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Bicycle seat post.	Bruce W. Ravenel	58,947	Boat.	Hugh R. Shaw	58,452
Bicycle seat support.	Edward C. Martin	56,197	Boat.	Moses H. Davidson	58,281
Bicycle shade.	Paula Von Meyern	56,851	Boat and vehicle.	Charles A. Barber	55,241
Bicycle skirt adjuster.	Helen B. Rennie	55,375	Boat propeller.	William M. Spann	55,107
Bicycle socket joint.	William Pearson	55,258	Boat propelling means.	Caroline S. Fryer	56,027
Bicycle spring wheel.	William G. Gibbs	56,217	Bob sleigh.	David Merklinger	58,138
Bicycle sprocket-wheel.	Edgar D. Misner	56,543	Bob sleigh.	John Clayton	58,177
Bicycle steering device.	Francis Mortimer	54,960	Bob sleigh.	The Woodstock Wagon and Manufacturing Co.	54,642
Bicycle sprocket-wheel and chain.	John C. Cottle, et al	56,540	Bobbin for spinning spindles.	Oliver C. Burr, et al	55,709
Bicycle support.	Andrew A. Ames	55,558	Boiler:	see Hot water.	
Bicycle support.	August H. Cronemeyer	57,477	Boiler.	Andrew Wildman, et al	55,512
Bicycle support.	Charles H. Thurston	56,853	Boiler.	Mary E. Morgan	57,128
Bicycle support.	Charles L. Benedict	54,722	Boiler.	The New York Central Works Co.	56,475
Bicycle support.	Charles N. Daly	56,852	Boiler cleaning process.	John C. Burneson, et al	55,995
Bicycle support.	Daniel W. Albright	55,848	Boiler flue cleaner.	Henry J. Johnson	57,109
Bicycle support.	Donald G. Ross	56,542	Boiler flue cleaner.	Robert G. Bidwell	57,108
Bicycle support.	Edwin R. Stansfield, et al	56,837	Boiler for heating systems.	Clarence C. Longard	58,410
Bicycle support.	F. E. Myers & Bros.	54,826	Boiler furnace.	Albert F. Kingsley	57,496
Bicycle support.	Frederick L. Thurston	56,206	Boiler furnace.	August Rahner, et al	57,592
Bicycle support.	Frederick S. Henning, et al	55,251	Boiler furnace.	Bernard C. Heavey	58,195
Bicycle support.	George Steese, et al	57,181	Boiler furnace.	Edward B. Parkhurst	58,503
Bicycle support.	George W. Hall	56,190	Boiler tube cleaner.	Charles Altman, et al	57,237
Bicycle support.	Henry D. Herdt	56,854	Boiler tube cleaner.	Wilber D. Forsyth, et al	54,020
Bicycle support.	Henry Harmer	55,548	Boiler tube cutter.	Frederick Colman	54,470
Bicycle support.	Henry L. Davis	55,155	Boilers.	Anti-incrustating mixture for.	Stefan Borecky, et al
Bicycle support.	Henry Otto	55,278			54,814
Bicycle support.	Horace W. Chamberlin	56,838	Bolster stake.	William V. Schaus	56,908
Bicycle support.	Isaac M. Lincoln	55,864	Bolt.	George H. Caugherty	55,655
Bicycle support.	John L. Benton, et al	54,728	Bolt securing means.	Joseph Cour	55,738
Bicycle support.	Joseph F. Furley, et al	58,345	Bone cutter.	The James Smart Manufacturing Co.	58,315
Bicycle support.	Joseph H. Iler	56,210			

Book and manuscript holder. Elbert D. Hall	57,356	Box making machine. Joseph H. D. Rehberger	57,092
Book-case. Otto H. L. Wernick	55,122	Brace. Edgar Kidwell	56,325
Book cover. Louisa A. Beers	55,292	Brace. Stephen McClellan	54,499
Book-keeper's arm rest. Walter Davidson	55,576	Bracket. Edward Lomey	56,068
Book holder. Calvert L. Ballard	55,136	Brake: See Air brake. Bicycle brake. Car brake. Cycle brake. Electric brake. Railway brake. Velocipede brake.	
Book holder. Mary E. Spielman	57,645	Brake. Dennis Beemer	57,208
Book support. August Lundberg	57,302	Brake. John Lees	57,171
Book support. George W. Ladd	56,104	Brake. John Shourek	56,933
Boom chain hook and link. John Youill	55,698	Brake. Ovid M. Gould	55,393
Boot and shoe. George W. Sleeper	55,519	Brake and fender. Newton Feigley	58,153
Boot and shoe. John F. Warner	57,084	Brake beam. The Morden Car Brake Company	54,586
Boot and shoe cleaner. Robert J. Trumbull	55,092	Brake coupler. Henry C. Laub	54,877
Boot and shoe display forms. De Witt C. See	55,316	Brake gear. F. W. Selley, et al.	57,614
Boot and shoe heel. Alexander Maebert	57,257	Brake for railways. Charles Lee Harryman, et al.	55,393
Boot and shoe heel. Manly R. Vandervoort	57,072	Brake for sewing machines. Oliver A. Morrow	56,743
Boot and shoe heel protector. Richard Stachow	57,634	Brake for trains. Albert M. Willets	55,175
Boot and shoe lacing. Horatio O. Whyman	57,398	Brake handle. John D. Waldran	55,068
Boot and shoe lasting machine. James J. Jordan, et al.	57,354	Brake shoe. Marvin Olcote	55,365
Boot and shoe shaping machine. George H. Clark	57,313	Brake shoe. The International Brake Shoe Company	57,611
Boot and shoe strap. George E. Shoop	56,149	Brake shoe. William W. Whitcomb	54,554
Boot and shoe ventilation. William Owen	55,370	Brake shoe. William W. Whitcomb, et al.	56,095
Boot and shoe ventilator. John E. Kennedy	56,311	Brake shoe mould. David McIntosh	56,250
Boot cleaning machine. Peter Fraser	57,489	Brake valve. George Westinghouse	55,714
Boot grease. Gustave W. Hansen	56,012	Bran packer. Ballard & Ballard Company	57,609
Boot-jack. William Bayhouse	55,426	Bread raiser. Jennie M. Tinker	56,328
Boot last. Peter Kelley	57,081	Breast strap. Gilbert Nevling, et al.	57,888
Boot, shoe, etc. Henry J. Doughty	54,859	Brewing syrup. Leopold I. N. Norman	54,516
Boot varnish. Felix St. Denis	54,860	Brick. John Quigley, et al.	58,421
Boots and shoes. Tool for removing nails and pegs from. Edward McLean	56,011	Brick and stone work. John W. Klinck	58,106
Boring apparatus. Anton Raky	57,431	Brick kiln. Edward M. Pike	54,647
Bottle: see Protective bottle.	56,093	Brick kiln. Milton M. Bushong	56,912
Bottle. Aerators Limited	56,562	Brick making composition. Edward New	55,899
Bottle. Bliss Thibedeau	56,566	Brick rougher and sander. John G. Kerst	55,663
Bottle. Burnham R. Benner	54,761	Bridge. Benjamin L. Blair	56,057
Bottle. David R. Saunders, et al.	55,046	Bridle bit. Charles H. Falls	55,517
Bottle. Edmund Towers, et al.	55,173	Bridle bit. Melvin F. Bigelow	56,048
Bottle. Edward H. Downing, et al.	55,600	Bristle washing machine. Charles E. Tyler, et al.	56,946
Bottle. Elizabeth Moore	58,134	Broiler. A. Fairgrieve, et al.	55,387
Bottle. James P. Erie	55,838	Broken limbs. Device for setting. Nazareth Pagnette, et al.	57,862
Bottle. John S. McWhorter, et al.	57,594	Broom corn breaker. William H. Gibson	57,005
Bottle. Louis C. Werner	54,799	Broom handle. George J. Craven	57,889
Bottle. Napoleon G. P. Fortin	56,440	Brush: see Blacking brush.	
Bottle. Pardon A. Campbell	57,588	Brush. Byron S. Baxter	54,651
Bottle. Peter P. Wood	54,762	Brush. Charles Klanberg	54,818
Bottle. Thomas M. Dillingham	54,741	Brush. Emma Morrison	54,796
Bottle. Warwick Winston	56,628	Brush. Oliver M. Farrand	56,783
Bottle. W. H. B. Schmeid	56,573	Brush making machine. McClintock Young, et al.	55,389
Bottle. William T. McLachlan	54,798	Buckle. Charles L. Garland, et al.	56,709
Bottle and bottle stopper. Arthur R. Pollard	57,879	Buffer for vessels. Johan Ciocoki	55,352
Bottle and seal. Charles W. Davison	55,222	Buffer platform for railway cars. The Trojan Car Coupler Co.	57,778
Bottle and stopper. Ephraim A. Foster	57,411	Buggy top. Annie E. Stout, et al.	54,939
Bottle and stopper. Holmes W. Coffin	57,512	Buggy top. Robert C. Bartlett	55,514
Bottle cleaning machine. Emil Kersten	56,150	Buggy washer. Charles C. Bridwell	55,966
Bottle filling device. Henry Tevers	57,769	Building material. David H. Fergusson, et al.	58,457
Bottle, jug, etc. Francis J. Cullum	58,098	Building strut. Charles M. Horton	57,813
Bottle seal. Leander Burnett	58,105	Bulkhead door closing mechanism. William B. Cowles	58,435
Bottle sealing device. Lewis Kalling	56,430	Bullet. Samuel C. Stevardson	57,064
Bottle sealing method. Alice M. Gillam	55,430	Bung. Dillon Beebe	54,805
Bottle stopper. Darius T. Phillips, et al.	57,455	Bung for barrels. Archibald E. McKechnie	54,488
Bottle stopper. Ferdinand A. Keimer	56,106	Burglar alarm lock. Simon C. Wolf	56,338
Bottle stopper. Fred A. Cooke	57,541	Burial casket. The Model Casket Co.	56,959
Bottle stopper. Frederick Andrews, et al.	54,827	Burial casket box. Joseph J. Stephens	55,579
Bottle stopper. Frederick Ludwig Siegel	56,459	Burner: see Water and oil burner.	
Bottle stopper. Jacob Halm, et al.	56,983	Burner. Frederick W. Magee	54,922
Bottle stopper. John Goettel	54,801	Burner for incandescent light. Gerhard Ditman	56,892
Bottle stopper. Montagne M. Bear	55,429	Burner for petroleum. J. Wesley Allison	55,337
Bottle stopper. Peder K. Mannes	57,394	Bust form. Natalie Schell	58,206
Bottle stopper. William Haskins	57,497	Butter box. Francois X. Ovide, et al.	57,944
Bottle stopper. William J. Cunningham	54,826	Butter box. George Esplin	58,123
Bottle stopper. William M. Fowler	55,301	Butter box. Henry L. Miller	55,656
Bottle wrapper. James J. Hinde	57,295	Butter, fat and oil purifying process. Joseph G. Har- grave, et al.	55,897
Bottles, tankards, glassware, etc. Robert R. Wales, et al. Box: see Fruit box.	55,708	Butter making process. Walter Cole	56,076
Box. Albert J. Vance	56,714	Butter package. Thomas C. Davidson	57,861
Box. David M. Macpherson	54,974	Butter receptacle and mould. Charles I. Conover	54,654
Box. Herbert A. Cobleigh	56,182	Button. Charles W. Lawer	54,816
Box. James H. Morlan, et al.	58,324	Button. Edward Foster	55,374
Box. Johann O. Eggestorff	57,556	Button. Joseph N. Gardner	56,627
Box. John H. Krenzinger	58,148	Button. Otto H. Plew	58,196
Box. Joseph S. Lewis	57,766	Button attaching and detaching implement. The McKenney Button Fastening Co.	58,323
Box. Louis T. Cormier	54,855	Button attaching machine. Flagg Brothers	55,528
Box. Peter C. Van Dolah, et al.	54,810	Button boring machine. Dilman B. Shantz	54,735, 54,736
Box. Samuel T. Russell	56,941	Button hook. James A. Haskett	57,274
Box. Thomas G. Bell	55,511	Button making machine. Frank J. Kaspar	56,936
Box. Thomas S. Usher	56,107	Button setting implement. The McKenney Button Fasten- ing Company.	54,839
Box and package. Harry M. L'ek	57,407	Buttomer. Charles E. Esterley	55,427
Box car. Anson W. Stebbins, et al.	57,875	Cabbage cutter. Edouard Gaboury	57,833
Box, case, crate. Hyman Abrahams	56,320		
Box cover fastener. Devillo W. Keeler	54,752		
Box fastener. E. H. Denton	55,459		
Box fastener. Joseph Ehler	57,559		
Box making machine. Charles W. Van Vleet	57,436		

Cabbage cutter. Hubbard Sine	57,311	Car coupler. Rankin Stewart	55,968
Cable traction. George S. Fouts	56,016	Car coupler. Robert C. Sayer	56,781
Calculating brush. Evangeline Gilmore	56,824	Car coupler. Robert D. Green	57,435
Calculating device. Levy Maybaum	57,231	Car coupler. Robert E. Bates	58,505
Calculating machine. De Kernica J. T. Hiatt	56,672	Car coupler. Robert H. Williams	56,814
Calendar. Willis H. Colly	56,588	Car coupler. Robert W. Riggins	56,484
Calendar for stationery. James S. Heithersay	58,480	Car coupler. Stephen J. Meeker	56,437
Calf weaner. John A. Griffin	55,043	Car coupler. The Gould Coupler Co.	54,594, 55,447
Caliper. John D. Johnston	58,517	Car coupler. Theophilus P. Weidler	57,785
Calipers. John N. Peavey, jr.	55,007	Car coupler. Thomas Galligan, et al	57,525
Cam coupling. Edward A. Blanton	56,180	Car coupler. William C. Beal, et al	56,065
Camera. Johan W. Holst	56,008	Car coupler. William Curry, et al	57,280
Camera. Margaret C. Booth	57,948	Car coupler. William E. Pearson	57,262
Can. Charles T. Draper	56,948	Car coupler. William E. Sauerman	56,721
Can. George W. Clerihew	56,041	Car coupler. William E. Whiteside	56,780
Can. Robert S. Burton	56,947	Car coupler. William H. T. Tabbert, et al	56,985
Can and bottle boxing machine. G. A. Farini	55,451	Car coupler. William Reese	58,113
Can and bottle closure. Daniel Elmer	54,766	Car coupler. William U. Wilks	55,243
Can and opener. John H. Stephens	56,266	Car coupler draw bar. Henry C. Williamson, et al	56,560
Can and opening key. Albert F. Remy	56,242	Car coupler guard. James Timms	54,620
Can and seal. John Foster Ross	55,204	Car door catch. William K. Edgar, et al	57,493
Can burnishing machine. G. A. Farini, et al	56,240	Car door fastener. Thomas Tighe	58,385
Can capping machine. George W. Bush	54,757	Car fender: see Car safety device. Street car fender.	
Can capping machine. Millard J. Hawkins	58,005	Car fender. Charles H. Weeden	57,624
Can case filling machine. Evan W. Cornell, et al	54,765	Car fender. Edward Mauley	55,965
Can closure. Abraham Joyce, et al	54,850	Car fender. George B. Hoak	54,869
Can cover. Max Ams	56,168	Car fender. George Hipwood, et al	56,042
Can head. Benjamin W. Morfoot	58,142	Car fender. George Wiemers	57,599
Can head cutting die. Benjamin W. Morfoot	56,601	Car fender. Henry Burden	56,114
Can heading machine. Robert D. Hume	56,577	Car fender. James E. A. Walker	55,395
Can making art. William J. Harris	57,105	Car fender. John E. Jones, et al	55,901
Can making machine. Robert D. Hume	56,896	Car fender. John J. Holloway, et al	55,460
Can opener. Oliver A. Burnes	55,371	Car fender. John P. Kane, et al	56,064
Can packing machine. Guillermo A. Farini	55,450	Car fender. John Wick, et al	58,076
Can soldering machine. Henry Schaake	55,623	Car fender. Montgomery Queen, et al	57,121
Can soldering machine. James L. Ashley, et al	56,369	Car fender. Norman T. Macferron	56,284
Can soldering machine. Thor H. Neilson	56,878	Car fender. Paul Jones	57,960
Can soldering machine. Walter Joel Phelps, et al	54,644	Car fender. Samuel C. Bole	56,427
Can top. Thomas H. Coakley, et al	55,217	Car fender. Susan F. Moore	56,177
Can washing machine. Frank A. Seufert	54,612	Car fender. Thomas R. H. Johnson	56,803
Can-wiping machine. John Chauncey McIntyre	54,511	Car heating apparatus. Edward E. Gold	57,276
Cans. Machines for ascertaining leaks in. Otto Asche	56,128	Car mover. Henry M. Crippen	55,612
Canal boat. John G. Foster	56,742	Car mover. Paul Wise, et al	57,969
Cancelling machine. Henry E. Waite	55,018	Car replacer. Levi W. Olmstead	57,498
Candlestick, lantern, etc. Edwin Gilbert, et al	54,824	Car replacer. Robert E. Alexander	55,961
Cannon. Edwin J. Blood	58,468	Car roof. Samuel W. Hempstead	55,400
Cant hook. James M. Ellis	57,107	Car roof. The Chicago-Cleveland Car Roofing Company	57,530
Capsule machine. Frank B. Grove	56,028	Car safety device. Charles D. Shrader	55,392
Car: see Railway car.		Car seat head rest. Joseph B. Strauss, et al	55,529
Car. Richard McCoy	56,917	Car step. Charles McLennon	55,900
Car. William G. Richards	55,412	Car step. Frank G. Brubaker	57,036
Car axle-bearing sleeve. The American Electric Light Co.	58,458	Car step. Frederick A. Taylor, et al	56,343
Car axle lubricator. Stewart Austin	55,959	Car step. William P. Nye	56,700
Car axle making machine. The Keystone Axle Co.	54,474	Car switcher. Herrick H. Roche	55,497
Car bell mechanism. Joseph T. Haskins	56,681	Car truck. Frederick H. Kindl	56,089
Car brake. Benjamin F. Jackson	56,098	Car truck. George W. Lacy	56,729
Car brake. James C. Devlin	54,811	Car truck. Herbert H. Hewitt	58,097
Car brake. John W. Rice, et al	55,786	Car truck. John C. Barber	54,600
Car brake. Patrick Flood	57,285	Car truck. John Player	58,107
Car brake. Stephen Rogers	56,688	Car truck. John W. Cloud	55,953
Car brake. William A. Mitchell, et al	55,119	Car truck. Kennet W. Blackwell	58,025
Car buffer. The Gould Coupler Co.	55,478	Car truck. The Gould Coupler Co.	57,632
Car coupler. Aaron H. Carroll	56,049	Car truck frame. Herbert H. Hewitt	58,095
Car coupler. Albert F. Guhl	55,502	Car wheel. The Noiseless Wheel Company	54,770
Car coupler. Amos Bopp	58,498	Car wheel die. Samuel H. Ralston	55,103
Car coupler. Charles Trench	56,730	Car wheel grinding mechanism. John Murphy	55,932
Car coupler. Christopher Dutchburn	57,981	Car wheel lubrication. Eugene Ewers	54,884
Car coupler. Cornelius Halpin, et al	54,934	Car wheels. Method of forging. Samuel H. Ralston	56,221
Car coupler. Daniel Collen	55,091	Car window. Jacob T. Grubb	55,090
Car coupler. David Altman, et al	56,996	Carbon brush. The Canadian General Electric Co.	57,596
Car coupler. David K. Clark, et al	56,404	Carbonic acid gas manufacture. Herbert S. Elworthy	58,184
Car coupler. Edwin C. Washburn	57,925	Carburetor. Daniel Pest	57,951
Car coupler. Eugene D. Whipple	56,444	Carburetor. Prosper Hereng	57,765
Car coupler. Frederick Linde	55,501	Card cutting and printing machine. Frank R. Bischoff, et al	56,227
Car coupler. Gardner Meeker	55,470	Card record. James N. Gunn	56,591
Car coupler. George Sleeman, et al	55,586	Card shooter. Clarence H. Judson	57,016
Car coupler. Jackson F. Swint, et al	55,964	Carding machine feeding mechanism. James Hogg	57,950
Car coupler. Jacob F. Strahle	56,574	Carpenter's gauge. John A. Ratcliff	57,330
Car coupler. James P. Johnson, et al	55,355	Carpenter's gauge. Louis Jomeas, et al	54,522
Car coupler. John A. Cameron, et al	56,918	Carpet beater. Edward Kent, et al	56,924
Car coupler. John C. Taylor	55,241	Carpet beater. Justus H. Ibel, et al	55,086
Car coupler. John J. Flynn	58,226	Carpet beater. William C. Allen	54,797
Car coupler. John La Burt	57,560	Carpet, etc. Ferdinand A. Jumeau	57,761
Car coupl. r. John M. Kincade	54,613	Carpet fastener. John J. Moore	55,116
Car coupler. John W. Price, et al	57,673	Carpet fastener. Joseph A. Dabrowski	55,835
Car coupler. Joseph Callantine	57,571	Carpet lining. William A. Mauran	56,699
Car coupler. Josiah Miller	58,122	Carpet stretcher. Christopher C. Thompson	57,269
Car coupler. Leon J. Yarnell, et al	57,507	Carpet sweeper. The Bissell Carpet Sweeper Co.	56,102
Car coupler. Martin L. Mardis	55,247	Carriage gear. Matthew Stanley	57,676
Car coupler. Michael J. Grady, et al	54,624	Carriage seat. Claude Goings	57,075
Car coupler. Milton Reiter, et al	55,592	Carriage top connections. Amis Krider	57,666
Car coupler. Phillip Sereber	57,253	Carriage top form. Judson E. Oakes	57,972
Car coupler. Philo C. Ewart	55,028		

Carrier. Mitchell T. Buchanan	55,893	Cinematographic apparatus. Johan W. Holst	56,762
Carrying frame. H. E. H. Borgstram	57,593	Clamp. Charles F. Wilson	57,332
Cart. Harry Aubrey de Vere Maclean	57,393	Clapboard. Wendell P. Jones	54,899
Cart. Roy Stone, et al.	56,229	Clapboard making machine. Patrick Conway, et al.	57,539
Cartridge. Matthew Mullineux	55,160	Claw bar. John Lindgren	56,354
Cartridge carrier. Robert F. Walker	58,984	Clean-out for soil pipes. Forest Hooper	55,611
Case for the driving gear of wheeled vehicles. Warren H. Frost	55,563, 55,564	Cleaning device for sewers, sinks, etc. John Wriglet, et al.	55,744
Cash register. Daniel W. Harper, et al.	55,197	Cleaning device for water-closets, sewers, sinks, &c. John Whigley	58,387
Cash register. John Eilers	57,352	Cleansing compound. Daniel F. Morrison	54,575
Cash register. Lawrence Cooney, et al.	58,479	Clevis. Allen L. Clark, et al.	55,593
Cash register. The Capital Cash Register Co.	57,216	Clevis. John Reel	55,186
Cash register. William Bentley	54,512	Clock. Joseph Schulte, et al.	58,327
Cash register and indicator. Henry S. Hallwood	57,363	Cloisonné work. Theophil Pfister, et al.	57,942
Cash register and indicator. The Columbia Cash Register	54,993	Cloth measuring machine. Thomas R. Woodard, et al.	54,897
Cash register and indicator. The Rochester Cash Register Co.	55,990	Cloth sizing system. Robert E. Menzie	56,747
Cask washing apparatus. Alonzo Pawling, et al.	54,682	Clothes bluing device. Francis W. Rabbi, et al.	57,067
Casket cover. Arthur W. Semmens, et al.	54,917	Clothes closet. William H. Dunsmore	54,610
Caster. George B. McC. Blue	55,364	Clothes drier. John E. Williams	57,776
Caster. George W. Phillips	56,166	Clothes drier. Sydney E. W. Adams	54,573
Caster. Henry Ill.	58,012	Clothes drier. William J. Coulter	57,638
Caster. Karl A. Klose, et al.	55,994	Clothes holder. Louisa W. Adolfezen	57,271
Cathode. The Electro-Metallurgical Co.	57,988	Clothes holder for clothes lines. William H. Orr	57,113
Cattle guard. Slaughter L. Spencer	58,149	Clothes line. Henry J. Wendt	55,044
Cattle stanchion. Jacob H. Virkler	56,928	Clothes line prop. John H. Stockman, et al.	57,898
Celluloid articles. Method of producing. Charles F. Church	58,402	Clothes pin. Joseph N. Brown	55,101
Centre board for yachts. Joseph Northup, et al.	57,198	Clothes pounder. George A. Crooker, et al.	55,904
Cereal cooker. Sidney Shepard & Co.	57,908	Clothes rack. Charles E. Rapley, et al.	57,210
Cereal degerming process. William M. Mackean, et al.	57,751	Clothes tongs. Elbert B. Stevenson	58,101
Cesspool. Louis Benoit	56,871	Clothes wringer. George B. Dowswell	56,282
Cesspool. Marie G. Forstall	56,571	Clothes wringer. James H. Wilson	56,801
Chain. George F. Ballou	56,022	Clothes wringer. Thomas W. Stone	55,736
Chain link. Otto Klatte	55,066, 55,067	Clutch. Theodore J. Koven	54,629
Chain wheel. Michael Garland, et al.	57,601	Coal screen. Rockwell King	57,122
Chair. Adelbert F. Briggs	58,201	Coal producing method. Werther A. G. V. Heidenstam	57,953
Chair. Harry W. Bolens	57,586	Coal record for railways. Frank A. Walters	56,267
Chair. Henry S. Jordan	56,904	Coat holder. Robert J. Stuart	58,120, 58,145
Chair. Hiram F. Rankin, et al.	57,325	Cock. Robert Skelly	56,663
Chair. John Gilson	55,704	Coffee can. Patrick J. Harris	57,923
Chair base casting. John Gilson, et al.	56,655	Coffee or tea service. Albert F. Stephens, et al.	54,550
Chair seat. Andrew J. King	57,379	Coffee pot. Charles H. Chase	56,467
Chart for garment cutting. Robert J. Smith	57,793	Coffee pot. Edmond N. Cusson	55,379
Check hook. Henry H. Whitney	56,061	Coffee pot. Forster Pardo	58,152
Check-rein guide loop. Scott H. Hull	58,520	Coffee pot. Herbert Le R. Mitchell	57,853
Check-rein hook. Mark Danby	56,889	Coffee pot. Herbert Nicholson	55,336
Cheese cutter. James E. Webster, et al.	54,874	Coffee roasting apparatus. John R. Okell, et al.	58,329
Cheese cutting machine. Alfred Saunders	55,794	Coffin handle. William Klein	56,510
Cheese marking, branding and labelling. William G. Gurd	54,876	Coin-actuated vending machine. Frank E. Morgan	54,823
Cheese press. Daniel A. Sprague	55,467	Coin assorting and ejecting machine. The Globe Cashier (British and foreign)	57,447
Chemical compound. Farbwerke Vormals Meister Lucius & Bruning	56,994	Coin changing machine. Cortlandt E. Palmer	58,011
Chemical engine. Thomas Down, et al.	58,481	Coin-freed delivery apparatus. Edward J. Brandt	57,333
Children's undervest. Isaac N. Fooks	57,589	Coin-freed delivery machine. Alfred Hulme, et al.	58,306
Children's vehicle. John Fenton	56,659	Coin-operated vending machine. Hermann C. Vierkant	58,023
Chiming mechanism. Thomas J. Flanagan	54,771	Coin-released apparatus. Isaac A. Grant	56,551
Chimney cleaning device. George R. Dayrell, et al.	55,816	Cold iron shears. Joseph W. Jackson	58,302
Chuck. Thomas E. Keavy	56,624	Collar button. Charles E. Smith	56,647
Church. C. F. Method of producing celluloid articles	58,402	Collar button. Joseph Goldsmith	54,841
Churn. Frank A. Stewart	55,356	Colour exhibiting device. James E. Patton	54,526
Churn. Frank Sanford & Co.	55,531	Colour printing machine. Vittorio Turati	57,357
Churn. George W. T. Nicholson	57,867	Colour printing machine. Jules Meyrueis	58,493
Churn. James Ingells, et al.	55,183	Combination tool. Adam W. Severance	58,486
Churn. Jason W. Board	54,785	Combination tool. Alfred Strum, et al.	56,384
Churn. John F. Class	56,786	Combination tool. Andrew Altman	55,448
Churn. John Wilson	54,536	Combination tool. Christian A. Salzman, et al.	56,992
Churn. Joseph Weggeman	58,218	Combination tool. Frank Elliott, et al.	57,367
Churn. William L. Wright, et al.	56,487	Combination tool. James Ingells, et al.	55,949
Churn dasher. Howard H. Sheely	58,414	Combination tool. Nathan N. Stebbins	55,909
Cigar. Frederick W. Fraser	56,509	Combination tool for mason's use. John P. Kane, et al.	57,188
Cigar bunching machine. William Yellowley, et al.	57,196	Combination tool for miners. Edward Adams	57,750
Cigar cutter and lighter. Edwin A. Johnston	57,014	Commode. Bishop A. Hall	57,260
Cigar holder. Etienne Girard	57,827	Commode. Cora G. Mann	54,742
Cigar holder. George H. Fraser	56,256	Commode. John Honeywell	56,711
Cigar machine. John Bunn	57,225	Compass box reflector. Abraham Mitchell, et al.	54,527
Cigar making machine. Denis Cousine	56,861	Compass stand. Ell B. Rockwell	55,132
Cigar making machine. Joseph Lacoste	57,583	Computing instrument. Alfred E. Putnam	56,410
Cigar rolling machine. John Bunn	56,020, 56,019	Computing scales. The National Computing Scale Co.	55,483
Cigar tip protector. Frederick E. Heimig, et al.	54,911	Condenser. Michael Spelman, et al.	54,533
Cigar wrapper cutting machine. Napoleon DuBrul	56,664	Conduit coupling. Henry K. Austin	56,200
Cigarette. Lewis H. Sondheim	56,280	Conductor for lightning and water. Lawson Adams, et al.	55,339
Cigarette box. Clarence I. Ward, et al.	56,037	Confectionery coating machine. John R. Van Derveer	55,702
Cigarette box. Henry Graetz	57,191	Conveyor for bales, boxes, etc. William L. McCabe, et al.	55,141
Cigarette holder. Harry H. Kerr	58,467	Cooking apparatus. Anna Sickels	55,033
Cigarette machine. The Commercial Union Cigar and Cigarette Co.	55,104	Cooking apparatus. Freaan A. Mabee	56,955
Cigarette machine feeder. James A. Bonsack, et al.	55,639	Cooking pan. William Hayward	57,433
Cigarette making machine. George H. Hilgarten	57,543	Cooking stove. Dewitt C. Wallace, et al.	54,671
Cigarette packing machine. Charles W. Van Vleet, et al.	57,540	Cooking stove. John Cunningham	58,143
Cigarette packing machine. James A. Bonsack	57,997	Cooling apparatus. James T. Bentley	58,118
Cigarette pressing machine. Emil George	58,462	Cooper's plane. Isidore J. Cocayne	57,930
Cinder sifter. George H. Meakins, et al.	54,842	Copying book. John J. Crabbe	54,943
Cinder sifter. John Clarke	54,870	Copying book. The Carter Crume Co.	55,026
		Copying press. George C. Houser	55,403
		Coke oven and oven tile. Frank L. Slocum	56,043



Copper hardening process. John Miller, et al.	55,879	Cycle brake. Laverux N. Dyhrberg	57,722
Cord holding mechanism. George Walter	55,599	Cycle brake. William Gilbert.	54,970
Cork press. Henry Schulhoff	56,930	Cycle chain and rivet. The Indianapolis Chain and Stamp- ing Co.	58,482
Corn cultivator. Norman McKenzie, et al.	55,908	Cycle driving gear. Walter Taylor	57,168
Corn cutting device. Jackson Johnson	57,382	Cycle driving mechanism. Johannes T. Pedersen	56,527
Corn holder. Henry Dryfuss	54,574	Cycle frame. John Spencer, et al.	54,959
Corn plant marker. Omer Billingsley	55,724	Cycle gear. Augustus Gross, et al.	55, 69
Corn planter. Harry Hall	54,885	Cycle gear. Charles L. Garland	55,553
Corn planter. Mahlon E. Rhoads	58,416	Cycle gear. Thomas H. Belch, et al.	55,541
Corn planter. Thomas S. Fair	57,414	Cycle gear. William H. Miller	54,717
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Corn silking machine. John C. McIntyre	57,741	Cycle lock. Frank V. Stead	57,467
Corset. Clara E. Woodsworth	54,925	Cycle mechanism. George T. Booth, et al.	56,836
Corset. Edward Kohnberger	54,743	Cycle mechanism. Gerard Beckman	55,550, 58,333
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Corset. Frederick Crompton	55,836	Cycle mechanism. John H. Howe	58,347
Corset. John S. Crotty	54,631	Cycle mechanism. William G. Hurst	57,458
Corset. Joseph A. Garneau	57,849	Cycle propelling mechanism. Gerard Beckman	56,193
Corset. Louis Rousseau	54,576	Cycle seat. Otis K. Newell	51,958
Corset. Lucille C. Wright	54,529	Cycle tube setting process. John G. Inshaw	54,961
Corset. Thomas H. Robinson	55,584	Cycle shade. Arthur T. Woodward	54,688
Corset clasp. Oliver M. Chesney	55,413	Cycle skirt guard. Charles Bristow	55,030
Corset fastening device. Carl J. Holmgren	56,356	Cycle sprocket chain wheel. James A. Walker	54,966
Corset lacing system. Phileas Couet	55,361	Cycle tire. Austin Ryan	57,719
Corset stay. John S. Crotty	54,630	Cycle tire. James McConechy	54,724
Corset staying process. John D. Belcher	54,636	Cycle tool. John B. Smith	56,548
Corset stiffener, &c. Edward K. Warren, et al.	56,307	Cyclometer. Charles A. Haney	54,956
Cot. George B. Meadows	57,392	Cyclometer. Charles S. Labofish, et al.	56,211
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Counter bracket seat. George A. Coulson	58,198	Cyclometer refuge. Richard T. Bond	57,704
Counter, refrigerator and show case. H. P. McIntosh	55,325	Damper for pipes. Eliza J. Climo	56,998
Cover for receptacles. Walter C. Gee, et al.	56,755	Damper regulator. Frederick T. Mueller, et al.	58,013
Cow anti-kicking device. Miles Robinson	56,804	Darning apparatus. John H. Wilday, et al.	55,650
Cow milking apparatus. Herbert J. Cunningham	57,258	Darning implement. Andrew E. Smythe	56,064
Cradle. John J. Bukolt	55,815	Deafness relieving instrument. George R. M. Marage	56,026
Cradle. Thomas Kipling	56,564	Desk, camp chair and bedstead. George W. Cole	56,796
Crank mechanism. G. L. Van Doornun	57,166	Decorative film packaging machine. Walter H. Coe	57,326
Crate. Andrew Stratton	55,170	Decorative films. Device for applying. Walter H. Coe	55,151
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Crate. Magnus Ek	56,999	Dental appliance. William T. Lyon	55,583
Crayon holder. Joseph Bessell	57,370	Dental chair. Frank Ritter	58,379
Cream dish. Samuel F. Rukenbrod, et al.	56,066	Dental handpiece. Johannes T. Pedersen	58,473
Cream separator. Thomas Collins, et al.	57,503	Dental plugger. Abraham Pelham, et al.	57,364
Cream separator. Thor. R. Tornerhielm	57,519	Dental plugger. Hugh McLaren	55,812
Cream separator. William C. Hartmann, et al.	58,179	Dental soldering machine. John Fletcher	54,990
Creamer. Olof Ohlsson	55,461	Dentists' gold. Method of preparing. C. A. Flower, et al	54,862
Creamer. Oscar Anderson	57,904	Derrick. George V. Stallings	56,349
Crematory for garbage. Felix L. Decarte	54,571	Desk: see School seat.	
Crib. Thomas H. Churchill, et al.	57,000	Desk. Horace D. Hermany	57,681
Crib. William D. Ranney	56,424	Desk. John Tremearne	56,949
Crimping machine. Edward P. Holden	55,621	Desk implement. Richard R. Vernon	56,675
Cuff button. William H. Glines	55,670	Desk lid support. Daniel W. Tower	55,608
Cuff buttoner. Waldron H. Rand, et al.	55,927	Die: see Car wheel die.	
Cuff-holder. Joseph Ichishima	56,697	The printing system. The Steen Stamping Press Co. of Philadelphia	54,793
Cuff holder. Louis P. Kleiderer	55,322	Differential speed and reversing gear. G. G. M. Harding- ham	57,789
Cuff and collar smoothing machine. Fred. E. Fay	56,129	Digging implement. Thomas A. Darby, et al.	55,433
Culinary utensil. Jane B. Wallace	55,193	Digging machine. Frederick Holzhauser	56,309
Culinary utensil. Kibbie R. Ackermann	55,915	Digester. Eugene Meurer	58,071
Cultivator. Andrew L. Brock	56,569	Disc harrow. The Ohio Cultivator Co.	57,618
Cultivator. Edmund Piggott	56,441	Disc harrow. The Massey Harris Co.	57,248
Cultivator. Frank E. Johnson	56,136	Disc plough. George Spaulding, et al.	56,932
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Cultivator. Richard Sylvester	55,884	Dish washer. Alfred Beers	54,697
Cultivator. Samuel L. Allen	55,036	Dish washer. Daniel W. Hawkes	55,176
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Cultivator. William A. Whitesel	56,657	Disintegrating machine. Alfred Jordan	55,693
Cultivator. William D. McCauly	54,665	Dispensing can. T. W. Alexander	57,015
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Curette. Emelin D. Saint Cyr	57,358	Display rack. James M. Taylor	57,740
Curling iron. Fred. D. Williams	56,770	Display rack. James P. Caldwell	57,038
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Curtain pole bracket. William S. Powell	55,435	Door fastener. Adolphe Lemay	57,756
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Curtain stretcher. Josephine Smith	54,622	Door gear. Wilham H. Murray	57,811
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Cuspidor. Elie Benoit, et al.	57,943	Door hanger and track. George C. Gardner	56,147
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Cycle. Alfred E. Franz Nehmer	56,521		
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Door knob. Charles F. Hill	56,899	Electric cable insulation. Max Guillaume	55,074
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Door saddle. Thomas Vogel	57,931	Electric circuit controller. The Canadian General Electric Company	55,120
Door spring. William Hargrove	58,286	Electric circuit safety device. Lewis G. Rowand	56,760
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Drag saw. Lewis Johnson	55,372	Electric heater. Edward E. Gold	55,299
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Drill. Frank A. Reynolds, et al.	56,141	Electric machine. William H. Cooley	56,361
Drill. Henry L. Webster	57,268	Electric meter. The Canadian General Electric Co.	57,620
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Stove pipe clamp. Frederick H. Livingston	55,707	Tension regulator. William A. Power, et al	55,572
Stove pipe cleaning device. William Felstead	55,734	Tent pole. Fanny Clunn	54,819
Stove pipe coupling. George D. Bateman	55,604	Thawing compound for hides. George W. Adler	55,301
Stove pipe coupling. Thomas Holland	55,328	Theatre. Frederick W. Shipman	54,836
Stove pipe damper. Oliver S. Ferguson	55,366	Thermostat. William Fiddes, et al	55,685
Stove pipe elbow making machine. The Patent Elbow Co.	58,443	Thermostatic valve. Warren Webster & Company	56,400
Stove pipe elbow making machine. The Thomas Davidson Manufacturing Co	54,755	Thill coupling. Alexander N. Cameron	55,058
Stove pipe, &c. William A. Cowan	55,191	Thill coupling. Humphrey B. Young, et al	54,878
Stove pipe thimble. Andrew M. Schiml, et al	54,889	Thill coupling. James Cavanagh	56,230
Stove pipe thimble. John J. Schaab	55,192	Thill coupling. James E. Cryderman, et al	57,551
Stove truck. William H. Neeb	55,163	Thill coupling. Sylvanus L. Hill, et al	56,822
Stoves. Controlling device for gas cooking. John Wynn	55,093	Thill coupling. Thomas C. Edwards	54,881
Stoves. Rotary grate for. Hermann Briesemeister	55,092	Thill coupling. Ulrich Ohlsen	54,655
Straw elevator. John A. Weeks	56,784	Thill coupling. William M. Buchana	56,995
Straw harpoon. John A. McGreevey	56,927	Thorough brace. O. B. Fuller	54,581
Street car. John J. Thompson	58,089	Thread cutter. Henry Gintz	54,995
Street car fender. Albert E. Hughes	55,694	Thread holder. Lily Whitney	57,395
Street car fender. George A. Parmenter	56,331	Thread package. Benjamin L. Armstrong, et al	54,747
Street car fender. George Sleeman	55,928	Threshing machine. Arthur E. Pratt	54,868
Street lamp. John Stewart	57,329	Threshing machine. William Maloney, et al	54,790
Street railway switch. William A. Grant	57,557	Ticket carrier. Richard N. King	58,311
Street sweeper. William S. Mears	55,668	Ticket case. Elbert S. McMaster	54,828
Street sweeper loader. John A. Hanlon	57,381	Ticket holder. James E. Adkins	57,100
Street sweeping machine. Andrew H. Smith	54,837	Ticket issuing device. Charles O. Tangeman	57,432
Stricture cutter. Robert C. Warner	56,035	Tide motor. Eli E. Sager, et al	57,051
String fastening. Harry H. Abell	56,935	Tie and rail fastener. Jacob S. Flegal	58,217
Stubble rejector. Harvey Pearson	55,051	Tile. William A. C. Waller	55,979
Stump extractor. Benonie Carrievault	56,143	Tile mounting methods. William H. Winslow	57,133, 57,135
Stump extractor. Norbert Champagne	55,015	Tile mounting system. William H. Winslow	57,690
Stump puller. John W. and John L. Hannegan	55,822	Time keeper apparatus. The Capital Cash Register Co.	55,896
Submarine plough. Charles B. Emerson	58,003	Timing instrument for vehicles. Edward G. Dorchester	57,009
Submarine signal transmission. Alexander Muirhead	54,729	Tip applying machine. The Warner Brothers Co.	57,871, 57,872
Submarine vessel. Simon Lake	55,625	Tire: See Bicycle, Pneumatic, Rubber wheel, tyre.	
Sugar bowl. William L. Cameron	56,330	Tire. Frederick A. Hodgman	56,471
Sulky. Eben N. Higley	54,653	Tire. Thaddeus Galvin, et al	57,724
Sulky plough. William H. Perrin	57,516	Tire. The American Tire Company	54,950
Sulphide ore treatment. Francis Ellershausen	57,749	Tire heater. Fred Ringst Meyer	54,888
Sulphide ore treatment. Thomas Huntington, et al	55,764	Tire remover. Robert M. Otey	57,243
Sulphuric acid concentrator. Thomas G. Webb	55,202	Tire removing machine. Henry H. Smith, et al	57,056
Sulphurized ores. Treatment of. John C. Butterfield	56,893	Tire repairing device. David H. Cox	55,535
Sunshade. Aquila W. Hollinsworth	58,164	Tire setting machine. Edward N. Zeller	55,295
Suppository. David Genese	54,534	Tire tightening device. James Pollock	55,424
Suppository preparing machinery. Henry S. Wellecome	55,936	Tire upsetting apparatus. Charles E. Pickerell	54,829
Surgical instruments. Means for cleaning. Kirke Stanley	56,739	Tire upsetting machine. A. B. Jardine & Co.	55,445
Surgical splint. Sidney H. Gardiner	58,513	Tire valve. George H. F. Scrador	55,534
Suspender. Edwin F. Merwin	54,847	Tires to wheels. Device for applying rubber. The Victor Rubber Tire Company	57,758
Swaging machine. The Morse Keefer Cycle Supply Co.	57,809	Tobacco disentangling system. Oscar W. Allison, et al	55,890
Sweeping machine. The Onondaga Sweeper Co	56,172	Tobacco cutting machine. Nicholas P. Perkins	56,278
Switch: see Electric switch, Railway switch.			
Switch. The Detroit Automatic Switch Co	57,693		
Switch and fuse box combined. Joseph B. Smith	54,646		

Tobacco pipe mouth piece. David B. Kinch	57,328	Twine cutter. Louis M. Bray	56,909
Tobacco pipe. E. H. Farley, et al	55,338	Type casting machine. Alexander S. Capehart	56,276
Tobacco pipe. George R. Davidson	57,218	Type distributing machine. The Cox Type Setting Machine Co	56,596
Tobacco pipe. Henry D. Fanders	58,296	Type setting machine. The Cox Type Setting Machine Co	57,130
Tobacco pipe. Henry Hunt	55,580	Type setting machine. Tolbert Lanston	55,735
Tobacco pipe. John Sigurdson, et al	57,054	Typewriter attachment for desks. John Gramelspacher	55,229
Tobacco pipe. Philip Brown	57,820	Typewriter and telegraph transmitter. The World Flash Co	57,689
Tobacco pipe and cigarette holder. Harry E. Gilchrist	56,073	Typewriter copy-holder. Eli B. Bingham	57,995
Tobacco pipe cleaner. John J. Snyder	55,140	Typewriter platen shift. The Imperial Writing Machine Co	54,491
Toboggan. Arthur A. Herd	58,405	Typewriter return mechanism. Walter M. Baer	55,886
Toe weight. Griffith D. Williams	56,181	Typewriter support. John F. Gregory	57,884
Tool. John P. Hutchins	57,584	Typewriter. Any M. Derrick	57,214
Tool holder. George Salot	56,895	Typewriter machine. Albert G. Corre	55,648
Tooth brush. Daniel W. Tower	58,245	Typewriter machine. Allison Templeton	54,903
Tooth brush. Edward H. Hamilton	55,624	Typewriter machine. Emery M. Hamilton	58,212
Tooth cleaner. Frank D. Gould	57,012		57,025
Tooth pick. Henry T. Tissington	57,915	Typewriting machine. Thomas W. Paterson	57,026
Tongs. Oscar L. Owen	55,585		57,027
Toy. Clark and Boyer	58,328		57,028
Toy. John A. Weitzel	55,627	Tyre. Charles H. Greaves, et al	58,341
Toy. Robert F. Donovan	56,952	Tyre. Edward J. Chambers	58,351
Toy. William R. Smith	57,914	Tyre setting machine. Philippe D. Dupont, et al	58,429
Toy boat. Otto Sprecher	55,408	Umbrella. Francois H. Genereux, et al	57,870
Towel rack. Jennie L. Cox	57,561	Umbrella. Frank H. Mitchell, et al	57,448
Towel rack. Samuel J. Holmes	57,781	Umbrella. Heyward Scudder	56,516
Trace carrier. William O. Kinne	56,901	Umbrella. James C. Hall	57,202
Trace detacher. Isadore Vanderbeck	55,303	Umbrella. William C. Whitney	58,516
Trace loop and hook. Samuel E. Purdum	55,056	Umbrella, &c. Katherine E. Landau	56,418
Track cleaner. George E. Turner	54,652	Under waist. James C. Andrews	58,199
Track cleaner. Michael Power	55,671	Unicycle. Thomas Tolson	58,006
Track gage. Orlando S. Kepler	58,167	Upholstering device. Alfred Freschl	55,385
Track sander. Francis M. Dean	56,725	Upholstering pin. George H. Howell, et al	57,499
Track sanding apparatus. Eusebie Picard, et al	57,069	Uterine dilator. Timothy A. Lewis, et al	57,664
Track sanding machine. Henry L. Leach	54,588	Valve; see Faucet and valve. Pneumatic tire valve, Pump valve	
Track sanding machine. Jerome A. Houston	57,668	Valve. Alfred R. Boluss	54,921
Traction engine. Horlon H. Shepherd	56,980	Valve. Elmer E. Kerns	56,643
Traction engine gear. Absalom Merner	57,294	Valve. Frederick Billings	58,202
Train signal. David McC. Dunn	57,795	Valve. Hams Horbiger	57,278
Transportation system. Wallace Grosvenor	57,585	Valve. Harry Morrison	58,496
Trap. Hiram T. Bush	57,228	Valve. Henry A. Wood	56,846
Tread support for stairs. C. B. Emery	56,456	Valve. Hubert K. Wood	58,157
Tread winding machine. Bryce M. Knox	56,494	Valve. John S. Dodge	56,179
Treadle. John F. Wilkinson	58,027	Valve. Joseph Simon Roy	55,313
Treshing machine. William Bartelt	56,116	Valve. Orlando F. Combe	57,239
Trimming machine. Ambrose S. Vose	56,357	Valve. Robert S. Hill	55,059
Tripletree. Mark Danby	56,963	Valve. The Ingersoll Sergeant Drill Co	56,233
Trolley. Thomas P. Danton, et al	58,526	Valve. Warren, Webster & Co	55,820
Trolley bell ringer. William J. Gubitz	57,748	Valve. William B. Guimarin	57,361
Trolley for kites. Thomas J. Rogers	57,010	Valve. William Engberg	55,967
Trolley pole and connection. Charles H. Finson	54,517	Valve. William McIntosh	56,728
Trolley support. Otto Holtz	54,483	Valve indicator. John T. Christie	57,656
Trolley switch. Moses Rangey, et al	55,134	Valve for gas engines. Fried Krupp Grusonwerk	55,882
Trolley wheel. Richard S. McPhaul	57,729	Valve for steam engines. Daniel W. Branch	56,352
Trolling hook. Allen H. Smith	55,008	Valve mechanism. Richard W. Bagley, et al	55,728
Trousers. Simon Marcus Silvermann	54,524	Valve repairing machine. Frank E. Dexter, et al	55,376
Trousers guard. Edward W. Hanauer	57,233	Vaporizer. Hiram Walker	57,091
Trousers pattern. David Y. Bruneau	56,416	Vaporizing element. Victor C. J. Ortman	56,495
Trousers protector. Louis M. Howes	57,665	Vapor motor. Levi S. Gardner	55,456
Trousers stretcher. Arthur Hickling	56,866	Vapor stove burner. J. W. Allison	55,000
Truck. Ernest C. Atwood	57,986	Vault light. The Prismatic Glass Co. of Toronto	54,468
Truck bolster. William V. Kelley	56,989	Vault light framing process. William H. Winslow	57,132
Trunk. Augustus W. Newell	58,175	Vegetable extracts. Ludwig Fromm	58,522
Trunk and hat box. Mary Lyons	55,225	Vegetable glue. Siegfried Herzberg	58,305
Truing device. Percy B. Bosworth	55,770	Vegetable harvester. Henry T. Scholey	55,457
Truss. John D. Rowley	55,293	Vegetable exterminator. Andrew T. Fotheringham, et al	55,490
Truss. Perjohan Fredin	55,633	Vehicle. John Appleton	54,867
Truss. Samuel Ide, et al	57,863	Vehicle axle. Benjamin F. Westmoreland	57,490
Truss. The Oscillating Truss Company	57,937	Vehicle axle. Octavius S. Ebert	57,912
Tube coupling. Edwin Taylor	56,310	Vehicle axle and nut. John E. Lewis	57,780
Tube cutter. Anton Kranzer	56,670	Vehicle brake. George Baxter	55,549
Tube joining method. Frederick Billing, et al	55,135	Vehicle brake. Isaac N. Keeling	56,111
Tube lining method. The Interior Conduit and Insulation Co	57,057	Vehicle brake. Joseph H. Miller, et al	57,728
Tube making apparatus. The Publishing, Advertising and Trading Syndicate	55,215	Vehicle brake. Otis M. Kirlin	56,787
Tube making machine. George J. Capwell	57,831	Vehicle driving gear. Carl T. G. Schneidewind	57,718
Tube making method and machinery. Thomas B. Sharp, et al	57,292	Vehicle frame. Charles F. Church	58,337
Tube shaping tool. Societe Anonyme des Tubes Chobert	55,117		58,361
Tube truing apparatus. The Standard Weldless Tube and Cycle Components	57,236	Vehicle frame joints. The Pope Manufacturing Co	58,362
	54,684		58,363
Tubular joint. Charles T. Crowden	55,354	Vehicle gear. Sidney I. Prescott, et al	55,843
Tufting machine. Alfred Spoffard	55,346	Vehicle hub. John Bell	57,422
Tug snap. James Ingells, et al	57,093	Vehicle motor. The British Motor Syndicate	55,341
Tuning pin. Henry Muller	57,946	Vehicle propulsion. Henry Symes	58,040
Tuning pin. Levi Walker	57,674	Vehicle seat. Albert H. Holland	56,069
Tunnel lining. George H. Dunlop	54,838	Vehicle seat. John F. Wilmot	55,256
Turbine. James Caldwell, et al	56,961	Vehicle shaft splicer. James Whitman	56,920
Turbine. Robert D. Ralston, et al	55,168	Vehicle spring. Seth M. Moore, et al	56,187
Turbine blade. Charles A. Parsons			
Turbine blades. Method of forming and attaching. Charles A. Parsons	55,166		
Turntable. Jacob M. Hess	57,922		

Vehicle stake. George H. Fraser	56,080	Wash boiler. Dorila Marcell	55,737
Vehicle tire. Henry W. Planche, et al.	55,865	Wash bowl and sink. Burton E. Loadwick	56,799
Vehicle tire. Thomas Bassford	54,968	Washing compound. Horimidas Beliveau, et al.	55,641
Vehicle tire. Francis Gossler	58,043	Washing glove. Josephine Chalfant	56,490
Vehicle wheel. Charles F. Church	58,336	Washing machine. A. H. Durand	55,327
Vehicle wheel. Harry R. Collins	58,354	Washing machine. Austin A. Merriam	56,727
Vehicle wheel. Charles E. Bulkley	55,846	Washing machine. Conrad Dietz	55,516
Vehicle wheel. Conrad Slomka	57,286	Washing machine. David F. Whiteman	55,681
Vehicle wheel. Er. Gabriel Corbett	56,858	Washing machine. David Moore	55,333
Vehicle wheel. Harry R. Collins	58,048	Washing machine. Donald Ross	55,791
Vehicle wheel. Joseph H. Strong	56,072	Washing machine. Edward J. Goodier	55,819
Vehicle wheel and brake. Thomas Spelman	56,121	Washing machine. Edward R. G. Watson	55,464
Vehicle wheel tire. The Advance Tire Company	54,695	Washing machine. Frank Alderman	57,403
Velocipede: see Bicycle.		Washing machine. George B. Dowswell	55,482
Velocipede. Bohn C. Hicks	56,529	Washing machine. Hans J. Paarmann	57,082
Velocipede. Charles F. Lavender, et al.	54,714	Washing machine. James A. Gowans	56,445
Velocipede. Edward L. Evens	57,180	Washing machine. James S. Hilyard	58,093
Velocipede. Elliott Barton	54,941	Washing machine. Josiah Smith	55,380
Velocipede. Hermann G. Meirmann	57,709	Washing machine. Lehman Weil	56,732
Velocipede. John H. Knight	54,698	Washing machine. Louis Lavergne	54,781
Velocipede. Thomas Hann, et al.	54,694	Washing machine. Samuel M. Windmiller	55,422
Velocipede brake. George F. Cadden	56,195	Washing machine. Steven D. Cole	58,094
Velocipede brake. Robert H. Canfield	54,953	Washing machine. William Baylis	57,907
Velocipede brush. Carl E. Flemming	58,360	Washing machine for calico printers' blankets. Daniel H. Simpson, et al.	56,297
Velocipede crank and axle. Charles L. McQuillan	58,368	Waste pipe connection. William H. Burnett	55,825
Velocipede driving mechanism. Thomas Grace	57,713	Watch and clock regulator. Thomas R. Bolten	57,235
Velocipede frame. Bruno Wesselman	54,706	Watch case pendant. Frank Moorfield	55,449
Velocipede frame. Frederick H. Nies, et al.	57,710	Water and oil burner and gas generator. Ezra Glasco	55,489
Velocipede frame. Société Anonyme des Tubes Chobert	54,955	Water bicycle. Charles L. Knepper	57,177
Velocipede gear ing. Andrew Jackson McDuffee	57,478	Water closet. Bernard M. Carney	57,899
Velocipede handle. William J. Grotenhuis, et al.	56,199	Water closet. Christopher O. Ellison	56,942
Velocipede handle bar. Charles F. Church	58,353	Water closet. Joseph Gingras	57,646
Velocipede mechanism. Henry Symes	55,570	Water closet. Michael L. McGuire	57,791
Velocipede mud guard. Walter F. Keys	56,531	Water closet. Philip Nicolle	54,900
Velocipede riding apparatus. George W. Tarver	56,855	Water closet. Robert S. Watson	56,620
Velocipede saddle. Alfred E. Ames	57,182	Water closet. Robert Washburn	56,874
Velocipede saddle. Martin L. Deitzler	58,045	Water closet seat. Edward L. Taft	55,172
Velocipede saddle. Theodore E. Beck	56,539	Water closet ventilator. Walter Stanley McDonald, et al.	54,475
Velocipede saddle. The Earl of Dundonald	58,346	Water filter. James H. Blessing	54,787
Velocipede seat. Alfred E. Ames	57,698	Water from steam. Apparatus for separating. Hugo Kohl	56,486
Velocipede tire girth. Carl A. Schreier	54,712	Water gas production. Carl Dellwik	58,524
Vending machine. Joseph M. Mackin	55,891	Water heater. August Buerkle	57,427
Vending machine for newspapers. Michael A. Kennedy	54,713	Water heater. John C. Beckfield	56,045, 56,046, 56,047
Veneer. Christian W. Luther	57,307	Water heater. Joseph Westover	56,722
Vent trac). Silas J. Rand, et al.	55,209	Water heating and purifying apparatus. John E. Prunty	55,324
Ventilated receptacle. William E. Howell, et al.	58,133	Water heating boiler. John P. B. Sadtler	57,574
Ventilator: see Boot and shoe ventilation.		Water motor. James Hurley	55,158
Ventilator. Theophile Lessard	56,592	Water motor. Joseph G. McCaffrey	55,468
Ventilator and brace. Richard M. Pancoast	58,172	Water purifier for steam boilers. William Irving	58,388
Ventilator and thimble. Robert L. Underwood, et al.	55,662	Water ser ice post. Joseph O. A. Laforest	58,474
Ventilator apparatus. Peter Phillips	55,619	Water supply device. George W. Conderman	57,420
Ventilator for cooking utensils. Charles Hoopes	58,176	Water wheel. Daniel Hug	56,265
Ventilator for lanterns, &c. Willard A. Bourne	58,004	Water wheel governor. Marcus P. Schenck	56,580
Ventilator for mines. Fritz Eisenbeis	58,188	Waterproof fabric manufacture. The Publishing, Advertising and Trading Syndicate	58,214
Vessel: see Marine vessel, Submarine vessel.		Waterproofing method. Charles R. Smith	58,404
Vessel. Conrad Odinet	55,291	Waterproofing apparatus for stock, etc. John Kirkwood	56,458
Vessel closing and charging apparatus. Emile Stern	55,733	Watt-meter. The Canadian General Electric Co	57,533
Veterinary forceps. Gerhard B. Ostliek	57,314	Wax making machine. Richard F. Holtermann	57,195
Veterinary speculum. Alexander A. Walker	56,769	Weather strip. Charles Mercereau	57,087
Vignetting apparatus. Ernest A. Harris, et al.	56,555	Weather strip. Henry K. Kimpton	57,024
Violin attachment. Albert Filsom	57,991	Weather strip. Henry Voth	54,548
Vise. Charles Dubois	55,582	Weather strip. Joseph Edward	55,198
Vise. Edward B. Newman, et al.	56,222	Weather strip and door stop. Adolphus M. Doyle	55,674
Vise. James M. Kennedy	54,822	Weather vane. William Kinahan	57,386
Vocalizing audiphone. James A. Larkin	56,503	Weed destroying machine. John Adna McDonald	54,975
Voting machine. Adrian O. Abbott	55,802	Weeder. Everett C. Welch	55,503
Voting machine. Patrick A. Macdonald	57,508	Weeder and rake. Alfred S. Topping	55,035
Vulcanizing apparatus. Philander J. Davis	56,929	Weeding machine. Denis G. Lajoie	58,144
Waggons: see Sled gear for waggons.		Weighing machine. Charles Ingrey	54,901
Waggon. Ferdinand Fischer	58,092	Weighing machine. Francis H. Richards	54,820
Waggon. William J. W. Kennedy, et al.	56,163	Weighing machine feeding mechanism. Henry E. Symser	57,966
Waggon box. Edward P. Langford	56,682	Weighing or measuring machine. Samuel P. Mackey	55,622
Waggon box. John Muir	57,241	Weighing scales. John H. Stephens	58,173
Waggon brake. Calvin C. Long	56,169	Weighing truck. Orlando W. Parsell	55,304
Waggon brake. Daniel F. Armstrong	54,557	Welding compound. Henry Eberding	56,602
Waggon brake. Ephraim J. England	56,802	Well-boring machine. William W. Horr	56,977
Waggon brake. Robert J. McGee	54,551	Well-drilling apparatus. Frank M. Kennedy	57,985
Waggon end gate. Columbus M. Davis	56,162	Welt seam trimmer. Zachary T. French, et al.	55,826
Waggon end gate. William H. Arner	56,355	Wheat drying apparatus. The Fish Oil and Guano Syndicate	58,424
Waggon for transplanting large trees. Ernest C. Watson	55,494	Wheat steamer. William L. Mathews	56,060
Waggon jack. Lucius H. Rand	57,538	Wheat washing machine. James McDaniel	55,954
Waggon seat. Elmer E. Wilson, et al.	57,631	Wheel: see Vehicle wheel; Wheel for vehicles.	
Waggon spring. John W. Brownell, et al.	58,170	Wheel. Abraham G. Jennings	54,705
Waggon spring. Targe G. Mandt	58,104	Wheel. Daniel McCallum, et al.	54,590
Waggon standard. Emile Fontrel	54,834	Wheel. Harry R. Collins	57,308
Waggon steel. Martha J. Leathers	56,611	Wheel. Romanus A. Hoffnagle	55,383
Wall-paper trimmer. John T. Montgomery	55,290	Wheel. William Murphy, et al.	57,229
Wall plaster. Walter A. Robinson	54,487	Wheel barrow, etc. Remus A. Kneeland	57,768
Wardrobe. Byron R. McIntyre	56,086	Wheel for cycles and vehicles. Richard T. Bellemev, et al.	55,842
Washboard. Maria R. Asselin	56,626	Wheel for vehicles. Edward J. Birchred	54,628
Washboard. Melvin Peck	54,857		
Washboard. Samuel A. Watson	54,672		
Washboard. William H. Orr	58,168		



Wheel for vehicles. The Samped Steel Vehicle Wheel Co.	57,476	Window shade. George Biehn.	57,066
Wheel for vehicles. William Chipman, et al.	55,147	Window shade and roller. George McCleary.	57,123
Wheel hub. Benjamin Crowther, et al.	58,441	Window shade fastener. Edmund F. Hartshorn.	58,114
Wheel hub. G. Sherman.	56,461	Window shade support. William H. Bisbee.	58,528
Wheel hub. Gustavus E. Strauss, et al.	54,699	Window shutter. Morris Lary.	54,661
Wheel hub. Jean B. Gerand.	54,618	Window shutter and awning. Max Gluck.	57,085
Wheeled plough. The David Bradley Manufacturing Co.	58,131	Window structure. The Philadelphia Safety Window Co.	57,049
Wheel rim. Samuel Siggins.	54,952	Wire bender. Marion T. Deck.	57,110
Wheel rim clamp. Charles Schalles.	56,303	Wire broom head. Simon L. Brandt, et al.	56,818
Wheel spoke nipple. William G. Allen.	56,288	Wire coil machine. Henry M. Jackson, et al.	56,646
Wheel spoke and rim fastening. Allen T. Clapp, et al.	55,210	Wire fabric making machine. Alva La S. Kitzelman.	56,779
Wheel tire. Gustav Podoll, et al.	57,185	Wire fabric making machine. Frank B. Hart.	56,131
Wheel tire. Alfred A. Furst.	54,957	Wire fence. Charley Heitsch.	57,581
Wheel tire. James Jamieson.	54,535	Wire fence machine. William H. Campbell.	54,546
Wheel tire. Jared H. Beamer.	57,178	Wire fence making machine. William F. Dobbs.	57,814
Wheel tire. William H. Servell.	57,700	Wire fence making machine. Joseph Beauregard.	57,852
Wheel tire and rim. William Hamilton.	55,852	Wire fencing machine. John Lane, et al.	55,360
Wheel thread. Henry Tudor.	57,651	Wire mattresses. Theodore W. Svane.	57,928
Wheels to axles. Device for attaching. The Toledo Metal Wheel Co.	57,336	Wire mattress and frame. F. G. Gale.	54,578
Whiffletree. George Heon.	57,272	Wire nail making machine. Charles C. Kesty.	55,446
Whiffletree. William D. Hopkins.	56,109	Wire nail making machine. Isaac Frechette.	55,125
Whiffletree irons. John W. Jones.	56,431	Wire rolling machine. William G. Allan.	56,641
Whip socket and rein holder. Louis M. Schulz.	58,154	Wire stay weaving machine. Charles A. Willmarth.	58,085
Whist playing apparatus. Lewis W. Heath.	56,676	Wire stretcher. Elvin S. Barrows.	56,428
Wick for hydrocarbon oil. The Lee Lamp Patent Co.	55,686	Wire stretcher. Joseph C. Walker.	58,225
Wick raiser. Eusebio F. Cabezola.	58,445	Wire stretcher. John E. Wheelock.	57,401
Wick tube for lamps. Nathan D. Ingram.	56,021	Wire stretcher. Robert J. Gardner.	58,299
Wind wheel. John F. Ford.	56,749	Wire swage. The Marcus Mason Manufacturing Co.	56,810
Wind wheel. John P. Fruit.	55,677	Wire weaving machine. William G. Phillips.	58,000
Windlass. Charles D. Lee.	56,353	Wood. Dry distillation of. Adolf Schmidt.	56,583
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- Connelly, W. Means for pumping oil wells. . . . . 55,023
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- Conover, J. F. Piano. . . . . 55,284
- Consolidated Car Heating Co. Motor truck. . . . . 58,126
- Consolidated Telegraph and News Co. Printing telegraph. . . . . 57,454
- Converse, F. M. Hook. . . . . 54,753
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- Conway, H. V., et al. Fence tightener. . . . . 56,819
- Conway P., et al. Clapboard making machine. . . . . 57,539
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- Cooley, W. H. Electric machine. . . . . 56,361
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Elsasser, J. Lock	56,241	Ferguson, O. S. Stove-pipe damper	55,366
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International Meter Co. Gas meter	57,416	Jordan, A. Disintegrating machine	55,693
Interior Conduit and Insulator Co. Tube lining method	57,057	Jordan, F. G. Furnace for extracting precious metals	55,145
Iredale, J. H. Bicycle tool	56,532	Jordan, H. S. Chair	56,904
Irving, H. Water purifier for steam boilers	58,388	Jordan, J. J., et al. Boot and shoe lasting machine	57,354
Isaac, George. Printing plate	54,784	Jordan, W. A., et al. Steam engine	56,978
Isherwood, A. Loom shuttle	58,186	Jordan, W. N., et al. Car compier	55,964
Iverson, N. G. Pump	57,124	Joyce, Abraham, et al. Can closure	54,850
Jack, J. W. Stove oven	56,693	Joyce, J., et al. Electric furnace	56,501
Jack, R. Paper bag opening or mouth	56,499	Judson, C. K., et al. Machine for forming belt lacing	54,746
Jackson, B. F. Car brake	56,098	Judson, C. W. Card shooter	57,016
Jackson, H. M. and G. M. Wire coil machine	56,646	Jumeau, F. A. Carpet, etc.	57,761
Jackson, J. E. Leather sewing machine	56,506	Jurschina, F. Filtering material	56,951
Jackson, J. T., et al. Radiator	54,657	Jutz, E. J. Display rack	57,792
Jackson, J. W. Cold iron shears	58,302	Juwil, C. W. Air brake retainer	55,094
Jackson, M. E., et al. Bottle	57,594	Kahnt, O. Floor construction	56,337
Jackson, M. E., et al. Egg case	57,529	Kalina, F. Pneumatic tire	54,701
Jacobus, J. W. Inkstand	58,465	Kalling, L. Bottle sealing device	56,430
Jacques, W. W. Process of converting carbon energy into electrical energy	55,129	Kanman, F. W., et al. Buggy top	54,939
James, H. W. Pump	56,734	Kane, J. P., et al. Car fender	56,064
Jameson, A. J. and J. Shelf and table	54,680	Kane, J. P., et al. Combination tool for masons' use	57,188
Jamieson, James. Wheel tire	54,535	Kane, J. P., et al. Spittoon	56,139
Janney, Raymond. Spring	54,608	Kane, M. Grain binder	58,019
Janney, W. S., et al. Electrical distribution system	55,475	Kane, Maurice. Harvester bundle carrier	56,965
Jardine, A., et al. Pedal and toe clip combined	55,533	Kanitz, S., et al. Furnace grate	57,807
Jardine, (A.B.) & Co. Tire upsetting machine	55,445	Karle, H. Floor material	56,775
Jardine, T. Farinacious food	56,243	Karyscheff, A., et al. Apparatus for the production of metals from their ores	58,208
Jardine & Co. Drill	54,845	Kaschenbach, J. Bed	58,384
Jarvis, C. W., et al. Lock nut	55,071	Kaspar, F. J. Button making machine	56,936
Jarvis, H. E. Pen holder	55,578	Katz, S. Artificial fuel	55,481
Jeffrey, J., et al. Chemical engine	58,481	Kauer, H., et al. Life saving apparatus	55,097
Jenkins, W. Bicycle	54,967	Kaufmann, G. A. Fence wire stretcher	57,660
Jennings, A. G. Wheel	54,705	Kauffer, H. P. et al. Cash register	58,479
Jerguson, A. P., et al. Pipe joint	55,031	Ka Vear, J. W., et al. Nut lock	58,230
Jessup, N. C. Drawbridge	54,479	Kearney & Foot Co. File cutting machine	57,939
Jewell, O. H. and W. M. Filter	57,289	Keavy, T. E. Chuck	56,624
Jewett, G. D. Ice cream freezer	54,776	Keefe, W. F. Pen	57,679
Johnson, W. Nut lock	56,776	Keeler, D. W. Box cover fastener	54,752
Joel, H. F., et al. Electric lamp	56,579	Keeling, I. N. Vehicle brake	56,111
Johnson, A. Bicycle seat post	58,348	Keimer, F. A. Bottle stopper	56,106
Johnson, A. P. Stove	56,905	Keiper, H. B. Ball or roller gearing for transmitting motion	58,339
Johnson, C., et al. Thill coupling	57,551	Keith, A. Gas condenser	55,196
Johnson, C. F. Advertising sign	56,044	Keith, J. Envelope sealing and stamp attaching machine	56,990
Johnson, C. H. Fluid pressure machine	57,204	Keller, A. M. J. Bicycle	56,546
Johnson, F., et al. Wheel	54,590	Keller, David A. Hat mark	54,519
Johnson, F. E. Cultivator	56,136	Keller, F. C., et al. Liquid bottling apparatus	57,954
Johnson, G. A., et al. Engraving process	55,981	Keller, J. M. Feed water heater	56,653
Johnson, G. W. Potato digger	57,983	Kelley, W. V. Truck bolster	56,989
Johnson, H. J. Boiler flue cleaner	57,109	Kelley, P. Boot last	57,081
Johnson, J. Corn cutting device	57,382	Kellner, Carl. Metallic cyanides	54,514
Johnson, J. Gas stove	58,511	Kellner, Dr. C. Electrode	55,130
Johnson, J. F., et al. Gold separator	58,232	Kellogg, Byron W. Sleigh knee	56,174
Johnson, J. P., et al. Car coupler	55,355	Kellogg, C. S. Mucilage bottle	55,910
Johnson, L. Drag saw	55,372	Kellogg, H. O., et al. Banjo	58,326
Johnson, M. W., et al. Belt guide	55,955	Kelly, H. Foot guard	54,928
Johnson, S. A. Smoke prevention apparatus	55,373	Kelly, J. A., et al. Boot and shoe lasting machine	57,354
Johnson, T. R. H. Car fender	56,241	Kelly, J. F., et al. Electrical distribution system	57,787
Johnson, W. Awning fixture	56,803	Kelly, J. F., et al. Electrical measure and indicator	55,524
Johnson, W. A., et al. Tank heater	57,569	Kelly, J. W., et al. Gas generator	57,835
Johnson, W. H. Railway crossing	57,413	Kelly, R. E. Bicycle alarm	56,528
	5,363	Kelly, W. E. Bicycle handle bar	55,559
		Kelman, J. L. Musical instrument	57,349
		Kelso, R., et al. Hose covering	57,045
		Kelso, W. H. Miners' pick	58,269

Kemble, W. C. Rail fastening	58,291	Knaust, G. H. Non-refillable bottle	56,345
Kemp, J. S. Manure spreader	57,549	Kneeland, R. A. Wheelbarrow, etc.	57,768
Kempshall, E. Apparatus for spreading plastic material	54,732, 54,733	Knepper, C. L. Water bicycle	57,177
Kempshall, Elcazer. Eyelet	54,731	Knight, H. H., et al. Egg case	57,529
Kempshall, Elcazer. Eyelet covering apparatus	54,477, 54,478	Knight, Jesse A. Woven bag	54,498
Kempshall, E. Eyelet covering machine	54,730	Knight, John H. Velocipede	54,698
Kempshall, E. Lacing	56,078	Knight, W. H. Motor vehicle	56,435, 56,436
Kempshall, E. Lacing tip	56,634	Knoll, W. Billiard cue chalker	56,968
Kendall, E. D. Gas making process and apparatus	55,181	Knox, B. M. Thread winding machine	56,494
Kendall's Patent Reversible Window Sash Co. Window sash and frame	57,617	Knox, W. J. Soldering compound	55,634
Kendall, W. G. Spring bed	54,666	Koeng, K., et al. Galvanic elements	56,705
Kenly, G. T. Faucet	55,185	Kohl, H. Apparatus for separating water from steam	56,486
Kenna, M. P. Planer for woodcuts and electroplates	56,886	Kohl, H. Pump and refrigerator	56,485
Kennedy, A., et al. Nailless horse-shoe	57,682	Kohler, A. Le R. Baling press	55,180
Kennedy, F. M., et al. Hoop-making machine	54,918	Kohn, J., et al. Petroleum lamp	58,317
Kennedy, F. M. Well drilling apparatus	57,985	Kohn, L., et al. Ventilated receptacle	58,133
Kennedy, J. E. Boot and shoe ventilator	56,311	Kohnberger, E. Corset	54,743
Kennedy, J. E. Shoe	56,493, 57,306	Kömeman, W. A. Fluid separating machine	56,371
Kennedy, J. H., et al. Waggon spring	58,170	Komestik, J., et al. Anti-incrustation mixture for boilers	54,814
Kennedy, J. M. Vise	54,822	Köneman, W. A., et al. Pulverizing apparatus	58,228
Kennedy, M. A. Vending machine for newspapers	54,713	Köneman, W. A., et al. Treatment of ores	58,396
Kennedy, W. J. W. Bag holder	56,140	Körmendy, G., et al. Telephonic installation	55,250
Kennedy, W. J. W., Wagon	56,103	Koven, T. J. Clutch	54,629
Kennelly, A. E., et al. Illumination measure	55,798	Kraemer, F. Earth thawing device	57,979
Kenney, F. E., et al. Alkali separator	55,218	Kraemer, J. C. and G. H. Acetylene gas generator	58,209
Kenny, P. T. Advertising device	58,002	Krahn, E., et al. Wheel hub	54,699
Kent, E., et al. Carpet beater	56,924	Kramer, W. F. Fifth wheel	57,767
Kepler, Orlando L. Track gauge	58,167	Kramer, O. Flooring, plastering and ceiling material	55,318
Kern, E. L. Railway switch	57,264, 57,265	Kranzer, A. Tube cutter	56,670
Kern, O. Gas burner	57,297	Krayn, R., et al. Galvanic elements	56,705
Kerns, E. E. Valve	56,643	Kreff, F. Hydrostatic vessel propulsion and steering apparatus	58,174
Kerr, H. H. Cigarette holder	58,467	Kreners, A., et al. Antiseptic compound	56,249
Kerr, J. S. Binder	58,115	Kreuziger, J. H. Box	58,148
Kerst, J. G. Brick rougher and sander	55,663	Kretschmar, J. Musical stringed instrument bow	55,933
Kersten, E. Bottle cleaning machine	56,150	Kretz, G. F. Dredging machine	55,006
Keshner, P., et al. Railway tie and clamp	54,549	Kridler, Amis. Carriage top connections	57,666
Kessler, C. Hose reel	57,226	Krimer, J. H. Oil catching device	55,190
Kesty, Charles C. Wire nail making machine	55,446	Kruschke, H. D. Wrench	54,992
Ketter, J., et al. Waggon	56,103	Kulescar, J. Lamp chimney protector	58,492
Key, G. F. Railway tie	57,640	Kuhn, R. Electrical distribution system	50,120
Keyes, F. E., et al. Pulp moulding machine	55,588	Kunstwerber, Claviez & Co. Jacquard machine	54,979
Keyes, H. F., et al. Musical instrument mouth piece	55,926	Kunstwerber, Claviez & Co. Loom	55,283
Keyes, W. F. Velocipede mud guard	56,531	Kykooskoff, E. Railway car for cattle	38,038
Keystone Axle Co. Car axle making machine	54,474	Labelle, L. V. Fertilizer distributor	57,410
Kibbe, A. R., et al. Distributer for insect poison and fertilizers	54,656	La'urt, J. Car coupler	57,560
Kiddie, W. M. Liquid elevator	56,512	Lacoste, J. Cigar making machine	57,583
Kidwell, E. Brace	56,325	Lacroix, J. Baking pan	55,419
Kiefel, C. Snow shoe	56,618	Lacroix, J. Sterilizing machine	57,848
Kieley, F. J., et al. Damper regulator	58,013	Laev, G. W. Car truck	56,729
Kilgore, F. O. Loading and unloading machine	54,853	Ladd, G. W. Book support	56,104
Kilmer, C. E., et al. Liquid applying device	57,801	Ladd, S. W. Lasting machine	56,491
Kimpton, H. K. Weather strip	57,024	Laforest, J. O. A. Water service post	58,474
Kincaide, J. M. Car coupler	54,613	Lahofish, C. S., et al. Cyclometer	56,211
Kinch, D. B. Tobacco pipe mouth piece	57,328	Laird, G. T., et al. Feeding trough	55,096
Kindle, F. M. Car truck	56,089	Laird, J. Binder for bales, etc.	56,971
Kincham, W. Weather vane	57,386	Laird, R. H. Hot water heater	56,326
King, A. J. Chair seat	57,379	Lajoie, D. G. Weeding machine	58,144
King, J. G. Stove	58,070	Lake, J. N. Fire extinguisher	55,577
King, J. M. Rubber footwear	55,605	Lake, S. Submarine vessel	55,625
King, R. Coal screen	57,122	Lalime, J. B., et al. Fire alarm and extinguisher	55,657
King, R. M. Ticket carrier	58,311	Lalime, J. B., et al. Fire extinguisher	56,257
King, W. H. Bicycle roller bearing	55,538	Lalonde, M., et al. Semaphore	57,733
Kingsford, T. Rotary cutter	57,055	Lamb, R. B., et al. Bicycle tire guard	55,566
Kingsford, T. Tank	55,233	Lammers, H. Baking oven	55,081
Kingsley, A. F. Boiler furnace	57,496	Lamoureux, A. F. Table leg	57,568
Kinne, W. O. Trace carrier	56,901	Lampough, F. W., et al. Ore separator	57,342
Kinsel, A. M., et al. Folding cot	58,283	Lancaster, C. J. Nail, spike, bolt, screw, etc.	58,235
Kipling, J., et al. Acetylene gas generator	58,192	Landan, K. E. Ironing machine	47,517
Kipling, T. Cradle	56,564	Landan, K. E. Umbrella, etc.	56,418
Kipp, H. T., et al. Storm door	55,118	Landon, G. A. Neck yoke	57,418
Kirk, W. R. Railway spring	54,927	Landstra, D. Skylight and ventilator	55,661
Kirkpatrick, W. G., et al. Box car	57,875	Lane, A., et al. Manufacture of carbons for electric lights	55,178
Kirkwood, J. Watering apparatus for stock, etc.	56,458	Lane, F. S., et al. Car fender	58,076
Kirlin, O. M. Vehicle brake	56,787	Lane, J. Gate	58,500
Kirsch, B. Rope for circular cross sections	57,730	Lane, J. and C. Wire fencing machine	55,360
Kisner, H. U. Saw set	55,326	Lane, M. H., et al. Cash register	58,479
Kilsee, Isidor. Telegraphic communication	55,878	Lang, S. R. Hinge	58,109
Kitselman, A. La S. Wire fabric making machine	56,779	Langbeck, A. W. Horsehair substitute	57,964
Kitson, A., et al. Gas condenser	55,196	Langenfeld, W. Musical instrument	57,007
Klatzig, O. Chain link	55,066, 55,067	Langford, E. P. Wagon box	56,682
Klanberg, C. Brush	54,818	Lammer, Ascel M. Stove	54,494
Kleiderer, Louis P. Cuff holder	55,322	Lansell, G. Pump	58,086
Klein, H. Show stand	55,589	Lauston, E. Typetting machine	56,735
Klein, I. Rubber tire	56,271	Lantzke, A. Insulating covering	56,943
Klein, W. Coffin handle	56,510	Laporte, J. C. Gate	56,797
Klinck, J. W. Brick and stone work	58,106	Larkin, J. A. Vocalizing audiphone	56,503
Klose, K. A. et al. Caster	55,994	Larkins, F., et al. Dust pan	55,665
Knapke, J. Fire escape	55,420	Laroque, A. Bicycle boot	56,218
Knapp, F. A., et al. Marine vessel	55,620	Larsh, D. L., et al. Cutter head	56,187
Knapp, J. H. Device for holding screws, nails and bolts	55,102	Larson, Ole. Drill sharpener	55,100
		Larson, W. et al. Oil cup	55,973
		Lary, Morris. Window shelf	54,661

Latimer, J. M. Plow	56,567	Long, S. E. Railway water tank	57,115
Law, O. W. Sawing frame	57,390	Longard, C. C. Boiler for heating systems	58,410
Laub, H. C. Brake coupler	54,877	Longard, C. C. Grate	58,411
Laubsch, C. S., et al. Pipe elbow	57,619	Lord, William. Grain conduit	54,983
Laurin, J. Bed	56,423	Lorillard, P. Fluid distributor	56,406
Laux, H., et al. Railway tie and clamp	54,549	Lathrop, C. A., et al. Vehicle tire	55,865
Lavender, C. T., et al. Velocipede	54,714	Loucks, Z. K., et al. Darning apparatus	55,650
Lavergne, L. Washing machine	54,781	Louden, W. Hay carrier track	55,369
Lavergne, L., et al. Sewer trap	54,980	Lounsbury, L. C., et al. Spike and bolt puller	56,287
Lawler, A. H. Nut lock	58,501	Lowe, J. L. Pencil sharpener	56,671
Lawler, J. J. Feed water regulator	54,541	Lowdon, D., et al. Electrical resistance	55,997
Lawrance, L. O. Sanitary ejector	57,369	Lowe, B. B. Mast hoop	57,062
Lawrence, H. A. Sap spout	56,339	Lowe, L. T. Packing gland bolt protector	57,550
Lawton, Evacuating device for bottles and boxes	57,759	Lowry G. A. Glass twine making machine	57,802
Lawyer, C. W. Button	54,816	Ludlum, T. B. Hydraulic mining machine	57,197
Lay, F. B., et al. Cash register	58,479	Ludwick, J. E. Oven for baking	56,552
Leach, H. L. Track sanding machine	54,588	Lumb, J. Lubricator	55,943
Leadbeater, J. W. Artificial fuel	58,284	Lumière, A. and L. Photographic apparatus	55,868
Leask, J. and T. W., et al. Sash holder	57,628	Lumière, A., et al. Photographic apparatus	55,404
Leathers, M. J. Waggon step	56,611	Lumière, Louis, et al. Photographic apparatus	55,404
Leavitt Machine Co. Valve and valve seat repairing system	55,376	Lundberg, A. Book support	57,302
Lebel, Godfroid. Ice creoper	55,016	Lundberg, A. E., et al. Vehicle brake	57,728
Leblanc, A., et al. Sleigh	55,669	Lussier, P., et al. Railway switch	55,271
Leblanc, J., et al. Track sanding apparatus	57,069	Luther, C. W. Veneer	57,307
Ledoux, A. R., et al. Method of separating nickel from copper and matte	58,427	Luther, O. Bicycle gear	54,685
Ledoux, A. R. Nickel separating process	56,772	Luther, W. S., et al. Fish net making machine	58,295
Lee & Co. Storage battery	57,662	Lutwyche, E. J. Letter for signs	58,165
Lee, C. D. Windlass	56,353	Luxon, J. N. Lamp and coal oil stove	56,074
Lee, John. Air brake valve controller	55,138	Lydiatt, James. Glass blowing apparatus	54,648
Lee, J. C. Skate brace	54,603	Lyman, G. L., et al. Machine for making belt lacing	54,746
Lee Lamp Patent Co. Wick for hydrocarbon oil	55,686	Lyon, W. T. Dental appliances	55,583
Leech, E. G., et al. Envelope moistner and sealer	55,907	Lyons, J. A. and G. Egg tester and sorter	56,374
Lees, J. Brake	57,171	Lyons, J. M., et al. Railway passage ticket	58,127
Leger, D. S. and O. S. Nut lock	54,938	Lyons, Mary. Trunk and hat box	55,225
Leggat, J. Peg strip	57,815	McArthur, E., et al. Lamp extinguisher	55,587
Leggat, J., et al. Wheel	57,229	McCabe, W., et al. Electric railway	58,231
Leggo, W. A. Bicycle brake	55,275	McCabe, W. L., et al. Conveyor for bales, boxes, etc.	55,141
Legrand, J. G. Gold washer	55,142	McCabe, W. L., et al. Freight transferring apparatus	57,438
Legros, O. Fare-box register	57,844	McCaffrey, J. G. Water motor	55,468
Leibach, G. Pipe joint	56,342	McCallum, D., et al. Wheel	54,590
Liebe, H. L., et al. Alarm or signal	55,542	McCallum, W. Kettle	57,644
Lemay, A. Door fastener	57,756	McCartney, J. Oscillating engine	57,687
Lemieux, A. Non-refillable bottle	54,931	McCaskill, D. A., et al. Gold dredge	57,752
Lenny, E. Bracket	56,068	McCauley, W. D. Cultivator	54,665
Lennox, R., et al. Wheel for vehicles	55,147	McChesney, J., et al. Apparatus for preventing horses from running away	57,613
Leonard, J. A., et al. Ink stand	54,907	McClair, C. A., et al. Ore crusher	56,771
Leonhardt, H. Draft equalizer	57,127	McCleary, G. Window shade and roller	57,123
Leroque, L., et al. Hame brace adjuster	56,259	McClellan, O. S., et al. Method of reheating exhaust steam	55,711
Lisher, C. P. Agricultural implement	54,616	McClellan, Stephen. Brace	54,499
Leslie, G. H., et al. Gas burner cut off	56,403	McClellan, W. J. Railway frog	56,686
Lesue, E. J. H., et al. Rotary engine	57,102	McClure, A. E., et al. Belt	56,753
Lessard, T. Ventilator	56,592	McColl, F. P. Metal packing vessel	54,863
Lester, T. W., et al. Clothes blueing device	57,067	McColl, J. H., et al. Shoe and moccasin	58,078
Lester, T. W., et al. Shoe and moccasin	58,078	McCollam, D. S. Animal trap	58,454
Le Vins, M. Oil can	57,575	McCollam, J. H. K., et al. Air pump for pneumatic tyres	58,069
Lewis, G. E. M. Shoe shank stiffener	57,414	McCollam, P. G. Mucilage bottle	56,396
Lewis, J. E. Vehicle axle and nut	57,780	McConehey, James. Cycle tyre	54,724
Lewis, J. F. Lubricator	57,439	McConkey, E. G. E. Window fastener	57,116
Lewis, James H. Bicycle saddle	54,951	McCool, G. Shears for cutting iron	56,879
Lewis, J. L. Roll casting mould	55,294	McCoy, J. G., et al. Animal trap	57,755
Lewis, J. S. Box	57,766	McCoy, R. Car	56,917
Lewis, L. Medicinal compound	57,834	McCrea, J. L. Gate	58,495
Lewis, O. H. Hay fork	55,615	McCue, T. W. Antiseptic compound	58,254
Lewis, T. A., et al. Uterine dilator	57,664	McCurdy, A. W. Gate	55,359
Ley, W. N. Sign	57,019	McDaniel, J. Wheat washing machine	55,954
Lick, H. M. Box and package	57,407	McDermott, H. Sawmill set works	58,091
Lightbanc, C. B. Reaper and binder feeder	55,367	McDermott, W. E., et al. Can soldering machine	56,369
Lilley, J. E., et al. Mineral disintegrating machine	55,684	McDonald, D., et al. Ore crusher	56,771
Limerise, G., et al. Car coupler	57,280	McDonald, F. Heel for boots and shoes	58,082
Limerise, G. Saw set	55,296	McDonald, James. Belt fastener	54,856
Lincoln, J. M. Bicycle luggage carrier	55,831	McDonald, J. A. Weed destroying machine	54,975
Lincoln, J. M. Bicycle support	55,864	McDonald, Robert. Wrench	54,830
Linde, F. Car coupler	55,501	McDonald, W. S., et al. Water closet ventilator	54,475
Lindfors, E. Plane guide	55,289	McDonnell, G. P., et al. Bicycle bell	58,061
Lindgren, J. Claw bar	56,354	McDonnell, R., et al. Vegetation exterminator	55,490
Lindsay, J. Mucilage bottle	56,402	McDugall, J. W. Pneumatic tire	54,690
Lindsay, T. W. A., et al. Chair	57,325	McDuffee, A. J. Velocipede gearing	57,478
Lingard, G. A., et al. Photo collographic printing	57,947	McDuffie, S. E. Planer head	57,744
Linke, T. Filter	56,517	McEachen, A. Non-refillable bottle	55,771
Linton, H. Kitchen cabinet	55,114	McEachen, G. Wrench	57,203
Lippincotte, A. C. Planimeter	54,782	McEachren, J. D. Furnace	55,331
Lisson, W. Plough point	57,035	McEwen, D. T. K., et al. Lamp extinguisher	55,587
Littlejohn, C. F. Placket fastener	57,293	McGee, P. S. Monument inscribing apparatus	57,735
Livergood, H. J. Dust separator	54,589	McGee, R. J. Waggon brake	54,551
Livingston, F. H. Stove pipe clamp	55,707	McGillis, A., et al. Hame trace adjuster	56,259
Lloyd, D. Show bin for seeds	57,006	McGraw, A. J., et al. Truss	57,869
Loadwick, B. E. Wash bowl and sink	56,799	McGreavey, J. A. Straw harpoon	56,927
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Nass, H. File and rasp	57,449	O'Neil, S., et al. Combination tool for miners' use	57,188
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Natschke, W. F. Cultivator and draft equalizer	55,483	Opsahl, J. R. Steam engine cut off	56,464
Nawrath, R. Barrel making machine	58,102	Orfeur, J. H. Bag winding apparatus	57,299
Neeb, W. H. Stove truck	57,387	Orr, W. H. Clothes holder for clothes lines	57,113
Nehmer, A. E. F. Cycle	55,163	Orr, W. H. Horse shoe	57,281
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Read, Alonzo P. Window fastener	56,812	Ritter, F. S. Grain mixer	55,002
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		Robertson, A. J. Pneumatic tire puncture preventer	55,561
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Robinson, Hugh M. Lamp heater	54,497	54,497	Saunders, A. Cheese cutting machine	55,794
Robinson, J. C., et al. Fastener	55,350	55,350	Saunders, D. R., et al. Bottle	55,046
Robinson, J. K., et al. Brush making machine	55,389	55,389	Saunders, J. H. Smoke consumer	57,580
Robinson, M. Cow anti-kicking device	56,804	56,804	Saunders, L., et al. Nut lock	56,363
Robinson, T. H. Corset	55,584	55,584	Savery, T. H. Paper making machine shake frame	57,819
Robinson, W. D. Filter and valve	56,394	56,394	Savoie, F. T. Pump	55,311
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Robinson, Walter A. Wall plaster	54,487	54,487	Sawyer, H. De W. Stove	57,301
Robison, F. L. Baking press	55,048	55,048	Saxon, F. H. Saw gauge	57,428
Robley, C. J., et al. Bedstead	56,710	56,710	Sayer, R. C. Car coupler	56,781
Roche, H. H. Car switcher	55,497	55,497	Saylor, C., et al. Rotary engine	57,892
Rochester Automatic Lubricator Co. Lubricator	58,182	58,182	Schamman, C. F. Match blank	57,008
Rochester Cash Register Co. Cash register and indicator	55,990	55,990	Schaab, J. J. Stove pipe thimble	55,192
Rochester, W. G., et al. Engraving process	55,981	55,981	Schaake, H. Can soldering machine	55,623
Rockwell, E. B. Compass stand	55,132	55,132	Schaller, O. Slate ruler	56,032
Roger, J. Ore crusher	55,800	55,800	Schalles, C. Wheel rim clamp	56,303
Rogers, E. H. Sewer trap	56,090	56,090	Schans, W. V. Bolster stake	56,908
Rogers, H. M. Mattress stuffing machine	54,596	54,596	Scharff, A. Non-refillable bottle	56,997
Rogers, S. Car brake	56,688	56,688	Schay, M. H. Screw driver	56,667
Rogers, T. J. Trolley for kites	57,010	57,010	Schell, N. Bust form	58,206
Rollison, J. R. Spring bed	55,823	55,823	Schenck, M. P. Water wheel governor	56,580
Roller Bearing Truck Co. Roller bearing	54,587	54,587	Schlesenger, W. M. Bicycle pump holder	54,689
Rollfinck, R. F. C. Eyelet	56,666	56,666	Schmeid, W. H. B. Bottle	56,573
Rooney, J. J. Storage battery	55,751	55,751	Schmid, G. M., et al. Rotary engine	57,102
Root, R., et al. Dental plugger	57,364	57,364	Schmidt, A. Acetic acid purifying process	55,888
Roper, D., et al. Wheel hub	58,441	58,441	Schmidt, A. Dry distillation of wood	56,583
Ropp, A. Oxidizing and roasting furnace	58,187	58,187	Schmidt, C. C. Bicycle gearing	56,203
Rosenbaum, M., et al. Hose covering	57,045	57,045	Schmidt, E. Lamp lighting device	55,732
Rosenbluth, E. M. Lantern	56,744	56,744	Schmidt, J. H., et al. Car coupler	57,507
Rosenthal, S. A. Storage battery plate	56,051	56,051	Schmidt, R., et al. Vegetable extracts	58,522
Ross, A. Bicycle handle bar	57,173	57,173	Schmidtlein, C. Sounding board	58,453
Ross, D. Washing machine	55,791	55,791	Schmil, A. M., et al. Stove pipe thimble	54,889
Ross, D. A. Envelope	56,099	56,099	Schmitz, W. J. Gas cooking stove	57,080
Ross, D. G. Bicycle support	56,542	56,542	Schmabel, C., et al. Zinc oxide	56,000
Ross, J. F. Can and seal	55,204	55,204	Schneider, John A. Stove	55,105
Ross, W. Bicycle frame	57,697	57,697	Schneidewind, C. T. G. Vehicle driving gear	57,718
Rossier, G. Potato slicer	57,041	57,041	Schofield, Richard J. Pneumatic tire puncture indicator	54,718
Roth, V. R. and W. L. Non-refillable bottle	57,491	57,491	Scholey, H. T. Vegetable harvester	55,457
Rothlisberger, J., et al. Stove	56,087	56,087	Schonong, W. Process of manufacturing fuel from turf	58,303
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Rothmann, G. H., et al. Alarm for prison cells, vaults, cages, &c.	57,350	57,350	Schuelke, W. Organ	58,491
Rouse, J. J. Bicycle gear	57,717	57,717	Schulte, E., et al. Acetylene gas manufacture	58,292
Rousseau, J. B. E., et al. Leather measuring machine	55,124	55,124	Schulte, J., et al. Clock	58,327
Rousseau, L. Corset	54,576	54,576	Schultz, E., et al. Lantern	58,469
Rouston, W. H., et al. Railway switch	57,449	57,449	Schumacher, J. Gas generator	58,240
Rowand, A. H., et al. Metal welding apparatus	58,183	58,183	Schumacher, R. Music slip	58,300
Rowand, L. G. Electric circuit safety device	56,760	56,760	Scott, A. M. Acetylene gas generator	54,984
Rowley, J. D. Truss	55,253	55,253	Scott, C. H. Tailor's measure	57,913
Rowley, T. Pneumatic tire	54,954	54,954	Scott, C. A., et al. Snow plough	56,483
Roy, J. & S. Valve	55,313	55,313	Scott, M. Pulley	57,112
Roy, J. H., et al. Stove	56,986	56,986	Scott, G. C. Sled boat	57,643
Rubel, Carl. Lime making process	54,840	54,840	Scott, G. H. Electric rail bond	55,752
Rudd, G. A. Horse collar	57,037	57,037	Scott, G. J., et al. Electrical distribution system	55,475
Ruddick, J. J. Railway signal	57,804	57,804	Scott, Harry, et al. Art of printing on wrapping paper	54,502
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Ruggles, G. W. Snow plough	57,515	57,515	Scott, P. Air compressor	55,037
Rund, E., et al. Gas engine	57,021	57,021	Scott, R. H. Pump	57,125
Runnions, J. N. Sleigh	57,639	57,639	Scott, W. Window screen	57,916
Rupenbrod, S. F., et al. Cream dish	56,066	56,066	Scott, W., et al. Cycle Mechanism	56,836
Russell, A. J. Gate	55,972	55,972	Schreier, C. A. Velocipede tire girth	54,712
Russell, A. N. Curtain fixture	54,660	54,660	Schroeder, A. Hinge	54,559
Russell, A. N. Leg shield for firemen	54,806	54,806	Schroeder, F. W. Railway rail fastening	56,940
Russell, S. T. Box	56,941	56,941	Schroeder's Ball Bearing Co. Ball bearing and lubricator	54,964
Russell, W. H. Bicycle	55,546	55,546	Schulhoff, H. Cork press	56,930
Rust, W. B. Printing attachment for paper holders	56,736	56,736	Schulz, L. M. Whip socket and rein holder	58,154
Ruth, P. G., et al. Acetylene gas burner	56,788	56,788	Schultz, Emil A. P. Furnace for reducing ore	57,952
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Ryan, P., et al. Gas stove	57,727	57,727	Schwenke, F. Mowing machine	55,839
Ryan, S. A., et al. Non-refillable bottle	56,816	56,816	Scrader, George H. F. Tire valve	55,534
Ryley, A. G. Stove	57,288	57,288	Screiber, P. Car coupler	56,869
Saal, C., et al. Sash balance and fastener	55,742	55,742	Scribner, J. M. Invalid's bed	57,253
Sackett, C. E. Envelope	57,375	57,375	Scudder, H. Umbrella	56,516
Sadtler, J. P. B. Water heating boiler	57,574	57,574	Senor, W. E., et al. Gold dredge	57,752
Sager, Eli E., et al. Tide motor	57,051	57,051	Searle, H. S., et al. Power transmission	58,375
Sager, William J. Method of treating metals	55,203	55,203	Seay, A. B. Foot-wear protector	55,762
Saint Cyr, E. D. Curette	57,358	57,358	Sebring, W. L., et al. Car door catch	57,493
Salmond, C. Billiard cue chalker	55,902	55,902	Secord, J. McK. Garment pin	54,566
Salot, G. Tool holder	56,895	56,895	See, De W. C. Boot and shoe display forms	55,316
Salzman, C. A., et al. Combination tool	56,992	56,992	Seeligmann, G. Fire lighter	55,195
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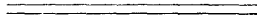
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## E R R A T A .

For the word "Links" in the title of patent No. 57,862, in the *Record* for October, 1897, read "Limbs."

Pour les mots "chaines brisées" lire "membres brisés."

For the name "Pagnette" in the same case, read "Paquette."



# The Canadian Patent Office

## RECORD





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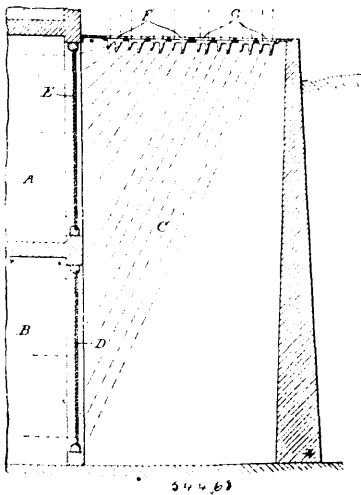
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### INVENTIONS PATENTED.

NOTE.—Patents are granted for 18 years. The term of years for which the fee has been paid, is given after the date of the patent.

#### No. 54,468. Vault Light. (*Lumière pour voûtes.*)

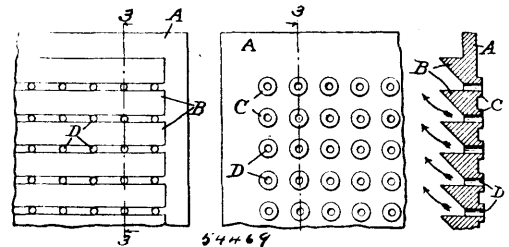


The Prismatic Glass Company of Toronto, assignee of James Grey Pennycook, all of Toronto, Ontario, Canada, 2nd January, 1897; 6 years. (Filed 23rd November, 1896.)

*Claim.*—1st. The combination of a vault light having reflecting surfaces calculated to reflect the light and direct it against the front of the basement beneath, with a refracting light or window in the front of the basement to take the light and refract it in a line somewhat parallel with the length of the basement. 2nd. The combination of a vault light consisting of a series of sections having reflecting surfaces at different angles in combination with a series of basements one above the other, and refracting window lights in the front of each basement, the reflecting angles of the vault lights being such as that each section throws its light upon its associated basement window, whence the light is carried through such basement in lines substantially parallel with the length thereof. 3rd. A vault light comprising a series of tile arranged in sections, the tile sections having increasingly inclined reflecting angles from the outer edge of the light in toward the building. 4th. A vault light comprising a series of tiles arranged in sections, the tile sections having increasingly inclined reflecting angles, from the outer edge of the light in

toward the building, each tile having a series of prisms of increasing length outwardly from the building. 5th. A vault light comprising a series of tiles arranged in sections, the tile sections having increasingly inclined reflecting angles from the outer edge of the light in toward the building, each tile having a series of prisms of increasing length outwardly from the building, the longer prisms having reflecting surfaces less inclined than the shorter prisms.

#### No. 54,469. Ventilator. (*Ventilateur.*)



The Prismatic Glass Company of Toronto, assignee of James Grey Pennycook, all of Toronto, Ontario, Canada, 2nd January, 1897; 6 years. (Filed 23rd November, 1896.)

*Claim.*—1st. As a new article of manufacture, a window glass consisting of a body with ribs on one side and having each a face substantially at right angles to the body of the glass, and a longer face inclined thereto, and an aperture between such ribs. 2nd. As a new article of manufacture, a window glass consisting of a body with a series of ribs on one side thereof, having each a face substantially at right angles to the body and one longer inclined face, and an aperture between the ribs arranged at its outer end so as to shed water. 3rd. As a new article of manufacture, a window glass consisting of a body with ribs on one side and having each a face substantially at right angles to the body of the glass and a longer face inclined thereto, and an aperture between such ribs, and a boss at the outer extremity of the aperture surrounding the same. 4th. As a new article of manufacture, a window glass consisting of a body with ribs on one side having faces adapted to reflect the light, and an aperture between such ribs. 5th. As a new article of manufacture, a window glass consisting of a body with ribs on one side having faces adapted to reflect the light, and an aperture between such ribs.

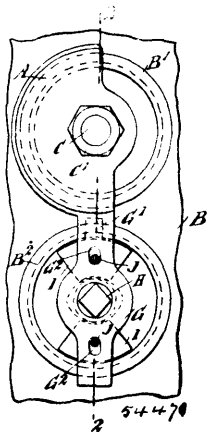
#### No. 54,470. Boiler-Tube Cutter.

(*Machine à couper les tubes de chaudières.*)

Frederick Colman, assignee of Julius Richard Bisbee, Territory of Arizona, U.S.A., 2nd January, 1897; 6 years. (Filed 2nd November, 1896.)

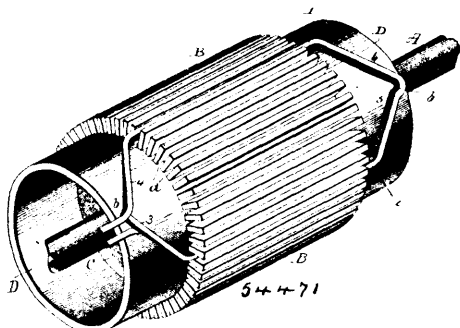
*Claim.*—1st. A boiler-tube cutter provided with a tool-carrier adapted to be turned and formed in its peripheral surface with an annular groove into which leads a transverse opening forming a guide for the cutter, substantially as shown and described. 2nd. A boiler-tube cutter, comprising a stand or yoke, a feed-screw mounted to turn therein, a feed-block held loosely on the said feed-screw and moving longitudinally therewith, said block being provided with an inclined groove, a cutter engaging with its inner end the said groove, a tool-carrier mounted to turn loosely on said feed-screw and formed with an opening in which slides said cutter, and means, substantially as described, for holding said yoke in position in front of the tube to be cut, said means being locked to the adjacent flue, as set forth. 3rd. A boiler-tube cutter, comprising a stand or yoke having

a cutting device adapted to enter the tube to be cut, a plate secured to said stand or yoke and arranged to extend over an adjacent tube,



jaws mounted to slide on the plate and arranged to engage the inner sides of said tube over which the plate extends, and means for moving the jaws on the plate to press them against the inner sides of the tube, substantially as set forth. 4th. A boiler-tube cutter, comprising a stand or yoke having a cutting device to cut a tube, a plate connected to said stand or yoke and arranged to extend over an adjacent tube, a shaft carried by the plate having a cam and adapted to be turned, and jaws carried by the plate and actuated from said cam, said jaws being arranged to engage the inner side of the tube over which the plate extends, substantially as set forth. 5th. A boiler-tube cutter, comprising a stand or yoke having a cutting device to cut the tube and provided with a screw-threaded boss, and a plate having a screw to engage the threaded boss of the stand or yoke, said plate being arranged to extend over a tube adjacent to the tube to be cut, and being provided with means to engage the inner side of said tube, substantially as set forth. 6th. A boiler-tube cutter, comprising a stand or yoke having a device to cut the tube, and a plate connected to said stand or yoke and arranged to extend over an adjacent tube and provided with slots, a shaft mounted to turn in the plate and provided with a cam, screws arranged to pass through the slots in the plate, and jaws held on the screws in position to be engaged by the cam to press them into engagement with the inner walls of the tube over which the plate extends, substantially as set forth.

**No. 54,471. Armatures for Electric Motors and Dynamos.** (*Armature pour moteurs et dynamos électriques.*)

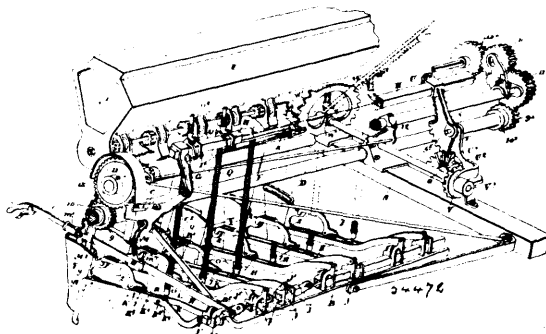


Jonathan Parker Bishop Fiske, of Newton, assignee of Howard Augustus Littlefield, of Lynn, both in Massachusetts, U.S.A., 2nd January, 1897; 6 years. (Filed 15th June, 1896.)

*Claim.*—1st. The combination with an armature core or drum having annular extensions at its ends, of a series of coils disposed on said core or drum and having their ends disposed on said annular extensions, substantially as set forth. 2nd. The combination with an armature core or drum, of a series of coils located thereon and having their ends projecting beyond the ends of said core or drum, and annular extensions secured to said core or drum and supporting the projecting ends of the coils, substantially as set forth. 3rd. The combination with an armature drum or core, and coils mounted thereon and extending beyond the ends thereof, of extensions secured to the drum or core and supporting the projecting ends of the coils, substantially as set forth. 4th. The combination with an armature drum or core, of a series of overlapping coils placed thereon and having their ends projecting beyond the ends of said core or drum, and annular extensions projecting from the ends of said drum or core and supporting the projecting overlapping ends of the coils, substantially as set forth. 5th. The combination with an armature drum or core, of a series of coils arranged

thereon and having ends projecting beyond the ends thereof in a direction concentric with the axis of the core or drum, and an annular flange or extension on each end of the core or drum for supporting said projecting ends of the coils, substantially as set forth. 6th. The combination with an armature drum or core having a series of longitudinal slots, of a series of overlapping coils disposed in said slots and having ends projecting beyond the ends of the core, and flanges extending from the ends of the drum or core for supporting said projecting ends of the coils, substantially as set forth. 7th. The combination with an armature core or drum and flanges secured to the ends thereof, of a series of coils located on the drum or core and adapted to overlap, the ends of said coils projecting beyond the ends of the drum or core and said coils being so formed that one half of each coil will lie against said flanges and the other half of each coil of each coil out of contact with said flanges, substantially as set forth. 8th. The combination with a slotted armature core, of heads secured thereto, annular flanges projecting from said heads, and counterpart detachable coils disposed within the slots in the core and having end portions supported by said flanges, substantially as set forth.

**No. 54,472. Seeding Machine.** (*Semoir.*)

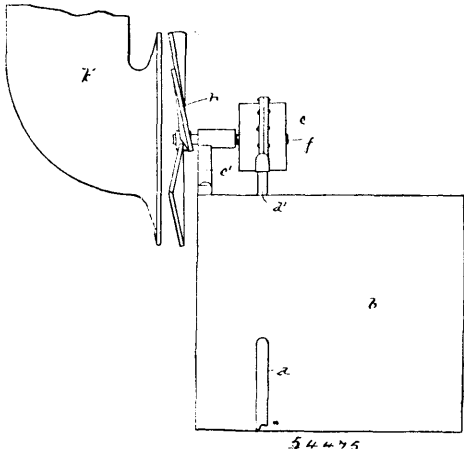


The Peter Hamilton Manufacturing Company, assignee of Andrew Johnston, all of Peterboro, Ontario, Canada, 2nd January, 1897; 6 years. (Filed 27th November, 1896.)

*Claim.*—1st. The combination with the hoes and drag-bars secured to suitable brackets on the cross rod and end journals for the cross bars supported in the frame of the machine, of an end bracket on the end of the cross bar provided with a forwardly extending lug, a connecting rod pivotally connected at the front to the lug, an arm pivotally connected to the side of the frame of the machine and to the rear end of the connecting rod, a lever rigidly connected to the lower end of the arm, and means for maintaining the lever in any desired position to which it may be adjusted, as and for the purpose specified. 2nd. The combination with the hoes and drag-bars secured to suitable brackets on the cross rod and end journals for the cross bars supported in the frame of the machine, of an end bracket on the end of the cross bar provided with a forwardly extending lug, a connecting rod pivotally connected at the front to the lug, an arm pivotally connected to the side of the frame of the machine and to the rear of the connecting rod, a lever rigidly connected to the lower end of the arm, a spring operated plunger on the lever, and a swinging notched quadrant pivotally swung at the top upon the side frame of the machine, as and for the purpose specified. 3rd. The combination with the hoes and drag-bars pivotally attached to the front of the machine, of a lifting bar, rods connecting the lifting bars to the drag-bars, an arm secured at the top to the lifting bar and suitably pivoted on the frame, and means connecting such arm to a lever pivoted at the rear end of the tongue, and further means for retaining such lever when swung to either side of the tongue, as and for the purpose specified. 4th. The combination with the hoes and drag-bars pivotally attached to the front of the machine, of a lifting bar, rods connecting the lifting bars to the drag-bars, an arm secured at the top to the lifting bar and suitably pivoted on the frame, and means connecting such arm to a lever pivoted at the rear end of the tongue, and a quadrant secured to the rear end of the tongue and provided with notches at each side thereof to receive the spring plunger of the lever, as and for the purpose specified. 5th. The combination with the hoes and drag-bars pivotally attached to the front of the machine, of a lifting bar, rods connecting the lifting bars to the drag-bars, an arm secured at the top of the lifting bar, a bracket secured to the tongue and provided with a pivot for the arm, the quadrant on the lower end of the arm, the bevel pinion provided with a quadrant meshing with a quadrant on the arm and journaled on a stud secured in the bracket, a shaft extending longitudinally of the tongue and above it, and journaled at the front end in the bracket on the tongue and at the rear end in the bearing formed at the lower portion of the quadrant, a bevel pinion on the shaft meshing with the bevel pinion journaled on the stud and a lever at the rear end of the shaft, and means for retaining such lever in any position to which it may be thrown, as and for the purpose specified. 6th. The combination with the lifting bar, of a double bracket designed to hold the socket of the lifting bar, and formed of two portions P<sup>1</sup>, P<sup>2</sup>, having inwardly

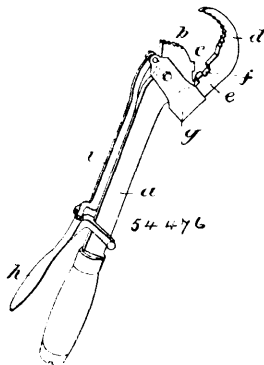


closet cistern, a suitably mounted circular enclosing casing to which said feed pipe is connected, a horizontal shaft mounted about mid-



way of its length in a bearing secured to the edge of the cistern box, one end of said shaft carrying a fan and the other end being passed through openings in the ends of said enclosing casing and concentric thereof, a hub mounted rigidly upon said shaft within said enclosing casing, said hub being provided with a laterally extending rim adapted to extend transversely and with its edges in close proximity to the inside of the chamber formed by said enclosing casing, a series of pistons mounted rigidly upon said rim and adapted to closely fit the space between said rim of the hub and the inside of the side and ends of the chamber, a flow pipe connected at one end to the said enclosing casing and communicating with the chamber formed thereby and the other end of such pipe extending into the cistern, ball cock mechanism for controlling the flow of water through said feed pipe, and a pipe having one end flared and located adjacent to said fan and the other end thereof communicating with the open air, all substantially as described and for the purpose set forth. 4th. The combination with the flow pipe of a cistern, of a shaft mounted adjacent to said flow pipe, a water motor operatively connected to said shaft, a fan mounted rigidly upon said shaft, an operative communication between said flow pipe and water motor, and a discharge pipe from said motor, for the purpose set forth.

**No. 54,476. Wrench. (Clé à écrou.)**



James D. Wilson, San Diego, California, U.S.A., and Robert Norton, North Elmham, County of Norfolk, England, 2nd January, 1897; 6 years. (Filed 3rd November, 1896.)

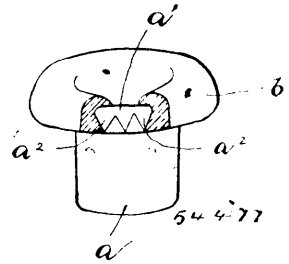
*Claim.*—A wrench comprising a wrench-bar having a rigid jaw and gear-teeth or projections at one end, a swinging movable jaw having its shank provided with corresponding intermeshing teeth, a yoke secured to the movable jaw and pivoted to the bar, an elbow hand-lever pivoted to the handle end of the bar, and a connecting-link from said elbow-lever to said yoke.

**No. 54,477. Eyelet. (Oeillet.)**

Eleazer Kempshall, Newton, Massachusetts, U.S.A., 4th January, 1897; 6 years. (Filed 9th March, 1896.)

*Claim.*—1st. An eyelet comprising in its construction a tubular-shaped body, an overturned flange, forming an extension of said body, said flange being concavo-convex in cross section, and spurs upon the free and rearwardly extending edge of said flange, substantially as and for the purpose set forth. 2nd. An eyelet comprising in its construction a tubular-shaped body, an overturned flange, forming an extension of said body, said flange being concavo-convex in cross section, and spurs upon the free and rearwardly

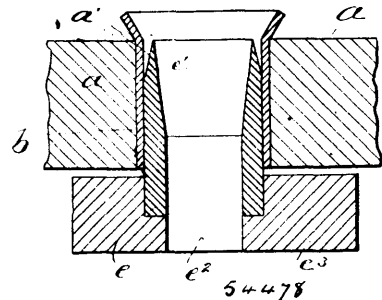
extending edge of said flange, adapted to rest on a die plate, and a covering of plastic material moulded about the top of said flange,



and filling the concave underside thereof, the plastic material upon the top and bottom side of said flange being united in the spaces between said spurs, substantially as and for the purpose set forth.

**No. 54,478. Apparatus for Covering Eyelets.**

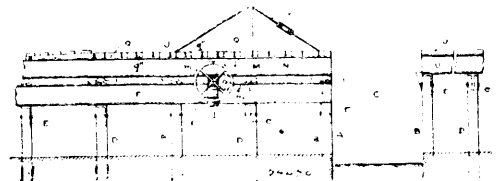
(Appareil pour couvrir les oeillets.)



Eleazer Kempshall, Newton, Massachusetts, U.S.A., 4th January, 1897; 6 years. (Filed 9th March, 1896.)

*Claim.*—1st. As a means for covering the exposed ends of eyelets with plastic material, a die-plate having a socket to receive the body of the eyelet, and a male die composed of two separable members adapted to co-operate in moulding the cover within the eyelet. 2nd. As a means for covering the exposed ends of eyelets with plastic material, a die-plate having a socket to receive the body of the eyelet, a male die-member formed to enter the body of the eyelet, and having a recess or socket at one end and a moulding face surrounding said recess and adapted to mould the inner portion of the cover, and another male die-member adapted to mould the outer portion of the cover, said members meeting within the eyelet.

**No. 54,479. Drawbridge. (Pont-levis.)**



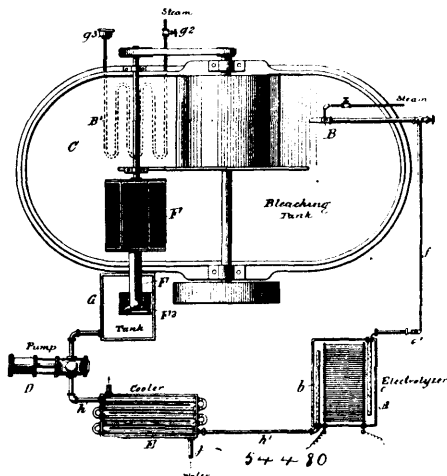
Nathan Cooper Jessup, West Hampton Beach, New York, U.S.A., 4th January, 1897; 6 years. (Filed 13th March, 1896.)

*Claim.*—1st. In a drawbridge, the combination of the groups of piles A, D, each group arranged in transverse series and provided with the horizontal beams E, the longitudinal fixed set of girders upon said beams E, the smooth faced supporting rollers supported between the sets of side girders, an operating shaft provided with the drive gear above and between the middle set of girders, and the platform having the side beams arranged to ride upon the smooth rollers and the central beam provided with a rack with which meshes the drive gear, substantially as and for the purposes described. 2nd. The combination of the three sets of longitudinal girders spaced at suitable intervals from each other and the sets of side girders carrying the series of smooth faced supporting rollers, the operating shaft provided with the drive gear which is arranged between the girders forming the middle set, the platform, the side beams on the platform in a vertical line between the girders of the two side sets and riding upon the smooth faced rollers, and the central platform beam carrying the rack with which meshes the drive gear, said central platform beam and the drive gear being arranged relatively to each other to guide the boom and platform in their endwise movements, substantially as described. 3rd. The combination of the piles A, D, provided with the flanged transverse beams E, the longitudinal girders F, G, H, fixed to said transverse beams, the supporting rollers journaled on the side girders F, H, the operating shaft provided with the flanged guide roller k<sup>1</sup> having the gear teeth between its flanges, the platform



having the side beams N, P, which ride upon the supporting rollers, the central flanged beam O fixed to the platform and having its flanges guided between the flanges on the drive gear, and the rack between the flanges of the central beam, substantially as described. 4th. The combination with the platform beams, tied or connected rigidly together and forming a slidable frame for the bridge platform, of the planks placed loosely upon said beams and provided with means to limit the end and side play or movement thereof on said beams, substantially as described. 5th. The combination of the platform beams, tied or connected rigidly together and forming a slidable frame for the bridge platform, and the loose planks provided with the bottom cleats and the side spacing blocks or strips, substantially as described.

**No. 54,480. Bleaching Process.** (*Procédé pour blanchir.*)



Henry Blackman, New York, State of New York, U.S.A., 4th January, 1897; 6 years. (Filed 28th May, 1896.)

*Claim.*—1st. The process of bleaching, consisting in first electrolyzing a solution of a chloride of an alkali or alkaline earth, heating the electrolyte containing the resulting hypochlorite and bleaching with it while at an elevated temperature, then cooling it and again electrolyzing it, whereby the bleaching is performed at a high temperature and the electrolysis at a low temperature. 2nd. The described continuous electrolytic bleaching process, consisting in first electrolyzing a solution of a chloride of an alkali or alkaline earth by circulating it through an electrolyzer, heating the electrolyte containing the resulting hypochlorite, bleaching with it while at an elevated temperature, continuously drawing off the electrolyte from the material being bleached, cooling it and returning it to the electrolyzer. 3rd. The improved bleaching apparatus, consisting of the combination of an electrolyzer, a bleaching tank, a heater, a cooler, a circulating pump, and connecting pipes constituting a circuit, whereby the bleaching liquid will be circulated through the electrolyzer to the heater and bleaching tank, and thence through the cooler back to the electrolyzer. 4th. The improved apparatus for bleaching paper pulp, consisting in the combination of a heater engine, the tank of which serves as a bleaching tank, a heater, an electrolyzer, a cooler, a pump, and connecting pipes forming a circuit. 5th. A bleaching tank having a steam heater applied thereto to heat the liquid therein, an electrolyzer, a heater, a pipe leading from the electrolyzer to the heater and from the heater to the bleaching tank, a cooler, pipes leading from the tank to the cooler and thence to the electrolyzer, and a circulating pump in the circuit of pipes.

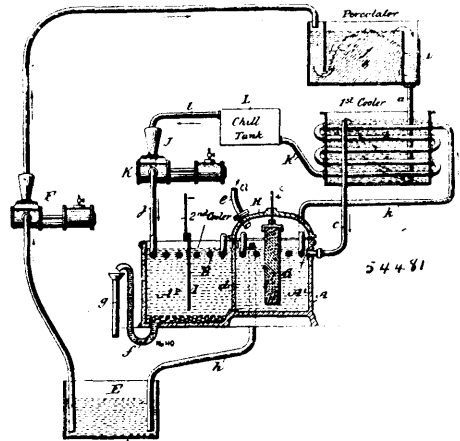
**No. 54,481. Electrolytic Process.**

(*Procédé électrolytique.*)

Henry Blackman, New York, State of New York, U.S.A., 4th January, 1897; 6 years. (Filed 28th May, 1896.)

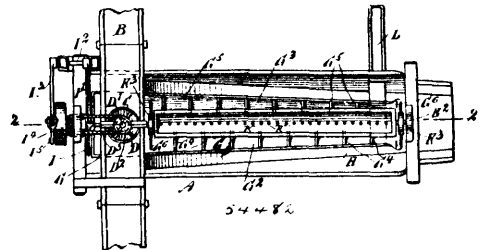
*Claim.*—1st. The improvement in electrolytic processes, which consists in first cooling the electrolyte, then introducing it to the cell, and then subjecting it to electrolysis and again cooling it during the electrolysis. 2nd. The improvement in electrolytic processes, which consists in artificially cooling the electrolyte by circulating a cold liquid first through passages in the electrolytic cell and then through a preliminary cooler, the electrolyte being first partially cooled in the latter and then introduced into the cell. 3rd. The combination with an electrolytic cell, of cooling pipes or passages in said cell, a preliminary cooler, a source of cold liquid with pipes for circulating it first through said passages in the cell and then through said preliminary cooler, and a source of electrolyte with pipes for first circulating it through said preliminary cooler, and then introducing it into said cell. 4th. The combination with an electrolytic cell, of cooling pipes or passages therein, a preliminary cooler, a chill tank, a circulating pump and a circuit of pipes for circulating cold liquid by said pump from the chill tank through the cooling passages

in the cell, through the preliminary cooler and back to the chill tank, a source of electrolyte, and pipes for circulating it first through



said preliminary cooler and then through the electrolytic cell. 5th. The combination with an electrolytic cell, of cooling pipes or passages therein, a preliminary cooler, a circuit of pipes for circulating the electrolyte first through said percolator, then through said preliminary cooler, then through the electrolytic cell and back to the percolator, a circulating pump in said circuit, and a source of cold liquid with pipes for circulating it first through said cooling passages in the cell, and then through said preliminary cooler.

**No. 54,482. Ore Concentrator.** (*Concentrateur de minerai.*)

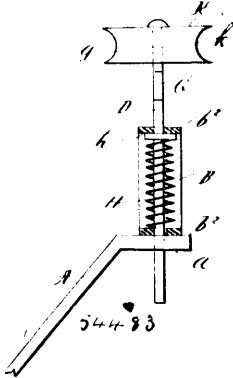


William Henry Moore, Deadwood, South Dakota, U.S.A., 4th January, 1897; 6 years. (Filed 22nd July, 1896.)

*Claim.*—1st. An ore concentrator provided with a rocking pan having a curved bottom and side wings extending therefrom, each side wing being provided with transverse partitions, substantially as shown and described. 2nd. An ore concentrator provided with a rocking pan having a curved bottom and side wings extending therefrom, each side wing being provided with transverse partitions, and a conveyer screw mounted to rotate in the curved bottom of the pan, substantially as shown and described. 3rd. In an ore concentrator, the combination with a rocking pan, of a pivoted sieve above the upper end of the pan, and means for imparting a sudden jerk or shake to the sieve, substantially as described. 4th. In an ore concentrator, the combination with a rocking pan, of a sieve pivoted in the pan at the upper end thereof, and means for imparting a sudden jerk or shake to the sieve as the pan is rocked, substantially as described. 5th. In an ore concentrator, the combination with a rocking pan, of a sieve pivoted in the pan, and a counter-balance carried by the sieve, substantially as and for the purpose set forth. 6th. In an ore concentrator, the combination with a rocking pan, and a screw-conveyer in the bottom of the pan, of a sieve pivoted in the pan at the upper end thereof, and means for imparting a sudden jerk or shake to the sieve as the pan is rocked, substantially as described. 7th. In an ore concentrator, the combination with a rocking pan having wings provided with partitions, and a conveyer screw in the bottom of the pan, of a pivoted sieve at the upper end of the pan, means for imparting a sudden jerk or shake to the sieve as the pan is rocked, and a water-distributing device above the pan, substantially as described. 8th. In an ore concentrator, the combination with a feed hopper, of a stirrer in the hopper, a rocking pan, a conveyer screw in the bottom of the pan, an oscillating sieve in the pan below the hopper, and a water-distributing device above the pan, substantially as described. 9th. In an ore concentrator, the combination with a rocking pan, of a water trough supported above the pan, and means for imparting a transverse swinging motion to the trough as the pan is rocked, substantially as described. 10th. In an ore concentrator, the combination with a rocking pan, of an oscillating sieve at the upper end of the pan and adapted to strike one side of the pan as the said pan is rocked, a water trough supported above the trough when the pan is pivoted, whereby when the sieve strikes one side of the pan

the trough will be at the opposite side, substantially as described. 11th. An ore concentrator, provided with a rocking pan having side wings provided with partitions, and a rocking water trough adapted to discharge alternately on the said side wings, substantially as shown and described. 12th. An ore concentrator, comprising a rocking pan having a curved bottom, and side wings provided with transverse partitions, a conveyer screw mounted to turn in the curved bottom of the said pan, and an oscillating clear water trough for alternately discharging jets of water on the side wings, substantially as shown and described. 13th. An ore concentrator, comprising a rocking pan having a curved bottom, and side wings provided with transverse partitions, a conveyer screw mounted to turn in the curved bottom of the said pan, an oscillating clear water trough for alternately discharging jets of water on the said side wings, and means substantially as described for imparting a rocking motion to the said trough from the said pan, as set forth.

**No. 54,483. Trolley Support. (Support de trolley.)**



Otto Holy, Schenectady, New York, U.S.A., 4th January, 1897; 6 years. (Filed 7th May, 1896.)

*Claim.*—1st. The combination with a trolley arm, which is adapted to be secured to a car, of a frame supported thereby, and a spring-operated rod which passes therethrough, said rod being provided at its upper end with spring arms, and two wheels or pulleys which are mounted thereon and which are arranged horizontally and provided with peripheral grooves, and between which the trolley wire or conductor is adapted to pass, substantially as shown and described. 2nd. The combination with a trolley wire, which is adapted to be secured to a car, of a frame supported thereby, and a spring-operated rod which passes therethrough, said rod being provided at its upper end with spring arms, and two wheels or pulleys which are arranged horizontally and provided with peripheral grooves, and between which the trolley wire or conductor is adapted to pass, said spring arms, by which the wheels or pulleys are supported, being each provided with a cord or other device which extends therefrom, substantially as shown and described. 3rd. The combination with a trolley arm, which is adapted to be rigidly secured to a car, of a frame supported on the upper end thereof, of a vertically movable operated rod supported in said frame, and spring arms connected with the upper end of said rod, and a grooved wheel or spool mounted on each of said arms and between which the trolley wire or conductor is adapted to pass, and means connected with said spring arms for separating the same, substantially as shown and described.

**No. 54,484. Treatment of Alloys.**

(*Traitement d'alliages métalliques.*)

Dimitry Alexandrowitch Peniakoff, of St. Petersburg, Russia, and of Hue, Belgium, 4th January, 1897; 6 years. (Filed 12th March, 1896.)

*Claim.*—The process above described, consisting in the treatment of various aluminium or magnesium salts (or their mixtures with other metal salts) by means of sulphuret of carbon or sulphur vapours and the conversion of the products thus obtained, by means of reducing gases, or metals, or by means of an electrical current into metallic aluminium, magnesium, or into their alloys with other metals.

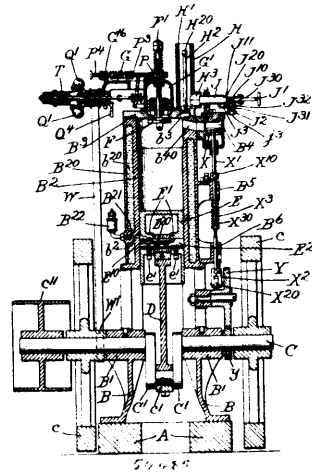
**No. 54,485. Gas and Oil Engine.**

(*Machine à gaz et huile.*)

The J. J. Norman Company, assignee of John J. Norman, all of Chicago, U.S.A., 4th January, 1897; 6 years. (Filed 24th October, 1896.)

*Claim.*—1st. In a gas engine, in combination with the cylinder and its main inlet valve, a centrifugal governor and connections therefrom to the main inlet valve by which the governor controls the extent of the opening of such valve, the oil inlet valve and connections from the main inlet valve to the oil inlet valve by which the latter is opened whenever the former opens and proportionately to the opening of the former, substantially as set forth. 2nd. In a

gas engine, in combination with the cylinder, the main inlet valve adapted to be opened solely by the suction produced by the with-

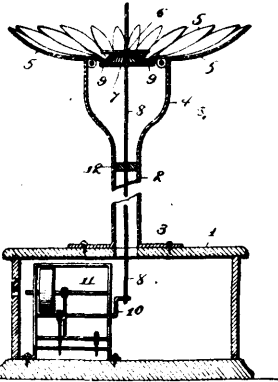


drawal of the piston, the oil inlet valve and connections from the main inlet valve to the oil inlet valve by which the latter is in every instance opened when the former opens, said connections being such as to make the openings of said valves in all instances bear the same ratio to each other, substantially as set forth. 3rd. In a gas engine, in combination with the cylinder and the main inlet valve adapted to be opened solely by the suction caused by the withdrawal of the piston, a stop to limit the extent of the opening of said valve, a centrifugal governor and connections therefrom to such stop adapted to move the latter to determine the extent of the opening of the main inlet valve according to the speed of the governor, substantially as set forth. 4th. In a gas engine, in combination with the cylinder and the main inlet valve thereof, the oil inlet valve and connections between said valves by which the opening of the former in every instance opens the latter, said connections being such as to cause the openings of said valves in all instances to bear the same ratio to each other, a governor and connections therefrom to the main inlet valve adapted to control the extent of the opening of said valve and thereby the extent of the opening of the oil inlet valve, said connections being adapted to hold said valves widest open at a pre-determined minimum speed of the governor, and to diminish the opening as the speed increases or diminishes from such minimum, substantially as set forth. 5th. In a gas engine, in combination with the cylinder and the main inlet valve thereof adapted to be opened solely by the suction caused by the withdrawal of the piston, a stop to limit its opening, a centrifugal governor and connections from the same to the stop adapted to hold the latter at the position corresponding to the widest opening of the valve when the governor has a certain slow speed, and to move it to the position which shall hold the valve closed when the motion ceases, substantially as set forth. 6th. In a gas engine, in combination substantially as set forth, the cylinder, the mixing or vaporizing chamber, the main inlet valve controlling communication between the two seating yielding and opening inwardly with respect to the cylinder, and having its stem extending through and protruding from the vaporizing or mixing chamber, said stem having the abutment or shoulder  $f^{12}$ , a slide P, adapted to operate transversely with respect to the valve stem, and having an inclined edge in the path of said abutment, a centrifugal governor, and connections therefrom to the slide adapted to control the position of the said inclined edge of the latter with respect to the path of travel of the abutment, whereby the stroke of the valve is reduced as the speed increases. 7th. In a gas engine, in combination with a cylinder and its main inlet valve and a movable stop P which limits the opening of said valve, a centrifugal governor having the stem T adapted to be thrust longitudinally by the centrifugal action of the governor balls, connections from said stem to said movable stop whereby the movement of the stem adjusts the stop to vary the extent of opening of the valve, said governor stem having the stop collar  $T^2$  and the latch  $Q^2$  pivoted on the governor frame adapted to be interposed between said frame, and the stop  $T^4$  to hold the stem T protruded and the stop P in position to permit the valve to open regardless of the governor, substantially as set forth. 8th. In a gas engine, in combination with the cylinder, the main inlet valve adapted to open inwardly with respect to said cylinder, the stem of said valve having a transverse slot whose upper end constitutes an abutment, a slide adapted to be reciprocated through said slot and having a notch with sloping edges into which said abutment is adapted to enter to permit the valve to open, the valve being held closed while the abutment is held entirely cut of the notch, governing mechanism connected to said slide and adapted to operate it back and forth through the slot, whereby the valve is restrained from opening at the position of rest and at a determined maximum speed of the governor, and its opening graduated to a maximum at an intermediate slow speed,

substantially as set forth. 9th. In a gas engine, in combination with the cylinder, the main inlet valve seating yieldingly and adapted to open inwardly with respect to the cylinder, a slide adapted to be reciprocated transversely with respect to the stem of said valve, said slide and stem having the one an abutment and the other a face obliquely transverse to the direction of reciprocation of the stem and adapted to collide with the abutment, and governing mechanism connected to and adapted to actuate the slide, substantially as set forth. 10th. In a gas engine, in combination with the main inlet valve thereof and a movable cam or stop whose position determines the extent to which said valve opens and adapted at a certain position to prevent the opening of the valve, a centrifugal governor and connections therefrom by which it operates such movable cam or stop, the governor balls being provided with springs tending to resist their centrifugal action, and a spring connected to said cam or stop tending to move the latter to the position at which it prevents the opening of the valve, substantially as and for the purpose set forth.

**No. 54,486. Advertising Device.**

(Appareil d'annonce.)



John Erb Wenger, Paradise, Pennsylvania, U.S.A., 4th January, 1897; 6 years. (Filed 26th October, 1896.)

*Claim.*—1st. In an advertising device of the character described, the tube 2, having an enlargement 4 at its upper end, petals 5, pivoted to the enlarged portion of said tube, in combination with the discs 6 and 7, secured to the rod to receive the ends of the petals, and means for operating said discs, as shown and described. 2nd. The herein described combination of the base 1, tube 2, having enlargement 4, petals 5, pivoted to said enlargement of the tube, bent ends 9, discs 6 and 7, disposed so as to form a space into which the said ends 9 project, the rod 8 and motor 11, for operating said rod, as shown and for the purpose set forth.

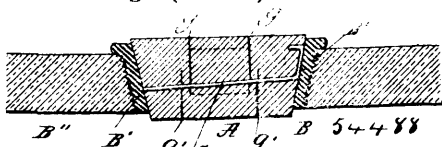
**No. 54,487. Composition of Plaster.**

(Composition de plâtre.)

Walter Andrew Robinson, Syracuse, New York, U.S.A., 4th January, 1897; 6 years. (Filed 22nd October, 1896.)

*Claim.*—1st. A composition of wall plaster, comprising sand, plaster of Paris, clay, fibre, sugar of lead, nitric acid, Irish moss, glue and white lead powdered, in substantially the proportions specified. 2nd. The herein described composition for the purpose set forth, comprising sugar of lead, nitric acid, glue, Irish moss and white lead powdered.

**No. 54,488. Bung. (Bondon.)**



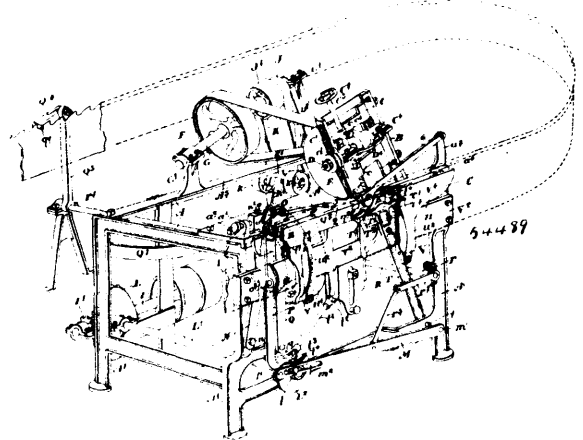
Archibald Edward McKechnie, New York, State of New York, U.S.A., 4th January, 1897; 6 years. (Filed 30th November, 1896.)

*Claim.*—1st. A bung made of a single piece of wood and provided with a separable part or detachable core which is integral therewith and of substantially the same depth as the bung, in combination with means for holding the separable part after it has been severed from the bung proper, said bung having been given a conical shape under pressure so as to close the grooves and make it practically solid, substantially as described. 2nd. A bung made of a single piece of material having a central core which is integral therewith, said core being formed by grooves in the opposite faces of the bung proper, in combination with means for holding the core or separable part after it is detached from the bung, said bung having been compressed after the grooves were formed so as to close them

and make it, the bung, practically solid, substantially as described. 3rd. A bung having a separable part which is integral therewith, in combination with a holding device consisting of means secured to the separable part and at a point near the bottom of the bung and extending outward and upward in a plane with the axis thereof to a point near the outer face thereof, substantially as described. 4th. A bung constructed of a single piece of material and provided with a separable part which is integral therewith, in combination with a holding device which extends laterally through the bung and the separable part, thence upward in a plane of the axis of the bung and to a point near the outer surface thereof. 5th. A bung constructed of a single piece of wood and provided with a central detachable core or separable part which is integral therewith, in combination with a holding device in the nature of a staple having a long leg extending through the bung and the separable part, the short leg being embedded in the lateral face of the bung and the head of the staple being substantially parallel with the axis thereof. 6th. A bung constructed of a single piece of wood having grooves in its opposite faces which overlap each other, said bung being provided with a holding device which extends therethrough, all of the parts being compressed so as to close the grooves and constitute a solid bung.

**No. 54,489. Automatic Band Saw Filing Machine.**

(Machine à limer les scies.)

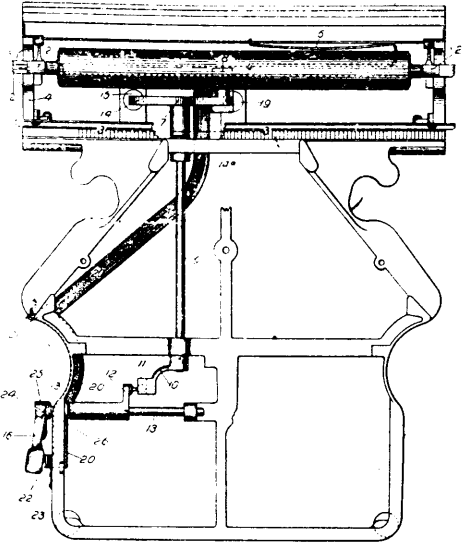


Mary Elizabeth House, assignee of Isaac Milton House, both of Gravenhurst, Ontario, Canada, 4th January, 1897; 6 years. (Filed 29th October, 1896.)

*Claim.*—1st. In a band saw filing machine, a bar pivoted in the frame of the machine, and having an inclined upper edge, a pawl pivotally attached to the top of the bar and having a pin-shaped end to engage with the front of the saw tooth, a bar provided with a wedged-shaped upper end designed to co-act with the inclined edge of the upper end of the bar holding the pawl, and means for reciprocating the bar having the wedged-shaped upper end, as and for the purpose specified. 2nd. In a band saw filing machine, a bar pivoted in the frame of the machine and having an inclined upper edge, a pawl pivotally attached to the top of the bar and having a pin-shaped end to engage with the front of the saw tooth, a bar provided with a wedged-shaped upper end designed to co-act with the inclined edge of the upper end of the bar holding the pawl and means for reciprocating the bar having the wedged-shaped upper end, a pawl pivoted in a bar on the opposite side of the machine and co-acting means connected to the bar having the wedged-shaped upper end whereby the pawl at the opposite side of the machine co-acts simultaneously with a pawl in the front of the machine to move the band-saw forwardly tooth by tooth, as and for the purpose specified. 3rd. In a band saw filing machine, a bar pivoted in the frame of the machine and having an inclined upper edge, a pawl pivotally attached to the top of the bar and having a pin-shaped end to engage with the front of the saw-tooth, a bar provided with a wedged-shaped upper end designed to co-act with the inclined edge of the upper end of the bar holding the pawl, a bar pivoted in the frame of the machine adjacent to the bar with the wedged-shaped upper end and having a groove to receive a tongue in the aforesaid bar, and means for reciprocating the aforesaid bar, as and for the purpose specified. 4th. In a band saw filing machine, a bar pivoted in the frame of the machine and having an inclined upper edge, a pawl pivotally attached to the top of the bar and having a pin-shaped end to engage with the front of the saw-tooth, a bar provided with a wedged-shaped upper end designed to co-act with the inclined edge of the upper end of the bar holding the pawl, a bar pivoted in the frame of the machine adjacent to the bar with the wedged-shaped upper end, and having a groove to receive a tongue in the aforesaid bar, supplemental bar pivotally connected to the bottom of the aforesaid bar, and a lever pivoted on the frame of the machine and pivotally connected to the supplemental bar at the end, a crank wheel and crank pin extending through a slot in the lever and means for rotating the crank wheel, which is suitably

secured to a shaft journalled in the frame of the machine, as and for the purpose specified. 5th. In a band saw filing machine, a bar pivoted in the frame of the machine and having an inclined upper edge, a pawl pivotally attached to the top of the bar and having a pin-shaped end to engage with the front of the saw-tooth, a bar provided with a wedged-shaped upper end designed to co-act with the inclined edge of the upper end of the bar holding the pawl, suitable guideways for the aforesaid bar, supplemental bar pivotally connected to the bottom of the aforesaid bar, and a lever pivoted on the frame of the machine and pivotally connected to the supplemental bar at the end, a crank wheel and crank pin extending through a slot in the lever, means for rotating the crank wheel, which is suitably secured to a shaft journalled in the frame of the machine, a cross rod suitably journalled in the machine and provided with a front arm, a bar connecting the free end of such arm with the crank pin operated lever, an upright bar secured on the opposite end of the rod extending across the machine and a pawl pivoted at the upper end of the bar and deriving simultaneous movement with the pawl at the front of the machine, as and for the purpose specified. 6th. In a band saw filing machine, a bar pivoted in the frame of the machine and having an inclined upper edge, a pawl pivotally attached to the top of the bar and having a pin-shaped end to engage with the front of the saw-tooth, a bar provided with a wedged-shaped upper end designed to co-act with the incline edge of the upper end of the bar holding the pawl and a set screw located to the outside of the bar having the wedged-shaped upper end suitably supported in a boss or bearing and designed to limit the throw of the wedged-shaped upper end of the bar, as and for the purpose specified. 7th. In combination an emery-wheel, an inclined shaft for supporting the same, an adjustable gate having journals for supporting the shaft, a counter-shaft journalled at the same incline as the emery-wheel shaft, a pulley on both emery-wheel and counter-shaft and a belt connecting such pulley and means for driving the counter-shaft, as and for the purpose specified. 8th. In combination an emery-wheel, an inclined shaft for supporting the same, an adjustable gate having journals for supporting the shaft, a counter-shaft journalled at the same incline as the emery-wheel shaft, a pulley on both emery-wheel and counter-shaft and a belt connecting such pulley, a pulley on the main driving-shaft, a supplemental pulley on the counter-shaft, a belt peculiarly turned and connecting the pulley on the inclined shaft with the pulley on the main driving-shaft and idler pulleys suitably journalled and connected to the frame of the machine and guiding the course of the belt from the pulley on the main shaft to the pulley on the inclined counter-shaft, as and for the purpose specified. 9th. The combination with the emery-wheel shaft and journals for supporting the same and emery-wheel, of a grooved separating collar located between the inner journal and the emery-wheel, as and for the purpose specified. 10th. In combination the emery-wheel, the shaft, the journal for supporting the shaft and gate to which the journals are secured, guiding standards for the gate, bosses on the gate, screw spindle extending through the bosses and provided with a suitable handle for adjustment, and means situated beneath the bottom of the screw spindle for raising and lowering the gate and emery-wheel in the desired manner for sharpening the teeth of the saw, as and for the purpose specified. 11th. In combination, the emery-wheel, the shaft, the journals for supporting the shaft and gate to which the journals are secured, guiding standards for the gate, bosses on the gate, screw spindle extending through the bosses and provided with a suitable handle for adjustment, a lever pivoted on a suitable bracket in the frame of the machine and having an enlarged end with arc-shaped bottom, a lever pivoted on the frame, an adjustable inclined way secured to the top of the lever and means for imparting an oscillating movement to the lever, as and for the purpose specified. 12th. In combination the emery-wheel, the shaft, the journals for supporting the shaft, and gate to which the journals are secured, guiding standards for the gate, bosses on the gate, screw spindle extending through the bosses and provided with a suitable handle for adjustment, a lever pivoted on a suitable bracket in the frame of the machine and having an enlarged end with arc-shaped bottom, a lever pivoted on the frame, an adjustable inclined way secured to the top of the lever and a connecting bar pivotally connected to the lever and an eccentric on a cross-shaft for imparting the oscillating movement to the lever, as and for the purpose specified. 13th. In combination the emery-wheel, the shaft, the gate supporting the shaft, the adjustable screw spindle extending downwardly from the gate, the intermediate lever suitably pivoted on the frame and having an enlarged free end with lower arc-shaped bottom, the oscillating lever pivoted in the frame of the machine and situated beneath the intermediate lever and the inclined curved adjustable way pivoted on the T-shaped head of the oscillating lever and a boss formed on the T-shaped head outside the lower end of the inclined way, as and for the purpose specified. 14th. In a machine of the class described, a vise secured to the frame consisting of an inner plate, an outer clamping plate provided with downwardly extending legs pivotally connected to lugs forming part of the inner plate and springs held at the lower part of the inner plate of the vise and designed to press against the upper part of the clamping plate of the vise, as and for the purpose specified. 15th. The combination with the inner plate and bearing blocks on surfaces  $a^2$ , of the spring-held clamping plate and the springs on the inner side thereof and bearing blocks on the ends of the springs, as and for the purpose specified.

**No. 54,490. Key Action for Typewriters.**  
(Action de clé de clavigraphes.)



The Imperial Writing Machine Company, Montreal, Quebec, Canada, assignee of Wellington Parker Kidder, Jamaica Plain, Boston, Massachusetts, U.S.A., 4th January, 1897; 6 years.  
(Filed 24th October, 1896.)

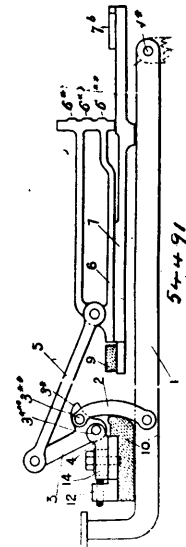
*Claim.*—1st. In a typewriting machine, the combination of a platen and impression-key lever with an intermediate end-thrust type-carrier and toggle operatively connected together and with the impression-key lever, and a ledge-like type-carrier support intermediate the platen and the free end of the key lever, the toggle driving the type-carrier to impression but arresting the impression stroke of the type-carrier at the instant of impression, substantially as and for the purpose set forth. 2nd. In a typewriting or like machine, the combination of a platen and impression-key lever with an intermediate end-thrust type-carrier and toggle operatively connected together and with the impression-key lever, a guide support for the type-carrier, the impression-key being pivoted at one side of the guide support, and a link connecting a toggle member with the impression-key lever, the joints of the toggle being in a substantially straight line at impression, substantially as and for the purpose set forth. 3rd. In a typewriting or like machine, the combination of a platen and impression-key lever with an intermediate end-thrust type-carrier and toggle operatively connected together and with the impression key, a guide support for the type-carrier during its movement from and towards the platen, a link connecting the impression-key lever with a toggle member, and a guide at the impression point for the head of the type-carrier, substantially as and for the purpose set forth. 4th. In a typewriting or like machine, the combination of a platen and impression-key lever with an intermediate end-thrust type-carrier and toggle operatively connected together and with the impression-key lever, a link which connects the impression-key lever with a toggle member at one side of a pivotal connection thereof, and a guide support for the type-carrier during its movement from and towards the platen, substantially as and for the purpose set forth. 5th. In a typewriting or like machine, the combination of a platen and impression-key lever with an intermediate end-thrust type-carrier and toggle operatively connected together and with the impression-key lever, ledge-like support for the type-carrier, a link connecting a toggle member with the impression-key lever which is pivoted at one side of said ledge-like support, and a guide at the impression point for the head of the type-carrier, substantially as and for the purpose set forth. 6th. In a typewriting or like machine, the combination of a platen and impression-key lever with a toggle and end-thrust type-carrier, a link connecting a member of the toggle with the impression-key lever, and a guide at the impression point for the head-carrier, the link extending across the plane of the path of the type-head from one toggle member to the impression-key lever pivoted at one side of said plane, substantially as and for the purpose set forth. 7th. In a typewriting or like machine, the combination of a platen and impression-key lever with an end-thrust type-carrier and toggle, a link connecting a toggle member with the impression-key lever, a guide support for the type-carrier during its movement from and towards the platen, a pad for the toggle when straightened, and a pad at the rear of said link against which the link strikes on its back stroke, all substantially as and for the purpose set forth. 8th. In a typewriting or like machine, the combination of an end-thrust type-carrier, a horizontal ledge-like guide support therefor during its movement from and towards the platen, a toggle and impression-key lever, a link connecting the toggle with the impression-key lever which is pivoted towards the platen at one side of said support and extends forwardly

beyond said support, and an adjustable bracket to which one toggle member is pivoted, the other toggle member being pivoted to the type-carrier, substantially as and for the purpose set forth. 9th. In a typewriting machine, the combination of an impression key, a link connected therewith, a toggle, one member of which is pivoted in the machine and connected with said link, a type-carrier with which the other member of said toggle is connected, a type-carrier guide comprising a table or ledge across which the type-carrier moves, and a platen, said table being between the platen and the front of the machine, and the impression key being pivoted at one side of said table, substantially as and for the purpose set forth. 10th. In a typewriting machine, the combination of a platen, a type-head, guides to control the type-head at impression, a table or ledge-like support for the type-head during its movements from and towards the platen, a toggle, one member of which is connected with the type-head and the other member of which is pivoted in the machine, the centres of the toggle being at one side of said support, an impression key pivoted at the other side of said support, and a link connecting said impression-key lever with one of the toggle members, substantially as and for the purpose set forth. 11th. In a typewriting machine, the combination of a platen, a type-head, guides to control the type-head at impression, a table or ledge-like support for the type-head during its movement from and towards the platen, a toggle, one member of which is connected with the type-head and the other member of which is pivoted in the machine, the centres of the toggles being at one side of said support and a toggle member having a projection, an impression key pivoted at the other side of said support, and a link connecting said impression-key lever with said projection on a toggle member, substantially as and for the purpose set forth. 12th. In a typewriting machine, the combination of a type-head and a support therefor with an impression-key lever, a toggle, one member of which is pivoted in the machine and the other member of which is operatively connected with the type-head, a link connecting the impression-key lever with a toggle member, and a spring which returns the type-head and toggle to position of rest, after impression, the impression-key lever being pivoted at one side of said support and the toggle and type-head being on the other side thereof, substantially as and for the purpose set forth. 13th. In a typewriting machine, the combination of a platen, a type-carrier, a key for straightening the toggle, a toggle connected with the type-carrier and, while straightening, pushing the type to impression, cam mechanism connecting the toggle and key, whereby movement of the key causes the cam mechanism to bring the toggle substantially on its pivots, the pivots of the toggle being substantially in one and the same line with each other at the instant of impression to print by pressure without concussion, all substantially as and for the purpose set forth. 14th. In a typewriting machine, the combination of a platen, a type-carrier, a key for straightening the toggle, a toggle connected with the type-carrier and, while straightening, pushing the type to impression, cam mechanism connecting the toggle and key whereby movement of the key causes the cam mechanism to bring the toggle substantially on its pivots, and a type-carrier guide which compels the type-carrier to move straight against the platen immediately preceding impression and which holds the type positively at the impression point during impression, the pivots of the toggle being substantially in one and the same line with each other at the instant of impression to print by pressure with out concussion, all substantially as and for the purpose set forth. 15th. In a typewriting machine, the combination of a platen, a type-carrier, a toggle for pushing the type-carrier at the impression point, and a key for straightening the toggle, with a cam operating mechanism controlled by movement of the key, the cam mechanism being operative to straighten the toggle, the pivots of the toggle being substantially in one and the same line with each other at the instant of impression to print by pressure without concussion, substantially as and for the purpose set forth. 16th. In a typewriting machine, the combination of a type-carrier, a platen, a key, a toggle and cam mechanism, the toggle straightening on its pivots by movement of the key, through the instrumentality of the cam mechanism when impression is given, the pivots of the toggle being substantially in one and the same line with each other at the instant of impression to print by pressure without concussion, substantially as and for the purpose set forth. 17th. In a typewriting machine, the combination of a platen, a type-bar, and a key-lever, with an intermediate toggle, one member of which pushes the type-bar, the cam operating directly on the toggle to straighten it, and being connected with the type-lever, the pivots of the toggle being substantially in one and the same line with each other at the instant of impression to print by pressure without concussion, substantially as and for the purpose set forth. 18th. In a typewriting machine, the combination of a platen, a type-bar guide, a type-bar, a toggle, one member of which is pivoted to the machine and provided with a cam path, a cam roll working in the cam path, a swinging carrier for the cam-roll, a link connecting the cam-roll carrier with a key-lever, and a key-lever, substantially as and for the purpose set forth. 19th. In a typewriting machine, the combination of a platen, a type-bar guide, a type-bar, and a key-lever with an intermediate toggle mechanism for pushing the type-carrier at impression, the toggle being provided with a cam-path, a swinging cam-roll carrier having a cam-roll working in said path, the swinging cam-roll

carrier actuated by the movement of the key to straighten the toggle, the cam path being so formed that, when the pivots of the toggle are brought into substantially the same line with each other, the velocity of the type-bar is gradually diminished until the type-bar reaches the impression point so that the type are brought to the paper without concussion, substantially as and for the purpose set forth. 20th. In a typewriting machine, the combination of a platen, a type-bar guide and end-wise moving type-bar, a toggle, one member of which is pivoted to the end-wise moving type-bar and the second member of which is provided with a cam-path and pivoted in the machine, a swinging cam-roll carrier provided with a cam-roll, a link connecting the swinging cam-roll carrier with a key, and a key, the cam-path having a part struck on the radius of a circle from the pivotal point of the swinging cam-roll carrier, all so arranged that, when the pivots of the toggle are brought into substantially the same line with each other, by movement of a key, the cam-roll is on that part of the cam-path which is struck from the pivotal point of the cam-roll carrier as a centre, substantially as and for the purpose set forth.

**No. 54,491. Platen Shifts for Typewriters.**

*(Mécanisme pour cylindres de clavigraphes.)*

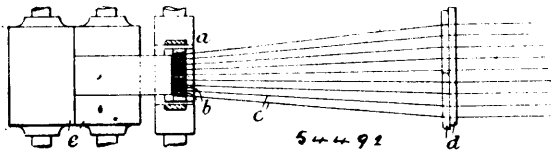


The Imperial Writing Machine Company, Montreal, Quebec, Canada, assignee of Wellington Parker Kidder, Boston, Massachusetts, U.S.A., 4th January, 1897; 6 years. (Filed October 24th 1896.)

*Claim.*—1st. In a typewriting machine, the combination of a vibrating platen, a carriage therefor, and a type-head having a plurality of type, with stops for arresting the platen in two of its impression positions, and a movable stop for arresting the platen in another of its impression positions, said movable stop being connected with and under the control of a key, substantially as and for the purpose set forth. 2nd. In a typewriting machine, the combination of a vibrating platen and a type-head having a plurality of type with platen shifting and stopping mechanism, and a shift-key having a duplex movement, one to actuate the platen shifting mechanism, and the other to actuate the platen stopping mechanism, the stopping mechanism comprising a lever which is engaged by the shift-key to swing its stop end into the path of the shifting platen, substantially as and for the purpose set forth. 3rd. In a typewriting machine, the combination of a shifting platen, platen shifting mechanism, a type-head having a plurality of type, a platen shift-key and a swinging bar carrying a stop for the platen, said key being adapted to engage said stop-carrying bar, whereby the swinging bar is moved to swing the stop into the path of the platen as it shifts from its normal printing position for another printing position, substantially as and for the purpose set forth. 4th. In a typewriting machine, the combination of a shifting platen and a swinging stop therefor on a movable bar, a hinged key adapted to engage said bar to swing it, and platen shift mechanism with which said key is connected to actuate it, substantially as described. 5th. In a typewriting machine, the combination of a shifting and longitudinally-travelling platen, a type-head having a plurality of type, a single shift-key, mechanism substantially such as described for connecting the shift-key with the platen, a swinging platen stop, the shift-key being movable sidewise to cause the swinging-platen stop to move into the path of the platen when the shift-key is moved to shift the platen from one impression position to another, all substantially as and for the purpose set forth. 6th. In a typewriting machine, the combination of a shifting and longitudinally-travelling platen, a type-head having a plurality of types, a single shift-key, mechanism, substantially such as described, for connecting the shift-key with the platen to move it from its normal position

to a plurality of new printing positions in the same direction, one in advance of the other, corresponding with positions of the several types on the type-heads, a complete movement of the key shifting the platen from its normal position to its extreme printing position, and a movable stop adapted to be moved into the path of the platen between the normal and extreme printing positions thereof, by a supplementary motion of the shift-key, all substantially as and for the purpose set forth.

**No. 54,492. Batten for Looms. (Chasse de métiers.)**

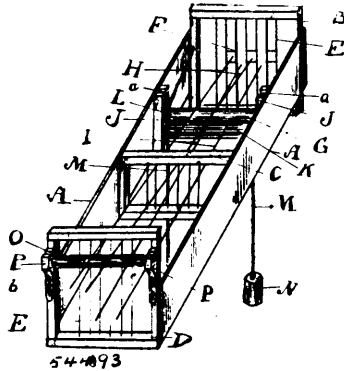


John Poyser, Wirksworth, near Derby, England, 5th January, 1897; 6 years. (Filed 15th December, 1896.)

*Claim.*—A batten for looms constructed with the several plates forming the reeds or dents arranged radially so that the spaces between the said reeds and through which the warp threads pass are in alignment with the radiating warp threads, substantially as described.

**No. 54,493. Loom for Finishing Fabrics. (Métier pour finir les étoffes.)**

(Métier pour finir les étoffes.)



Robert Etherington, Paris, Ontario, Canada, 5th January, 1897; 6 years. (Filed 14th December, 1896.)

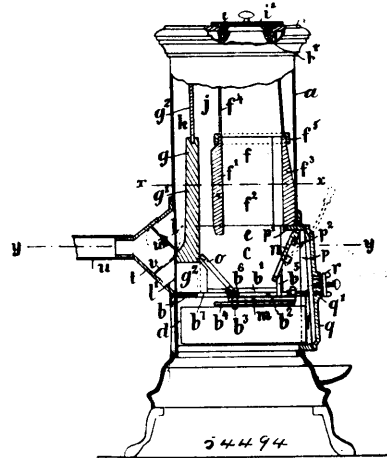
*Claim.*—1st. An apparatus of the class described, comprising the loom end, a warp-beam journaled thereon, two suitably-supported dead-rails and a vertically-adjustable roller to separate the ground and figure threads of the warp, substantially as and for the purpose set forth. 2nd. In an apparatus of the class described, the combination with a warping-box A, of reeds B, C, and D connected with said box, a journaled roller K, a vertically-movable roller G co-acting therewith, means for applying pressure to said roller G, and a roller O adapted to separate the ground and figure threads of the warp, substantially as and for the purpose hereinbefore set forth. 3rd. In an apparatus of the class described, the combination with a warping-box A, of reeds B, C, and D connected therewith, a journaled roller K, a vertically movable roller G co-acting with said roller K, means for applying pressure to said roller G, and a vertically-adjustable roller O adapted to separate the ground threads and figure threads of the warp, substantially as and for the purpose hereinbefore set forth.

**No. 54,494. Stove. (Poêle.)**

Axel Mauritz Lamer, Stockholm, Sweden, 5th January, 1897; 6 years. (Filed 18th November, 1896.)

*Claim.*—1st. A magazine-stove comprising an outer shell or casing, a combustion chamber and a grate, said casing provided with an outlet for the products of combustion at a point between said grate and the upper closed end of the stove, a magazine seated above the combustion chamber, and a dividing-wall rising from said grate between the magazine and the outer shell nearly to the top of the stove and forming between said parts up and down takes, the latter leading to the aforesaid outlet for the products of combustion, the lower part of said dividing wall being provided with an opening through which the combustion chamber communicates more directly with the said outlet, substantially as and for the purpose set forth. 2nd. A magazine-stove comprising an outer shell or casing, a combustion chamber and a horizontal grate, said casing provided with an outlet for the products of combustion, at a point between said grate and the upper end of the stove, a magazine arranged above the combustion chamber, in combination with a fireback depending from the magazine, into the combustion chamber, and a partition rising from said grate between the said fireback and outer shell nearly to the upper closed end of the stove and forming with said fireback and shell up and down takes

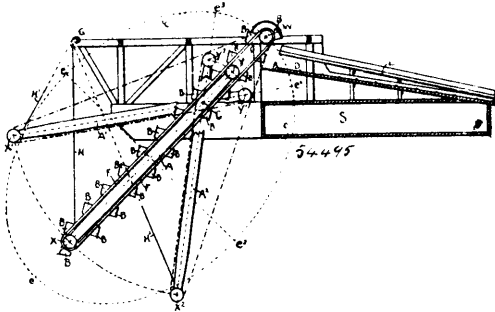
leading from the combustion chamber to the aforesaid outlet in the shell, said partition having an opening or flue leading directly from



the combustion chamber to the said outlet, and a grate between the combustion chamber and said opening in the partition, substantially as and for the purpose set forth. 3rd. A magazine-stove comprising an outer shell or casing, a combustion chamber and a horizontal grate, said casing provided with an outlet for the products of combustion at a point between said grate and the upper end of the stove, a magazine above the combustion chamber, in combination with a partition rising from the bottom of the combustion chamber behind that and the magazine nearly to the upper closed end of the stove and forming with the magazine and shell up and down takes leading from the combustion chamber to the aforesaid outlet, said partition having an enlarged portion to fit the shell below said outlet, an opening or short flue from the combustion chamber through the lower part of said enlarged portion, a corresponding outlet in the shell below the aforesaid outlet, a sloping grate between the combustion chamber and the said opening in the partition, and means for closing or regulating the outlets simultaneously or separately, substantially as and for the purpose set forth. 4th. A magazine-stove comprising an outer shell or casing, a combustion chamber, a magazine above the latter, a partition forming with the outside of the magazine and with the inside of the casing a flue, leading from the combustion chamber upwards to the top of the stove and thence downwards to an outlet in the rear part of the shell, a horizontal grate under the bottom of the combustion chamber, a forward sloping grate above the said bottom in front of the partition and behind the combustion chamber, an opening from the sloping grate backwards through the partition, an outlet in the shell coinciding with said opening, a dividing wall between the two outlets in the shell, an outlet chamber without the outlets, and two valves in said chamber, arranged to close the outlets respectively. 5th. In a magazine-stove, comprising an outer shell, a horizontal partition with grate opening, a horizontal grate beneath said opening, a combustion chamber above the partition, a vertical or sloping front grate, a magazine above the combustion chamber, a fireback depending from the rear wall of the magazine, a vertical partition rising from the rear portion of the horizontal partition, an uptake between the fireback and the vertical partition, a downtake between the vertical partition and the shell, an outlet in the shell, coinciding with the lower end of the said downtake, the combination with said parts of a forward sloping rear grate in front of the lower part of the vertical partition, an opening in the horizontal partition below the rear sloping grate, a horizontal flue or outtake from the rear grate backward through the vertical partition, a corresponding outlet in the shell divided from the aforesaid outlet by an enlarged portion of a vertical partition, an outlet chamber seated without the shell and surrounding both outlets and two valves in the outlet chamber adapted to close each of the outlets. 6th. A magazine-stove comprising the shell *a*, the horizontal plate or partition *b* with openings *b*<sup>2</sup> and *b*<sup>7</sup>, the horizontal grate *m* below the opening *b*<sup>2</sup>, the front hinged grate *n*, the rear sloping grate *o* above the opening *b*<sup>7</sup>, the combustion chamber *c* with its side walls *c* of refractory material, the magazine *f* with its lower portion made of refractory material, and seated upon the side walls or blocks *c*, the vertical partition *g* with its lower portion *g*<sup>1</sup> made of refractory material and seated upon the rear portion of the horizontal partition *b*, the opening *g*<sup>2</sup> in the vertical partition, the outlets *l* and *l*<sup>1</sup> in the shell *a*, the outlet chamber *t* behind the outlets, the valves *v* and *v* in said chamber, and the door *q* with air intakes *q*<sup>1</sup> and valve *r* for closing the latter. 7th. In a magazine-stove the combination of the shell *a*, having door-opening and outlet, the cover *h*, the door *q* having air intakes *q*<sup>1</sup> and valve *r*, the horizontal plate *b* having openings *b*<sup>2</sup> and *b*<sup>7</sup>, the horizontal grate *m* being turnable around the pin *b*<sup>3</sup> and movable backward on guides *b*<sup>4</sup>, the front grate *n* being turnable around the studs *p*<sup>2</sup>, the rear grate *o*, the blocks *c* of refractory material, the

vertical partition  $g^1$  of refractory material having opening  $g^2$  and an enlarged portion that divides the outlet in the shell into an upper portion  $l$ , communicating with the flue  $j$   $k$  and a lower portion  $l^1$  communicating with the opening  $g^2$ , the outlet chamber  $l$ , the valves  $r$  and  $x$  therein, the magazine  $f$  with its cover  $i$ , the lower portion of said magazine composed of four blocks or stones  $f^1, f^2, f^3, f^4$  of refractory material, substantially as and for the purpose set forth.

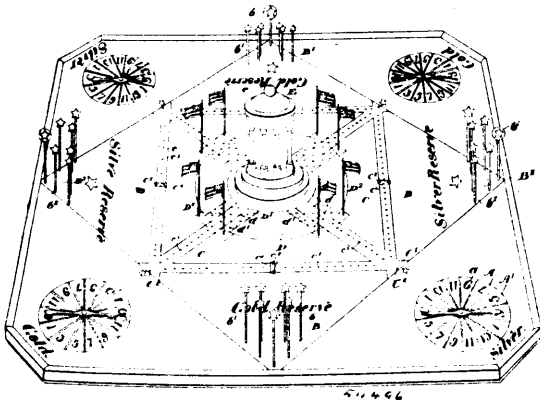
**No. 54,495. Gold Dredging Machine.**  
(*Dragueur pour mineraux.*)



The C. H. Olsen Gold Dredger Company, assignee of Christopher H. Olson, all of Tacoma, Washington, U.S.A., 5th January, 1897; 6 years. (Filed 3rd December, 1896.)

*Claim.*—1st In a dredging machine, the combination with a driving-shaft carrying sheaves and a chain of buckets, of a swinging beam with pulleys or sheaves at its ends and pivotally mounted at such a point between its ends that, at whatever deflection of the beam from a line drawn through the shafts of its sheaves and the driving-shaft, the bucket chains will be taut and will present a triangular figure, as set forth. 2nd. The combination of the pulley beam pivotally mounted as described, the chain of buckets and driving sheaves mounted as set forth, of the sluice D located upon the boat adjacent to the downward run of the chain, with or without the screen, as set forth. 3rd. In a dredging machine, the combination of the pivoted lever arm A, having pulleys X and Y, whose centres occupy the position of the foci of an ellipse, when in line with a sprocket-wheel W whose centre occupies the end of the major diameter, said arm pivoted at a point A that will be the centre of a circle a quadrant of whose arc will most nearly coincide with the end curve of the ellipse, said arm and wheel being provided with a belt chain F and buckets B, each alternate bucket having teeth all mounted and used in combination with a scow S, the inclined grating E, and the sluice box D, all so constructed that the downward movement of the belt will be on such an incline that the sluice box will be wholly beneath the buckets when dumping, all substantially as described and for the purposes set forth.

**No. 54,496. Game.** (*Jeu.*)

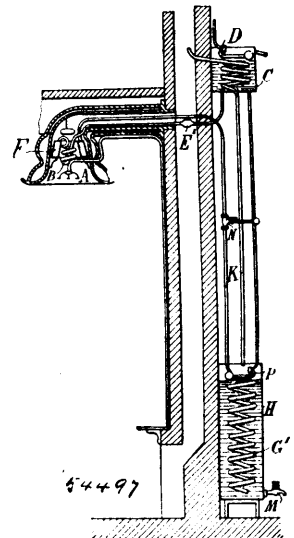


William Rufus Harrison, Toronto, Ontario, Canada, 5th January 1897; 6 years. (Filed 5th November, 1896.)

*Claim.*—1st. A game apparatus comprising a board having a central square bounded by a path-way having a series of holes in alignment in such path-way, diagonal path-ways leading from the bounding path-way provided with holes in alignment, an inner circle provided with a campus having the central holes in alignment with the diagonal path-way and side holes on each side and a central goal with a hole, and pegs representing the gold and silver men designed to be moved in such path-ways according to predetermined numbers, as and for the purpose specified. 2nd. A game apparatus comprising a board having a central square bounded by a path-way having

a series of holes in alignment in such path-way, diagonal path-ways leading from the bounding path-way provided with holes in alignment, an inner circle provided with a campus having the central holes in alignment with the diagonal path-way and side holes on each side and a central goal with a hole, holes at the corners of the diagonally marked square, and pegs to represent the gold and silver reserve men designed to stand in such holes for convenience in playing them, as and for the purpose specified. 3rd. A game apparatus comprising a board having a central square bounded by a path-way having a series of holes in alignment in such path-way, diagonal path-ways leading from the bounding path-way provided with holes in alignment, an inner circle provided with a campus having the central holes in alignment with the diagonal path-way and side holes on each side and a central goal with a hole, holes at the corners of the diagonally marked square and pegs to represent the gold and silver reserve men designed to stand in such holes for convenience in playing them, and a sectorially divided circle at each corner with numbers in each sector, and a pivoted pointer designed to be rotated so as to indicate one of the members when it stops, as and for the purpose specified. 4th. A game apparatus comprising a board having a central square bounded by a path-way having a series of holes in alignment in such path-way, diagonal path-ways leading from the bounding path-way provided with holes in alignment, an inner circle provided with a campus having the central holes in alignment with the diagonal path-way and side holes on each side and a central goal with a hole, holes at the corners of the diagonally marked square, and a sectorially divided circle at each corner with numbers in each sector, and a pivoted pointer designed to be rotated so as to indicate one of the numbers when it stops, as and for the purpose specified. 5th. A game apparatus comprising a board having a central square bounded by a path-way having a series of holes in alignment in such path-way, diagonal path-ways leading from the bounding path-way provided with holes in alignment, a blockade in the centre of the side portions of each path-way, an inner circle provided with a campus having the central holes in alignment with the diagonal path-way and side holes on each side and a central goal with a hole, and pegs representing the gold and silver men designed to be moved in such path-ways according to predetermined numbers, as and for the purpose specified.

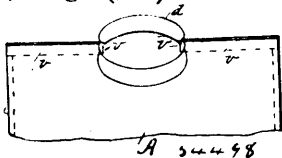
**No. 54,497. Water Heater.** (*Chauffeur d'eau.*)



Hugh Mansfield Robinson, London, England, 5th January, 1897; 6 years. (Filed 5th November, 1896.)

*Claim.*—1st. Apparatus for heating water by the waste heat of illuminating and ventilating flames, wherein a vaporizing coil  $b$  is arranged in the path of the hot products of combustion and surrounded by jacketed covers for retaining and reflecting the heat, the said coil being constantly fed with water from a cistern  $j$ , and being connected with an exit tube  $e$ , having a weighted valve  $r$ , through which tube the steam passes into the heating coil  $f$  of a cistern  $g$  which is arranged away from the flame, for instance under it, and has an outlet for hot water and steam of such a kind that the surplus steam flows away through a coil of the feed cistern  $j$  after it has warmed the water in the same. 2nd. In apparatus for heating water by the utilization of the waste heat of illuminating flames, the combination of a primary heating coil and steam receiver arranged above the burner, a secondary heating coil contained within a hot water tank, with a valve designed to confine the steam within the receiver until a definite pressure is attained, and means for regulating the supply of water to the primary coil and the tank, substantially as described and illustrated in the accompanying drawings.

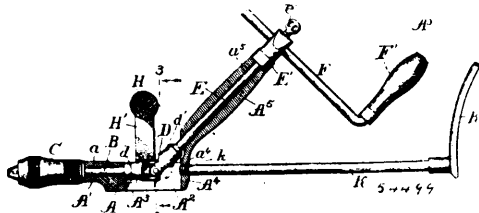
**No. 54,498. Bag. (Sac.)**



Jesse Arnold Knight, Phenix, Rhode Island, U.S.A., 5th January, 1897; 6 years. (Filed 11th December, 1896.)

*Claim.*—1st. As an article of manufacture, a bag having the webs composing the same woven together along the sides and bottom, and the top thereof woven together for a portion of its width, whereby an open mouth is formed, substantially as described. 2nd. As an article of manufacture, a bag having the webs composing the same woven together along the sides and bottom, and the top thereof woven together for a portion of its width, whereby an open mouth is formed, the mouth being surrounded by a neck projecting from the top of the bag, substantially as described.

**No. 54,499. Bit Brace. (Vilebrequin.)**



Stephen McClellan, San Marcos, Texas, U.S.A., 5th January, 1897; 6 years. (Filed 5th November, 1896.)

*Claim.*—1st. The combination with the V-shaped frame, the chuck C, and the journal B and shaft E set obliquely thereto, of the universal joint or its equivalent connecting said parts B and E, with an adjustable hand crank for driving said shaft E, substantially as described. 2nd. A bit brace, consisting of a V-shaped guide frame, with a journal bearing in one end of said frame, an inclined arm with a journal bearing therethrough near the other end of said frame, a journal B and a shaft E mounted in said journal bearings, respectively, a universal joint connecting said parts B and E, a chuck carried by the journal B, a hand crank connected to said shaft E, and a handle secured to said frame, substantially as described. 3rd. The combination with the V-shaped frame, the chuck C, and the journal and shaft E set obliquely thereto, the axis of the shaft E being in the plane longitudinally bisecting said V-shaped frame, of the universal joint or its equivalent connecting said parts B and E, with a hand crank for driving said shaft E, substantially as described. 4th. A bit brace, consisting of a guide frame A, having the faces A<sup>2</sup>, substantially at right angles to each other, with a journal bearing in one end of said frame an inclined arm with a journal bearing therethrough near the other end of said frame, a journal B and a shaft E mounted in said journal bearings, respectively, a universal joint connecting said parts B and E, a chuck carried by the journal B, a hand crank connected to said shaft E, and a handle secured to said frame, substantially as described. 5th. The combination with the V-shaped frame, the chuck C, and the journal B and shaft E set obliquely thereto, the axis of the shaft E being in the plane longitudinally bisecting said V-shaped frame, of the universal joint or its equivalent connecting said parts B and E, with an adjustable hand crank for driving said shaft E and a handle H secured to said frame, substantially as described.

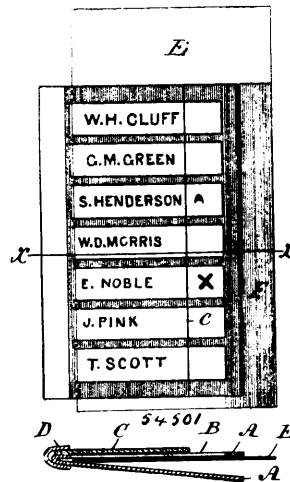
**No. 54,500. Manufacture of Enamelled Ware.**

(*Fabrication d'objets émaillés.*)

Alexander Niedringhaus, St. Louis, Missouri, U.S.A., 5th January, 1897; 6 years. (Filed 1st August, 1896.)

*Claim.*—1st. The process herein described of preparing steel for enamelling, which consists in combining it, in the presence of heat, with sulphur, substantially as described. 2nd. The process herein described of preparing steel for enamelling, which consists in subjecting the steel to the action of sulphur before it is coated with the enamel, substantially as described. 3rd. The herein described process of preparing steel for enamelling, which consists in annealing the same in the presence of a chloride and sulphur, substantially as described. 4th. The herein described process of making enamelled ware, which consists in first charging the steel with sulphur and in then applying the enamel thereto and fusing the same thereon, substantially as described. 5th. The herein described process of preparing steel for enamelling, consisting in impregnating the same with elements which destroy the effect of gases injurious to the enamel, substantially as described. 6th. The herein described process of preparing steel for enamelling, which consists in rendering the steel insensible to gases injurious to the enamel, which treatment also has a physical effect upon the steel, rendering its surface capable of effecting an intimate adhesion of the enamel, substantially as described.

**No. 54,501. Ballot Ticket Holder. (Porte-bulletin.)**

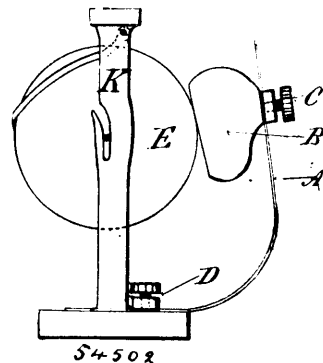


Henry Osborne Wood, Billings Bridge, Ontario, Canada, 5th January, 1897; 6 years. (Filed 12th October, 1896.)

*Claim.*—1st. A ballot ticket holder, comprising a front and back cover folded book-wise, the front cover having oblong spaces B, and a glass pane or transparency C, covering a portion of said spaces from the right side or edge, as set forth. 2nd. A ballot, comprising a holder having book-wise folded covers, the front cover provided with oblong openings B, a transparency C, covering a portion of said openings and a ballot ticket E, having the names of candidates printed to occupy two or more of said openings, and inserted between said covers, whereby a portion of the ticket at the end of the name of each candidate is exposed through said openings and the candidates, names protected by the transparency, for the purpose set forth.

**No. 54,502. Method of Labelling Wrapping Paper.**

(*Méthode d'étiqueter le papier d'enveloppe.*)



Donald James McLeod, Harry Scott and Wesley Simmons, all of Tilsonburg, Ontario, Canada, 5th January, 1897; 6 years. (Filed 4th November, 1896.)

*Claim.*—The combination of any rolled paper cutter K, with the printing machine B, and the spring A, and the shield and thumb screw C, at the back of the printing machine, and the shield and thumb screw D at the bottom of the spring A, and the movable ink dividers H, H, on the ink roller G, and the brass wire spring I which presses the ink roller G to the printing roller F in the printing machine, substantially as and for the purposes hereinbefore set forth.

**No. 54,503. Ointment. (Onguent.)**

William Marsden, Hamilton, Ontario, Canada, 5th January, 1897; 6 years. (Filed 5th November, 1896.)

*Claim.*—A compound composed of an ointment made from elder blossoms and refined lard, tincture of iodine, pine tar, and oxide of zinc, substantially in the proportions and for the purposes set forth.

**No. 54,504. Method of Producing Liquid Acetylene.**

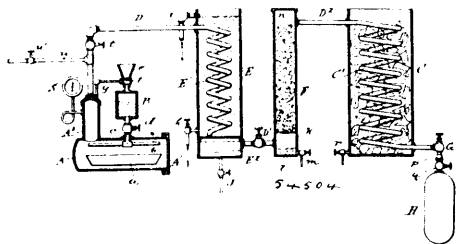
(*Méthode de production de liquide acétylique.*)

Thomas Leopold Willson, New York, State of New York, U.S.A., 5th January, 1897; 6 years. (Filed 25th March, 1895.)

*Claim.*—1st. The process of producing liquid acetylene which consists in generating acetylene gas by the mutual decomposition of a metallic carbide with water, then liquefying it at a suitably reduced temperature under its own pressure of generation. 2nd. The process

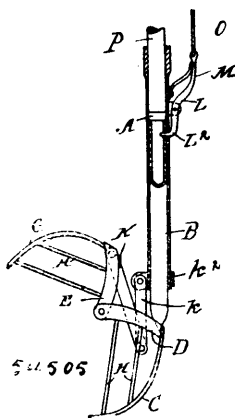


of producing liquid acetylene which consists in generating acetylene gas by the mutual decomposition of a metallic carbide with water,



then drying the gas by passing it in contact with a dehydrating substance, and then liquefying said gas under its own pressure of generation. 3rd. The process of producing liquid acetylene which consists in generating acetylene gas by the mutual decomposition of a metallic carbide with water, forcing the air from the apparatus by displacing it by the generated gas, then closing the apparatus and generating a pressure sufficient to liquefy the gas. 4th. The process of producing and utilizing acetylene which consists in generating acetylene gas by the mutual decomposition of a metallic carbide with water, cooling the gas under heavy pressure whereby it is liquefied, storing the liquid acetylene in a transportation tank, transporting it in such tank to the place of use, and there liberating it as the gas is required for use. 5th. The process of producing and utilizing acetylene which consists in generating acetylene gas by the mutual decomposition of a metallic carbide with water, drying the generated gas, cooling the gas under heavy pressure whereby it is liquefied, storing the liquid acetylene in a transportation tank, transporting it in such tank to the place of use, and there liberating it and permitting it to vaporize as the gas is required for use. 6th. The apparatus for producing liquid acetylene, consisting of the combination of a reaction chamber adapted to be charged with metallic carbide, means for introducing water therein under the pressure of the generated gas, an outlet pipe from said chamber, a liquefier adapted to cool the gas in its passage through it, and a terminal valve for closing the outlet from said liquefier for accumulating a pressure by the generation of the gas, whereby the gas is liquefied in said liquefier. 7th. The apparatus for producing liquid acetylene, consisting of the combination of a reaction chamber adapted to be charged with metallic carbide, a water reservoir in communication therewith with an intervening valve for admitting the water to the chamber, an outlet pipe from said chamber, a liquefier adapted to cool the gas in its passage through it, and a terminal valve for closing the outlet from said liquefier for accumulating a pressure by the generation of the gas. 8th. The apparatus for producing liquid acetylene, consisting of the combination of a reaction chamber adapted to be charged with metallic carbide, means for introducing water therein against the pressure of the generated gas, a gas outlet pipe from said chamber, a valve in said pipe, a dehydrator for drying said gas, a liquefier for cooling the gas and a terminal valve for closing the outlet to accumulate a pressure by the generation of the gas.

**No. 54,505. Oyster Tongs.** (*Pincettes à huîtres.*)

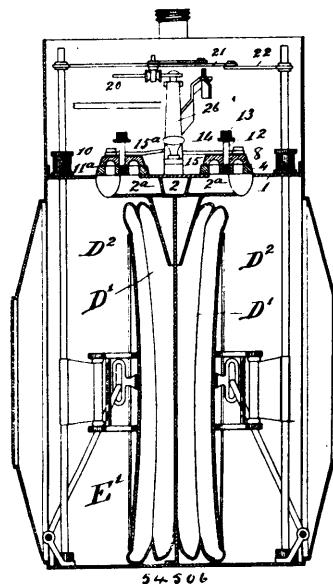


Frederick Paschen, Tampa, Florida, U.S.A., 5th January, 1897; 6 years. (Filed 4th November, 1896.)

*Claim.*—The oyster tongs as herein described, consisting of two parts or sections, the first being a tube, a handle connected with the upper end thereof, the lower end being secured to a cross-bar provided with a plurality of downwardly-directed and outwardly-curved teeth, the other section of the tongs being a vertically movable tube mounted on that above described, to which at its lower end by means of pivoted side arms is secured a supplemental cross-bar, also pivoted to the other cross-bar by a rod or link and also like it provided with teeth or tines downwardly directed and

backwardly curved, the action of the supplemental cross-bar and depending teeth being controlled and when desired the tongs held open by a spring lever pivoted to the upper end of the outer tube and provided with an inwardly-directed projection which is adapted to pass through a hole or opening formed in both the inner and outer tubing and having a guard or other device connected with said lever by which it is operated, substantially as shown and described.

**No. 54,506. Gas Meter.** (*Gazomètre.*)

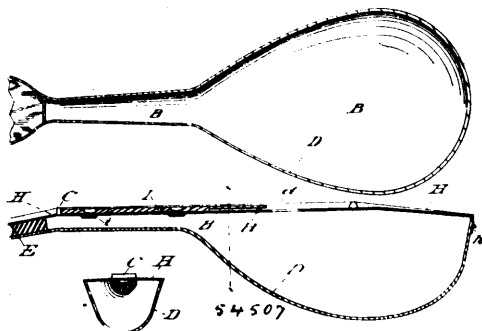


John Seymour, Brampton, Ontario, Canada, 5th January, 1897; 6 years. (File 5th November, 1896.)

*Claim.*—1st. In a gas meter, the combination with a diaphragm, of a valve plate, four ports provided in said valve plate, a grating mounted on said valve plate, said grating being provided with four ports corresponding to the ports in the valve plate, a cover for the grating, said cover provided with valves arranged to close the ports in the grating, means for oscillating the cover to connect alternately the port from the inlet tube with the port to the outside of the diaphragm and the port from the inside of the diaphragm with the port to the outlet tube, and the port from the inlet tube with the port to the inside of the diaphragm, and the port from the outside of the diaphragm with the port to the outlet tube, substantially as and for the purpose set forth. 2nd. In a gas meter, the combination with a diaphragm, of a valve plate, four ports 3, 5, 6, 7 formed in said valve plate, said ports being arranged in a circle, the ports 3 and 5 being respectively diametrically opposite the ports 7 and 6, a grating mounted on said valve plate, said grating being provided with ports corresponding to the ports of the valve plate, a cover for said grating provided with valves, said cover being secured to the grating by means of a pivotal pin, said valves adapted to close the ports in the grating, and means for oscillating the cover, substantially as and for the purpose set forth. 3rd. As an improvement in valves for gas meters, the combination with a diaphragm, of a valve plate, said valve plate being provided with a series of ports, a grating mounted on said valve plate and provided with a series of ports corresponding with the ports in the valve plate, a cover for said grating, said cover being provided with valves arranged to close the ports, a pivotal pin mounted in the grating and provided with an enlarged removable head, a coil spring encircling said pin near its upper end, the upper end of said coil spring bearing against the removable head and the lower end pressing the cover against the grating, and means for oscillating the cover, substantially as and for the purpose set forth. 4th. In a gas meter, the combination of a valve plate provided with a series of ports 3, 5, 6, 7, the ports 3 and 5 being respectively diametrically opposite the ports 7 and 6, and separated from each other by partitions 9, said ports 3 and 7 being of a greater area than the ports 5 and 6, a grating mounted on the valve plate and provided with ports corresponding to the ports of the valve plate, a cover mounted on the grating and provided with valve 11 and 11<sup>a</sup> arranged to close the ports in the grating, means for pressing the cover against the grating, and means for oscillating said cover, substantially as and for the purpose set forth. 5th. In a gas meter, the combination of a valve plate, a series of ports through the valve plate, a grating on the valve plate, a series of ports in said grating to correspond with the ports in the valve plate, a top cover on said grating, valves in said top cover arranged to close the ports in said grating, a pivotal pin passing through the top cover into the grating, a spring encircling said pin and bearing on the top of said top cover, a valve arm, one end of which is connected to said top cover, a crank to which is connected the other end

of said valve arm, and means for rotating said crank to give to the top cover an oscillating motion to permit of the valves opening alternately the ports from the inlet tube to the outside of the diaphragm, and from the inside of the diaphragm to the outlet tube, and from the inlet tube to the inside of the diaphragm, and from the outside of the diaphragm to the outlet tube, substantially as and for the purpose set forth. 6th. In a gas meter, the combination of a grating provided with four ports 3, 5, 6 and 7, separated from each other by partitions 9, a top cover 10 provided with valves 11 and 11<sup>a</sup> arranged to close the ports in the grating, means for holding the top cover tightly against the grating, means for oscillating the top cover to permit of the valves opening alternately the ports from the inlet tube to the outside of the diaphragm and from the inside of the diaphragm to the outlet tube and from the inlet tube to the inside of the diaphragm, and from the outside of the diaphragm to the outlet tube, substantially as specified.

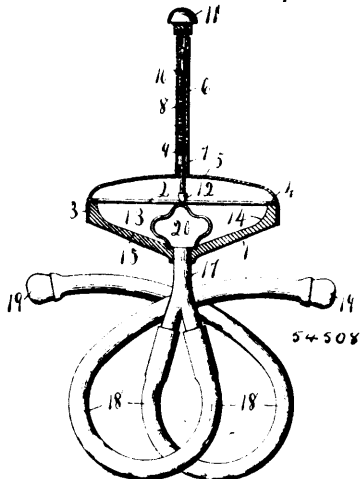
**No. 54,507. Musical Instrument. (Instrument de musique.)**



Charles W. Hutchins, Springfield, Massachusetts, U.S.A., 5th January, 1897; 6 years. (Filed 16th November, 1896.)

*Claim.*—1st. In metallic stringed instruments, the sound chamber inclosed by a metallic bowl or body, a neck having its cavity opening into the main sound chamber and having its curved wall formed of the prolonged wall of the bowl or body, and a metal sheet joined to the edges of the bowl or body and to the edges of the neck to form a cover to both, substantially as shown and described. 2nd. In metallic stringed instruments, a hollow neck provided with a cavity opening into and continuous with the bowl or body, and provided with a bottom and side wall formed of the prolonged bowl or body wall, and a metal sheet joined to the edges of said neck to provide a top thereto and adapted to form a top also to the bowl or body, as and for the purpose set forth. 3rd. The hollow neck provided with a bottom and side wall formed of the prolonged wall of the bowl or body, and provided with a cavity opening at one end of the neck into the main sound body of the instrument and at the other end of the neck arranged to extend beneath the nut, and a metal sheet joined to the edges of the neck to form a top thereto and a seat to the nut, and adapted to form also a top to the bowl or body. 4th. The finger-board provided with two adjusting screws having their ends screwed into the neck beneath the finger-board and having semi-spherical heads seated in corresponding counter-sinks in the finger-board with an enlarged opening for the passage of the screw shanks, for the purpose described.

**No. 54,508. Stethoscope. (Stéthoscope.)**



Florian John Mantel, Syracuse, New York, U.S.A., 5th January, 1897; 6 years. (Filed 12th November, 1896.)

*Claim.*—1st. In a stethoscope, the combination of a vibrating diaphragm, a rod for communicating thereto the sound vibrations of

the human body, and a spring for holding the inner point of the rod against the diaphragm. 2nd. In a stethoscope, the combination of a vibrating diaphragm, a metallic box or case having a cup-shaped depression on one face, a clamping ring for clamping the diaphragm to the case over said depression, and over the diaphragm and opposite the depression a support connected to said clamping ring, and a rod attached to said support and held against the diaphragm. 3rd. In a stethoscope, the combination of a diaphragm, a supporting box having a chamber underneath the diaphragm, means of communication between said chamber and the ear, a support above the diaphragm, and a rod carried on said support and having one end forced down against the plate and the other end outwardly extending for application to the body. 4th. In a stethoscope, the combination of an elastic diaphragm, a support thereto having a hollow chamber under the diaphragm, means for connecting said chamber to the ear, a spring arranged therein bearing against the centre of the diaphragm, a clamping ring for holding the diaphragm in position, and a small rod carried on said clamping ring and having one end forced downward against the diaphragm opposite the inner spring and the other end outwardly extending for application to the body. 5th. In a stethoscope, the combination of a circular metallic case having on one face a comparatively deep circular depression, an elastic diaphragm arranged to cover said depression, a hole opposite the centre of said diaphragm, a tube fitted thereto for insertion in the ear, a spring arranged in said depression and forcing said diaphragm outwardly by pressure against its centre, a clamping ring for clamping said diaphragm in position, having an outwardly extending bridge, a tube sustained on said bridge at right angles to the diaphragm, a rod arranged in said tube having one end extending outwardly, and a spring for forcing its inner end against the centre of the diaphragm.

**No. 54,509. Gold and Silver Extracting System.**

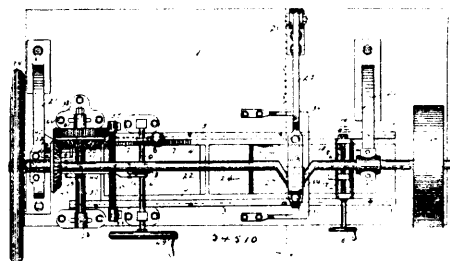
(*Procédé pour extraire l'or et l'argent des minerais.*)

Kate A. May, administratrix of the estate of Franklin C. May, 42 Blyth Road, London, England, 5th January, 1897; 6 years. (Filed 16th November, 1896.)

*Claim.*—1st. A preliminary treatment before amalgamation of gold or silver ores, with a mixed solution of alkaline hydrates and alkaline carbonates. 2nd. A treatment of gold or silver ores before amalgamation, consisting of the boiling of the crushed ore for at least one hour in a solution of mixed alkaline hydrate and carbonate, such as caustic soda and carbonate of soda, and the after digesting of the ore for at least 24 hours in said solution substantially as described. 3rd. The washing and draining off of the solution from the ore sludge of ar-enical cupric or antimonial ores, after boiling and digesting before passing same to amalgamation, substantially as described. 4th. The composition of the solution for a preliminary treatment of gold and silver ores, consisting of equal parts by weight of alkaline hydrate and carbonate, such as 5 per cent of caustic soda and 5 per cent carbonate of soda with 90 per cent of water, substantially as described.

**No. 54,510. Match-splint Machine.**

(*Machine à éclats pour allumettes.*)



George W. Sample, York, Pennsylvania, U.S.A., 5th January, 1897; 6 years. (Filed 23rd November, 1896.)

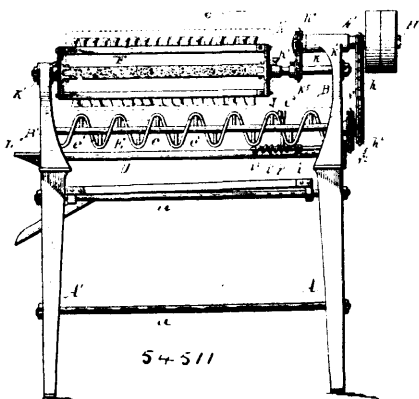
*Claim.*—1st. In a match-splint machine, the combination of a travelling block carriage, provided with a rack-bar, a shaft extending transversely of the carriage and having a pinion engaging the teeth of the rack-bar, a clutch-lever connected to said shaft, a rotatable shaft carrying a wiper to contact with said lever, a drive-shaft arranged substantially above and longitudinally of the line of the feed of the travelling carriage, a slicing-knife pivoted at one side of the carriage and eccentrically connected to the drive-shaft so as to lie above the block to be sliced, and a train of gears connecting the drive-shaft and the wiper-shaft, substantially as and for the purposes described. 2nd. In a match-splint machine, the combination with a splint-block carriage, of a pawl, ratchet and lever connected by means to said carriage to move the same, means for periodically actuating said lever, a lever provided with a foot and having a finger adapted to be brought into contact with said pawl to release it from the ratchet, and a catch engaging the foot of said lever to hold said finger normally out of contact with the pawl and adapted to release said foot to permit the lever to throw the finger against the pawl and release it, substantially as and for the purpose described. 3rd. In a match-splint machine, the combination of a

travelling splint block carriage, a shaft connected with said carriage to move it back and forth, a clutch-lever connected with said shaft to rotate the shaft in one direction and adapted to be unclutched from the shaft to permit the shaft to be reversed for moving the carriage in the opposite direction, a continuously driven extensible-threaded wiper-arm for actuating said lever, a socket for said arm to fit in, and a nut engaging the threaded portion of the wiper to adjust the wiper for regulating the throw of the clutch-lever, substantially as and for the purposes described. 4th. In a match-splint machine, the combination of a travelling splint-block carriage, a continuously-driven drive-shaft arranged parallel with and above said carriage, a slicing-knife connected to and operated by said shaft, a shaft extending transversely to the splint-block carriage and connected therewith for moving the same, a ratchet on said shaft, a lever loosely pivoted on said shaft and having a pawl engaging the ratchet, a continuously-driven wiper deriving power from the drive-shaft and arranged to periodically engage said lever to actuate the same, a device comprising a finger adapted to engage the pawl of the lever to disengage it from its ratchet when the lever is to be rendered inoperative while it continues to be actuated by the wiper, and a catch to engage a part of said device to normally hold said finger out of engagement with the pawl, said catch being located to be engaged by a part of the splint-block carriage when the lever is to be rendered inoperative, substantially as and for the purposes described.

suitable shaft, a spring-held push dog pivotally connected to the finger key, the registering wheel and the ratchet wheel secured to

**No. 54,511. Can Wiping Machine.**

(Machine pour essuyer les canistres.)



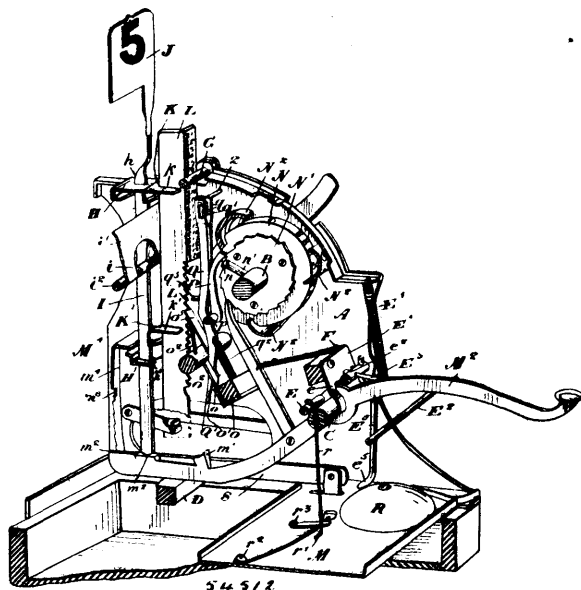
John Chauncey McIntyre, Farnham, New York, U.S.A., 5th January, 1897; 6 years. (Filed 21st November, 1896.)

*Claim.*—1st. The combination with a supporting frame, of a screw conveyer, supporting rollers upon which cans rest, and mechanism whereby said rollers are rotated to move with their upper portions toward the conveyer and hold the cans in engagement therewith, substantially as set forth. 2nd. The combination with a supporting frame, of a screw conveyer, can supporting rollers rotating with their upper portions toward the conveyer, and a rotating brush arranged above the supporting rollers, substantially as set forth. 3rd. The combination with a supporting frame, of a rotary brush, a screw conveyer whereby the cans are carried past the brush, can supporting rollers rotating with their upper portions toward the conveyer, and a yielding guide arranged adjacent to the front portions of the supporting roller, substantially as set forth. 4th. The combination with a supporting frame, of a rotary brush, a screw conveyer whereby the cans are carried past the brush, can supporting rollers rotating with their upper portions toward the conveyer, and a yielding guide arranged obliquely between the supporting rollers and the conveyer, substantially as set forth. 5th. The combination with a supporting frame, of a rotary brush, a screw conveyer whereby the cans are carried past the brush, can supporting rollers rotating with their upper portions toward the conveyer, a feed trough which delivers the cans to the supporting rollers, a yielding guide arm arranged over the front portion of the supporting rollers adjacent to one side of the feed trough, and a yielding guide arm arranged between the supporting rollers and conveyer, and extending obliquely from the opposite side of the feed trough to the rear portions of the supporting rollers, substantially as set forth.

**No. 54,512. Cash Register.** (*Registre de monnaie.*)

William Bentley, Toronto, Ontario, Canada, 7th January, 1897; 6 years. (Filed 3rd November, 1896.)

*Claim.*—1st. The combination with the finger bars supported on a suitable shaft extending from end plate to end plate, of a plate extending from end plate to end plate and supported thereon, and equidistant notches in such plate through which the finger keys extend, as and for the purpose specified. 2nd. The combination with the registering wheels supported on a suitable shaft extending from end plate to end plate, of bars extending from end plate to end plate and provided with equidistant notches into which the wheels extend and in which they rotate, as and for the purpose specified. 3rd. In combination, the finger keys supported on a



the registering wheel and with which the push dog is designed to come in contact, as and for the purpose specified. 4th. In combination, the finger key provided with a peculiarly formed boss at or near its rear end, the registering wheel supported on a suitable shaft, the ratchet wheel secured thereto, the projecting tooth of the ratchet wheel, a rocking detent pivoted adjacent to the wheel and with which the projecting tooth is designed to come in contact, a bar suitably hung, permissible of vertical movement, located adjacent to the rocking detent and having a tail spring held in position and with which the boss on the finger key is designed to come in contact, and a toe extending rearwardly from the bar, the registering bar suitably held in guides and provided with a vertical column of figures, and the vertical rack formed at the lower part of same and means for holding such bar in position upon being raised from number to number, as and for the purpose specified. 5th. In combination, the finger key provided with a peculiarly formed boss at or near its rear end, the registering wheel supported on a suitable shaft, the ratchet wheel secured thereto, the projecting tooth of the ratchet wheel, a rocking detent pivoted adjacent to the wheel and with which the projecting tooth is designed to come in contact, a bar suitably hung, permissible of vertical movement, located adjacent to the rocking detent and having a tail spring held in position and with which the boss on the finger key is designed to come in contact, a toe extending rearwardly from the bar, the registering bar suitably held in guides and provided with a vertical column of figures, the vertical rack formed at the lower part of same, and an oblique projecting spring designed to engage with the lower edge of each tooth of the rack as it ascends, as and for the purpose specified. 6th. In combination, the finger key provided with a peculiarly formed boss at or near its rear end, the registering wheel supported on a suitable shaft, the ratchet wheel secured thereto, the projecting tooth of the ratchet wheel, a rocking detent pivoted adjacent to the wheel and with which the projecting tooth is designed to come in contact, the double bar provided with a slotted upper end supported on a cross spindle, located adjacent to the rocking detent and having a tail spring held in position with which the boss on the finger key is designed to come in contact, and a toe extending rearwardly from the bar, the registering bar suitably held in guides and provided with a vertical column of figures, and the vertical rack formed at the lower part of same, and means for holding such bar in position upon being raised from number to number, as and for the purpose specified. 7th. The combination with the registering bar and suitable guide-ways therefor, of a stop bar extending across the machine directly underneath the bottom of such registering bar, as and for the purpose specified. 8th. The combination with the registering bar, provided with a column of figures arranged equidistant on the face thereof, and angularly formed on the top, suitable grades therefor, a rack formed on the lower front edge of the bar, means operated by the finger key and through the registering disc, mechanism whereby upon each downward depression of the finger key the registering bar is moved upward the space of one tooth of the rack, and means for holding the registering bar in its raised position after each upward movement, as and for the purpose specified. 9th. In combination the registering bar, suitable guides therefor, a rack formed at the lower front edge of the bar, a spring projection extending into the rack for holding the registering bar in the raised position, and means for throwing out the spring projection from its engagement with the rack, as and for the purpose

specified. 10th. In combination the registering bar, suitable guides therefor, a rack formed at the lower front edge of the bar, a spring projection extending into the rack for holding the registering bar in the raised position, a shaft extending across the machine arm having a pin extending upwardly therefrom into proximity with the spring projection, and means for turning the shaft so as to throw the pin against the spring projection, as and for the purpose specified. 11th. In combination the registering bar, suitable guides therefor, a rack formed at the lower front edge of the bar, a spring projection extending into the rack for holding the registering bar in the raised position, a shaft extending across the machine and having a pin extending upwardly therefrom into proximity with the spring projection, a spring-held lever extending through the end of the shaft, an operating lever extending above the end plate and suitably held in its normal position, and a connecting rod between the operating lever and the spring-held lever on the end of the shaft, as and for the purpose specified. 12th. The combination with the registering wheels and inwardly extending projection from the interior of each of the registering wheels and a pin extending outwardly from the shaft and designed to come in contact with the projection on the interior periphery of the registering wheel, as and for the purpose specified. 13th. The combination with the registering wheels and inwardly extending projection from the interior of each of the registering wheel shafts and a pin extending outwardly from the shaft and designed to come in contact with the projection on the interior periphery of the registering wheel, a disc on the end of the registering wheel shaft, a square or other end on the end of the shaft for the reception of the crank, a notch in the disc and a projection on a spring-held lever designed to engage with such notch when the registering wheels have been turned back to zero by the pins on the shaft coming in contact with the inwardly extending projections from the inner periphery of the registering wheel aforesaid, as and for the purpose specified. 14th. The combination with the tablets and bar and supporting guides therefor, the spring-held finger key, the boss at the rear end designed to form a rest for the bottom end of the tablet bar, the tooth on the tablet bar and the spring-held detent plate designed to come in contact with the back of such tooth when the bar is thrown up by the finger key as and for the purpose specified. 15th. The combination with the tablets and bar and supporting guides therefor, the spring-held finger key, the boss at the rear end of the finger key, the tooth on the tablet bar and the spring-held detent plate designed to come in contact with the back of such tooth when the bar is thrown up by the finger key, a rod depending from the end of the detent plate shaft and having a lateral off-set and means for adjusting the bar by pressure upon such off-set upon each downward movement of the finger key, as and for the purpose specified. 16th. The combination with the tablets and bar and supporting guides therefor, the spring-held finger key, the boss at the rear end designed to form a rest for the bottom end of the tablet bar, the tooth on the tablet bar, the spring-held detent plate designed to come in contact with the back of such tooth when the bar is thrown up by the finger key, a rod depending from the end of the detent plate shaft and having a lateral off-set, a bar having a jog in it designed to normally abut the off-set and an inclined end designed to normally rest on a guiding pin extending laterally from the frame, a rod pivotally connected to the front end of the bar, the shaft from which such rod depends and is secured, the bent rod spring-held and finger key, all arranged to operate as and for the purpose specified. 17th. The combination with the finger key journalled on a shaft extending from end plate to end plate, a supplemental shaft having a bent rod extending outwardly therefrom, the spring for maintaining an upward pressure upon such rod, the depending rod secured to the supplemental shaft and having a bevelled bent end as specified and the spring hanger, inclined guide situated above the stem of such hanger, and the bell situated in proximity to the hanger suitably supported, as and for the purpose specified. 18th. The combination with the finger key, the supplemental shaft, the bent rod extending therefrom, the spring holding such rod with a normal pressure upwards, the depending rod with inclined bent end, the lever with which such inclined end is designed to come in contact, the hanger having a bevelled lower end, the spring-pressed drawer and the stop on the upper edge thereof designed to normally abut the straight rear end of the hanger, as and for the purpose specified. 19th. The combination with the finger key having a laterally extending pin at the rear end thereof, of a spring hanger having a ratchet rack at the rear thereof over which the pin is designed to pass and a notch at the top of the rack through which the pin is caused to pass to descend upon the front side of the hanger, as and for the purpose specified.

#### No. 54,513. Treatment of Skins.

(*Traitement des peaux.*)

John Wesley Peirson and Frederick A. T. Moor, both of Philadelphia, Pennsylvania, U.S.A., 7th January, 1897; 6 years. (Filed 25th January, 1896.)

*Claim.*—1st. The art of completely preparing skins, pelts, hides, skins in the hair or raw stock for tanning which consists in one continuous and uninterrupted operation comprising subjecting them to attrition in the presence of a bath of sulphide of sodium and in a closed vessel whereby they are rapidly depilated and cleansed and prepared for the tanning solution or solutions without handling or interruption, substantially as described. 2nd. The art of completely

preparing skins, pelts, hides, skins in the hair or raw stock for tanning which consists in one continuous and uninterrupted operation comprising subjecting them to attrition in the presence of a bath of hot sulphide of sodium and in a closed vessel whereby they are rapidly depilated and cleansed and prepared for the tanning solution or solutions without handling or interruption, substantially as described.

#### No. 54,514. Method of Producing Metallic Cyanides.

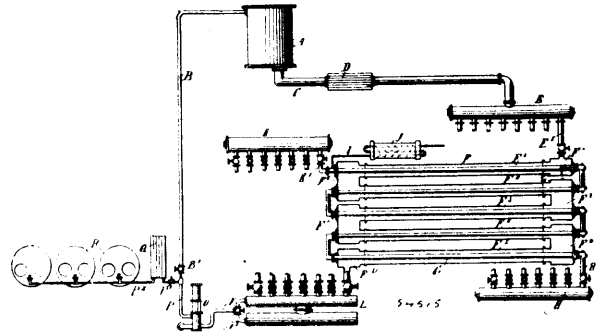
(*Méthode de production de cyanure métallique.*)

Carl Kollner, Vienna, Lower Austria, Hungary, 7th January, 1897; 6 years. (Filed 18th March, 1896.)

*Claim.* A process for producing metallic cyanides (cyanide of potassium, cyanide of sodium and the like) consisting in fusing, in an electrical fire-arc, the nitrates or nitrites of the corresponding metals, either alone or with the admixture of carbon free from nitrogen.

#### No. 54,515. Apparatus for Heating Liquids.

(*Appareil pour chauffer les liquides.*)



Charles Orlando Shaw, Cheboygan, Michigan, U.S.A., 7th January, 1897; 6 years. (Filed 23rd March, 1896.)

*Claim.*—1st. An apparatus of the class described, comprising an overhead tank adapted to contain a heating or cooking medium, a manifold connected by a pipe with said tank, a heater in said pipe for heating said medium as the latter flows from the tank to the manifold, and a series of liquor heaters each connected by a branch pipe with said manifold, and each heater consisting of a coil through the individual runs of which passes the pipe conveying the liquor under treatment, substantially as shown and described. 2nd. An apparatus of the class described, comprising an overhead tank adapted to contain a heating or cooling medium, a manifold connected by a pipe with said tank, a heater in said pipe for heating said medium as the latter flows from the tank to the manifold, a series of liquor heaters each connected by a branch pipe with said manifold, and each heater consisting of a coil through the individual runs of which passes the pipe conveying the liquor under treatment, a second manifold connected by a branch pipe with each liquor heater at the outlet end thereof, a pump connected with said second manifold, and a return pipe from the said pipe and said pump to said supply tank, substantially as shown and described. 3rd. An apparatus of the class described, comprising a series of heaters and coolers each having an outer coil for passage of the heating or cooling medium, and an inner pipe passing through the runs of the said coil and serving to convey the liquid to be heated, manifolds connected with the ends of each coil, and manifolds for connection with the said liquid pipe, substantially as shown and described. 4th. An apparatus of the class described, comprising a series of heaters and coolers each having an outer coil for passage of the heating or cooling medium, and an inner pipe passing through the runs of the said coil and serving to convey the liquid to be heated, manifolds connected with the ends of each coil, and valves for controlling the inlet and outlet to each coil and pipe to permit of cutting out any one of the heaters and to permit of heating or cooling different liquids, substantially as shown and described. 5th. An apparatus of the class described, comprising an overhead tank adapted to contain a heating or cooling medium, a manifold connected by a pipe with said tank, a heater in said pipe for heating said medium as the latter flows from the tank to the manifold, a series of liquor heaters each connected by a branch pipe with said manifold, and each heater consisting of a coil through the individual runs of which passes the pipe conveying the liquor under treatment, a second manifold connected by a branch pipe with each liquor heater at the outlet thereof, a pump connected with said second manifold, a return pipe from said pipe and said pump to said supply tank, and a boiler or like heating device in said return pipe, substantially as shown and described. 6th. An apparatus of the class described, comprising an overhead supply tank adapted to contain a heating or cooling medium, a manifold connected by a pipe with said tank, a heater in said pipe for heating the medium as the latter flows from the tank to said manifold, a series of liquor heaters each connected with a branch pipe of

the manifold, each liquor heater being made in sections connected with each other by return elbows to form a coil, and a pipe made in sections and extending through said pipes of the liquor heater, said pipe being connected by a branch pipe with a manifold containing the liquid to be heated or cooled, substantially as shown and described. 7th. An apparatus of the class described, comprising an overhead supply tank adapted to contain a heating or cooling medium, a manifold connected by a pipe with said tank, a heater in said pipe for heating the medium as the latter flows from the tank to said manifold, a series of liquor heaters each connected with a branch pipe of the manifold, each liquor heater being made in sections connected with each other by return elbows to form a coil, and a pipe made in sections and extending through said pipes of the liquor heater, said pipe being connected by a branch pipe with a manifold containing the liquid to be heated, the outlet end of said liquor-conveying pipe being connected with a manifold, substantially as shown and described.

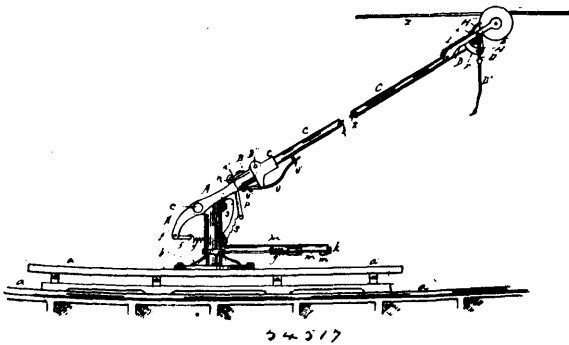
**No. 54,516. Brewing Syrup. (Sirope pour brassage.)**

Leopold Isidore Neumann Norman, London, England, 7th January, 1897; 6 years. (Filed 28th September, 1896.)

*Claim.*—1st. In the manufacture of beer or other products the application of a new syrup called "sexvert" characterized by containing in a homogeneous mixture of proportions controllable at will, fermentable (sxtrose and levulose) and infermentable (sextrine), to the exclusion of all injurious matter (gallisine.) 2nd. In the manufacture of the "sexvert" syrup alluded to, the transformation of the gallisine of commercial glucose in sxtrose by the mixture of the glucose with a portion of saccharose, the inversion of the saccharose of the mixture by acids and the addition after this inversion of acid in excess for the said conversion of the gallisine into sxtrose, as described. 3rd. The preparation of a syrup of crystallizable sugar of 30° B, the heating of this syrup to 82° or 83° C, the filtration and inversion by well known processes and a fresh filtration, the addition to aforesaid syrup of glucose syrup neutralized and diluted to 26° B, the addition to the mixture of fermented and unfermented syrup, of acid for the conversion of the gallisine into sxtrose, the heating to 82° or 83° C, until the polarimetric deviation remains constant, the neutralization with chalk and animal charcoal, the filtration and completion by the ordinary processes. 4th. The modification of the process by the employment of acid glucose syrup coming from the saccharification and the addition of a fresh portion of acid. 5th. The modification by the treatment of the glucose in a special vessel with excess of acid, the heating to boiling and neutralizing and the addition of inverted sugar and concentration in a vacuum.

**No. 54,517. Trolley-pole and Connection.**

(Perche et joint de trolley.)

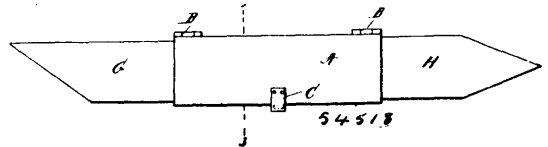


Charles H. Finson, Pittsfield, Maine, U.S.A., 7th January, 1897; 6 years. (Filed 4th June, 1896.)

*Claim.*—1st. In a trolley-pole and connections therewith for electric cars, the combination of the following elements, viz., a tubular trolley swinging vertically from a standard, a stationary ratchet secured to said standard, a pawl pivotally hung from the trolley-pole so as to be normally in engagement with the ratchet, a trolley-truck pivoted to the pole near its upper end, an arm or lever pivotally secured to the pole near its upper end, held normally forward or downward by a spring and adapted to be pressed upward or outward by the said truck when the trolley is forced down by its contact with the under side of the wire, and a cord or wire extending from said swinging arm or lever down through the trolley-pole to said pawl, whereby the pawl is held out of engagement with the ratchet when the trolley is in contact with the under side of the wire and is allowed to engage said ratchet when the trolley slips off the wire, substantially as set forth. 2nd. In a trolley-pole and connections therewith for electric cars, the combination of the following elements, viz., a tubular trolley-pole swinging vertically from a standard, a toothed frame secured to said standard, a pawl pivotally hung from the trolley-pole, a trolley-truck pivoted to the pole near its upper end, a cord or wire having its lower end connected with the pawl and extending up through the pole, and mechanism connected with said cord and intermediate therewith and with the truck whereby the

cord is tightened and the pawl is held out of engagement with the toothed frame when the trolley is in contact with the under side of the wire and the cord is loosened and the pawl placed in engagement therewith when the trolley slips off the wire, substantially as described. 3rd. The combination of the standard *e*, provided with the curved ratchet *S S*<sup>1</sup>, the tubular trolley-pole swinging vertically from said standard, the pawl *P P*<sup>1</sup> pivotally hung from the said pole next the ratchet, the trolley-truck *D* provided with the cross-pin *L*, and pivotally secured to the trolley-pole near its upper end, the curved lever or arm *H*, pivotally secured to the under side of the trolley-pole near its upper end and formed into the bearing-surface *H*<sup>1</sup> and bent outer end *H*<sup>11</sup>, a spring secured at its opposite ends to said portion *H*<sup>11</sup> and to the pole, and the cord or wire *K*, secured at its opposite ends to the pawl and said arm or lever and extending through the tubular pole, substantially as and for the purpose set forth. 4th. In a trolley-pole for electric cars, the combination of the portion *B* rigidly secured to the supporting portion *A*, and having its under side formed into the shoulder *B*<sup>1</sup>, and the portion *C* hinged to the portion *B*, so as to swing vertically with relation thereto and provided with the foot *C*<sup>1</sup> bearing normally against said shoulder, substantially as set forth.

**No. 54,518. Eraser Holder. (Porte-grattoir.)**



John Oscar Smith, Denver, Colorado, U.S.A., 7th January, 1897; 6 years. (Filed 30th October, 1896.)

*Claim.*—1st. The herein described eraser holder which is composed of two separate hinged clamps or parts and which is oblong in form and adapted to hold an eraser at each end thereof, the central portion thereof being also adapted to serve as a receptacle for stamps and other articles, substantially as shown and described. 2nd. As a new article of manufacture, an eraser holder divided longitudinally into two parts, which are hinged together on one side, and provided with locking devices on the opposite side, the inner surface of the holder ends being serrated to better hold the erasers, and a smooth walled central chamber being formed between the end serrations for holding pens, stamps or other articles, all being constructed and arranged substantially as herein shown and described.

**No. 54,519. Hat Identifying Mark.**

(Marque identifiant un chapeau.)

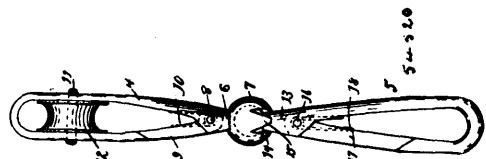


David Alexander Keller, Louisville, Kentucky, U.S.A., 7th January, 1897; 6 years. (Filed 9th November, 1896.)

*Claim.*—The herein described hat identification mark, constructed as a tag or label, having upon one and the same side or face a portion to receive identification marks and a gummed portion by which it may be secured to a hat or cap, substantially as set forth.

**No. 54,520. Device for Carrying Lanterns.**

(Appareil pour porter les lanternes.)



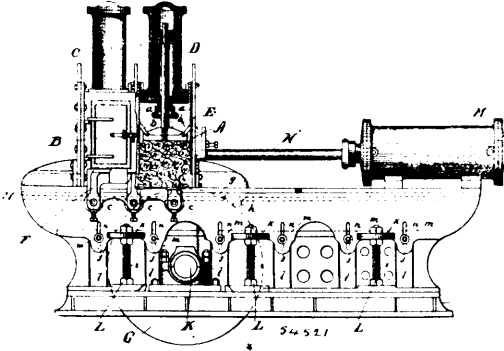
Yern Thompson, Racine, Wisconsin, U.S.A., 7th January, 1897; 6 years. (Filed 7th November, 1896.)

*Claim.*—1st. A travelling device for carrying lanterns, consisting of two sections of loop or hook form, the upper section having a pulley journaled between the sides of its loop, said pulley adapted to travel on a wire or trackway, and the lower section adapted to releasably engage the lantern, and the inner end of one section formed with a socket and the corresponding end of the other section with a ball fitting in said socket, whereby a universal joint connection is formed between the two sections, which permits the lower

section to be swung around freely in all directions. 2nd. In a travelling device for carrying lanterns, the combination, of two sections, of loop form, the longer arm of the loop of one section provided at its inner end with a widened portion which terminates in a ball-socket, and the inner end of the long arm of the loop of the other section terminating in a straight extension provided at its extremity with a ball fitting the socket of the first-named section, a spring-pressed snap-hook arm pivoted to the broadened portion of the long arm of the upper section, and having its free end normally bearing against the end of the short arm of the loop of said upper section, a shaft intersecting the loop of the upper section, and a pulley mounted on said shaft between the sides of the loops.

**No. 54,521. Apparatus for Pulping.**

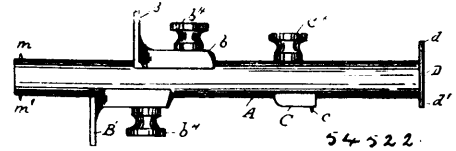
(Appareil à pulpe.)



The Roberts Grinder Co., Kingston, New York, assignee of Charles Winslow Roberts, North Bennington, Vermont, both in the U.S.A., 7th January, 1897; 6 years. (Filed 4th November, 1896.)

*Claim.*—1st. In a pulping organism, the combination of the following co-operating elemental devices in co-operating relation, to wit: a moving pulping agent, a stationary table, through which the pulping agent extends, a pocket, means for continuously pressing pulpable material through the pocket and against the table and against the pulping agent, and means for simultaneously moving the pocket across the pulping agent substantially in the plane of movement of the said pulping agent until the material in the said pocket is clear of the pulping agent and in contact with the table, as specified. 2nd. In a pulping apparatus, the combination of a pulping stone, a traverse table apertured for the passage of the stone therethrough, a pocket sliding upon the traverse table and provided with a piston for pressing the wood forward in the pocket, the said pocket being also provided with brackets and rollers carried in the brackets, the said rollers bearing beneath the edge of the traverse table so as to hold the pulpable material against the traverse table, together with means for traversing the pockets over the table. 3rd. The combination of a pulping stone, a traverse table apertured for the passage of the stone, pockets carried upon the traverse table and provided with brackets and rollers engaging beneath the edge of the table, the said pockets being also recessed for the passage of the stone, and means for traversing the pockets over the table and for continuously pressing the contents of the pocket against the table and against the pulping agent, as specified. 4th. The combination with a pulping stone, of a traverse table apertured for the passage of the stone, a base J supporting the table, slotted lugs *j*, *l*, on the table and base, said lugs co-operating with bolts *m* passing therethrough, a lug or lugs *k* and an adjusting screw *i* intervening between the base and table, whereby the table may be adjusted with respect to the stone, a pocket carried upon the traverse table, means for traversing the pocket over the table and also over the pulping agent, and means for continuously feeding the contents of the pocket, as specified. The combination with a pulping stone, of a traverse table apertured for the passage of the stone, a base J supporting the table, slotted lugs *j*, *l*, on the table and base, said lugs co-operating with bolts *m* passing therethrough, a lug or lugs *k* and an adjusting screw *i* intervening between the base and table, whereby the table may be adjusted with respect to the stone, a pocket carried upon the traverse table and provided with means for holding the same down to the said table and with a piston for pressing the pulpable material through the pocket, together with a power cylinder M and piston N entering the power cylinder and connected to the pocket whereby the pocket may be traversed over the traverse table, substantially as described. 6th. The following elements combined together substantially as shown and described, to wit: a stone, an apertured traverse table, together with means for adjusting the traverse table to and from the stone, a pocket carried upon the traverse table and provided with rollers engaging with the side of the table opposite to the side upon which the pocket is carried, together with means in the pocket for continuously pressing the wood forward in the pocket and with means for reciprocating the pocket entirely across the stone so as to free the wood from contact with the stone in order that a fresh planer grind may be taken at each vibration.

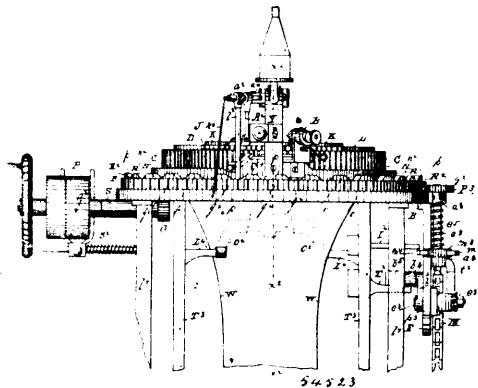
**No. 54,522. Carpenter's Gauge.** (*Jauge de charpentier.*)



Louis Joncas and George Haskell, both of Salem, Massachusetts, U.S.A., 7th January, 1897; 6 years. (Filed 13th November, 1896.)

*Claim.*—1st. A carpenter's gauge, having a tubular shank, a closed slot being provided in one side of said shank, said slot having an enlargement at one end thereof, a fixed marker in the shank, and a movable head to co-operate with said marker, said head having an extended base to slide on the outside of the said shank, a guide-lug projecting from the base to travel in the slot, and a screw and thumb-nut, the head of the former passing through the slot and engaging the edges thereof inside the shank for clamping the movable head in desired adjustment, said screw-head being capable of removal through said enlargement, substantially as described. 2nd. A carpenter's gauge comprising a tubular shank, closed slots therein on opposite sides, one of said slots having an enlargement at one end thereof, fixed markers on opposite sides of said shank, and moveable heads to co-operate with said markers, said heads each having an extended base to slide on the outside of the said shank, and a screw and thumb-nut, the head of the former passing through the adjacent slot and engaging the edges thereof inside the shank for clamping its head in desired adjustment, the said screw-heads being capable of removal through said enlargement, substantially as described. 3rd. A carpenter's gauge, having a tubular shank, said shank being elliptical in cross-section, a closed slot being longitudinally provided in one broad side of said shank and having an enlargement at one end thereof, a suitable marker and a head co-operating therewith, said head having an extended base to slide on the outside of the said shank, and a screw and thumb nut, the head of the former passing through the slot and engaging the edges thereof inside the shank for clamping the head in desired adjustment, said screw-head being capable of removal through said enlargement, substantially as described.

**No. 54,523. Knitting Machine.** (*Machine à tricoter.*)

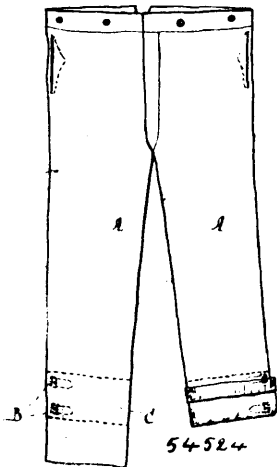


Eugene Vermilzea, Waterford, the firm of Campbell & Clute and Seth T. Harshaw, Cohoes, all of New York, U.S.A., 7th January, 1897; 6 years. (Filed 16th November, 1896.)

*Claim.*—1st. In a rotary knitting machine, the combination of a cylinder provided with vertically arranged needles, cams whereby said cylinder needles are caused to rise and descend, means by which the yarn is carried beneath the beards of said vertical needles when the latter are raised, a presser whereby the beards of said cylinder needles will be closed when descending to cast off their stitches, a dial-wheel having radially arranged needles and provided with cams whereby said dial needles are forced outwardly and drawn inwardly, a presser whereby the beards of the dial needles are closed when being drawn inwardly, and a casting-off plate adapted to engage with the under side of the dial needles when the latter are being drawn inwardly and force the stitches therefrom, substantially as shown and described. 2nd. The combination with the vertical spring-needles *N*<sup>1</sup>, constructed to be operated substantially as described, of the sinker-burr *B*<sup>2</sup> operated to deliver yarn to said vertical spring-needles, the presser *A*<sup>1</sup> operated to press in the beards of said vertical spring-needles, the horizontally arranged and radially placed spring needles *N*<sup>2</sup> operated to be moved outwardly and inwardly, substantially as described, the presser *A*<sup>2</sup>, and the casting-off plates *J*, *J*, each made with the edge or lip *I*<sup>1</sup>, constructed to engage with the under-side of said horizontally arranged needles when the latter are drawn inwardly, substantially in the manner as and for the purposes set forth. 3rd. The combination with the dial wheel *D*, having the down-cast hub

H<sup>4</sup>, of the vertical shaft or stud U, on which said dial-wheel journals, the gear-wheel G<sup>5</sup> mounted to turn on the lower end of said shaft U, and provided with a plate O having downwardly and outwardly extended arms O<sup>2</sup>, O<sup>2</sup>, adapted to engage with and be turned by the depending legs T<sup>3</sup>, of a revolving take-up mechanism, the shaft g<sup>5</sup>, having mounted upon its lower end the gear-wheel G<sup>4</sup>, adapted to mesh into the gear-wheel G<sup>5</sup>, and on its upper end the gear-wheel G<sup>3</sup> and the gear-wheel G<sup>2</sup>, mounted on the dial-wheel hub, and adapted to mesh into the gear-wheel G<sup>3</sup>, substantially in the manner as and for the purposes set forth. 4th. The combination with the dial-wheel D, having the down-cast hub H<sup>4</sup>, carrying a gear-wheel of the stationary stud or shaft U, the gear-wheel G<sup>5</sup>, mounted to turn on the lower end of said shaft or stud, the plate O, having the laterally extended arms O<sup>2</sup>, O<sup>2</sup>, and secured to the lower side of said gear-wheel G<sup>5</sup>, gears connecting said gear-wheel G<sup>5</sup> with the gear-wheel on the dial-wheel hub, a revolving take-up mechanism provided with inwardly projecting arms L<sup>4</sup>, L<sup>4</sup>, a collar C<sup>5</sup> secured to said stud or shaft U, and the cast-off plates J, J, upwardly-projected from said collar, substantially in the manner as and for the purposes set forth. 5th. The combination with the cylinder C, provided with a geared rack g<sup>7</sup>, and a driving-wheel G<sup>1</sup>, of the shaft U, the dial-wheel D, having the down-cast hub H<sup>4</sup>, operated to be rotated substantially as described, of the collar C<sup>5</sup> connected to said shaft U, and the cast-off plates J, J, upwardly projected from said collar, constructed and arranged to be operated substantially in the manner as and for the purposes set forth. 6th. The combination of the yoke, the presser A<sup>2</sup>, having a sleeved passage-way in its upper end of the rod a<sup>2</sup>, provided with the depending leg I<sup>2</sup> at its outer end and at its inner end pivoted to the yoke, of the pattern-ring R<sup>2</sup>, having the projection p on its upper surface, the vertical shaft e<sup>3</sup> provided with the pinion P<sup>3</sup> at its upper end, and having the encircling spring e<sup>3</sup>, the ratchet-wheel E, sprocket-wheel E<sup>2</sup>, pattern-chain M, having tappings t<sup>2</sup>, the pawl p<sup>2</sup>, having the crank-arm b<sup>2</sup>, and cam-roller b<sup>2</sup>, a revolving take-up mechanism having the depending legs T<sup>3</sup>, T<sup>3</sup>, provided with the arm T<sup>2</sup>, and the arm I<sup>2</sup>, and the spoke-wheel m<sup>3</sup> arranged on the shaft e<sup>3</sup>, constructed and arranged to operate substantially in the manner as and for the purposes set forth. 7th. The combination with the stationary shaft or stud U, of the dial-wheel D, having the hub H<sup>4</sup> downwardly projected from its under side, and provided with the gear-wheel G<sup>2</sup>, the gear-wheel G<sup>5</sup> arranged to turn on said shaft U at its lower end, the plate O connected to said gear-wheel G<sup>5</sup>, and provided with arms O<sup>2</sup>, O<sup>2</sup>, adapted to engage with and be turned by the sides of a revolving take-up mechanism, and the gear-wheels G<sup>4</sup> and G<sup>3</sup>, communicating motion from said gear-wheel G<sup>5</sup> to said gear-wheel G<sup>2</sup>, substantially in the manner as and for the purposes set forth.

**No. 54,524. Convertible Trousers. (Pantalon.)**



Simon Marcus Silverman, Chicago, Illinois, U.S.A., 7th January, 1897; 6 years. (Filed 21st December, 1896.)

*Claim.*—In convertible trousers, an internal encircling cuff united to each leg below the knee to cover the inseams and constitute a contrasting band, said cuff having suitable fasteners e.g., straps and buckles thereon and being located above the bottom of the leg so that on plural reversion of the trousers the final roll renders the cuff external i.e., causes it to face outward and the trousers leg is shortened to present the finished appearance of knickerbockers, on securing the fasteners, substantially as described.

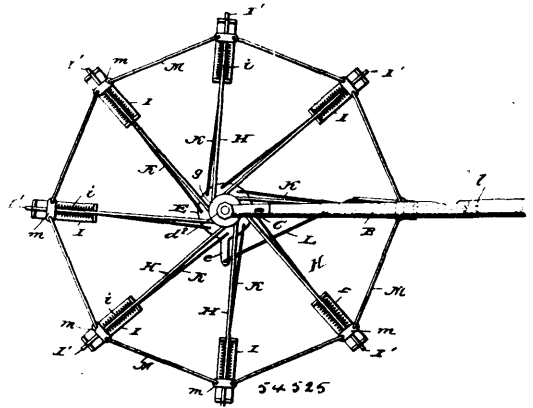
**No. 54,525. Apparatus for Casting Fish-Nets.**

(Appareil à jet de filets.)

James McKeever Holten, Fairton, and Mary Collins, Pennsville, both in New Jersey, U.S.A., 7th January, 1897; 6 years. (Filed 11th November, 1896.)

*Claim.*—1st. In a device for casting fish-nets, the combination, of the fixture C having a horizontal socket to receive the end of a

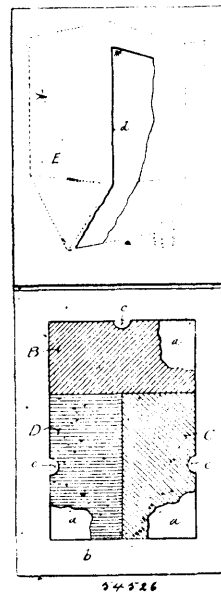
boom or spar and a vertical opening, a bolt D passed upward through said vertical opening and provided with nuts, a sleeve F mounted



upon the bolt and provided with projecting arms, spring-actuated bolts carried at the outer ends of the arms, together with a disc E mounted upon the bolt D, and rods K connecting the bolts with the disc, the latter being operated by a rope or flexible connection, substantially as shown and described. 2nd. In a device for casting fish-nets, the combination, of the fixture C having a horizontal socket to receive the end of a boom or spar and a vertical opening, a bolt D located partially within said vertical opening, a sleeve F mounted upon the bolt and having tangential arms H, sliding bolts at the outer ends of said arms, together with a disc E mounted upon the bolt, and rods K connecting the sliding bolts to the disc, said rods extending substantially parallel with the arms, the disc being operated by a cord or other flexible connection, substantially as shown and for the purpose set forth. 3rd. In an apparatus for casting fish-nets, the combination, of the fixture C having a horizontal socket to receive the end of a boom or spar and a vertical opening as shown, a bolt D secured in the vertical opening to depend below the fixture C, a collar F mounted upon the lower end of the bolt and provided with vertical apertures, tangential arms H having bent ends which engage said vertical apertures, and a disc g for holding said arms in such engagement, together with sliding bolts at the outer ends of the tangential arms, a disc E mounted upon the bolt D, and rods K connecting the sliding bolts with said disc, the latter having a projecting arm to which an operating-rope is connected, substantially as shown and for the purpose set forth.

**No. 54,526. Colour Exhibiting Device.**

(Appareil à exhiber des couleurs.)

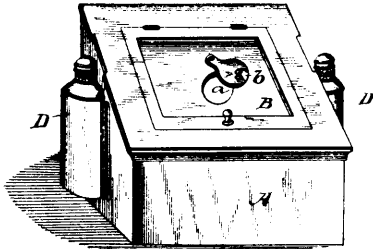


James Edward Patton, jr., Milwaukee, Wisconsin, U.S.A., 7th January, 1897; 6 years. (Filed 12th November, 1896.)

*Claim.*—1st. An interchangeable colour exhibiting device comprising a base, a series of removable and interchangeable colour cards, and a cover having a pictorial representation on the outer face thereof, and an opening therethrough whereby, when the cover is closed upon the base, a portion of each colour card is displayed to

complete the picture, substantially as set forth. 2nd. An interchangeable colour exhibiting device, comprising a base having a depressed centre and a surrounding frame with tongues projecting over said centre, a series of removable and interchangeable colour cards fitting within said centre, beneath said tongues, a cover hinged to the base, and having a mutilated or partially cut away picture on its outer face, and a receptacle for the colour cards secured to the back of the base, substantially as set forth.

**No. 54,527. Reflector for Compass-Boxes.**  
(*Reflecteur pour boîtes à boussole.*)

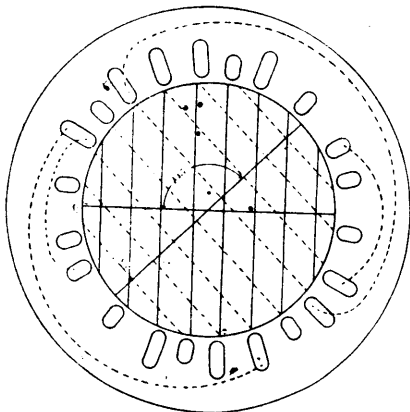


54527

Abraham Mitchell, Shelter Island, and Arthur S. French, both in New York, U.S.A., 7th January, 1897; 6 years. (Filed 11th November, 1896.)

*Claim.*—The compass-box having an opening at top, perforations in its side walls, and exterior side lamps applied on said walls, the tubular reflector open along its lower portion, said reflector being mounted in the box, over the compass card and at one side thereof, and extending between the openings in the side walls of the box to receive and direct the light from the lamps, the parts named being arranged, constructed and combined, substantially as shown and for the purpose specified.

**No. 54,528. Electro-Motor and Transformer.**  
(*Electro-moteur et transformeur.*)

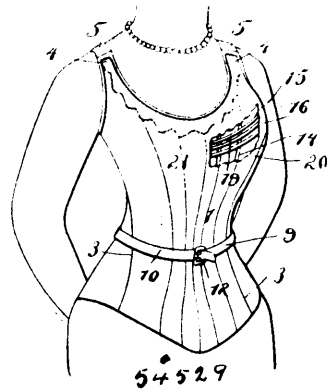


54528

The Alternate Current Electro Motor Syndicate, 2 and 4 Penwern Road Earls Court, assignee of Walter Langdon Davies, West Kensington, both in Middlesex, England, 7th January, 1897; 6 years. (Filed 30th May, 1896.)

*Claim.*—1st. In electro-motors, transformers and the like, a rotating field derived from a single alternating source, such field being the resultant of component fields, the axes of which are inclined to each other at an angle, the supplement of that by which the component fields differ in phase, as hereinbefore set forth, 2nd. In electro-motors, transformers and the like, a rotating field, the resultant of component fields, the axes of which are inclined to each other at an oblique angle, the supplement of that by which the fields differ in phase, as hereinbefore set forth. 3rd. In electro-motors, transformers and the like, a magnetic field obtained within the central space of a cylindrical magnet core by windings substantially as described, encircling more or less of the central space, and distributed upon the cylinder in due relation as herein explained to the magnetic reluctance to be overcome. 4th. In electro-motors, transformers and the like, a rotating field, the resultant of two component fields obtained in the manner stated in claim 3. 5th. In electro-motors, transformers and the like, a rotating field, the resultant of two component fields obtained in the manner stated in claim 3, the axes of which fields being inclined to each other at an angle, the supplement of that by which the fields differ in phase, as hereinbefore set forth.

**No. 54,529. Corset. (Corset.)**

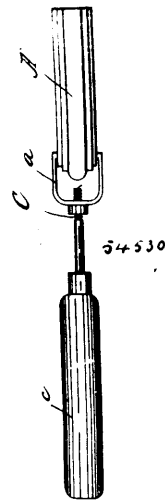


54529

Lucile Carlisle Wright, St. Louis, Missouri, U.S.A., 7th January, 1897; 6 years. (Filed 19th December, 1896.)

*Claim.*—A corset having a closed front and open back, comprising the vertical pockets 13, the stiffeners 14 in said pockets, the intersecting transverse pockets 15, arranged in batteries 16, and the stiffeners 19 secured in said pockets, the crossed shoulder straps 5-5, and the waist straps 9-10, the strap 10 being formed with a slot 11 through which the strap 9 passes, the two straps encompassing the waist and secured in front by a buckle 12, substantially as shown and described.

**No. 54,530. Machine for Casting Metallic Links.**  
(*Machine pour fabriquer les bagues d'assemblage.*)

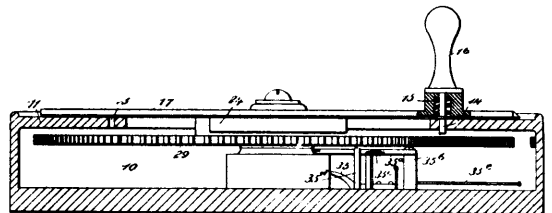


54530

Léonard Henri Regaudie, Montréal, Québec, Canada, 7 janvier 1897; 6 ans. (Déposé le 5 décembre 1896.)

*Résumé.*—Un appareil pour couler les bagues d'assemblage, comprenant quatre pièces A, A', B, B', creusées en forme de moule, fixées à des colliers a, a', d, d', et pourvues, les unes de poignées c, c', se terminant par des vis, et les autres de vis de pression e, e'; la pièce B' étant de plus pourvue d'une gouttière F pour la coulée du métal en fusion, le tout tel que décrit et montré sur dessins.

**No. 54,531. Telephone System. (Système de téléphone.)**



54531

Wallace Augustus Houts, Parker, South Dakota, U.S.A., 8th January, 1897; 6 years. (Filed 10th January, 1896.)

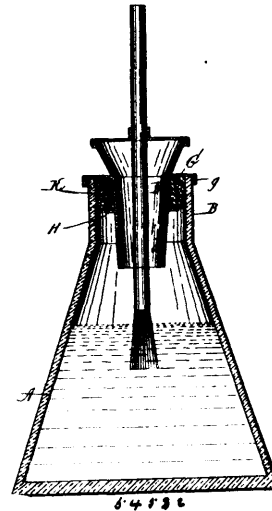
*Claim.*—1st. A call box provided with a revoluble indicator, a revoluble wheel, a spring having its ends secured to the wheel and the indicator respectively, and arranged to be wound up by the rotation of the indicator relatively to the wheel, and circuit-breaking



mechanism operated by the wheel, substantially as described. 2nd. A call box provided with a revoluble indicator, a fastening device to fix the position of the indicator relatively to the box, a wheel journaled in the box, a spring having its ends secured to the wheel and the indicator respectively, and arranged to be wound up by the rotation of the indicator relatively to the wheel, and a circuit breaker operated by the said wheel, substantially as described. 3rd. In a telephone system, the call box comprising a containing box, a revoluble dial thereon, a fastening device to fix the position of the dial, a gear wheel journaled beneath the dial, a driving spring connecting the gear wheel and dial, engaging stops on the gear wheel and dial, and a circuit-breaking wheel driven by the gear wheel, substantially as described. 4th. In a telephone system, the call box comprising a containing box, a revoluble dial thereon, a gear wheel journaled opposite the dial, a driving spring connecting the gear wheel and dial, a movable clutch plate engaging the gear wheel, abutting stops on the gear wheel and dial, and a circuit-breaking wheel driven by the gear wheel, substantially as described. 5th. In a telephone system, the call box comprising a containing box, a revoluble dial thereon, a handle on the dial, a fastening device actuated by the handle to fix the position of the dial, a gear wheel journaled in the box, a driving spring connecting the gear wheel and dial, stops to limit the relative movements of the gear wheel and dial, a lock for the gear wheel, and a circuit-breaking wheel driven by the gear wheel, substantially as described. 6th. In a telephone system, the call box comprising a containing box, a revoluble dial thereon, a fastening device to fix the position of the dial, a gear wheel journaled in the box, a driving spring connecting the gear wheel and dial, a fastening device for the gear wheel, a circuit-breaking wheel driven by the gear wheel and comprising alternating conducting and insulating plates, and a contact spring engaging the circuit-breaking wheel, substantially as described. 7th. In a telephone system, the switch comprising a barrel, a series of insulated conducting parts thereon, a series of wheels, one for each subscriber, turning on the barrel and connected with each subscriber's wire, and contact making devices carried by the wheels to engage the conducting parts on the barrel, substantially as described. 8th. In a telephone system, the switch comprising a barrel having circumferential grooves, contact strips crossing the grooves and bent to enter a portion of the grooves, wheels turning on the barrel, and contact arms carried by the wheels to engage the contact strips, substantially as described. 9th. In a telephone system, the switch comprising a barrel, a series of insulated contact strips thereon, a series of collars or frames on the barrel, each being in contact with one contact strip and insulated from the other contact strip, a series of ratchet wheels turning on the aforesaid collars, contact arms carried by the ratchet wheels to engage the contact strips, and magnet-actuated pawls to turn the ratchet wheels, substantially as described. 10th. In a telephone system, the switch comprising a barrel, a series of insulated frames on thereon, a series of revoluble ratchet wheels in their contact strips the barrel, each ratchet wheel being connected with its own telephone, contact arms carried by the ratchet wheels to engage the other telephone contact strips, a magnet actuated post for each ratchet wheel and a spring-pressed pawl carried by the post to engage the ratchet wheel, substantially as described. 11th. A telephone system, comprising a series of telephone instruments, a switch having a barrel and a series of longitudinal insulated contact strips, each connected with an independent telephone instrument, a series of ratchet wheels turning on the barrel, each being in contact with one of the aforesaid strips, contact arms carried by the ratchet wheels to engage the strips, oscillating posts, pawls carried by the posts to engage the ratchet wheel, and a call box for each telephone instrument, the call box being connected with the magnet of its appropriate ratchet wheel and adapted to send electrical impulses through the magnet, substantially as described. 12th. A telephone call box or the like, comprising a casing having a circular series of numerals marked on its face, a dial having a circular series of name spaces registering with said series of numerals and provided with an index, and circuit-breaking devices arranged in said casing and actuated from said dial, substantially as described. 13th. In a telephone system or the like, a switch comprising a body having a series of conducting parts each adapted to form one terminal of a subscriber's circuit, a series of movable parts arranged to move over said body, and contact devices carried on said movable parts and each adapted to form the other terminal of a subscriber's circuit, said contact devices being each provided with two contact points adapted alternately to contact with alternating members of the series of conducting parts, substantially as described. 14th. In a telephone system or the like, a switch comprising a cylindrical body having a parallel series of independent conducting parts each forming at all times one terminal of a subscriber's circuit, a series of movable parts guided on the outside of said body and arranged to contact successively with the respective conducting parts forming the terminals of the respective subscriber's circuits, and means for moving said movable parts independently of one another, substantially as described. 15th. A call box having a revoluble indicator, a revoluble wheel, stops on the indicator and wheel arranged to engage one another, a circuit-breaking device operated by said wheel, and a spring connected to said wheel and adapted, when the wheel is released, to drive the same forward to engage the stops with one another and actuate said circuit-breaking device, substantially as described. 16th. In a telephone system, a switch comprising a barrel, a series of insulated

contact strips thereon, a series of collars or frames on the barrel, each being in contact with one contact strip and insulated from the other contact strips, a series of wheels turning on the collars, contact devices on the said wheels to engage the contact strips, and means for actuating the said wheels, substantially as described.

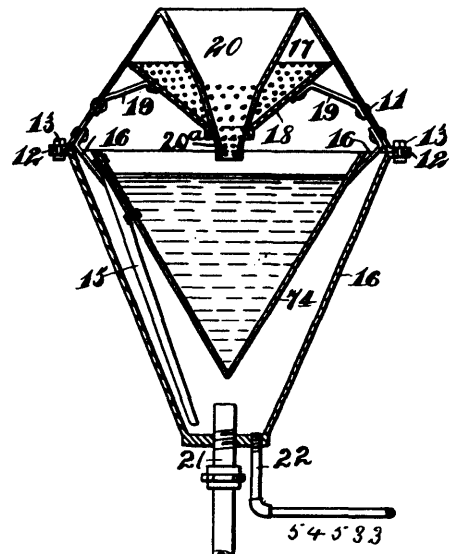
**No. 54,532. Mucilage Bottle. (Bouteille à mucilage.)**



William Percy Turner, New York, State of New York, U.S.A., 8th January, 1897; 6 years. (Filed 10th June, 1896.)

*Claim.*—1st. An attachment for the neck of mucilage bottles and similar receptacles, consisting of a funnel-shaped device having a tubular extension, a flange formed thereon, or secured thereto, and provided with a depending rim which is adapted to enclose the upper end of the neck of the bottle, and another flange secured thereto or formed thereon, and a packing ring which is placed between said flanges, substantially as shown and described. 2nd. The combination with a mucilage bottle, or receptacle having a neck of the usual form, of a removable plug or attachment which is funnel-shaped in form, and provided with a tubular extension which is adapted to project into the bottle or receptacle, said tubular extension being provided with two annular flanges or rims which are secured thereto or formed thereon, and the upper end of which is provided with a depending rim which is adapted to enclose the upper end of the neck of the bottle, substantially as shown and described.

**No. 54,533. Condenser. (Condenseur.)**

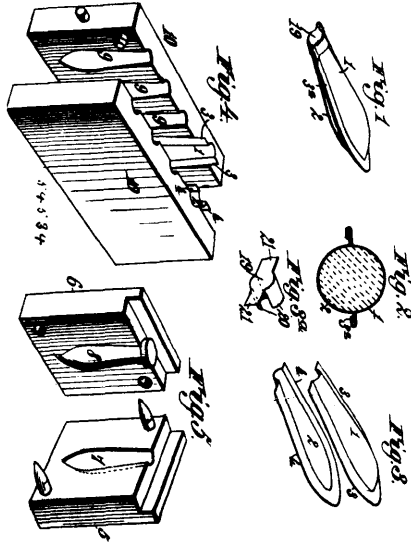


Michael Spelman, William Hinson Graves, and James Vincent Spelman, all of Shreveport, Louisiana, U.S.A., 8th January, 1897; 6 years. (Filed 10th July, 1896.)

*Claim.*—A condenser, comprising a two-part shell tapering toward its ends and having a steam supply opening at one end, a receiver within the part adjacent to the steam supply opening and tapering

toward the same, an overflow pipe for the receiver, a discharge pipe for the shell and adjacent to the steam supply opening, a distributor above the receiver and shaped as a cone and perforated, and a cone above the distributor, the same being open at each end and communicating with the outer side of the shell, substantially as described. 2nd. A condenser, comprising a two-part shell tapering toward its ends and having a steam supply opening at one end, a receiver within the part adjacent to the steam supply opening and tapering toward the same, an overflow pipe for the receiver, a discharge pipe for the shell and adjacent to the steam supply opening, a distributor above the receiver and shaped as a cone and perforated, a cone above the distributor, the same being open at each end and communicating with the outer side of the shell at its outer end and formed at its inner end with a perforated tube extending to about the centre of the condenser, substantially as described.

**No. 54,534. Suppository. (Suppositoire.)**



David Genese, Baltimore, Maryland, U.S.A., 8th January, 1897; 6 years. (Filed 17th July, 1896.)

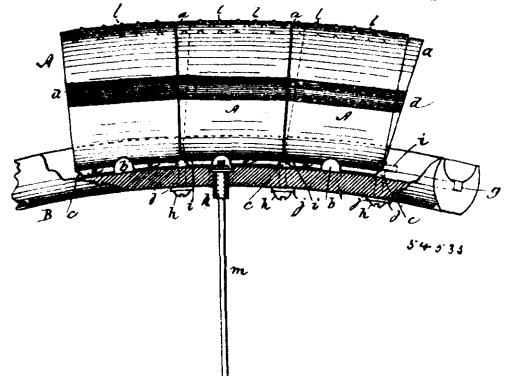
*Claim.*—1st. A suppository having an enclosing, insoluble, airtight integument, such as tin-foil, composed of two similar molded sections provided with continuous, laterally projecting rims united together and folded at the outer edge to hermetically seal them and effectually exclude moisture, substantially as described. 2nd. The method herein described of making suppositories, which consists in reducing the medicament to a fluid condition by heat, lining a mold with sections of insoluble material, such as tin-foil, introducing the hot medicament into the mold between the sections of the insoluble material, subsequently compressing the insoluble material longitudinally along the opposite edges and around one end of the suppository, and applying a protecting substance to the other end of the suppository, substantially as and for the purposes set forth. 3rd. An apparatus for maintaining in a heated, fluid, or semi-fluid condition the material for the preparation of the suppositories, or analogous articles, consisting of a liquid-holding kettle or vessel, from the top wall of which rises a substantially annular steam chamber communicating with the interior of the kettle or vessel and having a vertical opening in its walls, and a removable cylindrical container arranged in the steam chamber, resting upon the top portion of the kettle or vessel, heated by the latter and said annular steam chamber, and provided with a discharge faucet or nozzle arranged in the vertical opening of the steam chamber and adapted to pass vertically through said opening when the container is removed or replaced, said steam chamber having at its top portion a steam escape, substantially as and for the purpose described.

**No. 54,535. Wheel Tire. (Bandage de roue.)**

James Jamieson, Hamilton, Ontario, Canada, 8th January, 1897; 6 years. (Filed 30th July, 1896.)

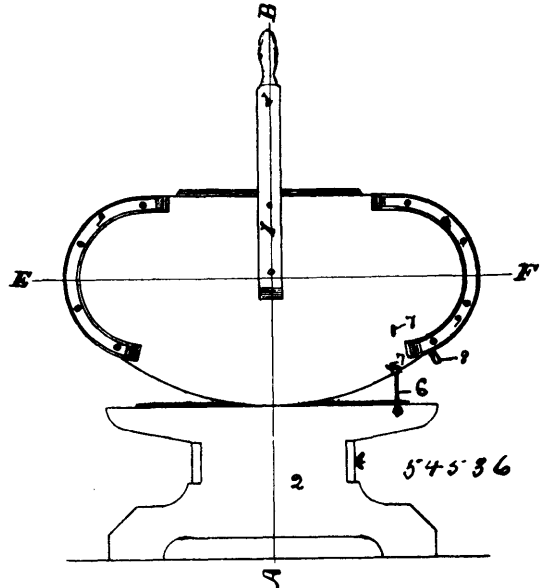
*Claim.*—1st. A non-puncturable tire for bicycles and other vehicles, consisting of a series of elastic sheet metal sections, made in tubular form, and each section constructed with an end flange to be overlapped by the next section, side grooves formed in each section to give sufficient spring and elasticity, in combination with a rim to which the sections are secured, forming a circle substantially as specified. 2nd. A non-puncturable tire for bicycles and other vehicles, consisting of a series of elastic sheet metal tubular sections, each formed from a flat rectangular sheet metal plate, and constructed with a notch cut out of each corner, and a half-circular opening about the centre of each end respectively, to admit fastening screws and spokes when each section is bent in tubular and circular

form and attached to a rim of a wheel, substantially as specified. 3rd. A non-puncturable tire for vehicles, comprising a series of



elastic sheet metal sections made in tubular and circular form, constructed with grooves on the sides for spring and elasticity, conical-shaped projections on the running surface for the purpose specified, openings in the bottom and ends of each section for spokes and screws respectively, vertical flanges on the bottom when bent in tubular form, and an annular groove in a wheel rim to receive the said flanges, and fastened thereto by bolts or screws and plates, substantially as described.

**No. 54,536. Churn. (Baratte.)**



John Wilson, Collingwood, Ontario, Canada, 8th January, 1897; 6 years. (Filed 17th October, 1896.)

*Claim.*—1st. A rocking churn, consisting of a curved body, rods 10 securing the sides to the said body, curved end pieces 9 through which the said rods pass, a vertical grate or rack removably secured centrally in said churn, a cover 5, handle 1, the said sides being extended to form rockers, and the hook 6 and eyes 7, substantially as set forth. 2nd. In a rocking churn, the combination with the churn rockers having notched segmental castings secured thereto, of the stand 2 having bearing surfaces for the said rockers, and castings provided with teeth adapted to engage the notches in the castings on the rockers, substantially as set forth.

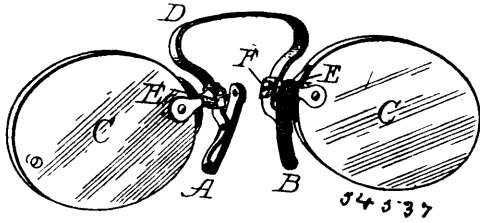
**No. 54,537. Eyeglass Nose-guard.**

(Garde-nez pour binocles.)

The Myrowitz Manufacturing Company, assignee of Emil Bruno Meyrowitz, all of Ridgefield, New Jersey, U.S.A., 8th January, 1897; 6 years. (Filed 12th November, 1896.)

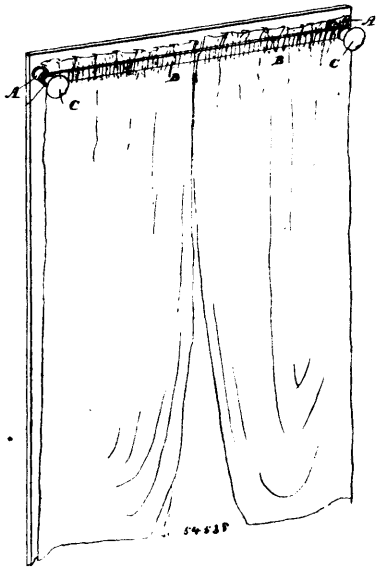
*Claim.*—1st. An eyeglass nose-guard comprising two parts united with each other by rivets, one of which forms a pivot, one of the parts having an adjusting arm which is pliable edgewise between said rivets to adjust the nose-guard, and is of greater effective length than the distance between said rivets to permit such adjustment. 2nd. An eyeglass nose-guard comprising a nose-piece adjustable edgewise upon a pivot at or near its middle, and a metallic connection having an attaching-arm and an adjusting-arm in one part, and united with said nose-piece by said pivot at the intersection of said arms, said adjusting-arm being further attached to the nose-

piece by a rivet at its extremity, and being pliable edgewise to adjust the nose-piece, and of greater effective length than the distance



between said pivot and said rivet to permit such adjustment. 3rd. In an eyeglass nose-guard comprising a nose-piece having a back-plate of pliable metal attached thereto, a metallic connection having an attaching-arm and an adjusting-arm, a pivot at the intersection of said arms uniting said nose-piece at or near its middle with said metallic connection, and a rivet attaching said adjusting arm to said nose-piece at or near its lower end, substantially as hereinbefore specified.

**No. 54,538. Curtain Support.** (*Support de rideau.*)



Robert E. Menzie, Toronto, Ontario, Canada, 8th January, 1897; 6 years. (Filed 23rd November, 1896.)

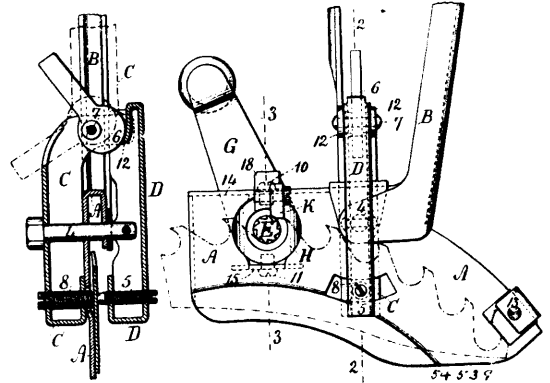
*Claim.*—1st. In a curtain support, in combination, the spacing blocks with inner screws for securing them to the frame, the slat with holes in the ends of the same and the ornamental retaining or holding blocks having screws at their inner ends, which extend through the holes in the ends of the slats into the spacing blocks, as and for the purpose specified. 2nd. In a curtain support, in combination, the spacing blocks with screws at their inner ends for securing them to the frame, the slat with holes in the ends, the wedge-shaped sleeves or washers, the supplemental slat and the ornamental holding or retaining block having screws at the inner ends, which extend through holes in the slats and washers or sleeves into the spacing block, as and for the purpose specified.

**No. 54,539. Saw Sharpener.** (*Machine à affûter les scies.*)

John Godfrey Moore, New York, State of New York, assignee of William Henry Myers, Brooklyn, both in the U.S.A., 8th January, 1897; 6 years. (Filed 16th November, 1896.)

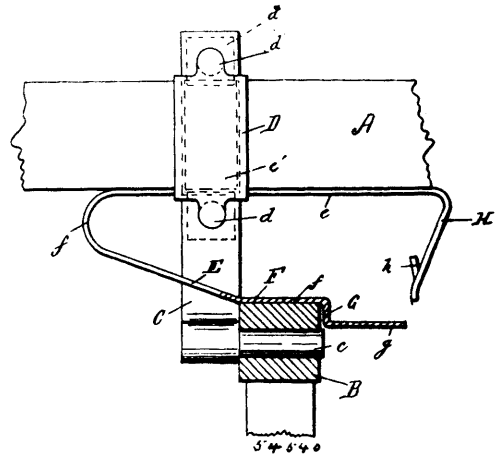
*Claim.*—1st. The combination with a milling tool and its shaft and stock, of a base plate, a standing or rigid handle thereon projecting at one side of the base plate, a presser lever and a pivot for connecting the same to the stock, a clamp lever pivoted to the presser lever and adapted to act with such presser lever in holding the saw, a cam for acting upon the clamping lever and a screw for adjusting the pressure of the clamping lever upon the saw, whereby the cam can be used in clamping or relieving the saw, independent of the adjusting screw that adapts the tool to different thicknesses of saws, substantially as set forth. 2nd. The combination in a saw sharpener, of a base plate, a rigid handle extending out from the base plate, a milling tool for acting within the throat of the saw tooth in sharpening the same, a compound lever having a handle and a clamp lever, a pivot for connecting the handle and clamp lever to the base plate, screws for adjusting the parts and adapting them to varying thicknesses of saws to be sharpened, and a cam for applying pressure to the clamp lever, substantially as set forth. 3rd. The combination with a base plate and a presser lever and clamp for act-

ing upon the saw, of a milling tool, a shaft and handle for actuating the same, a stock receiving the shaft and pivots for supporting the



stock and for allowing it to be moved with the milling tool to any desired angular position to the face of the base plate, substantially as set forth. 4th. The combination with the base plate having projecting bearings, of a stock having the ends bevelled, a milling tool and a tubular shaft for the same received within the stock, pivot screws passing through the bearings and into the stock for connecting the stock to the base plate, and a clamping screw in a segmental slot for holding the parts at the desired angle, substantially as set forth. 5th. The combination with the base plate having projecting bearings, of a stock having the ends bevelled, a milling tool and a tubular shaft for the same received within the stock, pivot screws passing through the bearings and into the stock for connecting the stock to the base plate, and a clamping screw in a segmental slot for holding the parts at the desired angle, a standing shear and a supporting lug upon the stock for acting with the milling tool, substantially as set forth. 6th. The combination with the levers for clamping and moving the saw of the milling tool, and means for rotating the same, and a guide block of rawhide or similar material against which the saw teeth rest, substantially as specified. 7th. The combination in a saw sharpener, of means for clamping the saw, a milling tool and handle for revolving the same, a stock for the milling tool and a standing shear on the stock and acting with the milling tool in sharpening the teeth, substantially as specified.

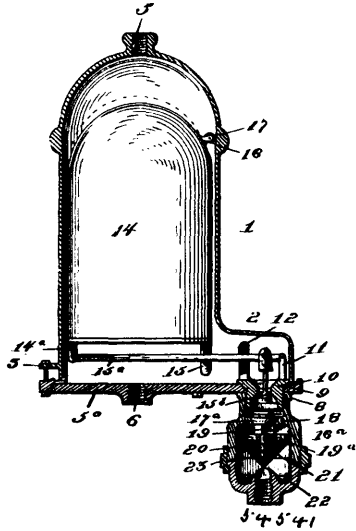
**No. 54,540. Shaft Coupling.** (*Armon de limonière.*)



David Bradley, Cartwright, and James S. Reekie, Boissevain, both in Manitoba, Canada, 8th January, 1897; 6 years. (Filed 27th November, 1896.)

*Claim.*—1st. The combination with a plate provided with a laterally projecting coupling pin, and means for securing the plate to the axle, of a spring secured to the axle and provided with a shoulder for holding the eye of the shaft on the said pin, substantially as set forth. 2nd. The combination with a plate adjustable longitudinally of the axle and provided with a laterally projecting coupling pin, and stationary clips for securing the plate to the axle, of a spring secured to the said axle and provided with a shoulder for holding the eye of the shaft on the said pin, substantially as set forth. 3rd. The combination with a plate provided with a laterally projecting coupling pin, and means for securing the said plate to the axle, of a spring secured to the said axle and bearing against the rear and end portions of the eye of the shaft when on the said pin, and a catch for holding the said spring clear of the said eye when pressed back to permit the said eye to be slid on or off the said pin, substantially as set forth.

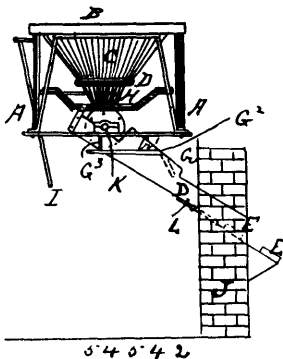
**No. 54,541. Feed Water Regulator.**  
(*Régulateur d'eau d'alimentation.*)



James J. Lawler, Mount Vernon, New York, U.S.A., 8th January, 1896; 6 years. (Filed 29th November, 1896.)

*Claim.*—1st. A feed water regulator, consisting of a casing having suitable connections for the flow of water, and a base provided with an aperture having radial recesses, a valve seat having lugs fitting in the aperture and recesses, a valve arranged in said seat, a casing for a second valve secured to the valve seat, a valve and strainer arranged therein, said casing being made in sections connected by a universal joint, a valve lever connecting with the upper valve and pivoted to a lug of the valve seat, and a float secured on the end of the lever to control the valve, as and for the purpose described. 2nd. In combination with the casing of a feed water regulator, a float having a guide arm working over the lever, and means at its lower outer edge for securing the float to the lever, a friction wheel secured near the top of the float and working on the wall of the casing, a valve and lever controlling the same, all arranged and operating substantially as and for the purpose described. 3rd. A feed water regulator, consisting of a casing, a supply pipe leading thereto, a strainer and valves controlling the inflow of water, a sediment pocket formed in the lower section of the valve casing, a valve lever, lugs integral with the valve seat to which the valve lever is pivoted and means for preventing the seat from turning, a guide in which the valve lever works, a float having a guide working over the lever by which the position is retained, a lug at the lower outer edge of the float by which it is pivoted to the lever, a friction wheel on the float working against the inner wall of the casing, and a removable bottom arranged on the casing, as and for the purpose described.

**No. 54,542. Furnace Feeding Mechanism.**  
(*Mécanisme d'alimentation pour fournaies.*)

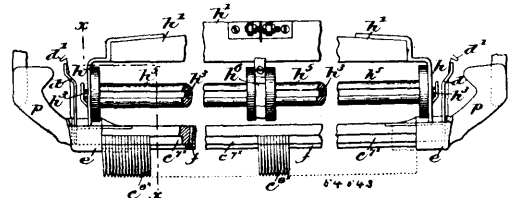


Fred. Hofacker, Rockland, Maine, U.S.A., 9th January, 1897; 6 years. (Filed 30th November, 1896.)

*Claim.*—1st. The rotary valve or cylinder comprising a shaft, disks or heads affixed thereto, segmental plates affixed to the said heads, and partitions forming a pocket within the periphery of the cylinder, said periphery being interrupted to form the mouth of the pocket. 2nd. A furnace-feeding mechanism comprising a hopper, a rotary cylinder or valve arranged to close the outlet of the hopper and comprising the heads 2, the removable sections 3 having ears 4, and the diverging plates F<sup>2</sup> forming a pocket, a chute arranged to receive coal

from said pocket and conduct it to the furnace, a valve arranged to open and close the chute, and means for operating the valve. 3th. A furnace-feeding mechanism comprising a hopper, a rotary cylinder or valve arranged to close the outlet of the hopper, and comprising the heads 2, the removable sections 3 having ears 4, and the diverging plates F<sup>2</sup> forming a pocket, a chute arranged to receive coal from said pocket and conduct it to the furnace, a valve arranged to open and close the chute, means for rotating the feeding-valve, and connections for opening and closing the chute-valve at each rotation of the feeding valve.

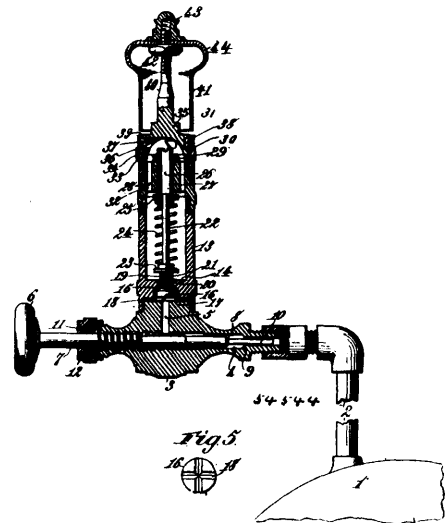
**No. 54,543. Tuft-Yarn Carrier for Looms.**  
(*Porte-fil pour métiers.*)



The Crompton Loom Works, assignee of Charles Crompton, both of Worcester, Massachusetts, U.S.A., 9th January, 1897; 6 years. (Filed 15th May, 1896.)

*Claim.*—1st. In a loom for weaving tufted fabrics, the combination with a tuft-yarn frame carrying a tuft-yarn spool, and the tubes through which the tuft-yarns are passed, and means for manipulating said frame, of a support for and to prevent bending or sagging of said frame during its movements for insertion of the tuft-yarns, substantially as described. 2nd. A tuft-yarn frame with a series of tuft-yarn tubes and carrying arms for the same, combined with an intermediate support for the tuft-yarn frame co-operating with said arms to prevent the sagging or bending of the frame during weaving, substantially as described. 3rd. In a loom for weaving tufted fabrics, a tuft-yarn frame having a series of tuft-yarn tubes, and carrying arms for the same, combined with an intermediate support connecting said arms, to provide a stiff and unyielding support for the tuft-frame, and thereby prevent sagging or bending of the latter during weaving, substantially as described.

**No. 54,544. Low-Pressure Alarm.**  
(*Indicateur du niveau d'eau.*)

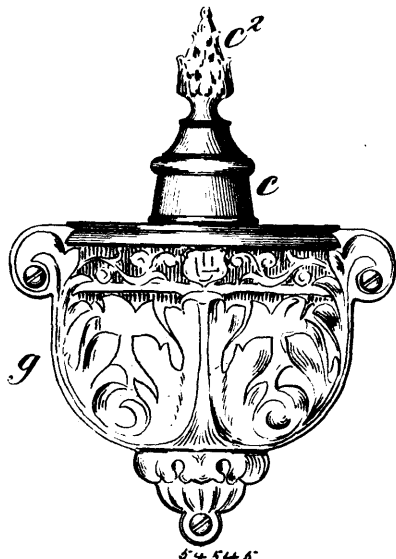


George Heffner, Louisville, Kentucky, U.S.A., 9th January, 1897; 6 years. (Filed 2nd December, 1896.)

*Claim.*—1st. In a low-pressure alarm for air-brake systems, the combination with a whistle, a sectional valve casing with which the whistle communicates, and a centrally perforated partition located in said casing and provided with a valve seat, of an upwardly seating whistle-controlling valve provided on its upper side with a shank triangular in cross-section and having a step bearing therein, a valve stem having on its lower end a pivot bearing for loose engagement with the step bearing of the valve shank and provided with a collar above the valve seat, a spring surrounding the valve stem and having at its lower end a bearing on said collar, a tubular adjusting screw plug supported in the top of the valve casing to serve as a guide for the valve stem and having a collar to afford a bearing for the upper end of the valve spring, and a lock nut on said screw plug, substantially as described. 2nd. In a low-pressure alarm for air-brake systems, the combination with an automatic valve and a casing having its upper end provided with a perforated head, of a

whistle bowl or base section engaged with said valve casing, and having an internal collar seating on the top edge of said head, a vertically adjustable disk concaved on its under side and having an annular depending flange engaging the interior of the bowl above its internal collar and provided with radial air passages, and a whistle bell mounted on a stem carried by said disk, substantially as described.

**No. 54,545. Electric Lighter. (Allumeur électrique.)**



John Hencken and John Henry Meyer, assignee of Herbert Ernest Rider, all of New York, State of New York, U.S.A., 9th January, 1897; 6 years. (Filed 18th December, 1896.)

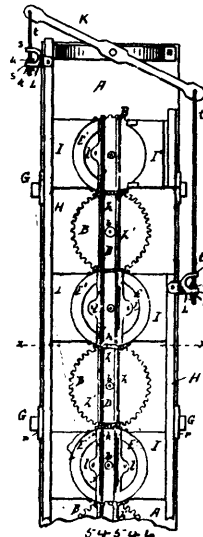
*Claim.*—1st. The combination with a torch of a receptacle for the same and an electric spark-forming device, said device being actuated by the withdrawal of the torch and not actuated by restoring the torch, substantially as set forth. 2nd. The combination with a torch and suitable electric connections and a device relatively to which said torch is movable, of a yielding spark-forming finger on said device, said finger being movable in one direction into contact with a terminal of said electric connections and being movable in another direction out of contact therewith, and a contact device on said torch arranged to be brought into contact with said yielding finger to close the electric circuit on the movement of the torch in one direction and to be brought into contact with said finger without closing the circuit on the movement of the torch in the other direction, substantially as set forth. 3rd. The combination with a torch having a contact, of a receptacle for the same, a moving spark-forming device and a stop constituting the terminal of an electric circuit, the spark-forming device being normally out of contact with said stop, so that upon withdrawing the torch the spark-forming device is made to contact with the stop, but upon replacing the torch the spark-forming device is moved away from said stop, substantially as set forth. 4th. The combination with a torch containing a contact device, of a receptacle for enclosing the same, a yielding spark-forming device arranged at the mouth of said receptacle in the path of the contact device of the torch, whereby on the withdrawal of said torch from the receptacle the spark-forming device is caused to yield outwardly beyond said receptacle, and the spark will be formed outside of said receptacle, substantially as set forth. 5th. The combination with a hollow torch containing a reservoir in its upper part and a wick extending downward through the torch and emerging at the lower end of said torch, of a closed receptacle for the wick end of the torch, a contact device at the mouth of said torch, and spark-forming fingers arranged to make and break contact with said contact device and thereby ignite said torch, substantially as set forth. 6th. The combination with a torch containing a contact device, of a receptacle *i* for said torch, the spring fingers *b* extending into said receptacle, the springs *k, k*, connected to said fingers, and the contact stops *a, a*, forming terminals of an electric circuit, substantially as set forth. 7th. The combination with a hollow torch containing a reservoir in its upper part and a wick extending downward and emerging at the lower end of said torch, said torch having a contact device at the lower end thereof, of the receptacle *i*, the spring fingers *b*, the springs *k, k*, and the contact stops *a, a*, substantially as set forth.

**No. 54,546. Wire Fence Machine. (Machine à clôture de fil de fer.)**

William H. Campbell, Albin, New York, U.S.A., 11th January, 1897; 6 years. (Filed 7th December, 1896.)

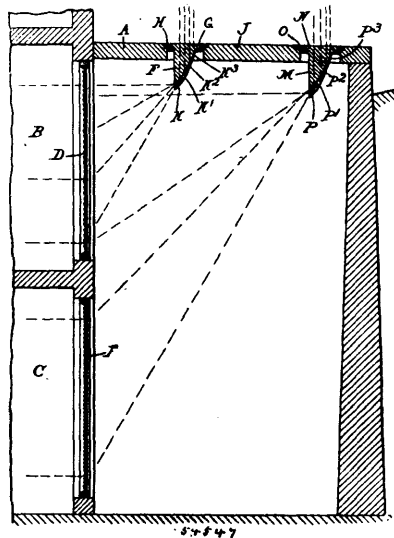
*Claim.*—In a wire fence machine, the combination with the gears B, and reversely operating slides H, H, of the rectangular guide-

frames D, D, projecting bodily from the gears, and the corresponding rectangular twister-frames E, E, resting in contact therewith, and



having twister-heads at their outer ends, the guide-frames provided with the flanged ribs *h', h'*, and the twister heads with bearings *j, j*, fitting over said ribs, as shown and described and for the purpose specified.

**No. 54,547. Prismatic Light. (Lumière prismatique.)**



Thomas Walter Horn, Toronto, Ontario, Canada, 11th January, 1897; 6 years. (Filed 4th December, 1896.)

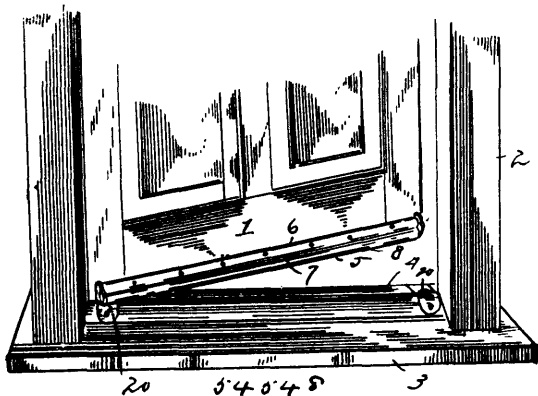
*Claim.*—1st. A vault light, comprising a mass of transparent material with one face substantially parallel to the rays of the incoming light and the other face broken into a series of separate faces set at varying angles to the perpendicular, so as to distribute the light over an area much larger than the area of the face of the prism. 2nd. A vault light, comprising a mass of transparent material with one face substantially parallel to the rays of the incoming light and the other face broken into a series of separate faces set at varying angles to the perpendicular, the higher faces being more nearly perpendicular and the lower ones departing increasingly from the perpendicular. 3rd. In a vault light, the combination of a basement substantially perpendicularly arranged prismatic window light with a vault light set in the pavement and having a rear reflecting portion comprising a series of faces set at varying angles to the perpendicular, so that the upper faces throw the light toward the bottom of the basement and the lower faces toward the top of the basement.

**No. 54,548. Weather-Strip. (Bourrelet de porte.)**

Henry Voth, Moberly, Missouri, U.S.A., 9th January, 1897; 6 years. (Filed 7th December, 1896.)

*Claim.*—1st. The improved weather strip, comprising a moulding secured to the door and formed in its bottom with a longitudinal

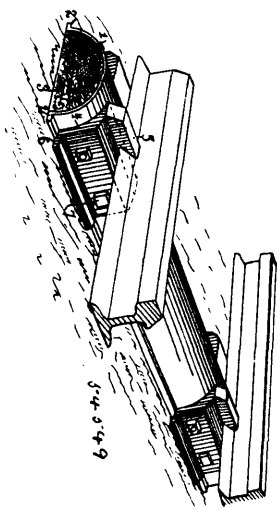
cove, and an oscillating strip pivoted at its outer edge to said moulding and having its swinging edge arranged nearest the door



and also chamfered, in combination with a threshold-strip having a splayed surface with which the oscillating strip engages, substantially as described. 2nd. The improved weather-strip, comprising a moulding secured to the door, and plates attached to said moulding and projecting above the upper surface thereof, and a hinged weather-strip pivoted at its outer edge between said end plates and having its swinging edge arranged to move in proximity of the door, the inner swinging edge of said strip, being also chamfered, in combination with a threshold-strip having a splayed surface with which the swinging edge of the hinged strip engages, and a suitable stop for limiting the downward movement of the hinged strip, substantially as described.

**No. 54,540. Railway Tie and Clamp.**

(*Traverse et crampon de chemin de fer.*)

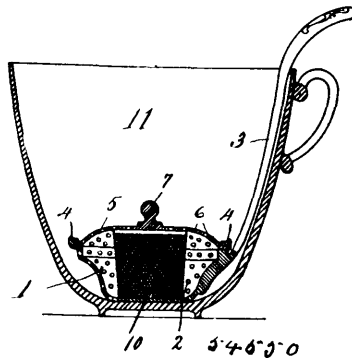


Peter Theshner and Henry Laux, both of Carlyle, Illinois, U.S.A., 11th January, 1897; 6 years. (Filed 7th December, 1896.)

*Claim.*—1st. The combination with a railway tie, curved in cross section and having its flanges, of a rail-clamp having its inner surface conformed to the tie and having a jaw to engage a rail, and also having a flange for engaging the top and edge of the tie-flange, substantially as specified. 2nd. The combination with a semi-cylindrical metal tie, having base flanges and flat depressed or portions, of rail-clamps having a body portion conformed to the curve of the tie and having flanges to engage the tops and edges of the tie-flanges, substantially as specified. 3rd. The combination with a semi-cylindrical plate-metal tie having base flanges, of rail-clamps adapted to fit against the sides of the tie and also having a top portion to engage against the under side of a rail, jaws on the clamps to engage over the base flange of the rail and against the rail-web, flanges on the clamp: s to engage over the flanges of the tie-flanges, and the fastening bolts, substantially as described. 4th. A railway tie having an outwardly extending base-flange and a rail clamp secured to one side of the tie and having at its upper portion a jaw capable of engaging the base flange of the rail and at its lower portion an outwardly extending flange passing over and bearing down upon the flange of the tie, substantially as described.

**No. 54,550. Coffee and Tea Service Utensil.**

(*Ustensile pour service à thé et café.*)

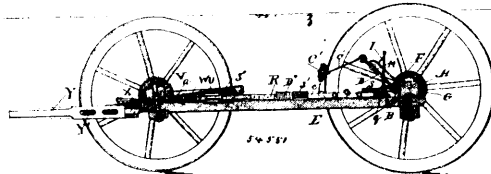


Albert F. Stephens and Richard T. Connell, both of St. Joseph, Missouri, U.S.A., 11th January, 1897; 6 years. (Filed 7th December, 1896.)

*Claim.*—As a new article of manufacture, an individual coffee or tea service utensil, comprising a perforated bowl having a handle, a lid or cover for the same also provided with a handle, and a foraminous cylinder or casing within said bowl held in place by the bottom of the bowl and the cover thereof, substantially as shown and described.

**No. 54,551. Wagon Brake.**

(*Frien de wagon.*)



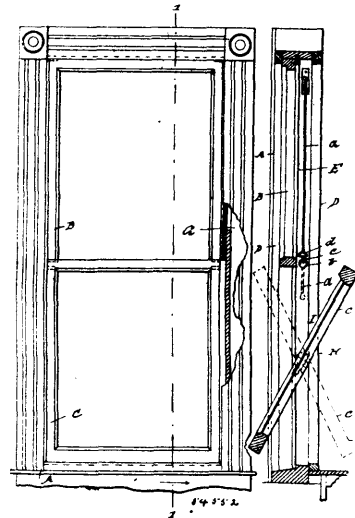
Robert James McGhee, Horning's Mills, Ontario, Canada, 11th January, 1897; 6 years. (Filed 7th December, 1896.)

*Claim.*—1st. An automatic wagon brake consisting of one or more brake shoes, and means for automatically setting the brake shoe by the pressure on the tongue, substantially as specified. 2nd. A wagon brake consisting of two brake shoes, a break beam connecting together the break shoes, suspended from the vehicle, and mechanism for automatically setting the brake shoes against the tires of the wheels, by the back pressure of the tongue, substantially as specified. 3rd. A wagon brake consisting of a brake shoe suspended from the vehicle, a friction strap encircling the hub of the wheel, means for causing the friction strap to bind on the said hub during the back pressure of the tongue, and a connection between the friction strap and shoe for setting the shoe against the tire, substantially as specified. 4th. A wagon brake consisting of two brake shoes, a brake beam coupling together the brake shoes suspended from the vehicle, a friction strap encircling the hub of one of the wheels, a longitudinally moving tongue, a connection between the tongue and the straps to cause the strap to bind on the hub, and a connection between the strap and the brake beam to set the shoes against the tire during the back pressure of the tongue, substantially as specified. 5th. A wagon brake consisting of two brake shoes, a brake beam connecting the brake shoes, a friction strap encircling the hub of each of the wheels, a bell crank lever pivotally connected to each of the said friction straps, a rock shaft, a crank for each end of the rock shaft, each crank connected to the short arm of the bell crank lever, an arm extending from the rock shaft, an S-lever connected to the arm and to each of the bell crank levers, adapted to be operated on the back pressure of the tongue to set the friction straps, brake shoes, a brake beam connecting the brake shoes, and a connection between the brake beam and the arm of the rock shaft, substantially as specified. 6th. In a wagon brake, a tumbling rod operated by the back pressure of the tongue, having a tumbling section capable of being cut out of the length of the tumbling rod when backing the vehicle, substantially as specified. 7th. In a wagon brake, a tumbling rod consisting of two sliding sections, and a tumbling section comprised of two parts hinged together and pivotally connected to the sliding sections, substantially as specified. 8th. In a wagon brake, a tumbling rod comprised of two sliding sections, one of the sliding sections having a laterally working arm pivotally connected to it, and a tumbling section comprised of two parts pivotally connected to the said arm and to one of the sliding sections, substantially as specified. 9th. A tumbling rod comprised of a sliding section  $r$  working in suitable guides, a laterally moving section  $r^1$  pivotally connected to the section  $r$ , a tumbling section  $r^{11}$ , comprised of two parts 1 and 2 hinged together, the section 1 pivotally connected to the section  $r^1$ , and a sliding section  $r^2$  pivotally connected to the part 2 of the tumbling section  $r^{11}$ , the sections 1 and 2 capable of collapsing and cutting out of the tumbling rod the length of the

section 11, and a spring to return the parts 1 and 2 of the tumbling section to their normal position when the tumbling rod has been released from pressure, substantially as specified. 10th. In a wagon brake the combination of a longitudinally moving tongue, a thrust-rod connected to the tongue, a brake setting and releasing lever operated by the backward movement of the thrust-rod, and a brake setting apparatus operated by the backward movement of the lever, substantially as specified. 11th. In a wagon brake the combination of a longitudinally moving tongue, a connecting rod operated by the tongue, a thrust-rod, a link connected to the thrust-rod and connecting rod, a brake setting and releasing lever opposed to the end of the thrust-rod, a spring to hold the thrust-rod normally away from said lever, and also hold the tongue in its normal position, substantially as specified. 12th. In a wagon brake the combination of a longitudinally moving tongue, a connecting rod operated by the tongue, a thrust-rod, a link connected to the thrust-rod and connecting rod, a brake setting and releasing lever opposed to the end of the thrust-rod, a spring to hold the thrust-rod normally away from the said lever, and also hold the tongue in its normal position, a head for the thrust-rod, and means for adjusting the said head, substantially as specified. 13th. In a wagon brake the combination of a longitudinally moving tongue, a thrust-rod connected to the tongue, a brake setting and releasing lever operated by the backward movement of the thrust-rod, a brake setting apparatus operated by the backward movement of the lever, and a spring to return the said lever to its normal position when relieved from the pressure of the thrust-rod, substantially as specified. 14th. In a wagon brake the combination of a longitudinally moving tongue, a connecting rod operated by the tongue, a thrust-rod, a link connected to the thrust-rod and connecting rod, a brake setting and releasing lever opposed to the end of the thrust-rod, a spring to hold the thrust-rod normally away from the said lever, and also hold the tongue in its normal position, and a spring to return the said lever to its normal position when relieved from the pressure of the thrust-rod, substantially as specified. 15th. In a wagon brake the combination of a longitudinally moving tongue, a connecting rod operated by the tongue, a thrust-rod, a link connected to the thrust-rod and connecting rod, a brake setting and releasing lever opposed to the end of the thrust-rod, a spring to hold the thrust-rod normally away from the said lever, and also hold the tongue in its normal position, a head for the thrust-rod, means for adjusting the said head, and a spring to return the said lever to its normal position when relieved from the pressure of the thrust-rod, substantially as specified. 16th. In a wagon brake the combination of a longitudinally moving tongue, a connecting rod operated by the tongue, a thrust-rod, a link connected to the thrust-rod and connecting rod, a brake setting and releasing lever opposed to the end of the thrust-rod, a spring to hold the thrust-rod normally away from the said lever, and also hold the tongue in its normal position, a rock shaft pivotally connected to the vehicle, an arm extending outwardly from the rock shaft, an S-lever pivotally connected to the arm, a pivoted lever, one end of the brake setting and releasing lever connected to the pivoted lever, the opposite end of the pivoted lever connected to the S-lever, a crank for each end of the rock shaft, a friction strap encircling each hub, a bell crank lever pivotally connected to each friction strap, each bell crank lever connected to its respective cranked end of the rock shaft, and means for connecting the ends of the S-lever to the bell crank levers, substantially as specified. 17th. In a wagon brake the combination of a longitudinally moving tongue, a connecting rod operated by the tongue, a thrust-rod, a link connected to the thrust-rod and connecting rod, a brake setting and releasing lever opposed to the end of the thrust-rod, a spring to hold the thrust-rod normally away from the said lever, and also hold the tongue in its normal position, a rock shaft pivotally connected to the vehicle, an arm extending outwardly from the rock shaft, an S-lever pivotally connected to the arm, a pivoted lever, one end of the brake setting and releasing lever connected to the pivoted lever, the opposite end of the pivoted lever connected to the S-lever, a crank for each end of the rock shaft, a friction strap encircling each hub, a bell crank lever pivotally connected to each friction strap, each bell crank lever connected to its respective cranked end of the rock shaft, means for connecting the ends of the S-lever to the bell crank levers, brake shoes, a brake beam connecting the brake shoes, and a connection between the arm of the rock shaft and the brake beam, substantially as specified. 18th. In a wagon brake, a friction strap encircling the band of the hub of one of the wheels, consisting of a spirally formed band, a yoke connecting together the ends of the band, a bell crank lever rigidly connected to the yoke, a rock shaft, a cranked end for the rock shaft passing through a slot in the short arm of the bell crank lever, the long arm of the bell crank lever connected to an S-lever mounted on an arm projecting from the rock shaft, means for operating the S-lever to draw on the bell crank lever and tighten the friction strap on the hub of the wheel, substantially as specified. 19th. In a wagon brake the combination of a longitudinally moving tongue, a connecting rod operated by the tongue, a thrust-rod, a link connected to the thrust-rod and connecting rod, a brake setting and releasing lever opposed to the end of the thrust-rod, a spring to normally hold the thrust-rod from the brake setting and releasing lever, a spring to return the brake setting and releasing lever to its normal position when freed from the pressure of the thrust-rod, a pivoted lever, one end of the lever connected to the adjacent end of the brake setting and releasing lever, a rock shaft, a pulley, con-

tiguous to the opposite end of the pivoted lever, an arm projecting from the rock shaft, an S-lever adjustably pivoted to the arm, a chain, one end connected to the S-lever passing around the pulley, and the other end connected to the adjacent end of the pivoted lever, a friction strap encircling each hub of each of the rear wheels, a bell crank lever connected to each strap, a crank for each end of the rock shaft passing through a slot in the short arm of the adjacent bell crank lever, chains connecting the long arms of the bell crank levers with the ends of the S-lever, brake shoes, a brake beam connecting together the brake shoes suspended from the vehicle, and a connection between the arm of the rock shaft and the brake beam, substantially as specified. 20th. In a wagon brake, a means for automatically setting the brakes on the vehicle pressing on the tongue, and for automatically throwing the brakes off when backing the vehicle, substantially as specified. 21st. In a wagon brake, consisting of a rock shaft, an arm connected to the rock shaft, a brake setting apparatus carried by the said arm, and a spring to normally hold the said arm against the under side of the reach, substantially as specified.

**No. 54,552. Reversible Window. (Fenêtre tournante.)**

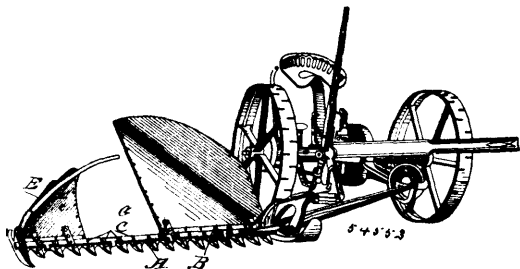


Silas Slater Bradshaw, Brooklyn, New York, U.S.A., 11th January, 1897; 6 years. (Filed 7th December, 1896.)

*Claim.*—1st. In a reversible window, the combination of sliding strips, a sash pivoted to the strips, a plurality of longitudinal grooves in the sliding strips, in each of which there are spring-actuated sealing rods or bars adapted to close the joints between the strips and the sash and the frame respectively, for the purposes set forth. 2nd. In a reversible window, the combination of sliding strips, a sash pivoted to the strips, devices adapted to draw the sash and strips toward each other and to hold them in their closed position, a plurality of longitudinal grooves in the sliding strips, in each of which there are spring-actuated sealing rods or bars adapted to close the joint between the strips and the sash and the frame respectively, for the purposes set forth. 3rd. The combination in a window of a sash, sliding strips therefor, pivots connecting the sash and the strips, spring-actuated sealing rods or bars located between the opposing surfaces of the sash and the strips, and cam-acting locking devices adapted to draw the sash and strips together and to hold them together, for the purposes set forth. 4th. The combination in a window of a sash, sliding strips therefor, pivots connecting the sash and the strips, spring-actuated sealing rods located in the sliding strips and adapted to close the joint between the strips and the sash, and devices adapted to draw the sash and strips together and to hold them together, for the purposes set forth. 5th. The combination in a window of a sash, the stiles whereof are flat on their edges, sliding strips therefor, pivots connecting the sash and strips, a recess or groove in the sliding strips adapted to receive a sealing rod, spring-actuated sealing rods located in the said grooves adapted to engage with the flat surfaces of the sash stiles, and locking devices to draw the sliding strip and sash toward one another and to hold them together, for the purposes set forth. 6th. The combination in a window of a sash, sliding strips therefor, pivots connecting the sash and the strips, spring-actuated sealing rods or bars located in a groove or recess in the sliding strips and confined therein at one point only throughout their length, said strips being adapted to outward and also to lateral movement, for the purposes set forth. 7th. The combination in a window of a sash, the lateral edges of the stiles whereof are flat, sliding strips for the sash, pivots connecting the sash and the strips, spring-actuated rods or bars located between the opposing surfaces of the sash and strips, cam-acting locking devices to draw the strips and sash toward one another and hold them together, and spring-actuated sealing rods or bars located in the sliding strips and adapted to seal the joints between

the strips and the window frame, for the purposes set forth. 8th. A tilting window, comprising a sash, pivoted sliding strips, and a combined joint closing and rattle preventing device composed of a continuous spring-actuated rod or bar having curved ends located in a recess in the sliding strips and constructed and arranged to close the joint between it and the window frame, and means connected with the sliding strip to limit the outward movement of the said rod or bar when the sliding strips are removed from the window frame, for the purposes set forth. 9th. The combination in a window of a sash, sliding strips therefor, pivots connecting the sash and the strips, locking devices to draw and hold said parts together comprising a pivoted latch on the sliding strips and a striker plate having lugs with cam-like surfaces which engage with the latch to draw said parts toward each other and to hold them together, for the purposes set forth. 10th. The combination in a window of a sash, sliding strips therefor, pivots connecting the sash and the strips, and a device for drawing said parts together and locking them in operative position comprising a pivoted latch located upon the sliding strips and a striker plate having upwardly projecting lugs with cam-like surfaces which engage with the latch, and means upon the latch to prevent its extremity from engaging said striker plate, for the purposes set forth. 11th. A pivot plate for tilting windows and like structures, embodying two pieces pivoted together centrally, the edges whereof are made in the form of intersecting circles, for the purposes set forth.

**No. 54,553. Gathering Attachment for Mowing Machines.** (*Appareil à glaner pour faucheuses.*)



David Draper, Belhaven, Ontario, Canada, 11th January, 1897; 6 years. (Filed 7th December, 1896.)

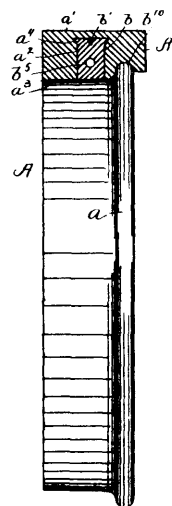
*Claim.*—1st. A gathering attachment for a mowing machine, consisting of a platform to follow behind the cutter bar, having an opening towards the rear for the delivery of the clover or grain, and sides so arranged to deliver the clover or grain towards the said opening, substantially as specified. 2nd. A gathering attachment for a mowing machine, consisting of two sections having an opening between them towards the rear of the gatherer, each section independently connected to the cutter bar, and the outer sides of the sections so arranged as to direct the cut grass or grain towards the said opening, substantially as specified. 3rd. A gathering attachment for a mowing machine consisting of two independent sections, having an opening between them towards the rear of the gatherer, means for independently and adjustably connecting each section to the cutter bar, and sides for each of the sections arranged to direct the cut clover or grain towards the said opening, substantially as specified. 4th. A gathering attachment for a mowing machine consisting of two sections, each section independently connected to the cutter bar, and comprised of a platform to receive the cut clover or grain as it falls over the cutter bar, and a side arranged diagonally from the outer end of the front to the rear end of the inner side of the section, substantially as specified. 5th. A gathering attachment for a mowing machine, consisting of two sections having an opening between them, links connecting the said sections to the cutter bar, means for increasing or diminishing the length of the said links, to increase or diminish the width of the said opening, and sides for each of the said sections, to direct the cut clover or grain towards the said opening, substantially as specified. 6th. A gathering attachment for a mowing machine, consisting of two sections having an opening between them for the delivery of the cut clover or grain, links for independently connecting each section to the cutter bar, means for adjusting said links to increase or diminish the width of the rear of the said opening, each section comprised of a platform to receive the cut grain or clover as it falls over the cutter bar, a shoe for the under side of the said platform, and a side arranged diagonally from the outer end of the front to the rear end of the inner side of the said platform, to direct the cut clover or grain towards the said opening, substantially as specified.

**No. 54,554. Brake-Shoe.** (*Sabot de frein.*)

William Wert Whitcomb, Brookline, Massachusetts, U.S.A., 11th January, 1897; 6 years. (Filed 7th December, 1896.)

*Claim.*—1st. A brake-shoe consisting of a body portion provided with a longitudinal slot, channel or groove of a width substantially equal to the width of that portion of the car wheel worn by the rail and of a depth less than the thickness of the shoe to leave a solid bottom for the slot integral with the shoe, a body of softer

material than the shoe in the said slot, channel or groove and adapted to engage that portion of the wheel worn by the rail to



form a braking surface therefor, and means within the slot for retaining the body of softer material therein, substantially as and for the purpose specified. 2nd. A brake-shoe consisting of a body portion provided with a longitudinal slot or channel of a width substantially equal to the width of that portion of the car wheel worn by the rail and provided with an enlargement within it and having a solid bottom integral with the shoe, and a body of softer material inserted into said slot or channel and extended into the enlargement thereof, and adapted to engage that portion of the wheel worn by the rail to form a braking surface therefor, substantially as described. 3rd. A brake-shoe consisting of a body portion provided with a longitudinal slot, channel or groove of a width substantially equal to the width of that portion of the car wheel worn by the rail and provided with a solid bottom integral with the shoe, and blocks or sections of non-metallic material inserted into said slot, and means to lock said blocks or sections in said slot, to form a substantially soft braking surface for the portion of the wheel worn by the rail, substantially as and for the purpose specified. 4th. A brake-shoe consisting of a body portion provided with a longitudinal slot, channel or groove, of a width substantially equal to the width of that portion of the car wheel worn by the rail and having one or more openings extended through its rear wall, and blocks or sections of non-metallic material inserted into said slots and separated to form an air space communicating with the openings in the back wall of the channel or slot, substantially as and for the purpose specified. 5th. A brake-shoe consisting of a body portion provided with a longitudinal slot, channel or groove of a width substantially equal to the width of that portion of the car wheel worn by the rail, and a body of softer material inserted into said slot to form a braking surface for the portion of the wheel worn by the rail and provided with a longitudinal opening forming an air circulating passage, substantially as and for for purpose specified.

**No. 54,555. Apparatus for Removing Garbage.**

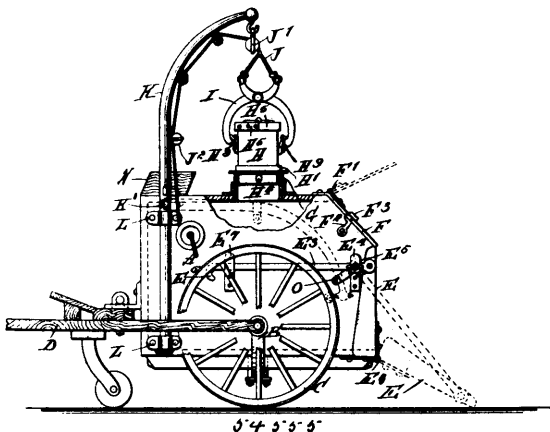
(*Appareil pour enlever les tripailles.*)

Wolfgang Goetz, New York, State of New York, U.S.A., 11th January, 1897; 6 years. (Filed 7th December, 1896.)

*Claim.*—1st. An apparatus for removing garbage, provided with a garbage box comprising a body having a hinged lid at its upper end and having its lower end open, doors hinged at the opposite sides of said open lower end and adapted to fold centrally to close the same, the ends of said doors being arranged to overlap when closed, and a pin removably arranged in the box below the overlapping portions of the doors for holding the doors in their closed position, substantially as set forth. 2nd. An apparatus for removing garbage, comprising a wagon body formed in its top with a receiving spout, a davit made in two parts, of which the lower part is mounted to turn on one side of the body and the upper part is adapted to be folded upon the said body, and a support on the side of the wagon body for the free end of the upper part of the davit when folded, substantially as described. 3rd. An apparatus for removing garbage, comprising a wagon body formed in its upper part with a receiving spout, a davit made in two parts of which the lower part is rotatively mounted in a vertical position on one side of the wagon body and provided with bifurcations at its upper part, and the upper part is pivoted at its lower end between the lower portions of the bifurcations of the lower part of the davit and adapted to be folded down sidewise against the side of the wagon body, and means for holding the upper part of the davit in an erect position when in use, substantially as described. 4th. An apparatus for removing garbage,

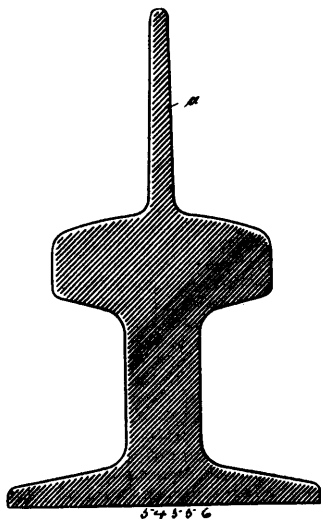


comprising a body having a receiving spout in its top, a slide extending across said spout below the top of the same and adapted to



be removed through an opening in the side of the spout, a box having an open lower end and provided with a projecting exterior flange adapted to rest on the upper edge of the receiving spout, doors hinged at opposite sides of the open lower end of the box and adapted to fold centrally to close the same, the ends of said doors being arranged to overlap when closed, and a pin removably arranged across said box below said overlapping portions of the doors and adapted to support the doors in their closed position, substantially as shown and described.

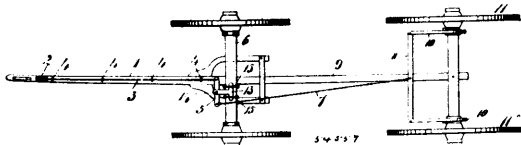
**No. 54,556. Rail. (Rail.)**



Herman Biermann, Breslau, Silesia, Prussia, 11th January, 1897; 6 years. (Filed 7th December, 1896.)

*Claim.*—In a rail for railroads the combination of the rail body with a longitudinal rib arranged on the head of the rail at the middle throughout its total length, substantially as and for the purpose set forth.

**No. 54,557. Wagon Brake. (Frein.)**

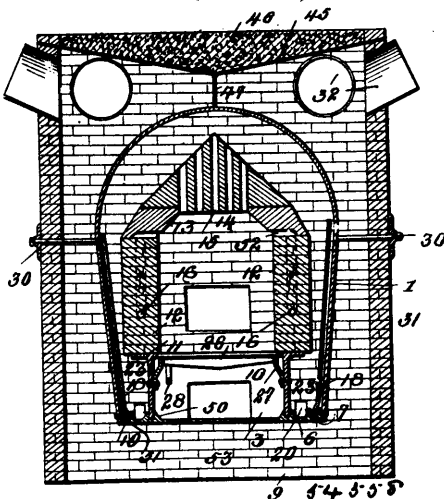


Daniel F. Armstrong, Mallorytown, Ontario, Canada, 11th January, 1897; 6 years. (Filed 9th December, 1896.)

*Claim.*—1st. The combination with a draft tongue having a slot 2, near the outer end, and the standards 12, of the wagon body, of the rod 3, having an end turned through said slot and connected at the other end to one end of a lever 5, fulcrumed near the middle to the front axle, a chain 7, connected at one end to said lever and at the other end to a cross bar 8, and tape springs 10, 10, secured at one end to the ends of said cross bar, and winding around the hubs of the rear wheels, and secured to the standards 12, of the wagon, re-

spectively, as set forth. 2nd. The combination with the front axle, of the lever 5, clevis 13, and clips 15, having the notched and slotted ends, as set forth.

**No. 54,558. Furnace. (Fournaise.)**



Henry Stanton, Flushing, Ohio, U.S.A., 11th January, 1897; 6 years. (Filed 9th December, 1896.)

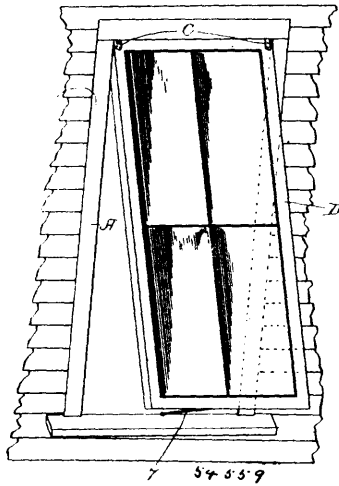
*Claim.*—1st. In a hot air furnace, the combination of a grate, a brick fire-pot, a perforated top over the fire-pot, a metal arch enclosing said fire-pot and top and arranged to direct the products of combustion downward, a cold air heating chamber enclosing said arch, and flues arranged to draw the products of combustion downwards between the fire-pot and arch and keep them separate from the air in the air-chamber, substantially as described. 2nd. In a furnace, the combination of a grate, a fire-pot above the grate, a perforated top over the fire-pot, a metal arch having its sides inclined inwards toward the bottom and arranged to direct the products of combustion downward, an outer cold air heating chamber arranged to direct the incoming air against the inclined sides of the arch, and flues arranged to draw the products of combustion downward and keep them separate from the air in the outer air-chamber, substantially as described. 3rd. In a furnace, the combination of a grate, a fire-pot above the grate, a metal arch, front and rear heads having outwardly turned flanges to receive the metal arch, and a cold air-chamber enclosing the metal arch, substantially as described. 4th. In a furnace, the combination of metal heads having outwardly turned flanges, an inner metal arch running from one head to the other, and outer metal arch plates for supporting the brickwork, each connected to a head and the inner arch, substantially as described. 5th. In a furnace, the combination of a fire-pot, a metal arch over the fire-pot, metal heads at each end of the fire-pot having outwardly turned flanges to receive the ends of the metal arch, and fire-brick ends to the fire-pot having their outer faces covering the inner faces of the heads and their edges bevelled on the top and sides, substantially as and for the purpose specified. 6th. In a furnace, the combination of the ash-box 10 having flanges 11, the brickwork sides supported by said flanges, the brick top having passages for the products of combustion, the metal arch to direct them downwards, and a passage for the escape of the products of combustion near the bottom of the arch, substantially as described. 7th. In a furnace, the combination with a fire-pot and a metal arch over the same, of the outflow water-box 34, the inflow water box 35, the rows of pipes 38 and 39 inclined in opposite directions and set between the fire-pot and the metal arch, elbows 42, 43, and the right and left hand threaded nipples 44 connecting the rows of pipes together, the vertical row of pipes 40 connected to box 35, and the elbows 41 connecting the vertical with the horizontal pipes, substantially as described. 8th. In a furnace, the combination with a metal arch and a fire-pot, of inflow and outflow boxes, pipes connecting said boxes, arranged in a horizontal row between the fire-pot and metal arch, and bricks resting upon and supported by said pipes to protect said metal arch from the flames of the fire-pot, substantially as described.

**No. 54,559. Hinge Hanger. (Penture.)**

Anton Schroeder, St. Paul, Minnesota, U.S.A., 11th January, 1897; 6 years. (Filed 9th December, 1896.)

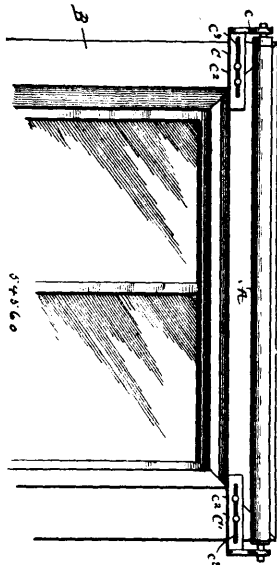
*Claim.*—1st. As an improved article of manufacture, the hinge hanger for sash, consisting of the member adapted to be secured to the inside of the window frame and having a hook projecting in line therewith serving as a gudgeon bearing, and the member adapted to be secured to the outer face of the sash, and having a gudgeon projecting laterally from the sash, so as to engage and turn in said hook. 2nd. As an improved article of manufacture, the herein described separable hinge hanger, consisting of two plates, one

adapted to be secured upon the inside of the window frame, and having a projecting edge with an open gudgeon bearing or hook,



and the other adapted to be secured upon the face of the sash, and having a laterally projecting gudgeon adapted when the sash is in place to rest in the hook of the other member. 3rd. In combination with the window frame and its removable sash, of the plates secured upon the inside of the frame near the top, each having an outwardly projecting hook, and the plates secured upon the face of the sash, and projecting beyond the edge of the same, each having a vertical slot in the projecting edge to receive the adjacent hook, the part at the top of the slot being rounded to serve as a pintle or gudgeon, and adapted to rest in said hook, the fittings being so arranged that the sash abuts against the top of the window frame, and cannot be lifted off from the hooks until it has been opened beyond the ordinary limit.

**No. 54,560. Shade Bracket. (Console d'écran.)**



Joshua Hardy Brown, Atlantic City, New Jersey, U.S.A., 11th January, 1897; 6 years. (Filed 9th December, 1896.)

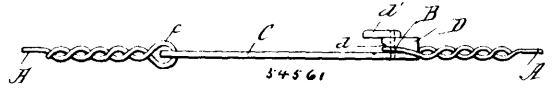
*Claim.*—1st. In a journal bracket for a window shade, the combination with a bracket proper, an extended slotted arm connected to the same whereby said bracket may be adjustably secured to the window frame, substantially as described. 2nd. In a window shade or bracket, the combination with a bracket proper having a journal receiving recess, of an extended arm having an elongated slot through which the securing nails or screws are passed to secure said bracket adjustably upon the window frame, substantially as described.

**No. 54,561. Bale Tie. (Cercle de ballot.)**

Louis Barceloux, Stanbridge, Quebec, Canada, 11th January, 1897; 6 years. (Filed 9th December, 1896.)

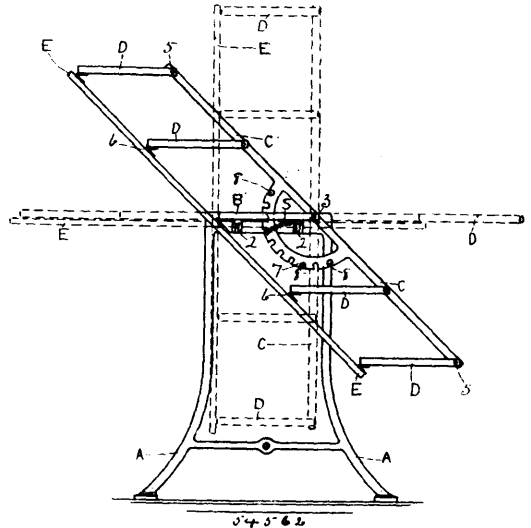
*Claim.*—1st. In a bale tie, the combination, with a wire having loops at its ends, of a plate pivoted to one of the said loops and pro-

vided with a projection at its free end having a notch for engaging with the other said loop, substantially as set forth. 2nd. In a bale



vided with a projection at its free end having a notch for engaging with the other said loop, substantially as set forth. 2nd. In a bale tie, the combination, with a wire having loops at its ends, of a plate pivoted to one of the said loops and provided with a projection at its free end, having a notch for engaging with the other said loop, and a keeper pivoted to the top of said projection and preventing the loop from slipping off it, substantially as set forth.

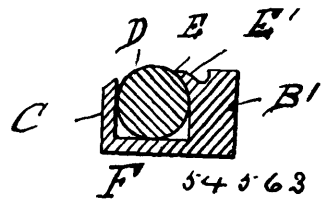
**No. 54,562. Show Table. (Caisse d'étalage)**



James Somerville, Hamilton, Ontario, Canada, 11th January, 1897; 6 years. (Filed 9th December, 1896.)

*Claim.*—1st. In a show table with adjustable leaves, a central rigid leaf supported by standards, straps having semicircular, or segmental formation pivoted at 3, to front ends of said leaf, and to a series of corresponding leaves, rear braces hinged at 6, to all the leaves, in combination with a horizontal rod H, formed with cranks to engage with a series of openings in segmental formation, the tension springs and outer manipulating handles secured to said horizontal rod, substantially as described. 2nd. In a show table with adjustable leaves, end straps having segmental extensions with a series of openings, and pivoted to the forward part of each end of a series of leaves, the central leaf thereof held rigid by means of standards, and braces hinged to the rear side of the leaves, substantially as described. 3rd. In a show table with adjustable leaves the combination of a series of leaves hinged to rear braces, the front part of the ends of the leaves pivoted to the straps having centrally located segments with series of openings, central leaf rigidly supported by standards leaving end space for the straps, a through rod formed with cranks to engage with said openings, tension springs, and outer end handles secured to crank rod, substantially as described.

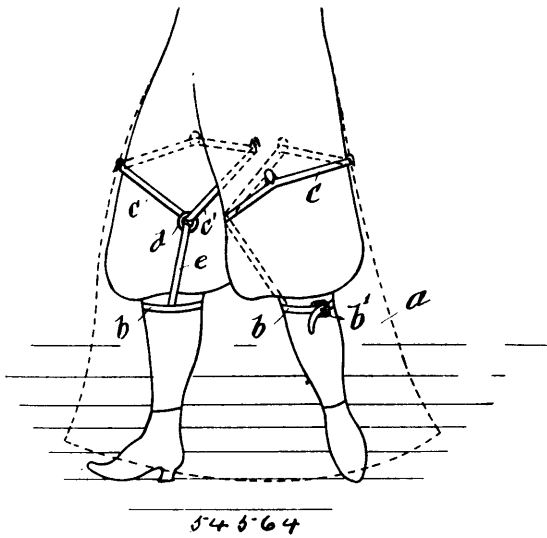
**No. 54,563. Horse Shoe. (Fer à cheval.)**



Frederick William Hahn, New York, State of New York, U.S.A., 11th January, 1897; 6 years. (Filed 9th December, 1896.)

*Claim.*—1st. The frame A having the thin horizontal flanges A<sup>1</sup>, the inner flange C<sup>1</sup> provided with lugs C<sup>2</sup>, the flanges B uniting with and merging into a solid broad and heavy caulk B<sup>1</sup>, the lug E, and the sink E<sup>1</sup>, in combination with the packing D, as and for the purpose described. 2nd. The frame A having nail flanges A<sup>1</sup>, inner flange C<sup>1</sup>, outer flanges B uniting with and merging into the broad and heavy caulk B<sup>1</sup>, and the lug E, located on the caulk and having its base formed below the thread of the caulk by the sink E<sup>1</sup>, and its inner wall flush with the inner wall of the caulk, in combination with the packing D, as and for the purpose described.

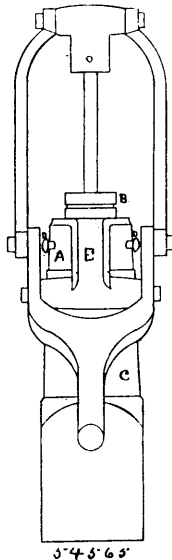
**No. 54,564. Skirt Supporter.** (*Support de jupes.*)



Sarah M. Smith, St. Augustine, Florida, U.S.A., 11th January, 1897; 6 years. (Filed 12th December, 1896.)

*Claim.*—In combination with a skirt, straps secured thereto near the front and rear portions, a ring travelling on each of the straps, strips connecting with the rings, and garters to which the straps are connected, the strip and ring joining the skirt strap above the garters, substantially as described.

**No. 54,565. Pump Head and Handle.** (*Tête de pompe et manche.*)



Thomas Hodgson, Beaverton, Ontario, Canada, 12th January, 1897; 6 years. (Filed 23rd July, 1896.)

*Claim.*—The handle attachment EEE, which with the cast-iron ring or socket A, constituting the swivel or movable fulcrum AEEE, all formed, arranged and combined substantially as and for the purposes hereinbefore set forth.

**No. 54,566. Garment Pin.** (*Epingle pour vêtements.*)

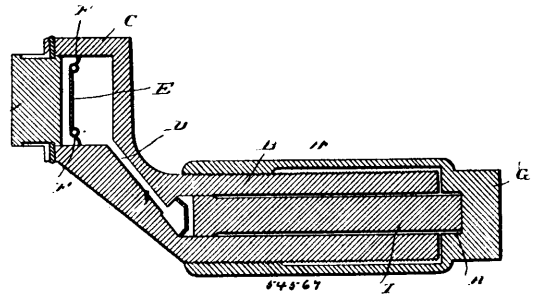


Jennie McKinley Secord, Rotterdam Junction, New York, U.S.A., 12th January, 1897; 6 years. (Filed 28th October, 1896.)

*Claim.*—A garment pin having a pin proper, a ring-like head for the pin, the head having two bars extending upwardly from its lower portion and converging to each other at the upper portion of

the head, an elastic band passed around the bars at their lower portions and having its runs spread from each other by said bars, and a block held by the elastic band and having a recess receiving the point of the pin proper, substantially as described. 2nd. A garment pin having a pin proper and a head for the pin proper, an elastic band connected to the head, a block having an orifice receiving the point of the pin proper, and a strip secured to the block and having one edge tubulated at the side of the block which side has the orifice, such tubulated edge receiving the elastic band, substantially as described.

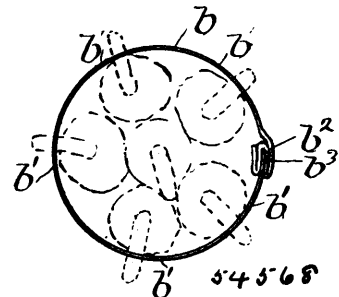
**No. 54,567. Piston Rod Extractor.** (*Extracteur de tige de piston.*)



Charles E. Nichols, Mandan, North Dakota, U.S.A., 12th January, 1897; 6 years. (Filed 17th November, 1896.)

*Claim.*—1st. In a device for the purpose described, the combination of two cylinders of the same cubical capacity of contents but of different diameters, connected by a small inclined passage, the spring-actuated washer in the larger cylinder, the piston in the other, and the nut, substantially as specified. 2nd. In a device for the purpose described, the combination of the two cylinders of the same cubical capacity of contents but of different diameters, connected by a small inclined passage, the spring-actuated washer and the piston in the cylinder of greater diameter, the piston in the other cylinder, the oil in the space between the two cylinders, and the nut on the end of the cylinder of smaller diameter and provided with a socket to receive the end of its piston, substantially as described.

**No. 54,568. Umbrella Package.** (*Caisse pour parapluies.*)



Henri Beaudry, Montreal, Que., Canada, 12th January, 1897; 6 years. (Filed 28th April, 1896.)

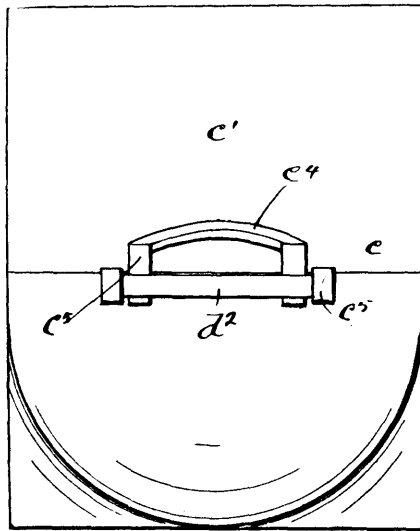
*Claim.*—1st. A cylindrical package of truncated-conical form, and having a strengthening rib extending longitudinally thereof, substantially as and for the purpose hereinbefore set forth. 2nd. A hollow truncated-conical package *b*, having a strengthening rib formed as described and extending longitudinally thereof, and bayonet formed slots *b'*, substantially as and for the purpose hereinbefore set forth.

**No. 54,569. Sewer Trap.** (*Fermeture d'égout.*)

Lewis Skuife, Montreal, Quebec, Canada, 12th January, 1897; 6 years. (Filed 18th May, 1896.)

*Claim.*—1st. In a sewer trap, a seat section and a cap section completely overlapping the top and side edges of the seat section and resting upon the top edge thereof. 2nd. In a sewer trap, a seat section and a cap section forming a passage of elbow form with vertical and horizontal sections, and a gate or valve for automatically closing the vertical portion of the passage, for the purpose set forth. 3rd. In a sewer trap, a seat section, a cap section completely overlapping the top and side edges of the seat section and resting upon the top edge thereof, and a gate or valve for automatically closing the vertical portion of the passages formed by said cap and seat sections. 4th. In a sewer trap, a seat section, a cap section overlapping and resting upon said seat section, and an inclined gate or valve hinged to said cap section for automatically closing the vertical portion of the passage formed by said cap and seat sections. 5th. In a sewer

trap, a cap section having a projecting staple section formed at the top of same adapted to rest on supporting lugs and whereby it may



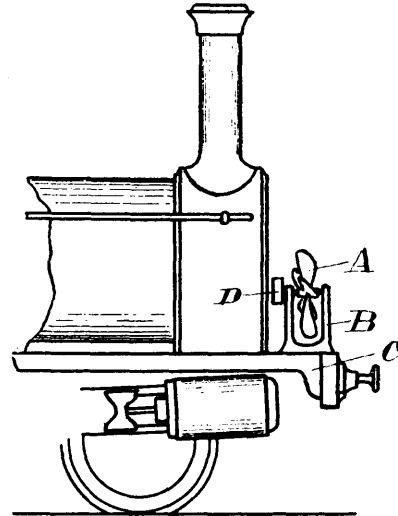
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be conveniently lifted, for the purpose set forth. 6th. A trap for the sewer connections of gulleys or the like, consisting of a seat section and a cap section, the seat section adapted to be rigidly secured to the gully and being formed with an opening communicating with the sewer connection, and overlapping flanges formed upon the edges of said seat and cap sections and presenting inclined faces, for the purpose set forth. 7th. A trap for the sewer connections of gulleys or the like, consisting of a seat section and a cap section, the seat section presenting inclined surfaces for the cap section to rest upon, as shown. 8th. A trap for the sewer connections of gulleys or the like, consisting of a seat section and a cap section, a free connection including supporting ledges on the edge of said seat section, and a staple projection on the cap section between said cap and seat sections whereby said cap section may be freely lifted from said seat section, the seat section adapted to be rigidly secured to the gully and being formed with an opening communicating with the sewer connection, a flange formed upon the edge of said seat section, and a recess formed in the edge of said cap section and adapted to receive said flange, for the purpose set forth. 9th. A trap for the sewer connections of gulleys or the like, consisting of a seat section and a cap section, said seat section being formed with an integral bracket having one or more ledges formed integral with such bracket and adapted to project laterally in the direction of said cap, and said cap section being formed with a staple projection adapted to take over said ledge or ledges and whereby it can be conveniently lifted, for the purpose set forth. 10th. A trap for the sewer connections of gulleys or the like, consisting of a seat section and a cap section, said seat section being formed with an integral bracket having one or more ledges formed integral with such bracket and adapted to project laterally in the direction of said cap, and said cap section being formed with a staple projection adapted to take over said ledge or ledges and whereby it can be conveniently lifted, and said bracket being cut away between said ledges, for the purpose set forth. 11th. In a sewer trap having a seat section and cap section forming a vertical passage, a gate or valve hinged to the cap section and having its free end supported by the seat section, for the purpose set forth. 12th. In a sewer trap having a seat section and cap section forming a passage in part vertical and part horizontal, and a gate or valve hinged and supported as shown, so as to automatically close the vertical portion of the passage, and a ledge *n*, for the purpose set forth. 13th. A trap for the sewer connections of pulleys or the like, consisting of a seat section and a cap section, said seat section having a tapered outlet and its inner end slightly downwardly-extended and open at the bottom, the sides of such downward extension being formed by wing sections, a web connected to said pipe section and to the edges of said wing sections adjacent to said pipe section, a flange formed upon the edges of said wing section and upon the upper edge of said pipe section, and a bracket extension upon the upper side of said pipe section and carrying one or more laterally-projecting upwardly-curved ledges, and said cap section being formed with a recess in the side edges thereof, and having a staple projection upon the upper side thereof, for the purpose set forth.

**No. 54,570. Motor. (Moteur.)**

Vincent Doyle, Dublin, Ireland, 12th January, 1897; 6 years. (Filed 5th November, 1896.)

*Claim.*—The application to locomotives and other vehicles or moving bodies of a rotating fan whereby motive power is produced

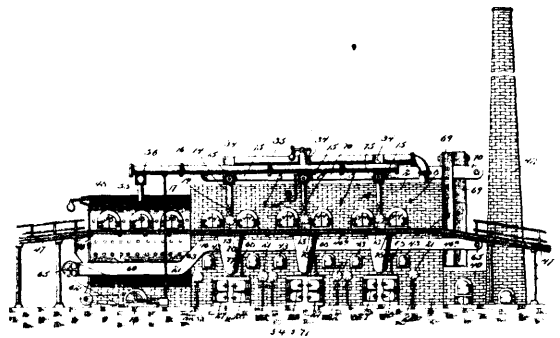


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by the draught or current of air caused by the rapid motion of the vehicle or moving body, to serve substantially as herein specified and set forth.

**No. 54,571. Crematory.**

(Machine pour détruire les tripailles.)



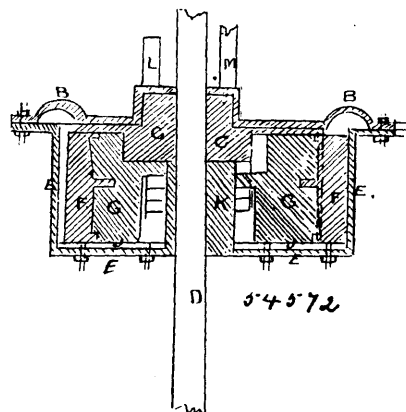
Fejix Louis Decarie, Montreal, (Quebec, Canada, 12th January, 1897; 6 years. (Filed 23rd November, 1896.)

*Claim.*—1st. A garbage crematory having a cremating chamber, a fire grate arranged within the lower portion of the chamber, and oppositely arranged inclined garbage supporting grates disposed above the fire grate and forming garbage cells within opposite portions of the cremating chamber, substantially as set forth. 2nd. A garbage crematory having a cremating chamber, a fire grate arranged within the lower portion of the cremating chamber, and oppositely inclined garbage supporting grates arranged above the fire grate, said garbage supporting grates being tubular to permit of water circulation therethrough, substantially as set forth. 3rd. A garbage crematory having a cremating chamber, a fire grate arranged within the lower portion of said chamber, and a pair of oppositely upwardly convergent intercommunicating tubular garbage supporting grates supported within the cremating chamber and enclosing garbage cells within opposite portions thereof, substantially as set forth. 4th. In a crematory, the casing, the fire grate arranged within the casing, a pair of upwardly convergent tubular garbage supporting grates supported above the fire grate and comprising a plurality of parallel grate tubes or pipes, and circulating connections with the ends of said grate tubes or pipes, substantially as set forth. 5th. In a crematory, the casing, a pair of upwardly convergent tubular garbage supporting grates mounted within the casing and diverging from their upper adjacent ends downwardly toward opposite sides of the chamber in which they are arranged, said garbage supporting grates comprising a plurality of parallel grate tubes or pipes, a header drum fitted to the upper ends of the grate tubes or pipes of both garbage supporting grates, circulating connections with the lower ends of said tubes or pipes, and a fire grate arranged below the upwardly convergent garbage supporting grates, substantially as set forth. 6th. A garbage support for crematories comprising a pair of spaced upwardly convergent tubular grates comprising a plurality of parallel grate tubes or pipes, and a header drum fitted to the upper ends of the tubes or pipes of both grates, substantially as set forth. 7th. In a crematory, the casing having a cremating chamber,

a pair of spaced upwardly convergent tubular garbage supporting grates mounted within the cremating chamber and respectively extending upward from opposite sides of said chamber, an upper header drum fitted to the upper ends of the tubular grates and extending transversely across the cremating chamber, steam pipe connections with said upper header drum, oppositely located drums arranged at opposite sides of the cremating chamber and connected respectively with the lower ends of the opposite tubular grates, water pipe connections with said oppositely located drum, and a fire grate arranged within the lower part of the cremating chamber below the garbage supporting grates, substantially as set forth. 8th. In a crematory, the casing having a cremating chamber, a pair of spaced upwardly convergent tubular garbage supporting grates mounted within the cremating chamber, circulating connections with the upper and lower ends of the said tubular grates, and a pair of oppositely located fire grates mounted within the lower part of the casing below the garbage supporting grates, substantially as set forth. 9th. In a crematory, the furnace casing having a plurality of interior successively arranged communicating cremating chambers, a pair of spaced upwardly convergent tubular garbage supporting grates mounted within each cremating chamber, an upper distributing header drum fitted to the upper ends of each pair of grates and extending transversely across the cremating chamber, water pipe connections with the lower ends of each pair of grates, upper oppositely arranged steam drums, pipe connections between the header drums and said steam drums, and fire grates fitted within the lower portion of each cremating chamber, substantially as set forth. 10th. In a crematory, the furnace casing having a series of interior vertical partition walls forming a plurality of successively arranged cremating chambers, said partition walls being provided at their upper ends with damper controlled flue openings, a stack connection with one end of the furnace and communicating with the last cremating chamber of the series, a pair of spaced upwardly convergent tubular garbage supporting grates mounted within each cremating chamber and enclosing garbage cells within opposite portions thereof, suitable water circulating connections with the ends of the garbage supporting grates, and fire grates fitted within the lower portion of each cremating chamber, substantially as set forth. 11th. In a crematory, the furnace casing having a plurality of interior successively arranged communicating cremating chambers, and open conveyer pits formed in the bed thereof and extending the entire length of the crematory so as to communicate with the interior of all of the chambers therein, separating sieves fitted in said conveyer pits, suitable conveyers working above and below said separating sieves, fire grates fitted within the lower portion of each cremating chamber over the conveyer pits, and garbage grates fitted in the cremating chambers above the fire grates, substantially as set forth. 12th. In a crematory, the casing, the fire grate arranged within the casing, a garbage supporting grate arranged above the fire grate, a suitably located drying chamber for garbage, and means for delivering the dried garbage from the drying chamber to the fire grate, substantially as set forth. 13th. In a crematory, the casing having a plurality of interior successively arranged communicating chambers, garbage supporting grates fitted in the cremating chambers, fire grates supported below the garbage supporting grates, an auxiliary heater or drier casing communicating with the series of cremating chambers, garbage supporting grates arranged within said heater or drier casing, and means for automatically delivering the dried garbage from the grates in the heater or drier casing to the fire grates in the cremating chambers, substantially as set forth. 14th. In a crematory, the main casing having a plurality of interior successively arranged communicating cremating chambers, garbage supporting grates fitted in the cremating chambers, fire grates arranged below said garbage supporting grates, an auxiliary heater or drier casing communicating with the series of cremating chambers of the main casing, oppositely inclined garbage supports arranged within said heater or drier casing, means for drying the garbage on said supports, and means for automatically delivering the dried garbage from said garbage supports in the heater or drier casing to the fire grates in the cremating chambers, substantially as set forth. 15th. In a crematory, the main casing having a plurality of interior successively arranged communicating cremating chambers, garbage supporting and fire grates fitted in each cremating chamber, a metallic steam jacketed auxiliary heater or drier casing communicating with the series of cremating chambers, a pair of spaced upwardly convergent tubular or hollow garbage supporting grates arranged longitudinally within the heater or drier casing, a central longitudinally arranged upper header drum communicating with the steam space at the ends of the heater or drier casing and fitted to the upper ends of said tubular supporting grates, suitable connections between the lower ends of said grates and the steam jacket of space of the casing, and means for automatically delivering and conveying the dried garbage from the lower ends of the garbage supporting grates in the heater or drier casing to the fire grates in the cremating chambers, substantially as set forth. 16th. In a crematory, the main casing having a plurality of interior communicating cremating chambers, garbage supporting and fire grates fitted in each cremating chamber, a steam jacketed heater or drier casing communicating with the cremating chambers and provided in opposite lower sides with a plurality of discharge openings, oppositely inclined upright tubular garbage supporting grates arranged within the steam jacketed casing and communicating with the steam space thereof, the lower ends of the oppositely arranged tubular grates extending to opposite

sides of the casing below said discharge openings so as to deflect dried garbage therethrough, conveyer boxes arranged at opposite sides of the main and auxiliary casings exterior thereto, said conveyer boxes communicating with said discharge openings and having hoppers extended into the cremating chambers above the fire grates, and suitable garbage conveyers arranged to work in said conveyer boxes, substantially as set forth. 17th. In a crematory, the main casing having a plurality of interior communicating chambers, garbage supporting and fire grates fitted in each cremating chamber, a steam jacketed auxiliary heater or drier casing communicating with the cremating chambers and provided in opposite lower sides with a plurality of discharge openings, a pair of oppositely inclined upright tubular garbage supporting grates arranged within the steam jacketed casing and extending to the sides thereof below the discharge openings, conveyer boxes arranged longitudinally of the sides of the main and auxiliary casings exterior thereto, said conveyer boxes communicating with said discharge openings, and provided with screen bottoms in the portions thereof next to the auxiliary casing, deflecting chutes extended from the screen bottom portions of the conveyer boxes into the auxiliary casing below the grates therein, hopper connections extended from the conveyer boxes into the cremating chambers over the fire grates, and suitable conveyers arranged in said conveyer boxes, substantially as set forth. 18th. In a crematory, the main casing having a plurality of interior communicating chambers, garbage supporting and fire grates fitted in each cremating chamber, an auxiliary heater or drier casing communicating with the series of cremating chambers, a pair of spaced upwardly convergent tubular garbage supporting grates arranged within the heater or drier casing, a hollow evaporating pan supported below said tubular grates and having pipe connections with the jacket of said heater or drier casing, and suitable conveyers for delivering the dried garbage from the heater or drier casing to the fire grates in the cremating chambers, substantially as set forth. 19th. In a crematory, the main casing having a plurality of interior communicating chambers provided with top feed openings, an auxiliary heater or drier casing having garbage supporting grates therein and communicating with said cremating chambers, said heater or drier casing also having opposite discharge openings for dried garbage, oppositely longitudinally arranged conveyer boxes communicating with said discharge openings and provided at intervals with feeding hoppers extended into the cremating chambers over the fire grates therein, garbage conveyers working in said conveyer boxes, a distributing box arranged longitudinally above the main casing and having bottom chute connections with the top feed openings of the cremating chambers, a distributing apron or belt working in the distribution box, and suitable elevators for delivering the garbage from one end of the conveyer boxes to said distributing box, substantially as set forth. 20th. In a crematory, the furnace casing having a series of interior vertical partition walls forming a plurality of communicating cremating chambers formed in the top thereof with separate oppositely located flue openings, a stack connection with one end of the furnace, a common escape flue or pipe arranged longitudinally above the furnace casing, and branch flues or pipes fitted in the flue openings in the top of the cremating chambers and connected with said common escape flue or pipe, substantially as set forth. 21st. In a crematory, the furnace casing having a plurality of interior communicating cremating chambers, garbage supporting and fire grates fitted in said cremating chambers, roadways or dump floors arranged longitudinally of the casing at opposite sides thereof, and provided with trap doors, and feed chutes extending from said trap doors into the cremating chambers above the fire grates therein, substantially as set forth.

**No. 54,572. Rotary Pump. (Pompe rotatoire.)**

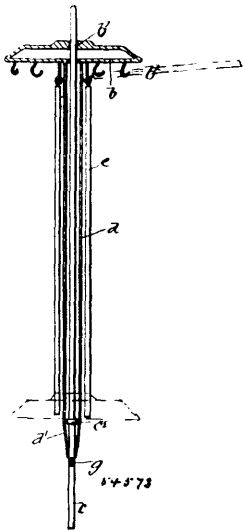


Joseph Stephen Godfrey, Lansing, Michigan, U.S.A., William McGregor and John Turk, both of Windsor, Ontario, Canada, 12th January, 1897; 6 years. (Filed 21st November, 1896.)

Claim.—1st. The combination of hinge packing H with rotary pump. 2nd. The combination of the revolving hub C, hinge packing H, the socket O and opening B, substantially as and for the

purposes hereinbefore set forth. 3rd. The combination of revolving hub C, piston heads G, end packing disc J and hinge packing H, with the inlet and outlet openings B, the openings for the inlet and outlet marked B being on the face of the end casing fig. 1, the necessity for breaking the inside of the outside casing E being obviated.

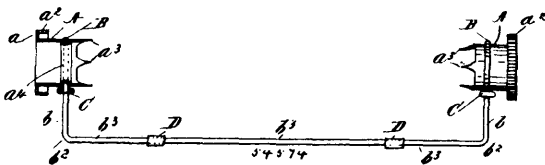
**No. 54,573. Clothes Drier. (Séchoir à linge.)**



Sydney Edmond Watson Adams, assignee of Owen Norton Evans, both of Montreal, Que., Canada, 12th January, 1897; 6 years. (Filed 29th November, 1896.)

*Claim.*—1st. In a clothes drier, the combination with the drier proper and a rod or hanger upon which said drier proper is adapted to be vertically movable, of a support adapted to be detachably connected to said rod or hanger and support said drier proper in its elevated position, and to be removed from said rod or hanger to allow said drier proper to be lowered, for the purpose set forth. 2nd. In a clothes drier, the combination with the carrying sleeve of a supporting rod slotted near its lower end, and a pin adapted to be inserted into said slot, for the purpose set forth. 3rd. In a clothes drier, the combination with the carrying sleeve, of a supporting rod slotted and provided with an enlargement or stop near its lower end, and a pin adapted to be inserted into said slot, for the purpose set forth.

**No. 54,574. Corn Holder. (Porte-blé-d'inde.)**



Henry Dreyfus, assignee of John Treifus, both of Brooklyn, New York, U.S.A., 12th January, 1897; 6 years. (Filed 25th November, 1896.)

*Claim.*—1st. A corn holder, constructed as herein described and as shown in figs. 1 and 2 of the drawing. 2nd. A corn holder, constructed as herein described, the same consisting of two tubular heads as A, which are supported in line with each other, the inner ends thereof being provided with teeth and the outer ends with a milled rim, said heads being also each provided with a handle portion composed of wire which is bent to form a loop or coil which surrounds said tubular heads, and the separate sides of the wire connected with each head being curved downwardly and then at right angles so as to form parallel sides b<sup>3</sup>, which are connected by transverse bands whereby the said heads are longitudinally adjustable and are held in an upright position, substantially as shown and described.

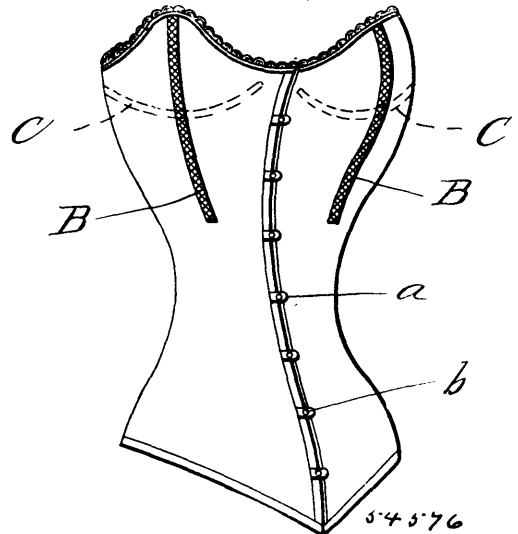
**No. 54,575. Cleansing Compound.**

(Composé pour nettoyer.)

Daniel Fraser Morrison, Pictou, Nova Scotia, Canada, 12th January, 1897; 6 years. (Filed 30th November, 1896.)

*Claim.*—A compound of carbonate of potash, soda carbonate and borax, or any or either of them, with Cairo sand, so called, substantially in the proportions and for the purposes set forth.

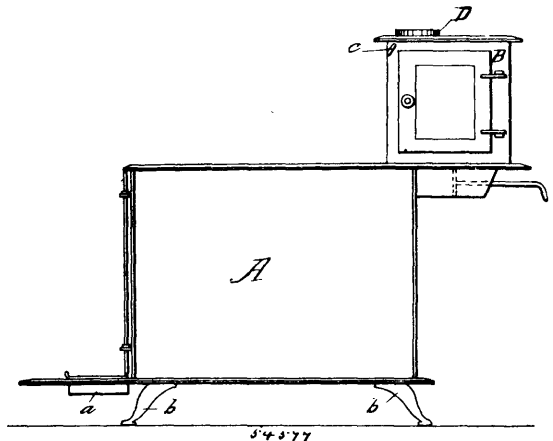
**No. 54,576. Corset. (Corset.)**



Louis Rousseau, Montréal, Québec, Canada, 12 janvier 1897; 6 ans. (Déposé le 5 octobre 1896.)

*Résumé.*—Un corset pourvu de bandes élastiques B, et de baleines C, disposées transversalement aux dites bandes élastiques, et ayant leurs extrémités enfouies dans de petites poches c pratiquées dans le corset, le tout tel que décrit et pour les fins indiquées.

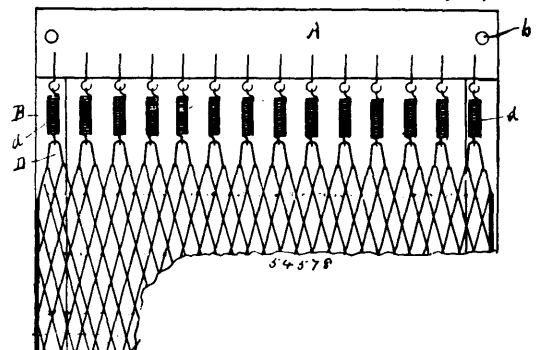
**No. 54,577. Stove. (Poêle.)**



Ophni Louis Gadoury, Saint-Placide, Québec, Canada, 12 janvier 1897; 6 ans. (Déposé le 5 octobre 1896.)

*Résumé.*—Un poêle comprenant un fourneau situé en arrière du dit poêle, un passage B<sup>1</sup> au-dessous du fourneau et deux clefs C et c, servant à faire passer à volonté la fumée en avant ou en arrière du fourneau, le tout tel que décrit et pour les fins indiquées.

**No. 54,578. Wire Mattress. (Matelas en fil de fer.)**

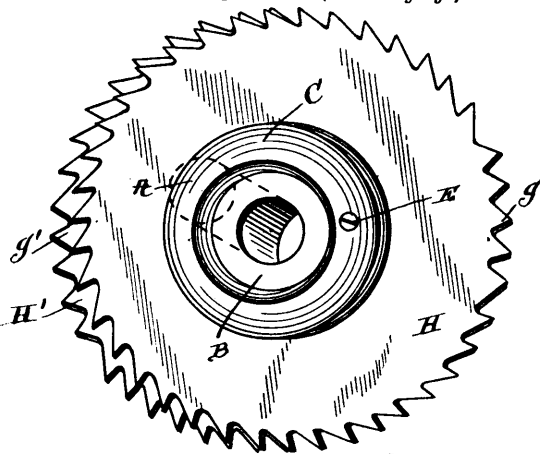


Francis Gilbert (Gale), Waterville, Quebec, Canada, 12th January, 1897; 6 years. (Filed 1st December, 1896.)

*Claim.*—1st. A mattress frame consisting of two end and two side rails, between the former of which a mattress fabric is suspended,

the end rails arranged to be moved upon the side rails by means of the tension attachment, substantially as hereinbefore set forth. 2nd. The herein described tension attachment for mattress frames consisting of the bolt *a*, screw threaded to engage with the nut *a*<sup>1</sup>, which has the prolongation *a*<sup>11</sup> to engage with the side rail of the mattress frame, the said bolt *a* lying parallel with the side rail and above it, the head of said bolt resting against the end rail and a holding bolt *b* to prevent the end rail from leaving the side rail when the bolt *a* is unscrewed from the nut *a*<sup>1</sup>, and tension is thereby given the mattress fabric suspended between the end rails, substantially as set forth. 3rd. The mattress fabric cut off from a continuous woven web in lengths suitable to the width of the mattress, the lines of sections being finished by clinching the cut off ends of the wire, and superimposing coils or braids of wire upon these edges, substantially as set forth.

**No. 54,579. Wabbling Saw. (Scie à zigzag.)**



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William A. Bissell, Newport, Kentucky, U.S.A., 12th January, 1897; 6 years. (Filed 9th, December 1896.)

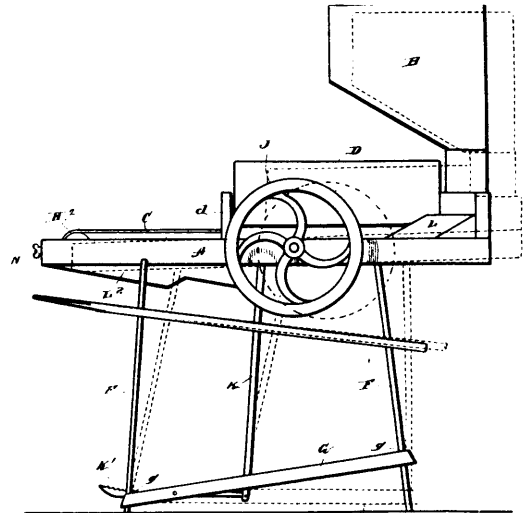
*Claim.*—1st. In a wabbling saw, the combination with a hub secured to an arbor, collars pivotally connected to the hub, saws carried by said collars, and means for adjusting the saws in angular planes, substantially as set forth. 2nd. In a wabbling saw in combination with a hub secured to an arbor and having a convex outer periphery, concave collars pivotally connected to the arbor hub by screws, saws secured to the inner faces of said collars, and means for adjusting the saws in angular planes, substantially as specified. 3rd. In combination with a saw-arbor having a hub with a convex outer periphery, two collars secured thereto by pivotal screws *D*, two saws secured to the inner faces of said collars each of which is provided with a section of cross-cut teeth at right angles to the pivotal points of said collars, and means for adjusting the saws in angular planes, substantially as specified. 4th. In combination with a saw-arbor, a hub secured thereto provided with a convex periphery, collars *C*, *C*, pivotal fastening screws *D*, *D*, saws *H*, *H*<sup>1</sup>, secured to the inner faces of said collars, and means for adjusting the saws in angular planes, substantially as described. 5th. The combination with a saw-arbor, a hub thereon, adjusting collars pivotally connected to said hub, two saws connected to said collars and each having rip-teeth and a section of cross-cut teeth at right angles to the pivotal points of said collars, and means for adjusting the saws angularly in either direction to project either the rip or cross-cut teeth, substantially as described. 6th. The combination with a saw-arbor, a hub thereon, adjusting collars pivotally connected to said hub, saws connected to said collars, and each having rip-teeth and a section of cross-cut teeth at right angles to the pivotal points of said collars, and adjusting screws carried by the adjusting collars and adapted to engage with the hub, whereby the saws may be placed in angular planes with respect to the axis of the arbor, substantially as described. 7th. The combination with a saw arbor, a hub thereon provided with a convex periphery, collars pivotally connected to said hub and conforming to the periphery thereof, saws connected to said collars, and each having rib-teeth and a section of cross-cut teeth at right angles to the pivotal points of said collars, and adjusting screws carried by the collars, the threads of said screws being adapted to mesh with a transverse series of threads on the peripheral face of the hub, whereby the saws may be adjusted in angular planes, substantially as set forth.

**No. 54,580. Bean-Picker. (Moissonneuse de fèves.)**

Edwin E. Miller, Rochester, Michigan, U.S.A., 12th January, 1897; 6 years. (Filed 9th December, 1896.)

*Claim.*—1st. In a bean-picker, the combination of a perforated separating drum, a force feed ring located between the hopper and the separating drum and provided with interior forcing corrugations arranged in spirals of long pitch, a swinging valve conforming in shape to a segment of said force feed ring and provided with ver-

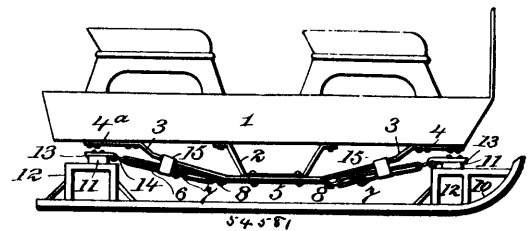
tical pivot connections, and a reach rod adapted to actuate it, substantially as described. 2nd. In a bean-picker, the combination of



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a frame carrying a hopper, a perforated separating drum, an endless travelling belt arranged to receive a portion of the beans delivered from perforations in the tail end of said drum, pivoted adjustable legs supporting said frame, adjustable sliding bars *G*, *G*, arranged between the fore and aft pairs of said pivoted legs, and movable thereon, and adapted to adjust the pitch of the frame, substantially as described. 3rd. In a bean-picker, the combination of a hopper, a perforated separating drum, a force feed ring located between the hopper and the separating drum, a swinging valve, conforming in shape to a segment of said ring, provided with a vertical pivot and adapted to swing into said ring, a reach rod and segment guide, an endless travelling belt, and means for actuating the belt and drum, substantially as specified.

**No. 54,581. Thorough-Brace. (Lien pour voitures.)**



54581

(Oscar B. Fuller, Duane, New York, U.S.A., 12th January, 1897; 6 years. (Filed 9th December, 1896.)

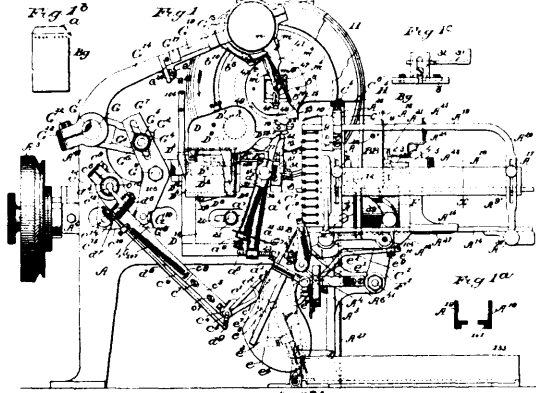
*Claim.*—1st. The combination of the central yokes adapted to be attached to the body, the double straps engaging the yoke and extending oppositely longitudinally of the body, clips engaging the straps and adapted to be attached to the running-gear, brace-rods also adapted to be attached to the body, and collars carried by the brace-rods and engaging the straps, as set forth. 2nd. The combination of the body, the side bearing-bridges *2*, the brace-bars *3* attached to the body and bridges, the central yokes *5* also attached to the bridges, the double straps engaging the yoke and extending oppositely longitudinally of the body, the running-gear, clips attached to the running-gear and engaging the straps, and collars carried by the brace-rods and confining the straps, as set forth.

**No. 54,582. Bag Filling Machine. (Appareil à ensacher.)**

The Brown Bag Filling Machine Co., Fitchburg, assignee of Henry Havelock Cummings, Malden, both in Massachusetts, U.S.A., 14th January, 1897; 6 years. (Filed 5th May, 1896.)

*Claim.*—1st. In a bag-filling machine, means to present a bag to be filled, combined with a flexible or yielding bag-opener to enter the mouth of and open the bag to be filled, substantially as described. 2nd. A bag presenting mechanism, including a guide-box, and a lip-holder, combined with an elastic bag-opener, and means substantially as described to operate it to enter the endmost bag at the end of the bag-presenting mechanism, substantially as described. 3rd. In a bag-filling machine, an intermittingly moving pasting device, and a guide-box for the reception of a series of bags having their seal flaps arranged uppermost and to receive pastes from said pasting device, combined with a down-hold located at the end of said box and acting on the seal flap ends of the bags to prevent them from rising in said guide-box under the action of the pasting device, and means for giving the guide-box a combined lateral and vertical

movement to bring the bags in contact with the pasting device, substantially as described. 4th. A guide-box, means to reciprocate



it, down holds to act on the upper ends of the lips of the bags, and a stationary lip-holder, to operate, substantially as described. 5th. A guide-box for a series of bags, combined with a series of spring pressed sliding pins at each side of the guide box to retain the endmost bag of a pile of bags until pulled out of the said guide-box, substantially as described. 6th. A guide-box for a series of bags, and down-holds to act upon the upper ends of the lips of the bags and keep them down in the said guide-box, combined with a flexible bag-opener, and actuating means to cause said bag-opener to be thrust into the endmost bag, substantially as described. 7th. The longitudinally reciprocating guide-box, to contain a series of bags to be filled, combined with bag-opening devices to enter the endmost bag and hold it open to be filled while the said guide-box is being retracted, substantially as described. 8th. A bag-filling machine containing the following instrumentalities, viz.: a hopper, a measuring device, bag-presenting mechanism, and a movable funnel, and flexible bag-opening device opening the bag in order that the snout of the funnel may enter the mouth of the bag, the measuring devices discharging its measured quantity of seed into the funnel to fill the bag, substantially as described. 9th. In a bag-filling machine, a movable arm having an attached funnel, and a flexible bag-opener extended beyond the snout of the funnel, a guide-box to contain a series of bags, and a lip-holder located in the path of movement of the bag-opener and immediately above the mouth of the bag, to deflect the flexible bag-opener into the mouth of the bag to open the same for the reception of the snout of the funnel, substantially as described. 10th. Bag-presenting mechanism automatically present and hold with its open end uppermost a bag to be filled, combined with an arm or carrier made movable in the direction of the length of the bag, and a bag-spreading device composed of arms adapted to enter the bag and spread the same open in the direction of its width and keep it open while the bag is being filled, substantially as described. 11th. Bag-presenting mechanism to present a bag to be filled, combined with a bag-opener, and with independent bag-spreading devices adapted to enter the mouth of and hold the bag open while being filled, to operate substantially as described. 12th. Bag-presenting mechanism to present a bag to be filled, and a bag-opener, combined with bag-spreading devices which enter the open end of and keep the bag with its open-up and spread, and a movable funnel having a discharge opening to direct the material into the bag while being held by the spreading devices, substantially as described. 13th. Mechanism to present a bag to be filled, combined with a movable funnel, and a flexible bag-opener, and with means to move the funnel to cause it to approach the bag and have its snout entered therein and retracted therefrom, substantially as described. 14th. A hopper, a measuring device therein, and means to move the said measuring device, combined with a funnel having a snout and adapted to receive the contents of the measuring device, and a bag-opener to enter and hold open the mouth of the bag to be filled, in order that the snout of said funnel may enter inside of and thus direct into the bag the seed discharged into the measuring device from the hopper, substantially as described. 15th. In a bag-filling machine, a measuring device, its actuating devices, a funnel, a bag-opening device, means to present a bag to be entered by the bag-opening device and snout of the funnel, combined with a stop motion device whereby, when the bag is absent, the measuring device will not be actuated to feed the funnel, substantially as described. 16th. A bag-filling machine containing the following instrumentalities, viz.: a bag-opening device to enter the open end of and pick a bag off from a series of bags, an independent funnel having a snout to enter the mouth of a bag opened by the opening device, and a bag-carrier to engage the filled bag and take it from the bag-opening device and present it in position to be folded, substantially as described. 17th. A bag-filling machine containing the following instrumentalities, viz.: a bag-opening device to enter the mouth of a bag, an independent spreading device to also enter the bag, a funnel to discharge seed into the mouth of the open bag, while held open by the spreading device, a bag-carrier to engage the filled bag and take it from the

bag-opening device and spreader, and a folding-bed and folding-blade between which the bag-carrier deposits the bag to be folded, substantially as described. 18th. In a bag-filling machine, a guide-box to present a bag, a pasting device to paste the bag to be filled, combined with an elastic bag-opener, substantially as described. 19th. A guide-box to present a bag to be filled, a pasting device to paste the bag, and a bag-opening device, to enter the open end of a bag in said guide-box combined with a folding-bed and folding-blade, and a bag-carrier to take a filled bag from the bag-opener and present it in position to be folded, substantially as described. 20th. A guide-box to present a series of bags, and a pasting device consisting of a bar having a series of yielding or spring supported pins, combined with the paste-box, its paste-roll, and means to actuate the paste-roller and present paste to the said pins, substantially as described. 21st. In a machine for filling bags, a hopper, a funnel, a measuring device co-operating with said hopper, and an elastic bag-opening device projecting beyond the delivery end of said funnel, and adapted to enter a bag and open it for the entrance of the funnel combined with bag-presenting mechanism including a movable guide-box to present the endmost bag of a series of bags in position to be entered by said opening device, substantially as described. 22nd. A guide-box to prevent a bag to be pasted, a paste-box, and pasting device having a series of spring-pressed pins and provided with toes, and a lug, combined with a support on which the said bar is laid, means to move the said bar, the said support being notched and provided with a projection to ensure the overturning of the said bar during its reciprocations, substantially as described. 23rd. A guide-box to receive a series of bags, and a sliding foot therein, combined with an attached follower adapted to conform to variations in the thickness at the side edges of the series of bags and made vertically adjustable with relation to said foot to co-operate with bags of different length, substantially as described. 24th. In a machine for filling bags, the following instrumentalities, viz.: a guide-box to receive a series of bags, a bed located below and at the end of said box, a folding-blade adapted to impinge a part of the bag against said bed, and a roll, and actuating devices to cause the roll to roll over the said bed and turn the open end of the bag over, substantially as described. 25th. A guide-box to receive a pile of bags, and a foot sliding therein, combined with a vertically adjustable block 5, a pivoted link 3, the follower pivoted on the said link, the arm A<sup>24</sup> extended backwardly from the follower, and the stop A<sup>25</sup>, to operate substantially as described. 26th. In a bag-filling machine, bag-opening and spreading devices to enter and hold open a single bag, a bag-carrier composed of two arms, and a rest to support the bottom of the bag, combined with means to open and close the said carrier to enable it to grasp and take a bag from the devices holding it and to thereafter release the bag at the desired time, substantially as and for the purpose set forth. 27th. The combination with a bag-folding device, its co-operating bed, of a vibrating arm e<sup>2</sup>, the bar e<sup>3</sup> having its shank connected thereto, the rod e<sup>3</sup>, its attached arm e, and means for rocking said rod e<sup>3</sup>, and the rigid arm e<sup>1</sup>, substantially as described. 28th. The bag-carrier composed of arms, one of which is pivotally mounted, the arm e<sup>8</sup> supporting the said bag-carrier, the rod d<sup>8</sup>, and the elbow lever d<sup>4</sup>, combined with a slide rod d, and means to actuate it, substantially as described. 29th. In a bag-filling machine, a guide-box to present a bag to be filled, an elastic bag-opener, a pasting device to paste the bag, and a folding-bed and folding-blade, combined with a clamp to clamp the filled bag upon the folding-bed while the folding-blade acts against the bag, substantially as described. 30th. In a bag-filling machine, a guide-box to present a bag to be filled, a bag-opener, a pasting device to paste the bag, and a folding-bed and folding-blade, combined with a clamp to clamp the filled bag upon the folding-bed, and a lip-turning roll co-operating with the said folding blade, as and for the purposes set forth. 31st. In a bag-filling machine, a guide-box to present a bag to be filled, an elastic bag-opener to open the bag, and a folding-bed, combined with a clamping device consisting essentially of a bar having guide rods, and a carrying arm a<sup>4</sup>, and springs 23 surrounding said rods, to operate substantially as described. 32nd. A guide-box to present a bag, a pasting device to paste the bag at intervals, combined with a folding bed, and a folding-blade having dogs to contact with the pasted bag at points where the paste is omitted, substantially as described. 33rd. A guide-box to present a series of bags to be filled, combined with a series of yielding holders or catches to act against the outer edges of the endmost bag, and a bag-opener to enter the bag and aid in detaching the same from the said guide-box, the holders or catches at such times yielding substantially as described. 34th. A guide-box to present a pile of bags to be filled, a follower to keep the said bags pressed forward, and a bag-opener, combined with a pressing device to press upon the lower end of the endmost bag, of the pile of bags to aid in putting the same into proper position with relation to the bag-opening device, substantially as described. 35th. A guide-box to present a pile of bags to be filled, a follower to keep the said bags pressed forward, and a bag-opener, combined with a pressing device to press upon the lower end of the endmost bag of the pile of bags to aid in putting the same into proper position with relation to the bag-opening device, and with a pasting device to apply paste to the bag, substantially as described. 36th. A bag-carrier to take a pasted bag and put into position for folding, and means to actuate the bag-carrier, combined with a folding-bed, and a lip-turning device, and with catches for moving aside the lower end of the bag out of the way of the rising carrier, substantially as



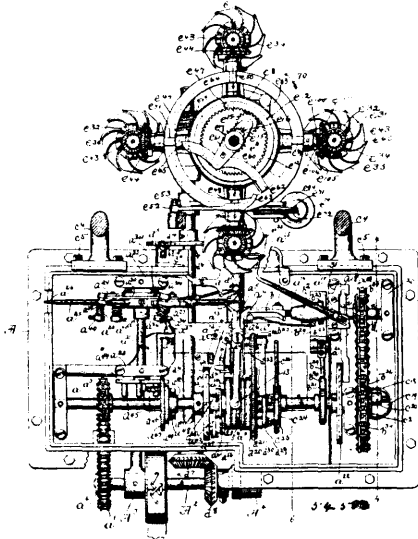
described. 37th. In a bag-filling machine, a folding-bed having a transverse rib, combined with a folding blade, and with a lip-turning roll co-operating therewith, substantially as described. 38th. In a bag-filling machine, a folding-bed having a transverse rib, combined with a folding-blade, and with a lip-turning roll co-operating therewith, and with a clamp to clamp the bag upon the folding-bed, substantially as described. 39th. In a bag-filling machine, a folding-bed, and a folding-blade, combined with a lip-turning roll, and with means to cause the said roll to travel downwardly over the said bed and lay the lip of the bag over the folding-blade, substantially as described. 40th. The folding-bed, combined with the lip-turning device, arms, to actuate it and with risers to lift the said lip-turning device upon the upper folding end of the bag, substantially as described. 41st. The folding-bed, the roll and the folding-blade, combined with the arm to carry the said blade, and with means, substantially as described, to connect the said blade in a yielding manner with the said arm so that the said blade may tip, under the action of said roll, substantially as described. 42nd. The folding-bed, and the folding-blade having dogs near its end, and the carrying-arm upon which the said blade is mounted in a yielding manner, combined with a lip-turning device co-operating with the dogs of the said blade, whereby the lip-turning roll causes the acting end of the folding-blade to descend, substantially as described. 43rd. In a bag-filling machine, a guide-box to contain a pile of bags, a follower therein to act upon the rearmost bag of the pile of bags, and a carrier to sustain the said guide-box, combined with means to reciprocate the said carriage, substantially as described. 44th. In a bag-filling machine, the carriage A<sup>13</sup> having the folding-bed, a lip-turning device, a folding-blade and a rocker having arms to actuate the said lip-turning device, combined with means to reciprocate the said carriage, and with adjusting screws to control the throw of the lip-turner according to the length of the lip of the bag, substantially as described. 45th. The carriage A<sup>13</sup> having an attached folding-bed, means to reciprocate the carriage, a rocker having arms to support a lip-turning device, a lip-turning device carried by the said arms, and risers, substantially as described, combined with front and back stops for the said risers, substantially as described. 46th. The folding-bed, the rocker having arms, and a bar B<sup>6</sup>, springs B<sup>7</sup> to press the said bar toward the said bed, combined with the roll B<sup>11</sup>, and with a folding-blade to operate substantially as described. 47th. In a bag-filling machine, the vibrating arm G<sup>14</sup>, its attached funnel, and bag-opener, combined with spreaders, the rock-shafts G<sup>18</sup>, and with means to actuate the said rock-shafts, substantially as described. 48th. The arm G<sup>14</sup>, the rock-shafts G<sup>18</sup> thereon, their attached spreaders, and the gears to connect the said rock-shafts, combined with a rod G<sup>22</sup> having a striker, and with a finger with which the said striker co-operates to open the spreaders at the proper time, substantially as described. 49th. The arm G<sup>14</sup>, the rock-shafts G<sup>18</sup>, their attached spreaders, and the gears to connect the said rock-shafts, combined with a rod G<sup>22</sup> having a striker, and with a finger with which the said striker co-operates, and with a cam to actuate said finger, substantially as described. 50th. The arm G<sup>14</sup>, its attached funnel and bag-opener, and the sleeve G<sup>1</sup> upon which the said arm is clamped, the said sleeve having an arm G<sup>2</sup>, combined with a stud G, a lever G<sup>7</sup>, means to actuate said lever, and a connection between said lever and said arm to actuate the arm G<sup>14</sup>, substantially as described. 51st. The slide D<sup>10</sup> provided with a roller or other stud; a cam to reciprocate said stud; an arm D<sup>12</sup> connected with said slide; an arm 16 supported by the arm D<sup>12</sup>; a pasting device supported by the arm 16 and adapted to move through an arc of one hundred and eighty degrees to obtain the paste and present it upon the lower lip of the bag, combined with a guide-box to present a series of bags, and with a paste-box and roller therein, to operate substantially as described. 52nd. The slide D<sup>10</sup> provided with a roller or other stud; a cam to reciprocate said stud; an arm D<sup>12</sup> connected with said slide having an arm 16, and a stud a<sup>2</sup>; a pasting device carried thereby; a paste-box; a roll; an arm a<sup>3</sup> mounted on the stud a<sup>2</sup> and provided with a spring-supported clamp, combined with the guide-box having a pile of bags mounted therein, substantially as described. 53rd. In a machine for filling bags, the following instrumentalities, viz.: a guide-box to receive a series of bags; a bag-opener; devices to move said bag-opener and cause it to enter the mouth of the endmost bag of the series and remove it from said guide-box; a bed located below and at the end of said box; a folding-blade to impinge a part of the bag against said bed, and a device to act against the lip at the end of the bag and lay the same over upon the body of the bag, substantially as described. 54th. A guide-box to receive a series of bags; a bag-opener; devices to move said bag-opener and cause it to enter the open mouth of the endmost bag of the series and remove it from the guide-box; a device to remove said bag from the bag-opener; a bed located below and at the end of said box; a folding-blade to impinge a part of the bag against said bed, and a device to act against the lip at the end of the bag and lay the same over upon the folding-blade, and upon the body of the bag, substantially as described. 55th. In a bag-filling machine, a rotating hopper provided with pockets; a chute h<sup>17</sup> located therein; a measuring device, and a funnel, combined with means to move said measuring device from below the said chute into the said funnel, substantially as described. 56th. A rotating hopper having pockets, a funnel located near the said hopper, combined with a measuring device and means to actuate it to carry

material from the hopper into the funnel, substantially as described. 57th. A rotating hopper having pockets, a measuring device, a reciprocating rod to which it is pivoted, and a funnel, combined with means for moving the said measuring device from the hopper into the funnel, substantially as described. 58th. In a bag-filling machine, a reciprocating measuring device having its bottom pivoted thereto at one end and notched at its free end, combined with a worm mounted in said notch at the end of the bottom, and a worm-toothed rack engaged by the teeth of the worm, the rotation of the latter effecting the adjustment of the bottom, substantially as and for the purpose described. 59th. In a bag-filling machine, the following instrumentalities, viz.: a rotatable hopper having a series of buckets, a funnel, a rod h<sup>7</sup>, means to reciprocate said rod, and a measuring device connected thereto, said measuring device after receiving material from the bucket being moved toward and discharging its contents into the funnel, for the purposes set forth. 60th. In a bag-filling machine, a reciprocating rod h<sup>7</sup>, combined with a measuring device pivoted at or near one end of the said rod, means to reciprocate said rod, a funnel, and means for tilting the pivoted measuring device as it enters the funnel, to operate substantially as described. 61st. In a bag-filling machine, a folding-bed combined with a folding-blade, a lip-turning roll, and a clamp to clamp the bag upon the folding-bed, to operate substantially as described. 62nd. In a bag-filling machine, a measuring device, a rotating hopper having lifting devices to lift and discharge material into the measuring device, and means to reciprocate the measuring device combined with a scraper to scrape or even the material with the top of the measuring device, the material dropping back into the hopper, substantially as described. 63rd. In a bag-filling machine, a rotating hopper having lifting devices to lift and discharge material into the measuring device, a measuring device having its bottom pivoted at one end and made adjustable in the said measuring device to provide for more or less material, substantially as described. 64th. In a rotating hopper having pockets, a curb h<sup>15</sup>, and a feed chute h<sup>17</sup> in connection therewith, combined with a measuring device, a funnel, and means to actuate the measuring device to supply the funnel, substantially as described. 65th. A rotating hopper having a curb h<sup>15</sup>, a feed chute h<sup>17</sup> in connection with the said curb, an auxiliary chute h<sup>20</sup>, a gate between the said auxiliary chute and feed chute, combined with a movable dam, a foot located in the said hopper and adapted to bear upon material therein, and intermediate devices to actuate the said dam, as and for the purpose set forth. 66th. The feed chute h<sup>17</sup> and the auxiliary chute h<sup>20</sup>, combined with a movable dam located in the feed chute h<sup>17</sup>, the said dam being adapted to be raised and lowered to control the flow of material from the auxiliary chute into the feed chute, substantially as described. 67th. In a bag-filling machine, a yielding folding-bed, a folding-blade or device to contact with a bag on the said folding-bed, combined with a lip-turning device adapted to travel over the surface of the folding-bed, substantially as described. 68th. A rotating hopper having pockets, a measuring device, a reciprocating rod to which it is pivoted, a track for the measuring device, and a funnel, combined with means for moving the said measuring device from the hopper into the funnel, substantially as described. 69th. A bag-carrier to take a pasted bag and put it into position for folding, and means to actuate the bag-carrier, combined with a folding-bed, and with catches for moving aside the lower end of the bag out of the way of the rising carrier, substantially as described. 70th. In a bag-filling mechanism the carriage A<sup>13</sup> having the folding-bed, a folding-blade, a lip-turning device, and a rocker having arms to actuate the said lip-turning device, combined with means to reciprocate said carriage and with devices to control the throw of the lip-turner to cause it to travel a longer or a shorter distance on the folding-bed as desired, substantially as described. 71st. A rotating hopper having a curb h<sup>15</sup>, a feed chute h<sup>17</sup> in connection with the said curb, an auxiliary chute h<sup>20</sup>, combined with a movable dam, a foot located in the said hopper and adapted to bear upon material therein, and intermediate devices to actuate the said dam, as and for the purpose set forth. 72nd. A guide-box to receive a pile of bags, and a foot adapted to slide therein, combined with a link in operative connection with said foot, a follower pivoted on said link, an arm extended backwardly from said follower, and a spring to tip the upper end of the follower forward, substantially as described. 73rd. The rotating hopper, a measuring device, and the stationary plate m<sup>4</sup> having a flange 49 and an opening 48, combined with a funnel into which the measuring device enters to discharge its contents, the said flange ensuring the return into the hopper of any material discharged from the measuring device and which does not get properly into the funnel, substantially as described. 74th. In a machine for filling bags, the following instrumentalities, viz.: a measuring device, a clutch to control the time of its movement, means to support a bag to be filled, and a feeler mechanism, which, in the absence of a bag to be filled, effects the release of the clutch and stops the movement of the measuring device, substantially as described. 75th. In a machine for filling bags, the following instrumentalities, viz.: the hopper, a co-operating measuring device, and a funnel to receive material from the hopper, a flexible bag-opening device, and a pasting or gumming mechanism to paste or gum the bag preparatory to closing the same, substantially as described. 76th. In a bag-filling machine, a guide-box to contain a series of bags to be filled, a folding-blade, a bed located below and at the end of said box, and provided with an elastic covering, combined with a roll, devices to actuate said roll and keep

it pressed toward the said bed and to cause the roll to travel over the said bed, substantially as described. 77th. In a bag-filling machine, a guide-box to receive a series of bags to be filled, a bed located below and at the end of the bag-holding guide-box, and a roll, and actuating devices to move said roll over said bed, combined with a folding blade having an upturned lip at its front end to co-operate with the said roll and bed, substantially as described. 78th. A bag-presenting mechanism, including a movable guide-box to hold and present a bag to be filled, and pasting mechanism adapted to apply paste to the endmost bag of the series of bags in the guide-box, and folding devices to fold the bag transversely, combined with a bag detainer adapted to hold the bag while being folded, substantially as described. 79th. The guide-box, a folding-bed located below the end thereof, a co-operating folding-roll, a rock-shaft having bearing arms in which the journals of the said roll are free to slide, and a folding-blade, combined with springs to keep the said roll pressed normally toward the said bed, whereby the roll is caused to follow the surface of the said bed when travelling upon it, substantially as described. 80th. Bag-presenting mechanism to present a bag to be filled, a bag-spreading device composed of arms adapted to be pressed into the open end of the bag, and devices to spread said arms in the direction of the width of the bag to hold the latter open while the bag is being filled, substantially as described. 81st. A hopper rotatable in a substantially vertical plane and provided with a series of buckets, a chute leading into said hopper, and a dam co-operating with said chute, combined with a foot located in the said hopper and moved by the material therein to control the said dam and determine the quantity of material to enter the hopper from the chute, substantially as described.

### No. 54,583. Tag Tying and Bunching Machine.

(Machine à attacher les étiquettes et mettre en bottes.)



John Price Swift, Falmouth, Massachusetts, U.S.A., 14th January, 1897; 6 years. (Filed 25th August, 1896.)

*Claim.*—1st. In an apparatus for forming knotted or tied loops from a continuous string, the combination of the following instrumentalities, viz.: a gripping mechanism to hold the string or cord to be formed into loops, a looper to act on the string to form one half or member of the loop, a feeder to carry the string to the gripping mechanism to form the other half or member of the loop, and a knotter to tie the loop, substantially as described. 2nd. In an apparatus for forming knotted or tied loops from a continuous string, the combination of the following instrumentalities, viz.: a gripping mechanism to hold the string or cord to be formed into loops, a looper to act on the string to form one half or member of the loop, a feeder to carry the string to the gripping mechanism to form the other half or member of the loop, a knotter to tie the loop, and means to sever the loop from the string, substantially as described. 3rd. In an apparatus for forming knotted or tied looped tags, the combination of the following instrumentalities, viz.: a tag holder or support, a gripping mechanism to hold the string or cord to be formed into loops, a feeder to carry the string to the gripping mechanism, a tag feeding mechanism, a looper to act on the string to form one half or member of the loop, a knotter to tie the loop, and means to sever the loop from the string, substantially as described. 4th. In an apparatus for forming knotted or tied loops from a continuous string, the combination of the following instrumentalities, viz.: a gripping mechanism to hold the string or cord to be formed into loops, an intermittently operated looper to act on the string to form one half or member of the loop, a feeder to carry the string to the gripping mechanism to form the other half or member of the loop, and a knotter to tie the loop, substantially as described. 5th. In an apparatus for forming knotted or tied looped

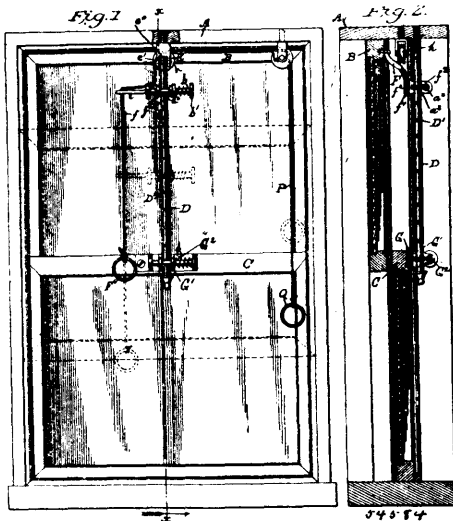
tags, the combination of the following instrumentalities, viz.: a loop holder provided with a passageway to receive both members of the loop, and a locking device to retain both members of the loop in the said passageway while the knot is being tied, and a cutter or knife to sever the tied loop from the string, substantially as described. 6th. In an apparatus for forming looped tags from a continuous non-metallic cord or string, the combination with a gripping mechanism to hold the string while the loop is being formed, of a vacuum tag feeding mechanism operated intermittently to place one of a plurality of tags on the portion of the string to be formed into a loop, and a loop forming mechanism, substantially as described. 7th. In an apparatus for forming looped tags from a continuous non-metallic cord or string, an intermittently operated looper provided with a plurality of loop forming arms or projections, substantially as described. 8th. In an apparatus for forming looped tags from a continuous non-metallic cord or string, the combination of the following instrumentalities, viz.: a tag holder or support holding a plurality of tags having eyelets, a string inserted through said eyelets, a gripping mechanism to hold the string while a loop is being formed, a tag feeding device to carry one of the tags toward the gripping mechanism, and a loop forming device to act on that portion of the string between the tag holder and the gripping mechanism, substantially as described. 9th. In an apparatus for forming knotted or tied loops from a continuous string, the combination of the following instrumentalities, viz.: a gripping mechanism to hold the string or cord to form into loops, a looper to act on the string to form one half or member of the loop, a looper actuating mechanism comprising a looper arm, a shaft to which said arm is secured, a disc or plate of other than round shape provided with a plurality of studs or projections, a disc provided with a slotted or open portion and having a stud or projection to engage the studs or projections on the other than round disc or plate, a shaft on which said slotted disc is mounted, and means to rotate said shaft, a feeder to carry the string to the gripping mechanism to form the other half or member of the loop, and a knotter to tie the loop, substantially as described. 10th. In an apparatus for forming looped tags from a continuous non-metallic cord or string, the combination with a gripping mechanism comprising jaws  $a^4$ ,  $a^5$ , and an intermediate jaw  $a^6$ , provided with a follower, of a switch cam having two tracks or ways to operate said intermediate jaw to engage it alternately with the jaws  $a^4$ ,  $a^5$ , and a string feeder to co-operate with said jaws, substantially as described. 11th. In an apparatus for forming looped tags from a continuous non-metallic cord or string, the combination with a gripping mechanism comprising jaws  $a^4$ ,  $a^5$ , and an intermediate jaw  $a^6$ , of a switch cam to operate said intermediate jaw to engage it alternately with the jaws  $a^4$ ,  $a^5$ , a string feeder to co-operate with the said jaws, and a brush intermittently brought into engagement with the jaws  $a^4$ ,  $a^5$ , from which the jaw  $a^6$  is moved by the switch cam, substantially as described. 12th. The combination with an apparatus for forming knotted or tied looped tags, of a tag assembling apparatus comprising a movable device provided with a slot into which the knotted tags are passed and suspended therein, substantially as described. 13th. The combination with an apparatus for forming knotted or tied looped tags, of a plurality of movable devices constructed to receive the loops of the tags, and an intermittently movable frame or support for said devices, substantially as described. 14th. The combination with an apparatus for forming knotted or tied looped tags, of a tag assembling apparatus provided with a slot or channel to receive both members of the loop of a tied tag and suspend the same by the knot formed in the loop, substantially as described. 15th. The combination with an apparatus for forming knotted or tied looped tags, of a tag assembling apparatus constructed to receive the loop of the tied tag, and an intermediate movable loop delivering device to receive the tied looped tag and to carry it to the assembling apparatus, substantially as described. 16th. The combination with an apparatus for forming knotted or tied looped tags from a continuous non-metallic cord or string, of a tag assembling mechanism comprising a plurality of rotating tagged loop receiving devices, and an intermittently rotated frame supporting said devices, substantially as described. 17th. In a tag assembling or bunching apparatus, a rotary tag receiving or holding device, mechanism to rotate it, a rotatable supporting frame for said tag receiving device, a locking device for said supporting frame, and means to engage said locking device at intervals to release the said supporting frame and permit it to be rotated, substantially as described. 18th. In a tag assembling or bunching apparatus, the combination of the following instrumentalities, viz.: a plurality of movable bunchers, a movable supporting frame therefor, a locking device to hold said supporting frame stationary, gearing to move said bunchers, a releasing device co-operating with the said locking device, gearing to operate said releasing device, and means to move said supporting frame when released, substantially as and for the purpose specified. 19th. In a tag assembling or bunching apparatus, the combination of the following instrumentalities, viz.: a plurality of movable bunchers, a movable supporting frame therefor, a locking device to hold said supporting frame stationary, gearing to move said bunchers, a releasing device co-operating with the said locking device, gearing to operate said releasing device, means to move said supporting frame when released, and means to permit the said bunchers to remain substantially stationary when the said supporting frame is moved, substantially as described. 20th. In a tag assembling or bunching apparatus, the combination of the following instrumentalities,

viz.: a plurality of rotatable loop-receiving devices, gearing to rotate said devices, an intermittently rotatable frame supporting said loop receiving devices, a locking device for said frame, and a releasing device to unlock said frame and permit it to be rotated, for the purpose specified. 21st. In a tag assembling or bunching apparatus, the combination of the following instrumentalities, viz.: a plurality of rotatable loop-receiving devices, gearing to rotate said devices, an intermittently rotatable frame supporting said loop receiving devices, a locking device for said frame, and a releasing device to unlock said frame, and means to rotate said frame when released, substantially as described. 22nd. In a tag assembling or bunching apparatus, the combination of the following instrumentalities, viz.: a plurality of rotatable loop-receiving devices, gearing to rotate the said devices, a driving mechanism for said gearing, an intermittently rotatable frame supporting said loop-receiving devices, a locking device for said frame, mechanism to produce intermittent movement of the said frame, a clutch to couple the said mechanism to the said frame, and a releasing device to act on said locking device to release the said frame and permit it to be rotated by its actuating mechanism, substantially as described. 23rd. In a tag assembling or bunching apparatus, the combination of the following instrumentalities, viz.: a plurality of movable bunchers, a movable supporting frame therefor, a locking device to hold said supporting frame stationary, gearing to move said bunchers, a releasing device co-operating with the said locking device, gearing to operate said releasing device, means to move said supporting frame when released, and an audible signal actuated by the said releasing device, substantially as described. 24th. In a tag assembling or bunching apparatus, the combination of the following instrumentalities, viz.: a rotary loop-receiving device provided with slots or channels to receive the loop of the tied tag, a support for said device and gearing to rotate said device, substantially as described. 25th. In a tag assembling or bunching apparatus, the combination of the following instrumentalities, viz.: a movable loop-receiving device provided with slots or channels to receive the loop of the tied tag, and means to move said device, substantially as described. 26th. The combination with an apparatus for forming knotted or tied looped tags, of a loop-receiving device provided with a channel or guideway between the walls of which both members of the loop are received and suspended therein, substantially as described. 27th. The combination with an apparatus for forming knotted or tied looped tags, of a loop-receiving device provided with a curved channel or guideway, between the walls of which both members of the loop are received and suspended therein, substantially as described. 28th. The herein described buncher provided with a plurality of curved channels or guideways communicating with a common discharge opening, substantially as described. 29th. In an apparatus for forming knotted or tied loops, the combination with a knot-forming device comprising a stationary jaw  $b^1$ , and a movable jaw  $b^2$ , and a cutter or knife  $b^{15}$  co-operating with the said jaws to form a beak, a crank or arm  $b^6$  connected to the movable jaw  $b^2$ , a lever  $b^{13}$  to which said knife is attached, adapted to act on the crank or arm  $b^6$  to open the jaw  $b^2$ , a cam to act on the said lever to open the knife, means to close the said knife, and means to close the movable jaw independent of the knife, substantially as described. 30th. In an apparatus for forming knotted or tied loops, the combination with a rotary knotting device comprising holding jaws, and a knife co-operating therewith and a lever to which the said knife is attached, of a cam to act on the said lever to open the said jaws and knife, and means to move the said cam into and out of the path of movement of the said lever, whereby the said cam is rendered active to operate upon the said lever during one revolution of the said knotting device and is rendered inactive for the whole or a portion of the second revolution of the said knotting device, substantially as described. 31st. In an apparatus for forming knotted or tied loops, the combination with a rotary knotting device comprising a fixed and a movable jaw, and a lever to act on the movable jaw, of a cam to act on the said lever to open the said jaws, and means to move the said cam into and out of the path of movement of the said lever, substantially as described. 32nd. In an apparatus for forming knotted or tied loops, the combination with a knotting device consisting of a fixed jaw and a movable jaw and a knife co-operating therewith attached to a lever adapted to co-operate upon the movable jaw, of a cam co-operating with the said lever and shaped to cause the said lever to act upon the movable jaw of the knottor while the said lever is acted upon by one portion of the cam and to permit the said lever to be moved out of engagement with the said movable jaw, to permit the said movable jaw to close while the lever remains in engagement with its operating cam, and means to act upon the said lever to close the knife when the said lever is out of engagement with the cam, substantially as described. 33rd. In an apparatus for forming knotted or tied loops, a looper comprising a plurality of movable arms, and a cam co-operating with said arms, substantially as described. 34th. In an apparatus for forming knotted or tied loops, a looper comprising a movable arm, and a cam co-operating with said arm and about which the said arm is carried, substantially as described. 35th. In an apparatus for forming knotted or tied loops, a looper comprising a plurality of movable arms, a disc to which said arms are secured, a rotary shaft upon which the said disc is fastened, and a stationary cam loosely mounted on the said shaft and co-operating with the looper arms, substantially as described. 36th. In an apparatus for forming knotted or tied loops, a looper comprising a plurality of

movable arms, a disc to which the said arms are secured, a shaft upon which the said disc is adjustably mounted, and a stationary cam loosely mounted on the said shaft and co-operating with the said arms, substantially as described. 37th. In an apparatus for forming knotted or tied loops, a loop-holding device comprising slotted arms  $a^3$ ,  $a^4$ , and a movable finger normally out of line with the slot between the said arms, but adapted to be brought across the said slot to operate, substantially as described. 38th. In an apparatus for forming knotted or tied looped tags from a continuous string having thereon a plurality of tags, an inclined tag-containing chute or receptacle provided at its mouth with stops or rests and having on its inclined bottom a ratchet bar, and a movable weight in said chute provided with a hole through which the said string is passed, and having an opening, and a pawl pivoted in said opening to engage the ratchet bar to prevent backward movement of the said weight, substantially as and for the purpose specified. 39th. The combination with an apparatus for forming knotted or tied looped tags, of a slotted loop-receiving device, and an intermediate loop-delivering device provided with a slot to receive the loop, and with a device for retaining the said loop within the slot of the delivering device until positively removed, substantially as described. 40th. In a tag assembling or bunching apparatus, the combination of the following instrumentalities, viz.: a spindle, a sleeve loosely mounted thereon, a gear secured to said sleeve, a worm in engagement with said gear to rotate said sleeve, a bevel gear  $e^3$  connected to said sleeve to rotate therewith, a rotary slotted loop-receiving device, a frame mounted on said sleeve and supporting said loop-receiving device, gearing carried by said frame and connecting the rotary loop-receiving device with the bevel gear  $e^3$ , an internally geared ring supported above the gear  $e^3$  and rotated therefrom, a locking device for said frame, a releasing device co-operating with said locking device and operated by the internally geared ring, and mechanism to produce rotation of the said frame when unlocked by the releasing device, substantially as described. 41st. In a tag assembling or bunching apparatus, the combination of the following instrumentalities, viz.: a spindle, a sleeve loosely mounted thereon, a gear secured to said sleeve, a worm in engagement with said gear to rotate said sleeve, a bevel gear  $e^3$  connected to said sleeve to rotate therewith, a rotary slotted loop-receiving device, a frame mounted on said sleeve and supporting said loop-receiving device, gearing carried by said frame and connecting the rotary loop-receiving device with the bevel gear  $e^3$ , an internally geared ring supported above the gear  $e^3$  and rotated therefrom, a locking device for said frame, a releasing device co-operating with the said locking device and operated by the internally geared ring, a spool  $e^{23}$  mounted on the said sleeve, a clutch to couple the spool to the said frame, and mechanism operated by the worm gear to partially rotate the said spool without producing rotation of the said frame, and means to rotate the said spool and the said frame in a reverse direction when the frame is released from its locking device, substantially as described. 42nd. In a tag assembling or bunching apparatus, the combination of the following instrumentalities, viz.: a spindle, a sleeve loosely mounted thereon, a gear secured to said sleeve, a worm in engagement with said gear to rotate said sleeve, a bevel gear  $e^3$  connected to said sleeve to rotate therewith, a rotary slotted loop-receiving device, a frame mounted on said sleeve, a shaft carried by said frame and provided with a pinion in mesh with the bevel gear  $e^3$ , a bevel gear loosely mounted on the said shaft and in engagement with a pinion on the slotted loop-receiving device, a ratchet disc or wheel fast on the said shaft, a pawl carried by said loose gear and adapted to engage said ratchet wheel or disc to render the said loose gear fast on the shaft, substantially as described. 43rd. In an apparatus for forming knotted or tied loops, the combination with a gripping mechanism comprising two movable jaws  $a^4$ ,  $a^5$ , and an intermediate jaw  $a^6$  pivotally connected together, and springs to act on the jaws, of a stop to arrest the movement of the said jaws, substantially as described. 44th. In an apparatus for forming knotted or tied loops, a looper mechanism comprising a supporting disc, a pivoted looper arm, and a pivot for the said looper arm set at an other-than-right angle to the supporting disc, substantially as and for the purpose specified. 45th. In an apparatus for forming knotted or tied loops, a looper mechanism comprising a stationary cam, a movable disc provided with a plurality of pivoted looper arms having shoes to engage said cam, and a spring normally acting on said looper arms to place the shoes in position to engage with the said cam, substantially as described. 46th. In an apparatus for forming knotted or tied loops, a looper mechanism comprising a disc provided with circumferential lugs or projections  $a^{11}$ , a plurality of pivoted looper arms having shoes normally positioned between the said circumferential lugs or projections, a spring to act on the said arms to return the said arms to their normal position, and a buffer carried by the circumferential lugs and acting upon the looper arms to cushion the return blow of the said arms, substantially as described. 47th. In an apparatus for forming knotted or tied loops, the combination with a gripping mechanism comprising two jaws as  $a^4$ ,  $a^5$ , and an intermediate jaw  $a^6$  provided with a follower, of a switch cam having two tracks or ways, one of the said ways acting on the follower to move the intermediate jaw toward the jaw  $a^4$ , and the other track or way acting on the follower to move the intermediate jaw toward the jaw  $a^5$ , the track or way with which the follower is engaged when the intermediate jaw is moved to operate with the jaw  $a^5$ , being carried toward the other track or way for a portion of its length, as and for the purpose

specified. 48th. The combination with an apparatus for forming knotted or tied looped tags, of a loop delivering device provided with a slit to receive both members of the loop of the tied tag, and means to oscillate the said slitted device, substantially as described. 49th. In an apparatus for forming knotted or tied loops, the combination of the following instrumentalities, viz.: a fixed jaw, a movable jaw co-operating with the fixed jaw to grasp the members of the loop, a knife or cutter to act on the members of the loop after the same have been grasped between the said fixed and movable jaws, means to effect the movement of both the movable jaw and the cutter one direction, and means to close the movable jaw independent of the said cutter, and means to close the cutter after the movable jaw is closed, substantially as described. 50th. In an apparatus for forming knotted or tied looped tags from a continuous string, the combination of the following instrumentalities, viz.: a gripping mechanism to grip the string, a loop holder provided with a slot or passageway to receive both members of the loop, a locking device to close the said passageway and lock both members of the loop in its holder, and a knotting device to act on that portion of both members of the loop between the loop holder and the gripping mechanism, substantially as described.

**No. 54,584. Window Fastening. (Arrête-croisée.)**



George W. Goss, Rockbury, and Alonzo T. Hubbard, Tyson, both in Vermont, U.S.A., 14th January, 1897; 6 years. (Filed 29th June, 1896.)

*Claim.*—1st. A bracket E attached to a window sash, and provided with ears and a perforated extension e, in combination with a spring-bolt mounted in the said ears, a pull-cord attached to the said bolt and passing through the said extension, and a stationary notched rod arranged to be engaged by the said bolt, substantially as set forth. 2nd. A bracket E attached to a window sash, and provided with ears and a perforated extension e, in combination with a spring-bolt mounted in said ears, a pull-cord attached to the said bolt and passing through the said extension, a stationary notched rod arranged to be engaged by the said bolt, and a cord for raising the sash, substantially as set forth. 3rd. In combination with the two sashes of a window, a stationary rod notched throughout its length, a spring-bolt on the lower sash, another spring-bolt moving with the upper sash, a bracket on said upper shaft having a perforated extension and raised ears, and a pull-cord which passes through the said extension and is attached to the spring-bolt of the upper sash, the latter bolt being mounted in the said ears, and both bolts being adapted to engage the said rod, substantially as set forth.

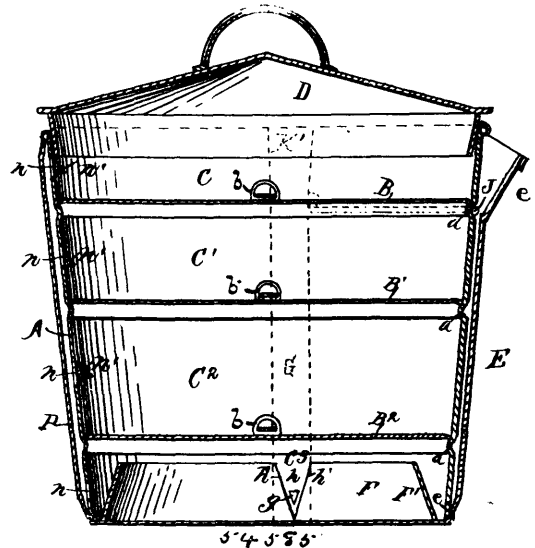
**No. 54,585. Steam Cooker.**

(Appareil pour la cuisson à la vapeur.)

Alexander M. Amos, Buffalo, New York, U.S.A., 14th January, 1897; 6 years. (Filed 7th December, 1896.)

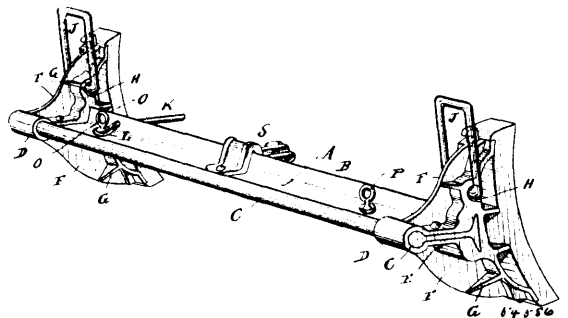
*Claim.*—1st. The combination with the body of a steam cooker having a steam-generating chamber in its bottom, of an imperforate wall or dam extending upward from the bottom of the steam-generating chamber, and arranged in proximity to the surrounding main wall thereof and forming with the latter a separate water-trough from which the water is supplied to the steam-generating chamber only by overflowing said dam, and an inlet or filling tube connected with said water-trough, substantially as set forth. 2nd. The combination with the body of a steam cooker having a steam-generating chamber, provided with a water inlet, of a signal tube communicating with said chamber, an imperforate water-trough or receptacle arranged in said chamber communicating with said inlet and having its walls extending above the inlet, whereby the water supplied to said trough cannot escape into the steam-generating chamber except by overflowing said trough and whereby the water

in the trough forms a seal or closure which prevents the escape of steam through the inlet, substantially as set forth. 3rd. The com-



bination with the body of a cooker having a steam-generating chamber provided at or near its bottom with a water inlet and a steam-escape aperture, of a filling tube leading to said water-inlet and a steam escape aperture, of a filling-tube leading to said water-inlet, an annular water-trough arranged in the bottom of said chamber adjacent to the wall thereof and provided opposite said steam-escape aperture with a recess, whereby steam is free to escape through said aperture when the water-level in the cooker falls below the same, and a signal or whistle tube communicating with said steam-escape aperture, substantially as set forth. 4th. The combination with the body of a steam cooker, having a steam-generating chamber, of a signal tube communicating with said chamber, a whistle communicating with said tube and having a deflecting lip arranged below the whistle aperture, and an outlet opening for the water of condensation arranged adjacent to said lip, substantially as set forth. 5th. The combination with the body of a steam cooker having a steam-generating chamber provided with a filling tube, of a signal tube communicating with said generating chamber and provided with an alarm whistle, and a drain conduit or tube leading from said whistle to said filling tube, substantially as set forth. 6th. The combination with the steam-generating chamber, of the cooker provided at or near its bottom with a water-inlet and a steam-escape aperture, of filling and whistle-tubes leading to said water-inlet and steam aperture, respectively, an annular water-trough arranged in the bottom of said chamber adjacent to the wall thereof and provided opposite said steam aperture with a recess, a steam-vent tube arranged on one side of the cooker-body and extending downwardly from a point below the upper end of the body, an upright valve case arranged in the upper portion of said vent tube, communicating with the interior of the cooker and having an open upper end forming a substantially horizontal valve-seat, a gravity valve consisting of a flat plate resting loosely on said valve-seat, and means whereby said valve plate is held against displacement on its seat, substantially as set forth.

**No. 54,586. Brake Beam. (Sommier de frein.)**

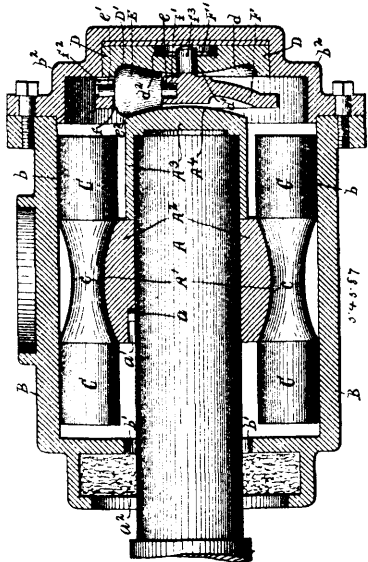


The Marden Car Brake Co., Saco, Maine, assignee of Aldis Henry Marden, Waltham, Massachusetts, and Frank William Coolbaugh, East Orange, New Jersey, all in the U.S.A., 14th January, 1897; 6 years. (Filed 10th December, 1896.)

*Claim.*—1st. The combination with a flanged brake beam of the two sections s applied on opposite sides of the beam and each having a thimble r on the inner side, which thimbles when the sections s are placed in the beam form a tubular guide for receiving

a rivet, substantially as herein shown and described. 2nd. In a brake beam, the combination with a metal beam, flanged along one edge and having a bead along the opposite edge, of heads having pockets extending entirely through from side to side and of the shape and size of the cross section of the beam, to receive the ends of the beam, whereby the end parts of the beam are entirely surrounded by the metal of the head and rivets passed through said pockets and the web of the beam, substantially as herein shown and described. 3rd. In a brake beam, the combination with a metal beam, having flanges along one edge and a bead along the other edge, of a head on each end of the beam, each head having a pocket of the shape and size of the cross section of the beam, a rib extending longitudinally along the back of the head, from the pocket to the upper and lower ends of the head and lateral extensions from the longitudinal rib to the back of the head, substantially as herein shown and described. 4th. The combination with a flanged metal brake beam, of a guide rod passed through the flange of the beam, and having its inner end riveted to the upper surface of the beam, substantially as herein shown and described. 5th. The combination with a flanged metal brake beam, of a guide rod passed through an aperture in the flange and provided at its inner end with an eye, resting on the upper surface of the web of the beam, a rivet passed through said eye and through the beam and having an eye for a safety chain formed on its upper end, substantially as herein shown and described.

**No. 54,587. Roller-Bearing. (Coussinet anti-frottant.)**



The Roller Bearing Truck Company, New York, assignee of Benjamin Smith Lawson, Red Bank, New Jersey, all in the U.S.A., 14th January, 1896; 6 years. (Filed 10th December, 1896.)

*Claim.*—1st. In a roller-bearing, the combination with an axle or shaft A provided with a peripheral engaging face A<sup>1</sup>, of an outer casing B, and an independently adjustable roller C interposed between the peripheral engaging face of the axle or shaft and the outer casing, and constructed, arranged and operating, substantially as and for the purpose described. 2nd. In a roller-bearing, the combination with an axle or shaft A, and a sleeve detachably secured to the axle or shaft, of an outer casing B, and independently adjustable rollers interposed between the detachable sleeve and the outer casing, and constructed, arranged and operating, substantially as and for the purpose specified. 3rd. In a roller-bearing, the combination with an axle or shaft A, of an outer casing B, a bearing piece D, a frame or support F, and independently adjustable rollers C, E, constructed, arranged and operating, substantially as and for the purpose described.

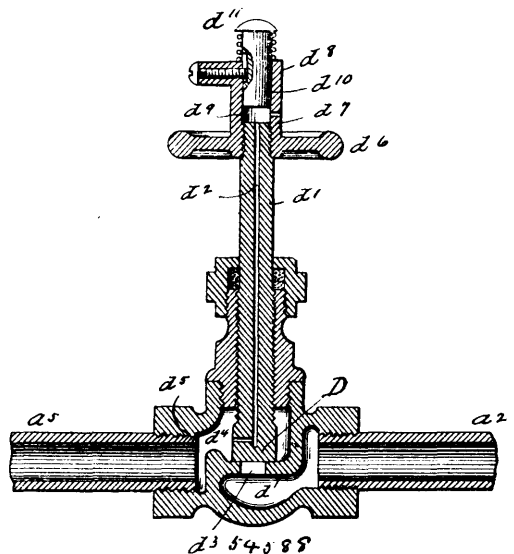
**No. 54,588. Track Sanding Apparatus.**

(Appareil à sabler les rails.)

Henry L. Leach, Cambridge, Massachusetts, U.S.A., 14th January, 1897; 6 years. (Filed 10th December, 1896.)

*Claim.*—1st. In track sanding apparatus, the combination of a compressed fluid apparatus, a sand supply apparatus having a sand discharge pipe, a conduit from the compressed fluid apparatus to the sand supply apparatus, a valve-casing interiorly divided into two chambers by a valve-seat, and mounted in said conduit with the conduit connected, on one side, with the chamber above the valve-seat, and on the other side with the chamber below the valve-seat, a regulating valve mounted in said casing and having a handle projecting therefrom, and a sounding device, which is between said fluid apparatus and sanding apparatus and is in communication with the conduit from the compressed fluid apparatus to the sand

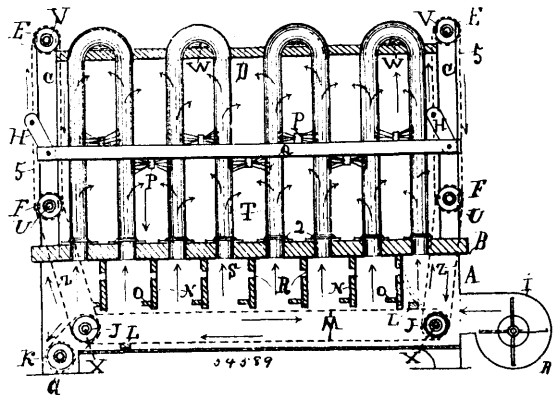
supply apparatus, and operative when said valve is off its seat and inoperative when the valve is on its seat, the sand discharge pipe



being in communication, through the sand supply apparatus with the said conduit. 2nd. The combination of a valve-casing, having a valve-seat with a high pressure port below the valve-seat and a low pressure port above the valve-seat, with a valve having a chambered stem, the chamber thereof having a constantly open passage into the low pressure chamber and an opening outside the casing. 3rd. The combination of a valve casing having a valve-seat, a high pressure port below the valve-seat and a low-pressure port above the valve-seat, with a valve having a chambered stem, the chamber thereof having a constantly open passage into the low pressure chamber and an opening outside the casing, and a valve for said opening outside the casing.

**No. 54,589. Dust Collecting Machine.**

(Ramasse-poussière.)

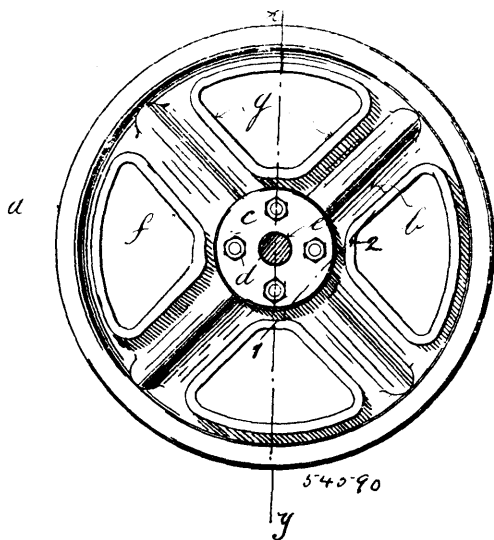


Hiram Joseph Livergood, Jackson, Michigan, U.S.A., 14th January, 1897; 6 years. (Filed 11th December, 1896.)

*Claim.*—1st. In a dust collecting machine, having a settling chamber, cross pieces S secured in said chamber A, elastic springs R, having one end of each spring secured to said cross pieces S, and attached to their other ends, the dust arresters N adapted to operate in conjunction with the drags L, on the rotating belts M, and the stops O, O, secured to the sides of the chamber A, substantially as shown, and for the purpose described. 2nd. In a dust collecting machine, the round arched tubular cloth collectors T, loosely supported at the top, resting onto the oval cross supports S, said supports being secured at each end to the plates D, D, the two ends of round arched tubular cloth dust collectors T, being secured to the top side of the perforated deck B, by the metal plates 2, substantially as shown, and for the purpose specified. 3rd. In a dust collecting machine, having the round arched tubular cloth dust collectors T, the combination of the hem, the hoops 3, metal plates 2, for securing the cloth tubes T, to the deck B, substantially as shown, and for the purpose described. 4th. In a dust collecting machine, the brackets or shafts V, V, and U, U, secured to the posts C, C, resting on the deck B, the over hanging wheels E, E, and F, F, mounted on the brackets or shafts V, V, and U, U, journaled on said shafts, the belts 5, 5, adapted to be stretched

tight around the wheels E and E, being secured to said belts 5, the attachments 6, 6, said pins having journalled thereon the upper ends of the pitmans H, H, the lower ends of the pitmans H, H, being attached to the parallel side bars Q, Q, the brushes P, running crosswise of the machine, and secured at each end to the side bars Q, giving the brushes P a positive reciprocating motion against the outward surface of the cloth tubes T, substantially as shown, and for the purpose specified.

**No. 54,590. Wheel. (Roue.)**

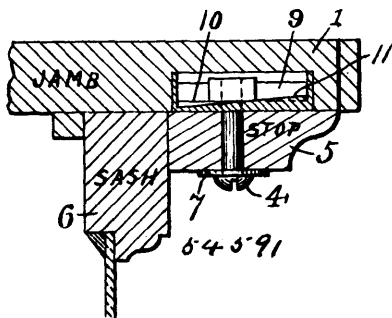


Daniel McCallum, Frank Johnson and George William Boucher, all of Cardiff, England, 14th January, 1897; 6 years. (Filed 11th December, 1896.)

*Claim.*—In wheels for vehicles and the like forming same from sheet metal by stamping, pressing or cutting out, and securing same upon an axle, by means of collars, bosses and bolts or the like.

**No. 54,591. Window Fastener.**

(Arrête-nervure de fenêtre.)

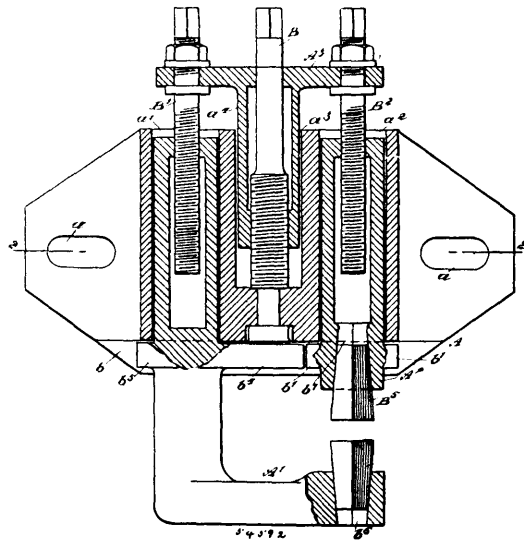


Alonzo P. Read, Chicago, Illinois, U.S.A., 14th January, 1897; 6 years. (Filed 14th December, 1896.)

*Claim.*—1st. The combination of the bead or guide-strip and the frame, the one being provided with a locking stem and the other with a slot for the transverse movement of said stem, extending transversely of the bead, and an inclined shoulder or flange along the edge of said slot, and a nut or head on said locking stem engaging with said inclined shoulder or flange, substantially as set forth. 2nd. The combination of the frame and the bead or guide-strip, the one being provided with set screws and the other with a number of slots extending transversely of the bead and inclined shoulders or flanges turned or inclined in opposite directions and extending transversely of the bead, and nuts or heads on said screws engaging with said inclined shoulders or flanges, substantially as set forth. 3rd. The combination of the frame and a bead or guide-strip, the one being provided with set screws and the other with inclined shoulders or flanges turned or inclined in opposite directions and being of different pitch, and heads or nuts on said set screws each engaging with two of said flanges of different pitch, substantially as set forth. 4th. As a new and useful article of manufacture a socket provided with a slot and having the straight shoulders or flanges 9 on the inner side arranged at a slight distance from the edge of said slot and an incline or bevel extending along the edge of said slot on the inner side, the nut located between said flanges 9 and resting against the incline or bevel and a set screw passing through said slot and engaging in said nut, substantially as set forth. 5th. The combination with the frame and the bead or guide-strip, said frame

being provided with a transverse slot and guide flanges extending along the edge of said slot, of a nut located between said guide flanges, a set screw passing through said head or guide-strip and engaging in said nut, and an inclined shoulder arranged along the inner side of said slot and against which said nut bears, substantially as set forth.

**No. 54,592. Saw Guide. (Garde-scie.)**



Alphonso Marks, McComb, Ohio, U.S.A., 14th January, 1897; 6 years. (Filed 11th December, 1896.)

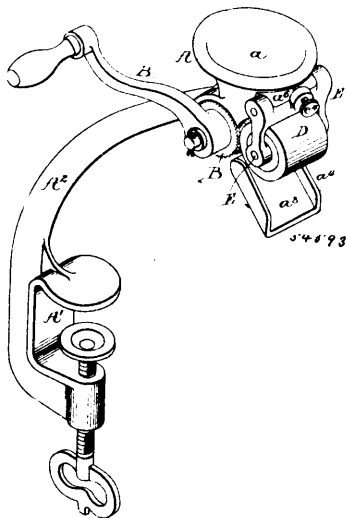
*Claim.*—1st. In a saw guide, the combination of a rigid body portion, the body portion having three transverse passages, two jaws having shanks respectively movable in two of the transverse passages, a cross head having a shank movable in the third transverse passage, two screws connected to the cross head and respectively connected to the shanks of the jaws, and a third screw rotatably carried by the body portion and having threaded connection with the cross head, substantially as described. 2nd. In a saw guide, the combination of a rigid body portion having three transverse passages, two jaws each having a hollow shank respectively movable in two of the transverse passages, each jaw also having an arm engaging the body portion, a cross head having a shank movable in the third transverse passage, two screws revolvibly mounted in the cross head and respectively thread-connected with the shanks of the jaws, and a third screw revolvibly carried by the body portion and projected through the shank of the cross head, the third screw co-operating with threads on said shank, substantially as described. 3rd. In a saw guide, the combination with a rigid body portion having three transverse passages, of two jaws each having a shank respectively movable in two of the passages, a screw co-operating with the shank of each jaw, a cross head by which the screws are revolvibly carried, the cross head having a shank movable in the third passage, and a third screw revolvibly carried by the body portion and passed through the shank of the cross head and beyond the cross head, substantially as described. 4th. In a saw guide, the combination with a rigid body portion having three transverse passages and a table adjacent to the passages, of two jaws the shanks of which are respectively movable in two of the transverse passages, the jaws of each having an arm engaging the table at different points on the surface of the table, a screw co-operating with each shank, a cross head having a hollow shank movable in the third passage, and a third screw having a head by which the screw is revolvibly held in the body portion, the third screw being projected through the shank of the cross head and beyond the cross head, substantially as described.

**No. 54,593. Raisin Seeder. (Vide raisin.)**

John Wilson Brown, jr., Philadelphia, Pennsylvania, U.S.A., 14th January, 1897; 6 years. (Filed 14th December, 1896.)

*Claim.*—1st. As a new article of manufacture the frame of a raisin seeder, having the discharge spout formed integral therewith and having a spindle fixed thereto for the reception of the seeding-wheel, the spindle and spout being rigid in respect to each other so that when the machine is dismembered for cleansing the relation of the spout to the spindle cannot be altered, substantially as described. 2nd. As a new article of manufacture a head of a raisin seeder, consisting of an integral structure having a hopper, side plate and discharge spout for the seeds cast integral therewith and open at one side for the removal of the seeding roll, and having a permanent stand upon which the seeding roll is mounted, substantially as described. 3rd. The combination in a raisin seeder, of the head, the seeding roll and spout, an elastic presser roll mounted above the spout and means for positively adjusting the presser roll with respect

to the seeding roll and for locking it in its adjusted position, substantially as described. 4th. The herein described raisin seeder



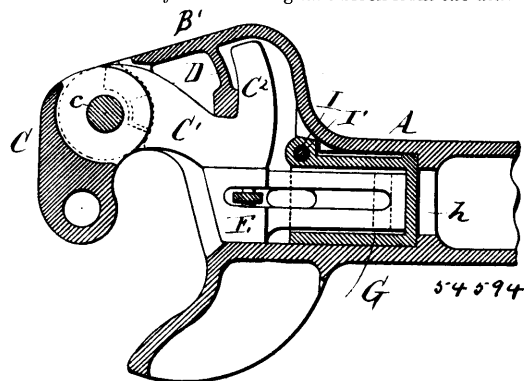
consisting of a casing having an upwardly extending hopper provided with bearings for seeding and presser rolls, a seeding roll mounted in the bearings at the bottom of the hopper, a presser roll mounted in its bearings in front of the seeding roll, the said casing having a discharge spout extending downwardly therefrom below the rolls, the inner edge of said spout being turned up and extending close to the surface of the seeding roll to form a scraping edge, substantially as described. 5th. The herein described raisin seeder consisting of a casing comprising an overhanging arm A', having a hopper extending upwardly therefrom, a downwardly extending discharge spout having its inner edge turned up to form a scraping edge, a seeding roll mounted in bearings at the bottom of the hopper and rotating close to the scraping edge of the spout, and a presser roll mounted in front of the seeding roll, substantially as and for the purpose set forth. 6th. The herein described raisin seeder consisting of a casing having an upwardly extending hopper, the lower portion of said hopper being shaped to conform to seeding and presser rolls, and provided with a downwardly extending spout, the inner edge of which forms a scraping edge, a seeding roll mounted in said hopper, close to the said scraping edge, doffers carried by the shaft of said seeding roll and extending through an opening in the casing formed by the inner edge of the spout bottom and the lower portion of the back section of the casing, substantially as and for the purpose set forth. 7th. The combination in a raisin seeder, of the casing having a hopper and spout, a presser of yielding material, a stud projecting from the frame, a sleeve carried thereby and confined longitudinally thereon, toothed discs and washers mounted on the sleeve, a handled nut screwed onto the sleeve and adapted to confine the discs thereto, with loose rings c between the discs and having projections adapted to rest against the back portion of the frame and discharge the raisin pulp from the machine, substantially as described. 8th. The combination in a raisin seeder, of the casing, a stud projecting therefrom, a sleeve mounted on the said stud having a head at one end and screw threaded at the opposite end, a series of discs and rings alternately arranged upon the said sleeve, a handled nut adapted to the screw-threaded portion of the sleeve and acting to clamp the discs and rings to the sleeve, substantially as described. 9th. The combination in a raisin seeder, of the main frame having the feed hopper thereon, the seeding roll mounted on said frame below the hopper, a frame pivoted to the hopper above the seeding roll and carrying in its lower end a presser roll of yielding material in front of the seeding roll, and a lug extending upwardly from said frame and provided with a set screw bearing against the side of the hopper, substantially as described. 10th. The combination in a raisin seeder, of the main frame having the feed hopper therein, the seeding roll mounted on said frame below the hopper, a yoked frame carrying a presser roll and pivoted to the main frame above the seeding roll, a lug extending upwardly from said frame, and a set screw carried by said lug and bearing against the outwardly flaring side of the hopper, substantially as described.

**No. 54,504. Car Coupler. (Attelage de chars.)**

The Gould Coupler Company, New York, State of New York, assignee of Willard Fillmore Richards, Buffalo, New York, both in the U.S.A., 14th January, 1897; 6 years. (Filed 11th December, 1896.)

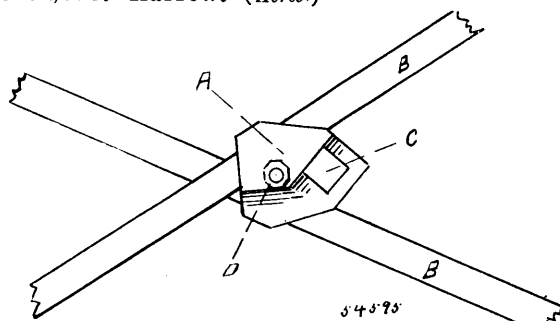
Claim.—1st. The combination with a drawhead and a coupling jaw pivoted thereto, of a supporting block or carrier, independent of the drawhead and removably seated in the latter, and a swinging lock pivoted at its rear end to said separate block or carrier and arranged to interlock with the coupling jaw or knuckle, the pivot of

the lock being carried solely by said removable block, whereby the lock can be removed by withdrawing said block from the drawhead,



and the necessity of perforating the walls of the drawhead is avoided, substantially as set forth. 2nd. The combination with a drawhead and a drawbar provided with an internal shoulder or abutment, of a coupling jaw pivoted to the drawhead, a block or carrier seated in the drawhead and abutting against the shoulder of the drawbar, a horizontal pivot pin carried by said block, and a swinging lock mounted on said pivot pin and adapted to interlock with the coupling jaw, substantially as set forth. 3rd. The combination with a drawhead and a drawbar provided with an internal shoulder, of a coupling jaw pivoted to the drawhead, a removable block seated in the drawhead abutting against the shoulder of the drawbar and carrying a horizontal pivot pin, a retaining pin whereby said block is held against displacement, and a swinging lock mounted on said pivot pin, substantially as set forth. 4th. The combination with a drawhead and a drawbar provided with an internal shoulder, of a coupling jaw pivoted to the drawhead, a hollow or recessed block seated in the drawhead against said shoulder and provided in its rear wall with a concave seat, and a lock pivoted to said block and having at its rear end a convex knuckle which bears against said concave seat, substantially as set forth.

**No. 54,595. Harrow. (Herse.)**



William Wesley Owens, Peterborough, and William Wells, Cambridge, both in Ontario, Canada, 14th January, 1897; 6 years. (Filed 11th December, 1896.)

Claim.—The combination of a pair of metal clips A A for harrows having square holes C for teeth, holes H and bolts D for holding clips together, tit F and flanges E, substantially as and for the purpose hereinbefore set forth.

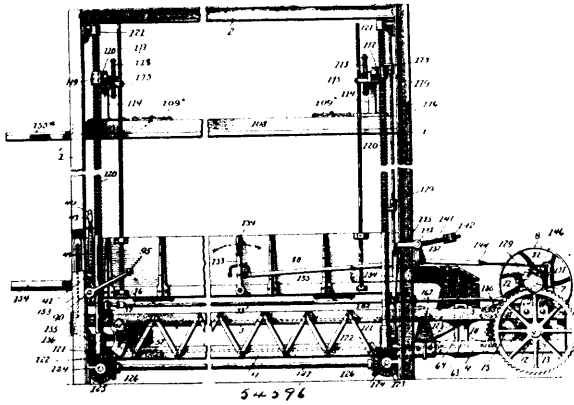
**No. 54,596. Mattress-stuffing Machine.**

(Machine pour bourrer les matelas.)

Henry Munroe Rogers, assignee of Edwin Napier Stephenson, both of Boston, Massachusetts, U.S.A., 14th January, 1897; 6 years. (Filed 12th December, 1896.)

Claim.—1st. In a mattress-stuffing machine, a press-box having its bottom wall sloping or inclined downwardly from its side edge portions towards its longitudinal central portion, substantially as described. 2nd. In a mattress-stuffing machine, the combination with a press-box, of a press-box cover having its acting face sloping or inclined upwardly from its side portions towards its longitudinal central portion, substantially as described. 3rd. In a mattress-stuffing machine, the combination with a press-box having its bottom wall sloping or inclined downwardly from its side edge portions towards its longitudinal central portion, of a press-box cover having its acting face sloping or inclined upwardly from its side edge portions towards its longitudinal central portion, substantially as described. 4th. In a mattress-stuffing machine, the combination with a press-box and a press-box cover sloping or inclined from their side edge portions towards their longitudinal central portions, of a plunger-head having its upper and lower edges sloping or inclined in opposite directions towards the middle of its length, substantially

as described. 5th. The combination in a mattress-stuffing machine, of a press-box, a plunger-head movable in the press-box, a carriage



beneath the press-box and connected with the plunger-head, a chain-belt mechanism, switching or shifting devices connecting the carriage with the chain-belt mechanism for reversing the travel of the carriage at the limit of its forward and backward strokes, a rising and falling cover movable into and out of the press-box, and operatively connected mechanisms connected with the said cover and with the said chain-belt mechanism for raising and lowering the cover and imparting motion to the chain-belt mechanism, substantially as described. 6th. The combination of a press-box having a longitudinal slot in its bottom wall and a plunger-head movable in said press-box, of horizontal rails or tracks arranged horizontally beneath the press-box, a carriage travelling on said rails or tracks under the press-box, a shank connecting the carriage with the plunger head and traversing the longitudinal slot in the bottom wall of the press-box as the carriage moves, a chain-belt mechanism located beneath the press-box and carriage and provided with devices which operate to move the carriage forward and then reverse its direction of travel, a gate for opening and closing one end of the press-box, and lever and tappet mechanism acted upon by the carriage as it moves backward and forward to positively open and also close the gate, substantially as described. 7th. The combination with a press-box and a plunger-head movable therein, of a carriage movable beneath the press-box and connected with the plunger-head, an endless travelling belt, connections between the belt and carriage, a power-driven mechanism for imparting motion to the belt, a clutch for throwing the endless belt into and out of operative connection with the power-driven mechanism, a clutch-actuating lever automatically operated by the action of the carriage to move the clutch and thereby disengage the power-driven mechanism from operative connection with the belt to stop the motion of the latter, a gate for opening and closing one end of the press-box, and lever and tappet mechanism acted upon by the carriage as it moves backward and forward to positively open and also close the gate, substantially as described. 8th. The combination with the press-box and a plunger-head movable therein, of a carriage travelling back and forth beneath the press-box, an endless chain belt located under the press-box and provided with devices which connect with the carriage and operate to move it back and forth, a power-driven shaft, gearing connecting the power-driven shaft with the belt, a clutch for throwing the power-driven shaft into and out of operative connection with the gearing which actuates the belt, a lever connected with the clutch and actuated by the direct action of the carriage for moving the clutch to throw the power driven shaft out of operative connection with said gearing, a gate for opening and closing one end of the press box, and lever and tappet mechanism acted upon by the carriage as it moves backward and forward to positively open and also close the gate, substantially as described. 9th. The combination with a press-box having a longitudinal slot in its bottom wall, and a plunger-head movable in the press-box, of rails or tracks arranged horizontally beneath the press-box, a carriage having wheels travelling on the rails or tracks, a shank connected with the plunger-head and the carriage and traversing the longitudinal slot in the bottom wall of the press-box as the carriage moves beneath the latter, endless travelling belts extending under the press-box, switching or shifting devices connecting the belts with the carriage and operating to move the latter forward and then reverse its direction of travel, a power driven shaft geared to the belts for imparting motion thereto, a clutch for throwing the belt operating gearing into and out of operative connection with the power driven shaft, a clutch lever connected with said clutch and automatically operated by the carriage at the limit of its movement in one direction to move the clutch and throw the power driven shaft out of operative connection with said gearing, a gate for opening and closing one end of the press-box, and lever and tappet mechanism acted upon by the carriage as it moves backward and forward to positively open and also close the gate, substantially as described. 10th. The combination with a press-box, and a plunger-head movable therein, of a carriage travelling back and forth beneath the bottom wall of the press-box and connected with the plunger-head, a gate arranged to open and close one end of the press-

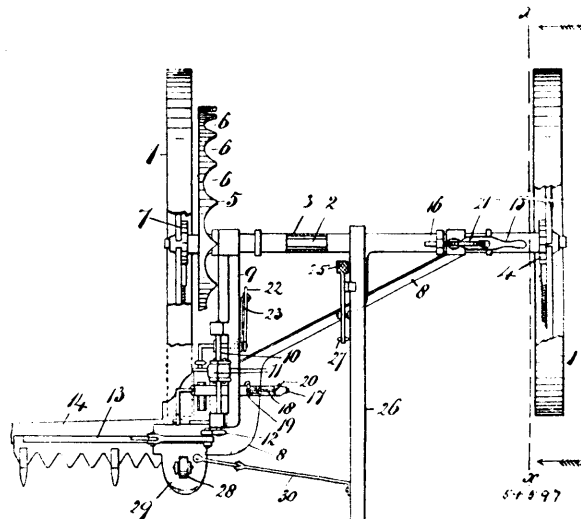
box, and tappet and lever mechanism acted upon by the carriage as it moves backward and also as it moves forward to positively open and also close the gate, substantially as described. 11th. The combination with a press-box, and a plunger-head movable therein, of a gate arranged to close one end of the press-box, a carriage travelling beneath the bottom wall of the press-box and with which the plunger-head is connected, an endless travelling belt provided with devices which connect it with the carriage and operate to move the latter forward and then reverse its direction of travel while the belt moves in one direction, and mechanism automatically operated by the carriage as it moves forward and backward to positively open and also close the gate, substantially as described. 12th. The combination with a press-box, and a plunger-head movable therein, of a gate arranged to open or close one end of the press-box, a rock-shaft connected with the gate, a rock-shaft provided with tappets, a connection between the said rock shafts, and a travelling carriage connected with the plunger-head and provided with devices for operating the said tappets as the carriage moves forward and backward to automatically open and close the gate, substantially as described. 13th. The combination with a press-box, and a plunger-head movable therein, of a carriage movable back and forth beneath the press-box connected with the plunger-head, an endless belt for moving the carriage backward and forward, tappet and lever mechanism automatically operated by the carriage in both its backward and forward movement to positively open and close the gate, substantially as described. 14th. The combination with a press-box, and a plunger-head movable therein, of a travelling carriage connected with the plunger-head, an endless belt, extending under the press-box and provided with devices which connect it with the carriage and operate to move the latter forward and then reverse its direction of travel while the belt moves in one direction, means for imparting motion to said belt, and tappet and lever mechanism automatically operated by the carriage in both its forward and backward movement to positively open and close the gate, substantially as described. 15th. The combination with a press-box, and a plunger-head movable therein, of a carriage travelling beneath the bottom wall of the press-box and connected with the plunger-head, an endless belt connected with the carriage for moving the same forward and backward, a gate arranged to open and close one end of the press-box, a rock-shaft connected with the said gate, a rock-shaft provided with tappets, a connection between said rock-shafts, and devices mounted on the carriage and arranged to operate said tappets as the carriage moves forward and backward to automatically open and close the gate, substantially as described. 16th. The combination with a press-box, and a plunger-head movable therein, of a travelling carriage connected with the plunger-head, means for moving the carriage backward and forward, a gate arranged to open and close one end of the press-box, a rock-shaft connected with said gate, a rock-shaft provided with tappets, a connection between said rock-shafts, and dogs or pawls mounted on the carriage and arranged, respectively, to automatically operate said tappets to open and close said gate, substantially as described. 17th. The combination with a press-box, and a plunger-head movable therein, of rails or tracks extending under the press-box, a carriage travelling on said rails or tracks beneath the bottom wall of the press-box, means for moving the carriage backward and forward, a gate arranged to open and close one end of the press-box, a rock-shaft provided with tappets, connections between the tappet-carrying rock-shaft and the said gate, and devices mounted on the carriage for operating said tappets as the carriage moves backward and forward to automatically and positively both open and close the gate, substantially as described. 18th. The combination with a press-box, and a plunger-head movable therein, of a carriage travelling beneath the press-box and provided with vertically slotted portions and dogs or pawls, endless travelling belts extending under the press-box, shifting boxes or blocks connecting the belts with the slotted portions of the carriage and operating to move the carriage forward and then reverse its direction of travel, mechanism for imparting motion to the belts, a gate arranged to open and close one end of the press-box, and a tappet mechanism connected with the gate and actuated by the dogs or pawls of the carriage as it moves forward and backward to automatically and positively open and close the gate, substantially as described. 19th. The combination with a press-box, and a plunger-head movable therein, of a carriage travelling back and forth beneath the press-box and connected with the plunger-head, mechanism for moving the carriage backward and forward, a gate arranged to open and close one end of the press-box, a counterbalance weighted rock-shaft connected with said gate, a tappet-carrying shaft connected with the counterbalance weighted rock-shaft, and dogs or pawls mounted on the carriage and arranged to strike the tappets of the tappet-carrying shaft as the carriage moves backward and forward to open and close the gate, substantially as described. 20th. The combination in a mattress stuffing machine, of a press-box divided longitudinally into lateral sections, each comprising a plurality of extensible and contractible parts, two sets of right and left-hand screw-threaded shafts, independent gearing at the inner ends of the said sets of screw-threaded shafts, and a coupling connecting the inner ends of two of said shafts, substantially as described. 21st. The combination with an expansible and contractible press-box, a cover movable into and out of the press-box, and an expansible and contractible cover, of means for expanding and contracting the press-box, and connections between said press-box and said cover, whereby the cover is expanded and contracted



simultaneously with the press-box, substantially as described. 22nd. The combination with an expansible and contractible press-box, and an expansible and contractible cover co operating therewith, of right and left hand screw-threaded shafts for expanding and contracting the press-box, and connections between the movable sections of the press-box and the movable sections of the cover, whereby the latter is expanded and contracted by the action of the movable sections of the press-box, substantially as described. 23rd. The combination with an expansible and contractible press-box, of vertically movable cover supports, a press-box cover having laterally movable side sections, and hangers connected with said side sections and provided with roller-bearings mounted on said supports, substantially as described. 24th. The combination with an extensible and contractible press-box, and vertically movable cover supports, of a cover having laterally movable sections, hangers attached to said sections and movable back and forth on said cover supports, and connections between said hangers, substantially as described. 25th. The combination with an expansible and contractible press-box, and vertically movable cover-carrying beams or girders, of a cover having laterally adjustable side sections, hangers attached to said side sections and provided with bearings engaging said beams or girders, lazy tongs connecting said hangers, and lazy tongs connecting the laterally movable sections of the cover with the main body portion thereof, substantially as described. 26th. The combination with an extensible and contractible press-box, and vertically movable cover supports, of a cover having laterally movable side sections, hangers attached to said side sections and movable back and forth on said cover supports, and guide-rods engaging the press-box and said hangers, whereby the expansion or contraction of the press-box causes the hangers to move on the said supports, substantially as described. 27th. The combination with an expansible and contractible press-box, and an expansible and contractible cover movable into and out of the box, of guide-rods engaging the press-box and connected with the cover supports, whereby the press-box and cover are simultaneously adjusted, substantially as described. 28th. The combination with an extensible and contractible press-box, and an expansible and contractible cover movable bodily in a vertical plane and held substantially horizontal in its movements, of connections between the cover and press-box, whereby the cover is guided and widened or narrowed when the press-box is widened or narrowed, substantially as described. 29th. The combination with the laterally adjustable press-box of a mattress-stuffing machine, of vertical screw-threaded shafts geared together at the base of the machine, horizontally arranged transverse beams or girders having nuts engaging the shafts, a laterally adjustable press-box cover, hangers suspending the cover from said beams or girders, and laterally adjustable thereupon, power driven mechanism for rotating the screw-threaded shafts in one direction, means for reversing the motion of said shafts, and means for stopping the shafts whenever required, substantially as described. 30th. The combination with an extensible and contractible press-box, and an extensible and contractible plunger-head movable therein, of devices for connecting the plunger-head with the press-box, so that the adjustment of the latter effects the adjustment of the plunger-head, and means for expanding and contracting the press-box, substantially as described. 31st. The combination with a press box having laterally movable side sections provided with eyes or loops, of an extensible and contractible plunger-head having devices for engaging said eyes or loops, and means for expanding or contracting the press-box, whereby the plunger-head is at the same time expanded or contracted, substantially as described. 32nd. The combination with a press-box, and a travelling carriage provided with a plunger-head, of driving mechanism for actuating the carriage, a clutch for throwing the driving mechanism into and out of operative connection with said carriage, and a clutch-operating mechanism provided with a movable pin which is adapted to be acted upon by part of the carriage for automatically shifting the clutch, and means for withdrawing said pin to enable the clutch to be operated manually, substantially as described. 33rd. The combination with a press-box, and a travelling carriage provided with a plunger-head to move in the press-box, of driving mechanism for actuating said carriage, a clutch for throwing the driving mechanism into and out of operative connection with the carriage, a clutch operating mechanism provided with a spring-pressed pin arranged to be acted upon by a part of said carriage when it reaches the limit of its back stroke to automatically shift the clutch and stop the motion of the carriage, and means for retracting said pin so that the clutch can be operated to throw the driving mechanism into operative connection with said carriage for starting the same, substantially as described. 34th. The combination in a mattress-stuffing machine, of a laterally adjustable press-box, vertical screw-threaded shafts geared together, horizontally arranged beams or girders provided with screw nuts engaging said screw-threaded shafts, a laterally adjustable press-box cover, hangers suspending the cover from said beams or girders and adjustable thereupon, power-driven mechanism geared to the screw-threaded shafts for raising and lowering the beams or girders and the press-box cover, a clutch for throwing the power-driven mechanism into and out of operative connection with the screw-threaded shafts, and mechanism operated by the horizontally arranged cover carrying beams or girders to actuate the clutch and thereby throw the power-driven mechanism out of operative connection with the screw-threaded shafts whenever it is desired to stop the ascent or descent

of the press-box cover, substantially as described. 35th. The combination with a press-box having an opening and closing gate at one end, and a plunger movable in the press-box, of a travelling carriage provided with dogs or pawls and connected with the plunger, means for moving the carriage back and forth, a rock-shaft provided with tappets which are acted upon by the dogs or pawls of the carriage as the latter moves forward and backward, and connections between the rock-shaft and the gate, whereby the gate is positively raised and also lowered by the action of the dogs or pawls of the carriage upon the tappets of the rock-shaft, substantially as described. 36th. The combination in a mattress-stuffing machine, of a press-box having a longitudinal slot, a plunger-head movable in the press-box, a carriage movable beneath the press-box, a shank connecting the plunger and the carriage and traversing said longitudinal slot as the carriage moves beneath the press-box, a rising and falling cover movable into and out of the press-box, and operatively connected mechanism connected with the said cover and the said shank for raising and lowering the cover and moving the shank in the slot, substantially as described. 37th. The combination of a press-box, a plunger-head movable therein, a cover which bodily rises and falls while it remains substantially horizontal, vertical screw-threaded shafts connected with said cover, a power-driven shaft, gearing operated by the latter to actuate the plunger-head, mechanism operated by the power-driven shaft to rotate the screw-threaded shafts first in one direction and then in the opposite direction for raising and lowering the cover, clutches for throwing the power-driven shaft into and out of operative connection with the gearing and mechanism which operate the screw-threaded shafts and the plunger, and two independent hand levers for operating said clutches, substantially as described. 38th. The combination with a press-box and a vertically movable cover, of vertical screw-threaded shafts connected with and serving to raise and lower the cover, driving mechanism for imparting motion to the said shafts in either direction, a clutch for throwing said driving mechanism into and out of operative connection with said shafts, a transverse slide-bar for operating said clutch, devices connected with the slide-bar and actuated by the vertically movable cover to shift the slide-bar transversely and thereby throw the driving mechanism out of operative connection with the screw-threaded shafts, and a hand lever connected with said slide-bar operating devices, whereby the slide-bar may also be operated by the hand lever, substantially as described. 39th. The combination with a press-box and a vertically movable press-box cover, of a rising and falling rod actuated by the cover, a traversing rock-shaft connected with said rising and falling rod, a power-driven mechanism for raising and lowering the cover, a clutch for throwing the power-driven mechanism into and out of operative connection with the cover, devices connecting the said clutch with the said rock-shaft, and a hand lever also connected with said rock-shaft, whereby the clutch may be operated at will by the attendant, and is operated by the cover itself, substantially as described.

**No 54,507. Mowing Machine. (Faucheuse.)**

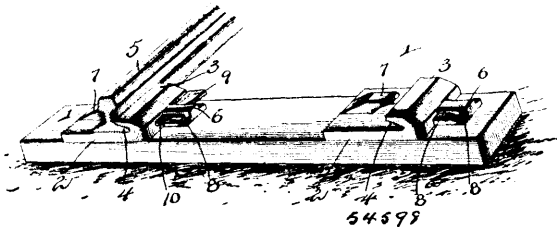


John C. Craig and William T. Craig, both of Kimmount, Ontario, Canada, 14th January, 1897; 6 years. (Filed 22nd December, 1896.)

*Claim.*—1st. The combination with the ground wheels and axle, of the shell 3, connected at one end to one of said wheels by a ratchet and pawl, the contrate wheel 5, having a scooped edge and connected to the other ground wheel by a ratchet and pawl, a frame 8, mounted on said shell to reciprocate and carrying the shoe 29, finger bar, and a rocking shaft 10 having rollers engaging the contrate wheel and connected to the knife to reciprocate the knife, and a lever 15, reciprocating the frame, to move the rollers in and out of contact with the scooped edge of the contrate wheel, substantially

as set forth. 2nd. The combination with the axle and ground wheels and a contrate wheel loosely mounted on said axle and connected by a ratchet and pawl, of the frame 8, mounted on said axle to slide reciprocally, and carrying a rock-shaft having rollers engaging said contrate wheel to reciprocate the knife, and lever 17, fulcrumed to said frame, and connected to the shoe, for elevating the finger bar and knife to an upright position, substantially as set forth. 3rd. The combination with the axle and ground wheels, of the shell 3, contrate wheel 5, frame 8, mounted reciprocally thereon and carrying a rocking shaft provided with rollers engaging said contrate wheel, and lever 22, fulcrumed to said frame and having a bent end connected to the hinder part of the shoe, to tilt the finger bar and knife horizontally, substantially as set forth. 4th. The combination with the ground wheels and axle, of the shell 3, and frame 8, mounted thereon, and lever 15, and inverted U-shaped fulcrum or bar 21, to reciprocate said frame for the purpose set forth. 5th. The combination with the ground wheels and axle, of the shell 3 and frame 8, mounted thereon, a foot lever 25, fulcrumed to said shell or projection 26, and a vertical rod 27, connecting said frame and lever, to lift the knife and finger bar horizontally from the ground, as set forth. 6th. The combination with the ground wheels and axle, of the contrate wheel 5, shell 3, carrying the tongue 26, frame 8, carrying the shoe 29, and the rod 30, connecting the shoe and tongue, said shoe having a ground wheel 28, as set forth.

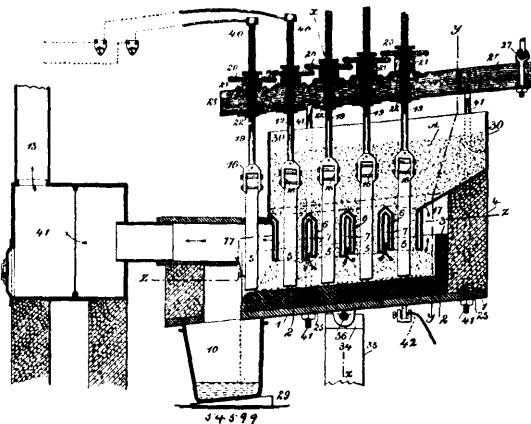
**No. 54,598. Railway Chair. (Coussinet.)**



William Campbell and Dominic Costello, both of Houtzdale, Pennsylvania, U.S.A., 14th January, 1897; 6 years. (Filed 21st December, 1896.)

*Claim.*—The combination of a metal cross-tie having a flat upper face, chairs formed integral with the cross-tie and comprising parallel bottom portions 2 located on the upper face of the tie at opposite sides thereof and provided at their inner longitudinal edges with grooves, and a transverse jaw 3 formed integral with the parallel bottom portions 2, located at one end of the chair and having its engaging face bevelled to conform to the configuration of the bottom flange of a rail, the adjustable clamps composed of a flat shank arranged on the upper face of the cross-tie between the bottom portions 2 of the chair, extending the entire length of the same and provided with longitudinal flanges interlocked with the grooves of the said bottom portions, said shank being extended beyond the chair at the transverse jaw 3 and provided with a horizontal opening and the jaw 7 located at the other end of the shank and formed integral with the same, and the horizontally-disposed wedge-shaped keys arranged in the openings of the shanks, located beyond the chairs and abutting against the adjacent ends thereof, substantially as described.

**No. 54,599. Electric Furnace. (Fournaise électrique.)**

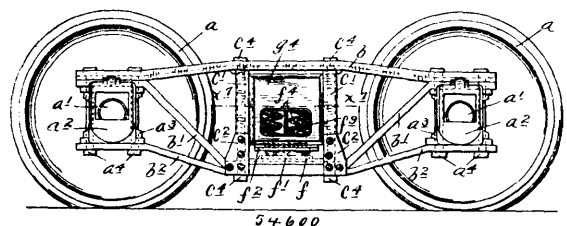


Edgar Field Price, Niagara Falls, New York, U.S.A., 14th January, 1897; 6 years. (Filed 5th December, 1896.)

*Claim.*—1st. The combination in a furnace, of a conducting hearth forming one electrode, a range of electrodes substantially perpendicular to the hearth, and means for adjusting the electrodes and regulating the currents, a supply hopper for the material to pass down around the electrodes, and means for varying the inclination

of the hearth and the movement of the material thereon as it passes from one electrode to another, substantially as specified. 2nd. The combination with a furnace having an inclined bottom or hearth, of a range of electrodes substantially perpendicular to such bottom, means for supporting and adjusting the electrodes towards or from the hearth, and means for supplying the material to be acted upon around such electrodes, and casings around the electrodes, there being spaces between such casing and the electrodes for the passage of the material acted upon, substantially as set forth. 3rd. The combination with a furnace having an inclined bottom or hearth, of a range of electrodes substantially perpendicular to such bottom, means for supporting and adjusting the electrodes towards or from the hearth, means for supplying the material to be acted upon around such electrodes, a hollow casing adjacent to such electrodes, and means for supplying a circulating fluid through such hollow casings to regulate the temperature thereof, there being spaces between the electrodes and the casings for the passage of the material to be acted upon, substantially as set forth. 4th. The combination with an inclined hearth, of a range of electrodes over such hearth and electric connections to the hearth and to the electrodes and means for supplying the material to be treated around the electrodes in the range, except the one adjacent to the place of delivery from the hearth, so that the materials cannot pass off the hearth without being subjected to the electric operation, substantially as specified. 5th. The combination in an electric furnace, of a hearth or bottom forming one electrode, a range of electrodes substantially perpendicular to the bottom, casings around the respective electrodes and a hopper with which such casings are connected, there being spaces between the casings and the electrodes for the passage of the material acted upon, substantially as specified. 6th. The combination in an electric furnace, of a hearth or bottom forming one electrode, a range of electrodes substantially perpendicular to the bottom, casings around the respective electrodes and a hopper with which such casings are connected, there being spaces between the casings and the electrodes for the passage of the material acted upon, the casings being provided with openings forming flues, and flues into which the escaping gases or other materials pass and a chamber to which they are led, substantially as set forth. 7th. The combination in an electric furnace, of a hearth or bottom forming one electrode, a range of electrodes substantially perpendicular to the bottom, casings around the respective electrodes and a hopper with which such casings are connected, there being spaces between the casings and the electrodes for the passage of the material acted upon, a pivotal support for the furnace and means for adjusting the inclination of the bottom or hearth, substantially as set forth. 8th. The combination in an electric furnace, of a bottom or hearth, a pivoted plate for supporting the same, side walls and a hopper for the material to be acted upon, an electrode and means for adjusting the proximity of the end of the same to the bottom of the hearth, a casing surrounding the electrode, there being a space between the casing and the electrode for the material in the hopper to pass down to the hearth, supporting rods and a screw for adjusting the furnace upon its pivotal support and varying the inclination of the hearth, and a removable pot for receiving the product from the furnace, substantially as set forth. 9th. The combination in an electric furnace with a conductor forming the furnace hearth from which the changed material is allowed to pass off by gravity, of an adjustable electrode above the hearth, a supply hopper from which the material to be treated descends around the upper electrode and a lateral escape for the gases to prevent them ascending through the material under treatment, substantially as specified.

**No. 54,600. Car Truck. (Châssis de chars.)**

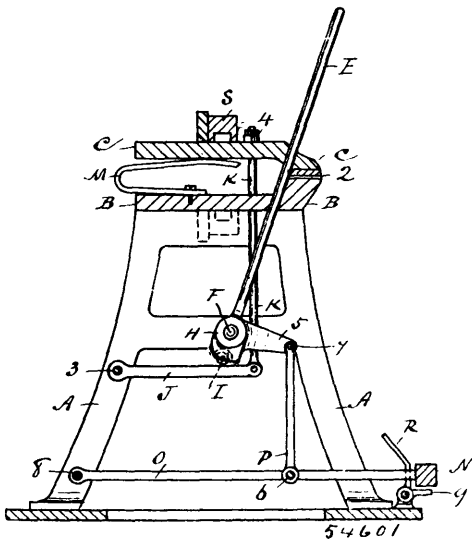


John C. Barber, St. Paul, Minnesota, U.S.A., 14th January, 1897; 6 years. (Filed 15th December, 1896.)

*Claim.*—1st. The combination with a truck-frame, of a bolster mounted for both vertical and lateral movements on the same, as a base of resistance, base-plates carried by and fixed against lateral movement with respect to said bolster, but free for vertical movement thereon, and springs between said base-plates and said bolsters, substantially as described. 2nd. The combination with a truck-frame and a bolster mounted thereon with freedom for lateral and vertical movements, of fixed roller bearing plates on the truck frame, rollers on said fixed plates, movable bearing-plates on said rollers, and bolster supporting springs on said movable plates, with said movable plates and said springs carried with the bolster, in its lateral movement, but permitting vertical movement of the bolster, in respect to the plates, substantially as described. 3rd. The combination with a truck-frame, of a truck bolster, provided

with pockets near its ends, roller bearing plates fixed to the frame, rollers on said fixed plates, movable bearing plates on said rollers, bolster supporting springs on said movable plates, and vertical guides, in the pockets of said bolster, engaging with said movable plates, whereby the movable plates and the springs are carried with the bolster, in its lateral movement, while permitting the vertical movement of the bolster, in respect to said plates, substantially as described. 4th. In a car-body, the combination with the side frames, of the fixed bearing plates *f*, the roller-bearings *f*<sup>1</sup>, the movable bearing plates *f*<sup>2</sup>, the spring *f*<sup>3</sup>, the shimming-blocks *f*<sup>4</sup>, and the bolster provided with pockets, for receiving said parts, *f*<sup>2</sup>, *f*<sup>3</sup> and *f*<sup>4</sup>, and provided with guides co-operating with the plates *f*<sup>2</sup>, substantially as and for the purpose set forth. 5th. A car-truck bolster, composed of the channel-bars *g*, cross-ties *g*<sup>2</sup>, *g*<sup>3</sup>, and end caps or filling pieces *g*<sup>4</sup>, and having pockets in its ends equipped with vertical guides, in combination with the fixed bearing plates *f*, the rollers *f*<sup>1</sup>, the bearing plates *f*<sup>2</sup>, the springs *f*<sup>3</sup>, and the shimming blocks *f*<sup>4</sup>, all arranged, for co-operation, substantially as described. 6th. The combination with the bolster columns *c*<sup>1</sup>, and the saddle-plates *c*<sup>2</sup>, of the gussets *c*<sup>3</sup> binding said parts together and reinforcing the same, said parts being formed of separate pieces and united by rivets, substantially as described.

**No. 54,601. Sheet Metal Bending Machine.**  
(*Machine à plier les feuilles de métal.*)

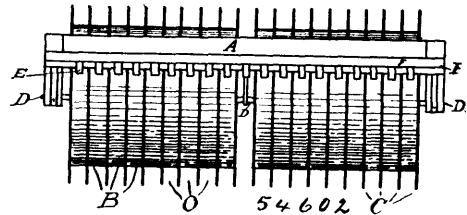


John M. Brown and Nathan G. Boggs, both of Hamilton, Ontario, Canada, 15th January, 1897; 6 years. (Filed 16th December, 1896.)

*Claim.*—1st. In a cornice brake machine, the combination of a horizontal through rod journalled in the ends of frame, and provided with a secured roller cam located near to each end of machine, a lever pivoted to rear of frame to engage with roller in cam, a rod bolt pivoted to front end of said lever and secured to upper leaf of machine by check nut, and operated by lever handles secured to each end of horizontal journalled rod, to operate upper leaf, substantially as described. 2nd. The combination in a cornice brake machine, of end-located cams secured to a through rod journalled in ends of machine, the upper leaf connected to said cam by means of a rod bolt and lever, said lever pivoted to rear of frame and engaging with roller in cam to operate said leaf by lever handle connected to ends of said through bar, substantially as described. 3rd. In a cornice brake machine, a front foot-rail connected to and in combination with the roller cam on through rod, a transverse rod pivoted to rear of frame and supporting the foot-rail, a rod to connect a front arm on said roller cam and the said transverse rod, substantially as described. 4th. In a cornice brake machine, the roller cam having front arm connected to the front horizontal rail by means of pivoted transverse rod of said rail and rod connected to said cam arm and said transverse rod, in combination substantially as described. 5th. In a cornice brake machine, the roller cam on through journalled rod connected to front rail by means of cam arm 5, rod P, connected to said arm and to transverse rod O, pivoted at the rear with front end secured to said front rail, in combination with a foot elbow lever to engage with and release the foot-rail, substantially as described. 6th. In a cornice brake machine, the tension bars having higher inner ends secured to outer side of leaf, and apart to admit an end pressure screw, the outer ends engaging with lugs or stops forming a part of said leaf, in combination with a centrally raised tension rod having forward outer ends secured to said leaf, substantially as described. 7th. In a cornice brake machine, tension bars having inner ends apart secured to the leaf of machine and capable of end extension by means of a screw acting

upon each inner end, and outer ends against rigid lugs of the leaf, in combination with a tension rod centrally raised, having forward ends with screwed nuts to engage with rigid lugs of leaf, substantially as described.

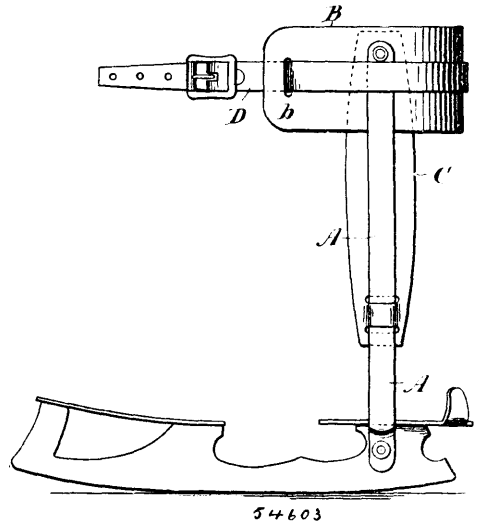
**No. 54,602. Land Roller.** (*Rouleau d'agriculture.*)



James Moore, Port Dover, Ontario, Canada, 15th January, 1897; 6 years. (Filed 17th December, 1896.)

*Claim.*—1st. The combination with the wooden rollers B, of circular steel plates C, substantially as and for the purpose hereinbefore set forth. 2nd. The combination with the wooden rollers B, and the circular steel plates C, of a cleaning attachment E and F, substantially as and for the purpose hereinbefore set forth. 3rd. The combination with the wooden rollers B, and the circular steel plates C, of wooden rings or fillers G, held in position by hinges H, and fastenings K, substantially as and for the purpose hereinbefore set forth.

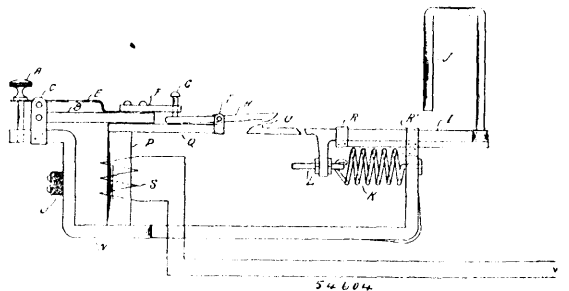
**No. 54,603. Ankle Brace for Skates.**  
(*Attache de patins.*)



Jackson Charles Lee, Fremont, Nebraska, U.S.A., 15th January, 1897; 6 years. (Filed 17th December, 1896.)

*Claim.*—The combination with a skate, of a brace, means for pivotally connecting it direct to the runner, said brace bowed outwardly between its ends to receive the wearer's ankle, a protector strap secured at one end to the brace and having loose sliding connection at its opposite end with said brace, substantially as set forth.

**No. 54,604. Insole.** (*Fausse-semelle.*)



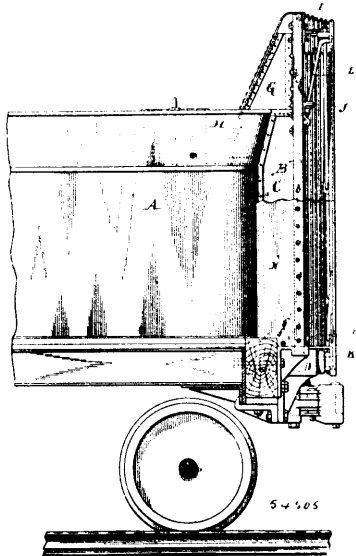
James E. McWilliam, Hubbardston, Massachusetts, U.S.A., 15th January, 1897; 6 years. (Filed 16th December, 1896.)

*Claim.*—1st. The improvement in insoles, substantially as described. 2nd. As an article of manufacture, an insole comprising a rubber backing and an upper layer of fabric having weft or filling

threads, each comprising a central thread or core with wool loosely spun or twisted around the same, said wool being brushed or combed out on the surface of the fabric, substantially as described. 3rd. As an article of manufacture, an insole comprising a rubber backing and an upper layer of fabric having wool woven therein, said wool being brushed or combed out on to the surface thereof, and said insole being medicated by having a suitable powder incorporated into the body portion thereof, substantially as described.

**No. 54,605. Locomotive Tender.**

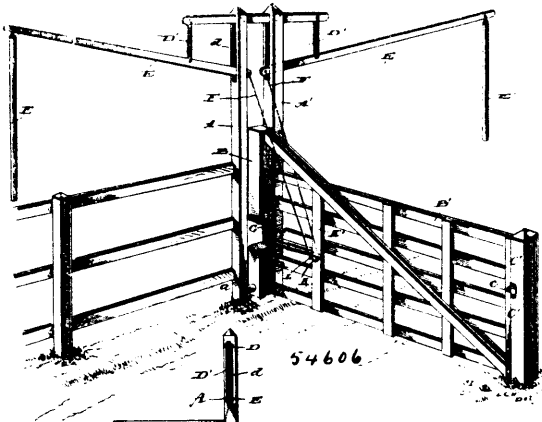
(*Tender pour locomotives.*)



The Gould Coupler Company, New York, State of New York, assignee of Willard Richards, Buffalo, New York, both in the U.S.A., 15th January, 1897; 6 years. (Filed 15th December, 1896.)

*Claim.*—1st. The combination with the body and the rear frame sill of a locomotive tender, of fixed supports projecting rearwardly from said sill, an upright vestibule frame secured with its lower end to said supports and connected above said supports with the tender body, and a flexible hood secured to said frame and projecting rearwardly therefrom, substantially as set forth. 2nd. The combination with the body of a locomotive tender provided at its rear end with upright supporting sockets, of a separate upright frame having stiles or side pieces seated in said sockets, webs or plates connecting said frame with the body of the tender, and a flexible hood secured at its inner end to said frame, substantially as set forth. 3rd. The combination with the body of a locomotive tender provided at its rear end with upright supporting sockets, of a separate upright frame having stiles or side pieces seated in said sockets, webs or plates connecting said frame with the body of the tender, a flexible hood secured at its inner end to said frame, and a hood or covering plate enclosing said connecting plates, substantially as set forth.

**No. 54,606. Gate. (Barrière.)**

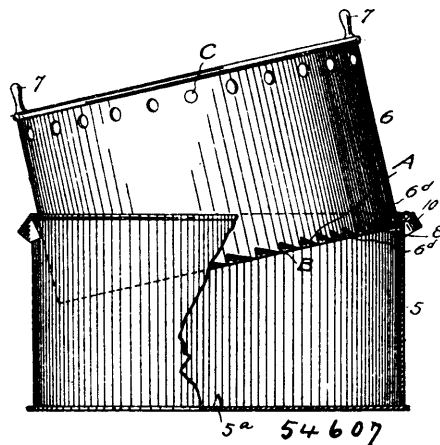


Constant Geoseph Deloye, Lenox, Massachusetts, U.S.A., 15th January, 1897; 6 years. (Filed 15th December, 1896.)

*Claim.*—1st. The combination with an upright and a gate mounted thereon to turn from a horizontal to a vertical position, of a jointed arm pivotally connected with the gate and upright, a spring bearing

on the joint of said arm, and an operating lever connected with the jointed arm forward of its pivot, substantially as specified. 2nd. The combination with an upright and a gate mounted thereon to turn from a horizontal to a vertical position, of a jointed arm pivotally connected with the gate and upright, a spring bearing on the joint of said arm, an operating lever connected with the jointed arm forward of its pivot, and a guard arm for preventing lifting of the jointed arm, substantially as specified. 3rd. The combination with an upright and a gate mounted to turn from a horizontal to a vertical position, of a jointed arm pivotally connected with the gate and upright, and a guard arm having a slot in which works a projection on the jointed arm, substantially as specified. 4th. The combination with an upright and a gate mounted thereon to turn from a horizontal to a vertical position, of a jointed arm having a portion to embrace one of the uprights of the gate to which it is secured, and a pivoted guard arm mounted on the pivot of the jointed arm and having a longitudinal slot to receive a projection on the jointed arm, substantially as specified. 5th. The combination with a gate mounted to turn from a horizontal to a vertical position and vice versa, of a pivoted jointed arm connected with the gate, cords connected with said arm in front of its pivot, and a guard arm mounted on the pivot of the jointed arm and having a slot in which works a projection on the forward end of the jointed arm, substantially as specified. 6th. The combination with an upright, a gate mounted to turn from a horizontal to a vertical position, and a bracket secured to said upright and having a stud, of a guard arm pivotally mounted on said stud and having a slot, a jointed arm mounted independently on said stud, and a rod or pin carried by the free end of said jointed arm and working in the slot of the guard arm, substantially as specified. 7th. The combination with an upright, a gate mounted to turn from a horizontal to a vertical position, and a bracket secured to said upright and having a stud, of a guard arm pivotally mounted on said stud and having a slot, a jointed arm mounted independently on said stud, a rod or pin carried by the free end of said jointed arm end working in the slot of the guard arm, and a spring mounted to act on the joint of the jointed arm, substantially as specified.

**No. 54,607. Dish Washer. (Laveuse de vaisselle.)**

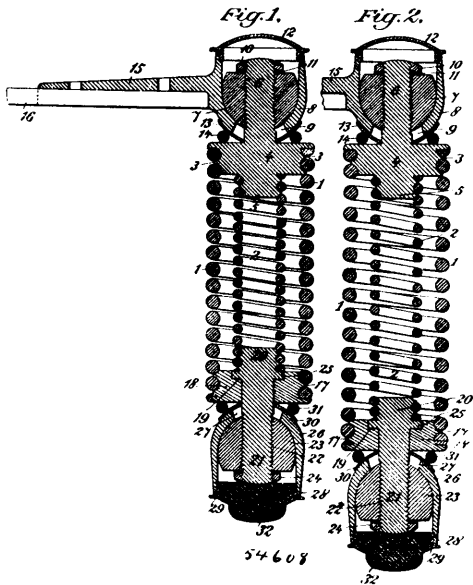


Alfred Beers, Denver, Colorado, U.S.A., 15th January, 1897: 6 years. (Filed 16th December, 1896.)

*Claim.*—1st. In a dish washer, the combination with the outer pan, of an inner pan rotatably supported in the outer pan and having an integral bottom consisting of sector-shaped inclined blades, formed by cutting radial slits in a circular piece of sheet metal and bending the blades to a suitable inclination, their inner extremities being left fast to the central portion of the bottom, and their outer extremities being secured to the vertical wall of the pan, substantially as described. 2nd. In a dish washer, the combination with the outer pan having a central pivot in its bottom, and a wire attached to its inner wall near the top thereof, and the inner pan having an integral bottom, comprising central portions 6°, the bottom of the pan around this central portion being formed into sector-shaped blades, whose inner extremities are fast to said central portion, said blades being bent to a suitable inclination, their outer extremities being secured to the vertical wall of the pan, the central portion of the inner pan's bottom having a socket which the pivot of the outer pan engages, substantially as described. 3rd. In a dish washer, the combination with an outer pan, of an inner pan rotatably mounted and having an integral bottom composed of a central portion and radial inclined blades, whose outer extremities are secured to the vertical wall of the pan, and a device adapted to hold the plates apart while washing, substantially as described. 4th. In a dish washer, the combination with an outer pan, of an inner pan rotatably mounted and having an integral bottom comprising a central portion and radial inclined blades whose outer extremities are secured to the vertical wall of the pan, and a detachable screen engaging the bottom of the inner pan, as and for the

purpose set forth. 5th. The plate separating device herein described, comprising a series of horizontal or approximately horizontal connected folds, one located above another and adapted to separate a number of plates placed one above and upon another, substantially as described. 6th. The combination with a dish washer, a device for separating plates, said device being formed from a strip of sheet metal, and comprising a series of horizontal or approximately horizontal connected spring folds located one above another and having their inner extremities pressed quite closely together and turned slightly upward to engage the rims on the bottoms of the plates, the said device being adapted to separate a number of plates placed one above and upon another, substantially as described.

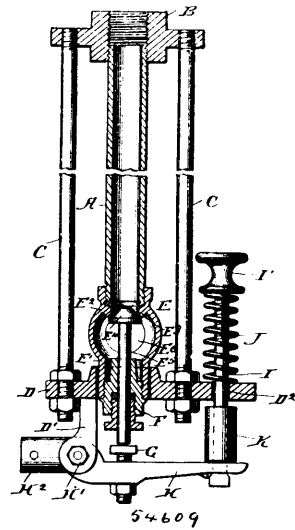
**No. 54,608. Spring. (Ressort.)**



Reynold Janney, Westborough, Massachusetts, U.S.A., 15th January, 1897; 6 years. (Filed 16th December, 1896.)

*Claim.*—1st. As an article of manufacture, the compound compressing spring, substantially as described. 2nd. The combination of two coiled springs, one within the other, the inner spring being normally in a state of compression and acting upon the outer one to weaken or reduce the power thereof. 3rd. The combination of two coiled springs, one within the other, the inner one being normally in a state of compression and acting upon the outer one to a certain point to weaken or reduce its power and beyond that point acting together with the outer spring to resist further extension. 4th. The combination of the outer and heavier coiled spring, the inner coiled spring having normally an expansive action against the outer spring, and screws for connecting the ends of said springs together. 5th. The combination of the outer and heavier coiled spring, the inner coiled spring having normally an expansive action against the outer spring, the screws 3 and 5, and the screws 17 and 20, the latter screws being independently movable to facilitate assemblage and the compression of the inner spring. 6th. The combination with two concentric coiled springs, of two screws for connecting the associated ends of said springs, a threaded shank connected to said screws, a socket made of a single piece, and a ball or spherical bearing arranged upon said threaded shank and within said socket. 7th. The combination of the two concentric coiled springs, the inner one being the weaker and acting normally to expand the outer, the screws for connecting the ends of said springs, the threaded shanks having balls screwed thereupon, the one-piece sockets, the attaching means thereon, and the closures for the sockets. 8th. The combination with two concentric coiled springs, of two screws connecting the associated ends of said springs, and provided with a threaded shank, a socket made of a single piece and through which said shank passes, a ball screwed upon said shank within said socket, a concave dust-excluding washer for said socket, a rubber ring for pressing upon said washer, and a dust-cap for said socket. 9th. The combination with two concentric coiled springs, and at one end thereof, of the screw 3, head-piece 4, the screw 5, the threaded shank 6, the ball 7, the socket 8, having the opening 9 therein, the dust-cap 12, the washer 13, and the rubber ring 14. 10th. The combination with two concentric coiled springs, and at one end thereof, of the screw 17, the head-piece 18, the seat 19, the collar 25, the screw 20, the shank 21, threaded as at 22, the ball 23, the nut 24, the socket 26 having an opening 27, the washer 30, the rubber ring 31, the dust-cap 29, and the rubber cushion 32. 11th. In combination with the open base of the socket of a ball-and-socket joint, the concave spring-pressed washer.

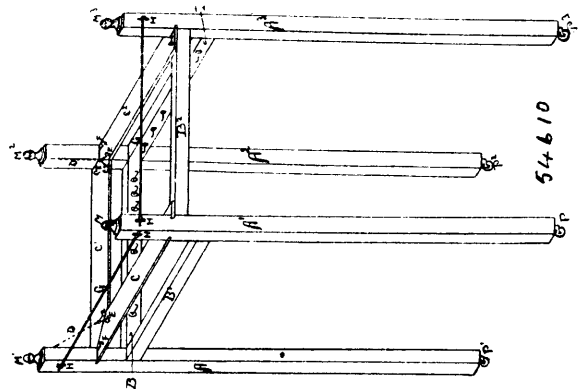
**No. 54,609. Expansion Steam-Trap. (Purge de tuyau.)**



Hubert Francis Smurthwaite, Coatesville, Pennsylvania, U.S.A., 15th January, 1897; 6 years. (Filed 18th December, 1896.)

*Claim.*—1st. In an expansion steam-trap comprising a frame, an expansion-tube secured at one end in the said frame and having connection at said end with the steam supply, a discharge-valve secured on the other free end of the said tube and provided with a valve having its stem fitted to slide in a stuffing-box attached to the valve-body, the latter being fitted to slide in the said frame, a lever fulcrumed on the said frame, a bolt held on the free end of the said lever, and a spring engaging the said bolt to give the desired tension to the bolt, lever and valve, substantially as shown and described. 2nd. In an expansion steam-trap comprising a frame, an expansion-tube secured at one end to the said frame and having connection at said end with the steam supply, a discharge-valve secured on the other free end of the said tube and provided with a valve having its stem fitted to slide in a stuffing-box attached to the valve-body, the latter being fitted to slide in the said frame, a lever fulcrumed on the said frame, a bolt held on the free end of the said lever, and a spring engaging the said bolt to give the desired tension to the bolt, lever and valve, the tension of the spring being regulated by a nut on the said bolt, substantially as shown and described. 3rd. An expansion steam-trap comprising a frame, an expansion-tube secured at one end in the said frame and having connection at said end with the steam supply, a discharge-valve secured on the other free end of the said tube and provided with a valve having its stem fitted to slide in a stuffing-box attached to the valve-body, the latter being fitted to slide in the said frame, a lever fulcrumed on the same frame, a bolt held on the free end of said lever, a spring engaging the said bolt to give the desired tension to the bolt, lever and valve, and a stop-collar held on the said bolt intermediate of the said lever and the said frame, to limit the swinging motion of the lever, substantially as shown and described.

**No. 54,610. Clothes Closet. (Cabinet à linge.)**

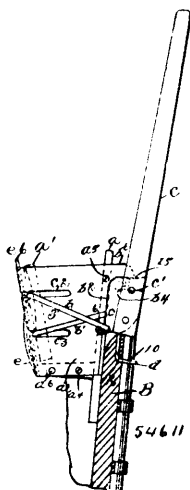


William Henry Dunsmore, Stratford, Ontario, Canada, 15th January, 1897; 6 years. (Filed 18th December, 1896.)

*Claim.*—1st. The combination of the posts A, A<sup>1</sup>, A<sup>2</sup> and A<sup>3</sup>, with the hook strips B, B<sup>1</sup>, B<sup>2</sup> and B<sup>3</sup>, and the shelves C, C<sup>1</sup> and C<sup>2</sup>, substantially as and for the purpose hereinbefore set forth. 2nd. The combination with the posts A, A<sup>1</sup>, A<sup>2</sup> and A<sup>3</sup>, the hook strips B, B<sup>1</sup>, B<sup>2</sup> and B<sup>3</sup>, and the shelves C, C<sup>1</sup> and C<sup>2</sup>, of the side

and end curtains O, O<sup>1</sup>, O<sup>2</sup> and O<sup>3</sup>, the top curtain N, poles G and G<sup>1</sup>, and knobs M, M<sup>1</sup>, M<sup>2</sup> and M<sup>3</sup>, substantially as and for the purpose hereinbefore set forth.

**No. 54,611. Mop Wringer. (Essoreuse de torchon.)**



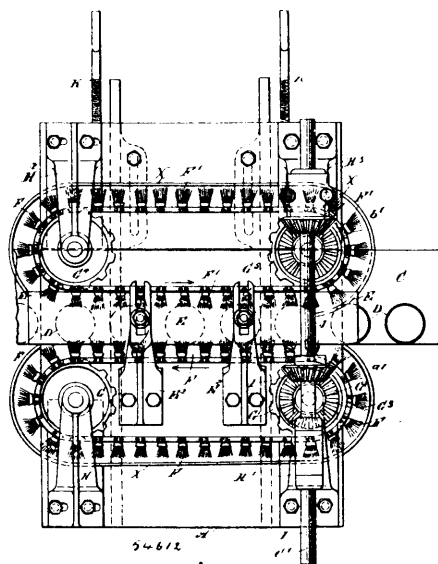
William G. Archer, Rutland, Vermont, U.S.A., 15th January, 1897; 6 years. (Filed 18th December, 1896.)

*Claim.*—1st. In a mop wringer, the combination of the following instrumentalities, viz., a stationary wall or board adapted to be attached to and removed from a pail, side walls secured to the stationary wall and provided with slots, a presser-wall movable within the side walls, a rock-shaft, and means extended through the slots in the side walls for connecting the movable presser-wall with the rock-shaft, substantially as and for the purpose specified. 2nd. In a mop wringer, the combination of the following instrumentalities, viz., a stationary wall or board adapted to be attached to and removed from a pail, side walls secured thereto and projecting within the pail when the wringer is applied thereto, the said side walls being provided with slots, a presser-wall movable bodily toward the said stationary wall within the said side walls, a rock-shaft, and draft-rods attached to the movable presser-wall and extended through the slots in the side walls, and connected to the rock-shaft to operate, substantially as described. 3rd. The combination with a pail, of a mop wringer consisting of a stationary back wall or board adapted to be inserted into the pail to engage the inner wall thereof, side walls secured to the said stationary wall and provided with arms extending over the rim of the pail, a rock-shaft having bearings in said arm, a presser-wall movable within the said side walls from the centre of the pail toward the stationary wall, means to connect the said movable presser-wall to the said rock-shaft, and means secured to the arms of the side walls for engaging the outside of the pail and co-operating with the stationary back wall, which engages the inner side of the pail, to secure a firm attachment and brace for the wringer, substantially as described. 4th. In a mop wringer, the combination of the following instrumentalities, viz., a stationary wall, and a movable presser-wall, a rock-shaft provided with cranks or arms, and draft rods secured to the said presser-wall and to the cranks of the rock-shaft so as to effect a crossing of the said draft-rods, for the purpose specified. 5th. In a mop wringer, the combination of the following instrumentalities, viz., a stationary wall *a*, side walls *a*<sup>2</sup>, *a*<sup>3</sup>, provided with slots *e*<sup>2</sup>, *e*<sup>3</sup>, and having the extensions *b*<sup>6</sup>, *b*<sup>7</sup>, a presser-wall *a*<sup>1</sup>, movable bodily toward the stationary wall *a*, a rock-shaft journaled in the extensions *b*<sup>6</sup>, *b*<sup>7</sup>, cranks or arms attached to the said rock-shaft, crossing draft-rods secured to the said presser-wall *a*<sup>1</sup>, and to the said cranks or arms, and a retaining rod *d* having the curved portion to embrace the circumference of the pail, substantially as described. 6th. In a mop wringer, the combination of the following instrumentalities, viz., a substantially vertical stationary wall, a substantially vertical presser-wall normally having its upper end farther from the stationary wall than its lower end, and free to move bodily toward it and from the said stationary wall, and means to effect the bodily movement of the said presser-wall so as to cause the upper end of the presser-wall in the bodily movement of the latter to move toward the stationary wall faster than its lower end, for a portion of the movement of the said presser-wall, whereby the top or upper portion of the bodily movable presser-wall is engaged with the top or upper portion of the mop, while the lower portion of the bodily presser-wall is not engaged therewith, for the purpose specified. 7th. The combination with a pail, of a mop wringer provided with stationary back wall adapted to be inserted within the pail, and having side walls located within the pail and provided with extensions projecting outward beyond the rim of the said pail, and a spring acting retaining-rod comprising a bow-shaped horizontal portion curved to conform to the outside circumference of the pail, and vertical arms secured to the extensions of the side walls,

whereby the said retaining rod co-operates with the stationary back wall to form an automatic adjustable fastening for the mop wringer by which it is secured to the pail, substantially as described.

**No. 54,612. Can Washing Machine.**

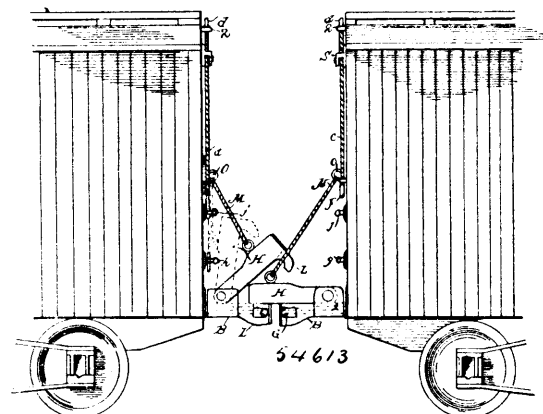
(Machine à laver les boîtes métalliques.)



Frank Anthony Seufert, The Dalles, Oregon, U.S.A., 15th January, 1897; 6 years. (Filed 18th December, 1896.)

*Claim.*—1st. A can washing machine, provided with two oppositely arranged brushes mounted to revolve in opposite directions, and between which pass the cans to be cleaned, the said brushes causing the cans to turn and thereby clean their sides, substantially as shown and described. 2nd. A can washing machine, comprising two oppositely arranged endless brushes mounted to travel in opposite directions, and means for carrying the cans along between the said brushes, to cause the latter to engage the cans on opposite sides and rotate and clean the cans, substantially as shown and described. 3rd. A can washing machine, comprising two oppositely arranged endless brushes mounted to travel in opposite directions, means for carrying the cans along between the said brushes to cause the latter to engage the cans on opposite sides and rotate and clean the cans, and a cover extending over the open ends of the said cans during their passage between the brushes, substantially as shown and described. 4th. A can washing machine, comprising oppositely arranged endless brushes mounted to travel, and adapted to be adjusted toward or from each other, and a feed belt for carrying the cans between and along the said brushes, substantially as shown and described. 5th. A can washing machine, comprising oppositely arranged endless brushes mounted to travel, and adapted to be adjusted toward or from each other, a feed belt for carrying the cans between and along the said brushes, and a vertically and laterally adjustable cover for closing the open ends of the said cans, as set forth.

**No. 54,613. Car-Coupler. (Attelage de chars.)**

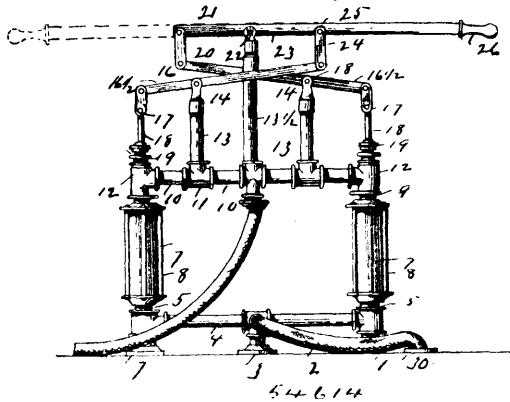


John M. Kincaid, Westville, Ohio, U.S.A., 15th January, 1897; 6 years. (Filed 18th December, 1896.)

*Claim.*—1st. In a car-coupler, the combination with a draw-head having a lateral horn extending from each side of a jaw pivoted to

said head and having a horn extending downward from near each side thereof and adapted to ride over and engage with such lateral horns of an opposing car, and mechanism for raising said pivoted jaw, adapted to be operated from either side or top of the car. 2nd. In a car-coupler, the combination with a draw-bar and its head, a horn projecting from said head, a recess in said head adapted to receive an ordinary link, a shank extending through said link and secured to said head, lugs or ears extending from said head and having a jaw pivoted between them. 3rd. In a car-coupler, the combination with the draw-head having a jaw pivoted thereto and a recess therein, said recess adapted to receive an ordinary draft-link, of a shank or staple extending through said link and adapted to hold it when used for coupling, and a lip projecting into the outer end of said recess and adapted to hold the said link within the recess when not in use. 4th. In a car-coupler, the combination with a draw-head having a lateral projection from each side thereof, said projections being curved backward to form hooks, a jaw pivoted in said head and having a depending projection near each side thereof, said projections being curved along their front edges and hooked-shaped along their rear edges, whereby they will ride over the lateral projections of an opposing coupler and be prevented from being disengaged by constant jarring. 5th. In a car-coupler, the combination with a draw-head having a lateral horn extending from each side of a jaw pivoted to said head, and having a horn extending downward from near each side and adapted to ride over and engage with such lateral horns of an opposing car.

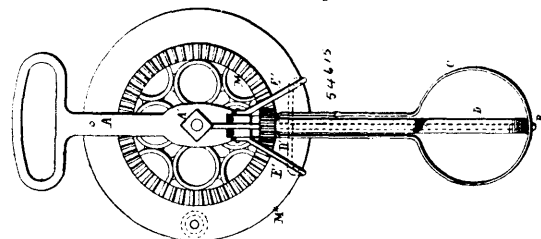
**No. 54,614. Force Pump. (Pompe foulante.)**



Byron A. Straight, Jamestown, New York, U.S.A., 15th January, 1897; 6 years. (Filed 19th December, 1896.)

*Claim.*—1st. In a double cylinder pump, the combination with two cylinders and suitable pistons and valves therefor, of a rigid pipe connection between the upper ends, comprising the pipe sections and three coupling pieces, a discharge pipe connected to one coupling piece, three air chambers mounted upon said coupling pieces, a lever mounted upon each air chamber, those upon the two side air chambers being connected to the two pistons, and that upon the middle air chamber being connected to the others, substantially as shown and for the purpose set forth. 2nd. In a double cylinder pump, the combination with the two cylinders and suitable pistons and valves therefor, of feet upon which the cylinders rest, a rigid connection between the lower ends of said cylinders, having a coupling at its middle point, a suction pipe connected to said coupling piece, a third foot and rigid connection between it and said coupling piece, whereby the pump is supported in a triangular space, a rigid pipe connection between the upper ends of said cylinders, and suitable discharge passages and piston operating mechanism, substantially as shown and for the purpose set forth.

**No. 54,615. Egg-Beater. (Vergette de cuisine.)**

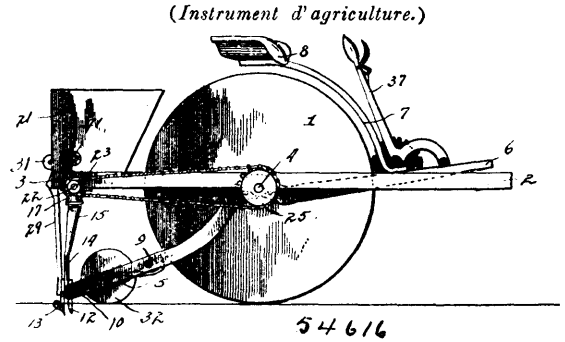


Herbert Washington Mason, Glen's Falls, New York, U.S.A., 15th January, 1897; 6 years. (Filed 19th December, 1896.)

*Claim.*—In an egg-beater the combination of a frame, whippers carried thereby, horizontally-positioned intermeshing pinions for turning the whippers and a wheel to rotate said pinions which is pivotally mounted on said frame in a vertical position and that is provided on its inner, central face with gear-teeth, and a plane-surface extended rim, a roller supported by said frame to bear on the

inner face of said rim at its upper turned portion, and a spring-hook also supported by said frame that is adapted to bear against and guide said rim in two planes at its bottom portion to hold the gear normally in proper contact and that will allow of yielding to overcome an extra strain imposed upon the gearing, substantially as described.

**No. 54,616. Agricultural Implement. (Instrument d'agriculture.)**



Charles P. Leshar, Lansing, Michigan, U.S.A., 15th January, 1897; 6 years. (Filed 18th December, 1896.)

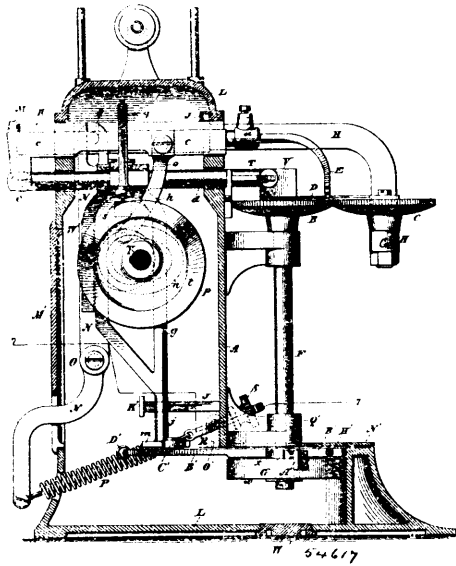
*Claim.*—1st. In an agricultural instrument, the combination with a roller, its trunnions and frame, of a swinging frame pendent on the trunnions, a feed-hopper carried on the main frame, and feeding mechanism operatively connected with the main frame and the pendent frame, substantially as set forth. 2nd. In an agricultural implement, the combination with a roller, its trunnions and frame, of a pendent frame carried upon the trunnions, a series of teeth carried upon the pendent frame, and means for operating the pendent frame, substantially in the manner and for the purpose specified. 3rd. In an agricultural implement, the combination with a roller, its trunnions and frame, of a swinging frame pendent on the trunnions, a series of arms composed of plates arranged in pairs upon the pendent frame, and disc cutters carried upon the frame between the plates but independent of them, substantially as set forth. 4th. In an agricultural implement, the combination with a roller, its trunnions and frame, of a swinging frame pendent upon the trunnions, a series of arms composed of plates arranged in pairs upon the frame, and disc cutters each spring supported between the plates but independently thereof, substantially as set forth. 5th. In an agricultural implement, the combination with a roller, its trunnions and frame, of a swinging frame pendent upon the trunnions, bars constituting a part of the pendent frame, a series of arms composed of plates arranged in pairs upon the bars, a spring coiled around the upper bar for each pair of plates, and carrying between the plates a disc cutter, substantially as set forth. 6th. In an agricultural implement, the combination of a frame and roller revolvably secured therein, of a feed-hopper and feeding mechanism operatively connected with the roller, a series of harrow or similar teeth carried upon the frame and adapted to be raised and lowered independently thereof, a spring-actuated cut-off slide in the hopper, and a bevelled slide-actuating piece carried upon one of the teeth and adapted to raise the slide by the raising and lowering of the tooth which carries it, substantially as set forth.

**No. 54,617. Sewing Machine. (Machine à coudre.)**

John Frederick Wilhelm, New York, State of New York, U.S.A., 16th January, 1897; 6 years. (Filed 16th November, 1896.)

*Claim.*—1st. In a sewing machine of the character described, the revolvable feed disc B, and actuating mechanism connected therewith, combined with the feed disc C, the horizontal reciprocating bar H carrying said disc C, the pivoted lever connected with said bar H for moving the same in one direction, and the spring P connected with said lever for moving said bar in the opposite direction, substantially as set forth. 2nd. In a sewing machine of the character described, the feed disc B and actuating mechanism connected therewith, combined with the feed disc C, the horizontal reciprocating bar H at its front end bent downward and under said disc C and carrying the same, guides for said bar H, the screw K at the base of one of said guides, the screws J for retaining said bar H, the pivoted lever connected with said bar H for moving the same in one direction, the forwardly extending spring connected with said lever for moving the same in the opposite direction, and the screw T and nut S connected with said spring for adjusting the latter, substantially as set forth. 3rd. In a sewing machine of the character described, the feed discs, and the vertical shaft carrying one of said discs, combined with the disc *w* on said shaft and having the rim *x* and pawls A<sup>1</sup>, the arm B<sup>1</sup> on said shaft and having the ratchet teeth, the springs intermediate said arm and pawls, the spring D<sup>1</sup> creating a tension on said arm B<sup>1</sup> in one direction, and the rigid rod *j* actuated from the driving shaft and having the cam *m* in engagement with said arm B<sup>1</sup> for moving the latter in the opposite direction, substantially as set forth. 4th. In a sewing machine of the character described, the feed discs, and the vertical shaft carrying one of said discs, combined with the disc *w* on said shaft and having

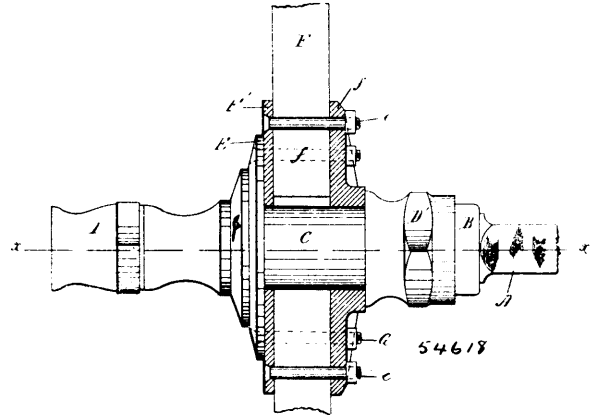
the rim *x* and pawls *A*<sup>1</sup>, the arm *B*<sup>1</sup> on said shaft and having the ratchet teeth for said pawls, the springs intermediate said arms and



pawls, the spring *D*<sup>1</sup> creating a tension on said arm *B*<sup>1</sup> in one direction, a reciprocating cam in direct contact with said arm for moving it in the opposite direction and actuated from the driving shaft, and an adjustable regulating stop *H*<sup>1</sup> for said arm *B*<sup>1</sup>, substantially as set forth. 5th. In a sewing machine of the character described, the feed discs, and the vertical shaft carrying one of said discs, combined with the oscillatory arm *B*<sup>1</sup>, pawl and ratchet mechanism intermediate said arm and said shaft for actuating the latter from the former, the reciprocating cam *m* in operative engagement with said arm *B*<sup>1</sup>, the spring retaining said arm against said cam, and mechanism intermediate the main driving shaft and said cam for reciprocating the latter against said arm *B*<sup>1</sup>, substantially as set forth. 6th. In a machine of the character described, the feed discs and actuating mechanism therefor, and the needle bar and actuating mechanism therefor, combined with the looper bar, the bar *c* carrying said looper bar, the rod *d* to which said bar *c* is pivoted, the cam for reciprocating said rod from the main driving shaft, the wheel *t* forming the cams *n*, *p*, the arm *o* passing from the arm *c* to the said cam *n*, and the arm *q* secured at one end on the looper bar and at the other end engaged by said cam *p*, substantially as set forth. 7th. In a machine of the character described, the feed discs and actuating mechanism therefor, and the needle bar and actuating mechanism therefor, combined with the looper bar, the bar *c* carrying the looper bar, the rod *d* to which said bar *c* is pivoted, the cam for reciprocating said rod from the main driving shaft, the arm *o* rigidly connected to the arm *c*, the cam engaging said arm *o*, the arm *q* having a sleeve at one end on said looper bar, and a cam engaging said arm *q*, substantially as set forth. 8th. In a machine of the character described, the feed discs and actuating mechanism therefor, combined with the looper bar, the bar *c* having the sleeves *b* in which said looper bar is mounted, the rod *d* to which said bar *c* is pivoted, the cam for reciprocating said rod *d* from the main driving shaft, the arm *o* rigidly connected to said arm *c*, the cam engaging said arm *o*, the arm *q* having a sleeve at one end on said looper bar, and a cam engaging said arm *q*, substantially as set forth. 9th. In a machine of the character described, the feed discs and actuating mechanism therefor, and the main driving shaft having the cams *X* and *i* and wheel *t*, the latter forming the cams *n*, *p*, combined with the needle bar, the frame *W* thereon engaging said cam *X*, the rod *d* having a frame engaging said cam *i*, the rod *e* pivot-d to said rod *d*, the arm *o* intermediate said rod *e* and said cam *n*, the looper bar *a* carried by said bar *c*, and the arm *q* at one end connected with said looper bar and at the other engaged by said cam *p*, substantially as set forth. 10th. In a machine of the character described, the feed discs and actuating mechanism therefor, and the needle bar and actuating mechanism therefor, combined with the rod *d*, the bar *c* pivotally connected therewith, the looper bar *a* carried by said bar *c*, the cams *n*, *p*, arms intermediate the said cams and said bars *c*, *a*, for actuating the latter from the former, the cam *i* on the driving shaft, the frame *g* engaging said cam *i* and connected with the rod *d* and the rod *j* forming a part of said frame and in operative relation with the actuating mechanism of the feed discs, whereby the latter receive motion from a positive reciprocating frame actuated by the cam on the driving shaft, substantially as set forth. 11th. In a sewing machine of the character described, the revoluble feed disc *B* and actuating mechanism connected therewith, combined with the feed disc *C*, the horizontal reciprocating bar *H* carrying at its front end said disc *C*, guides for said bar *H*, the pivoted lever connected with said bar for moving the same forward, the forwardly extending spring connected with said

lever and exerting a tension rearward on said bar *H*, and the screw and nut for regulating the tension of said spring from the front of the machine, substantially as set forth. 12th. In a machine of the character described, the frame *A* containing the operative mechanism and having the closed bottom and the forwardly extending lower portion enclosing the feed-actuating devices, said lower portion having an opening directly over said feed-actuating devices and a removable cover thereon, substantially as set forth.

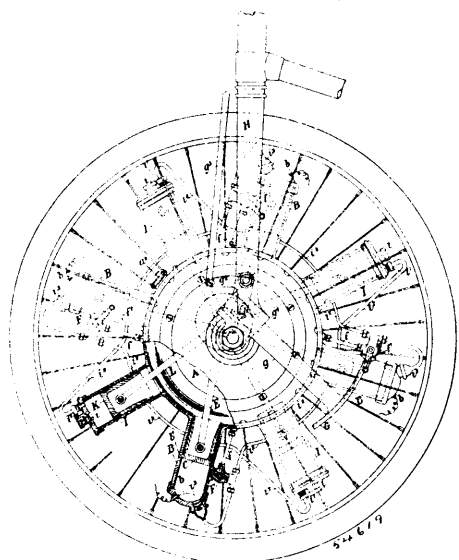
**No. 54,618. Wheel Hub. (Moyeu de roue.)**



Jean Baptiste Garand, Montreal, Quebec, Canada, 16th January, 1897; 6 years. (Filed 22nd December, 1896.)

*Claim.* 1st. The combination, with an axle provided with a collar having a recess in one side, and a bearing provided with a conical portion connecting it with the bottom of the said recess, of a wheel hub journalled on the said bearing and its conical portion and engaging with the said recess, and means for preventing the said hub from sliding off the bearing, substantially as set forth. 2nd. The combination, with the spokes of a wheel provided with tapering ends fitted together, of two plates arranged one on each side of the said ends, and bolts passing through the said plates and through the meeting edges of the said ends, substantially as set forth. 3rd. The combination, with a wheel hub provided with a flange, of the wheel spokes provided with tapering ends fitted together, two plates secured together one on each side of the said ends, bolts securing the said plates and spokes to the said flange, and a nut screwed on the said hub and clamping the said plates and spokes against the said flange, substantially as set forth. 4th. The combination, with an axle-bearing, of a wheel hub journalled thereon and provided with an oil hole in its end portion, and a hollow oil cap secured over the end portion of the said bearing and connected to the hub behind the said oil hole, substantially as set forth.

**No. 54,619. Motor Engine. (Moteur.)**



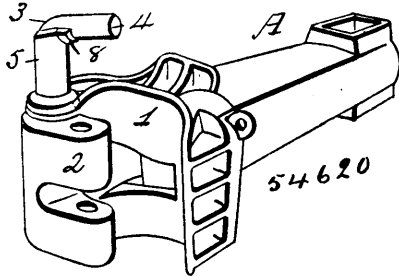
John Howard, 143 Cannon Street, London, assignee of Adolph Berrenberg, 11 Crystal Palace Station Road, Norwood, Surrey, both in England, 16th January, 1897; 6 years. (Filed 14th November, 1896.)

*Claim.*—1st. The improved motor engine constructed or operating substantially as herein described, and comprising numerous com-



pressor and motor cylinders arranged alternately and radially about a central chamber in which is enclosed a crank, the latter being common to the pistons of all the compressor and motor cylinders. 2nd. In a motor engine of the central crank-shaft and radial cylinder type, the employment of a series of compressor cylinders and a series of motor cylinders, air compressed in the former being conveyed to the latter and serving to scavenge the motor cylinders of the products of the previous combustion, to introduce and to spray the liquid hydrocarbon fuel, and to constitute the atmospheric portion of the working charge. 3rd. In a motor engine of the central crank-shaft and radial cylinder type, the combination, with a motor cylinder B, of a valve F controlling the admission of air from the compressor cylinder and of liquid hydrocarbon from the fuel reservoir, a lever f on said valve and a cam G, arranged to operate substantially as and for the purpose set forth. 4th. In a motor engine of the central crank-shaft and radial cylinder type, the combination, with the valve F, of the lever f', cam G, carried at the outer extremity of an arm g, and means, such as a bell crank g' and connecting rod g'', whereby said cam may be withdrawn from the path of the lever f', the supply of fuel to the motor cylinder being thus shut off, substantially as set forth. 5th. In a motor engine of the central crank-shaft and radial cylinder type, utilizing the central chamber as a reservoir for the liquid hydrocarbon fuel, substantially as herein described. 6th. In a motor engine of the type herein referred to, the employment of means for igniting the inflammable charge, substantially as herein described, and whereby on the motor piston arriving at the end of its in stroke, an electrical circuit is established, and, on the commencement of its out-stroke, electrical contact is broken, a spark produced and the charge fired. 7th. In the application of motor engines to auto cars or road carriages, arranging a series of compressor cylinders and motor cylinders about a central chamber within which a fixed crank-shaft is enclosed and about which the engine revolves, the said cylinder and chamber being surrounded by a wheel rim supported on tension or other spokes radiating from the aforesaid central chamber, substantially as herein described.

**No. 54,620. Car-Coupler. (Attelage de chars.)**



James Timms, Columbus, Ohio, U.S.A., 16th January, 1897; 6 years. (Filed 22nd December, 1896.)

*Claim.*—1st. In a car-coupler, the combination with a draw-head, of a pivot-pin for pivotally securing the knuckle to the draw-head, the pin having a horizontal portion which rests over the knuckle of the companion coupler, and means independent of the pin bearing beneath the said horizontal portion for holding said pin in an elevated position and preventing it from turning, substantially as set forth. 2nd. In a car-coupler, the combination with a draw-head, of a pivot-pin for pivotally securing the knuckle to the draw-head, the upper end of said pin being bent horizontally so as to rest over the knuckle of the companion coupler, and a sleeve for holding the horizontal portion of the pin elevated and for locking it against rotary motion, substantially as set forth. 3rd. In a car-coupler, the combination with a draw-head, of a pivot-pin provided with an outwardly-extending arm and means for locking said pin against withdrawal, and a sleeve provided on its lower end with a flange and downwardly-projecting lip and on its upper end with an outwardly-projecting flange having a concave upper face adapted to receive the horizontal portion of the pin, whereby the latter is held against rotary movement, substantially as set forth.

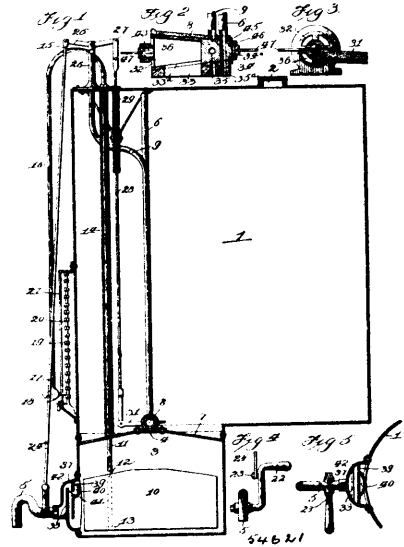
**No. 54,621. Measuring Receptacle.**

*(Réceptacle pour mesurer les liquides.)*

John H. Martindale, Russell, Pennsylvania, U.S.A., 16th January, 1897; 6 years. (Filed 18th November, 1896.)

*Claim.*—1st. In a measuring receptacle, the combination of a supply chamber, a measuring chamber located below the supply chamber and arranged to be normally filled therefrom and having a discharge opening in its side above the bottom, a movable filling block resting normally on the bottom of said measuring chamber movable upward to determine the quantity of liquid remaining above the discharge opening, and suitable cut-off for controlling the communication between the storage chamber and the measuring chamber, as set forth. 2nd. In a measuring tank, the combination of storage and measuring chambers, the filling block in the measuring chamber movable vertically therein to determine the quantity remaining above and below it, the outlet in the side of the measur-

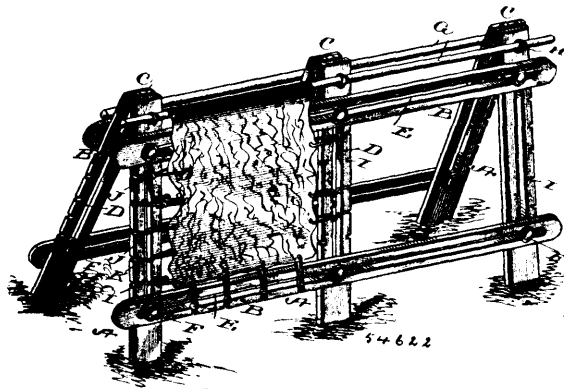
ing chamber having a faucet through which liquid may be drawn off at will, and a communication between the chambers kept normally



open by the closing of the outlet faucet and closed upon the opening of said faucet, as set forth. 3rd. In a container for dispensing liquids, the combination of the storage receptacle formed with a depression and a measuring chamber below the level thereof and a communication between the receptacle and chamber controlled by a cut-off located in said depression, substantially as set forth. 4th. In a container for dispensing liquids, the combination of a storage receptacle formed with a depression in its bottom and a measuring chamber beneath said depression, a passage through the bottom of said depression into the chamber, a cut-off resting on the bottom over said passage and having an end opening below the level of the bottom of the storage receptacle in order to drain the latter, as explained. 5th. In a container for dispensing liquids, the combination of the storage and measuring compartments with a valved passage in the wall which separates them, the drawing-off faucet in communication with the measuring compartment, and a connection between the drawing-off faucet extending into one of the compartments and controlling the valve of the passage to close and open the latter simultaneously with the opening and closing of the former, as explained. 6th. In a container for dispensing liquids, the combination of the storing compartment and the measuring compartment, the valved passage between the same, the drawing-off faucet communicating with the measuring compartment, the rod connected with the handle of said faucet, and the rod controlling the valve in the passage between the compartments and connected with the faucet rod through the medium of the pivoted lever, as explained. 7th. In a measuring tank, the combination of the storage and measuring chambers, two air pipes establishing communication between the top of the measuring chamber and the top of the storage chamber and the outer atmosphere respectively, a valve located in the bottom of the storage chamber and having a plug with diametric passages located so as to admit the passage of air through the respective pipes alternately, an arm on said valve having a rod extending through the top of the receptacle, the pivot lever on top of said receptacle with which said rod is connected and connection between said lever and the draw-off faucet, substantially as and for the purpose set forth. 8th. In a container for dispensing liquids, the combination with the measuring chamber, of the displacing device movable in the chamber to determine the amount of liquid to remain above the drawing-off level, and the siphon outlet, determining by its high point the drawing-off level but having a communication at the bottom with the measuring chamber to ensure a free flow, as explained. 9th. In a container for dispensing liquids, the combination of the measuring chamber having a displacing device for determining the quantity of liquid remaining above the drawing-off level, an outlet housing formed with an outflow passage communicating with the measuring chamber at or near the bottom, the wall for determining the level of the outflow, and the siphon breaking passage opening into the measuring chamber safely above the level of the outflow and communicating with the outflow passage on the inside of the wall, substantially as set forth. 10th. In combination with a faucet, the siphon outlet therefor and the auxiliary air passage leading from a point safely above surface disturbance of the liquid and into the siphon to prevent closing of the same after reduction of the level of the liquids, as set forth. 11th. In a container for dispensing liquids, the combination of the measuring chamber having a displacing device approximately fitting the same, and a drawing-off outlet formed through a housing, said housing having means for attachment to the wall of the chamber and formed with a concave face which leaves a space between it and the displacing device to ensure free access of the liquid to the outlet, as

explained. 12th. In combination with a container for liquids, a goose-neck faucet and a suitable siphon cut-off, as explained. 13th. In combination with a container for liquids, a goose-neck faucet, a siphoning outlet leading thereto, and a siphon cut-off, as and for the purpose set forth. 14th. In a liquid measuring device, the combination of a storage tank, a measuring chamber, a communication between the storage tank and the measuring chamber, an air tube communicating between the top of the storage tank and the top of the measuring chamber, a suitable valve controlling the communication through said tube, whereby the liquid taken from the storage tank will be replaced by air from the measuring tank when drawing off liquid therefrom, and means for drawing off the liquid having controlling communication with said valve, substantially as set forth. 15th. In a liquid measuring device, the combination of a storage tank, a measuring chamber, a liquid-conveying passage leading from the bottom of the storage tank to the measuring chamber, an air pipe leading from the top of the measuring chamber to the top of the storage tank, a compound valve adapted to control communication through the liquid pipe and air pipe, a device located in the measuring chamber for determining the quantity of liquid drawn off, and automatically operating controlling connection for said compound valve, substantially as shown and described. 16th. In a liquid measuring device, the combination of the storage tank, the measuring chamber provided with a device for determining the quantity of liquid withdrawn therefrom, a liquid communication between the storage tank and the measuring chamber, an air passage leading from the top of the measuring chamber to the top of the storage tank, an air passage leading from the open air into the measuring chamber, a suitable valve controlling said air passages for opening them alternately, an outlet faucet and means for connecting the said valve with the outlet faucet whereby air communication is established between the tanks when filling the receiving tank and between the receiving tank and the outer air when decanting, substantially as set forth. 17th. In a liquid measuring device, the combination of a suitable tank, a faucet leading from said tank, a measuring chamber communicating with said faucet, a device in said chamber determining the amount drawn therefrom, a rod to an inner leg of which is attached said device, an index pin attached to an outer leg of said rod, suitable stops for engagement by the pin for holding the rod in adjusted position, and a scale, substantially as set forth. 18th. In a liquid measuring device, the combination of a suitable tank, means for measuring liquid withdrawn from said tank, an adjustable operating rod controlling said measuring means, a vertical screw-threaded rod, a series of nuts adjustably mounted on said rod, a pin carried by the operating rod and engaging said nuts, and a suitable scale, substantially as set forth. 19th. In a liquid measuring device, the combination of a suitable tank, means for measuring the liquid withdrawn from said tank, an adjustable rod controlling said measuring means, a screw-threaded rod secured to the tank, a series of nuts mounted on said rod, a slotted casing enclosing the rod and holding the nuts in position on the rod, a scale and a pin carried by the operating rod, substantially as and for the purpose set forth. 20th. In combination with a measuring tank, a siphon outlet for same, comprising the overlapping vertical walls extending respectively from bottom and top of a suitable outlet passage, and the safety air duct on one of the walls and leading from a point above surface disturbance of the liquid into the space between the walls, substantially as and for the purpose set forth.

**No. 54,622. Curtain Stretcher. (Etendeur de rideau.)**

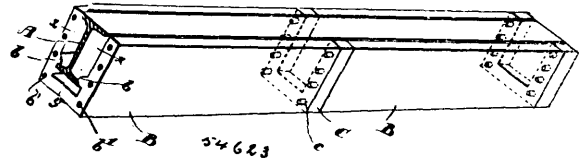


Mrs. Josephine Smith, Jacksonville, Illinois, U.S.A., 16th January, 1897; 6 years. (Filed 21st December, 1896.)

*Claim.*—1st. The combination of the hook having a retaining lip at one end, and an extension bar having a series of eyes adapted to be engaged by said retaining lip and provided at one end with a hook. 2nd. In a curtain stretcher, the combination of two frames hinged at their upper ends, each frame consisting of three uprights having longitudinal slots therein, the outer uprights having a series of notches in their outer edges and the central uprights having similar notches in both edges, horizontal bars having longitudinal slots therein, adjustable bolts connecting the uprights and the bars,

rods secured to the outer faces of the uprights at the upper ends of the same, and hook and pin connections adapted to be seated in the notches and hold the curtain.

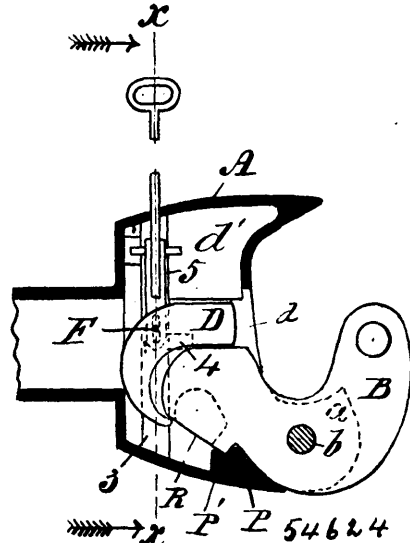
**No. 54,623. Fireproof Covering for Steel Beams. (Composition à l'épreuve du feu pour poutres en acier.)**



John Michael Gander, Toronto, Ontario, Canada, 16th January, 1897; 6 years. (Filed 23rd December, 1896.)

*Claim.*—1st. The combination with a steel beam, of a series of lengths substantially U-shaped in cross-section, interior longitudinal lips attached to or forming part of the lengths and designed to rest on the lower edges of the beam, and means for interlocking the ends of the lengths, as and for the purpose specified. 2nd. The combination with a steel beam, of a series of lengths substantially U-shaped in cross-section, interior longitudinal lips attached to or forming part of the lengths and designed to rest on the lower edges of the beam, holes in the ends of the lengths and an interlocking U-shaped piece situated between each two lengths and having teats designed to fit into the holes in the ends of the lengths, as and for the purpose specified. 3rd. In combination, the double beam, the cover sides of suitable material substantially L-shaped, the interior lips forming part of the sides and resting on the outer edges of the double beam, the intermediate bottom lengths, means for connecting it to the sides, holes in the ends of the side pieces and intermediate bottom pieces and the U-shaped interlocking pieces provided with teats at each side designed to fit into the holes of the abutting length, as and for the purpose specified. 4th. In combination the double beam, the covering sides of suitable material substantially L-shaped, the interior lips forming part of the sides and resting on the outer edges of the double beam, the half-dovetailed groove in the inner edges of the side pieces, the intermediate bottom length and the half-dovetailed tongue designed to fit into the corresponding grooves in the inner bottom edges of the side piece, holes in the ends of the side pieces and intermediate bottom piece, and the interlocking pieces provided with teats at each side designed to fit into the holes of the abutting length, as and for the purpose specified.

**No. 54,624. Car-Coupler. (Attelage de chars.)**

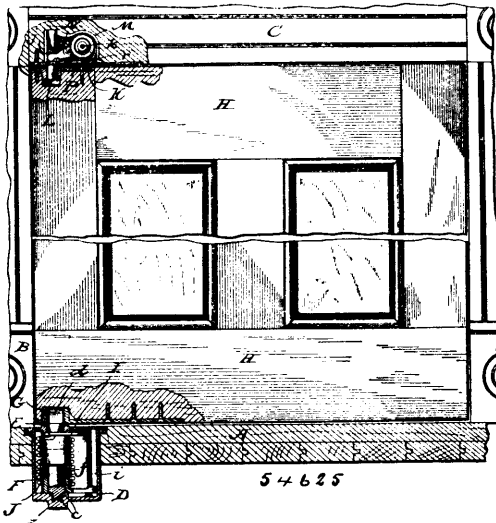


Michael John Grady and Richard McMillan, both of Kingston, Ontario, 16th January, 1897; 6 years. (Filed 22nd December, 1896.)

*Claim.*—1st. The combination with the draw-head having an internal side recess *d'*, and a pendent inclined face lug 4, at the interior top, a swinging knuckle B, having a flange or filling R, at the heel, a guide pin F, passing through the top and bottom of the draw-head, a gravitating locking block or keeper D, sliding on said pin, and having a curved heel in continuous frictional engagement with said flange or filling, and lever 5, fulcrumed within the draw-head to lift said locking block against said lug, as set forth. 2nd. The combination with the draw-head having an internal side recess *d'*, an inclined face lug 4, pendent from the interior top, and a resistance block or post P, at the side, of the swinging knuckle B,

having a flange or filling R, at the heel, and stopping against said post, a pin F, vertically within the draw-head, a gravitating locking block or keeper D, sliding on said pin, and having a curved heel traversing said flange or filling in a continuous manner, as set forth for the purpose described.

**No. 54,625. Spring Catch. (Loquet à ressort.)**

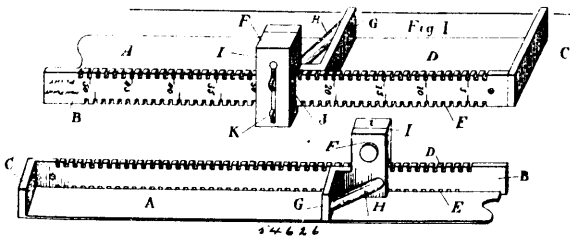


Martin S. Field, Racine, Wisconsin, U.S.A., 16th January, 1897; 6 years. (Filed 10th December, 1896.)

*Claim.*—1st. The combination of a suitably supported pintle having a tenon, a spring-controlled arm loose on the pintle but in clutch therewith, a stop arranged to limit back-throw of the arm, and a mortise-plate attachable to a door for engagement with the pintle-tenon. 2nd. The combination of a suitably supported pintle having a tenon, a pair of spring-connected arms loose on the pintle but in clutch therewith, suitable means for holding one arm when the other is on throw, and a mortise-plate attachable to a door for engagement with the pintle-tenon. 3rd. The combination of a suitable support designed for insertion in a threshold, a tenoned pintle having its bearing in the support, a pair of segmental arms loose on the pintle but in clutch therewith and each provided with a series of openings, a spiral-spring interposed between the arms and having its ends engaged with openings in the same, suitable means for holding one arm when the other is on throw, and a mortise-plate attachable to a door for engagement with the pintle-tenon. 4th. The combination of a suitable support designed for insertion in a threshold, a tenoned pintle having its bearing in the support and provided with a collar recessed from above and below to have the vertical boundaries of one recess face opposite those of the other, a pair of segmental arms loose on the pintle and having lugs engaging said recesses, a spiral-spring connecting the arms, suitable means for holding one arm when the other is on throw, and a mortise-plate attachable to a door for engagement with the pintle-tenon. 5th. The combination of a casing designed for insertion in a threshold and provided with a detachable cover, a tenoned pintle having its bearing in the casing, a pair of spring connected arms loose on the pintle but in clutch therewith, fingers extended from the arms to oppose opposite sides of a rib in said casing, and a mortise-plate attachable to a door for engagement with the pintle-tenon.

**No. 54,626. Gauge for Composing Sticks.**

(Justifieur pour compositeurs.)

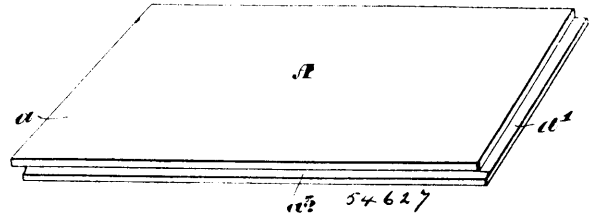


George Hill Wheeler, Toronto, Ontario, Canada, 16th January, 1897; 6 years. (Filed 20th November, 1896.)

*Claim.*—1st. A device for gauging composing sticks consisting of a bar, having a scale marked thereon, a fixed head at one end of the bar, a movable head adapted to slide on the bar, and a means for locking the movable head, substantially as specified. 2nd. A device for gauging composing sticks consisting of a bar, having a

scale representing one system marked along one end thereof, and a scale representing another system marked along the other edge, a head fixed at one end of the bar, a movable head adapted to slide on the bar, and means for locking the movable head, substantially as specified. 3rd. A device for gauging composing sticks, comprising a bar, having a scale marked thereon, a fixed head for the bar, a movable head, a lock having a pivoted tooth adapted to engage the scale, and lock the movable head in any set position, substantially as specified. 4th. A device for gauging composing sticks, comprising a bar having a scale marked thereon, a fixed head, a movable head, a lock having a pivoted wedge-shaped tooth, adapted to engage the said scale, substantially as specified. 5th. A device for gauging composing sticks, comprising a bar having a scale marked along one edge thereof, to correspond with one system of measurement, a scale similarly marked along the other edge, to represent a second system of measurement, a fixed head, a movable head, a lock for the movable head, having a pivoted wedge-shaped tooth to engage the said scale, substantially as specified. 6th. A printer's composing stick, comprised of a bottom, a fixed head and back for the bottom, a movable head, a lock connected to the movable head, having a pivoted dog provided with wedge-shaped teeth, a notched scale along one edge representing one system of measurement, and a similarly notched scale along the other edge representing a second system of measurement, the said teeth adapted to engage with the said notches, substantially as specified. 7th. A printer's composing stick, consisting of a bottom, a fixed head and back for the bottom, a movable head, a lock connected to the movable head, having a pivoted dog provided with wedge-shaped teeth, a notched scale along one edge representing one system of measurement, and a similarly notched scale along the other edge representing a second system of measurement, the said teeth adapted to engage with the said notches, and a clamp to bind the lock and movable head to the said back, substantially as specified. 8th. A printer's composing stick, comprised of a bottom, a fixed head for the bottom, a fixed back for the bottom, a scale marked along one edge of the back representing one system of measurement, a movable head, a lock for the movable head sliding on the said back, and a pivoted dog to engage the said scale, substantially as specified. 9th. A printer's composing stick consisting of a bottom, a fixed head and back for the bottom, a movable head, a lock connected to the movable head, having a pivoted dog provided with wedge-shaped teeth, a notched scale along one edge representing one system of measurement, and a similarly notched scale along the other edge representing a second system of measurement, the said teeth adapted to engage with the said notches, and a clamp to bind the lock and movable head to the said back, substantially as specified.

**No. 54,627. Plaster Board. (Planchette à plâtre.)**



John Michael Gander, Toronto, Ontario, Canada, 18th January, 1897; 6 years. (Filed 23rd December, 1896.)

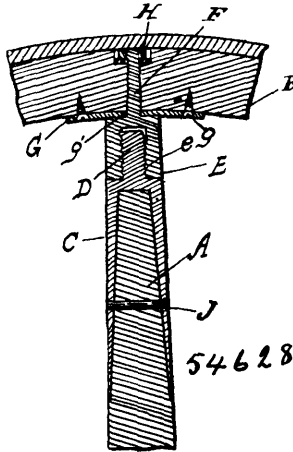
*Claim.*—1st. A plaster board comprising a composite material made in flat form with one underlying flange designed to be affixed to the joists, one overlapping flange designed to be fixed over the underlying flange of the abutting end of the adjacent board, a longitudinal tongue in one edge of the board and a longitudinal groove in the opposite edge, as and for the purpose specified. 2nd. A plaster board comprising a composite material made in flat form with one underlying flange designed to be affixed directly to the joists, one overlapping flange designed to be fixed over the underlying flange of the abutting end of the adjacent board, a longitudinal tongue in one edge of the board, a longitudinal groove in the opposite edge, and a series of depressions or recesses formed in the back of the board, as and for the purpose specified. 3rd. As a new article of manufacture, a plaster board designed to be fitted directly to the joists of ceilings and walls and formed of a composition of plaster of paris, ground asbestos and grassy fibrous non-igniting material, as and for the purpose specified.

**No. 54,628. Vehicle Wheel. (Roue de voiture.)**

Edward J. Bircherd, Genoa Junction, Wisconsin, U.S.A., 18th January, 1897; 6 years. (Filed 28th December, 1896.)

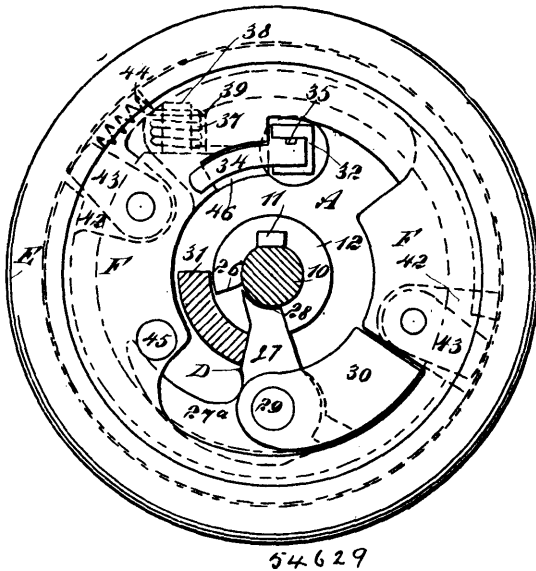
*Claim.*—1st. The combination with a sleeve having a threaded extension, a ferrule having a screw-threaded bore to receive the extension and a bolt extending therefrom and adapted to pass through the felly and to receive a nut, as set forth. 2nd. The combination of a sleeve having a threaded extension, a ferrule having a threaded bore to receive said extension, and a bolt integral with the ferrule, a plate having a hole to receive the bolt, and a nut adapted to be engaged with the outer end of the bolt, as set forth. 3rd. The combination with the sleeve having a screw-threaded extension, a ferrule having a ferrule bore to receive said extension, and a bolt

with a polygonal portion, a plate having a polygonal hole, and a nut fitted to the outer end of the bolt, substantially as specified. 4th.



The combination with a spoke and a felly, of a sleeve on the end of the spoke, a ferrule on the sleeve inside the felly, a bolt carried by the ferrule and extended through the felly, a plate on the inner face of the felly, and a nut engaging the bolt on the outer face of the felly, all substantially as shown and described.

**No. 54,629. Clutch.** (*Manchon d'embrayage.*)

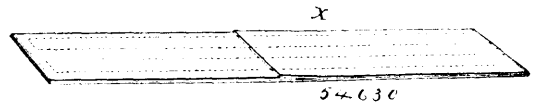


Theodore Julius Koven, Jersey City, New Jersey, U.S.A., 18th January, 1897; 6 years. (Filed 24th December, 1896.)

*Claim.*—1st. In a clutch, the combination, with a driving shaft and a driving pulley loosely mounted thereon, the said pulley being provided with an extension from its hub, of a disc mounted to slide upon and turn with the drive shaft, the said disc being provided with a hub having a recess therein, the extension of the driving pulley extending over said hub, an angle lever pivoted upon the disc, one member whereof is adapted to enter the recess in the hub of the disc and is located in the path of the extension from the driving pulley, the other member of the said lever being curved, a pin adapted as a fulcrum for the lever and for engagement with its curved member, the said pin having substantially a fixed relation to the lever, the latter having movement upon the pin, and a shifting mechanism whereby the clutch may be carried out of the path of the driving pulley extension, substantially as shown and described. 2nd. In a clutch, the combination, with a driving shaft and a driving pulley loosely mounted thereon and provided with an extension of its hub, of a clutch comprising a disc mounted to slide upon and turn with the driving shaft, the said disc being provided with a hub over which the extension of the driving pulley is adapted to extend, the said hub having a recess therein, an angle lever pivoted upon the disc, one member whereof is adapted for engagement with the extension from the driving pulley and adapted to enter the recess in the disc hub, the opposite member having a curved surface, a regulating ring surrounding the disc, a pin carried by the said regulating ring, adapted as a fulcrum for the said lever and for engagement with its curved member, a cam connection between the disc and the said ring, means substantially as shown and described for releasing the ring from the disc and simultaneously turning it, a shifting sleeve connected with the disc, spring-controlled arms pivoted to a fixed support and having outward bearing on the sleeve, a cam carried by the sleeve, and a movable directing shaft adapted for engagement with the cam, substantially as shown and described. 4th. In a clutch, the combination, with a driving shaft and a driving pulley mounted thereon and having an extension from its hub, of a clutch comprising a disc mounted to slide upon and turn with the shaft, an angle lever pivoted upon the disc, one member whereof is adapted to enter a slot in the hub of the disc, the same member being in the path of the extension of the driving pulley, the opposite end of the lever having a curved face, an adjusting ring loosely mounted around the disc, a casing in which the said ring has movement, dogs carried by the ring and adapted for engagement with the casing, a spring-controlled locking cam carried by the disc and adapted for engagement with the said ring, and a pin adapted as a fulcrum for the lever, carried by the ring and engaging with the curved member of the lever, and a shifting mechanism connected with the disc, as and for the purpose set forth.

regulating ring surrounding the disc, a pin carried by the said regulating ring, adapted as a fulcrum for the said lever and for engagement with its curved member, a cam connection between the disc and the said ring, means substantially as shown and described, for releasing the ring from the disc and simultaneously turning it, as and for the purpose set forth. 3rd. The combination, with a driving shaft and a driving pulley mounted thereon and provided with an extension of its hub, of a clutch comprising a disc mounted to slide upon and turn with the drive shaft, the said disc being provided with a hub over which the extension of the driving pulley is adapted to extend, said hub having a recess therein, an angle lever pivoted upon the disc, one member whereof is adapted for engagement with the extension from the driving pulley and adapted to enter the recess in the disc hub, the opposite member having a curved surface, a regulating ring surrounding the disc, a pin carried by the said regulating ring, adapted as a fulcrum for the said lever and for engagement with its curved member, a cam connection between the disc and the said ring, means substantially as shown and described for releasing the ring from the disc and simultaneously turning it, a shifting sleeve connected with the disc, spring-controlled arms pivoted to a fixed support and having outward bearing on the sleeve, a cam carried by the sleeve, and a movable directing shaft adapted for engagement with the cam, substantially as shown and described. 4th. In a clutch, the combination, with a driving shaft and a driving pulley mounted thereon and having an extension from its hub, of a clutch comprising a disc mounted to slide upon and turn with the shaft, an angle lever pivoted upon the disc, one member whereof is adapted to enter a slot in the hub of the disc, the same member being in the path of the extension of the driving pulley, the opposite end of the lever having a curved face, an adjusting ring loosely mounted around the disc, a casing in which the said ring has movement, dogs carried by the ring and adapted for engagement with the casing, a spring-controlled locking cam carried by the disc and adapted for engagement with the said ring, and a pin adapted as a fulcrum for the lever, carried by the ring and engaging with the curved member of the lever, and a shifting mechanism connected with the disc, as and for the purpose set forth.

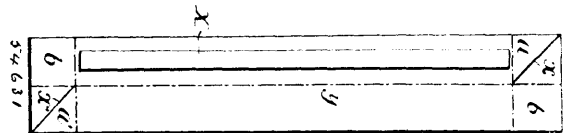
**No. 54,630. Corset Stay.** (*Renfort de corset.*)



John Stuart Crotty, New York, State of New York, U.S.A., 18th January, 1897; 6 years. (Filed 24th December, 1896.)

*Claim.*—1st. A dress stay consisting of a resilient blade and a casing formed of a single continuous piece of fabric wider than the blade and more than twice the length thereof, the said casing being folded around the ends of the blade and overlapped upon one side thereof and having its inner faces cemented together and to the blade, substantially as described. 2nd. A multiple stay consisting of two or more separated parallel resilient blades and a casing formed of a single continuous strip of fabric wider than the blade and more than twice the length thereof, the said strip being folded around the ends of the blades and overlapped upon one side thereof and having its inner faces cemented to the blades and cemented together intermediate of the blades, substantially as described.

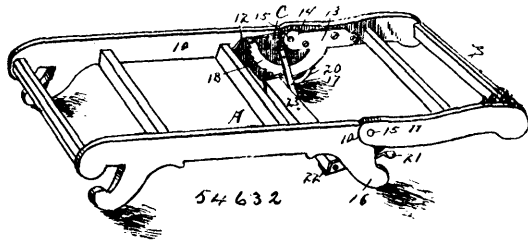
**No. 54,631. Manufacture of Corsets.** (*Fabrication de corsets.*)



John Stuart Crotty, New York, State of New York, U.S.A., 18th January, 1897; 6 years. (Filed 24th December, 1896.)

*Claim.*—1st. A stiffener for corsets, etc., comprising a stiffening blade and a covering consisting of a single strip of fabric folded lengthwise upon itself, with the blade lying within the fold, said folded strip of fabric being longer than the blade and being slitted at opposite ends of the covering projecting beyond the blade forming two integral end-pieces at each end of the blade, and the other of each pair of end pieces folded over the previously folded end-pieces, substantially as specified. 2nd. A stiffener for corsets, etc., comprising a stiffening blade and a covering consisting of a single strip of fabric folded lengthwise upon itself, with a blade lying within the fold, said folded strip of fabric being longer than the blade and being slitted diagonally at diagonally opposite corners of the covering projecting beyond the blade, forming two integral end pieces at each end of the covering, one of each pair of end pieces folded over the previously folded end-piece, substantially as described.

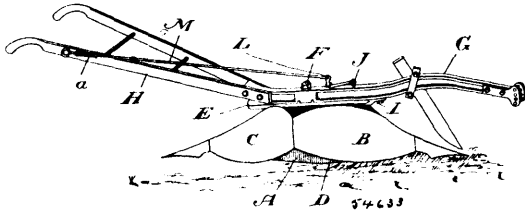
**No. 54,632. Couch and Bed Hinge.**  
(*Penture de canapé et lit.*)



Ambrose Huttinger, Cleveland, Ohio, U.S.A., 18th January, 1897; 6 years. (Filed 28th December, 1896.)

*Claim.*—The combination of a main-frame, a head-frame, two main-frame hinge-plates respectively secured to the inner sides of the main-frame and at one end thereof, two head-frame hinge-plates respectively secured to the inner sides of the head-frame and respectively hinged to the main-frame hinge-plates, a curved rack-bar secured to each head-frame hinge-plate, two levers respectively fulcrumed at the sides of the main-frame and below the main-frame hinge-plates, each lever having a spur thereon respectively capable of co-operating with the teeth of the ratchet-bars and each lever also having sockets, and a weighted beam secured in the sockets and extending transversely from one end to the other, substantially as described.

**No. 54,633. Plough.** (*Charrue.*)



Harold Ernest Smith, Toronto, Ontario, Canada, 18th January, 1897; 6 years. (Filed 31st December, 1896.)

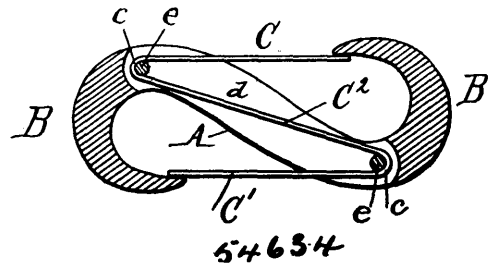
*Claim.*—1st. A double-ended plough, in combination with a plough beam so constructed and arranged that the plough may be used with either end foremost, substantially as and for the purpose specified. 2nd. A double-ended plough, in combination with a plough beam pivoted to the double-ended plough, and locking mechanism adapted to lock the plough to the beam with either end foremost, substantially as and for the purpose specified. 3rd. A double-ended plough having its halves set at an angle to one another in a vertical plane, in combination with a plough beam pivoted to the double-ended plough, and locking mechanism adapted to lock the plough to the beam with either end foremost, substantially as and for the purpose specified. 4th. A double-ended plough having a flat horizontal plate rigidly connected thereto, in combination with a plough beam and handles pivoted thereon, means for locking the beam and handles from turning when the plough is set with either end foremost, and ribs formed on the plate concentric with the pivot and adapted to engage similar grooves on the beam, substantially as and for the purpose specified. 5th. A double-ended plough with its halves set at an angle to one another in a vertical plane and having a horizontal plate rigidly connected thereto, in combination with a plough beam and handles pivoted thereon, means for locking the beam and handles from turning when the plough is set with either end foremost, and ribs formed on the plate concentric with the pivot and adapted to engage similar grooves on the beam, substantially as and for the purpose specified. 6th. A double-ended plough having a flat horizontal plate rigidly connected thereto, in combination with a plough beam and handles pivoted thereon, a hook formed on or connected to the plough beam and adapted to engage with either end of the plate and a bolt passing through a hole in the plough beam and adapted to fit either of two holes formed one at each end of the said plate, substantially as and for the purpose specified.

**No. 54,634. Snap-Hook.** (*Crochet à ressort.*)

Reuben Cadwell Eldridge, Niagara Falls, Ontario, Canada, 18th January, 1897; 6 years. (Filed 30th December, 1896.)

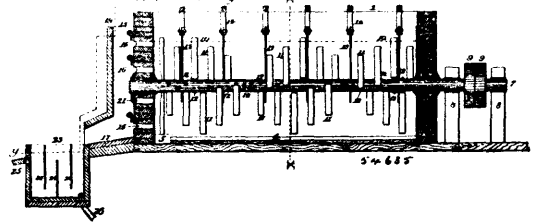
*Claim.*—1st. A double snap-hook, comprising a body or shank, two hooks arranged at opposite ends of said body or shank and facing in opposite directions, and tongues closing the mouths of said hooks, substantially as set forth. 2nd. A double snap-hook, comprising a body or shank, two oppositely facing hooks arranged at opposite ends of said body or shank, and a single continuous spring composed of two outer branches or tongues bearing respectively against the noses of said hooks and an intermediate member connecting said branches or tongues, substantially as set forth. 3rd. An S-shaped snap-hook comprising a body or shank having a longi-

tudinal slot or recess, two oppositely facing hooks arranged at opposite ends of said body or shank, transverse pins or rivets



arranged in said slot near opposite ends thereof, and a continuous S-shaped spring seated in said slot and extending with its bends around said pins or rivets and bearing with its outer branches or against the noses of said hooks, substantially as set forth.

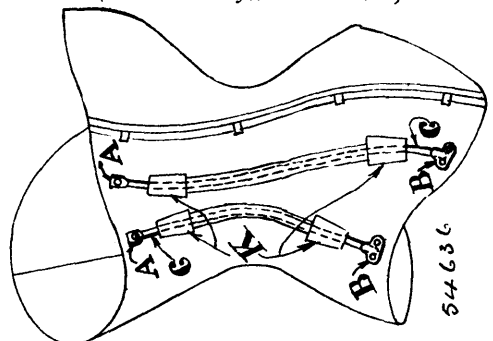
**No. 54,635. Amalgamator.** (*Machine à amalgamer.*)



Jacob Jones Storer, Newton, and Frank Martin, Medford, both in Massachusetts, U.S.A., 18th January, 1897; 6 years. (Filed 29th December, 1896.)

*Claim.*—1st. An amalgamator constructed substantially as herein shown and described, consisting of a tank lined with amalgamated plates, a shaft made to revolve in the longitudinal axis thereof, and carrying amalgamated blades adapted for radial and angular adjustment, preferably arranged in spirals, and a series of vertically adjustable, removable, amalgamated arresting plates extending above the water line and having a space beneath their lower edges for the flow of the water and ore pulp, all arranged and operated substantially as set forth. 2nd. In an amalgamator a series of vertically adjustable amalgamated arresting plates vertically suspended therein, at right angles to the outward flow of the water and pulp, with their upper edges extending above the water line and their lower edges above the amalgamator bottom, substantially as and for the purposes described; said plates being coated with quick-silver for the purpose of arresting, retaining and amalgamating the particles of precious metal passing through the amalgamator, as set forth. 3rd. The combination with an amalgamator consisting of a tank lined with amalgamated plates and having a longitudinal groove and well in its bottom and a series of adjustable discharge openings at one end, provided with a revolvable shaft carrying amalgamated blades, and with a series of vertically adjustable amalgamated arresting plates, of an enclosed amalgamated apron plate fixed at the discharge end of the tank, and of a mercury trap set to receive the material discharged from the said apron plate, all arranged and operated as herein shown and described. 4th. The combination with an amalgamating tank constructed substantially as herein shown and described, of a revolvable shaft fixed in the longitudinal axis thereof, and provided with angularly and radially adjustable amalgamated copper blades, as set forth.

**No. 54,636. Method of Staying Corsets.**  
(*Méthode de renforcer les corsets.*)

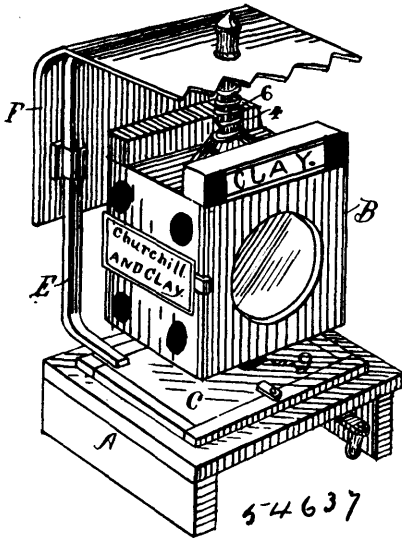


John D. Belcher, Halifax, Nova Scotia, Canada, 18th January, 1896; 6 years. (Filed 30th December, 1896.)

*Claim.*—1st. The combination of safety pockets A.A. B.B. and eyelets with ribbon spring steel or whalebone filling with concaved

ends C, substantially as and for the purpose hereinbefore set forth. 2nd. The combination with the safety pockets A.A. and B.B. and eyelets A<sup>11</sup> and B<sup>11</sup> with ribbon spring steel or whalebone filling, C concave and rounded ends, substantially as and for the purpose hereinbefore set forth.

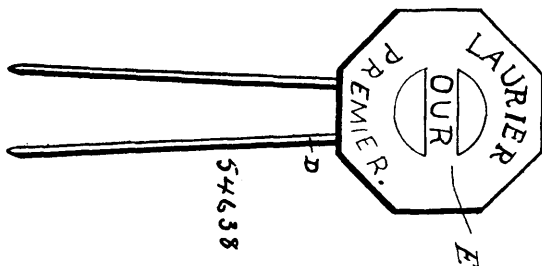
**No. 54,637. Revolving Headlight for Street Cars.**  
(*Lumière tournante pour chars de rue.*)



Miley P. Crawford, Benjamin T. Oliver and Bird Adams, all of Roanoke, Virginia, U.S.A., 18th January, 1897; 6 years. (Filed 28th December, 1896.)

*Claim.*—1st. In a car-signal, the combination of the base, a rectangular plate secured thereon, a shield covering said lantern, a crescent-shaped slot in the said plate, a lantern situated between the said shield and base, a socket placed on top of said lantern, a shaft the lower end of which is journaled in the said socket, the upper end secured to the shield-supporting bar, spiral springs surrounding said shaft, a downwardly projecting socket from said lantern, substantially as shown and described. 2nd. In a car-signal, the combination of the base, a rectangular plate secured thereon, shield-supporting standards, a lantern having upwardly and downwardly projecting sockets, a hollow shaft projecting upwardly through the said downwardly-projecting socket, a crescent-shaped slot in said plate, a shaft attached to the downwardly-projecting socket and working in said crescent-shaped slot, a crank attached to the inner end of said shaft, substantially as shown and described. 3rd. In a car-signal, the combination of the base, a shield supported by curved uprights, a lantern situated between the said shield and the base, a lower projecting socket, a shaft attached thereto, a metal plate upon said base, a curved slot in said plate, said shaft working in the slot, a spring attached at one end to the lower end of said shaft, the other end thereof attached to a pin placed on the under side of said base, and means for lighting said lantern, substantially as shown and described.

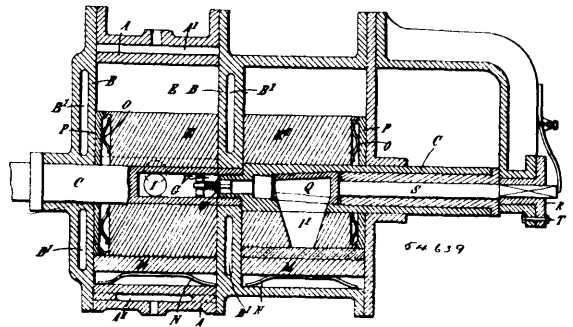
**No. 54,638. Hair Pin and Button Hook.**  
(*Epingle à cheveux et crochet de chaussures.*)



Ben Whiteley and Isaac N. Ford, both of Sterling, Colorado, U.S.A., 18th January, 1897; 6 years. (Filed 28th December, 1896.)

*Claim.*—The combination with a combined hair-pin and button-hook, formed of a single piece of wire and having a lateral portion, of a device to which it is designed to be connected, the same having guides in which the pin portion is received and guided, substantially as shown and described.

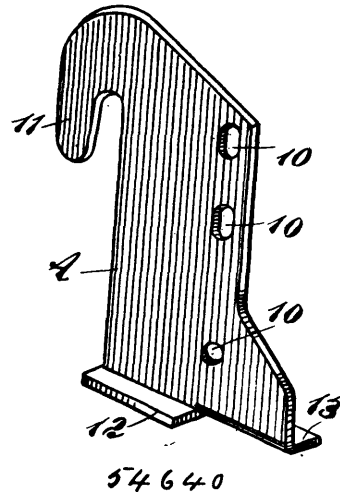
**No. 54,639. Rotary Motor and Pump.**  
(*Moteur rotatoire et pompe.*)



The Anglo-French Motor Carriage Company, Digbeth, Birmingham, England, assignee of Emile Roger, 52 Rue des Dames, Paris, France, 18th January, 1897; 6 years. (Filed 31st December, 1896.)

*Claim.*—1st. A rotary engine adapted to be used as a motor or pump, characterized by a piston hinged to a cylindrical block in such manner that it can lie in a recess therein, and so together with the block form a complete cylinder, and said block being keyed to an eccentrically arranged shaft having a longitudinal passage therein which communicates with a radial passage in the block leading to the aforesaid recess through which the motive fluid enters the working chamber by raising the piston. 2nd. A petroleum or other internal combustion motor, consisting of two engines of the kind referred to placed end to end on the same shaft, one adapted to serve as the motor operated by the burning of the combustible mixture, and the other adapted to act as the pump for drawing in and compressing the mixture for burning in the said motor. 3rd. A petroleum or other internal combustion motor, consisting of a rotary engine of the kind referred to and a reciprocating piston pump actuated from the main shaft of the engine for drawing in and compressing the fluids to be burnt in the chamber of the rotary motor.

**No. 54,640. Bedstead Joint.** (*Joint de couchette.*)



Daniel Delevan Curtis and George E. Manzer, both of Sidney Centre, New York, U.S.A., 18th January, 1897; 6 years. (Filed 26th December, 1896.)

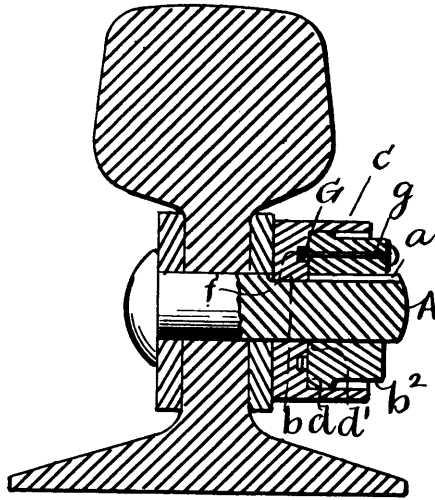
*Claim.*—1st. A bed-rail fastener having flanges formed at its bottom portion, the flanges being upon both sides, one flange in advance of the other, as and for the purpose specified. 2nd. A bed-rail fastener, the body portion of which is provided with horizontal flanges at its sides, the flanges being in staggered arrangement, whereby the material from which the body is made may be cut and struck up in opposite directions in the formation of the said flanges, as and for the purpose set forth.

**No. 54,641. Lock Nut.** (*Arrête-écrou.*)

Charles Henry Crosthwaite and Michael David Tighe, both of Canon City, Colorado, U.S.A., 18th January, 1897; 6 years. (Filed 18th December, 1896.)

*Claim.*—The combination of a bolt having a longitudinal keyway formed therein, a washer fitting the same and having a projection engaging the said keyway, said washer having on its outer face a marginal flange or rim extension in the plane of its lateral faces and surrounding the nut seat, the bottom of said seat having the con-

centric annular bearing surfaces  $d, d'$ , and the annular series of the ratchet teeth formed between and below the plane of said surfaces,

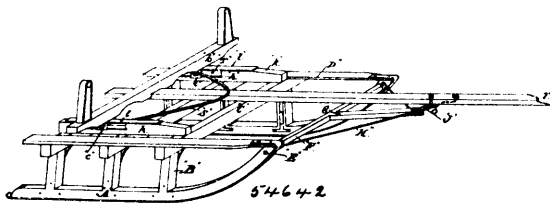


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a nut having a circular base portion adapted to fit closely within the said seat, a spring-pressed dog carried by the said nut and adapted to engage the said ratchet teeth, and a headed pin or shank attached to said dog and extending out through the nut, substantially as specified.

**No. 54,642. Construction of Bob-Sleighs.**

(Construction de traineau-jumeau.)



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The Woodstock Wagon and Manufacturing Company, assignee of Frederick Mayes, all of Woodstock, Ontario, Canada, 18th January, 1897; 6 years. (Filed 22nd December, 1896.)

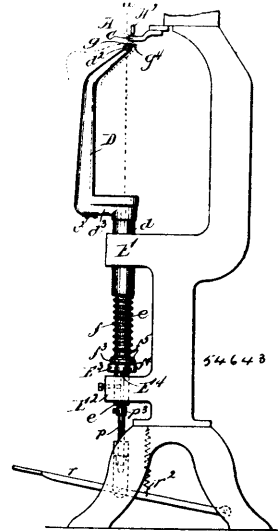
*Claim.*—The slide formed in rests  $k$  by means of the plates  $l$  and  $h$ , and the roller bearing lug  $c$  bolted on underside of bolster, substantially as and for the purpose hereinbefore set forth.

**No. 54,643. Pegging Machine.** (*Machine à cheviller.*)

The Davey Pegging Machine Company, Portland, Maine, assignee of William Winslow Kelly, Spencer, Massachusetts, all in the U.S.A., 18th January, 1897; 18 years. (Filed 21st December, 1896.)

*Claim.*—1st. The combination of the peg-driving mechanism of a pegging-machine with a rotatable horn, the axis of rotation of which is offset with relation to the line of feed of the peg-driving mechanism, substantially as and for the purpose described. 2nd. The combination of the peg-driving mechanism of a pegging-machine, with a rotatable horn, the axis of rotation of which is offset with relation to the line of feed of the peg-driving mechanism, and an anvil-piece pivotally supported in the tip of said horn, substantially as and for the purpose described. 3rd. The combination of the peg-driving mechanism, of a pegging-machine, with a rotatable horn, the axis of rotation of which is offset with relation to the line of feed of the peg-driving mechanism, and an anvil-piece supported in the tip of said horn, and means for holding said anvil-piece against rotation with the horn, substantially as and for the purpose described. 4th. The combination of the rotatable horn, with an anvil-piece supported in the tip thereof and projecting laterally beyond said horn-tip to afford a support for the material, and means for holding said anvil against rotation with the horn, substantially as described. 5th. The combination of the peg-driving mechanism, comprising an awl and peg-driver, with a rotatable horn, the axis of rotation of which is offset with relation to the said awl and driver, which operate outside the periphery of the tip of said horn, and an anvil-piece supported in said horn-tip, and projecting over the periphery thereof toward the awl and driver, and means for holding said anvil-piece against rotation with the horn, substantially as described. 6th. The herein-described anvil-piece for the horn of a pegging-machine, comprising a pivotal shank and an overhanging head or supporting portion, having a lateral projection at

one end thereof, substantially as described. 7th. The combination of the rotatable horn, with a sprocket-wheel held against rotation



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in the axis of the horn, a second sprocket-wheel having its bearing in the rotating horn and a chain connecting said sprocket-wheels, an anvil-piece pivotally supported in the horn-tip, and connection between the same and said sprocket-wheel and horn, substantially as and for the purpose described. 8th. The combination with the rotatable horn and means for yieldingly pressing it upward, of a treadle and means for yieldingly pressing it upward, and a loose or slotted connection between said treadle and horn, said horn being movable downward independently of said treadle, substantially as described. 9th. The combination of a rotatable horn, with an anvil piece supported in the tip thereof, gearing in said horn to prevent rotation of said anvil-piece therewith, and a shaft in the shank of said horn connected with said gearing, a fixed post below and in line with the said horn engaged with said shaft as described, whereby the latter can move longitudinally but without rotary movement in said post, substantially as and for the purpose set forth. 10th. The combination of a rotatable horn, with a spring to press it upward, and an anti-friction bearing for the end of said spring comprising a collar, a series of balls contained therein, and bearing-surfaces for said balls at each side of said collar, substantially as and for the purpose described. 11th. The combination of the horn having a hollow or tubular shank, and an anvil-piece supported in the tip thereof, and gearing in said horn to prevent rotation of said anvil-piece therewith, a post fixed below and entering the tubular shank of said horn, a shaft in said horn connected with the gearing therein, and engaged with said post as described, a spring to elevate said horn and a treadle connected to a shaft in said horn and provided with a stop to limit the upward movement thereof, substantially as described.

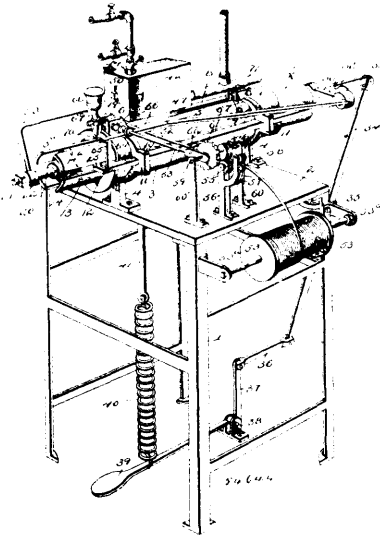
**No. 54,644. Can Soldering Machine.**

(*Machine à souder les boîtes en fer blanc.*)

Walter Joel Phelps, Edwin Phelps and Hosea F. Goings, all of Baltimore, Maryland, U.S.A., 18th January, 1897; 6 years. (Filed 21st November, 1896.)

*Claim.*—1st. In a can soldering machine, an outer cylindrical shell or casing having a longitudinal top slot, a stationary cylindrical expandible core arranged within said shell or casing, and extending the entire length thereof, the soldering iron, and means for sliding a can body longitudinally between said shell or casing and said core, substantially as set forth. 2nd. In a can soldering machine, a cylindrical shell or casing having a longitudinal top slot, a rigidly supported stationary expandible core arranged within the shell or casing and normally snugly fitting the interior thereof, a soldering iron arranged to extend within said top slot, and a carrying device for positively carrying a can body under the soldering iron and between said core and the shell or casing, substantially as set forth. 3rd. In a can soldering machine, a cylindrical shell or casing, a suitably arranged soldering iron, a stationary expandible core snugly fitting within the shell or casing and extending the entire length thereof, and means for carrying a can body between the core and the shell or casing and against said soldering iron, substantially as set forth. 4th. In a can soldering machine, a cylindrical shell or casing provided with a continuous longitudinal top slot, a suitably arranged soldering iron, carrying mechanism for the can bodies, and means for adjusting the distance between the edges of said top slot to slightly vary the diameter of the shell or casing, substantially as set forth. 5th. In a can soldering machine, a stationary cylindrical shell or casing having a continuous longitudinal top slot and a flared mouth at one end, a rigidly supported stationary hollow cylindrical expandible core snugly fitting the

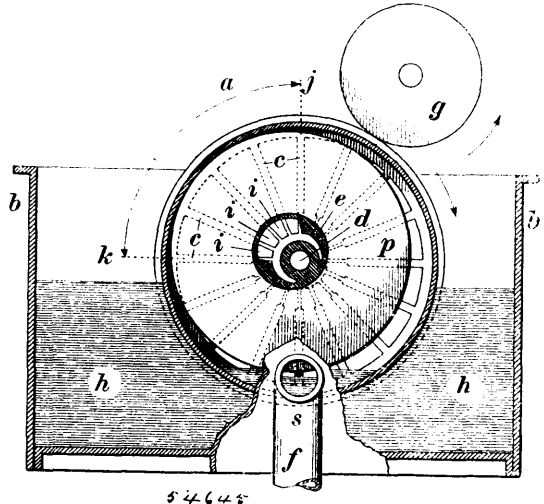
interior of the shell or casing and extending the entire length thereof, said expansible core having a longitudinal top space coinciding



with said top slot, and projecting out of and beyond the flared end of the shell or casing to form a receiving end for the unsoldered can body, a soldering iron arranged to extend within the top slot of the shell or casing, and means for sliding a can body longitudinally between the shell or casing and the stationary core therein, substantially as set forth. 6th. In a can soldering machine, the shell or casing provided with a continuous longitudinal top slot and upwardly projecting lugs located at directly opposite sides of said top slot, adjusting screws mounted in said lugs to slightly vary the diameter of the shell or casing, a soldering iron arranged to extend within said top slot, a cylindrical core arranged within said shell or casing, and means for carrying a can body between the core and the shell or casing and under said soldering iron, substantially as set forth. 7th. In a can soldering machine, a cylindrical shell or casing having a continuous longitudinal top slot, a soldering iron arranged to extend into said top slot, a cylindrical expansible core snugly fitting within the shell or casing and comprising a central core rod extending longitudinally of the shell or casing, oppositely located collars fitted on the rod, a circular group of parallel spaced segmental plates, and expanding springs arranged between said segmental plates and said collars, and a carrying device for the can body, substantially as set forth. 8th. In a can soldering machine, a cylindrical shell or casing having a continuous longitudinal top slot, the soldering iron a cylindrical expansible core snugly fitting within the shell or casing and comprising a central longitudinal core rod extended beyond one end of the shell or casing, oppositely located collars fitted on the rod and having peripheral sockets, a circular group of parallel spaced segmental plates having cleat irons on their inner sides concentric with said collars, and expanding springs arranged in said sockets and normally pressing against said cleat iron, a rigid supporting rod suitably connected with the extended end of the core rod, and a carrying device for the can body, substantially as set forth. 9th. In a can soldering machine, a cylindrical shell or casing provided with a continuous longitudinally disposed top slot and in its opposite sides with diametrically opposite guide slots, a soldering iron arranged to project into said top slot, a stationary cylindrical expansible core arranged within and extending the entire length of the shell or casing and having at opposite sides longitudinal spaces coinciding with said guide slots, a pair of reciprocating carrier bars mounted to slide in said guide slots and each provided with a series of inwardly projecting spring adjusted catch dogs normally projecting into the longitudinal side spaces of the core, the catch dogs of the opposite bars being oppositely arranged in pairs to simultaneously engage successive can bodies, a cross-head connection between one end of said carrier bars and suitable treadle mechanism connected with said cross-head connection to provide for the reciprocation of the carrier bars in both directions, substantially as set forth. 10th. In a can soldering machine, a cylindrical shell or casing provided with a longitudinal top slot, a cylindrical core arranged within the shell or casing, a heater box arranged above the shell or casing and provided in its bottom with a longitudinal slot and in one end with a vertically disposed slot, a burner arranged within the upper part of said heater box, a soldering iron arranged within the heater box and projecting through the bottom slot thereof into the top slot of the shell or casing, said soldering iron being provided near one end with oppositely projecting pins disposed above the bottom of the heater box, and at its opposite end with a headed screw projecting through the slot in one end of the heater box, and a suitable carrier device to move the can bodies under the soldering iron between the shell or casing and the core, substantially as set forth. 11th. In a can soldering machine, a cylindrical shell or casing provided with a longitudinal top slot, a

cylindrical core arranged within the shell or casing, a soldering iron arranged to project into said top slot and provided at its front lower edge with a solder recess or pocket, a carrier device for the can body a suitably arranged spool or reel carrying a solder strip, and feed mechanism controlled by the movement of said carrier device to provide for feeding the solder strip into said solder recess or pocket during the time that a can body is passing one half of its length under the iron, substantially as set forth. 12th. In a can soldering machine, a cylindrical shell or casing provided with a top slot, a cylindrical core arranged within the shell or casing, a soldering iron arranged to project into said top slot, a reciprocating carrier device for the can body, a track rail fitted to and reciprocated with said carrier device, said track rail having a front horizontal portion and a rear inclined portion, a suitable holder for a strip of solder, a suitably arranged pair of friction feed rolls gripping the strip of solder therebetween to feed the same against one side of the soldering iron, and a ratchet device operatively connected with one of said feed rolls and having a movable feed lever carrying at one end a track roller resting on said track rail, substantially as set forth.

**No. 54,645. Mould-Cylinder. (Cylindre-moule)**



The Vacuum Wet Machine Co., assignee of Howard Parker, both of St. Johnsbury, Vermont, U.S.A., 18th January, 1897; 6 years. (Filed 20th November, 1896.)

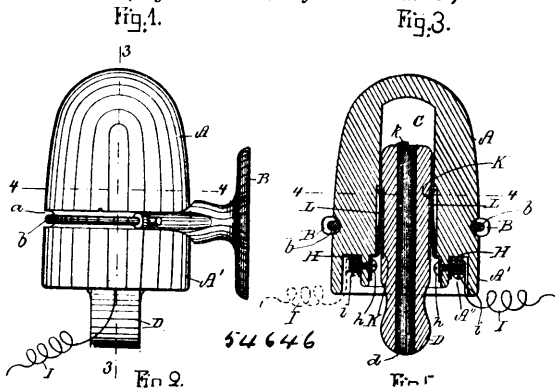
*Claim.*—1st. The combination of a pulp vat, a mould-cylinder adapted to rotate therein, having a pervious periphery, and longitudinal internal compartments formed against such periphery, a water outlet, arranged below the axis of the cylinder, an exhaust conduit arranged above the water outlet, and an appliance having a solid portion arranged above the axis, and adjacent to those compartments upon which the pulp has been deposited, and establishing communication between such compartments and the exhaust conduit, and also having an open portion adjacent to the water outlet, to open communication between such outlet and the compartments next to it, substantially as described. 2nd. The combination of the pulp vat *b*, and the rotary mould-cylinder therein, having a foraminous periphery, and separate internal longitudinal compartments formed against this periphery, enclosed at one end, with a water outlet *f*, and a conduit *s*, communicating with a light exhaust, and a detached head *p*, fitting the cylinder, and means for supporting the said head eccentrically to the cylinder, whereby it is adapted to cover and close compartments above the axis, and to uncover a certain number of those below, and establish communication between them and the said conduit and water outlet, substantially as described. 3rd. In combination with a pervious cylinder, having internal longitudinal compartments formed against its curved surface, and closed at one end, a detached head *p*, mounted eccentrically, to cover and close a predetermined number of such compartments at the other end, and an exhaust conduit *e*, also eccentric with the cylinder, and communicating with said compartments when closed, as herein set forth. 4th. The combination of the pulp vat *b*, and the rotary mould-cylinder therein, having separate longitudinal compartments formed within its foraminous periphery, closed at one end against ingress from the pulp vat, with a water outlet and exhaust conduit at the other end of the cylinder, and a detached head *p*, in an opening of which the exhaust conduit ends, of which head the portion above the axis of the cylinder has more surface than the portion below, whereby it is adapted to cover and close said compartments during a certain portion of their upward movement, as they revolve about the axis of the cylinder, and place them in communication with the exhaust, while during the remainder of their movement, and when submerged in the vat, they are on open communication with the water outlet, substantially as set forth. 5th. In combination with the pulp vat *b*, and the foraminous periphery and closed head of the mould-cylinder therein, the partitions *m, m*, forming internal longi-



tudinal compartments, and reaching to the skeleton end *c*, the detached head *p*, fitting this skeleton end, but eccentric with it, an exhaust conduit *e*, and a water outlet *f*, the said exhaust conduit being eccentric with the cylinder, and arranged to communicate at the ports *i*, *i'*, with a certain number of such compartments as in the rotation of the cylinder are emerging from the vat, while the said head, by reason of its eccentricity, uncovers such compartments as are submerged in the vat, and leaves them in open communication with the water outlet, substantially as and for the purpose set forth. 6th. The combination of a pulp vat, a mould-cylinder adapted to rotate therein, having a pervious periphery, and longitudinal internal compartments formed against such periphery, a water outlet arranged below the axis of the cylinder, an exhaust-conduit arranged above the water outlet, and an appliance having a solid portion arranged above the axis, and adjacent to those compartments upon which the pulp has been deposited, and establishing communication between such compartments and the exhaust conduit, and also having an open portion in the plane of the water outlet, to open communication between such outlet and the compartments next to it, and in connection with the water outlet a light exhaust, as described.

**No. 54,646. Combined Switch and Fuse Box.**

(*Aiguille et boîte de fusée combinées.*)



Joseph Brodie Smith, Manchester, New Hampshire, U.S.A., 18th January, 1897; 6 years. (Filed 18th November, 1895.)

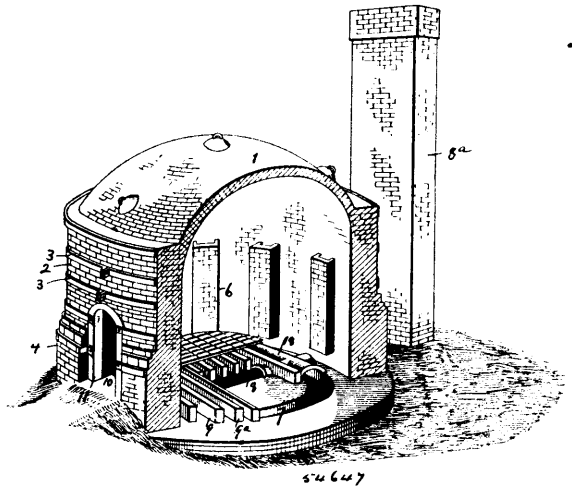
*Claim.*—1st. The herein described combined switch and fuse box consisting of a box of insulating material having a central recess in combination with a perforated plug of insulating material longitudinally movable in said recess, contact plates and a fuse wire attached thereto and contact springs secured within the interior of the box and connected to the circuit wires, substantially as and for the purpose set forth. 2nd. In a combined switch and fuse box, a plug of insulating material having a longitudinal channel in combination with contact plates connected to a fuse wire crossing the upper end of said channel, a box of insulating material having a central recess for receiving said plug and extended above the latter and stop projections to limit the upward movement of said plug, substantially as and for the purpose set forth. 3rd. The herein described combined switch and fuse box consisting of a box of insulating material open at the bottom in combination with one or more insulating petticoats about said opening, a chamber forming the interior of said box, a removable plug of insulating material having a perforation therein acting to furnish a vent to the gases contained in that portion of the chamber not filled by the plug, contact plates attached to said box and protected from moisture by the aforesaid petticoats, said contact plates being adapted to connect with corresponding contact plates on the plug and serving for terminals of the leading wires of the before mentioned contact plates carried upon the plug and a fusible conductor connecting them, substantially as and for the purpose set forth.

**No. 54,647. Brick Kiln.** (*Four à briques*)

Edward M. Pike, Chenoa, Illinois, U.S.A., 19th January, 1897; 6 years. (Filed 24th August, 1896.)

*Claim.*—1st. In a down draft brick kiln, a floor comprising an annular sub-flue, a diametric sub-flue connecting same with the stack, and a series of flues above and crossing said diametric sub-flue and opening into same, combustion bags on the inner wall of the kiln, furnaces opening into the bottom of the said bags, and air flues introducing air into the upper portions of the said bags, substantially as and for the purpose described. 2nd. A down draft kiln having a stack, a diametric sub-flue leading thereto, an annular sub-flue intersecting the same and both of which flues are partially arched, a series of parallel flues above said sub-flues and communicating with them, combustion bags and furnaces opening therein, and air ducts passing about said furnaces and back of the bag wall and venting into the upper portion of the said combustion bag, substantially as described. 3rd. A down draft kiln, comprising a superstructure, combustion bags on the inner wall thereof, furnaces opening into said bags, air ducts from the open air passing around the furnaces and back of the bag wall and into the combustion bag

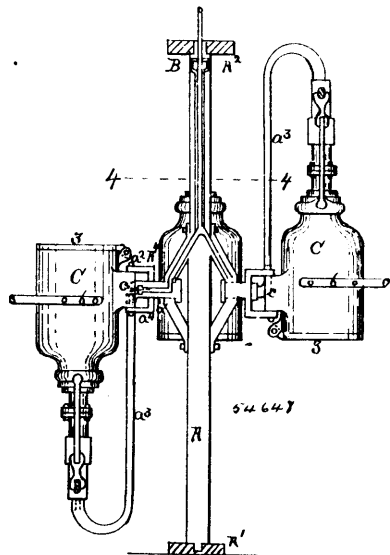
near its top, combined with a superstructure or floor in which there is a series of parallel flues opening into an annular flue, a diametric



flue and thence into the stack, substantially as described. 4th. A down draft kiln, comprising a superstructure, a door therefor, a metallic frame for the door, clamping bands about the superstructure with ends bolted to the said frame, combustion bags within the said superstructure and furnaces opening therein, an air duct passing about the said furnaces and behind the combustion bag wall and opening into the said bag near its top, combined with a substructure containing annular and diametric draft flues leading to the stack, substantially as described.

**No. 54,648. Glass-blowing Machine.**

(*Appareil pour souffler le verre.*)



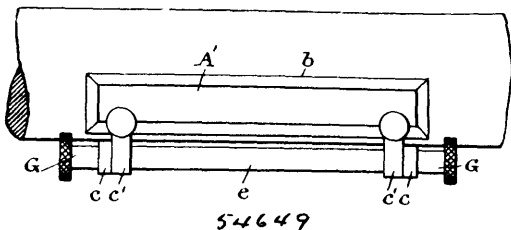
James Lydiatt, Wallaceburg, Ontario, Canada, 19th January, 1897; 6 years. (Filed 16th November, 1896.)

*Claim.*—1st. The combination with a mould, of a plunger provided with an air inlet channel, substantially as set forth. 2nd. The combination with a mould, of a plunger provided with an air inlet channel, and a reciprocatory channel arm carrying said plunger, substantially as set forth. 3rd. The combination with a mould, of a plunger with an air inlet channel, and a reciprocatory channel arm carrying said plunger, said plunger detachable from said arm, substantially as set forth. 4th. The combination of a reversible mould provided with a movable plunger, and means to admit air into said mould, substantially as set forth. 5th. The combination of a rotatable standard, a mould carried thereby provided with a movable plunger, and means to admit air into said mould, substantially as set forth. 6th. The combination of a rotatable standard, of an air supply pipe, a mould carried by said standard provided with a movable plunger, and means connecting said mould with said air supply pipe, substantially as set forth. 7th. The combination of a standard, of an air inlet and rotatable ported bracket valve, and a mold carried by said valve, the port of said valve communicable with said air inlet and said mould, substantially as set forth. 8th. The combination of a standard, an air inlet, a rotatable ported bracket valve

communicable with said air inlet, and a mould carried by said valve provided with a movable plunger, said plunger communicable with said port, substantially as set forth. 9th. The combination of a standard, an air inlet, a rotatable ported bracket valve communicable with said air inlet, and a reversible mould carried by said valve provided with a channel plunger, said plunger communicable with the port of said valve, substantially as set forth. 10th. The combination of a standard, an air inlet, a reversible mould carried by the standard provided with a movable channelled plunger, and means connecting said plunger with said air inlet, substantially as set forth. 11th. The combination of a rotatable standard, an air inlet, a series of rotatable bracket valves communicable with the air inlet, a series of reversible moulds carried by said valves, said moulds communicating with said ports when in normal position and cut off from said ports when in reversible position, substantially as set forth. 12th. The combination of a rotatable standard, an air inlet, channelled brackets communicating with said air inlet, rotatable ported bracket valves journalled in said channelled brackets, and reversible moulds carried by said valves, each provided with a movable plunger communicable with the interior of the mould and with the port of the corresponding valve, substantially as set forth.

**No. 54,649. Key-Seat Rule.**

(Règle pour rainures à la clavettes.)

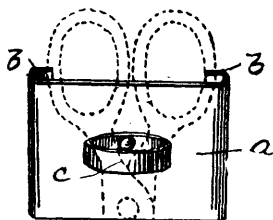


54649

Frank Cramblitt, Baltimore, Maryland, U.S.A., 19th January, 1896; 6 years. (Filed 13th November, 1896.)

*Claim.*—1st. In a key-seat rule the combination of two parallel plates, each having a straight edge and half-hinge parts, those on one plate being tapped and screw-threaded and those on the other plate being bored and countersunk, and a screw uniting said half-hinge parts and having a cone-shaped shoulder which bears on the countersunk bore, whereby the hinge parts and plates are clamped and held immovable. 2nd. In a key-seat rule the combination of two parallel plates each having a straight edge and hinged together at the edges opposite the said straight edges, and one of said plates being held by set-screws which allow of its separation and detachment from the other plate, and means for holding said plates more or less open, as set forth.

**No. 54,650. Scissors Holder.** (Porte-ciseaux.)



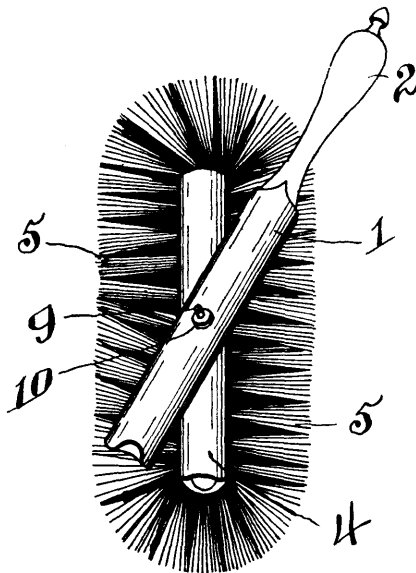
54650

Amelia D. Polsgrove, Huntingdon, Pennsylvania, U.S.A., 19th January, 1897; 6 years. (Filed 23rd November, 1896.)

*Claim.*—1st. A scissors holder, consisting of a supporting-plate having upon its front face a loop or band to receive the scissors, and a pin attached to the rear face of the supporting-plate, the ends of said plate being bent rearwardly and inwardly to form heads b, by which the body of the plate is held away from the material to which it is attached, substantially as set forth. 2nd. A scissors holder consisting of a supporting-plate having upon one face a loop or band c, to receive the scissors and having its ends bent rearwardly and

inwardly to form two heads b, and a pin attached to the supporting plate between and lying in the planes of said beads, substantially as set forth.

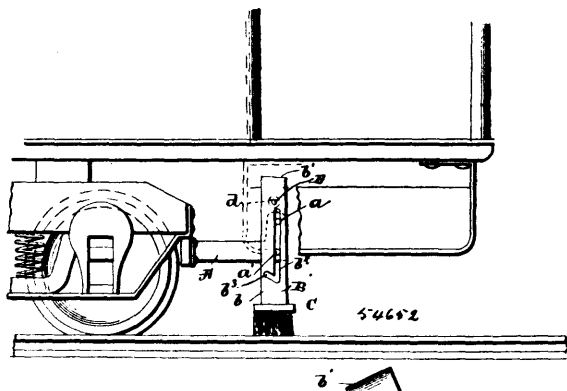
**No. 54,651. Brush.** (Brosse.)



Byron S. Baxter, Providence, Rhode Island, U.S.A., 19th January, 1897; 6 years. (Filed 17th December, 1896.)

*Claim.*—1st. In a reversible brush, the head member and the handle member, one of said members being convexed from one side edge to the other, and the other of said members being concaved from one side edge to the other, in combination with a suitable pivot of sufficient length to permit the members to be reversed without detachment, extending through the handle member and provided exterior thereto with a nut adapted to be operated to seat one of the said members in the other member, as set forth. 2nd. A reversible brush, comprising the brush head member convexed throughout its length from one side edge to the other, the brush handle member concaved to conform with the said convex surface of the head, the pivot bolt of sufficient length to permit the members to be reversed without detachment, extending through both brush members, and a suitable thumb nut, the latter being operated to seat the head member, as set forth.

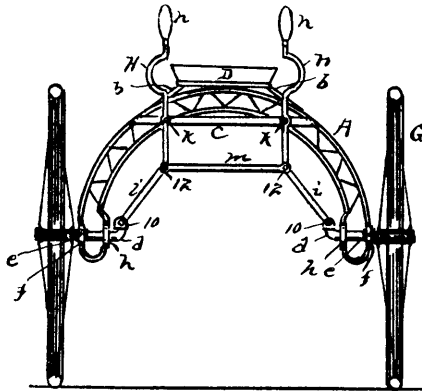
**No. 54,652. Track Cleaner.** (Nettoyeur de voie.)



George Edmund Turner, Marion, Ohio, U.S.A., 19th January, 1897; 6 years. (Filed 19th December, 1896.)

*Claim.*—1st. The combination with the bracket A, provided with the rigid studs a, a', of the frame B, provided with the slots b<sup>1</sup>, b<sup>2</sup>, and the brush C, substantially as and for the purpose specified. 2nd. The combination with the bracket A, the head of which is provided with the rigid studs a, a', projecting on each side thereof in the same line, of the frame B consisting of the parallel sides b, b, having two parallel slots b<sup>1</sup>, b<sup>2</sup>, terminating in inclined slots b<sup>3</sup>, into which the studs project, and having the brush C secured thereto, substantially as and for the purpose specified. 3rd. The bracket A having the laterally projecting studs a, a', on each side thereof in the same line, in combination with the frame B having the slots b<sup>1</sup>, the brush C, and the adjustable bolt D carrying the sleeve c, substantially as and for the purpose specified.

**No. 54,653. Sulky. (Désobligeante.)**

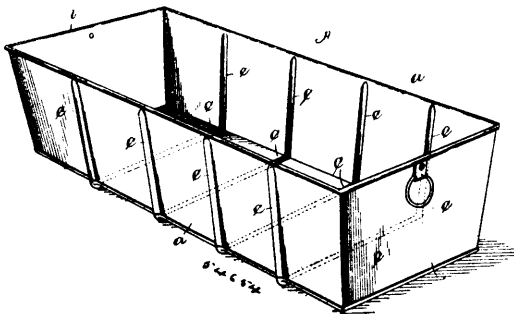


Eben N. Higley, Somersworth, New Hampshire, U.S.A., 19th January, 1897; 6 years. (Filed 24th December, 1896.)

*Claim.*—1st. In a sulky, the combination with the frame or body, of a pair of wheels mounted on short independent transversely pivoted axles, in combination with connected levers arranged on opposite sides of the seat, and adapted to be operated by the contact of the body of the driver therewith as he leans over to one side, and suitable connections between said levers and axles, whereby as either lever is operated the axles will be swung on their pivots to incline the wheels in parallelism at an angle to a vertical plane, substantially as set forth. 2nd. In a sulky, the combination with the frame, of a pair of wheels mounted on short independent axles transversely pivoted within hangers at the lower ends of said frame, levers connected together by a parallel rod and extending upward on opposite sides of the seat and adapted to be operated by the contact of the body of the driver therewith as he leans over to one side, and suitable connections between the levers and the transversely pivoted axles, whereby as either lever is operated both wheels will be inclined in parallelism at an angle to a vertical plane, substantially as set forth. 3rd. In a sulky, the combination with the frame A, provided with guide-slots at its lower end, of a pair of wheels mounted on short independent axles transversely pivoted within hangers at the lower ends of said frame, said axles passing through said guide-slots, levers connected together by a parallel rod and extending upward on opposite sides of the seat and adapted to be operated by the contact of the body of the driver therewith as he leans over to one side, and suitable connections between the levers and the transversely pivoted axles, whereby as either lever is operated both wheels will be inclined in parallelism at an angle to a vertical plane, substantially as set forth. 4th. In a sulky, the combination with the wheels G mounted upon short independent axles d, transversely pivoted within hangers at the lower ends of said frame and passing through said guide-slots h, the levers H, fulcrumed to the bar C, and connected together at their lower ends by the parallel rod m, said levers being provided at their upper ends with pads, and the connecting-rods i, pivoted to the levers H, and to the inner ends of the axles d, all constructed to operate substantially in the manner and for the purpose described.

**No. 54,654. Butter Receptacle and Mould.**

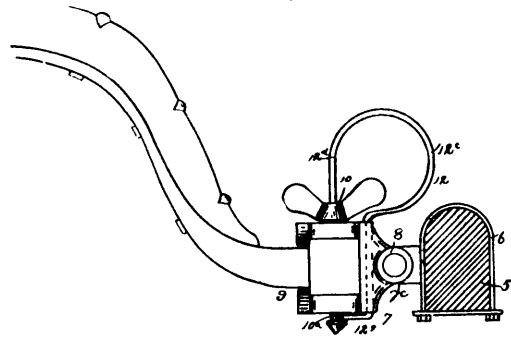
(Réceptacle à beurre et moule.)



Charles Irving Conover, Charlestown, Four Corners, New York, U.S.A., 19th January, 1897; 6 years. (Filed 19th December, 1896.)

*Claim.*—A butter or other receptacle, comprising a rectangular vessel I, having flaring sides and ends, and provided with a series of vertical and transverse ribs or grooves, substantially as shown and described.

**No. 54,655. Thill-Coupler. (Armon de limonière.)**



Ulrich Ohlsen, Globeville, Colorado, U.S.A., 19th January, 1897; 6 years. (Filed 24th December, 1896.)

*Claim.*—1st. In a thill-coupling, the combination of the bracket having a socket open in the front and on one side, and having apertures formed in the top and bottom, the thill-iron having a head adapted to enter said socket, said head being apertured to register with the apertures in the top and bottom of the bracket, the pin adapted to engage the apertures in the bracket and thill-iron head, said pin having a recess in its upper extremity and a suitable recess or circumferential groove formed near its lower extremity, and the spring-locking key passing through the bracket, its lower extremity being bent to engage the groove near the lower extremity of the pin, while the top of the key is adapted to enter a recess in the top of the pin, substantially as described. 2nd. In a thill-coupling, the combination of the bracket having a socket open in front and on one side, adapted to be fastened to the fore axle of the vehicle, and having apertures formed in its top and bottom, the thill-iron adapted to engage the socket of the said bracket and apertured to register with the bracket apertures, the pin adapted to engage the registering apertures in the bracket and thill-iron, said pin projecting above and below the bracket and having recesses formed in its protruding extremities, and a locking-key attached to the bracket, said key having the lower extremity bent to engage the recess in the lower part of the pin, while its upper extremity is formed into a spring-hook adapted to engage the recess in the top of the key, substantially as described. 3rd. In a thill coupling, the combination of the bracket adapted to be fastened to the fore axle of a vehicle, the bracket having a socket open in front and on one side, and provided in front with upper and lower jaws projecting respectively below the top and above the bottom of the socket, said bracket having apertures formed in its top and bottom, the thill-iron having a head fashioned to engage the bracket-socket, and apertured to coincide with the apertures in the bracket, and having shoulders engaging front jaws of the bracket, the pin passing through the registering apertures of the bracket and thill-iron, and suitable means attached to the bracket for locking the pin in place, substantially as described. 4th. In a thill-coupling, the combination of the hollow bracket adapted to be connected with the fore axle of a vehicle, having a socket open in front and on one side, front upper and lower jaws projecting respectively below the top and above the bottom of the bracket, said jaws projecting laterally from the body of the bracket, and tapered or rounded to increase the distance between their outer extremities, said bracket having apertures formed in the top and bottom, the thill-iron having an apertured head adapted to enter the bracket-socket, and shouldered to engage the front jaws of the bracket, a pin adapted to engage the registering apertures of the thill-iron and bracket, and suitable means for locking the pin in place, substantially as described. 5th. In a thill-coupling, the combination of the hollow bracket open in front and on one side, and having apertures formed in its top and bottom, the thill-iron adapted to engage the bracket socket and apertured to coincide with the bracket apertures, a conical or tapering pin adapted to engage the apertures of the thill-iron and bracket, and suitable means for locking the pin in place, substantially as described. 6th. In a thill-coupling, the combination of the hollow bracket open in front and on one side, and having apertures formed in its top and bottom, the thill-iron having an apertured head adapted to engage the bracket socket, the pin engaging the coinciding apertures in the bracket and thill-iron, said pin projecting both above and below the bracket, and provided with recesses formed in its protruding extremities, and a locking-key attached to the bracket and adapted to engage the protruding extremities of the pin, one extremity of the key being formed into a spring-hook, as and for the purpose set forth.

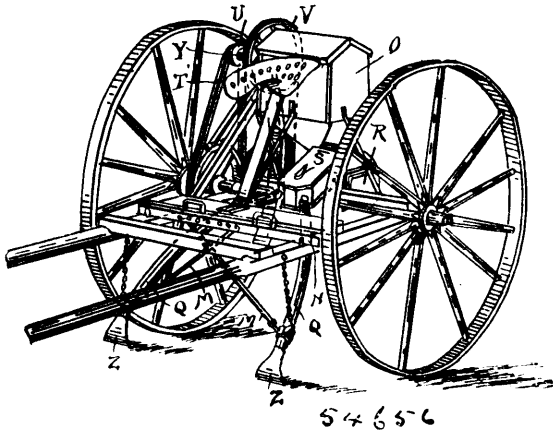
**No. 54,656. Distributor for Fertilizers, etc.**

(Distributeur d'engrais, etc.)

John W. Randall and Alonzo R. Kibbe, both of New Richmond, Wisconsin, U.S.A., 19th January, 1897; 6 years. (Filed 24th December, 1896.)

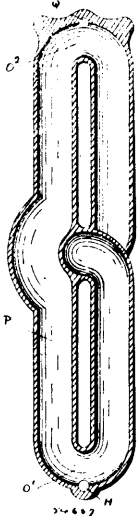
*Claim.*—1st. The combination of the running wheel axle having belt wheel T, the belt T', and driven wheel U on counter shaft

above, the hopper C having a vertical stirrer and feeder shaft connected by bevel gear X with the counter shaft, the fan driving



wheel V and clutch Y on said counter shaft, the fan-casing P connected with the lower part of the hopper and having a driven wheel P<sup>2</sup>, and the belt P<sup>4</sup> connecting the driven wheel V of the counter shaft with the driven wheel P<sup>2</sup> of the fan-shaft, all arranged substantially as shown and described. 2nd. In a poison distributor, the combination with the hopper O, of the vertical stirrer shaft A with stirring arms and feed disc D, the stationary ring C forming a contracted throat above the disc, a vertically adjustable step bearing with set screw F forming a subjacent support for adjusting vertically the shaft A and disc D for regulating the feed, and a subjacent fan-chamber communicating with the lower part of the hopper casing, substantially as shown and described. 3rd. The combination in a poison distributor, of a fan-chamber P with blast fan P<sup>1</sup>, outlets N<sup>1</sup>, N<sup>1</sup>, with pivoted deflector I located between them, the hose sections Q, Q, and means for adjusting them to the width of the rows and the height of the vines, substantially as and for the purpose described. 4th. The combination with the two hose sections Q, Q, in a poison distributor, of the crossed rods M, M; and the adjustable sliding bar N, having holes to accommodate the crossed rods to regulate the adjustment of the hose, substantially as and for the purposes stated.

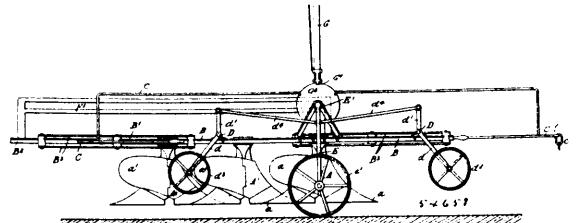
**No. 54,657. Radiator. (Radiateur.)**



John Thomas Jackson and Fergus James Travers, both of Toronto, Ontario, Canada, 19th January, 1897; 6 years. (Filed 26th December, 1896.)

*Claim.*—1st. A radiator having the several loops thereof with the main connection in the centre, substantially as set forth. 2nd. A radiator having central connections with right angle bends or elbows cast integral within the centre of the circulating loop, thereby causing a constant flow of circulation, substantially as set forth. 3rd. In a radiator the construction of a passage along the bottom of the loops of the radiator by which means condensed steam or water may be released or drained off and the radiator emptied when not in use, substantially as set forth.

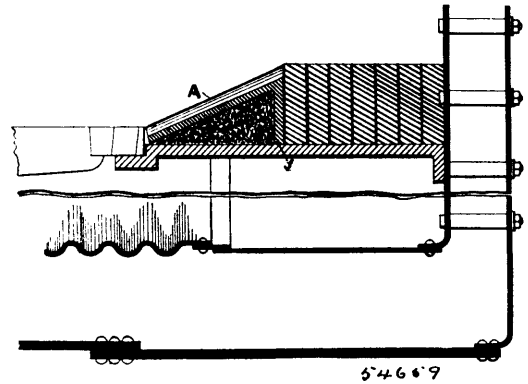
**No. 54,658. Plough. (Charrue.)**



William Henry Giffillan Greaves, Cradock, Cape Colony, 19th January, 1897; 6 years. (Filed 26th December, 1896.)

*Claim.*—1st. A plough body having two penetrating points at opposite ends so that it may be operated in opposite directions, substantially as hereinbefore described. 2nd. The combination with a plough body having two penetrating points at opposite ends, of a reversible mould board or reversible portion of a mould board, substantially as and for the purpose hereinbefore described. 3rd. The combination with a plough fitted with a double plough body or double plough bodies, of wheels such as d<sup>2</sup>, d<sup>3</sup>, c<sup>1</sup>, c<sup>3</sup>, and a hand lever connected so as to operate all of these wheels simultaneously, substantially in the manner and for the purpose hereinbefore described with reference to the accompanying drawings. 4th. A plough having two or more double plough bodies each mounted on a beam or frame such as B, B<sup>1</sup> or B<sup>2</sup>, all of which are connected together by radius bars such as B<sup>3</sup>, substantially as hereinbefore described with reference to the accompanying drawings. 5th. The combination and arrangement of parts constituting a plough with two or more double plough bodies, substantially as hereinbefore described and illustrated in the accompanying drawings.

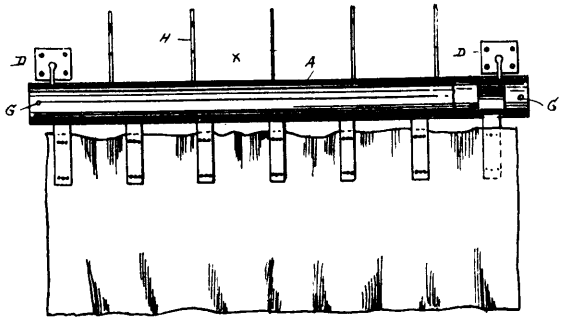
**No. 54,659. Furnace Fire Bridge. (Autel de fournaies.)**



James Regan, Philadelphia, Pennsylvania, U.S.A., 19th January, 1897; 6 years. (Filed 26th December, 1896.)

*Claim.*—1st. An insulated fire bridge provided on the upper surface with a series of grooves, channels or depressions for the retention of ashes or other non-conductors of heat and embedded in similar substance, substantially as and for the purpose described. 2nd. An insulated fire bridge plate A composed of the sections d, d<sup>1</sup> and d<sup>2</sup>, and provided with a flange or foot f, grooves, channels or depressions b, and ridges c, substantially as specified.

**No. 54,660. Curtain Fixture. (Appareil de rideaux.)**

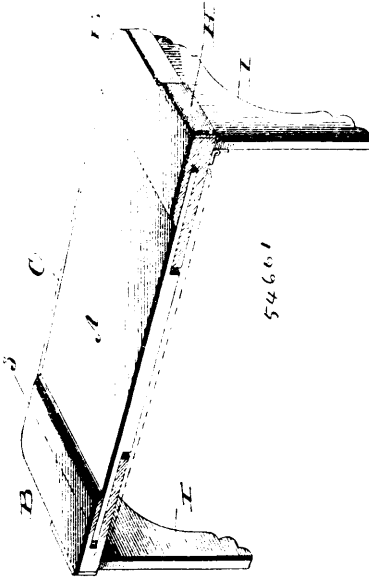


Albert N. Russell, Mound Valley, Kansas, U.S.A., 19th January, 1897; 6 years. (Filed 28th December, 1896.)

*Claim.*—The combination with a curtain pole, having an elliptical bore, with which communicates a longitudinal slot, of a curved arm provided with an attaching-plate, the extremity of said arm being secured to said pole to support the latter, a series of curved hooks, one end of which is secured to the pole, and the outer end of each

of which is provided with a hooked portion adapted to support flower pots, bird cages, etc., and a clamping device formed of spring metal, the central portion of which is elliptical, the ends of which are bent at right angles thereto and extending parallel to each other, said clamp being adapted to enter the elliptical bore of the pole, and the ends to extend through the slot, said ends being also provided with teeth or projections, whereby the curtain is securely held between the depending ends of the clamp, substantially as described.

**No. 54,661. Window Shelf. (Tablette de fenêtre.)**



Morris Lary, New York, State of New York, assignee of Milo Kingsbury Waite, Northville, New York, all in the U.S.A., 19th January, 1897; 6 years. (Filed 22nd December, 1896.)

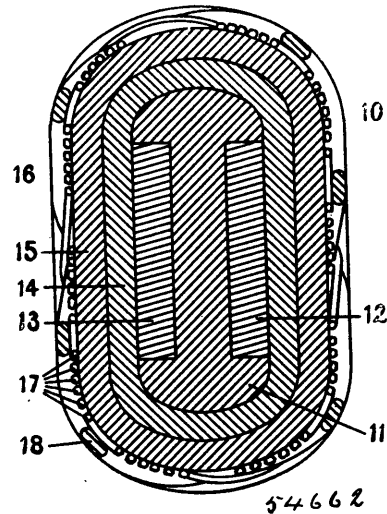
*Claim.*—1st. A window shelf composed of the central body portion having cut-away ends, recessed end pieces which are applied to the ends of the body portion, combined with toggle levers for adjusting the end pieces, substantially as set forth. 2nd. A window shelf composed of the central body portion having cut-away ends, recessed end pieces which are applied to the ends of the body portion, and suitable brackets attached to the under sides of the shelf, combined with means for adjusting the end pieces, substantially as set forth. 3rd. A window shelf composed of the central body portion having cut-away ends, recessed end pieces which are applied to the ends of the body portion, and suitable brackets attached to the under sides of the end pieces, combined with means for adjusting the end pieces, substantially as set forth. 4th. A window shelf composed of the central body portion having cut-away ends, recessed end pieces which are applied to the ends of the body portion, combined with toggle levers for adjusting the end pieces, and means yielding to permit such levers to pass their dead centres, substantially as set forth. 5th. A window shelf composed of the central body portion having cut-away ends, recessed end pieces which are applied to the ends of the body portion, combined with toggle levers for adjusting the end pieces, and yielding pads on the edges of the end pieces, substantially as set forth. 6th. A window sliding shelf composed of the central body portion having cut-away ends, the extensible end pieces, recessed so as to fit over the ends of the body portion, and a guiding strip applied to one edge of the body portion, and having its free ends overlapping the edges of the end pieces, combined with means for adjusting the end pieces in relation to the body portion, and the brackets hinged to the under sides of the shelf, substantially as specified. 7th. A window sliding shelf composed of the central body portion having cut-away ends, the extensible end pieces, recessed so as to fit over the ends of the body portion, and a guiding strip applied to one edge of the body portion, and having its free ends overlapping the edges of the end pieces, combined with toggle levers for adjusting the end pieces in relation to the body portion, and the brackets hinged to the under sides of the end pieces, substantially as specified.

**No. 54,662. Semi-metallic Packing. (Garniture métallique.)**

Alexander Montgomery, Newton, Massachusetts, U.S.A., 19th January, 1897; 6 years. (Filed 28th December, 1896.)

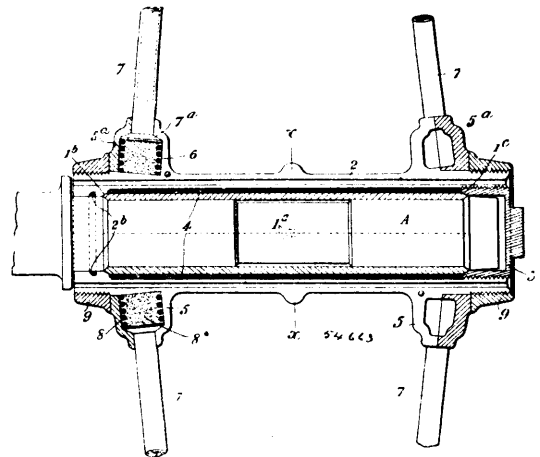
*Claim.*—1st. A packing consisting of a flexible body and a thin, woven, seamless tubular covering therefor, said covering consisting of one thickness of flat strands composed of metallic and fibrous threads. 2nd. A packing consisting of an elastic core, layers of fibrous material wound around said core, said layers being charged with a suitable lubricant, and a thin, woven covering therefor con-

sisting of one thickness of flat strands composed of metallic and fibrous threads, said covering being integral around the entire core.



3rd. A packing consisting of an elastic I-shaped core surrounded by layers of fibrous material charged with a suitable lubricant, and a thin, seamless tubular covering therefor consisting of one thickness of flat strands composed of metallic and fibrous threads.

**No. 54,663. Metallic Wheel. (Roue métallique.)**



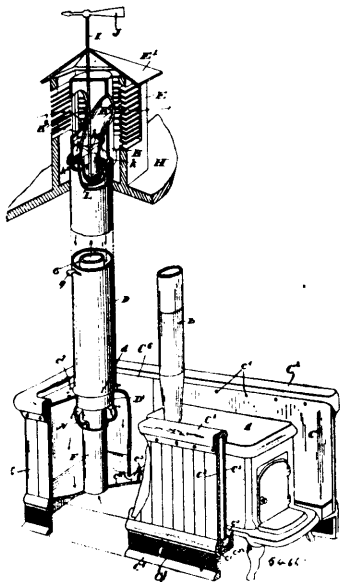
Isaac Davis, 144 Fleet Street, London, England, 19th January, 1897; 6 years. (Filed 28th December, 1896.)

*Claim.*—1st. In a wheel, a combined sectional axle box and hub of the kind herein referred to provided with a layer of material such as leather arranged between the exterior of the axle box and the interior of the hub, substantially as described and shown for the purposes specified. 2nd. A metallic wheel having the inner ends of its spokes arranged to bear directly against an elastic or yielding support located in recesses or in a recess between flanges on the wheel hub, the flanges being detachable the one from the other, substantially as herein described for the purpose specified. 3rd. In a wheel, a hub divided longitudinally and provided near each end with a pair of flanges 5, 5<sup>a</sup>, having formed within and between them a series of recesses or an annular recess, and elastic or yielding material arranged within said recesses or recess and against which the enlarged inner ends of the wheel spokes bear, the outer flange of each pair being made removable, and coupling rings adapted to hold the removable flanges in place and also to hold the parts of the divided hub together, substantially as herein described. 4th. A metallic wheel having the outer ends of each of its spokes enlarged, sockets carried by the periphery of the wheel and within which the enlarged outer ends of the spokes are located, and tightening up devices adapted to act directly or positively against said enlarged outer ends of the spokes in said sockets so as to exert a longitudinal strain on said spokes, substantially as described. 5th. A metallic wheel having the outer ends of each of its spokes enlarged, sockets attached to the inner periphery of the wheel, and within which the enlarged outer ends of the spokes are located, cushioning material inserted between each spoke end and the bottom of the corresponding socket, and nuts each screwed into one of said sockets and acting directly against the enlarged outer end of the corresponding spoke, substantially as described for the purpose specified. 6th. In a wheel, a

combined sectional axle box and hub of the kind herein referred to provided with a layer of flexible material between the axle box and hub, a ring of flexible material let into an annular recess in the axle box so as to surround the adjacent part of the wheel axle to which the wheel is fitted, and lengths of flexible material located in recesses in the adjacent longitudinal edges of the two sections of the hub, substantially as described for the purposes specified. 7th. A wheel having its spokes each in tension and in firm and non-elastic connection with the wheel rim or fellow and hub but capable of moving radially inward, and elastic or yielding material located between the hub and spokes and upon which the inner ends of the latter are bedded, substantially as described. 8th. A metallic wheel having its spokes enlarged at their inner and outer ends, the inner ends being arranged to bear in an outward direction against a rigid part of the wheel hub and in an inward direction against elastic or yielding material carried by said hub, and the outer ends of said spokes being arranged to bear in an inward direction directly against tightening up devices and in an outward direction against layers of cushioning material, substantially as described. 9th. A metallic wheel comprising a hub provided with pairs of flanges, one of the flanges of each pair being removable, elastic or yielding material held between each pair of flanges, a wheel rim having sockets each provided with a tightening up nut and with a layer of cushioning material, and two series of spokes each having enlarged inner and outer ends, the inner ends being each held between and directly against one of the pairs of flanges by the elastic or yielding material and the outer ends of the spokes being held between the nuts and layers of cushioning material in the sockets and bearing directly against said nuts, substantially as described for the purpose specified. 10th. A metallic wheel comprising a combined sectional axle box and hub provided with pairs of flanges 5, 5<sup>a</sup>, with interposed elastic or yielding material, a wheel rim having attached to its inner periphery internally screw-threaded sockets 10 fitted with layers 13 of cushioning material and nuts 12, and spokes 7 having enlarged inner ends located between said pairs of flanges, bedded on the elastic or yielding material held between the same and strained in an outward direction against the flanges, the outer end of said spokes being enlarged and bedded against the cushioning material in the sockets and forced radially outward by direct contact therewith of said nuts, substantially as described. 11th. The combination and arrangement of parts constituting my improved metallic wheel constructed as hereinbefore described with reference to and shown in figures 1 to 5 inclusive, or modified according to figure 6, or to figure 7, or to figure 7<sup>a</sup> of the drawings annexed.

**No. 54,664. Ventilating Apparatus.**

(Appareil de ventilation.)

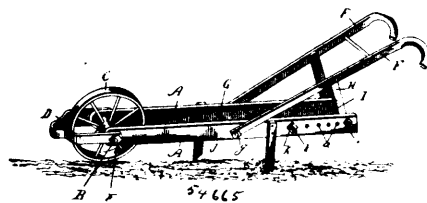


Allan Bachert Shantz, Caledonia, Ontario, Canada, 20th January, 1897; 6 years. (Filed 30th December, 1896.)

*Claim.*—1st. In a ventilating apparatus, a shield having a double wall and intermediate air space and open at the bottom, a pipe leading up from the closed top of the double wall to outside of the roof, a cowl supported and journaled in the top of the pipe and provided with an intake hole and a weather vane connected centrally to the cowl and designed to control its rotation so as to present the intake opening towards the weather side, as and for the purpose specified. 2nd. In a ventilating apparatus, in combination a shield provided with a double wall having an intermediate air space closed at the top and open at the bottom, a heater surrounded by the shield, an inlet pipe extending upwardly from the top of the hollow

wall to the outside of the roof, a cowl supported and journaled in the top of the pipe and provided with an intake hole and a weather vane connected centrally to the cowl and designed to control its rotation so as to present the intake opening towards the weather side, as and for the purpose specified. 3rd. In a ventilating apparatus, in combination a shield provided with a double wall having an intermediate air space closed at the top and open at the bottom, the inner wall being shorter than the outer wall, a ledge formed at the bottom of the outer wall and having an upwardly-projecting adjustable flap, a heater located within the shield, and an inlet pipe extending from the top of the shield to the outside of the roof, and suitable means for causing the current of air to pass downwardly into the shield, as and for the purpose specified. 4th. In a device of the class described, a double wall, the intermediate air space, the capping at the top of the double wall, the ledge and opening at the bottom, the grating extending beneath the ledge around the bottom of the shield, and the inlet pipe arranged as and for the purpose specified. 5th. In a device of the class described, a double wall, the intermediate air space, the capping at the top of the double wall, the ledge and opening at the bottom, and the moisture pan designed to rest on the ledge beneath the opening, as and for the purpose specified. 6th. In a device of the class described, the combination with the shield having the double wall intermediate air space, closed at the top and open at the bottom, the enlarged air space between the wall arranged at the back, the inlet pipe and moisture pan situated beneath it, as and for the purpose specified. 7th. In a device of the class described, the combination with the shield having a double wall, intermediate air space closed at the top and open at the bottom, the enlarged air space between the wall arranged at the back, the inlet pipe extending upwardly from the back portion of the double wall, the outlet pipe extending through the enlarged air space at the back down through the bottom back wide ledge and up through the top of the inlet pipe, as and for the purpose specified. 8th. In combination the double wall shield, the intermediate air space, the inlet pipe, the outlet pipe extending upwardly through the inlet pipe, the cowl pivotally supported on the top of the inlet pipe, the curved extension of the outlet pipe pivotally supported on the top of the outlet pipe, the weather vane and means for supporting and securing it in the cowl, so that the cowl rotates with the vane, as and for the purpose specified. 9th. In combination the double wall shield, the intermediate air space, the inlet pipe, the outlet pipe extending upwardly through the inlet pipe, the cowl pivotally supported on the top of the inlet pipe, the curved extension of the outlet pipe pivotally supported on the top of the outlet pipe, the weather vane and the spiders M and L, through which the stem of the weather vane extends, as and for the purpose specified.

**No. 54,665. Cultivator. (Cultivateur.)**



William D. McCauly, Elmore, Arkansas, U.S.A., 20th January, 1897; 6 years. (Filed 30th December, 1896.)

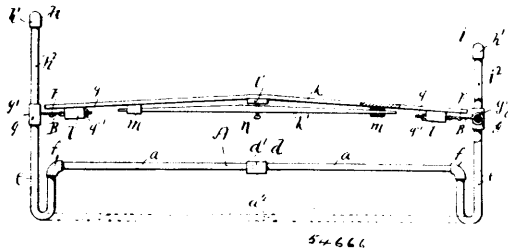
*Claim.*—1st. A frame having perforated beams in combination with a cultivator provided with a standard having notched and perforated parallel arms extending rearward and uniting in a single downwardly-curved bar to the forward end of which is attached a cultivating-shovel, as set forth. 2nd. A frame having perforated beams and bolts and nuts fitting said perforations, combined with a cultivator provided with a standard having notched and perforated arms extending rearwardly fitting outside of said frame and registering with said bolts, as set forth. 3rd. In a cultivator, a frame composed of parallel beams, provided with a plurality of holes for the axle-rod, the transverse frame rods, and the plough attachments, and adapted as described for the detachable connection of the ploughs, the cotton-scraper, and the harrows, as set forth.

**No. 54,666. Spring Bedstead. (Sommier et lit élastique.)**

Webber G. Kendall, Providence, Rhode Island, U.S.A., 20th January, 1897; 6 years. (Filed 31st December, 1896.)

*Claim.*—1st. In a spring bedstead, the combination of the connected spring legs with the spring slats, the slat supporting bars at the ends of the frame and connections between the spring slats and the slat supporting bars, substantially as described. 2nd. In a spring bedstead, the combination of the connected spring legs with the spring slats, the slat supporting bars, at the ends of the frame, and the connections provided with a yielding joint between the spring slats, and the slat supporting bars, substantially as described. 3rd. The combination of the supporting bars, the longitudinal spring slats, and the connecting cross-bars, with the adjustable springs under the slats, and means for connecting the spring slats to the slat supporting bars, substantially as described. 4th. The combination of the cabinet and the connected bedstead frame provided with the spring legs jointed to the cabinet, substantially as described

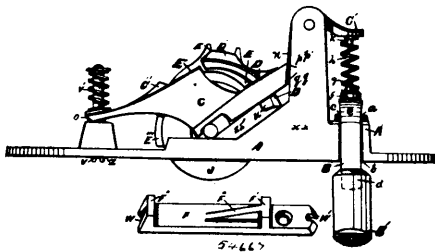
5th. The combination of the bedstead provided with the spring legs, with the spring slats, the slat supporting bars, connections between



the spring slats and the slat supporting bars, the head bar, and the inclined bars provided with a hook-end for connection with the head-bar, to form a couch, substantially as described. 6th. In a spring bedstead, the combination of the connected spring legs, with the spring slats, the slat supporting bars at the ends of the frame, connections between the spring slats and the slat supporting bars, and the removable head and foot bars, substantially as described.

**No. 54,667. Roller Sash Balance.**

(*Contre-poids de croisée.*)



Robert Bectson Hugonin, Hartford, Connecticut, U.S.A., 20th January, 1897; 6 years. (Filed 2nd January, 1897.)

*Claim.*—1st. In a roller sash balance, the combination of face plate A, roller lever C, and roller J, with lever brake holder D, having a pivoting bearing D<sup>1</sup>, and lever brake E, having a pivoting bearing E<sup>1</sup>, and means for yieldingly adjusting the pressure of the roller upon the sash, substantially as described. 2nd. In a roller sash balance, the combination of plate A, lever C, roller J, and adjusting screw V having a pressure regulating spring V<sup>1</sup>, with lever brake holder D having bearing D<sup>1</sup>, and lever brake E having bearing E<sup>1</sup>, substantially as described. 3rd. In a roller friction and anti-friction rolling and sliding balance, the combination of the lever brake holder D having a fulcrum bearing D<sup>1</sup>, for bearing E<sup>1</sup> on lever E, axle supporting arms S, S<sup>1</sup>, with lever brake E having bearing E<sup>1</sup>, and roller J, all pivotally connected with lever C, and the latter movably attached to face plate A, and means for yieldingly adjusting the pressure of the lever C, upon the roller, substantially as described. 4th. In a roller sash balance, the face plate A, in combination with lever C, having a roller J, arranged in a holding and sliding roller supporting device pivoted therein, the device having fulcrum stops N, N<sup>1</sup>, with means for yieldingly adjusting the pressure of the roller upon the sash, substantially as described. 5th. In a roller sash balance, the combination of face plate A having a lock supporting projection A<sup>1</sup>, with openings a, b, roller lever C having a spring holding projection C<sup>1</sup> and spring seat k, lock lever B having guiding arm c, locking arm d, spring seat g, connecting bar e, spring h interposed between seats k and g, on projection C<sup>1</sup>, and lock lever B, having lock handle B<sup>1</sup>, arranged and operated substantially as described. 6th. The combination with a sash balance, having a spring seat k, a face plate A having a lock supporting a projection A<sup>1</sup>, having openings a, b, for the application of a lock lever B provided with a locking tongue d, a guiding arm c, cross bar e, spring seat g, and spring h interposed between spring seats k and g, and lock handle B<sup>1</sup>, arranged and operated substantially as described. 7th. In combination with a sash lock having a face plate A, lock lever B provided with a sash locking tongue d, operated by a spring and lock handle B<sup>1</sup>, the sash locking plate F, having locking notches F<sup>1</sup>, F<sup>11</sup> incline F<sup>111</sup>, bevelled and rounded ends W, W<sup>1</sup>, substantially as described.

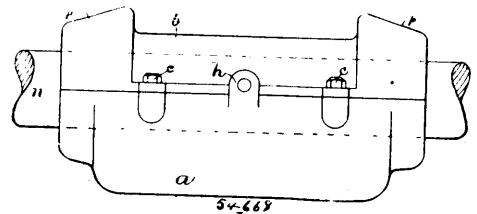
**No. 54,668. Anti-friction Bearing.**

(*Coussinet de tourillon sans friction.*)

Andrew Young Small, Brockton, Massachusetts, U.S.A., 20th January, 1897; 6 years. (Filed 4th January, 1897.)

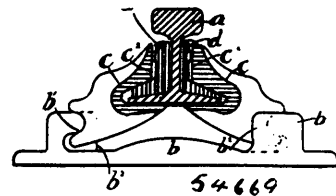
*Claim.*—1st. In a bearing of the character specified, the combination of an oil-reservoir having bearings for a plurality of rollers, anti-friction rollers journalled in said bearings and arranged to support the shaft and to transfer oil thereto from the reservoir, a fixed support for said reservoir, and complementary bearings on said reservoir and support whereby the reservoir is permitted to oscillate longitudinally to maintain its rolls in parallelism with the shaft.

2nd. The combination with the oil-reservoir having the central ears, of the cross-bars or ribs, a plurality of anti-friction rollers mounted



in said bars, and the yoke-bracket or hanger having trunnion engagement with said ears. 3rd. The combination with the oil-reservoir having central ears, of the cross-bars or ribs forming bearings, anti-friction rollers mounted in said bearings, the cover having lugs extending down inside of the reservoir, said lugs to bear on the trunnions of the rollers, and the bracket or hanger having trunnion connections with said ears. 4th. The combination with the oil-reservoir, of a plurality of anti-friction rollers mounted therein, and the cap or cover secured to said reservoir and having lugs extending down inside thereof and fitted to the trunnions or axles of the rollers. 5th. The combination with the oil-reservoir a having ears h, of the cross-bars or ribs having three sets of bearings f, the cover b bolted to the reservoir, the rollers g in the bearings f, and the yoke-bracket m, having trunnions l, fitted to said ears h, substantially as and for the purpose set forth.

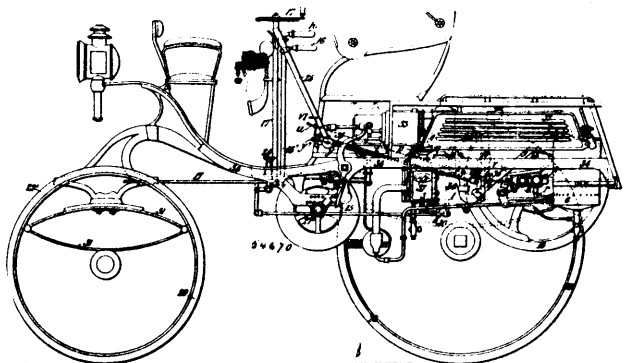
**No. 54,669. Rail Joint. (Joint de rails.)**



John Hinckley Williams, Boston, Massachusetts, U.S.A., and Joseph Alexander Gillies, Sydney, Nova Scotia, Canada, 20th January, 1897; 6 years. (Filed 30th December, 1896.)

*Claim.*—1st. A rail joint or coupling, comprising a pair of angular jaws pivoted on opposite sides of the rail and having arms extending under the rail, and clamping-faces confronting the web of the rail, and fish-plates between the said clamping-faces and the web of the rail and interlocked with the jaws, with provision for vertical adjustment to suit the thickness of the base of the rail. 2nd. A rail joint or coupling, comprising a pair of angular jaws pivoted on opposite sides of the rail and having arms extending under the rail, and oblique clamping-faces confronting the web of the rail, and wedge-shaped fish-plates having wedge-shaped flanges for engagement with said jaws and adapted to bear on the base of the rail. 3rd. A rail joint or coupling, comprising, first, a base having upwardly projecting ears, each provided at one end with a stop; secondly, angular jaws having lugs formed to rock on said ears and to abut against the stops, arms extending under the rails and oblique clamping-faces confronting the web of the rail; and thirdly, wedge-shaped fish-plates interlocked with the jaws between the said clamping-faces and web.

**No. 54,670. Motor Vehicle. (Voiture à moteur.)**

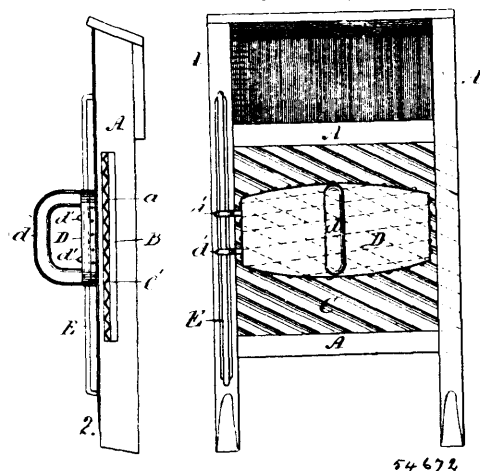


The Anglo-French Motor Carriage Company, Digbeth, Birmingham, England, assignee of Emile Roger, Paris, France, 20th January, 1897; 6 years. (Filed 31st December, 1896.)

*Claim.*—1st. In an auto-car or self-propelling vehicle, the means for cooling the water jacket of the working cylinder and for condensing the steam, the said means consisting of a receiver or cham-

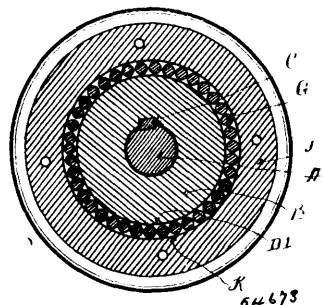
ber 4 situated above the water jacket, water reservoirs or chambers 32, 32<sup>1</sup>, situated at a higher level than the water jacket and provided with air passages or spaces to enable the atmosphere to exert an increased cooling effect on the water within said chambers as the vehicle travels along, pipes *n*, *n*<sup>1</sup>, connecting the upper part of the said water reservoirs to the upper part of the recess or chamber, and other pipes *l*, *l*<sup>1</sup>, connecting the lower part of said water reservoirs to the lower part of the water jacket, the aforesaid receiver or chamber being provided with an internal partition *w* which enables the space on one side of said partition to communicate with the upper part of the water jacket, and the space on the other side of said partition to communicate by means of a pipe *q* with the aforesaid pipes *l*, *l*<sup>1</sup>, by which the lower parts of the water reservoirs are connected to the lower part of the water jacket. 2nd. The means whereby the quantity of oil supplied to the carburizer can be readily controlled by the driver of the car, the said means consisting of a cock or valve *p* on a pipe *r* through which the oil is supplied from the oil reservoir to the carburizer, an arm *s* mounted on the plug of said cock, and a movable rope *t* connected with the said arm *s* and having its outer end located within easy reach of the driver. 3rd. The means whereby the quantity of carburized air and of atmospheric air for admixture with the carburized air to produce the explosive mixture can be readily controlled by the driver, the said means consisting of a cock 5, to the plug of which a rotary rod *x* is connected, and of a valve *v* to which a movable rod *y* is connected, the outer ends of both of these rods *x* and *y* being respectively provided with a handle *VI* and a knob *n*<sup>1</sup> for enabling them to be readily operated. 4th. The means for varying the speed of the vehicle or for stopping it, consisting of a stopped pulley 14 on the driving shaft, a stopped pulley 15 and loose pulleys *b* and *g* on the compound intermediate shaft *c f* which transmits motion to the road wheels of the car, belts gearing the pulleys on this compound shaft to the stopped pulley 14, belt forks for shifting the said belts from the fast to the loose pulleys, or *vice versa*, when a suitable handle or handles are operated by the driver, brake shoes 25<sup>1</sup>, 25<sup>1</sup>, for the road wheels, a hand lever 25 for operating the said brake shoes to stop the vehicle, and a pedal device 24 situated within easy reach of the driver and connected to a brake shoe 24<sup>1</sup> for retarding the revolution of the fly-wheel of the motor.

the side of the frame, the guide rod *E*, extending along one side of the frame, and the rubber *D*, having a corrugated rubbing surface,



and one end provided with screw eyes *d*<sup>1</sup>, through which said rod passes, substantially as set forth.

**No. 54,673. Railway Car Wheel.**  
(*Roue de chars de chemin de fer.*)



John Jacob Adolf Miller, Denver, Colorado, U.S.A., 20th January, 1897; 6 years. (Filed 29th December, 1896.)

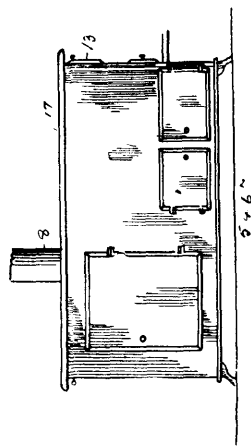
*Claim.*—1st. The combination in a car wheel, of the axle, the disc keyed thereto and having an annular reduced portion or groove in its periphery, a circular row of rollers therein, a tread and flange portion arranged to fit centrally over said disc portion and to rotate on said rollers, and side flanges to said tread and flange portion, one of which is removable, extending from said tread portion freely over said disc and fitting revolvably on said axle, whereby said tread portion is independent of said axle and rotates on the roller bearing of said disc portion and the disc portion and axle are free to rotate independent of the tread portion of said wheel, substantially as described. 2nd. In a car wheel, the combination with the wheel and the disc wheel, of a wheel having a tread and flange fitting freely on said axle, an integral solid side on the flange side of the wheel, a deep, concentric recess formed in the opposite side and adapted to fit over said disc, a reduced tread portion in the periphery of said disc, a flanged portion adjacent to the wheel's flange, a circular row of rollers arranged to roll on the tread of said disc and to bear against the periphery of said recess, a side flange detachably secured to the side of said disc adapted to confine said rollers to said tread portions and a flange detachably secured to the wheel adapted to freely confine said disc within said recess, substantially as described.

**No. 54,674. Horizontal Excavator.**  
(*Excavateur horizontal.*)

John M. Carroll, Grand Forks, North Dakota, U.S.A., 20th January, 1897; 6 years. (Filed 30th December, 1896.)

*Claim.*—1st. An excavator for boring an underground trench, comprising a truck adapted to span the pit and movable over the surface of the ground, a horizontal auger adapted to be operated within a pit, a chain wheel or equivalent device rotatively connected to but movable lengthwise of the auger stem or boring bar, and a chain driven from a power device carried by said portable support, and passing over said chain wheel, substantially as described. 2nd. In an excavator, for boring an underground trench, the combination with a horizontal auger operative from a pit, at the head of the bore, of a series of driving bars adapted to be coupled to the auger stem and each other and provided with guide discs fitting the auger bore, for guiding the auger to a true line movement, substantially as described. 3rd. The combination with the truck at the surface,

**No. 54,671. Cooking Stove.** (*Poêle de cuisine.*)



Dewitt Clinton Wallace and John Segenfelter, Paducah, Kentucky, U.S.A., 20th January, 1897; 6 years. (Filed 2nd January, 1897.)

*Claim.*—A cooking-stove or range having a medial hot-air space, an oven at one end, and a fire-box at the opposite end, all in substantially the same horizontal plane, a diagonally-disposed plate 4 connecting the top of the rear fire-box wall with the bottom plate of the stove and forming a warming oven in the angular space inclosed between the said plate 4 and the adjacent fire-box wall, a plate 15 extending into the said medial space from the upper end of the oven wall adjacent to the fire-box, a perforated diaphragm 14 extending approximately parallel with the plate 4 and connecting the free end of the plate 15 with the lower corner of the oven contiguous to the plate 4, and a damper at the inner end of the plate 15 for controlling the heated air, substantially as and for the purpose set forth.

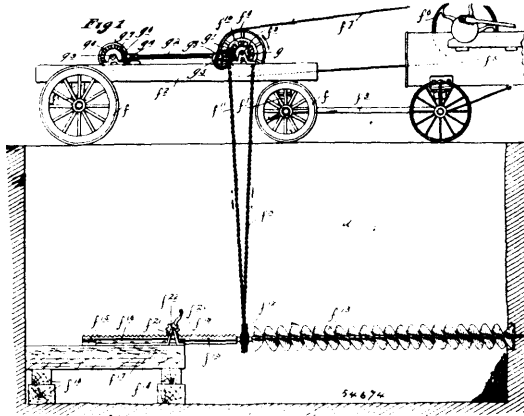
**No. 54,672. Washboard.** (*Planche à laver.*)

Samuel Albert Watson, Woodstock, New Brunswick, 20th January, 1897; 6 years. (Filed 29th December, 1896.)

*Claim.*—In a washboard, or washing machine, the combination of the diagonal corrugated surface *C*, the longitudinal slot *a*, through



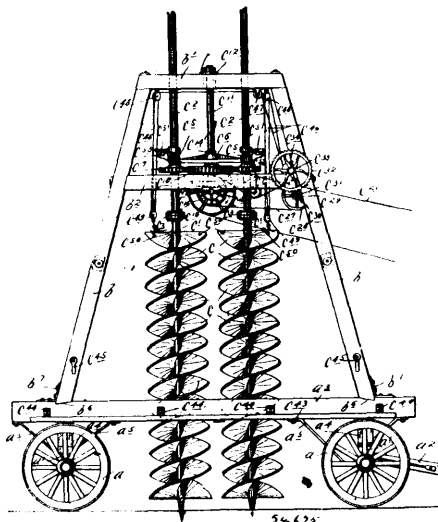
of the horizontal auger operative from a pit at the head of the bore, the rack and pinion feed in said pin, the driving bars with guide



disks, adapted to be coupled to the auger stem and each other, the drive chain wheel rotatively connected to but movable over said auger stem and driving bars, a driven shaft on said truck provided with a chain wheel and the chain connecting said chain wheels, substantially as described. 4th. The combination with a truck or other portable support on the surface, and the horizontal auger operative from a pit, at the head of the bore, through to a distant pit, at the foot of the bore, of a windlass on the truck having its cable wrapped about the same, with its ends free and extending therefrom, and sheave blocks adapted to be anchored in the head and foot pits, for rendering the windlass and cable available to drag the auger and other parts, through the bore made by the same, substantially as described. 5th. A pipe clamp for movement through or engagement with the inside of a pipe section, comprising a pair of expandible and contractible jaws, an expanding device working between said jaws, flexible connections uniting said jaws to said expanding device, with freedom for a limited movement, and a pair of cable sections attached to said expanding device and extensible through the pipe in opposite directions, substantially as described. 6th. The pipe clamp comprising the jaws *b*, having their inner ends connected by the links *h*<sup>1</sup>, the wedge-shaped spreader *h*<sup>2</sup>, working between said jaws, the chains, *h*<sup>3</sup>, connecting the outer ends of said jaws with the cable coupling eye, *h*<sup>4</sup>, on the outer end of said spreader, and the cable coupling chain, *h*<sup>5</sup>, at the inner end of said spreader, substantially as described.

**No. 54,675. Vertical Excavator.**

(Excavateur vertical.)



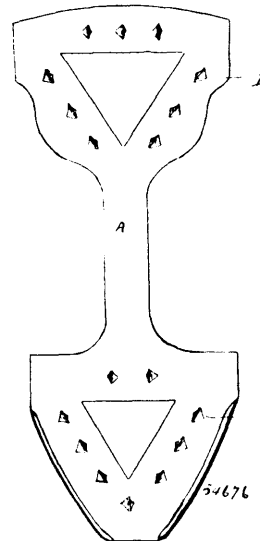
John M. Carroll, Grand Forks, North Dakota, U.S.A., 20th January, 1897; 6 years. (Filed 30th December, 1896.)

*Claim.*—1st. In an excavator, the combination with a portable frame, of the pair of upright augers mounted for vertical movement thereon, a pair of spur gears rotatively connected to but free for sliding motion on the auger stems, and a spur gear between said auger gears and engaging with both, substantially as described. 2nd. In an excavator, the combination with a portable frame, of the pair of upright augers mounted for vertical movement thereon, the pair of gears rotatively connected to the auger stems but free for sliding motion of the same, the central gear having its opposite sides engaged by said auger gears, the vertical shaft supporting said cen-

tral gear, and means for driving said shaft, substantially as described. 3rd. In an excavator, the combination with a portable support, of a pair of upright augers mounted for vertical movement on said support, gears on the auger stems, rotatively connected thereto but free for sliding motion thereon, fixed bearings forming guides for said auger stems and seats for said auger gears, and a yoke bar having end bearings embracing the auger stems and resting on the hubs of the auger gears and forming part of the support for the drive which operates said augers, substantially as described. 4th. The combination with the portable support, of the upright augers mounted for vertical movement on said frame, the fixed bearings *c*<sup>4</sup> for the stems of said augers, the gears *c*<sup>7</sup> rotatively connected to but sliding on said augers stems with their hubs resting on said bearings *c*<sup>4</sup>, the bearing yoke *c*<sup>6</sup> with end bearings *c*<sup>5</sup> working on said auger stems and resting on the hubs of said gears *c*<sup>7</sup>, the central vertical shaft *b*<sup>11</sup> supported from the cap of the main frame and from said yoke *c*<sup>6</sup>, the central gear *c*<sup>10</sup> on said shaft engaging said auger gears *c*<sup>7</sup> and the drive *c*<sup>15</sup>, *c*<sup>16</sup>, *c*<sup>17</sup> and *c*<sup>22</sup>, substantially as described. 5th. In an excavator, the combination with the main frame or support of one or more upright augers mounted for vertical movement thereon, gears on the auger stems rotatively connected thereto but free to permit sliding motion of the auger stems therethrough, and pivoted clamping levers with eyes or hubs through which the auger stems work, for automatically clamping and holding the augers wherever set in their vertical movement, substantially as described. 6th. The combination with the supporting frame, vertically movable augers, windlass and connections therefrom for lifting the augers, of the driving connections for imparting rotary motion to said augers and windlass including as one element thereof a clutch for making the same rotate the augers or the windlass at will, and a clutch controlling the connection of the windlass drum with its supporting and driving shaft, for unwinding the drum at will, substantially as described.

**No. 54,676. Overshoe Ice-Creepers.**

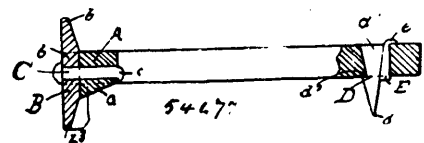
(Grappin pour chassures.)



Henry M. Meadows, Woodstock, Ontario, Canada, 20th January, 1897; 6 years. (Filed 30th December, 1896.)

*Claim.*—The combination of the steel flexible sole, with prods on under surface, with the heel and side supports of same material and adjusted by means of straps over overshoes or rubbers, substantially as and for the purpose hereinbefore set forth.

**No. 54,677. Horseshoe.** (Fer à cheval.)

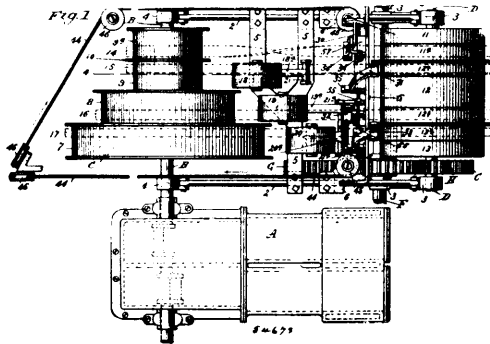


Benjamin G. Fox, Pricetown, Pennsylvania, U.S.A., 20th January, 1897; 6 years. (Filed 2nd January, 1897.)

*Claim.*—1st. The combination with a horseshoe, having a vertical dovetailed mortise in the edge thereof and increased thickness of cross-section at said mortise, of a toe-calk having a dovetailed tenon or shank fitting the mortise and a shoulder seated against the under side of the shoe, and a key passing horizontally through the calk-shank and the thickened portion of the shoe to firmly unite the same, substantially as set forth. 2nd. The combination with a horseshoe having a dove-tailed mortise in the edge thereof and

increased thickness of cross-section at said mortise, of a toe-calk having a tenon or shank fitting the mortise and a crescent or U-shaped wearing extension seated against the lower face of the shoe and partially enclosing said increased shoe-section, with means for removably securing the calk to the shoe, substantially as set forth.

**No. 54,678. Motor Carriage. (Voiture à moteur.)**

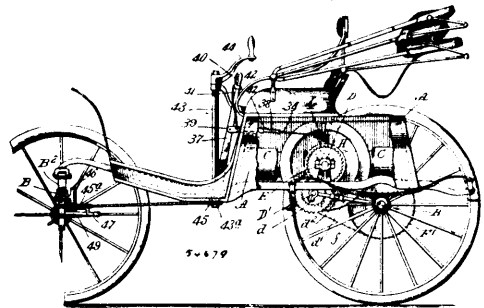


James Frank Duryea, Springfield, Massachusetts, U.S.A., 20th January, 1897; 6 years. (Filed 2nd January, 1897.)

*Claim.*—1st. In an automobile carriage or other conveyance, a driving cone-pulley, a driven counter-shaft having a plurality of tight and loose pulleys thereon, a plurality of straight belts, and one crossed belt engaging said driving and said driven pulleys, and means for moving said belts singly and consecutively from said loose to said tight pulleys, and automatic means for singly and consecutively moving each of said belts back onto its loose pulley, and suitable connections between a motor and said driving cone-pulley, and between said counter-shaft and the driving axle or shaft of the conveyance, substantially as set forth. 2nd. In an automobile carriage or other conveyance, a driving cone-pulley, a driven counter-shaft having a plurality of tight and loose pulleys thereon, a plurality of straight belts and one crossed belt engaging said driving and said driven pulleys, and means for moving said belts singly and consecutively from said loose to said tight pulleys, and automatic means for singly and consecutively moving each of said belts back onto its loose pulley, and an adjustable idler pulley for each of said straight belts, and suitable connections between a motor and said driving cone-pulley and between said counter-shaft and the driving axle or shaft of the conveyance, substantially as set forth. 3rd. In an automobile carriage or other conveyance, a driving cone-pulley, a driven counter-shaft having a plurality of tight and loose pulleys thereon, and a plurality of driving belts engaging said driving and said driven pulleys, a part of said belts running in one direction, and a part running in and opposite direction, and a plurality of shipping levers pivotally supported between said driving-cone and said counter-shaft pulleys, and means for imparting to each of said shipping levers, consecutively, a swinging movement in one direction against the action of a retracting spring, and suitable connections between a motor and said driving-cone, and between said counter-shaft and the driving axle or shaft of said conveyance, substantially as set forth. 4th. In an automobile carriage or other conveyance, a driving cone-pulley, a driven counter-shaft having a plurality of tight and loose pulleys thereon, and a plurality of shipping levers pivotally supported between said driving-cone and said counter-shaft pulleys, and means for imparting to each of said shipping levers, consecutively, a swinging movement in one direction against the action of a retracting spring, said means consisting of a member moving in proximity to the said shipping levers and substantially at right angles thereto, and engaging consecutively with each of them, and means for imparting movement to said moving member, and connections between a motor and said driving-cone, and between said counter-shaft and the driving axle or shaft of a carriage or other conveyance, substantially as set forth. 5th. In an automobile carriage or other conveyance, a driving cone-pulley and a driven counter-shaft having a tight pulley on said counter-shaft, and a loose pulley on each side of said tight pulley, suitable belts engaging said driving and driven pulleys, two shipping levers pivotally supported for movement in a vertical plane, and in engagement with said belts, and a member moving in a line substantially at right angles to said shipping levers, and engaging them at a point vertically between the pivotal points thereof for moving said belts singly from said loose pulleys to said tight pulley, and suitable connections between a motor and said driving pulley and between said counter-shaft and the driving axle of said carriage or other conveyance, substantially as described. 6th. In an automobile carriage or other conveyance, a driving cone-pulley, a driven counter-shaft having a plurality of tight and loose pulleys thereon, a plurality of straight belts and one crossed belt engaging said driving and said driven pulleys, and a plurality of shipping levers pivotally supported between said driving-cone and said counter-shaft pulleys, and means for imparting to each of said shipping levers, consecutively, a swinging movement in one direction against the action of a retracting spring, said means consisting

of a suitably-supported wire-ropes, one portion of which lies in proximity to said shipping levers, and having movements in a line substantially at right angles thereto, said portion having means thereon for engagement with said levers, and an operating lever, as 50, with which said wire-ropes is connected, and by which said movements are imparted thereto, combined with suitable connections between said cone-pulley and a motor, and between said counter-shaft and the driving-axle or shaft of the carriage or other conveyance, substantially as described. 7th. In an automobile carriage or other conveyance, a driving cone-pulley, a driven counter-shaft having a plurality of tight and loose pulleys thereon, a plurality of straight belts and one crossed belt engaging said driving and said driven pulleys, and a plurality of shipping levers pivotally supported between said driving-cone and said counter-shaft pulleys, alternately above and below the line of movement of a member moving in a line substantially at right angles to said shipping levers, an operating lever, as 50, for imparting said movement to said member, and suitable connections between a motor and said driving cone-pulley and between said counter-shaft and the axle or shaft of a carriage or other conveyance, substantially as described. 8th. In an automobile carriage or other conveyance, a motor, a driving-shaft and a counter-shaft, belts engaging pulleys on said shafts, and means for moving said belts in a line with the axes of said shafts, consisting of the shipping-levers 30, 31, 32 and 33, the wire-ropes 44, the operating lever 50, and the buttons 54 and 55 on said wire-ropes, for moving said shipping-levers in one direction, and the springs 38 and 39 for moving said levers in a reverse direction, and the fixed guide-plates 57, 57<sup>a</sup> and 57<sup>b</sup>, substantially as described. 9th. In the herein described belt-shipping mechanism, a tight pulley, a loose pulley on each side thereof, and having belt thereon engaged by shipping levers pivotally supported respectively above and below the line of movement of the wire-ropes 44, having the buttons 54 and 55 thereon, for imparting movement to said shipping-levers by the engagement of said buttons with the levers 58 and 62, fixed to the frame 6, and the fixed guide-plates 57, 57<sup>a</sup> and 57<sup>b</sup> for said rope 44, substantially as described.

**No. 54,679. Motor Vehicle. (Voiture à moteur.)**

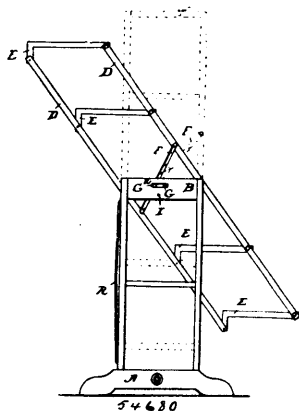


James Frank Duryea, Springfield, Massachusetts, U.S.A., 20th January, 1897; 6 years. (Filed 2nd January, 1897.)

*Claim.*—1st. In a motor carriage or other automobile conveyance, a motor, a driving-shaft connected with said motor, a driving-axle on said carriage, a counter-shaft parallel with said driving-shaft and said driving-axle, and movably supported by said shaft and said axle, a flexible driving connection engaging said counter-shaft and said driving-axle and a series of clutch mechanisms on said driving-shaft, gear connections between said clutch mechanisms and said counter-shaft for rotating the latter at varying speeds and in either direction, and means for operating said clutch mechanisms consisting of a series of rotating cams located in operative relation to the clutch-levers of said clutch mechanisms for operating the latter, and means for rotating said cams, substantially as described. 2nd. In a motor carriage or other automobile conveyance, a motor, a driving-shaft connected with said motor, a driving-axle on said carriage, a counter-shaft parallel with said driving-shaft and said driving-axle, and movably supported by said shaft and said axle, a flexible driving connection engaging said counter-shaft and said driving-axle, and a series of clutch mechanisms on said driving-shaft, gear connections between said clutch mechanisms and said counter-shaft for rotating the latter at varying speeds and in either direction, and means for operating said clutch mechanisms consisting of a series of rotating cams located in operative relation to the clutch-levers of said clutch mechanisms, said cams being provided with hubs for engagement with a chain or other flexible member, and an operating-lever connected to said chain for shifting the latter, to rotate said cams in either direction at will, substantially as described. 3rd. In a motor carriage or other automobile conveyance, a motor, a driving-shaft connected therewith, a driving-axle on said carriage, a counter-shaft supported by said driving-shaft and said axle, and in parallel relation thereto and adjustable in the arc of a circle concentric with said driving-shaft, a positive driving connection between said counter-shaft and axle, a series of clutch mechanisms on said driving-shaft, loose gears thereon in mesh with gears fixed on said counter-shaft, said clutch mechanisms being operated to engage said loose gears for rotating it in either direction, a series of rotating cams operatively located relative to the

clutch-levers of said clutch mechanisms, a flexible medium engaging said cams, and a lever connected to said flexible medium for shifting the latter, substantially as described. 4th. In a motor carriage or other automobile conveyance, a motor therefor adapted to use an explosive element, as gasoline, for a motive force, a driving-shaft connected with said motor, and suitably connected to the driving-axle of said conveyance, a dynamo for generating an electric current for igniting said explosive element in said motor, suitable connections between said dynamo and said motor, and means for rotating the armature of said dynamo, consisting of a suitable driving connection between said driving-shaft, and a pulley on said armature-shaft, frictionally connected therewith, whereby said shafts is rotated under a normal speed of said motor, and which frictional connection is broken by a speed of rotation in excess of said normal speed, substantially as described. 5th. In a motor carriage having its front and rear axles rigidly secured to the frame thereof, said front axle having wheels pivotally connected to its extremities for swinging in a horizontal plane, means for swinging said wheels for steering said carriage consisting of the arms 49, secured to the pivoted studs on which said wheels revolve, rods 48, connecting said arms 49, with a forked lever, 47, which lever is fixed to a sprocket-wheel, 45a, supported in a horizontal plane on said front axle, a sprocket-chain engaging said sprocket-wheel, 45a, and a second sprocket-wheel, 45, on one end of a steering post, 43a, to the opposite end of which is secured suitable means for rotating said post, substantially as described. 6th. In a motor carriage or other automobile conveyance, a suitable motor, a driving-shaft connected therewith, a counter-shaft, suitable connections between said counter-shaft and the driving-axle of said carriage, and means for driving said counter-shaft at variable rates of speed and in either direction, consisting of a series of loose gears of different diameters on said driving-shaft, having flanged pulleys secured to the sides thereof, clutch mechanisms rotating with said driving-shaft for engaging said pulleys, and fixed gears of different diameters secured on said counter-shaft and in mesh with said loose gears, combined with a series of rotating cams for operating said clutch mechanisms, one at a time, during their rotation in one direction only, and a chain engaging with and rotating said cams, and means for moving said chain, substantially as described. 7th. In a motor carriage or other automobile conveyance, a motor, a driving-shaft connected to said motor, a counter-shaft having a suitable connection with the driving-axle of said carriage, a series of loose gears on said driving-shaft and fixed gears on said counter-shaft in mesh with said loose gears, clutch mechanisms on said driving-shaft for engaging said loose gears for rotating said counter-shaft at variable speeds in one direction, and means on said driving-shaft for rotating said counter-shaft in the opposite direction, consisting of an internally toothed flanged pulley, 12, secured to the side of one of said loose pulleys, as 7, a friction driven pulley, 14, a gear, 13, on the hub thereof, a yoke, 15, having pinions, 16, thereon, said yoke having a bearing on the said hub of pulley, 14, a clutch mechanism for engaging and rotating said pulley, 14, a cam-operated clutch lever for operating said clutch mechanism, and means actuated by said clutch-lever for engaging the said yoke 15, and preventing the rotation thereof during the rotation of said pulley, 14, combined with means for operating said cams, substantially as described.

**No. 54,680. Convertible Shelves and Tables.**  
(*Tablette et table convertibles.*)

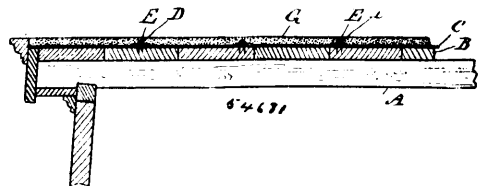


Anthony J. Jameson and Joseph Jameson, both of Bryan, Ohio, U.S.A., 20th January, 1897; 6 years. (Filed 4th January, 1897.)

*Claim.*—1st. The combination with a series of shelves having angular end pieces and pairs of bars at each end of the shelves pivotally connected to the ends of said angular end pieces, the pivots of the front bars being above the level of the pivots of the rear bars, of a stand or frame having uprights extending up outside of the end bars, and brackets located between the bars and connecting one of the shelves and the upright of the stand or frame, substantially as described. 2nd. The combination with the frame or stand, the

pivoted end bars and the series of shelves pivotally connected with said bars, of the fixed shelf, the locking-braces for the bars and the controllers for the braces pivoted on the under side of the fixed shelf substantially as described. 3rd. The combination with the frame or stand, the pivoted end bars, the series of shelves pivotally connected with said bars, the fixed shelf, and the locking-braces for the bars, of the controllers for the braces pivoted on the under side of the fixed shelf, the rod connecting said controllers for simultaneous operation, and the spring for holding the braces in locking position, substantially as described.

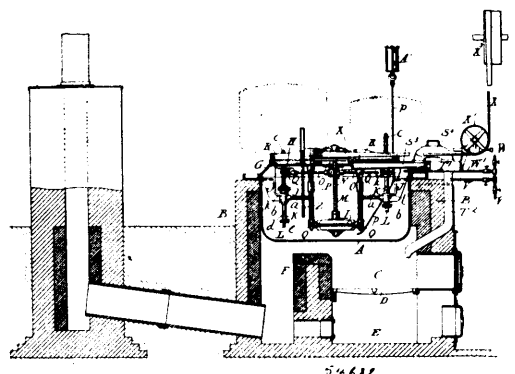
**No. 54,681. Roofing Compound.**  
(*Toiture et composition pour toitures.*)



Terence Sparham and James Thompson, Lyndhurst, Ontario, Canada, 20th January, 1897; 6 years. (Filed 29th December, 1896.)

*Claim.*—1st. A roofing having the felt or paper covering fastened by wires D, secured by staples E, and covered with roofing compound G, composed of blue clay and coal tar mixed together in about the proportions stated and spread while hot, substantially as set forth. 2nd. A roofing compound, composed of blue clay and coal tar mixed together while hot in about the proportions stated.

**No. 54,682. Apparatus for Washing Casks, etc.**  
(*Appareil pour laver les barils, etc.*)



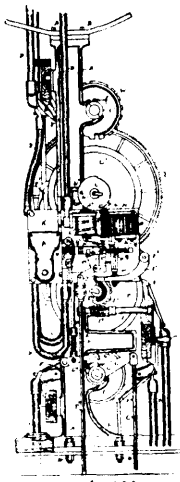
Alonzo Pawling and Henry Harnischfeger, assignee of Jacob F. Theurer and Oscar Mueller, all of Milwaukee, Wisconsin, U.S.A., 20th January, 1897; 6 years. (Filed 29th December, 1896.)

*Claim.*—1st. In combination with a tank and with a furnace for heating the same, a top or cover for said tank provided with a cask support and with a chamber beneath said support provided with an outlet opening into the tank, a trunk connecting said chamber with the furnace, and means for creating a current through said trunk whereby vapours and odours from the cask and chamber are carried into the furnace. 2nd. In cask pitching apparatus, the combination of a tank for containing pitch, a furnace for heating the same, a holder for carbonic acid gas, a pipe connecting the gas holder with the tank, and a cock or valve for controlling communication between said holder and tank whereby the carbonic acid gas may be introduced into the tank to suppress flames arising therein. 3rd. In combination with tank A and its furnace B, steam pipe V, carbonic acid gas pipe W W', and valves for controlling the flow of steam and gas. 4th. In combination with tank A and its top or cover G, a pump or liquid forcing apparatus, and nozzles or jet devices connected with said pump, said parts being directly attached to and carried by the top G, whereby they are adapted to be removed from the tank A with said top. 5th. In combination with a tank, a bracket provided with an annular chamber b, pipe K provided with a nozzle c and with a lateral opening d, a pump I, a pipe a connecting the pump and chamber b, and means for moving pipe K longitudinally to carry the opening d into or out of chamber b as desired. 6th. In combination with the tank of a cask cleaning or enamelling apparatus, a jet or spray device comprising a shell or casing having an annular chamber b, and a pipe closed at one end provided with a delivery orifice at the other end and having an inlet orifice at an intermediate point, said pipe being longitudinally movable and thereby adapted to bring the inlet opening into communication with chamber b and to close it against direct communication with the tank, or to carry said opening out of communication with the inlet and into direct communication with the tank, whereby the liquid is

permitted to drain from the nozzle. 7th. In combination with tank A and a top or cover therefor, a pump I, a shaft M for imparting motion thereto, a worm wheel N carried by said shaft, a shaft O provided with worm gear P and worm or screw Q, and a jet pipe K provided with a worm gear wheel J, all arranged substantially as described and shown, whereby the jet pipe is thrown into gear and is caused to rotate when moved to operative position, but is disconnected from the gearing when withdrawn from operative position. 8th. In combination with a tank and pump, a rotatable shaft O provided with a gear Q, a bracket or support J provided with a chamber b, a pipe a connecting chamber b with pump, a pipe K provided with a nozzle c and with lateral orifice d, a gear wheel J secured to pipe J and adapted to mesh with gear Q, and means for moving pipe K longitudinally. 9th. In combination with a tank and with a bracket or support as J, a jet pipe K movable longitudinally through the support, and a neck and collar formed, one upon the support and the other upon the pipe, whereby the liquid of the tank is confined and caused to cushion the descent of the pipe. 10th. In combination with bracket J provided with neck l, pipe K, a gear wheel j secured to said pipe and provided with collar k, substantially as and for the purpose explained. 11th. In combination with tank A and its top or cover G provided with lip i, vertically movable jet pipe K, and lifting bar L provided with notch h. 12th. In combination with tank A and bracket J, jet pipe K, lifting bar L, and a swivel connection between the pipe and bar, consisting of a two-part shell e and a disc f seated within said shell and having a stem g seated in the bar L. 13th. In combination with the tank of a cask-cleansing or enamelling apparatus, a cask frame or support having a depressed portion to sustain the cask at a point near its mid-length, and a relatively higher portion at one side thereof only, to sustain the cask at a point near its end, whereby the cask is supported in a horizontal position but is enabled to tip readily upon its lower support. 14th. In a cask-cleansing or enamelling apparatus, the combination of a tank, a frame or support to hold a cask above said tank, and a screen interposed between the cask and tank to prevent large particles of matter from flowing from the cask into the tank. 15th. In combination with a tank or vat, a cask holder or support adapted to support a cask on its side and to extend beyond the two side openings of the cask, and a screen interposed between the tank and the side opening of the cask nearest its end. 16th. In combination with a furnace tank having an opening in its top, a cask support surrounding said opening, an injecting nozzle extending upward within the cask support, and a trunk leading into the furnace and serving to carry fumes and odours from a cask placed upon said support into the furnace, substantially as set forth. 17th. In combination with the pitch tank of a cask-pitching apparatus, an elevated oil cup having a delivery pipe extending downward into the tank below the pitch line therein. 18th. In combination with the pitch tank of a cask-pitching apparatus, a sight feed oil cup and a delivery pipe extending therefrom into the tank below the level of the pitch therein. 19th. In combination with tank A and top G having the cask supports and the flues or spaces between them, a pipe or trunk connecting said flues or passages with the furnace beneath the tank. 20th. In combination with tank A and its furnace, top G provided with cask supports and with flues or chambers beneath the same, removable U-pipe S<sup>1</sup> and delivery pipe T<sup>2</sup> connecting the U-pipe with the furnace chamber.

#### No. 54,683. Controller for Electric Motors.

(Contrôleur pour moteurs électriques.)



The Canadian General Electric Co., Toronto, Ontario, Canada, assignee of John W. Darley, jun., Baltimore, Maryland, U.S.A., 21st January, 1897; 6 years. (Filed 7th December, 1895.)

Claim.—1st. A plurality of electric motors arranged in groups, a commutating cylinder adapted to connect them in series or multiple, and a cut-out cylinder arranged, substantially as described, to cut

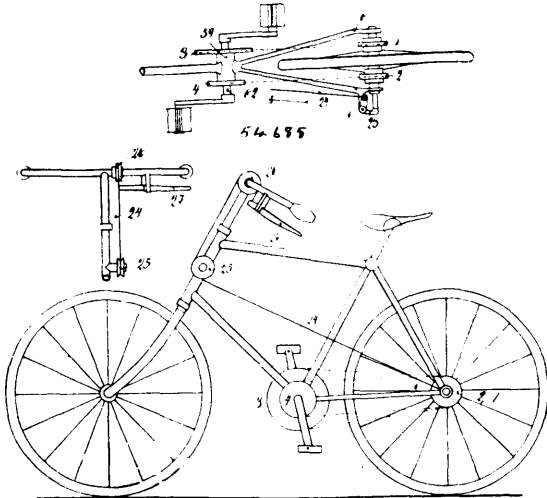
out any disabled motor from a group in all positions of the commutating cylinder and to cut out its mate only in multiple positions, whereby the power of the mate may be employed in the series positions, while the balance of the circuits is preserved in the multiple positions. 2nd. A plurality of electric motors arranged in groups, a commutating cylinder provided with contacts and cross connections adapted to connect the motors in series or multiple, and a cut-out cylinder provided with contacts and cross connections, all adapted and arranged substantially as herein described and set out to cut out disabled motor from any group in all positions of the commutating cylinder and to cut out its mate only in multiple positions. 3rd. In a controlling apparatus for electric motors, an electro-magnetic circuit-breaker, a commutating cylinder and mechanism, substantially as described, operated thereby and adapted to vary the capacity of the circuit-breaker. 4th. In a controlling apparatus for electric motors, an electro-magnetic circuit-breaker comprising a series coil, a core energized thereby, an armature attracted by such core and arranged to prevent the separation of the circuit-breaking contacts when not attracted, and a rotary yoke carried by the commutating cylinder and adapted to vary the attraction of the core upon the armature in accordance with the positions of the commutating cylinder. 5th. In a controlling apparatus for electric motors, a commutating cylinder provided with contacts and cross connections adapted to connect the motors in series or parallel, in combination with an electro-magnetic circuit-breaker comprising a series coil, a core energized thereby, an armature attracted by such core and adapted to hold in engagement the circuit-breaking contacts, and a rotary magnetic yoke attached to and revolving with the commutating cylinder, whereby the circuit-breaker may have a different capacity for the series and multiple positions of the commutating cylinder. 6th. In a controlling apparatus for electric motors, an electro-magnetic circuit-breaker, a cut out cylinder and mechanism, substantially as described, operated thereby and adapted to vary the capacity of the circuit breaker in accordance with the position of the cut-out cylinder. 7th. In a controller for electric motors, an electro-magnetic circuit-breaker, a cut-out cylinder and adjustable mechanism, substantially as described, operated thereby and adapted to vary the capacity of the circuit-breaker in accordance with the position of the cut-out cylinder. 8th. In a controller for electric motors, an electro-magnetic circuit-breaker comprising a series coil, a core magnetized thereby, an armature attracted by such core against the pull of a spring, and contacts arranged to separate when the armature is thus attracted, in combination with a cut-out cylinder, and mechanism adapted to increase the tension of the spring when any motor is cut out by the revolution of the cut-out cylinder. 9th. In a controller for electric motors, an electro-magnetic circuit-breaker comprising a series coil, a core magnetized thereby, an armature attracted by such core against the pull of a spring, and contacts arranged to separate when the armature is thus attracted, in combination with a cut-out cylinder, a cam attached to and revolving therewith, an arm operated by such cam and arranged to furnish an adjustable bearing for the spring, whereby the revolution of the cut-out cylinder may increase the tension of the spring to vary the capacity of the circuit-breaker when a motor is cut out. 10th. In a controller for electric motors, an electro-magnetic circuit-breaker comprising a series coil, a core magnetized thereby, an armature attracted by such core against the pull of a spring and contacts held in engagement when the armature is unattracted, in combination with a cut-out cylinder, a cam attached to and revolving therewith, an arm operated by such cam and adapted to form a bearing for one end of the spring, whereby the revolution of the cut-out cylinder may increase the tension of the spring to vary the capacity of the circuit-breaker when a motor is cut out. 11th. In a controller for electric motor, an electro-magnetic circuit-breaker comprising a series coil, a core magnetized thereby, an armature attracted by such core against the pull of a spring, circuit-breaking contacts comprising a main and an auxiliary contact upon the same rod, and a detent upon the armature holding such contacts in engagement, all in combination with a rotary magnetic yoke attached to and revolving with the commutating cylinder and adapted to vary the pull upon the armature in accordance with the position of the commutating cylinder. 12th. In a controller for electric motors, an electro-magnetic circuit-breaker comprising a series coil, a core for such series coil provided with a pole piece, a second core also provided with a pole piece, a magnetic yoke arranged to complete the circuit between the pole pieces and to be maintained at different distances therefrom, and an armature attracted by the second core and adapted to act as a detent for the circuit-breaking contacts. 13th. In a controller for electric motors, a commutating cylinder adapted to connect the motors in series or parallel at will, a reversing cylinder, and mechanism adapted to release such reversing cylinder only when the commutating cylinder is in its first or off position. 14th. In a controller for electric motors, a commutating cylinder, a reversing cylinder, and a detent for such reversing cylinder arranged to be thrown out of engagement by the rotation of the commutating cylinder to its first or off position. 15th. In a controller for electric motors, a reversing cylinder provided with detent notches, as G<sup>1</sup>, G<sup>2</sup>, a detent lever, as G<sup>3</sup>, adapted to maintain the cylinder in one or the other of two positions, a rod, as H, attached to the detent lever and adapted to co-operate with a pin, as H<sup>2</sup>, rotated by the commutating cylinder and arranged to lift the detent lever G<sup>3</sup> from the notches only when the commutating cylinder is in its off posi-



described. 14th. The combination and arrangement of parts constituting a complete tubular joint substantially as described and illustrated in figures 7 and 8, or figures 9 and 10, or figure 11 of the accompanying drawings. 15th. A jig or mould for making hubs, substantially as described. 16th. The method of manufacturing cycle hubs, substantially as hereinbefore described. 17th. Cycle hubs manufactured by operating with the fluid under pressure upon a tube in a mould, substantially as described.

**No. 54,685. Bicycle Driving Gear.**

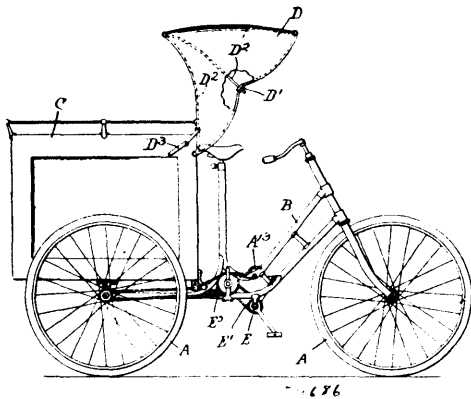
(Roue de commande pour bicycles.)



Oscar Luther, Munich, Bavaria, Germany, 21st January, 1897; 6 years. (Filed 5th November, 1896.)

*Claim.*—1st. A device for changing the driving gear for bicycles and other vehicles characterized by a hollow axle or hub in the hollow space of which any desired rigid or elastic parts may be placed, by means of which parts driving couplings of any desired kind may be thrown into or out of gear, substantially as described. 2nd. The combination and arrangement of parts constituting variable speed driving mechanism for bicycles and other vehicles, substantially as shown and described with reference to the accompanying drawing, substantially as described.

**No. 54,686. Bicycle. (Bicycle.)**



Carl Young, Chicago, Illinois, U.S.A., 21st January, 1897; 6 years. (Filed 24th October, 1896.)

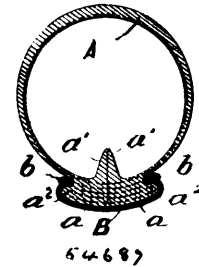
*Claim.*—1st. The combination with a bicycle of a power-storing device concealed within the part of the frame of the bicycle that connects the front fork with the crank-bearing, a controllable connection between said power-storing device and the crank-shaft of the bicycle, and a hand-operated means associated with said power-storing device for supplying power thereto. 2nd. A power-storing device for bicycles, comprising a coil-spring, a rotatable head connected with one end of said spring, and having a ratchet-wheel connected therewith, a revoluble wheel or disc associated with said head and operatively connected with said ratchet-wheel, an arm or the like connected with said wheel so as to rotate it when moved and so situated as to be operated by the hand of the rider and a connection between said spring and the crank-shaft of the bicycle, the whole so arranged that the hands and the feet may be used to aid in propelling the bicycle. 3rd. The combination with a bicycle of a power-storing device comprising a coil-spring concealed within the frame of the bicycle, a rotatable head to which said spring is

attached, an arm operatively connected with said head and within the reach of the hand of the rider and a controllable connection between said spring and the bicycle wheel, whereby two sources of power may be applied to the bicycle, either simultaneously or separately, substantially as described. 4th. The combination with a bicycle of a spring-motor comprising a coil-spring concealed within the part of the frame connecting the front fork with the crank-bearing and connected at one end with a rotatable head, an arm operatively connected with said head, said spring connected at the other end with a gear-wheel, a pinion loosely mounted upon the crank-shaft of the bicycle and in engagement with said gear-wheel, and a clutch rigid on said shaft and adapted to automatically connect the pinion therewith when said pinion is rotated faster than the shaft. 5th. The combination with a bicycle of a spring-motor comprising a coil-spring connected at one end with a rotatable head, an arm operatively connected with said head, said spring connected at the other end with a gear-wheel, a pinion loosely mounted upon the crank-shaft of the bicycle and in engagement with said gear-wheel, and a clutch rigid on said shaft and adapted to automatically connect the pinion therewith when said spring is rotated faster than the shaft, and a locking device associated with one end of said spring and adapted to prevent its rotation. 6th. The combination with a bicycle of a spring-motor comprising a coil-spring connected at one end with a rotatable head, an arm operatively connected with said head, said spring being connected at the other end with a gear-wheel, a pinion loosely mounted upon the crank-shaft of the bicycle and in engagement with said gear-wheel, a clutch rigidly connected with said crank-shaft, and provided with spring-actuated pawls adapted to engage teeth upon said pinion, said teeth and pawls so shaped that the pinion will be operatively connected with the crank-shaft only when it is rotated at a speed greater than the speed of the crank-shaft. 7th. The combination with a bicycle of a spring-motor comprising a coil-spring connected at one end with a rotatable head, an arm operatively connected with said head, said spring being connected at the other end with a gear-wheel, a pinion loosely mounted upon the crank-shaft of the bicycle and in engagement with said gear-wheel, a clutch rigidly connected with said crank-shaft, and provided with spring-actuated pawls adapted to engage teeth upon said pinion, said teeth and pawls so shaped that the pinion will be operatively connected with the crank-shaft only when it is rotated at a speed greater than the speed of the crank-shaft, and a sliding rod having one end within the reach of the rider, the other end of said rod adapted to be inserted in slots or holes in said pinion, so as to lock it and prevent its rotation. 8th. The combination with a bicycle of a spring-motor comprising a coil-spring connected at one end with a rotatable head having a ratchet-wheel rigidly connected therewith, a rotatable disc or pulley associated with said head and provided with a pawl adapted to engage said ratchet wheel, a flexible power-transmitting device fastened to said pulley, and adapted to move it in one direction, a spring associated with said pawl and adapted to move it in an opposite direction, a second pulley to which said flexible power-transmitting device is fastened, an arm connected with said second pulley and adapted by its movement to rotate said pulley through a partial revolution, and a controllable connection between said spring and the wheel of the bicycle, whereby the spring may be operatively connected therewith. 9th. The combination with a bicycle of a spring-motor comprising a coil-spring connected at one end with a rotatable head having a ratchet-wheel rigidly connected therewith, a rotatable disc or pulley associated with said head and provided with a pawl adapted to engage said ratchet-wheel, a flexible power-transmitting device fastened to said pulley, and adapted to move it in one direction, a spring associated with said pawl and adapted to move it in an opposite direction, a second pulley to which said flexible power-transmitting device is fastened, an arm connected with said second pulley, and adapted by its movement to rotate said pulley through a partial revolution, a gear-wheel to which the lower end of said spring is fastened, a pinion loosely mounted upon the crank-shaft of the bicycle and in engagement with said gear-wheel, a clutch rigid on said crank-shaft and adapted to operatively engage said pinion therewith when the pinion is rotated at a greater speed than the crank-shaft. 10th. The combination with a bicycle of a spring-motor comprising a coil-spring connected at one end with a rotatable head having a ratchet-wheel rigidly connected therewith, a rotatable disc or pulley associated with said head and provided with a pawl adapted to engage said ratchet-wheel, a flexible power-transmitting device fastened to said pulley, and adapted to move it in one direction, a spring associated with said pawl and adapted to move it in an opposite direction, a second pulley to which said flexible power-transmitting device is fastened, an arm connected with said second pulley through a partial revolution, a gear-wheel rigidly connected to one end of said spring, a pinion in engagement with said gear-wheel and loosely mounted upon the crank-shaft of the bicycle, a clutch rigidly connected with said shaft and provided with spring-actuated pawls adapted to engage teeth on said pinion, said pawls and teeth so shaped that they only operatively engage each other when the pinion is rotated at a greater rate of speed than the shaft, substantially as described. 11th. The combination with a bicycle of a spring the ends of which are fastened respectively to two parts movable with relation to each other, a hand winding device by which the spring is wound associated with one of said parts, and a controllable winding connection between

said other part and the crank-shaft of the bicycle whereby the spring may be wound either by hand or rotation of the crank-shaft. 12th. The combination with a bicycle of a power-storing device comprising a spring connected at one end to a shaft, a rotatable case surrounding said spring and provided on its periphery with teeth, one end of said spring being connected with said case, a chain or the like engaging said teeth and adapted to connect said case with a clutch on the crank-shaft of the bicycle, said clutch so constructed that the spring may be operatively connected with the shaft so as to rotate it. 13th. The combination with a bicycle of a spring connected at one end to a rotatable shaft, a rotatable case surrounding said spring and having the other end of said spring fastened thereto, a locking device for said spring, connecting mechanism between said spring and said shaft and adapted to connect them so that the spring may be wound by the rotation of said shaft, said connecting mechanism so constructed that the spring and shaft may be automatically connected together when the spring-locking device is removed. 14th. A clutch comprising two parts movable with relation to each other, a series of eccentric rollers associated with said parts and adapted to connect them together, a series of springs interposed between said rollers, each spring engaging the two adjacent rollers, and controlling mechanism connected with one of said springs by which their pressure against the adjacent rollers is varied. 15th. A clutch comprising two parts movable with relation to each other, a series of eccentric rollers associated with said parts and adapted to connect them together, a series of free springs loosely interposed between said rollers, and a controlling arm associated with said rollers and springs by which their position may be varied, and a locking device for said arm, substantially as described. 16th. A clutch comprising a disc rigidly connected to a shaft, a case in which said disc is inclosed, a ring surrounding said disc and rigidly connected to said case, a series of openings extending through said ring, a series of eccentric rollers within said openings and adapted when in certain positions to operatively connect the disc and case together and a controlling device associated with said rollers and adapted when operated to vary their positions, substantially as described. 17th. The combination with a bicycle of a spring having its ends connected each to one of two rotatable parts, a clutch associated with the crank-shaft of the bicycle and comprising two parts movable with relation to each other, a ring interposed between said parts and rigidly connected to one of them, said ring provided with a series of holes extending therethrough, a series of eccentric rollers situated in said openings and adapted when in certain predetermined positions to be actuated by the relative movement of the parts so as to lock them together, and a connecting device between one of the movable parts of the clutch and one of the movable parts to which the spring is connected. 18th. The combination with a bicycle of a spring having its ends connected each to one of two movable parts, a clutch associated with the crank-shaft of the bicycle and comprising two parts movable with relation to each other, a series of eccentric rollers associated with said parts and adapted when in certain predetermined positions to be actuated by the relative movement of the parts so as to lock them together, and a connecting device between one of the movable parts of the clutch and one of the movable parts to which the spring is connected, and a controlling mechanism for said rollers by which their position is varied. 19th. The combination with a bicycle of a spring having its ends connected respectively with two rotatable parts, a clutch associated with the crank-shaft, comprising two parts movable with relation to each other, a series of eccentric rollers interposed between these two parts and adapted when moved from their normal position to be actuated by the relative movement of said parts so as to operatively connect the parts together, a series of springs associated with said eccentric rollers and adapted to hold them in a normal position, and an arm connected with said springs and adapted to move them so as to rock the eccentric rollers and move them to a position where the relative movement of the two parts of the clutch will cause them to engage said parts so as to operatively connect them together. 20th. A clutch device comprising two parts adapted to be moved with relation to each other, a ring interposed between said parts and provided with openings extending therethrough, a series of eccentric rollers situated in said openings and interposed between said parts and adapted when rocked or moved in one direction from their normal position to be actuated by the relative movement of said parts in one direction so as to operatively connect them together but leave them free to move relatively in the opposite direction, and a controlling device connected with said eccentric rollers by which they may be moved in either direction from their normal position. 21st. A clutch device comprising two parts adapted to be moved with relation to each other, a series of eccentric rollers interposed between said parts and adapted when rocked or moved in one direction from their normal position to be actuated by the relative movement of said parts in one direction so as to operatively connect them together but leave them free to move relatively in the opposite direction, a series of free springs loosely interposed between said eccentric rollers and adapted to normally hold them so that the two parts of the clutch will be free to move with relation to each other, and an arm or lever connected with said eccentric rollers, and springs so as to move or rock said eccentric rollers in either direction whereby the parts of the clutch will be connected together. 22nd. The combination with a bicycle of a spring, two movable parts to which the ends of said spring are attached, one end to each part, a locking device for each of said parts, a clutch associated with the crank-

shaft of the bicycle and comprising two parts adapted to be moved with relation to each other, a series of eccentric rollers interposed between said parts and adapted when rocked or moved in one direction from their normal position to be actuated by the relative movement of said parts in one direction so as to operatively connect them together but leave them free to move relatively in the opposite direction, and a controlling device connected with said eccentric rollers by which they may be moved in either direction from their normal position, a power-transmitting device operatively connecting one part of said clutch with one of the parts to which said spring is fastened whereby the spring may be operatively connected with the crank-shaft, substantially as described. 23rd. The combination with a bicycle of a spring, the ends of which are fastened respectively to two parts movable with relation to each other, a hand-winding device by which the spring is wound associated with one of said parts, a controllable winding connection between said other part and the crank-shaft of the bicycle, said connection comprising two parts movable with relation to each other, a series of eccentric rollers associated with said parts and adapted to connect them together, a series of springs loosely interposed between said rollers, said springs engaging the two adjacent rollers, and a controlling mechanism connected with one of said springs by which their pressure against the adjacent rollers may be varied. 24th. A clutch comprising a disc rigidly connected to a shaft, a case in which said disc is enclosed, a ring surrounding said disc and rigidly connected to said case, there being a series of openings extending through said ring, a series of eccentric rollers within said openings and adapted when in certain positions to operatively connect the disc and case together, a series of springs loosely interposed between said rollers, the ends of each spring being normally in contact with the two adjacent rollers, and a controlling device connected with one of said springs and adapted when operated to vary the pressure of said springs against the adjacent rollers so as to change their position. 25th. A clutch, comprising two parts movable with relation to each other, a series of eccentric rollers associated with said parts and adapted to connect them together, a series of free springs loosely interposed between said rollers, and a controlling arm associated with said rollers and springs by which their position may be varied.

**No. 54,687. Pneumatic Tire. (*Bandage pneumatique.*)**



John Townsend Trench, Kenmare, Kerry, Ireland, 21st January, 1897; 6 years. (Filed 27th November, 1896.)

*Claim.*—1st. A pneumatic tire, consisting of a tube adapted to contain air under pressure divided circumferentially along its base or inner side and having tapered or cone-shaped internal radial or vertical lips on its edges or margins, of a rim adapted to receive the same, and of means for attaching the tube to the wheel rim, substantially as described. 2nd. In a pneumatic tire of the type claimed by the preceding claim forming the internal radial or vertical lips so that they incline towards one another whereby they meet and become pressed firmly one against the other in the act of mounting the tube in the wheel rim, as set forth. 3rd. In a tubeless pneumatic tire, making the joint between the divided edges or margins of the tube preventing their outward expansion under inflation, and attaching them to the wheel rim, substantially as hereinbefore described and illustrated by figures 1, 4, 5, 6, 7, 8, 9, 10, 11 and 12 of the accompanying drawing.

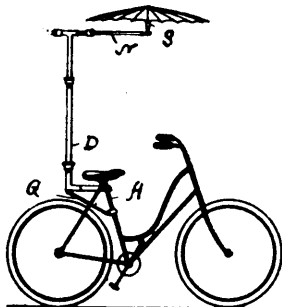
**No. 54,688. Umbrella for Cycles.**

(*Parapluie pour cycles.*)

Arthur Thomas Woodward, Bendigo, Victoria, Australia, 21st January, 1897; 6 years. (Filed 29th November, 1896.)

*Claim.*—1st. An improved umbrella for cycles having a jointed telescopic rod as N with a plugged end and a fork thereon as and for the purposes hereinbefore described and as illustrated in the drawings. 2nd. An improved umbrella for cycles a jointed umbrella rod end as S having a tongue as R, on which is a ridge as Q, with a screw hole through the said tongue, all as and for the purposes hereinbefore described and as illustrated in the drawings. 3rd. An improved umbrella for cycles and in combination a jointed telescopic rod as N with a plugged end and a side fork as O on the inside face of which are grooves as P, an umbrella rod end as B with a tongue as R having a ridge as Q locked by a screw as T, all as and for the purposes hereinbefore described and as illustrated in the drawings. 4th. An improved attachment for connecting umbrellas to cycles and in combination a split clip as B, main divided or undivided telescopic tube as D, (with or without an elbow as X) tongue as C and stay as G, a

split threaded ring as I surrounded by a nut as K, all as and for the purposes hereinbefore described and as illustrated in the drawings.

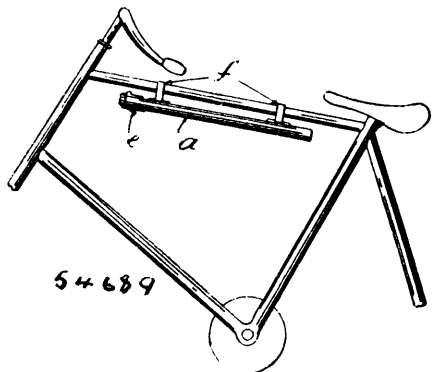


54,688

5th. An improved attachment for connecting umbrellas to cycles and in combination a split clip as B, main divided or undivided telescopic tube as D, (with or without an elbow as X) tongue as C and stay as G, a split threaded ring as I surrounded by a nut as K, subsidiary telescopic tube as L with a T piece as M around which is a split ring and a nut as K, all as and for the purposes hereinbefore described and as illustrated in the drawings. 6th. An umbrella attachment for cycles and in combination a jointed telescopic rod as N, on one end of which is a detachable handle as U and on the other a clip for holding an umbrella, a split clip as B, main divided or undivided telescopic tube as D, (with or without an elbow as X) subsidiary telescopic tube as L, with a T piece as M, all as and for the purposes hereinbefore described and as illustrated in the drawings. 7th. An improved umbrella and attachment for cycles and in combination a jointed telescopic umbrella rod as N with a plugged end and a side fork as O, on the inside face of which are grooves as P, an umbrella rod end as S with a tongue as R having a ridge as Q locked by a screw as T, a handle as U, metallic bush V and plug as W, a split clip as B, main divided or undivided telescopic tube as D (with or without an elbow as X), a tongue as C and a stay as G, split threaded ring as I surrounded by a nut as K, subsidiary telescopic tube as L with a T piece as M, around which is a split ring and a nut as K, all as and for the purposes hereinbefore described and as illustrated in the drawings. 8th. In an improved umbrella and attachment for cycles, the whole of the combination and arrangement of parts as set forth upon figures 1, 2, 3, 4, 5 and 6 of the accompanying drawings and constituting my improved umbrella and attachment for cycles.

#### No. 54,689. Case for Bicycle Pumps.

(Fourreau pour pompes de bicycles.)



54,689

Walter Max Schlesinger, London, Middlesex, England, 21st January, 1897; 6 years. (Filed 9th November, 1896.)

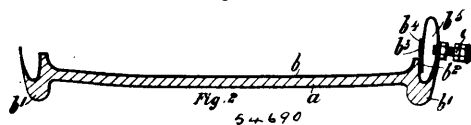
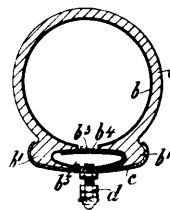
*Claim.*—The new or improved case or holder for bicycle pumps and the like, consisting of a case or holder having at its closed end a spring buffer or compressible bottom for the purpose of preventing the pump or other article from shaking or vibrating when carried in the case or holder, and also for causing the pump or article to protrude from the case or holder when the lid or cover has been removed, substantially as desired and illustrated herein.

#### No. 54,690. Pneumatic Tire. (Bandage pneumatique.)

John William McDougall, Napier, New Zealand, 21st January, 1897; 6 years. (Filed 29th November, 1896.)

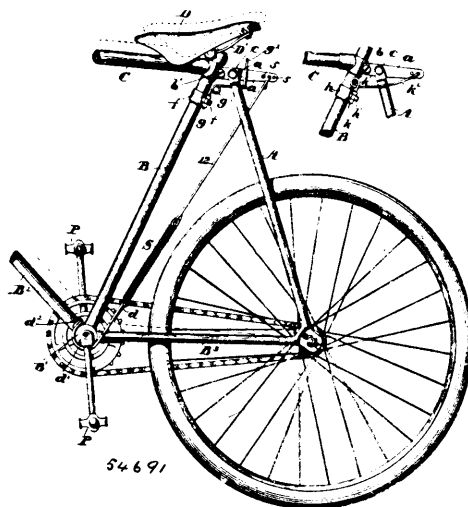
*Claim.*—1st. A pneumatic tire constructed, arranged and secured, substantially as described herein with reference to figures 1 and 2 on the drawings. 2nd. A pneumatic tire constructed, arranged and secured, substantially as described herein with reference to figures 3, 4 and 5 on the drawings. 3rd. A pneumatic tire constructed, arranged and secured, substantially as described herein with reference to figures 6, 7 and 8 on the drawings. 4th. A pneumatic tire,

constructed, arranged and secured, substantially as described herein with reference to figures 9 and 10 on the drawings. 5th. A

Fig. 2  
54,690

pneumatic tire constructed, arranged and secured, substantially as described herein with reference to figures 11, 12 and 13 on the drawings. 6th. A fastening for pneumatic tires, consisting of two rings or sides connected by cross bars and operated by a key or keys, substantially as described herein with reference to figures 14, 15 and 16 on the drawings. 7th. The improvements in and relating to pneumatic tires, substantially as and for the purposes set forth herein and illustrated on the accompanying drawings.

#### No. 54,691. Bicycle. (Bicycle.)



54,691

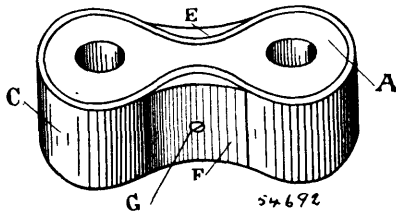
Norman Taylor Mills, East Hampton, Connecticut, U.S.A., 21st January, 1897; 6 years. (Filed 29th November, 1896.)

*Claim.*—1st. In a bicycle, the main frame, the rear fork, and a yielding connection between its upper end and the main frame, substantially as described. 2nd. In a bicycle, the main frame, the rear fork, a jointed connection between its upper end and the main frame, and a controlling spring for said connection, substantially as described. 3rd. In a bicycle, the main frame, the rear fork, a lever pivotally connected to the upper end of the fork and the frame, and a controlling spring fixedly connected at one end and connected at its other end to the lever, substantially as described. 4th. In a bicycle, the main frame, a seat support and crank-shaft hanger mounted thereon at a fixed distance apart, the rear fork, and a yielding connection between the upper end of the fork and the main frame, substantially as described. 5th. In a bicycle, the main frame having a crank-shaft hanger brace, a saddle mounted on said brace, the rear fork, a jointed connection between its upper end and the main frame, and a controlling spring for said connection, whereby shock is transmitted to and taken up by said spring, substantially as described. 6th. In a bicycle, the main frame, the rear fork, a lever pivotally connected to the upper end thereof and to the frame, a controlling spring for the lever, and a guard to limit the movement of said lever, substantially as described. 7th. In a bicycle, the main frame, a bifurcated lever pivotally mounted thereon, the rear fork, a joint connecting its upper end with said lever, a controlling spring for the lever, and a loop-like stop surrounding and to limit the swing of the lever, substantially as described. 8th. In a bicycle, the main frame, the rear fork, a spring controlled lever connecting its upper end and the frame, a clip rigidly secured to the frame, and a spring-acting loop-like stop mounted on the clip, and through which the free end of the lever is extended, to limit the movement thereof, substantially as described. 9th. In a bicycle, the main frame, a crank-shaft hanger supported thereby, the rear fork, a lever pivotally connecting its upper end



and the frame, a spring connected at one end to the free end of the lever, and a clip attached to the other end of the spring and curved to embrace the shaft hanger, substantially as described.

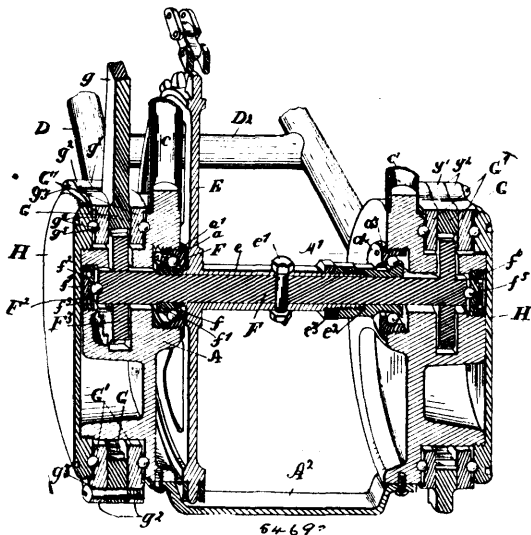
**No. 54,692. Bicycle Chain.** (*Chaîne de bicyclette.*)



Arthur W. Gregory, Morristown, New York, U.S.A., 21st January, 1897; 6 years. (Filed 29th November, 1896.)

*Claim.*—1st. A link for a chain, and a covering of rawhide applied thereto, combined with blocks applied to opposite sides of the link to hold the covering in position and a fastening bolt or screw which is passed through the parts to hold them in position, substantially as shown. 2nd. A link for a bicycle chain, and a covering of rawhide applied thereto, combined with clamping blocks secured to opposite sides of the link, and curved upon their inner sides so as to conform to the shape of the link and hold the covering in close contact therewith, and a screw rod which is passed through the parts to secure them together, substantially as described. 3rd. A link for a bicycle chain, and a covering of rawhide applied thereto, combined with blocks applied to opposite sides of the link, and which blocks conform to the shape of the link and have roughened sides, and a screw for securing the parts together, substantially as set forth.

**No. 54,693. Bicycle Construction.** (*Construction de bicyclette.*)

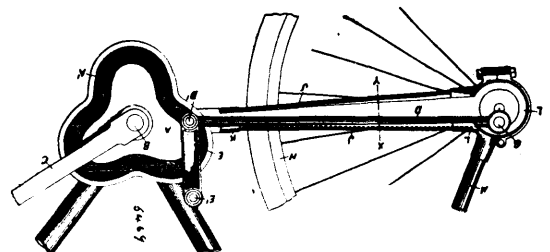


John Ferguson Black and Alfred Martin Smith, both of Montreal, Quebec, Canada, 21st January, 1897; 6 years. (Filed 28th November, 1896.)

*Claim.*—1st. In a bicycle, the combination with the lower reach of the frame having a rear forked end, of the rear post having a lower forked end, two crank-hangers to which the opposing members of each fork are connected and a sprocket-wheel axle suitably journaled in the crank-hangers, as and for the purpose specified. 2nd. In a bicycle, the combination with the lower reach of the frame having a rear forked end, of the rear post having a lower forked end, two crank-hangers to which the opposing members of each fork are connected, a sprocket-wheel axle suitably journaled in the crank-hangers and the side bars having the front ends connected to the crank-hangers, as and for the purpose specified. 3rd. In a bicycle, the combination with the lower reach of the frame having a rear forked end, of the rear post having a lower forked end, two crank-hangers to which the opposing members of each fork are connected, a sprocket-wheel axle suitably journaled in the crank-hangers, double side bars having the front ends connected to the crank-hangers and the strengthening cross-bar between the double side bars is proximity to the crank-hangers, as and for the purpose specified. 4th. In a bicycle, the combination with the lower reach of the frame having a rear forked end, of the rear post having a lower forked end two crank-hangers to which the opposing members of each fork are connected, a sprocket-wheel axle suitably journaled in the crank-hangers and the bracing cross-bar extending between and secured

to the lower portion of the crank-hangers, as and for the purpose specified. 5th. The combination with the disc-shaped crank-hangers supported in the frame as specified, of a sprocket-wheel axle and sprocket-wheel supported in suitable bearings inside the crank-hangers and means for driving the sprocket-wheel axle, as and for the purpose specified. 6th. The combination with the disc-shaped crank-hangers supported in the frame as specified, of a sprocket-wheel axle and sprocket-wheel supported in suitable bearings inside the crank-hangers, pinions attached to or formed on the ends of the sprocket-wheel axle, internal gearings journaled eccentrically to the axle at each end thereof and provided with suitable cranks attached to or forming part of the same, and suitable bearing rings attached to the gear rings and journaled on ball bearings on the disc-shaped crank-hangers, as and for the purpose specified. 7th. The combination with the disc-shaped crank-hangers supported in the frame as specified, of a sprocket-wheel axle and sprocket-wheel supported in suitable bearings inside the crank-hangers, pinions attached to or formed on the ends of the sprocket-wheel axle, internal gear rings journaled eccentrically to the axle at each end thereof and provided with suitable cranks attached to or forming part of the same, suitable bearing rings attached to the gear rings and journaled on the crank-hangers by ball bearings and a removable cap secured on the outer ends of each crank-hanger, as and for the purpose specified. 8th. In combination, the sprocket-wheel axle, the crank-hangers, the sprocket-wheel provided with a sleeve secured to the sprocket-wheel axle, the interior threaded recesses in the crank-hangers, the cups with shoulder flanges screwed into the recesses and the balls and cones secured to the axle, all arranged as and for the purpose specified. 9th. In combination, the sprocket-wheel axle, the crank-hangers, the sprocket-wheel provided with a sleeve secured to the sprocket-wheel axle, the interior threaded recess in one crank-hanger next the sprocket-wheel, the cup with shoulder flanges screwed into the same, the balls, the shoulder on the sprocket-wheel axle, and the cone extending between each shoulder and the hub of the sprocket-wheel, as and for the purpose specified. 10th. In combination, the sprocket-wheel axle, the crank-hangers, the sprocket-wheel provided with a sleeve secured to the sprocket-wheel axle, the interior threaded annular recess in one crank-hanger next the sprocket-wheel, the cup with shoulder flange screwed into the same, the balls, the shoulder on the sprocket-wheel axle, the cone extending between such shoulder and the hub of the sprocket-wheel, the interior threaded recess in the opposite crank-hanger, the cup with shoulder flange, the balls, the cone with threaded cup shaped end screwed onto the end of the sleeve of the sprocket-wheel and the lock nut on the threaded end of such sleeve, as and for the purpose specified. 11th. In combination, the crank-hangers, the sprocket-wheel axle and sprocket-wheel, the bearings for the sprocket-wheel axle at the interior of the crank-hangers, the caps secured to the opposite ends of the crank-hangers and the single ball bearing at each end of the sprocket-wheel axle, comprising threaded plugs fitted into a corresponding recess in the crank-hangers and a ball fitting into a recess in the end of the axle, as and for the purpose specified. 12th. In combination, the sprocket-wheel axle, the crank-hangers and bearings in the same forming a support for each end thereof, the sprocket-wheel, the pinions attached to or forming part of the ends of the sprocket-wheel axle, the gear rings with cranks attached to or forming part of the same, the supplemental rings secured to the gear rings by suitable lugs and bolts, the ball bearings between the inner supplemental rings and the crank-hangers, the removable caps screwed on to the threaded outer end of the crank-hanger, and the ball bearings between the removable caps and the outer supplemental rings, as and for the purpose specified.

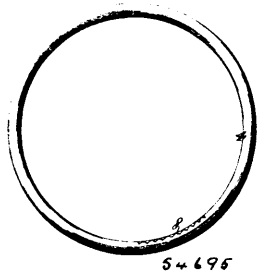
**No. 54,694. Velocipede or other Vehicles.** (*Vélocipèdes ou autres véhicules.*)



Thomas Hann, Plumstead, Kent, William Bromley and John Price, both of Kennington Lane, Surrey, Alfred Henry Smith and Dick Edwards Radcliffe, both of Regent's Park, both in London, and all in England, 21st January, 1897; 6 years. (Filed 16th November, 1896.)

*Claim.*—In velocipedes or other vehicles, the employment of two multiple throw grooved cams A A, one such being fixed upon the pedal or driven axle at each side of the machine frame, and providing two similar independently swinging arms E, E, upon a stud-bearing on the frame above the cams, (one arm for each cam,) the lower end of each arm having a bowl entering its cam groove, and each arm being also independently connected by connecting rod D with cranks G on the rear wheel, to be driven substantially as set forth.

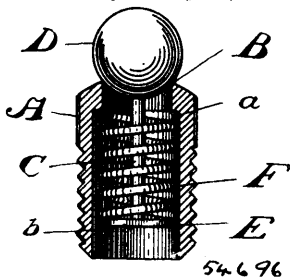
**No. 54,695. Vehicle Tire. (Bandage de véhicules.)**



The Advance Tire Company, assignee of Gustavus Heidel, all of St. Louis, Missouri, U.S.A., 21st January, 1897; 6 years. (Filed 23rd November, 1896.)

*Claim.*—A vehicle tire comprising a core of alternately arranged discs of felt covered with rubber, and discs of rubber, substantially as described.

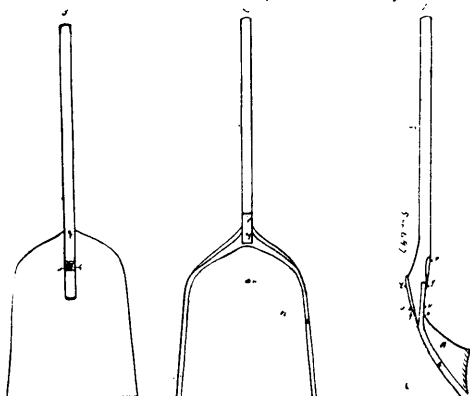
**No. 54,696. Oil Cup for Bicycles, etc. (Godet à huile pour bicycles, etc.)**



The Gould Bicycle Company, assignee of William Sanfield Wilson, both of Brantford, Ontario, Canada, 21st January, 1896; 6 years. (Filed 2nd December, 1896.)

*Claim.*—1st. In an oil cup, the combination with a cylinder counter-bored to form an internal shoulder, and having an external valve seat formed in its end, of a plunger provided with a valve to fit the aforesaid external seat, and a spring bearing at one end against the aforesaid shoulder and engaging with the plunger so as to draw the valve into its seat, substantially as and for the purpose specified. 2nd. In an oil cup, the combination with a hollow cylinder counter-bored to form an internal shoulder and having an external valve seat formed in its end, of a plunger provided at one end with a ball valve to fill the aforesaid external seat, and at the other with a head shaped to permit the passage of oil, and a spring located between the said head and the shoulder in the cylinder, substantially as and for the purpose specified. 3rd. In an oil cup, the combination with a hollow cylinder counter-bored to form an internal shoulder and having its outer end convex externally, and provided with an external valve seat, of a plunger provided at one end with a ball valve to fit the aforesaid external seat, and at the other with a head shaped to permit the passage of oil, and a spring located between the said head and the shoulder in the cylinder, substantially as and for the purpose specified.

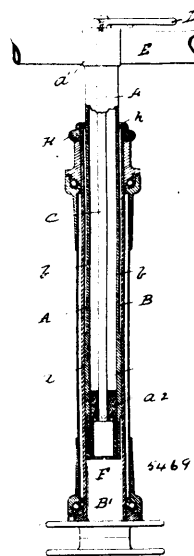
**No. 54,697. Wooden Shovel. (Pelle en bois.)**



Pierre Boivin et François Barbeau, tous deux de Saint-Ambroise de la Jeune Lorette, Québec, Canada, 21 janvier 1897; 6 ans. (Déposé le 25 novembre 1896.)

*Résumé.*—Dans les pelles en bois courbées, un rebord C, formé par le creusement du centre de la dite pelle, tel que décrit et pour les fins indiquées.

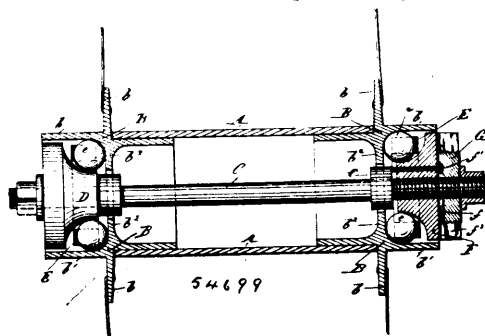
**No. 54,698. Velocipede. (Vélocipède.)**



John Henry Knight, St. John's Wood, London, Middlesex, England, 21st January, 1897; 6 years. (Filed 11th December, 1896.)

*Claim.*—1st. In a velocipede, the combination with the tubular stem of the fork carrying the steering wheel, of a pillar adapted to carry the transverse handle bar and mounted in the stem of the steering fork so that it has free vertical movement in but no radial movement apart from the said stem, and of an eccentric locking device consisting of a cam or eccentric mounted on a rod passing down through the handle-bar pillar, and of a lever fixed on the top end of the said rod outside the said pillar, as set forth. 2nd. In a velocipede, the combination with the tubular stem B of the fork carrying the steering wheel, of the pillar A adapted to carry the transverse handle bar and mounted in the stem of the steering fork so that it has free vertical movement in but no radial movement apart from the said stem, of a locking device carried by the said pillar and consisting essentially of a split tube forming part of the pillar A or attached thereto, of a cam or eccentric F mounted within the said split part of the pillar A, of a rod C for carrying the said cam or eccentric, and of a lever D located on the top of the pillar A for actuating the rod C, as set forth. 3rd. In a velocipede, the combination with the tubular stem B of the fork carrying the steering wheel, of a pillar A adapted to carry the transverse handle bar and mounted in the stem of the steering fork so that it has free vertical movement in but no radial movement apart from the said stem, of a locking device carried by the said pillar and consisting of one or more cams or eccentrics F carried by a rod C mounted eccentrically in suitable bearings in the tubular pillar A and adapted to pass through slots or openings *a'* in the said pillar and impinge on and bind the said pillar in the tubular stem B of the steering fork, as set forth.

**No. 54,699. Wheel Hub. (Moyeu de roue.)**

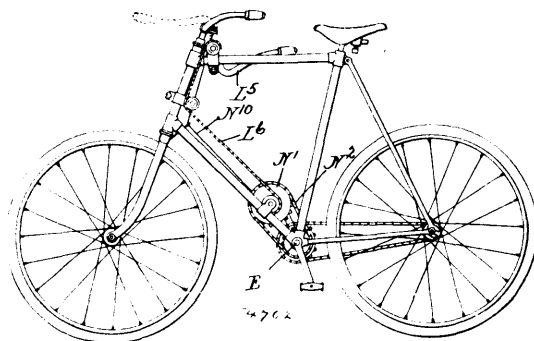


Gustavus E. Strauss, New York, State of New York, and Emil Klahn, West Hoboken, New Jersey, all in the U.S.A., 21st January, 1897; 6 years. (Filed 7th December, 1896.)

*Claim.*—1st. A hub for wheels, comprising a tube and two end-rings inserted into the same and attached thereto, the rings having each an upwardly extending flange for bearing the spokes, and an outward extension which forms with an inner flange a curved or conical wall of a ball-chamber, in combination with an axle having conical end-portion, and series of balls in the chambers formed by the inner flanges of the end-rings of the hub and the conical portions

of the axles. 2nd. In a hub, a device for holding the balls of the ball-bearing consisting of a ring-shaped washer having on one side-surface a number of excavations in which the balls are so held that they can rotate therein and project partially beyond the inner and outer peripheries of the same, substantially as and for the purpose set forth. 3rd. The combination of a hub, comprising a tube and two end-rings inserted into the same and attached thereto, the rings having each an upwardly extending flange for bearing the spokes, and an outward extension forming with an inner flange a curved or conical wall, with two washers holding balls which project beyond the inner and outer peripheries of the washers, one washer being placed upon each curved or conical wall of said ring-sections, an axle having on one end a cone and on the other end a conical screw-nut, which cone and conical screw-nut enclose the ball-holding washers in the chambers formed by the same and the curved or conical walls of the ring-sections, substantially as set forth. 4th. The combination of a hub, comprising a tube and two end-rings inserted into the same and attached thereto, the rings having each an upwardly extending flange for bearing the spokes, and an outward extension forming with an inner flange a conical wall, with two washers holding balls which project beyond the inner and outer peripheries of the washers, one washer being placed upon each inner curved or conical wall of the said ring-sections, an axle having a flange and on one end a cone, a conical screw-nut screwed upon the other end of the axle and being provided with a threaded excavation and incisions in its top and traversing holes, pins in the traversing holes, and an additional screw-nut pressing the pins upon the flange of the axle, the said cone and conical screw-nut and the inner curved or conical walls of the ring-sections enclosing the ball-bearing washers, substantially as set forth.

**No. 54,702. Bicycle and Vehicle. (Bicycle.)**

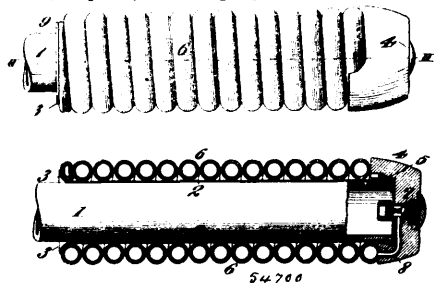


Carl Young, Chicago, Illinois, U.S.A., 22nd January, 1897; 6 years. (Filed 7th December, 1896.)

*Claim.*—1st. The combination in a bicycle, of a pedal-shaft, pedal-cranks associated therewith each adapted to make a partial rotation, an open ring connected at one end with each of said pedal-cranks, intermediate gear mechanism connecting the other ends of the two open rings, braking-surfaces connected with the shaft and opposed to said rings, a clutch associated with each of said pedal-cranks and adapted to connect them with the crank-shaft when they are alternately operated, the whole being so constructed that when the pedal-cranks are simultaneously pressed, the spring-rings are forced against their opposed braking-surfaces. 2nd. The combination in a bicycle, of a pedal-shaft, pedal-cranks each adapted to make a partial rotation, connecting devices between the pedal-cranks and shaft to operatively connect them, a series of bevelled gears connecting said pedals, so that the operative movement of one brings the other to the beginning of its stroke, and two split spring braking-rings between the pedals and the bevelled gears, bearing-surfaces opposed to the rings and associated with the shaft and connected with the pedals and bevelled gears, so that when both pedals are simultaneously pressed, the rings will engage their opposed surfaces and retard the shaft. 3rd. The combination in a bicycle, of a pedal-shaft, pedal-cranks each adapted to make a partial rotation, two spring-rings, one connected with each of said pedal-cranks, discs opposed to them and connected with the shaft, a series of openings or spaces in said discs, a series of rollers in said spaces provided with springs adapted to normally press them into contact with said spring-rings, intermediate gear mechanisms connecting said spring-rings together and also connecting the pedals so that a movement of one causes an opposite movement of the other, whereby, when the cranks are alternately pressed, the spring-rings and rollers will engage so as to rotate the shaft, and when they are simultaneously pressed, the spring-rings will be forced into engagement with the discs so as to retard the movement of the shaft. 4th. The combination in a bicycle, of a pedal-shaft, pedal-cranks each adapted to make a partial rotation, spring-rings having separated ends each connected at one end with one of said pedal-cranks, and each opposed to a disc connected with the pedal-shaft, a series of projecting arms on said discs, a series of rollers interposed between said arms and elastically pressed against said spring-rings, two bevelled gears loosely mounted on said pedal-shaft, each connected with one end of said spring-rings, intermediate bevelled pinions to operatively connect the bevelled gears, the whole so arranged that when the pedal-cranks are alternately actuated they will be connected with the shaft so as to operate the same, and when actuated simultaneously will be connected with the shaft so as to retard its motion. 5th. A bicycle comprising a driving-shaft, pedal-cranks adapted to make only a partial rotation, a spring-ring connected with one of said pedal-cranks, an opposed braking surface on the driving-shaft, clutching devices for connecting said pedal-cranks with said shaft, an intermediate gear mechanism to connect the pedal-cranks together through the spring-ring, so that when both pedals are simultaneously pressed, the spring-ring is forced against its opposed surface, and the shaft is retarded, and when either pedal is operated, the shaft is rotated. 6th. A power transmitting device for vehicles and the like, comprising a driven shaft, two bevel-gears rotatably mounted upon said shaft, each bevel-gear provided with a clutching mechanism adapted to connect it with the shaft when moved in one direction, but allowing it to move in an opposite direction free from said shaft, a connection between said bevel-gears so that a movement of one causes an opposite movement of the other and a lever adapted to be operated by the foot, directly connected with each of said bevel-gears whereby the shaft is driven when the levers are simultaneously operated. 7th. A power transmitting device for cycles and vehicles comprising a driven-shaft, mounted in bearings on a frame connected with the cycle or vehicle, two bevelled gears rotatably mounted upon said shaft, each bevelled gear provided with a clutching mechanism adapted to connect it with the shaft when moved in one direction but allowing it to move in an opposite direction free from said shaft, a connection between said bevelled gears so that a movement of one causes an opposite movement of the other, a lever adapted to be operated by the foot connected with each of said bevelled gears whereby the shaft is driven when the

**No. 54,700. Pneumatic Handle for Bicycles, etc.**

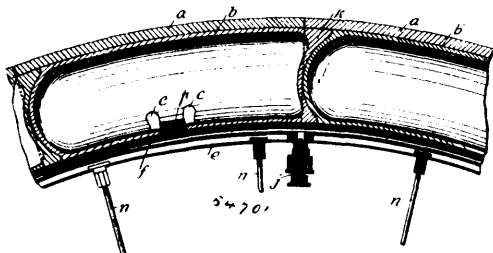
(*Poignée pneumatique pour bicyclettes, etc.*)



Julian Kane Pogue, Webster Groves, Missouri, U.S.A., 22nd January, 1897; 6 years. (Filed 4th December, 1896.)

*Claim.*—1st. As a new article of manufacture, a pneumatic hand-grip, consisting of a number of rings lying side by side, substantially as described. 2nd. As a new article of manufacture, a pneumatic hand-grip, consisting of a coiled tube, substantially as set forth. 3rd. As a new article of manufacture, a pneumatic hand-grip, consisting of a tube coiled in spiral form and provided with a valve through which the tube is inflated, substantially as set forth. 4th. As a new article of manufacture, a pneumatic hand-grip, consisting of a sleeve, and a tube coiled in spiral form upon the sleeve and provided at one end with a valve, substantially as set forth. 5th. As a new article of manufacture, a pneumatic hand-grip, consisting of a sleeve, and a tube wound in spiral form upon the sleeve and having one end tapered down and cemented to the adjacent coil, and a valve applied to the other end of the tube, substantially as set forth.

**No. 54,701. Pneumatic Tire. (Bandage pneumatique.)**

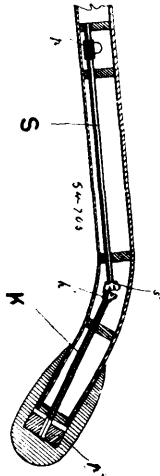


Franz Kalina, Postelberg, Bohemia, 22nd January, 1897; 6 years. (Filed 7th December, 1896.)

*Claim.*—1st. The combination of the segments *b, b'*, with a common air chamber *f*, perforated screws *p* communicating with the inside of the air-chamber *f*, and nuts *c*, fitted with annularly grooved flanges *h, h'*, engaging the walls of said segments, for connecting same to screws *p*, for the purpose and substantially as described. 2nd. The combination with a series of segments *b, b'*, of a series of portions of the tire *a, a'*, cemented to said segments upon half the periphery thereof, for the purpose and substantially as set forth.

pedals are simultaneously operated, a connection between said shaft and one of the wheels of the cycle or vehicle, and a coil spring in said connection interposed between said shaft and the cycle or vehicle wheel. 8th. A power transmitting device for cycles and vehicles comprising a driven-shaft mounted in bearings in a frame, two bevelled gears rotatably mounted upon said shaft, each bevelled gear provided with a clutch mechanism adapted to connect it with the shaft when moved in one direction but allowing it to move in an opposite direction free from said shaft, a connection between said bevelled gears so that a movement of one causes an opposite movement of the other, a lever adapted to be operated by the foot connected with each of said bevelled gears, said levers located between the bearings of said shaft, said levers so constructed as to communicate motion to each of said bevel-gears whereby the shaft is driven when the levers are alternately operated.

**No. 54,703. Bicycle Brake. (Frein de bicyclette.)**



Alfred Williams, Worcester Road, Redditch, Worcester, England, 22nd January, 1897; 6 years. (Filed 11th December, 1896.)

*Claim.*—1st. In a velocipede mounting, the plunger rod of a brake in the interior of the steering head and handle bar stem, and actuating the same by means of a pinion or its equivalent fixed to one end of a spindle passing through the interior of the handle bar, the other end being secured in the interior of the handle, in the manner and for the purpose substantially as described and shown on the accompanying sheet of drawings. 2nd. In a velocipede mounting, the plunger rod of a brake in the interior of the steering head and handle bar stem, and actuating the same by means of a pinion or its equivalent fixed to one end of a spindle gearing with a pinion fixed to one end of another spindle, the other end being secured in the interior of the handle in the manner and for the purpose substantially as described and shown on the accompanying sheet of drawings. 3rd. The improved cycle brake having the brake pad or block operating through the steering head tube upon the steering wheel, and operated from the steering handle or handles through mechanism internally mounted in the handle bar, substantially as herein set forth, and such as shown upon the drawings. 4th. In a cycle brake the combination of a brush with or near the brake pad, block or spoon, and operated in conjunction therewith, as and for the purpose set forth and shown. 5th. In cycle brakes, mounting the brake block, pad or spoon, on the end of a vertical or diagonal rod and with or without the brush, the said rod being operated by wheels through the spindle or spindles or their equivalents, which are mounted in the handle bars and revolved or turned by the steering handle or handles, substantially as set forth and shown.

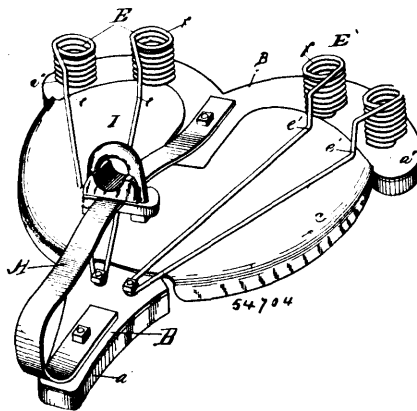
**No. 54,704. Saddle for Bicycles, etc.**

(Selle de bicycles, etc.)

William Sanford Smith, Toronto, Ontario, Canada, 22nd January, 1897; 6 years. (Filed 7th December, 1896.)

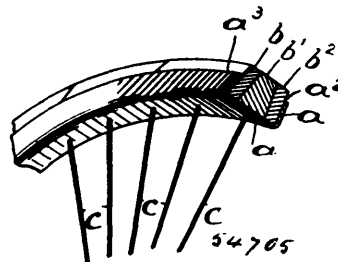
*Claim.*—1st. A bicycle saddle consisting of a saddle frame, a seat-plate located below the saddle frame, and springs connected to the saddle frame to sustain the seat plate, substantially as specified. 2nd. A bicycle saddle consisting of a saddle frame, a seat-plate located below the saddle frame, springs to sustain the seat plate, and seat pads supported by the seat plate, substantially as specified. 3rd. A bicycle saddle consisting of a saddle frame, a seat-plate located below the saddle frame, two sets of springs to sustain the seat-plate, each set consisting of a substantially V-shaped arm, having the ends of the arms coiled, substantially as specified. 4th. A bicycle saddle consisting of a saddle frame, a seat-plate located below the saddle frame, two sets of springs to sustain the seat-plate, each set consisting of a substantially V-shaped arm, having the ends of the arms coiled, and seat-pads supported by the seat-plates, substantially as specified. 5th. A bicycle saddle consisting of a

saddle frame, substantially T-shaped, comprised of a stem and two outwardly branching arms at the rear end of the stem, a seat-plate,



located below the saddle frame, the rear of the seat-plate shaped to correspond with the inner edge of the said arms, an upwardly turned flange surrounding each side of the seat-plate to form pockets for the seat-pads, and springs connected to the arms and stem of the seat-frame, to sustain the seat-plate, substantially as specified. 6th. A bicycle saddle consisting of a saddle frame, substantially T-shaped, comprised of a stem, and two outwardly branching arms at the rear end of the stem, a seat-plate located below the saddle frame, the rear of the seat-plate shaped to correspond with the inner edge of the said arms, an upwardly turned flange surrounding each side of the seat-plate to form pockets for the seat-pads, springs connected to the arms and stem of the seat-frame, to sustain the seat-plate, and seat-pads supported by the seat-plate, substantially as specified. 7th. A bicycle saddle consisting of a saddle frame, substantially T-shaped, comprised of a stem and two upwardly branching curved arms at the rear of the stem, a seat-plate consisting of two pockets united at their forward end, two sets of springs connected to the under side of the frame to sustain the seat-plate, each set of springs consisting of a substantially V-shaped arm, connected at the V end to the horn of the saddle frame, and having their outer ends coiled to form helical springs, the upper ends of the said springs being connected to the under side of the outwardly branching arms, substantially as specified. 8th. A bicycle saddle consisting of a saddle frame, substantially T-shaped, comprised of a stem and two outwardly branching curved arms at the rear of the stem, a seat-plate consisting of two pockets united at their forward end, two sets of springs connected to the under side of the frame to sustain the seat-plate, each set of springs consisting of a substantially V-shaped arm, connected at the V end to the horn of the saddle frame, and having their outer ends coiled to form helical springs, the upper ends of the said springs being connected to the under side of the outwardly branching arms, and seat-pads supported by the seat-plate, substantially as specified. 9th. In a bicycle saddle, the combination of the saddle frame, a saddle supporting spring connected to the saddle frame, a clip consisting of a substantially U-shaped bracket having upwardly extending sides projecting above the supporting spring, a movable block within the said bracket below the supporting spring, a yoke connecting together the ends of the bracket above the supporting spring, and nuts to bind together the several parts of the clip, substantially as specified.

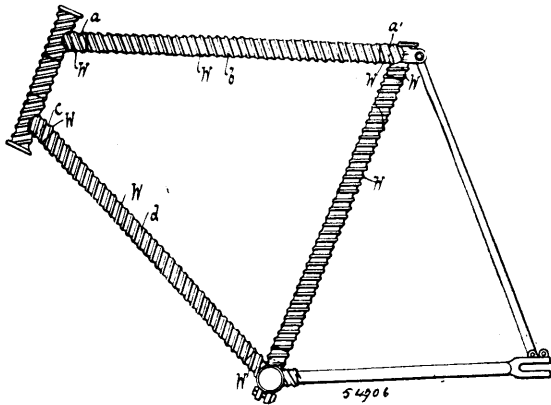
**No. 54,705. Wheel. (Roue.)**



Abraham Gould Jennings, Brooklyn, New York, U.S.A., 22nd January, 1897; 6 years. (Filed 7th December, 1896.)

*Claim.*—A wheel comprising a hollow metallic rim struck up from a single piece in the transverse direction, and having a base-wall  $a^1$  flat in cross-section, from which extend straight walls  $a^2$ ,  $a^3$  inclined toward each other, filling-blocks retained within the socket, comprising a series of wedge-shaped blocks  $b^1$ , laid in the hollow socket and flanked on both sides by smaller filling or wedging blocks  $b, b^2$ , each of which blocks is supported at its flat face upon the base-wall  $a^1$  of the socket and extends outside thereof to form the tread of the wheel and spokes connected with the socket, substantially as described and for the purpose specified.

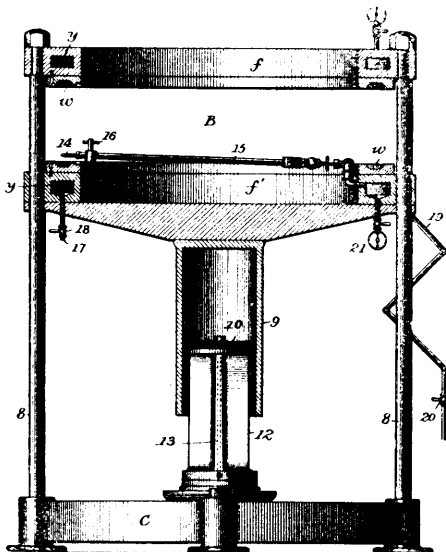
**No. 54,706. Velocipede Frame. (Cadre de vélocipède.)**



Bruno Wesselmann, Gottingen, Hanover, Germany, 22nd January, 1897; 6 years. (Filed 12th December, 1896.)

*Claim.*—1st. A velocipede frame, comprising tubes provided with screw-threaded ridges, substantially as described. 2nd. A velocipede frame, composed of tubes provided with screw-threaded ridges and angle pieces for connecting said tubes, said tubes and angle pieces being inserted one into another, and said ridges being extended and impressed into said pieces, substantially as described.

**No. 54,707. Apparatus for Making Pneumatic Tires. (Appareil pour faire les bandages pneumatiques.)**

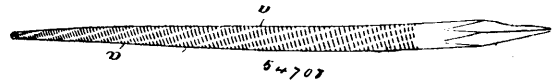


Henry J. Doughty, Providence, Rhode Island, and Walter B. Hardy, Boston, Massachusetts, all in the U.S.A., 22nd January, 1897; 6 years. (Filed 12th December, 1896.)

*Claim.*—1st. In an apparatus for vulcanizing pneumatic tires, the combination with a mould adapted to receive a tire tube and comprising a stationary and a movable hollow section, of means for supplying said sections with an expansive heating fluid, and a pipe connected with said movable section for supplying suitable quantities of said fluid to the interior of the enclosed tube, substantially as shown and described. 2nd. In an apparatus for vulcanizing pneumatic tires, the combination with a mould adapted to receive a tire tube and comprising a stationary and a movable hollow section, of means for supplying said sections with an expansive heating fluid, and means for simultaneously supplying the interior of the tube with a similar fluid from the interior of said movable section, substantially as shown and described. 3rd. In an apparatus for vulcanizing pneumatic tires, the combination with a mould adapted to receive a tire tube and comprising a stationary and a movable continuous hollow chamber, each provided with a detachable mould section, of means for supplying said chambers with an expansive heating fluid, and means connected with one of said chambers for supplying suitable quantities of said fluid to the interior of the enclosed tube, substantially as shown and described. 4th. In an apparatus for vulcanizing pneumatic tires, the combination with a stationary and a movable chamber, each of a circular or ring shape, of correspondingly formed detachable mould sections carried by the adjacent faces of said chambers and adapted between them to enclose a tire tube, means for supplying said sections with an

expansive heating fluid, and means for simultaneously supplying the enclosed tube with fluid from the interior of said movable section, substantially as shown and described.

**No. 54,708. Round File. (Lime ronde.)**

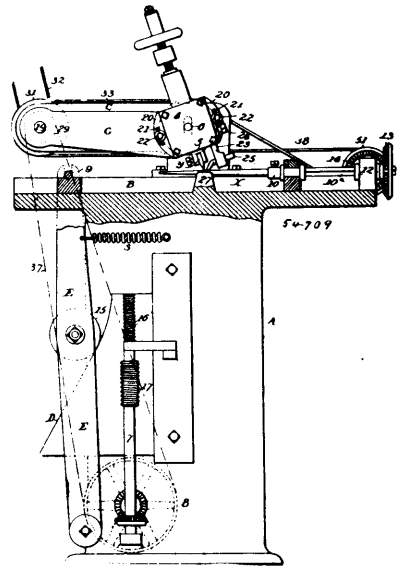


The Arcade File Works, assignee of Alfred Weed, both of Anderson, Indiana, U.S.A., 22nd January, 1896; 6 years. (Filed 29th October, 1896.)

*Claim.*—A round file having teeth cut upon a spiral line extending from the point to the heel, and becoming more open towards the heel, substantially as set forth.

**No. 54,709. File Cutting Machine. (Machine à tailler les limes)**

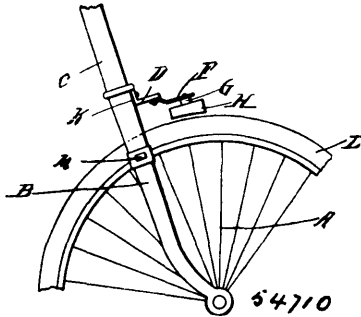
(Machine à tailler les limes)



The Arcade File Works, assignee of Alfred Weed, both of Anderson, Indiana, U.S.A., 22nd January, 1896; 6 years. (Filed 29th October, 1896.)

*Claim.*—1st. In a file cutting machine, a cutter head supporting a movable cutter holder and shaft for driving the same and supported to move vertically, in combination with a presser foot carried by the head, substantially as set forth. 2nd. The combination with the vertically movable cutter head 4, its cutter holder and actuating shaft, of an adjustable presser foot 22, substantially as and for the purpose set forth. 3rd. The combination in a file cutting machine, of a head supporting the cutter holder and its operating means, and a pivoted arm, to which said head is connected, substantially as set forth. 4th. The combination of the pivoted arm B and a cutter head 4 supported thereon, and means for securing the head in different positions upon the arm, substantially as set forth. 5th. The combination of the pivoted arm B, its cutter head and cutter holder and shaft 6, a pulley upon the said shaft and a pulley upon a shaft concentric with the pivot of the head, and a band passing over the said pulley, substantially as set forth. 6th. The combination with the reciprocating cutter and operating devices of a file cutting machine, of a blank carrier and a blank holder, and means for rotating the said holder, substantially as set forth. 7th. The combination of the reciprocating cutter and operating devices of a file cutting machine, and a sliding carriage, a rotating holder supported thereby and adapted to receive the blank, and an anvil arranged to occupy a position beneath the blank and beneath the cutter, substantially as set forth. 8th. The combination of a cutter and operating devices, a sliding carriage provided with a holder, and means for turning the holder, and means for imparting to the carriage a longitudinal movement at varying speeds, substantially as and for the purpose set forth. 9th. The combination of the reciprocating cutter and operating devices, a carriage B for the blank, revolving holder turning upon the carriage and constituting part of a shaft extending through the hub of a driving gear, and means for imparting motion to the said gear, substantially as set forth. 10th. The combination of the sliding carriage and cutter and operating devices, of a shaft 6 provided with a pulley, gears 13, 14, one having a hub to receive a shaft extending from the holder, a pulley and a belt extending from the said pulley to the pulley upon the shaft 6, substantially as set forth.

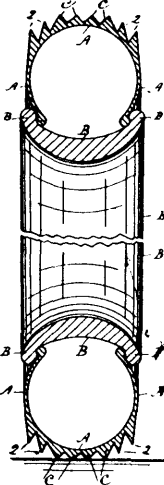
**No. 54,710. Brake for Bicycles, etc.**  
(Frein pour bicycles, etc.)



Alexander Hadik, New York, State of New York, U.S.A., 22nd January, 1897; 6 years. (Filed 14th December, 1896.)

*Claim.*—1st. The combination with the forward upright part of the frame of a bicycle or similar vehicle, of a suitable fastening device connected therewith, and projecting forwardly, a spring arm connected therewith, and a brake shoe connected with the lower side of said arm, and adapted to be forced into contact with the tire of the guide wheel, substantially as described. 2nd. The combination with the cross head of the forward fork of a bicycle or similar vehicle, of an arm secured thereto, and projecting forwardly, a spring connected with said arm, and a brake shoe connected with the lower side of said spring, and adapted to be forced into contact with the tire of the guide wheel, substantially as shown and described. 3rd. The combination with the cross head of the forward fork of a bicycle or similar vehicle, of an arm secured thereto, and projecting forwardly, a spring connected with said arm, and a brake shoe connected with the lower side of said spring, and adapted to be forced into contact with the tire of the guide wheel, said brake shoe being provided with a cross bar substantially as shown and described. 4th. The combination with the forward upright part of the frame of a bicycle or similar vehicle, of a spring connected therewith, and provided with a cross bar on its under side, and a brake shoe secured to said cross bar and adapted to bear on the tire of the guide wheel, substantially as shown and described.

**No. 54,711. Pneumatic Tire for Bicycles.**  
(Bandage pneumatique pour bicycles.)



Ysobel Western, Hamilton, Ontario, Canada, 22nd January, 1897; 6 years. (Filed 17th December, 1896.)

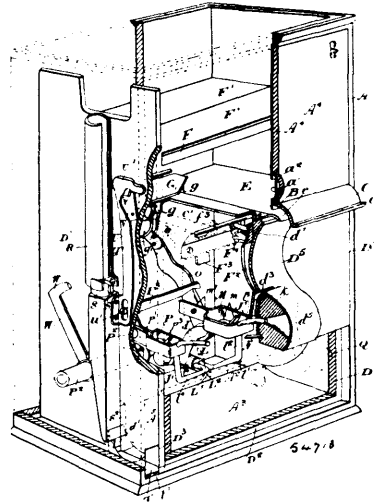
*Claim.*—1st. A bicycle wheel pneumatic tire having a series of annular teeth concentric with the tire, the central teeth having the least depth and the outer side teeth the greatest depth, the intermediate teeth gradually conforming thereto on a circumferential line substantially as described. 2nd. A pneumatic tire having a number of annular channels circumferential and concentric with the tire, the outer side teeth having the greatest depth, or projection, than the centrally located periphery teeth and the intermediate teeth conforming thereto, substantially as described.

**No. 54,712. Tire Girth for Velocipedes.**  
(Lien pour bandages de velocipedes.)

Carl Arno Schreier, Dresden, Saxony, (Germany, 22nd January, 1897; 6 years. (Filed 21st December, 1896.)

*Claim.*—A woven strip or girth for application to the outer side of a pneumatic tire, combined with suitable means for securing the strip or girth in position.

**No. 54,713. Newspaper Vending Machine.**  
(Appareil de vente des journaux.)

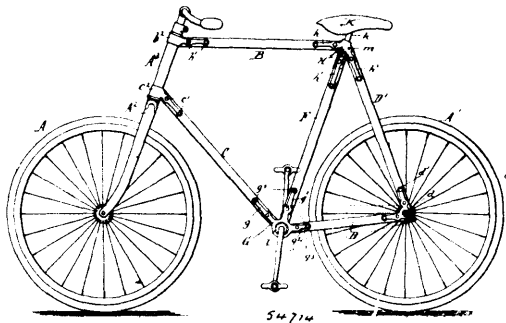


Michael Alexander Kennedy, Montreal, Quebec, Canada, 22nd January, 1897; 6 years. (Filed 16th November, 1896.)

*Claim.*—1st. In a machine for vending newspapers and the like, the combination with the ejecting slot and an outwardly projecting downwardly curved lip at the lower side of the slot, of a curved lip at the upper side of the slot provided with a trough extending from end to end, as and for the purpose specified. 2nd. The combination with the penny slot and guide, of the crank shaft, crank handle and crank, pitman extending laterally, vertically and forwardly, recess in the front to receive such forward extension of the pitman, a bottomless casing through which the vertical portion of the pitman extends, supporting pin extending underneath the bottomless casing towards one side, opposite steps inside the bottomless casing supporting the case at the rear and secured to the crank shaft, and means connected to the upper end of the arm whereby the paper is forced through the ejecting slot and the arm is thrown forward by the partial rotation of the crank shaft, as and for the purpose specified. 3rd. The combination with the penny slot and guide, of the crank shaft, crank handle and crank, pitman extending laterally, vertically and forwardly, recess in the front to receive such forward extension of the pitman, a bottomless casing through which the vertical portion of the pitman extends, supporting pin extending underneath the bottomless casing towards one side, opposite stops inside the bottomless casing, arms supporting the case at the rear and secured to the crank shaft, a supporting plate for the back portion of the paper, suitable guideways extending from front to rear of the inner case, a carrier plate extending through a slot in the supporting plate and an adjustable spring secured to the back of the plate and extending through a slot in the downwardly projecting stem of the carrying plate, depending lugs underneath the plate and the link connection between such lugs and the end of the arm secured to the crank shaft, as and for the purpose specified. 4th. The combination with the plate supporting the back portion of the paper, of the carrying plate having a stem extending through the slot in the supporting plate and provided at the top with a forwardly turned lip, a spring secured to the bottom of the supporting plate and extending through a slot in the stem of the carrying plate, and an adjusting screw extending through the supporting plate and designed to abut the top of the spring, as and for the purpose specified. 5th. The combination with the carrying plate and mechanism for operating the same, of a weighted divided plate designed to rest on the top of the papers, as and for the purpose specified. 6th. The combination with the coin slots in the front of the casing, of closing bars spring held above the top of the slots, a pressure bar supported in the top of the closing bars, the pressure plates located at the top of the paper, and a spring secured through such pressure plate and having the free end depending beneath the level of the weighted plates and designed to come in contact with the pressure bar supported on the closing bars when the papers are all ejected, as and for the purpose specified. 7th. The combination with the closing bar having the upper end extending through a slot in the cross bar at the top of the inner casing, of a set screw extending through such cross bar and designed to abut the closing bar and hold the bottom end of it in front of the slot when desired, as and for the purpose specified. 8th. The combination with the change controlling slot, of the crank shaft, crank handle and crank, pitman having laterally, vertically and forwardly projection portions, recess in the front of the casing to receive the forwardly projecting portion, the bottomless casing through which the vertical portion of the pitman extends, the inclined stops in the case, the inclined pin extending inwardly to one side of the bottomless casing, the L-shaped arm to which the bottomless casing is secured, the arm secured to the crank shaft designed to come in contact with the L-shaped arm, the sleeve through which one end of the crank

shaft extends and to which is secured the L-shaped arm with ejecting end, the tube for holding the change coins, the bar underneath such tube provided with cylindrical upper end extending into the tube and the slit in such cylindrical upper end, all arranged to be operated as and for the purpose specified. 9th. The combination with the tube, the slit in the front of the same, the bar with cylindrical upper projection which extends into the bottom of the tube, the wings at the bottom side of the tube, the arm with ejecting end and means for throwing such arm forward beneath the tube, so as to carry the coins into the change receptacle upon a coin being deposited for which change is needed, as and for the purpose specified. 10th. The combination with the change tube slitted and provided at the bottom with forwardly extending wings, of the bottom bar supported at the bottom in a suitable guideway having at the top a cylindrical projection extending into the bottom of the tube, a spring bar connected to the side of the bottom bar provided with a slot and pin extending through such slot, the forwardly projecting tongue at the upper end of the spring bar, and the notched quadrant having the depth of each notch the same as the depth of the coin, as and for the purpose specified. 11th. The combination with the change-holding tube and means for ejecting the coin from the same, of a concave receptacle located at the bottom of the casing and hinged in the front, and an opening in the front of the casing to enable the buyer of the paper to turn out the change when deposited in the receptacle, as and for the purpose specified.

**No. 54,714. Velocipede. (Vélocipède.)**

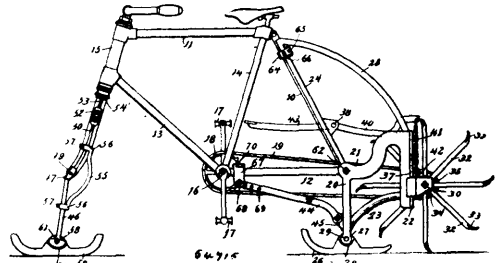


Charles Frederick Lavender and Thomas Fane, both of Toronto, Ontario, Canada, 22nd January, 1897; 6 years. (Filed 15th December, 1896.)

**Claim.**—1st. A velocipede frame, composed of independent members secured together at their adjacent ends and each consisting of a wooden truss, substantially as set forth. 2nd. In a velocipede, the combination with the steering head, of upper and lower reach members connected at their front ends with the steering head and each composed of a pair of separated wooden bars, upper and lower rear forks, each composed of a pair of wooden bars, independent of said reach members, and a saddle post or brace composed of a pair of separated wooden bars, independent of said reach and fork members and connected with the latter, substantially as set forth. 3rd. In a velocipede, the combination with the steering head, the lower reach member and the lower rear fork, of a pair of upright supporting plates arranged at the junction of said fork and said reach member and each having an opening or seat, and a crank shaft or bracket having its end portions secured in the openings or seats of said supporting plates, substantially as set forth. 4th. In a velocipede, the combination with the steering head, of an upper reach member, a lower reach member composed of a pair of separated wooden bars, wooden upper and lower forks, metallic plates connecting the front ends of said lower reach bars with the front ends of said lower fork members and each having an opening or seat, and a crank shaft hanger or bracket secured at its ends in the openings of said connecting plates, substantially as set forth. 5th. In a velocipede, the combination with the steering head, of an upper reach member, a lower reach member composed of a pair of separated wooden bars, wooden upper and lower forks, a saddle post composed of a pair of separated wooden bars, connecting plates, each having an opening or seat and three integral arms secured respectively to the adjacent ends of the bars of the lower reach member, the saddle post and the lower fork, and a crank shaft hanger secured at its ends in the openings of said connecting plates substantially as set forth. 6th. In a velocipede, the combination with the steering head, of upper and lower reach members each composed of a pair of separated wooden bars, upper and lower clips embracing the steering head and having their legs secured to the front portions of said upper and lower bars respectively, wooden upper and lower forks, a saddle post composed of a pair of separated wooden bars, upper connecting plates each having three integral branches secured respectively to the adjacent ends of the upper reach bars, the saddle post bars and the upper rear fork, and lower connecting plates each having three integral branches secured respectively to the adjacent ends of the lower reach bars, the saddle post bars and the lower rear fork, substantially as set forth. 7th. In a velocipede, the combination with the upper reach member composed of a pair of separated bars, and the upper rear fork, of

plates connecting the adjacent ends of said reach member and said fork, and a split sleeve or socket for the reception of a saddle pillar secured between said plates and having a clamping bolt for contracting the same, substantially as set forth. 8th. In a velocipede, a crank shaft hanger or bracket, comprising a tube or barrel adapted to contain ball bearings in its ends, and supporting or attaching plates secured to the end portions of said tube and arranged at right angles to the axis of the tube, substantially as set forth.

**No. 54,715. Attachment for Bicycle Frames. (Attache pour cadres de bicyclettes.)**

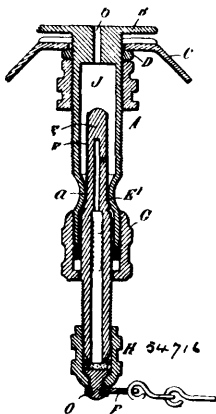


Clarence Montford Brooks, Oconto, Wisconsin, U.S.A., 22nd January, 1897; 6 years. (Filed 12th December, 1896.)

**Claim.**—1st. In combination with a bicycle frame, of an auxiliary frame, consisting of legs having runners at their lower ends, an axle journaled on projecting parts of the legs, a propelling-wheel mounted on said axle, means for driving said wheel from the driving axle of the bicycle, and means for securing the auxiliary frame to the bicycle frame. 2nd. An attachment for bicycle frames, consisting of legs having runners at their lower ends, vertical guideways, extending downwardly from projecting parts of the legs, journal boxes mounted slidingly in the guideways, means for sliding said boxes in the ways, an axle mounted in the boxes, and a propelling-wheel mounted on the axle. 3rd. An attachment for bicycle frames, consisting of an auxiliary frame provided with depending legs, said legs having runners at their power ends, a lever pivoted to the auxiliary frame, vertical guideways forming a part of the auxiliary frame, journal boxes slidingly mounted in the guideways, a connection between the end of the lower and the boxes, an axle journaled in the boxes, and a propelling-wheel mounted on the axle. 4th. An attachment for bicycle frames, consisting of an auxiliary frame comprising vertical legs having runners at their lower ends, forwardly-extending upwardly-inclined arms, adapted to be secured to the rear inclined braces of a bicycle frame, rearwardly-projecting arms, a rear axle mounted in said rearwardly-projecting arms, and a propelling-wheel on said rear axle. 5th. An attachment for bicycle frames, consisting of an auxiliary frame comprising vertical legs having runners at their lower ends, forwardly-extending upwardly-inclined arms adapted to be secured to the rear inclined braces of a bicycle frame, a forwardly-extending pivoted brace, the forward end thereof adapted to be secured to the lower portion of the bicycle frame, rearwardly-projecting arms, a rear axle mounted in said rearwardly-projecting arms, and a propelling-wheel on said rear axle. 6th. An attachment for bicycle frames, consisting of an auxiliary frame comprising vertical legs having runners at their lower ends, forwardly-extending upwardly-inclined arms, rearwardly-extending arms having guideways depending therefrom, journal boxes mounted slidingly on said guideways, means for sliding said boxes, a rear axle mounted in the boxes, and a propelling-wheel on the rear axle. 7th. An attachment for bicycle frames consisting of an auxiliary frame comprising vertical legs having runners at their lower ends, forwardly-extending upwardly-inclined arms, rearwardly-extending arms having guideways depending therefrom, other braces connecting the upper portion of the guideways with the forwardly-extending upwardly-inclined arms, journal boxes slidingly mounted on the guideways, a rear axle journaled in the boxes, and a propelling-wheel mounted on the axle. 8th. An attachment for bicycle frames, consisting of an auxiliary frame comprising vertical legs having runners at their lower ends, forwardly-extending upwardly-inclined arms, rearwardly-extending arms having guideways depending therefrom, journal boxes slidingly mounted on the guideways, a rear axle journaled in the boxes, a propelling-wheel mounted on the axle, a hub or shaft mounted between the forwardly-extending upwardly-inclined arms, arms extending rearwardly from this hub or shaft, chains connecting the rear ends of these arms with the journal boxes, and a foot-treadle extending forwardly from the hub or shaft. 10th. In combination with the frame of a bicycle, of an attachment consisting of an auxiliary frame comprising vertical legs having runners at their lower ends, forwardly-extending upwardly-inclined arms, adjacent

to the rear inclined braces of a bicycle frame, rearwardly-extending arms, a rear axle mounted thereon, a propelling-wheel mounted on the axle, a bolt for connecting the auxiliary frame to the bicycle frame, said bolt adapted to pass through the frames, a clamp for connecting the forwardly-extending upwardly-inclined arms of the auxiliary frame to the rear inclined brace or braces of the bicycle frame, and a connection between the driving axle of the bicycle and the propelling wheel. 11th. In combination with the frame of a bicycle, of an attachment consisting of an auxiliary frame comprising vertical legs having runners at their lower ends, forwardly-extending upwardly-inclined arms, rearwardly-extending arms, a rear axle mounted thereon, a propelling wheel mounted on the axle, a clamp for connecting the forwardly-extending upwardly-inclined arms of the auxiliary frame to a brace or braces of the bicycle frame, a pivoted forwardly-extending arm connected to the auxiliary frame, a clamp for connecting this arm to the bicycle frame, a bolt for connecting the auxiliary frame to the bicycle frame, and a connection between the driving axle of the bicycle and the propelling wheel. 12th. In combination with the frame of a bicycle, of an attachment consisting of an auxiliary frame comprising vertical legs having runners at their lower ends, forwardly-extending upwardly-inclined arms, rearwardly-extending arms, a rear axle mounted thereon, a propelling wheel mounted on the axle, a clamp for connecting the forwardly-extending upwardly-inclined arms to a brace or braces of the bicycle frame, a pivoted forwardly-extending arm connected to the auxiliary frame, a clamp connected to a part of the bicycle frame and adjustably connected to this forwardly-extending pivoted arm, a bolt for connecting the auxiliary frame to the bicycle frame, and a connection between the driving axle of the bicycle and the propelling wheel. 13th. The combination of a front fork of a bicycle frame, a loop or ring arranged between the lower ends of the arms of said fork, a bolt passing through said lower ends of the arms of the fork and through the loop or ring, a leg, secured at its upper end to the lower portion of the loop or ring, a runner secured to the lower end of the leg, a rod secured at its lower end to the upper portion of the loop or ring, said rod having its upper extremity threaded, a turn-buckle, engaging said threaded extremity, and another rod, provided at its lower end with threads engaging the upper end of the turn-buckle, and said rod formed or provided at its upper end with a plate, the opposite ends of which bear against the inner sides of the arms of the fork at the upper ends of said arms. 14th. The combination of a front fork of a bicycle frame, a loop or ring arranged between the lower ends of the arms of said fork, a bolt passing through said lower ends of the arms of the fork and through the loop or ring, a leg, secured at its upper end to the lower portion of the loop or ring, a runner secured to the lower end of the leg, a rod secured at its lower end to the upper portion of the loop or ring, said rod having its upper extremity threaded, a turn-buckle, engaging said threaded extremity, another rod, provided at its lower end with threads engaging the upper end of the turn-buckle, and said rod formed or provided at its upper end with a plate, the opposite ends of which bear against the inner sides of the arms of the fork at the upper ends of said arms, and a brace secured at its lower end to the leg which extends downwardly from the loop or ring, and at its upper end to the rod which extends upwardly from the loop or ring.

**No. 54,716. Air Valve for Pneumatic Tires.**  
(*Soupepe à air pour bandages pneumatiques.*)

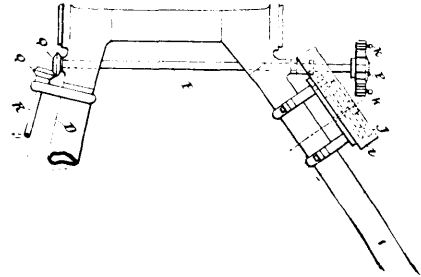


Charles Kingston Welch, Coventry, Warwick, England, 22nd January, 1897; 6 years. (Filed 21st December, 1896.)

*Claim.*—1st. In a tubular valve body having a large internal aperture formed by boring from either end of the body, or by stamping, the internal shoulder constituting the seat for the valve-stem or plug, or the contraction at the head, or both, formed by contracting the tubular body substantially as described, and for the purposes specified. 2nd. The combination with the tubular valve body having a contraction under the head of an air tube moulded with a bead around the edge of the valve hole, substantially as described and for the purpose specified. 3rd. A dust cap furnished with a loose

rotary valve cup having a washer fixed in it and having a stem projecting through the cap and retained by riveting the end, with or without a retaining chain attached to a link loosely mounted on the aforesaid stem, substantially as described. 4th. A dust cap constructed substantially as described with reference to the drawings and for the purposes specified.

**No. 54,717. Cycle Gearing.** (*Engrenage pour cycles.*)



William Hunter Miller, Paignton, Devon, England, 22nd January, 1897; 6 years. (Filed 23rd December, 1896.)

*Claim.*—1st. In a variable chain driving gear, the combination in the crank chain wheel, of a scroll extension mechanism and a coiled spring for operating the said scroll, substantially as described. 2nd. In a variable chain driving gear, the combination in the crank chain wheel, of a scroll extension mechanism and two or more coiled springs in boxes operating the said scroll through gearing, substantially as described. 3rd. In a variable chain driving gear, the combination with the crank spindle of means for its horizontal adjustment to take up the chain slack, substantially as described. 4th. In a variable chain driving gear, a chain consisting of plates *h*, connected by rivets *mm*, and having slots *n* and rollers *p* working in said slots, said links being hinged together by rivets *q* in extension *l*, substantially as and for the purpose herein set forth. 5th. In a variable chain driving gear, the combination with a chain formed as in the preceding claim, of side bars or rollers with or without additional plates and a double toothed chain wheel on driving wheel hub, substantially as and for the purpose herein set forth. 6th. In a variable chain driving gear, the combination of a scroll extension crank chain wheel and a chain as set forth in claim 4, substantially as described. 7th. In a variable chain driving gear, the combination of a scroll extension crank chain wheel, and a chain and driving wheel chain wheel as set forth in claim 5, substantially as described. 8th. In a variable chain driving gear, the combination with the crank spindle bearings, of horizontal guides to permit sliding motion to take up the chain slack, substantially as described. 9th. In a variable chain driving gear, the combination with the crank spindle bearings of horizontal guides and a screw or screws to move said bearings in said guides, substantially as and for the purpose described. 10th. In a variable chain driving gear, the combination with a screw or screws, as set forth in the preceding claim, of the means for operating the said screw or screws, substantially as and for the purpose herein set forth. 11th. In a variable chain driving gear, the combination with a crank chain wheel scroll extension disc, of a brake for stopping the rotation of said disc, substantially as and for the purpose herein set forth. 12th. In a variable chain driving gear, a brake for stopping the rotation of a crank chain wheel scroll extension disc, consisting of a ratchet toothed block *Y* intermittently forced against ratchet teeth *Y*<sup>2</sup> on the scroll disc sleeve *W*<sup>1</sup>, by a cam action from the crank spindle traversing screw *N*, substantially as and for the purpose herein set forth. 13th. In a variable chain driving gear, the combination of a shaft *P*, handwheel *P*<sup>1</sup>, gears *Q*, a shaft *R*, universal joint *S*, screw *N*, ratchet *b*, cans *c*, lever *d* and brake block *Y*, substantially as and for the purposes herein set forth. 14th. In a variable chain driving gear, the combination with the controlling handle *P*<sup>1</sup>, of the gear indicating device, substantially as and for the purpose described. 15th. A variable chain driving gear, consisting of the combination of the scroll extension crank chain wheel, the novel form of chain, the screws and guides for adjusting position of crank spindle, the brake for stopping the motion of the scroll extension disc, the springs for automatically rotating said disc, and the devices for operating and controlling the said mechanism, substantially as described. 16th. The variable chain driving gear, constructed and operating substantially as herein described and shown with reference to the accompanying drawings.

**No. 54,718. Pneumatic Tire Puncture Indicator.**

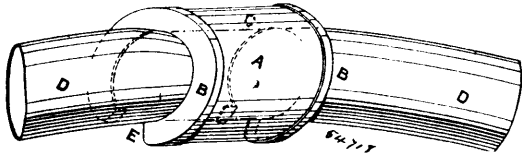
(*Indicateur de piqûres dans les bandages pneumatiques.*)

Richard James Scofield, Manchester, Lancaster, England, 23rd January, 1897; 6 years. (Filed 22nd December, 1896.)

*Claim.*—1st. An appliance for locating or indicating the position of a puncture or small hole in a pneumatic tube or tire constructed to embrace the tube or tire with a chamber surrounding it, in which a light material is placed capable of being displaced or agitated by a fine spray or jet of air, substantially as described. 2nd. An appliance for locating or indicating the position of a puncture or

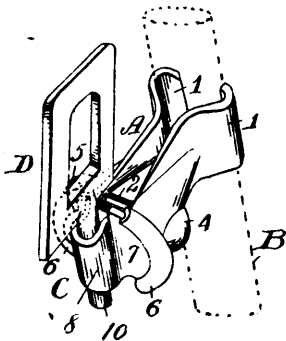


small hole in a pneumatic tube or tire, comprising an exterior transparent casing A fitted into a horseshoe-shaped-ends B, with an



inner edge to embrace the tube or tire, forming a chamber C to contain a light material capable of being displaced by a fine spray or jet of air. 3rd. An appliance for locating or indicating the position of a puncture or small hole in a pneumatic tube or tire, constructed and arranged substantially as described and shown.

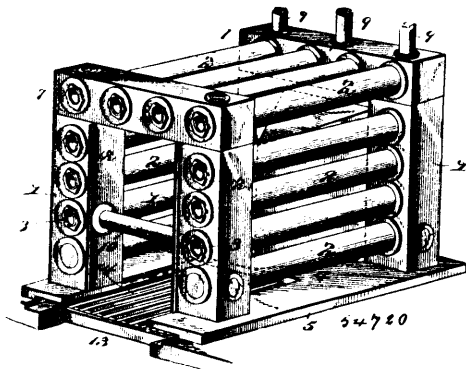
**No. 54,710. Bracket for Bicycles. (Console pour bicycles.)**



William Otterbein Gottwals, Washington, Columbia, assignee of Frederick L. Ellis, Milldale, both in the U.S.A., 23rd January, 1897; 6 years. (Filed 17th December, 1896.)

*Claim.*—1st. A bicycle-lamp bracket, consisting of the combination of a clamp adapted to grasp a support, such as a bicycle fork, a swivel also held between the parts of the clamp, a lamp-holding bracket having a bearing in said swivel, and means for compressing the clamp to hold said support and swivel. 2nd. A bicycle-lamp bracket, consisting of the combination of a two-part clamp adapted to grasp a support, a compressible swivel also held between the parts of the clamp, an adjustable lamp-holding bracket having a bearing between the parts of said swivel, and means for compressing the clamp to hold said support and to hold and compress said swivel. 3rd. A bracket for bicycle lamps and other purposes, consisting of the combination of a clamp having grasping means or jaws and rounded grasping flanges, a swivel bent to form a bearing and having rounded ears adapted to fit within said flanges, a bracket having a journal fitting in said bearing, and means for compressing the clamp to grasp a support and compress the swivel on said journal.

**No. 54,720. Hot Water Generator. (Générateur à eau.)**

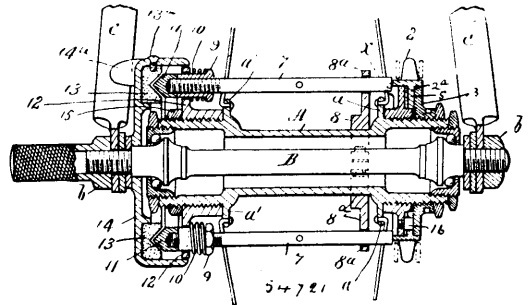


Andrew Jackson Pulver and Homer W. Fiske, both of Milan, Ohio, U.S.A., 23rd January, 1897; 6 years. (Filed 2nd January, 1897.)

*Claim.*—1st. A boiler of the character described, formed of similarly constructed top and side sections arranged to enclose a combustion chamber and communicating at their contiguous ends, each section composed of continuous end manifolds, a series of longitudinal water-tubes fitted to and connected at their ends to the inner or opposing walls of the opposite and corresponding manifolds, and caliducts extending through the water-tubes and the manifolds and secured at their ends to the outer walls of the manifolds, substantially as set forth. 2nd. A boiler for the purposes set forth, comprising similarly constructed top and side sections disposed to enclose a combustion chamber, each formed of continuous end mani-

folds and connecting water-tubes and caliducts, a similar front and back for closing the ends of the boiler or combustion chamber and having top and side openings corresponding in position with and approximating the size of the manifolds of the top and side sections, and covers removably fitted to the said openings for closing the same and admitting of ready access being had to the manifolds and caliducts, for the purposes set forth. 3rd. The combination with a boiler, comprising a tubular top and side sections arranged to enclose a combustion chamber, of a dimidiate trigonal deflecting wall arranged at the rear end of the said combustion chamber, substantially as described for the purpose set forth. 4th. The herein-shown and described boiler, comprising similar top and side sections, each composed of end manifolds in communication, a series of longitudinal water-tubes and concentric caliducts, transverse pipes connecting the vertical manifolds, a front and back provided with top and side openings in register with the top and side manifolds, removable covers for closing the said openings in the front and back, and a dimidiate trigonal deflecting wall disposed in the rear of the combustion chamber formed by the top and side sections, substantially described for the purpose set forth.

**No. 54,721. Bicycle Brake. (Frein de bicycles.)**



James H. Bullard, Springfield, Massachusetts, U.S.A., 23rd January, 1897; 6 years. (Filed 24th December, 1896.)

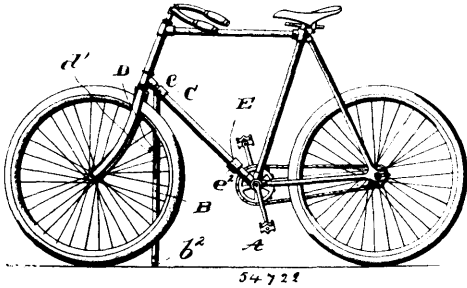
*Claim.*—1st. A brake mechanism for bicycles and analogous vehicles, comprising a wheel hub, a sprocket wheel having a limited revoluble movement on said hub, means for applying a variable resistance to the revoluble movements of said sprocket wheel, a stationary brake element supported at one end of said hub, a revoluble brake element supported on said hub for engagement with said stationary brake element, means intermediate of said sprocket and stationary brake element whereby the revoluble movements of said sprocket wheel in opposite directions effect the engagement and disengagement of said stationary and revoluble brake element, and means for imparting said revoluble movements to said sprocket wheel, combined and operating substantially as set forth. 2nd. A brake mechanism for bicycles and analogous vehicles, comprising a wheel hub, a stationary brake element supported at one end of said hub, a revoluble brake element supported on said hub for engagement with said fixed brake element, a sprocket wheel having a limited revoluble movement on said hub, means intermediate of said sprocket wheel and revoluble brake element, whereby the revoluble movements of said sprocket wheel in opposite directions effect the engagement and disengagement of said brake elements, means for imparting revoluble movements to said sprocket wheel and hub, means for retaining said sprocket wheel in its brake setting position, and connections between the pedals of the vehicle and said sprocket wheel, whereby said revoluble movements are imparted to the latter, combined and operating substantially as set forth. 3rd. In a brake mechanism operated by the revoluble movement of a sprocket wheel relative to the hub to which it is attached, means for effecting said revoluble movement, a resistance applied to the movements of said sprocket, whereby the latter is temporarily retained in any brake-operating position to which it may have been moved on said hub, substantially as described.

**No. 54,722. Bicycle Support. (Support de bicyclee.)**

Charles Lewis Benedict, Amherst, Nova Scotia, 23rd January, 1897; 6 years. (Filed 30th December, 1896.)

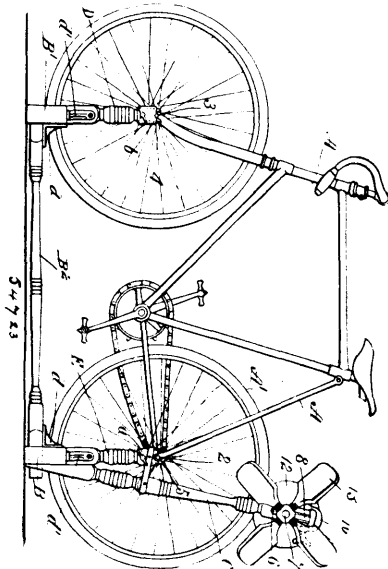
*Claim.*—1st. A bicycle support comprising among its members, an attaching device adapted to be detachably secured to the bicycle frame, the hollow supporting rod pivotally connected therewith and provided with a longitudinal slot, and the hook arm having one end pivoted within said hollow supporting rod adjacent to one end of said slot, the other end being provided with a spoke engaging hook, said hook arm being adapted to pass through said slot and lie within said hollow supporting rod when the support is not in use, substantially as described. 2nd. A bicycle support comprising among its members, an attaching device adapted to be detachably secured to the bicycle frame, the hollow supporting rod pivotally secured to said attaching device and provided with a longitudinal slot, a hook arm pivoted with said rod adjacent to one end of said slot, and having its other end provided with a spoke engaging hook, adapted to enter said slot and lie wholly within said hollow rod when the latter is not in operative position, a clip adapted to be

detachably secured to the bicycle frame, provided with spring arms for holding said rod when not in use and means for forcing



said hook within said hollow rod when the latter is moved out of operative position and into engagement with the said spring arms, substantially as described. 3rd. A bicycle support comprising among its members, a clamping collar, the hollow supporting rod hinged thereto, a hook arm pivoted within said rod, and having a spoke engaging hook at its free end, said rod being provided with a longitudinal slot, to permit said hook to lie within said rod when out of operative position and a link connecting said hook arm and said collar, substantially as described. 4th. A bicycle support comprising among its members, a clamping collar, the hollow supporting rod hinged thereto provided with a longitudinal slot, a hook arm pivoted within said hollow rod and having a spoke engaging hook at its free end, said hook arm being adapted to lie within said hollow rod when the latter is not in operative position, a link connecting said hook arm and said collar and a lock secured to the outer end of the hook arm having a movable bolt, adapted to engage a portion of the hook to retain the spoke within said hook, substantially as described. 5th. A bicycle support comprising among its members, a supporting rod, a securing device for attaching it to the bicycle frame, a hook arm pivoted to said rod, having its outer end provided with a spoke retaining device, and a supporting device for the free end of said rod, when not in use, having a part adapted to be secured to the bicycle frame, and a pair of spring arms for engaging and holding said rod, substantially as described.

**No. 54,723. Bicycle Training Machine.**  
(Appareil pour apprendre à pédaler.)

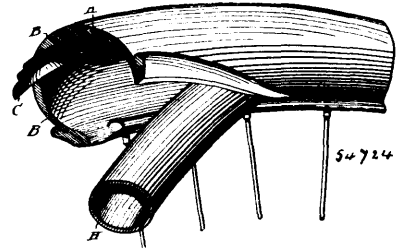


John Boyle, Orillia, Ontario, Canada, 23rd January, 1897; 6 years. (Filed 2nd January, 1897.)

*Claim.*—1st. In a bicycle training machine, means for supporting a bicycle in a fixed position for mounting the same, whereby the driving wheel thereof is free to rotate, combined with a revoluble fan wheel supported near the tire of said driving wheel, and means of engagement between the shaft of said fan wheel and driving wheel, substantially as set forth. 2nd. In combination, a bicycle, supports engaging the axle of the driving wheel thereof, adjustable in a line with said axle, a freely rotating fan supported on a shaft near said wheel, and means of engagement between said driving wheel and the shaft of said fan, substantially as described. 3rd. In combination, a bicycle, supports engaging the axle of the driving wheel thereof, adjustable in a line with said axle, a freely rotating fan supported on a shaft

near said wheel, and adjustable towards and from said wheel, and means of engagement between said driving wheel and the shaft of said fan, substantially as described.

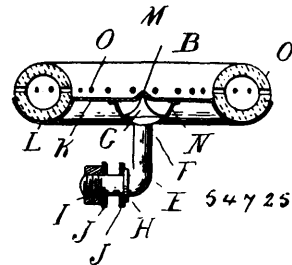
**No. 54,724. Cycle Tire.** (Bandage de cycles.)



James McConecky, Glasgow, Scotland, 23rd January, 1897; 6 years. (Filed 31st December, 1896.)

*Claim.*—1st. The improved tire for cycles and other vehicles, substantially as described and illustrated in the accompanying sheet of drawings. 2nd. In pneumatic tires for cycles and other vehicles, the insertion of a strip, hoop, or band of cork between the inner air tube and the outer covering, substantially as described and illustrated on the accompanying sheet of drawings.

**No. 54,725. Bicycle Saddle.** (Selle de bicyclee.)



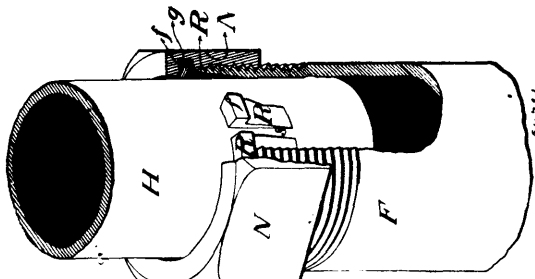
G. Herbert Follows and Carl G. Smedberg, both of Cleveland, Ohio, U.S.A., 23rd January, 1897; 6 years. (Filed 26th December, 1896.)

*Claim.*—1st. In a bicycle saddle, the combination with a pad support, of a pad swivelled and rotatably mounted upon said support, whereby said pad conforms to the movements of the body and shifts to prevent dragging or friction as the rider mounts or dismount. 2nd. In a bicycle saddle, a plurality of pads, a support therefor, and a wabbling joint connecting each pad with the support, whereby the pads adjust themselves automatically to the shape of the rider and to his movements. 3rd. In a bicycle saddle, the combination with a pad support, and independent pads swivelled and rotatably mounted upon said support, whereby said pads conform to the movements of the body and shift to prevent dragging or friction as the rider mounts or dismounts. 4th. In a bicycle saddle, a plurality of pads, a support therefor, and a universal joint connecting each pad with the support, whereby the pads adjust themselves automatically to the shape of the rider as well as to his movements. 5th. In a bicycle saddle, the combination with the pad support, of independent pads, and a universal joint centrally connecting each pad with its support, whereby said pad may universally rock and have independent rotary motion. 6th. In a bicycle saddle, the combination with the pad support, of a plurality of pads, and a coupling in the form of a universal joint, connecting each pad with the support, the couplings having, in a vertical plane transverse to that of the machine, a rotary adjustment relative to the support. 7th. In a bicycle saddle, the combination with a saddle support, the pads mounted thereon, and a clamp for said saddle support, in which the latter is adapted to have a rotary adjustment. 8th. In a bicycle saddle, the combination with a clamp attachable to the bicycle frame comprising two members, and devices for clamping said members together, of a saddle support consisting of a spring bar, a portion of which is adapted to be retained in the clamp, and pads mounted upon the ends of said bar. 9th. In a bicycle saddle, the combination with a clamp attachable to the bicycle frame, and a saddle support comprising a spring bar extending through the clamp in a plane transverse to that of the machine terminating at each end in a curved supporting arm, and pads mounted upon said arms. 10th. In a bicycle saddle, the combination with a clamp attachable to the bicycle frame, comprising two members, said members having a hinge connection at their rear ends and secured at their forward ends by a single coupling, of a saddle support consisting of a spring bar, a portion of which is adapted to be retained in the clamp, and pads mounted upon the ends of said bar. 11th. In a bicycle saddle, the combination with a clamp attachable to the bicycle frame, comprising two members, a retaining piece upon one of said members, and a hook arranged upon the other forming a hinge connection between the members,

and a securing bolt coupling together the free ends of said members, of a saddle support consisting of a spring bar, a portion of which is adapted to be retained in the clamp and pads mounted upon the ends of said bar, substantially as described. 12th. In a bicycle saddle, the combination with a clamp attachable to the bicycle frame, comprising two members, each provided with a semi-circular recess and devices for clamping said members together, of a saddle support consisting of a spring bar, said bar having a horizontal portion extending through the clamp and carrying at each end a spring arm, and pads mounted upon the arms, substantially as described. 13th. In a bicycle saddle, the combination with a clamp attachable to the bicycle frame, comprising two members, each provided with a semi-circular corrugated recess, and devices for clamping said members together, a saddle support consisting of a spring bar, said bar having a corrugated horizontal portion extending through the clamp and carrying at each end a curved spring arm, and pads mounted upon the arm, substantially as described. 14th. In a bicycle saddle, the combination with a clamp attachable to the bicycle frame and a saddle support comprising a spring bar extending through the clamp and terminating at each end in a curved arm, said arms being slotted at their free ends, couplings E adjustably secured in said slots, and pads upon the couplings, substantially as described. 15th. In a bicycle saddle, the combination of the support, independent plates swivelled and rotatably mounted upon said support, and ring-shaped cushions upon the plates. 16th. In a bicycle saddle, the combination with a plurality of spring supporting arms attachable to the bicycle frame, of a plurality of perforated plates rockingly connected to the spring supporting arms, and perforated ring-shaped cushions mounted upon the plates, substantially as and for the purpose described. 17th. In a bicycle saddle, the combination of the support, independent plates swivelled and rotatably mounted upon said support, and rubber cushions arranged upon the plates, substantially as described. 18th. In a bicycle saddle, the combination with a support, of a pad, and a wobbling joint connecting said pad with said support, said joint being centrally located with respect to said pad, whereby said pad may conform to the movements of the body of the rider. 19th. In a bicycle saddle, the combination with a support, of a pad, and a wobbling and rotatable joint connecting it with said support, whereby said pad may conform to the movements of the body of the rider, and may also more or less rotate to prevent dragging or friction as the rider mounts and dismounts. 20th. In a bicycle saddle, the combination with a support, of a pad, and a wobbling and rotatable joint connecting it with said support, said joint being centrally located with respect to said pad, whereby said pad may conform to the movements of the body of the rider and may partially rotate to prevent dragging or friction as the rider mounts or dismounts. 21st. In a bicycle saddle, the combination with a support, of a pad, and a rotatable joint connecting it with said support, said joint being centrally located with respect to said pad, whereby said pad may partially rotate to prevent dragging or friction as the rider mounts or dismounts.

**No. 54,726. Bicycle Handle Bar.**

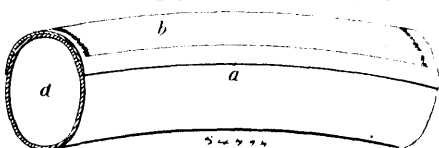
(Barre de manche de bicyclet.)



Thomas Walter Van Tuyl, Petrolia, Ontario, Canada, 23rd January, 1897; 6 years. (Filed 26th December, 1896.)

Claim.—A clamping device consisting of a nut and wedge ring, substantially as described and for the purposes specified.

**No. 54,727. Means for Closing Punctures in Pneumatic Tires.** (Moyen de fermer automatiquement les piqûres dans les bandages pneumatiques.)



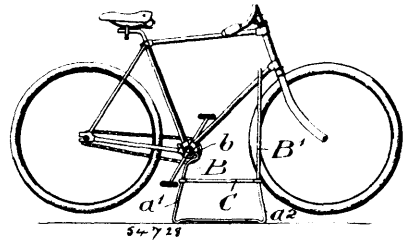
John Joseph Shaumessy, Newcastle-upon-Tyne, assignee of Thomas Duffell Bell, York, both in England, 23rd January, 1897; 6 years. (Filed 2nd January, 1897.)

Claim.—1st. In pneumatic tires providing the tread portion of the inner or air tube with a band composed of a strip of rubber to

one face of which is cemented or vulcanized a strip of pure silk fabric or with a band of pure silk fabric only, the said band being applied to the air tube when the said band is in its normal condition and the inner or air tube of the pneumatic tire is inflated just sufficiently to give it its shape, substantially as and for the purpose hereinbefore described. 2nd. The manufacture and use for pneumatic tires of bands composed of a strip of rubber to one face of which is cemented or vulcanized a strip of pure silk fabric, substantially as described and illustrated in the accompanying drawing. 3rd. The manufacture and use of pneumatic tires having the tread portion of the inner or air tube lined or covered with a band formed of a strip of rubber and pure silk or of a strip of pure silk, substantially as hereinbefore described.

**No. 54,728. Bicycle-supporting Stand.**

(Support de bicyclet.)

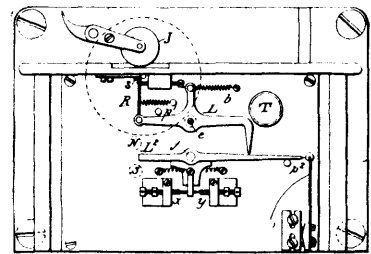


John Lucien Benton and Charles Richard Bishop, both of New Haven, Connecticut, U.S.A., 23rd January, 1897; 6 years. (Filed 31st December, 1896.)

Claim.—1st. A bicycle-supporting stand, comprising a suitable base consisting of a stationary section and a swinging section, a rear upright uprising from the stationary section and adapted to engage the crank hanger and a front upright uprising from the stationary section and adapted to engage the front lower brace, substantially as set forth. 2nd. A bicycle-supporting stand, comprising a rear upright, a front upright, a base consisting of a stationary section and a swinging section comprising upper and lower horizontal portions connected by end upright portions, an adjustable arm adapted to slide along the upper horizontal portion of the swinging section and means for securing the arm to said upper horizontal portion, substantially as set forth. 3rd. A bicycle-supporting stand, comprising a rear upright adapted to engage the crank hanger, a front upright adapted to engage the front lower brace and a base consisting of a section stationary with respect to the uprights and a swinging section, and a stop on the swinging section adapted to engage one of the uprights to limit the outward swinging movement of the said section, substantially as set forth. 4th. A bicycle-supporting stand, comprising a suitable base consisting of a stationary section and a swinging section, a rear upright uprising from the base adapted to engage the crank hanger, and a front upright of loop form uprising from the base adapted to engage the front lower brace and also the steering wheel, substantially as set forth.

**No. 54,729. Submarine Cable Transmitter.**

(Transmetteur de cable sous-marin.)

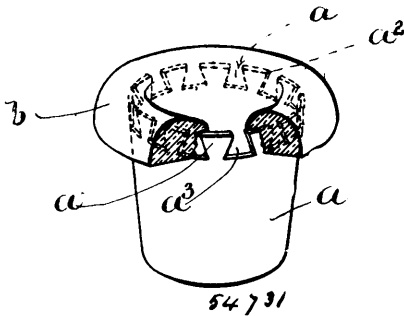


Alexander Muerhead, Westminster, London, England, 23rd January, 1897; 6 years. (Filed 22nd November, 1895.)

Claim.—1st. In an automatic telegraph transmitter, the combination with the perforated ribbon actuating devices and the lever contact devices adapted to respectively enter perforations in the travelling ribbon and by their movement thus adapted to establish battery contacts, of a rotating cam acting after a determined interval of time to restore the contact lever devices to their normal position. 2nd. In an automatic telegraph transmitter, the combination with the perforated ribbon actuating devices and the lever contact devices adapted to respectively enter perforations in the travelling ribbon and by their movement thus adapted to establish battery contacts, of rotating cams acting respectively to release that lever contact device that may have entered a perforation in the travelling ribbon and after a determined interval of time to restore the corresponding contact-making device to its normal position. 3rd. In an automatic telegraph transmitter, the combination with the perforated ribbon actuating devices and the lever contact devices

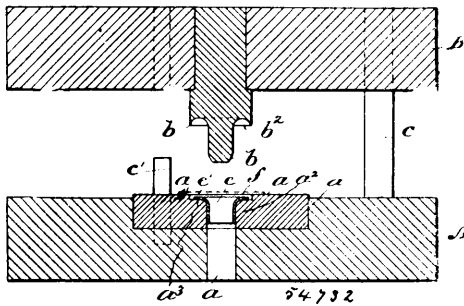


flange, composed of celluloid, or other materials, anchored about said projections. 4th. An eyelet, comprising in its construction a



tubular unflanged body, dove tailed projections extending from one end of said body, constructed to form intervening spaces having contracted openings, and a covering, or setting flange of plastic material moulded about said projections and filling said spaces, said covering having a rounded top and a flat under side, that is arranged at practically right angles to the axis of the eyelet.

**No. 54,732. Eyelet-covering Machine.**  
(Machine pour couvrir les œillets.)

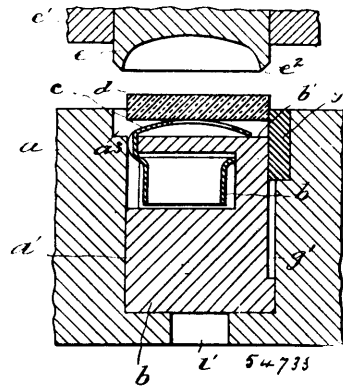


Eleazer Kempshall, Newton, Massachusetts, U.S.A., 23rd January, 1897; 6 years. (Filed 9th March, 1896.)

*Claim.*—1st. In dies for covering the face flanges of eyelets, an eyelet-supporting member having an opening to receive the shank of the eyelet, and surrounded by a pressure face, a pressure member having a ring-like depression to press the plastic covering material upon and about the face flange of the eyelet and against said pressure face, and a tapering plunger to enter the eyelet shank and stand in the opening made in the covering material in line with the central opening of the shank. 2nd. The use for covering the enlarged flaring flanged ends of metallic eyelets, of a die to hold the shank of the eyelet with the entire flaring flange exposed, and a heated co-operating moulding die having a tapering projection entering the mouth of the eyelet, and a surrounding concentric rim provided with an annular concavity, the projection entering a hole in the disc-like covering material lying at the face of the eyelet, the annular concavity shaping the face of the eyelet and causing the covering material to embrace the flanged end. 3rd. The method of covering the heads of eyelets with a plastic material, which consists in forming the metallic eyelets and the plastic washers separately, inserting the metallic eyelet in a hole in a die and the washer in a recess surrounding the entrance to the said hole, centring the washer within said eyelet by means of a conical projection entering the washer and eyelet, and simultaneously moulding the washer and fixing it to the eyelet by means of heat transmitted to the die. 4th. In dies for covering the faces of lacing eyelets, an eyelet-supporting member having a shank-receiving opening surrounded by a ring-like depression or recess, and a pressure member having a plunger or projection, the diameter of which is less than that of said shank-receiving opening, to leave a space for the eyelet shank when the dies are closed, and a concentric rim surrounding said projection and separated therefrom by an annular concavity, said rim being adapted for entrance in the said ring-like depression. 5th. In dies for covering the face flanges of eyelets, an eyelet-supporting member having a shank-receiving opening and having a substantially flat moulding face encircling said opening, and a pressure member having a central plunger or projection registering with said shank-receiving opening, and an annular concavity encircling said projection, the said concavity co-operating with the moulding face surrounding said shank-receiving opening to mould between them the plastic covering material to thereby form an eyelet covering having a broad flat pressure resisting seat and a crowning top face. 6th. The method of covering the heads of eyelets with plastic material, which consists in forming a metallic eyelet, arranging the same in a hole in a die, arranging over the face flange of the said eyelet the covering material, heating the said covering material and moulding or forming the said material upon and beneath the face flange and allowing

the covering to set thereupon. 7th. The method of covering the face flanges of eyelets with plastic material, which consists in forming metallic eyelets and separately forming plastic washers from which the covers are to be made, placing the washer in contact with the face flange or rim of the eyelet and moulding or forming the said washer about the rim of the eyelet by compression between two die members, one or both of which are heated. 8th. The method of covering the heads of eyelets with a plastic material, which consists in forming the metallic eyelets and the plastic washers separately, inserting the metallic eyelet in a hole in a die and the washer in a recess surrounding the entrance to the said hole, centring the washer within said eyelet by passing a conical projection through the washer into the eyelet from above, and simultaneously moulding the washer and fixing it to the eyelet by means of heat transmitted to the die. 9th. The method of covering heads of eyelets, lacing-hooks, etc., with plastic material, which consists in forming metallic blanks and plastic washers separately, assembling the blank and washer, then moulding or forming the washer about the head of the eyelet, or lacing-hook, by compressing with a heated die, while retaining the blank by a companion die.

**No. 54,733. Apparatus for Covering Lacing-Hooks, etc.**  
(Appareil pour couvrir les crochets à lacs, etc.)

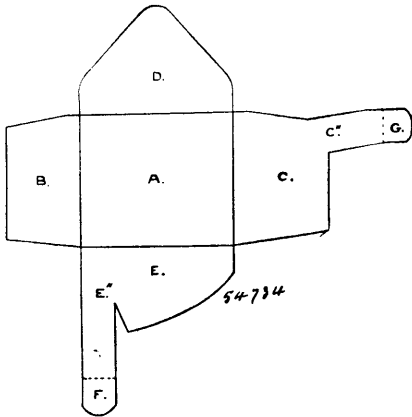


Eleazer Kempshall, Newton, Massachusetts, U.S.A., 23rd January, 1897; 6 years. (Filed 9th March, 1896.)

*Claim.*—1st. An apparatus of the character specified, comprising a base or plate having a socket, a holder formed to be enclosed by said socket and adapted to support an article to be covered, and a die formed to act on a plastic blank interposed between the holder and die, the holder and socketed plate being relatively movable to cover and uncover the holder. 2nd. An apparatus of the character specified, comprising a base or plate having a socket, a holder movable in said socket and adapted to support an article to be covered, a die formed to act on a plastic blank interposed between the holder and die, and means for displacing the holder to raise the covered article from the socket. 3rd. An apparatus of the character specified, comprising a base or plate having a socket and a moulding face at one side of the socket, a holder formed to be enclosed by the socket and having a moulding face which coincides with the moulding face on the bed when the holder is in its operative position, and a die adapted to co-operate with said moulding faces in forming a head from a plastic blank on an article supported by the holder. 4th. An apparatus of the character specified, comprising, first, a base or plate having a socket and a moulding face at one side thereof, secondly, a lacing-hook holder formed to be enclosed by said socket and having a head-supporting and cover-moulding face at its outer end, a shank-receiving cavity under said face, and a neck-receiving recess between said cavity and face, the said moulding face coinciding with the moulding face of the bed when the holder is in its operative position, and thirdly, a die formed to co-operate with said moulding faces in forming a covering on the head of a lacing-hook. 5th. A lacing-hook covering apparatus comprising a movable base or bed, having a series of sockets which are open at one side of the plate, and hook holders movable in said sockets, each having a head supporting and cover-moulding face at its outer end, and a shank-receiving cavity below said face, the said cavities being within the sockets when the holders are in their operative positions and projected from the sockets for the reception and removal of the hook-shanks when the holders are displaced. 6th. A lacing-hook covering apparatus comprising a movable base or bed having a series of sockets, which are open at one side of the plate, hook-holders movable in said sockets, each having a head supporting and cover-moulding face at its outer end and a shank-receiving cavity below said face, the said cavities being within the sockets when the holders are in their operative positions, and means for simultaneously displacing said holders. 7th. A lacing-hook covering apparatus comprising a movable base or bed having a series of sockets, which are open at one side of the plate, the other side of the plate having orifices coinciding with the sockets, hook-holders movable in said sockets, each having a head-supporting and cover-moulding face at

its outer end, and a shank-receiving cavity below said face, the said cavities being within the sockets when the holder having a series of pins adapted to enter the orifices in the bed to simultaneously displace the hook-holders. 8th. An apparatus of the character specified, comprising a holder adapted to support an article to be covered, a base or plate having a socket formed to receive said holder, the mouth of the socket forming a blank-receiving cavity above the said holder, and a die formed to act on a plastic blank in said cavity, the socketed plate and holder being relatively movable to cover and expose the holder.

**No. 54,734. Envelope. (Envelope.)**

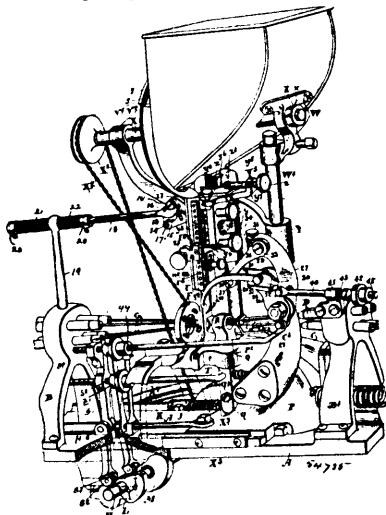


Rowan Johnston, Calgary, North-west Territories, Canada, 23rd January, 1897; 6 years. (Filed 10th December, 1893.)

*Claim.*—1st. The side flap C made to fold over the flap B, and the extension C', G of the said flap C folded over and secured by mucilage or gum to the front face of the envelope, substantially as shown and described. 2nd. The flap E with its extension E', F made to extend and fold over the flap D onto the front face of the envelope, and secured by mucilage or gum on the flap D, after D is folded over B and C, and the face of the envelope, where it covers the part G of the extension C', G of the flap C in such a manner that when the postage stamp is affixed so as to cover the portion of the extension E', F of the flap E marked F and part of the face of the envelope, as shown and described.

**No. 54,735. Machine for Boring Holes in Buttons.**

(Machine pour percer des trous dans les boutons.)



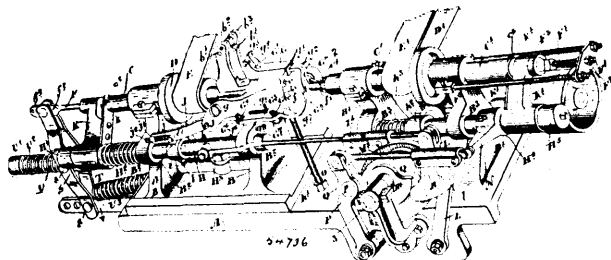
Dilman Brubacher Shantz, Berlin, Ontario, Canada, 25th January, 1897; 6 years. (Filed 17th July, 1896.)

*Claim.*—1st. In a machine for boring holes in buttons, the combination with the receiving chucks for holding the buttons opposite to the boring drills, of a chute and means for transferring the buttons one at a time from the chute to the receiving chucks, as and for the purpose specified. 2nd. In a machine for boring holes in buttons, the combination with the receiving chucks for holding the buttons opposite to the boring drills, of a chute and gripping means automatically operated to grasp the button to carry it to the chucks and to release it after being placed in the chucks, as and for the purpose specified. 3rd. In a machine for boring holes in buttons, the combination with the receiving chucks for holding the buttons opposite to the boring drills, of a chute extending directly over the opening between the chucks, means for temporarily holding the

button after falling from the chute, and means for transferring the button past such temporary holding means to between the chucks, as and for the purpose specified. 4th. In a machine for boring holes in buttons, the combination with the receiving chucks for holding the buttons opposite to the boring drills, of a chute extending directly over the opening between the chucks and a spring plate held to the side of the chute and having the lower end bent inwardly, so as to come across the path of the descending button, and means for transferring the button past the interfering bottom of such plate to between the chucks, as and for the purpose specified. 5th. In a machine for boring holes in buttons, the combination with the receiving chucks for holding the buttons opposite to the boring drills, of a chute extending directly over the opening between the chucks, a spring plate and an adjustable means for holding it to the side of the chute, such spring plate having a lower curved forked end extending into the pathway of the descending button, and means for transferring the button past the interfering curved bottom end of such spring plate, as and for the purpose specified. 6th. In a machine for boring holes in buttons, the combination with the stationary chuck with opening therein opposite the drills, and the carriage to which it is secured having a backward and forward movement, and the movable chuck adjustable on the carriage, of an upward extension to the stationary chuck designed to carry the chute, and means for carrying the button from the bottom of the chute to between the stationary chuck and the moving chuck, as and for the purpose specified. 7th. In a machine for boring holes in buttons, the combination with the receiving chucks for holding the buttons opposite to the boring drills, the chute situated directly above the space between the chucks, pivoted fingers having their free ends extending at each side of the pathway of the button, and means for closing the fingers upon the button to carry it down to the chucks and also for opening the ends of the fingers when the button is carried down and the fingers are moving up, as and for the purpose specified. 8th. In a machine for boring holes in buttons, the combination with the receiving chucks for holding the buttons opposite to the boring drills, the chute situated directly above the space between the chucks, pivoted fingers having their free ends extending at each side of the pathway of the button, and a spiral spring extending between the fingers and encompassing a spindle passing through the fingers, and means for opening the ends of the fingers when the button is carried down and the fingers are moving up, as and for the purpose specified. 9th. In a machine for boring holes in buttons, the combination with the receiving chucks for holding the buttons opposite to the boring drills, the chute situated directly above the space between the chucks, pivoted fingers having their free ends extending at each side of the pathway of the button, and means for closing the levers upon the button to carry it down to the chucks, and conical bosses formed on the inside of the gripping fingers, and an arm spring-held having laterally extending pins designed to co-act with the bosses, as and for the purpose specified. 10th. In a machine for boring holes in buttons, the combination with the receiving chucks for holding the buttons opposite to the boring drills, the chute situated directly above the space between the chucks, pivoted fingers having their free ends curved and extending downwardly at each side of the pathway of the button, the tension spring for holding the fingers together, cone-shaped bosses on the inside of the fingers, an arm with laterally extending pins designed to co-act with the cone-shaped bosses, a lug on the arm, a set screw extending over such lug and a spiral spring designed to normally hold the lug up against the set screw, as and for the purpose specified. 11th. In a machine for boring holes in buttons, the combination with the receiving chucks for holding the buttons opposite to the boring drills, the chute situated directly above the space between the chucks, pivoted fingers having their free ends curved and extending downwardly at each side of the pathway of the button, the tension spring for holding the fingers together, cone-shaped bosses on the inside of the fingers, an arm with laterally extending pins designed to co-act with the cone-shaped bosses, a lug on the arm, a set screw extending over such lug, a spiral spring designed to normally hold the lug up against the set screw, and means for moving the fingers up and down, as and for the purpose specified. 12th. In a machine for boring holes in buttons, the combination with the receiving chucks for holding the buttons opposite to the boring drills, the chute situated directly above the space between the chucks, pivoted fingers, the carriage supporting the stationary chuck, the upwardly extending arm attached to the carriage, the lever pivoted on the arm, the gripping fingers arranged with their ends to each side of the downward pathway of the button supported upon the upper end of the lever, and means for opening and closing the gripping ends of the lever, as and for the purpose specified. 13th. In a machine for boring holes in buttons, the combination with the receiving chucks for holding the buttons opposite to the boring drills, the chute situated directly above the space between the chucks, pivoted fingers, the carriage supporting the stationary chuck, the upwardly extending arm attached to the carriage, the lever pivoted on the arm, the gripping fingers arranged with their ends to each side of the downward pathway of the button supported upon the upper end of the lever, means for opening and closing the gripping ends of the lever, and means connecting the lever pivoted on the upwardly extending arm with operating mechanism connected to the arbor, as and for the purpose specified. 14th. In a machine for boring holes in buttons, the combination with the receiving chucks for holding the buttons opposite to the boring

drills, the chute situated directly above the space between the chucks, pivoted fingers, the carriage supporting the stationary chuck, the upwardly extending arm attached to the carriage, the lever pivoted on the arm, the gripping fingers arranged with their ends to each side of the downward pathway of the button, supported upon the upper end of the lever, means for opening and closing the gripping ends of the fingers and the rod 45, lever S, and cam L, and arbor H driven, as and for the purpose specified. 15th. In a machine for boring holes in buttons opposite to the boring drills, the chute situated directly above the space between the chucks, pivoted fingers, the carriage supporting the stationary chuck, the upwardly extending arm attached to the carriage, the lever pivoted on the arm, the gripping fingers arranged with their ends to each side of the downward pathway of the button supported upon the upper end of the lever, means for opening and closing the gripping ends of the fingers, means for connecting the lever pivoted on the upwardly extending arm with operating mechanism connected to the arbor, and further means connected to the lever above its pivot for relieving such lever from any undue strain, as and for the purpose specified. 16th. In a machine for boring holes in buttons, the combination with the receiving chucks for holding the buttons opposite to the boring drills, the chute situated directly above the space between the chucks, pivoted fingers, the carriage supporting the stationary chuck, the upwardly extending arm attached to the carriage, the lever pivoted on the arm, the gripping fingers arranged with their ends to each side of the downward pathway of the button supported upon the upper end of the lever, means for opening and closing the gripping ends of the finger, means connecting the lever pivoted on the upwardly extending arm with operating mechanism connected to the arbor, further means connected to the lever above its pivot for relieving such lever from any undue strain, and a rod pivotally connected to the lever above its fulcrum, a collar secured to the standard and designed to receive and support the free end of the rod, an adjustable nut on the threaded end of the rod and a spring between such nut and the collar on the rod, as and for the purpose specified. 17th. In a machine for boring holes in buttons, the combination with the boring spindles and chuck and stationary chucks, of a chute situated directly above the space between the chucks and a hopper at the top of the chute, as and for the purpose specified. 18th. In a machine for boring holes in buttons, the combination with the boring spindles and movable chuck and stationary chucks, of a chute situated directly above the space between the chucks, a hopper at the top of the chute and means for delivering the buttons from the hopper one at a time into the top of the chute, as and for the purpose specified. 19th. In a machine of the class described, the combination with the chucks, of a chute comprising the front, back and perforated sides, as and for the purpose specified. 20th. In a machine of the class described, the combination with the chucks, of a plate forming an upward extension of the stationary chucks, the sides, the back and adjustable means for varying the distance between the front and back, as and for the purpose specified. 21st. In a machine of the class described, the combination with the chucks, of a plate forming an upward extension of the stationary chuck, the sides, the back and the set screws extending through a wing, the annular grooves in the end of the set screw and the plate secured to the back having the ends extending into the annular grooves, as and for the purpose specified. 22nd. In a machine of the class described, the combination with the chucks, of a plate forming an upward extension of the stationary chuck, the back, the sides and adjustable means for varying the distance between the sides, as and for the purpose specified. 23rd. In a machine of the class described, the combination with the chucks, of a plate forming an upward extension of the stationary chuck, the sides, the notches in the front plate, the side plates secured to the sides and extending through the notches, the right and left hand spindle provided with centrally grooved collar and a pin in the front extending forwardly into such collar, as and for the purpose specified. 24th. In a machine for boring holes in buttons, the combination with the boring spindles and movable and stationary chucks, of a chute situated directly above the space between the chucks and a hopper at the top of the chute and vertical spindles extending upwardly from the carriage and designed to support the hopper in position, as and for the purpose specified. 25th. In a machine for boring holes in buttons, the combination with the boring spindles and movable and stationary chucks, of a chute situated directly above the space between the chucks and a hopper at the top of the chute having its end reduced to the same size as the chute, and means at the upper entrance of the chute for causing the buttons to pass down with their convex sides against the back of the chute, as and for the purpose specified. 26th. In a machine for boring holes in buttons, the combination with the boring spindles and movable and stationary chucks, of a chute situated directly above the space between the chucks and a hopper at the top of the chute having its end reduced to the same size as the chute and a plate having a broad V-shaped end designed to extend into the chute, as and for the purpose specified. 27th. In a machine for boring holes in buttons, the combination with the boring spindles and movable and stationary chucks, of a chute situated directly above the space between the chucks and a hopper at the top of the chute having its end reduced to the same size as the chute, a plate having a broad V-shaped end designed to extend into the chute, a bracket secured on the spindle and having a flat top upon which the plate rests, and means for adjusting the plate upon such top, as and for the purpose specified. 28th. In a machine

for holes in buttons, the combination with the boring spindles and movable and stationary chucks, of a chute situated directly above the space between the chucks and a hopper at the top of the chute having its end reduced to the same size as the chute, a plate having a broad V-shaped end designed to extend into the chute, a bracket secured on the spindle and having a flat top upon which the plate rests, means for adjusting the plate upon such top, an upwardly extending portion in the front of the flat top and retaining studs or projections on each side of the plate as and for the purpose specified. 29th. In a machine for boring holes in buttons, the combination with the boring spindles and movable and stationary chucks, of a chute situated directly above the space between the chucks and a selecting plate of suitable shape extending into the chute, as and for the purpose specified. 30th. In a machine for boring holes in buttons, the combination with the boring spindles and movable and stationary chucks, of a chute situated directly above the space between the chucks, a selecting plate of suitable shape extending into the chute, a supporting bracket having a flat top upon which the plate rests, such flat top having an upwardly turned outer end, an adjusting screw spindle extending through such end and having the inner end rotatably connected in an eye secured in the top of the plate, as and for the purpose specified. 31st. In a machine for boring holes in buttons, in combination, the boring spindles, the chucks, the chute, the slot in the front side of the chute, the finger or arm extending into such slot and means for giving it an upward poke, as and for the purpose specified. 32nd. In a machine for boring holes in buttons, in combination the boring spindles, the chucks, the chute, the slot in the front side of the chute, the finger or arm extending into such slot, the pivoted plate on which the arm is pivoted, the pin extending through a slot in the arm, and means for swinging the plate upon the forward movement of the carriage and chute, as and for the purpose specified. 33rd. In a machine for boring holes in buttons, in combination, the boring spindles, the chucks, the chute, the slot in the front side of the chute, the finger or arm extending into such slot, the pivoted plate on which the arm is pivoted, the pin extending through a slot in the arm and the rod pivotally connected to a crank pin on the pivoted plate, collars on the rod, a vertical rod through a hole in the upper end of which the rod extends, and spiral springs between the collars on the rod and the vertical rod, as and for the purpose specified. 34th. In combination the chute leading to the holding chucks, the hopper having a narrowed lower portion leading into the chute, the central shaft extending, the hopper, the ring and arm secured to such shaft within the hopper, and means for rotating the shaft, as and for the purpose specified. 35th. In combination the chute leading to the holding chucks, the hopper having a narrowed lower portion leading into the chute, the central shaft extending through the hopper, the ring and arms secured to such shaft within the hopper, sprocket wheel on the end of the shaft, sprocket wheel on the end of the arbor, and the chain for connecting both sprocket wheels, as and for the purpose specified. 36th. In combination the chute leading to the holding chucks, the hopper having a narrowed lower portion leading into the chute, the central shaft extending through the hopper, the ring and arms secured to such shaft within the hopper, sprocket wheel on the end of the shaft, the sprocket wheel secured on an extension of the arbor having a toggle-jointed connection to the end of the arbor and suitably journaled at the other end, and the chain for connecting both sprocket wheels, as and for the purpose specified. 37th. In combination the carriage and chuck supported thereon, the chute, the hopper and the vertical spindle supporting the hopper on the carriage, as and for the purpose specified. 38th. In combination the chucks, the chute, the hopper, the circular opening in the end of the hopper, the shaft extending through and supported in suitable bearings in the hopper, means for driving the shaft, a disc secured on the shaft and means in connection with such disc for throwing the button with the periphery of the disc, as and for the purpose specified. 39th. In combination the chucks, the chute, the hopper, the circular opening in the end of the hopper, the shaft extending through and supported in suitable bearings in the hopper, means for driving the shaft, a disc secured on the shaft, the arc-shaped guiding plates secured above and to the outside of the circular opening in the hopper, the adjustable finger and means between the finger and the arc-shaped building-plates for giving it an inward and outward thrust, as and for the purpose specified. 40th. In combination the chucks, the chute, the hopper, the circular opening in the end of the hopper, the shaft extending through and supported in suitable bearings in the hopper, means for driving the shaft, a disc secured on the shaft, the arc-shaped guiding plates secured above and to the outside of the circular opening in the hopper, the adjustable finger, the plate attached thereto and extending through a slot in the disc, a detent connected to the plate on the outside of the disc, and the spring for pressing the disc normally against the interior of the arc-shaped guiding plate, as and for the purpose specified. 41st. In combination the chucks, the chute, the circular opening in the end of the hopper, the shaft extending through and supported in suitable bearings in the hopper, means for driving the shaft, a disc secured on the shaft, and the arc-shaped guide secured above the circular opening at the inside of the disc and abutting the same, as and for the purpose specified. 42nd. In a machine for boring holes in buttons, the combination with the receiving chucks for holding the buttons opposite the boring drills, of a temporary receptacle for the blank located in proximity to the chucks, as and for the purpose specified.

**No. 54,736. Button Turning Machine.***(Machine pour tourner les boulons.)*

Dilman Brubacher Shantz, Berlin, Ontario, Canada, 25th January, 1897; 6 years. (Filed 17th July, 1896.)

*Claim.*—1st. In a machine for turning buttons and like articles, in combination, the revolving cutter spindles, the stationary jaws and the movable jaws, extra gripping fingers and means for raising and lowering them into position between the cutting tools during the period that the cutting tools are working on the article previously placed in position, as and for the purpose specified. 2nd. In a machine for turning buttons and like articles, in combination, the revolving cutter spindles, the stationary movable gripping fingers and arms and means for throwing them upwardly, the cutting tools and independent recessed or hollowed jaws working longitudinally and parallelly with the cutting tools, non-rotatable, and designed to hold the blank firmly in position while being operated upon, as and for the purpose specified. 3rd. In a machine for turning buttons and like articles, in combination, the cutter spindles and tools, suitable grips to hold the article while being operated upon by the cutting tools, the adjustable fingers and arms designed to open to receive the blank to be placed by the attendant and to hold such blank during the period that the tools are working upon the article held in position, as and for the purpose specified. 4th. In a machine for turning buttons and like articles, in combination, the cutter spindles and tools, suitable grips to hold the article while being operated upon by the cutting tools and adjustable fingers and arms designed to open to receive the blank to be placed by the attendant and to hold such blank during the period that the tools are working upon the article held in position, and means by which the temporary holding fingers and arms are moved into their proper position, holding the blank until such blank is received and held in position by the gripping jaws as and for the purpose specified. 5th. In a machine for turning buttons and like articles, in combination, the cutter spindles and tools, suitable gripping jaws to hold the article while being operated upon by the cutting tools, adjustable fingers and arms held upon a suitable carriage pivoted upon the bearing standard, and means for tilting such carriage, as and for the purpose specified. 6th. In a machine of the class described, the combination with the gripping jaws, one of which is adjustable lengthwise to and from the other, of a carriage pivoted on the frame of the machine, adjustable holding fingers to place the blank in position, means for raising the carriage and a stop for limiting its downward movement, as and for the purpose specified. 7th. In a machine of the class described, the combination with the gripping jaws, one of which is adjustable lengthwise to and from the other, of a carriage pivoted on the frame of the machine, longitudinal fingers supported in a guideway in the top of the carriage and having bent lower ends, arms extending out from the carriage in front of the bent ends of the fingers, and means for drawing the bent ends of the fingers back upon the carriage being raised, as and for the purpose specified. 8th. In a machine of the class described, the combination with the gripping jaws, one of which is adjustable lengthwise to and from the other, of a carriage pivoted on the frame of the machine, longitudinal fingers supported in a guideway in the top of the carriage and having bent lower ends, arms extending out from the carriage in front of the bent ends of the fingers, rocking detents suitably pivoted at the rear of the carriage and having their lower ends engaging with recesses in the outer ends of the fingers, and means for self-tilting such detents on their pivots when the carriage is raised, as and for the purpose specified. 9th. In a machine of the class described, the combination with the gripping jaws, one of which is adjustable lengthwise to and from the other, of a carriage pivoted on the frame of the machine, longitudinal fingers supported in a guideway in the top of the carriage and having bent lower ends, arms extending out from the carriage in front of the bent ends of the fingers, rocking detents suitably pivoted at the rear of the carriage and having their lower ends engaging with recesses in the outer ends of the fingers and an engaging detent pivotally supported upon brackets secured to the top of the standard and having a limited movement, as and for the purpose specified. 10th. In a machine of the class described, the combination with the gripping jaws, one of which is adjustable lengthwise to and from the other, of a carriage pivoted on the frame of the machine, longitudinally adjustable holding fingers supported in suitable guideways and co-acting flexibly held arms having their outer ends extending beyond the ends of the longitudinally adjustable fingers, as and for the purpose specified. 11th. In a machine of the class described,

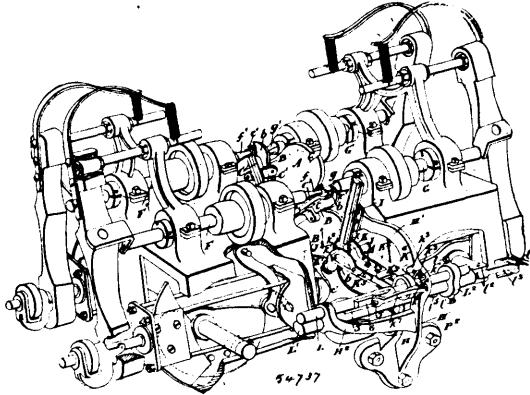
the combination with the gripping jaws, one of which is adjustable lengthwise to and from the other, of a carriage pivoted on the frame of the machine, longitudinally adjustable holding fingers supported in suitable guideways and co-acting arms having curved outer ends extending beyond the longitudinally adjustable fingers, lugs for supporting such arms, pins extending through the enlarged holes in the arms and into the lugs and laterally and longitudinally connecting springs to each arm and the carriage, as and for the purpose specified. 12th. In a machine of the class described, the combination with the gripping jaws, one of which is adjustable lengthwise to and from the other, of a carriage pivoted on the frame of the machine, co-acting fingers and arms, means for adjusting them to and from each other, a rod supported in suitable bearings in the standards, a link flexibly connecting such rod to an arm extending behind the pivot point of the carriage, and means for imparting a longitudinal reciprocating movement to such rod as and for the purpose specified. 13th. In a machine of the class described, the combination with the gripping jaws, one of which is adjustable lengthwise to and from the other, of a carriage pivoted on the frame of the machine, co-acting fingers and arms, means for adjusting them to and from each other, a rod supported in suitable bearings in the standard, a collar on the rod provided with upwardly extending lugs, a link pivotally connected to one end, an arm extending behind the pivot point of the carriage, a slot at the other end of such link through which a pin in the lugs extend, a spring located in such slot, and means for imparting a longitudinal reciprocating movement to such rod, as and for the purpose specified. 14th. In a machine of the class described, the combination with the gripping jaws, one of which is adjustable lengthwise to and from the other, of a carriage pivoted on the frame of the machine, co-acting fingers and arms, means for adjusting them to and from each other, a rod supported in suitable bearings in the standards, means for flexibly connecting the rod to the carriage, a spring situated on the rod between one of the bearings and a fixed collar on the rod, and means for imparting a longitudinal reciprocating movement to such rod in the opposite direction to that in which the spring forces the rod, as and for the purpose specified. 15th. In a machine of the class described, the combination with the gripping jaws, one of which is adjustable lengthwise to and from the other, of a carriage pivoted on the frame of the machine, co-acting fingers and arms, means for adjusting them to and from each other, a rod supported in suitable bearings in the standards, means for flexibly connecting the rod to the carriage, a spring situated on the rod between one of the bearings and a fixed collar on the rod, and the rod  $H^3$  pivotally connected to the rod  $H$ , the lever  $L$ , the roller  $I$ , the cam  $M^1$ , all arranged as and for the purpose specified. 16th. In a machine of the class described, the combination with the gripping jaws, one of which is adjustable lengthwise to and from the other, of a carriage pivoted on the frame of the machine, co-acting fingers and arms, means for adjusting them to and from each other, a rod supported in suitable bearings in the standards, means for flexibly connecting the rod to the carriage, a spring situated on the rod between one of the bearings and a fixed collar on the rod, and the rod  $H^3$  pivotally connected to the rod  $H$ , the lever  $L$ , the roller  $I$ , the cam  $M^1$ , and the wing  $L^1$  and cam  $M$ , all arranged as and for the purpose specified. 17th. In combination, the cutter spindles  $C$  suitably journaled and provided with an annular groove  $c^2$ , the arm  $K$ , the plate  $k$  secured thereto and having jaws extending into the annular groove  $c^2$ , the rod  $H$ , collar  $H^1$ , spring  $H^2$ , rod  $H^3$ , lever  $L$ , roller  $I$ , cam  $M^1$ , wing  $L^1$  and cam  $M$ , all arranged as and for the purpose specified. 18th. In combination, the cutter spindles  $C^1$  provided with suitable cutting tools and having an annular groove  $c^2$  at the outer end, the arm  $K^1$ , plate  $k^1$  having jaws extending into the annular groove  $c^2$ , the rod  $H^1$  supported in suitable bearings, the collar  $h^2$  and one of the bearings of the rod  $H^1$ , the rod  $C$  pivotally connected to the arm  $N$ , the lever  $P$ , the roller  $p$ , cam  $Q$ , wing  $R$  and cam  $R^1$ , all arranged as and for the purpose specified. 19th. In a machine of the class described, the combination with one cutter spindle and its co-acting gripping jaw, of the opposite cutter spindle and its co-acting gripping jaw suitably supported, and means for imparting a backward and forward movement to such gripping jaw parallelly to the cutter spindle to and from the blank, as and for the purpose specified. 20th. In a machine of the class described, the combination with the cutter spindle and its co-acting gripping jaw, of the opposite cutter spindle and its co-acting gripping jaw suitably supported, a rearward extension to such jaw, a double lever connected to the end of such rearward extension and suitably pivoted, a spring connecting such lever to the frame, a cam on the main driving arbor, a lever and friction roller co-acting with such cam, and a rod connecting the cam lever to the lever connected to the rearward extension of the movable jaw, as and for the purpose specified. 21st. In a machine of the class described, the combination with the cutter spindle and its co-acting gripping jaw, of the opposite cutter spindle and its co-acting gripping jaw suitably supported, a rearward extension to such jaw, the double lever  $S$ , the rod  $U$  secured to the frame, the threaded sleeve  $T^1$  secured to the rod, the sleeve  $T^2$  upon which the lever  $S$  is pivoted, the collar  $U^1$ , spiral spring  $U^2$ , rod  $V$ , lever  $V^1$  and cam  $V^2$ , all arranged as and for the purpose specified. 22nd. In combination, the stationary gripping jaws made in two parts, separated for the passage of the cutter and having inward extensions to grip the blank, the adjustable jaw made in two parts, having inward extensions to grip the blank, and hollow from end to



end for the passage of the cutter, independent springs to control the position of each part upon the blank, and means for throwing the jaws backward, as and for the purpose specified. 23rd. In a machine of the class described, in combination the cutter spindles and tools, suitable grips to hold the article while being operated upon by the cutting tools, suitably supported fingers, and springs to press them forward to temporarily grip the blank, as and for the purpose specified.

**No. 54,737. Button Turning Machine.**

(Machine pour tourner les boutons.)



Dilman Brubacher Shantz, Berlin, Ontario, Canada, 25th January, 1897; 6 years. (Filed 17th July, 1896.)

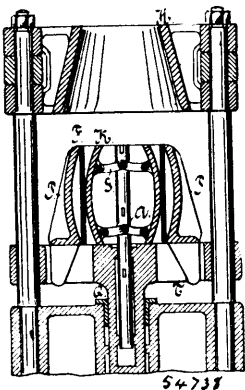
*Claim.*—1st. In a machine for turning buttons and like articles, in combination, a pair of revolving spindles, rough-hewing tools secured in their ends, a supplemental pair of revolving spindles located in proximity thereto and finishing tools secured in their ends, means for automatically reciprocating the cutting tools, a set of transferring grips designed to carry the blank from between the set of rough-hewing tools to between the set of finishing tools and a placing grip, operated to feed the blank into the transferring holding grip, as and for the purpose specified. 2nd. In a machine for turning buttons and like articles, in combination, a pair of revolving spindles, rough-hewing tools secured in their ends, a supplemental pair of revolving spindles located in proximity thereto and finishing tools secured in their ends, means for automatically reciprocating the cutting tools, a set of transferring grips designed to carry the blank from between the set of rough-hewing tools to between the set of finishing tools, a placing grip, operated to feed the blank into the transferring holding grip, and a feeding chute extending over the placing grip and designed to hold a plurality of buttons in alignment as and for the purpose specified. 3rd. In a machine for turning buttons and like articles, in combination, a pair of revolving spindles, rough-hewing tools secured in their ends, a supplemental pair of revolving spindles located in proximity thereto and finishing tools secured in their ends, means for automatically reciprocating the cutting tools, a set of transferring grips designed to carry the blank from between the set of rough-hewing tools to between the set of finishing tools, a placing grip, operated to feed the blank into the transferring holding grip, a feeding chute extending over the placing grip and designed to hold a plurality of buttons in alignment, and means at the bottom of the feeding chute for retaining the button temporarily in position until it is carried away by the placing grip, as and for the purpose specified. 4th. In a machine for turning buttons and like articles, in combination, a pair of revolving spindles, rough-hewing tools secured in their ends, a supplemental pair of revolving spindles located in proximity thereto and finishing tools secured in their ends, means for automatically reciprocating the cutting tools, a disc, a series of stationary open jaws secured to the disc at equal distances apart circumferentially, three spring-held adjacent gripping levers, pins extending through the disc designed to span the width of the gripping levers, a spring having an incline from bottom to top towards the disc, and means for throwing such spring down at the top to relieve the pin to close the jaw, as and for the purpose specified. 5th. In a machine for turning buttons and like articles, in combination, a pair of revolving spindles, rough-hewing tools secured in their ends, a supplemental pair of revolving spindles located in proximity thereto and finishing tools secured in their ends, means for automatically reciprocating the cutting tools, a disc, a series of stationary open jaws secured to the disc at equal distances apart circumferentially, three spring-held adjacent gripping levers, pins extending through the disc designed to span the width of the gripping levers, a spring having an incline from bottom to top towards the disc, an outwardly extending portion of the spring designed to come in contact with a projection on a longitudinally reciprocating rod, as and for the purpose specified. 6th. In combination with the disc, the stationary jaws secured thereto and set at equal distances circumferentially, the movable gripping levers and means for opening and closing them and receiving support for the blank designed to extend below the

space between the jaws, as and for the purpose specified. 7th. The combination with the gripping jaw and gripping levers, of the gripping placing fingers designed to grasp the face of the blank, and means for carrying such fingers down into the open gripping jaws, as and for the purpose specified. 8th. The combination with the gripping jaw and gripping levers having the sides open, of the gripping placing fingers, one finger of which is flat and the opposite finger of which is provided with a socket having a conical recess and automatic means for operating the fingers, as and for the purpose specified. 9th. The combination with the gripping jaw and gripping levers having the sides open, of the gripping placing fingers, one finger of which is flat and the opposite finger of which is provided with a socket having a conical recess, and automatic means for operating the fingers, and a chute suitably held in position and depending curved spring fingers extending down from the sides of the chute, as and for the purpose specified. 10th. The combination with the disc and stationary jaw and three adjacent gripping levers having the ends of the jaw formed on the ends thereof, of three levers suitably pivoted and provided each with a separate spring to hold them independently against the respective lever, and means for relieving the three levers simultaneously, as and for the purpose specified. 11th. In combination with the disc, the stationary jaws secured to the disc having open sides, the bracket supporting the chute, the curved gripping fingers connecting together by a spiral tension spring, and means for forcing the levers together against the tension of such spring, as and for the purpose specified. 12th. In combination, the disc, the stationary jaws secured to the disc having open sides, the co-acting gripping levers provided with open sides, a chute, the bracket supporting the chute, the curved gripping fingers connected together by a spiral tension spring, a longitudinal adjustable rod extending through the bracket, an outward extension lever to which one of the gripping fingers is connected, and means between the lever and a longitudinal adjustable rod for throwing the gripping finger away from its fellow, as and for the purpose specified. 13th. In combination, the disc, the stationary jaws secured to the disc having open sides, the co-acting gripping levers provided with open sides, a chute, the bracket supporting the chute, the curved gripping fingers connected together by a spiral tension spring, a longitudinal adjustable rod extending through the bracket, an outward extension lever to which one of the gripping fingers is connected, an enlarged opening in the end of the lever through which the longitudinally adjustable rod extends, a pivot to the outside of such opening and a right angular extension provided with a friction roller designed to have a rolling contact against a block extending through the rod and collapsible when moved in its recess in one direction and non-collapsible when moved in the other direction through contact with the roller, as and for the purpose specified. 14th. The combination with the gripping placing fingers and the levers to which they are connected, of a right angular extension to one lever, a longitudinally adjustable rod and the block fitting in a recess 10 in such rod, the slots 14, pins 15, pin 12 and spring 13, all arranged as and for the purpose specified. 15th. The combination with the gripping fingers and levers to which they are connected held so as to swing together, and a spiral spring connecting them to a suitable portion of the frame and having a normal tendency to pull downwards upon them, of means whereby the levers with their fingers are raised against the tension of such spring, as and for the purpose specified. 16th. The combination with the gripping fingers and levers to which they are connected held so as to swing together, and a spiral spring connecting them to a suitable portion of the frame and having a normal tendency to pull downwards upon them, of a roller journalled in suitable bearings attached to one of the levers, and a longitudinally reciprocating rod and a block on such rod designed to co-act with such roller, as and for the purpose specified. 17th. The combination with the gripping fingers and levers to which they are connected held so as to swing together, and means for normally exerting a downward pressure upon such levers, as and for the purpose specified. 18th. The combination with the gripping fingers and levers to which they are connected held so as to swing together, and means for normally exerting a downward pressure upon such levers, and limiting means for controlling the extent of the downward throw of the gripping fingers and levers, as and for the purpose specified. 19th. In combination, the gripping fingers, levers attached to or forming part of the same, the spiral spring connected to the levers and to portion of the frame to normally exert a downward pressure upon such lever, a pivotal connection between the levers at their outer end, longitudinal rods extending through and supported upon suitable brackets, openings in the bracket and levers for the passage of the rods and means between the rods and levers whereby the levers are separated, closed together and carried upwardly by the longitudinal adjustment of the rods, as and for the purpose specified. 20th. In combination, the gripping fingers, levers attached to or forming parts of the same, the spiral spring connected to the levers and to portion of the frame to normally exert a downward pressure upon such levers, a pivotal connection between the levers at their outer end, longitudinal rods extending through and supported upon suitable brackets, openings in the bracket and levers for the passage of the rods and means between the rods and levers whereby the levers are separated, closed together and carried upwardly, a binding connection for the rod, the cage, cams and link connecting the ends of the rods to the cage, as and for the purpose specified. 21st. In combination with the gripping jaw and gripping

levers, the gripping placing fingers designed to grasp the face of the blank, a worm gear and worm and means driven from such gearing to carry the fingers down into the open gripping jaws, as and for the purpose specified. 22nd. In combination, the revolving tools, the gripping jaw and gripping levers, the worm gear, means for opening the gripping levers operated from the worm gear, and means for transferring the blank from the chute or temporary receptacle to between the gripping jaw and gripping lever, as and for the purpose specified. 23rd. In combination, the cutter spindles, the cutting tools, the gripping jaws and means below the gripping jaws for supporting the prepared blank preparatory to its being gripped by the jaws, as and for the purpose specified. 24th. In combination with the disc, the stationary jaws, secured thereto and set at equal distances circumferentially, the movable gripping levers and a finger designed to pass through the open jaws as they rise to their position to grip the blank, as and for the purpose specified. 25th. In combination, the disc, the stationary jaw secured thereto, the movable gripping levers having an inward pressure exerted upon them by suitable springs and the placing fingers designed to carry the blank into position between the jaws and gripping levers, as and for the purpose specified. 26th. In combination, the disc, the stationary jaw secured thereto, the movable gripping levers having an inward pressure exerted upon them by suitable springs, the pin extending through the disc with its head abutting the gripping fingers, the spring P<sup>1</sup> designed to be operated so as to release the pin before the revolving plate begins to move, and the placing fingers designed to carry the blank into position between the jaws and gripping levers, as and for the purpose specified.

**No. 54,738. Cask and Barrel-making Machine.**

(Machine à faire les barils. etc.)

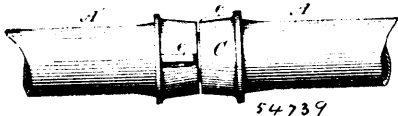


Johann Anthon, Fleusburg, Schleswig-Holstein, (Germany), 25th January, 1897; 6 years. (Filed 7th April, 1896.)

*Claim.*—1st. The improvements in the method of manufacturing wooden casks, barrels and other vessels of a like nature, and in machinery for effecting the same, substantially as and for the purposes described. 2nd. In the manufacture of wooden casks, barrels and other vessels of a like nature, forcing the same into the required shape in suitable moulds by means of hydraulic or other suitable power presses, and subjecting the wood to the action of heated water, heated air, steam or other vapour, either previously to or during the application of the aforesaid pressure, substantially as hereinbefore described. 3rd. In the manufacture of wooden casks, barrels and other vessels of a like nature, the application and use of presses worked by hydraulic or other suitable power, constructed, arranged and operating substantially as hereinbefore described. 4th. In the manufacture of wooden casks, barrels and other vessels of a like nature, the application and use of presses worked by hydraulic or other suitable power, constructed, arranged and operating substantially as hereinbefore described. 5th. In the manufacture of wooden casks, barrels and other vessels of a like nature, the application and use of moulds *p, p*, formed in sections and capable of being separated and pressed together, substantially as and for the purposes hereinbefore described. 6th. In the manufacture of wooden casks, barrels and other vessels of a like nature, the application and use of cores *k*, constructed, arranged and operating substantially as hereinbefore described.

**No. 54,739. Hose or Tubing Connector.**

(Joi-t de boyaux ou tubes.)



Joseph Best Green, Janesville, Wisconsin, U.S.A., 25th January, 1897; 6 years. (Filed 22nd July, 1896.)

*Claim.*—1st. A hose or tubing coupler, consisting of a cylindrical piece arranged to fit within an end of each of two pieces of hose or

tubing, and a thimble arranged to screw upon said hose or tubing to bind said cylindrical piece and the tubing together, substantially as set forth. 2nd. In a hose or tubing coupler, a cylindrical connecting piece arranged to be inserted part way within a hose or tubing, means upon said connecting piece to engage with said hose or tubing, and means for binding said parts together, substantially as set forth. 3rd. A coupling for hose or flexible tubing comprising a cylindrical connecting piece arranged to fit part way within said hose or tubing, said connecting piece having one or more annular tapering shoulders formed thereon, and a collar or thimble arranged to fit over said hose or tubing, and to embed and bind said hose or tubing in the interstices formed behind the shoulders on said connecting piece, substantially as set forth. 4th. In a coupling for hose or flexible tubing a cylindrical connecting piece arranged to fit part way within said hose or tubing and having means of engagement therewith, together with an interiorly threaded collar or thimble shaped substantially as the frustum of a cone, and being outwardly flared at its major diameter, substantially as and for the purposes set forth.

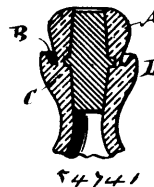
**No. 54,740. Medicinal Compound.**

(Composition médicale.)

Dr. Antonia Muller, Charlottenburg, near Berlin, and Dr. Arthur Muller, Frankfurt-on-Oder, both in Prussia, 25th January, 1897; 6 years. (Filed 4th July, 1896.)

*Claim.*—1st. The herein described laxative caramel or bon-bon, consisting of camomile flowers, marsh-mallow root, flavouring material, as vanilla, sugar, tartar, Iolape and ginger mixed, substantially as described. 2nd. The process of manufacturing the herein described laxative caramel or bon-bon, consisting of a decoction of camomile flowers, marsh-mallow root, flavouring extract and water boiled together with sugar, and before its conversion into caramel mixed with tartar, Iolape and ginger, and continuing the boiling of the entire mass until it is converted into caramel, substantially as described.

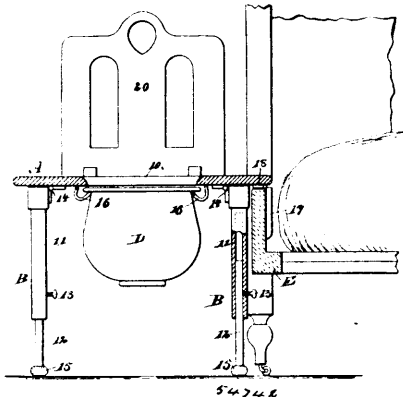
**No. 54,741. Bottle. (Bouteille.)**



Thomas Manly Dillingham, New York, State of New York, U.S.A., 25th January, 1897; 6 years. (Filed 10th June, 1896.)

*Claim.*—A bottle-neck provided with a seat for the cork choked or contracted sharply toward the mouth, a cork fitting the same, and a breakable line, near the greatest diameter of the cork, and at such a point as to leave approximately half the cork within the removable part, and the rest within the neck proper, substantially as described.

**No. 54,742. Commode. (Commode.)**



Cora Genevieve Mann, Brooklyn, New York, U.S.A., 25th January, 1897; 6 years. (Filed 28th May, 1896.)

*Claim.*—1st. In a commode, the combination, with a seat, of telescopic supports connected with the seat, a clamp or hanger attached to the seat, arranged for the support of a vessel, and a locking device connected with the said clamp or hanger, as and for the purpose specified. 2nd. In a commode, a seat, telescopic supports having a hinged connection with the seat, and a clamp or hanger consisting of a series of connected substantially horizontally located hooks placed around the opening in the seat, and a locking device forming a portion of the said clamp or hanger, as and for the purpose specified. 3rd. In a commode, the combination, with a seat and its opening, the said seat being provided with a support for a vessel

beneath the opening therein, of telescopic legs having hinged connection with the seat, a locking device for the said legs, and a back adjustably upon the aforesaid seat, as and for the purpose specified. 4th. In a commode, the combination, with a seat, of legs comprising a tubular member having a hinged connection with the seat, rod members having sliding action in the tubular members, and a locking device whereby the rod members may be held in predetermined position in the tubular members of the legs, substantially as set forth. 5th. In a commode, the combination, with a seat, of telescopic legs connected with the seat, arms attached to the said seat and arranged for engagement with the side boards of a bed, and means for locking the members of the legs in predetermined position, substantially as set forth. 6th. In a commode, the combination, with a seat, of locking arms having hinged engagement with the seat and adapted for engagement with the side boards of a bed, telescopic legs having hinged connection with the said seat, locking devices for the said legs, and a back adjustably placed upon the said seat, as and for the purpose specified. 7th. In a commode, the combination, with the seat and the opening of the same, of a hanger or clamp constructed of a spring material such as wire, the said material being formed in a series of substantially horizontally located hooks, and a latch pivotally connected with one end of the said hanger or clamp and adapted for engagement with the other end of the same, as and for the purpose set forth.

**No. 54,743. Corset. (Corset.)**

Edward Kohnberger, Vienna, Austro-Hungary, 25th January, 1897; 6 years. (Filed 11th May, 1896.)

*Claim.*—1st. An improvement in the art of manufacturing material for stays or corsets, consisting of weaving elastic, as rubber threads, bands or strings, as warp in such part or parts of the material of a stay or corsets as are intended to be made extensible, substantially as set forth. 2nd. A new article of manufacture, consisting of stays or corsets made of material having elastic, as rubber threads, bands or strings, as warp woven in such parts of the stay or corset as are intended to be made extensible, substantially as set forth.

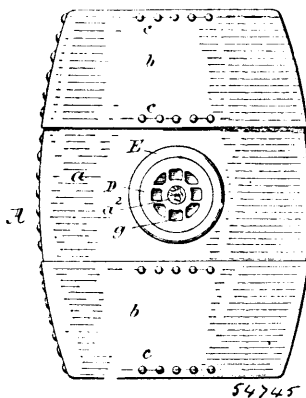
**No. 54,744. Meat Preserving Process.**

(*Procédé pour conserver la viande.*)

Carlos Lisandro Villar, Buenos-Ayres, 25th January, 1897; 6 years. (Filed 16th April, 1896.)

*Claim.*—A process which I term "Inter-Arterial" for the preservation of meat for food, which same attains that which the animal organization realizes through the circulation of the blood, that is to say, the carrying of an antiseptic liquid at a given pressure to all the tissues, which is arrived at after death has taken place by hemorrhage, by means of injections in a closed circuit, made through an artery or vein with an antiseptic agent in a more or less concentrated solution, preferably chloride of sodium, using for the purpose canulas, tubes, or other known mean, and obtaining the pressure required from whatever source, whether from a head of the liquid or from pumps or otherwise, as is herein described and specified, and for the purpose stated.

**No. 54,745. Metal Barrel. (Baril métallique.)**



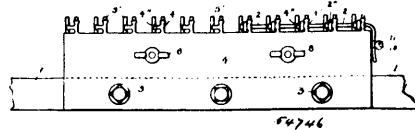
Bernhard Politzer, Vienna, Austria, 25th January, 1897; 6 years. (Filed 27th April, 1896.)

*Claim.*—1st. A barrel made of sheet metal and comprising a spherical middle section, conical end sections, riveted or welded together to form the barrel shell, the outer edge of one or both of the conical sections having an inwardly turned fold and a barrel head for one or both sections having an outwardly turned flange secured within the fold of the conical end sections, substantially as described. 2nd. An article of manufacture consisting of a steel outer shell, having lap end flanges and metal heads provided with flanges to fit within the lap flanges, and secured together, substantially as described. 3rd. The combination with a barrel made of sheet metal, sections secured together and a metal bung or tap hole comprising an inner and an outer section locked together, substantially

as described. 4th. A metal bung for barrels comprising an inner ring section and an outer sleeve section fitted within the ring section and adapted to receive an ordinary removable wooden bung, substantially as described. 5th. A barrel comprising a metal shell, a metal head secured thereto and having a bung opening consisting of an inwardly projecting flange formed thereon, and a metal bung holding sleeve fitted therein, substantially as described for the purpose specified. 6th. An article of manufacture comprising a barrel made of a sheet metal shell, sheet metal heads, hermetically welded or riveted thereto, metal capped and seal locking bung and tap holes therein, and the inner surface of said metal barrel covered with a paint compound, substantially as described.

**No. 54,746. Device for Forming Belt-Lacing.**

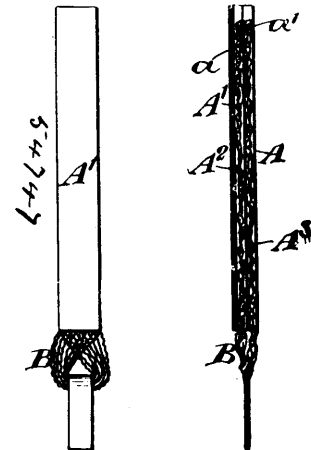
(*Appareil pour le lacement des courroies.*)



Charles K. Judson and Grace L. Lyman, both of Washington, Columbia, U.S.A., 25th January, 1897; 6 years. (Filed 27th April, 1896.)

*Claim.*—In a device for forming belt-lacing, pins or the like arranged and constructed to provide at suitable intervals wire holding spaces in combination with stationary arms 4<sup>11</sup> situated each opposite a wire holding space and in a plane transverse to the length of said space, substantially as set forth. 2nd. In a device for forming belt-lacing, pins or the like arranged and constructed to provide at suitable intervals wire holding spaces in combination with stationary arms 4<sup>11</sup> situated each opposite a wire holding space and in a plane transverse to the length of said space, and means for varying the distance between the arms and spaces, substantially as set forth.

**No. 54,747. Thread Package. (Fuseau pour le fil.)**



Benjamin Latham Armstrong, New London, Connecticut, and Edward Clarkson Seward, Montclair, New Jersey, both in the U.S.A., 25th January, 1897; 6 years. (Filed 20th March, 1896.)

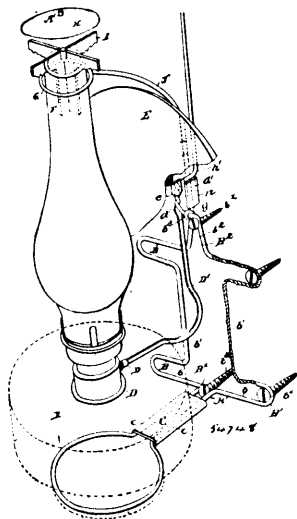
*Claim.*—1st. A thread package, comprising a folded holder or casing having, within its walls at or near one end, a bearing piece for separating the sides of the skein and over which the individual threads of the skein may be drawn for use, substantially as set forth. 2nd. A thread package, consisting of a folded casing for embracing the skein, the said casing being provided with a bearing piece, folded upon itself, the bight of the fold forming a bearing for the skein and a partition between the sides of the skein, the said folded bearing piece being permanently attached to one only of the opposite sides of the casing, substantially as set forth. 3rd. A thread package comprising a folded core having a reinforced end, and wings which fold in opposite directions over the folded core, substantially as set forth.

**No. 54,748. Lamp Bracket. (Console pour lampes.)**

John Bateman Timberlake, Jackson, Michigan, U.S.A., 25th January, 1897; 6 years. (Filed 25th January, 1896.)

*Claim.*—1st. The combination of a horizontal clasp adapted to gripe a lamp fount, a horizontal clasp adapted to gripe the upper part of a lamp fount, and a carrier uniting the two clasps and provided with a seat adapted to engage with a wall projection, substantially as set forth. 2nd. The combination of a horizontal expandible clasp adapted to gripe a lamp fount, a horizontal clasp adapted to gripe the upper part of a lamp fount, and a carrier uniting the two clasps and provided with a seat adapted to engage with a wall pro-

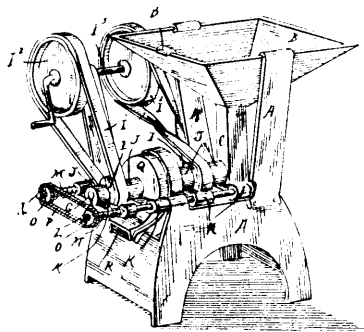
jection, substantially as set forth. 3rd. The combination of a horizontal clasp adapted to gripe the lower part of a lamp fount, a



horizontal clasp adapted to gripe the upper part of a lamp fount, a carrier uniting the two clasps and provided with a support for a reflector, substantially as set forth. 4th. The combination of a horizontal clasp adapted to gripe the lower part of a lamp fount, a horizontal clasp adapted to gripe the upper part of a lamp fount, a support for the upper end of a lamp chimney, and a carrier uniting the clasps and the chimney support, substantially as set forth. 5th. The combination of a horizontal clasp adapted to gripe the lower part of a lamp fount, a horizontal clasp adapted to gripe the upper part of a lamp fount, a support for the upper end of a lamp chimney, a carrier uniting the clasps and the chimney support, and a heating attachment at the top of the chimney, substantially as set forth. 6th. The combination of a horizontal clasp adapted to gripe a lamp fount, a support for the upper end of a lamp chimney, and a carrier uniting the clasp with the chimney support and provided with a seat adapted to engage with a wall projection and with lateral extensions, substantially as set forth. 7th. The combination of a horizontal clasp adapted to gripe a lamp fount, a support for the upper end of a lamp chimney, a reflector, and a carrier uniting the clasp and the chimney support and provided with means for supporting the reflector and with lateral extensions, substantially as set forth. 8th. The combination of a horizontal clasp adapted to gripe a lamp fount, a support for the upper end of a lamp chimney, a carrier uniting the clasp and the chimney support, and provided with lateral extensions, and a smoke guard, substantially as set forth. 9th. The combination of a horizontal clasp adapted to gripe a lamp fount, a support for the upper end of a lamp chimney, a carrier uniting the clasp and the chimney support, and a reflector mounted upon the carrier, substantially as set forth. 10th. The combination of a horizontal clasp which is provided with two laterally projecting arms formed of one piece of metal, a carrier having an upright portion and two laterally projecting arms, and a clamp uniting the arms of the clasp with the arms of the carrier, substantially as set forth. 11th. The combination of a horizontal clasp which is provided with two laterally projecting arms formed of one piece of metal, a carrier having an upright portion and two laterally projecting arms, a sleeve connecting one of the carrier arms with one of the arms of the clasp, a sleeve connecting the other carrier arm with the other arm of the clasp, and a clamp connecting the sleeves, substantially as set forth. 12th. The combination of a horizontal expansible clasp which is adapted to engage with the fount of a lamp, two rearwardly extending shank-arms, a carrier comprising a duplex handle having two legs at a distance from each other, a seat for a wall projection, and a clasp for holding the expansible clasp and the shank-arms in their normal position, substantially as set forth. 13th. A lamp bracket having in combination a ring-like clasp adapted to gripe the fount, U-shaped lateral extensions and upright legs forming a carrier, an inverted U-shaped seat above the legs to engage with a wall projection, and a clamp mounted on the legs to gripe the clasp to the lamp fount, substantially as set forth. 14th. A lamp bracket having in combination a ring-like clasp adapted to gripe the fount, V-shaped lateral extensions and upright legs forming a carrier, an inverted U-shaped seat above the legs to engage with a wall projection, and a reflector support above said seat, the legs, the seat and the reflector support being all formed of a continuous piece of wire, substantially as set forth. 15th. A lamp bracket having in combination a ring-like clasp adapted to gripe the fount, U-shaped lateral extensions and upright legs forming a carrier, a seat for a wall projection, and a support for a reflector formed of the upper ends of the legs, the said upper ends of the legs being welded together, whereby the above referred to parts are formed of an integral piece of metal, substantially as set forth. 16th. A lamp bracket having in combination a

ring-like clasp adapted to gripe the fount, an upright carrier adapted to be grasped by the hand and to suspend the lamp, and a support for a reflector, all formed of an integral and practically homogeneous piece of metal, substantially as set forth.

No. 54,749. Grinding Mill. (Moulin à blé.)

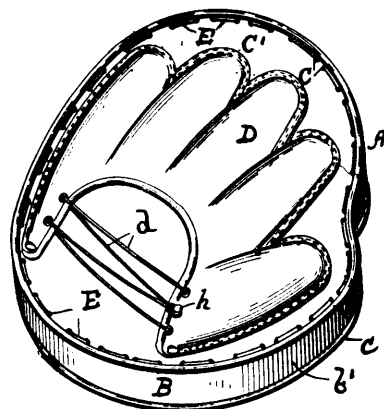


54749

David Leroy Sprague, Clear Lake, Iowa, U.S.A., 25th January, 1897; 6 years. (Filed 8th September, 1896.)

Claim.—1st. The combination with the fixed rods, threaded at their outer extremities, of the fixed and movable overlapping halves of the casing, the adjustable frame, the coiled springs, and the adjustable nuts o geared together, all substantially as described and for the purpose specified. 2nd. The combination of the frame, the burs, the case surrounding said burs and formed in overlapping sections, one of which is fixed and the other movable to and from the same, the removable frame, bearings for the shaft and means for adjusting said frame to regulate the distance between the burs, substantially as described. 3rd. The combination with the frame, of the burs, the case surrounding said burs and formed in overlapping sections, one of which is fixed and the other movable to and from the same, the removable frame, bearings for the shaft and means for adjusting said frame to regulate the distance between the burs, said frame having a portion serving as a stop to limit the yield of the burs, substantially as described.

No. 54,750. Ball Player's Glove. (Gants.)



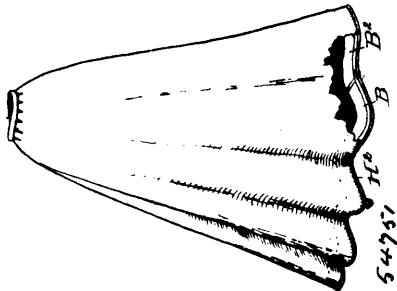
54750

Anna Burns Phillips, Brooklyn, Iowa, U.S.A., 26th January, 1897; 6 years. (Filed 22nd September, 1896.)

Claim.—1st. A ball player's glove comprising external front and back coverings, a removable padding between said coverings and detachable means for securing the same at their peripheral edges that consists of a tie which passes from one external covering to the other through the removable padding, substantially as described. 2nd. A ball player's glove comprising separable external front and back coverings, the latter being provided with a pocket for the hand of the player, a removable padding member that is shaped in conformity with the outline of the glove, and that is provided with an outer edge casing secured thereto around its entire edge with a series of integral eyes which extend through the padding at its edge, and fastening and retaining means for uniting at one edge the respective members, substantially as described. 3rd. A ball player's glove comprising separable external front and back coverings, a removable padding, shaped in conformity therewith, and which consists of sheets of padding material that are secured together at intervals around their edges and that includes a circular depression at a determinate point therein, and fastening and retaining means for uniting the respective members at their peripheral edges, substantially as described. 4th. As a new article of manufacture, an

improved inner padding for a ball player's glove that is composed of suitable padding material which is provided at its outer edge with an internal marginal stiffening strip and an outer edge casing of sheet material, means for binding said casing stiffening material and padding together through the peripheral edges thereof, substantially as described. 5th. A ball player's glove consisting of an external back covering, an inside or padded portion, an external front or palm covering, the three portions having thumb and palm parts in undivided continuous pieces, the back covering having a pocket for the hand, the inside portion having a circular depression formed therein, and a stiffened and bound edge penetrated by elongated eye-lets, and fastenings for joining the several portions together at their peripheral edges, substantially as described. 6th. A ball player's glove comprising external front and back coverings, a removable padding shaped in conformity with the outline of said coverings and that is provided at a determinate point on its palm face with a circular depression and that comprises in its construction a gusset incorporated within the padding material between the thumb and palm portions and that is made to extend to a point beneath the circular depression, and a reinforcing strip at the edge of the padding adjacent to the finger tips, both arranged and adapted to preserve the integrity of the circular depression, when subjected to the influence of flexure, said padding and coverings being combined and secured by detachable fastening means that pass through the same at their peripheral edges, substantially as described.

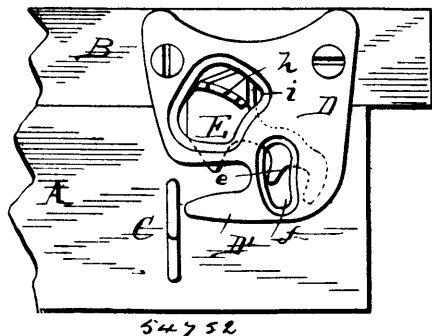
**No. 54,751. Dress Protector. (Protecteur de robes.)**



Walter W. Dennis and Will G. Hay, both of New York, State of New York, assignees of Louise Macy Leeds, Chicago, Illinois, all in the U.S.A., 26th January, 1897; 6 years. (Filed 10th August, 1896.)

*Claim.*—1st. A dress facing, comprising a series of bias cut strips of fabric, coated on one face with an adhesive material, said strips being cemented together with the bias cut ends abutting, and one longitudinal edge of the facing being hemmed with the coated surfaces in contact, as set forth. 2nd. A dress facing, comprising a series of bias cut strips of fabric, coated on one face with an adhesive material, said strips being cemented together with the bias cut ends abutting, and one longitudinal edge of the facing being hemmed with the coated surfaces in contact and thickened to protect the edge of the garment, as set forth. 3rd. A dress facing, comprising a series of bias cut strips of fabric, coated on one face with an adhesive material, said strips being cemented together with the bias cut ends abutting, and one longitudinal edge of the facing being hemmed with the coated surfaces in contact and having a cord between the thicknesses of fabric at the bottom of the hem, whereby a beaded edge is produced, as set forth.

**No. 54,752. Box Cover Fastener. (Attache pour couvercle de boîtes.)**

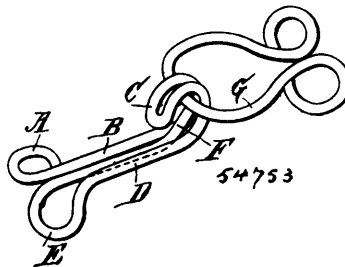


Deville Watson Keeler, Cattarangus, New York, U.S.A., 26th January, 1897; 6 years. (Filed 26th August, 1896.)

*Claim.*—1st. In a box cover fastener, the combination with a casing adapted to be secured to the edge of a box cover and provided at its lower end with a hook adapted to engage with a staple

or projection on the body of the box and on its inner side with an upright socket, and a swinging spring catch arranged in said casing, adapted to interlock with said staple or projection, and provided with a pivot lug seated in said socket, substantially as set forth. 2nd. In a box cover fastener, the combination with a casing adapted to be secured to the edge of a box cover and provided at its lower end with a hook adapted to engage with a staple or projection on the body of the box and on its inner side with an upright socket, and a swinging spring catch arranged in said casing and provided with a depending pivot lug seated in said socket, and a depending stop-lug arranged in rear of said pivot lug and bearing against the front wall of said casing, substantially as set forth.

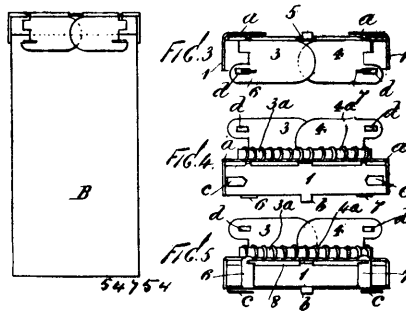
**No. 54,753. Hook. (Crochet.)**



Frank M. Converse, New York, State of New York, U.S.A., 26th January, 1897; 6 years. (Filed 17th August, 1896.)

*Claim.*—1st. A garment hook having a short downwardly bent recurved portion and provided with a spring tongue adapted to rest against the inserted eye and press it firmly against the recurved portion of the hook, substantially as and for the purpose set forth. 2nd. The herein described hook, having the side portions B and D, spaced apart and terminating in the short recurved and downwardly bent, looped end or bill C, and having a spring tongue F, located between said sides, allowing the rigid shank to guide the eye, and having its free end bent upwardly to extend obliquely across the hook opening in position to firmly press the inserted eye against the bill, said bend occurring at such a point in the tongue, with relation to the tip of the bill, as to allow said tip to co-operate with the shank to guide the eye into the hook opening, substantially as set forth.

**No. 54,754. Binder. (Lien.)**



Frank Douglas Hutchins, Norwick, New York, U.S.A., 26th January, 1897; 6 years. (Filed 31st October, 1896.)

*Claim.*—1st. The combination in a temporary binder, of a body, a clamping plate hinged to and longitudinally movable with reference to the body, and a notched post with which the clamping plate engages, substantially as set forth. 2nd. The combination in a temporary binder, of a body, a clamping plate hinged to and longitudinally movable with reference to the body, a post on the body, and a spring for moving the clamping plate and holding it engaged with the post, substantially as set forth. 3rd. The combination in a temporary binder, of a body, having projections for attaching a binding, binding posts, clamping plates hinged to and longitudinally movable with reference to the body, and a spring acting between clamping plates to hold them apart and in engagement with the binding posts, substantially as set forth.

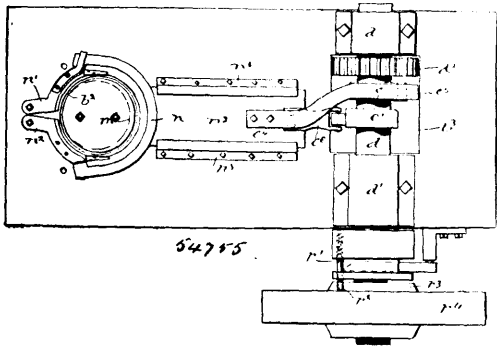
**No. 54,755. Stovepipe Elbow Making Machine.**

(Machine pour faire les coudres de tuyaux de poêles.)

The Thomas Davidson Manufacturing Co., assignee of James Russell, both of Montreal, Quebec, Canada, 26th January, 1897; 6 years. (Filed 23rd July, 1896.)

*Claim.*—1st. In a stovepipe elbow making machine, the combination with means for holding the pipe to be operated upon, of a main crimper and a pair of auxiliary crimpers adapted to impinge upon and crimp the pipe, and means for operating said main crimper. 2nd. In a stovepipe elbow making machine, the combination with means for holding the pipe to be operated upon, of a

main crimper and a pair of auxiliary crimpers, the latter operated by the main crimper and the main and auxiliary crimpers adapted



to simultaneously impinge upon and crimp the pipe, and means for operating said main crimper. 3rd. In a stovepipe elbow making machine, the combination with means for holding the pipe to be operated upon and means for crimping the pipe, a crimping and flattening head movable rectilinearly throughout its complete operation, and means for moving said crimping head, for the purpose set forth. 4th. In a stovepipe elbow making machine, the combination with means for holding the pipe to be operated upon and means for crimping the pipe, of a reciprocating head having a pipe supporting section and a crimp flattening section formed integrally with one another, and means for reciprocating said head. 5th. In a stovepipe elbow making machine, the combination with means for holding the pipe to be operated upon, of a main crimper and a pair of auxiliary crimpers, such main and auxiliary crimpers adapted to impinge upon and crimp the pipe, means for operating said main and auxiliary crimpers, a crimping and flattening head movable rectilinearly throughout its complete operation, and means for moving said crimping and flattening head, for the purpose set forth. 6th. In a stovepipe elbow making machine, the combination with means for holding the pipe to be operated upon, of a main crimper and a pair of auxiliary crimpers, such main and auxiliary crimpers adapted to simultaneously impinge upon and crimp the pipe, means for operating said main and auxiliary crimpers, crimping and flattening head movable rectilinearly throughout its complete operation, and means for moving said crimping head for the purposes set forth. 7th. In a stovepipe elbow making machine, the combination with means for holding the pipe to be operated upon, of a main crimper and a pair of auxiliary crimpers, the latter operated by the main crimper and the main and auxiliary crimpers adapted to impinge upon and crimp the pipe, means for operating said main crimper, a reciprocating solid head for bending back the crimped portion and means for reciprocating said head. 8th. In a stovepipe elbow making machine, the combination of horizontally operating crimpers, a vertically reciprocating solid head comprising pipe supporting and crimp flattening sections, means for operating said crimpers and means for reciprocating said head, for the purpose set forth. 9th. In a stove pipe elbow making machine, the combination with crimping mechanism, of a reciprocating mandrel having a head formed integrally with the end thereof, said head being adapted to receive the crimped portion of the pipe, means for operating said crimping mechanism and means for reciprocating said mandrel, for the purpose set forth. 10th. In a stovepipe elbow making machine, the combination of a horizontal table portion having an opening therein, a main crimper located adjacent to said opening and connected to one end of a slide, a pair of auxiliary crimpers pivoted to said table portion adjacent to said opening, means for operating said main crimper and an operative connection between said main and auxiliary crimpers, a reciprocating mandrel having a head formed integrally therewith, said head being adapted to receive said crimped portion of the pipe and means for operating said main crimper, means for reciprocating said mandrel, and means for feeding the pipe. 11th. In a stovepipe elbow making machine, the combination with means for holding the pipe to be operated upon, of a main crimper, a pair of auxiliary crimpers, link connections between said main and auxiliary crimpers whereby said main and auxiliary crimpers will be caused to simultaneously impinge upon the pipe, and means for operating said main crimper. 12th. In a stovepipe elbow making machine, the combination with means for holding the pipe to be operated upon, of a main crimper having its ends extended tangentially, a pair of pivoted auxiliary crimpers having their free ends bevelled and located in contact with the tangential ends of said main crimper, links carried rigidly upon the free ends of said auxiliary crimpers and adapted to take over said tangential portions of the main crimper, and means for reciprocating said main crimper. 13th. In a stovepipe elbow making machine, the combination with means for holding the pipe to be operated upon, of a main crimper having its ends extended tangentially, a pair of pivoted auxiliary crimpers having their free ends bevelled and located in contact with the tangential ends of said main crimper, levers fulcrumed in close proximity to the adjacent ends of said main and auxiliary crimpers and adapted to normally bear upon

same, links connecting the ends of said levers to said crimpers, and means for reciprocating said main crimper. 14th. In a stovepipe elbow making machine, the combination of a horizontal table portion having an opening therein, a main crimper located adjacent to said opening and connected to one end of a slide, a pair of auxiliary crimpers pivoted to said table portion adjacent to said opening, means for reciprocating said slide and an operative connection between said main and auxiliary crimpers, a vertically reciprocating mandrel having a solid head secured to the upper end thereof, said head being adapted to receive said crimped portion of the pipe, a pair of stationary vertical racks secured to the frame of the machine, a vertically movable carriage consisting of a rigid portion adapted to encircle said mandrel, and an open ring encircling said rigid portion, one of the ends of said ring being provided with a pin projection and the other having an eccentric fulcrumed thereto, said eccentric being slotted to take over said pin projection, a pair of pawls carried by said carriage and adapted to engage said racks, a pair of racks secured at one end to said carriage, and a lever fulcrumed to the frame of the machine and carrying a pair of pawls in one end, said pawls being adapted to engage said last mentioned racks, and said lever being operatively connected to said mandrel and means for operating said lever, for the purpose set forth. 15th. In combination with the driving shaft and pipe feeding carriage of a stovepipe elbow making machine, of clutch mechanism mounted tightly upon said driving shaft, and a driving pulley mounted loosely upon said shaft, a lever fulcrumed adjacent to said clutch mechanism and adapted when moved in one direction to effect the engagement of said clutch mechanism and driving pulley, and when moved in the opposite direction to effect the disengagement of said clutch mechanism and driving pulley, and means adapted to be engaged and operated by said carriage for moving said lever. 16th. In combination with the frame, driving shaft and pipe feeding carriage of a stovepipe elbow making machine of clutch mechanism mounted tightly upon said driving shaft, and a driving pulley mounted loosely upon said shaft, a lever fulcrumed adjacent to said clutch mechanism and adapted when moved in one direction to effect the engagement of said clutch mechanism and driving pulley, and when moved in the opposite direction to effect the disengagement of said clutch mechanism and driving pulley, a lever fulcrumed to the frame of the machine and adapted to be engaged by said carriage at the completion of an elbow, a lever fulcrumed to the frame of the machine and extending parallel to said last mentioned lever and said clutch operating lever, a link connection between said parallel lever and the clutch operating lever and the lever to be engaged by said carriage, for the purpose set forth. 17th. In combination with the frame, driving shaft and pipe feeding carriage of a stove pipe elbow making machine, of clutch mechanism mounted tightly upon said driving shaft, and a driving pulley mounted loosely upon said shaft, a lever fulcrumed adjacent to said clutch mechanism and adapted when moved in one direction to effect the engagement of said clutch mechanism and driving pulley, and when moved in the opposite direction to effect the disengagement of said clutch mechanism and driving pulley, a lever fulcrumed to the frame of the machine and adapted to be engaged by said carriage at the completion of an elbow, a lever fulcrumed to the frame of the machine and extending parallel to said last mentioned lever and said clutch operating lever, link connections between said parallel lever and the clutch operating lever and the lever to be engaged by said carriage, a U-shaped section having the ends of the arms fulcrumed to the floor and said section having a lateral projection adapted to project under the treadle and engage or be engaged by same, for the purpose set forth. 18th. In a stovepipe elbow making machine, a pipe feeding carriage consisting of a rigid portion adapted to receive the pipe about same, an open ring encircling said rigid portion, one end of said ring being provided with a pin projection and the other end having an eccentric fulcrumed thereto, said eccentric being slotted to take over said pin projection. 19th. In a stovepipe elbow making machine, the combination of a table portion having an opening therein, a main crimper located adjacent to said opening and connected at one end of a slide, a pair of auxiliary crimpers pivoted to said table portion adjacent to said opening, means for reciprocating said slide and an operative connection between said main and auxiliary crimpers, a reciprocating mandrel having a solid head secured to the upper end thereof, said head being adapted to receive said crimped portion of the pipe, a pair of stationary racks secured to the frame of the machine, a movable carriage consisting of a rigid portion adapted to encircle said mandrel and an open ring encircling said rigid portion, one of the ends of said ring being provided with a pin projection and the other having an eccentric fulcrumed thereto, said eccentric being slotted to take over said pin projection, a pair of pawls carried by said carriage and adapted to engage said racks, a pair of racks secured at one end to said carriage and a lever fulcrumed to the frame of the machine and carrying a pair of pawls in one end, said pawls being adapted to engage said last mentioned racks, and said lever being operatively connected to said mandrel, and means for operating said lever, for the purpose set forth. 20th. In a stovepipe elbow making machine, the combination of a table portion having an opening therein, a main crimper located adjacent to said opening and connected to one end of a slide, a pair of auxiliary crimpers pivoted to said table portion adjacent to said opening, a shaft extending at right angles to said slide, a pair of cams carried

by said shaft, an arm carried by said slide and adapted to be engaged by the adjacent side of the cam adjacent thereto, a second arm carried by said slide and extended and curved to extend over and be engaged by the other cam, and an operative connection between said main and auxiliary crimpers, a reciprocating mandrel having a solid head secured to the upper end thereof, said head being adapted to receive said crimped portion of the pipe, a pair of stationary racks secured to the frame of the machine, a movable carriage consisting of a rigid portion adapted to encircle said mandrel and an open ring encircling said rigid portion, one of the ends of said ring being provided with a pin projection and the other having an eccentric fulcrum thereto, said eccentric being slotted to take over said pin projection, a pair of pawls carried by said carriage and adapted to engage said racks, and said lever being operatively connected to said mandrel and means for operating said lever, for the purpose set forth. 21st. In a stovepipe elbow making machine, the combination of a horizontal table portion having an opening and connected to one end of a slide, a pair of auxiliary crimpers pivoted to said table portion adjacent to said opening, means for reciprocating said slide, a vertically reciprocating mandrel having a solid head secured to the upper end thereof, said head being adapted to receive said crimped portion of the pipe, a pair of stationary vertical racks secured to the frame of the machine, a vertically movable carriage consisting of a rigid portion adapted to encircle said mandrel and an open ring encircling said rigid portion, one of the ends of said ring being provided with a pin projection and the other having an eccentric fulcrum thereto, said eccentric being slotted to take over said pin projection, a pair of pawls carried by said carriage and adapted to engage said racks, a pair of racks secured at one end to said carriage and a forked lever fulcrumed to the frame of the machine, the forked end thereof straddling the mandrel, a spindle passing through perforations in the ends of said fork and through a perforation through the mandrel, a pair of pawls mounted upon said spindle near the ends thereof, said pawls being adapted to engage said last-mentioned racks, and said lever being operatively connected to said mandrel, and means for operating said lever, for the purpose set forth. 23rd. In a stovepipe elbow making machine, the combination of a horizontal table portion having an opening therein, a main crimper located adjacent to said opening and connected to one end of a slide, a pair of auxiliary crimpers pivoted to said table portion adjacent to said opening, means for reciprocating said slide, a vertically reciprocating mandrel having a solid head secured to the upper end thereof, said head being adapted to receive said crimped portion of the pipe, a pair of stationary vertical racks secured to the frame of the machine, a vertically movable carriage consisting of a rigid portion adapted to encircle said mandrel and an open ring encircling said rigid portion, one of the ends of said ring being provided with a pin projection and the other having an eccentric fulcrum thereto, said eccentric being slotted to take over said pin projection, a pair of pawls carried by said carriage and adapted to engage said racks, a pair of racks secured at one end to said carriage and a forked lever fulcrumed to the frame of the machine, the forked end thereof straddling the mandrel, a spindle passing through perforations in the ends of said fork and through a perforation through the mandrel, a pair of pawls mounted upon said spindle near the ends thereof, said pawls being adapted to engage said last-mentioned racks, a U-shaped section fulcrumed at its ends upon said spindle adjacent to said pawls and having lateral projections adapted to engage said pawls, and means for operating said lever, for the purpose set forth. 24th. In stovepipe elbow making mechanism, a reciprocating part, means for reciprocating said part, and means for adjusting the reciprocation thereof. 25th. In stovepipe elbow making mechanism, a reciprocating head, a lever for reciprocating said head, a crank-shaft for operating said lever and an extensible pitman for operatively connecting said lever and crank-shaft. 26th. In combination with a pipe feeding carriage and means for moving said carriage, means for engaging said carriage and retaining same in any position to which it may be adjusted, and means for automatically releasing said carriage. 27th. In combination with a pipe feeding carriage and means for moving said carriage, means for

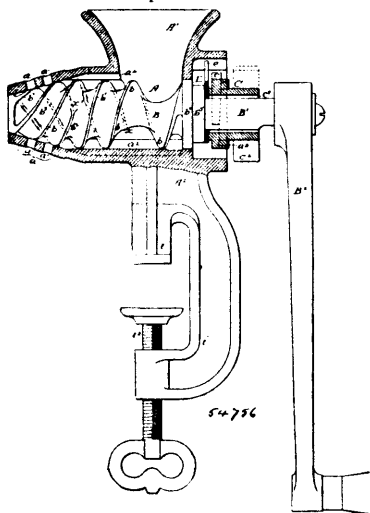
engaging said carriage and retaining same in any position to which it may be adjusted, means for automatically releasing said carriage and means for automatically causing the re-engagement of said retaining means and carriage. 28th. In combination with a pipe feeding carriage of a stovepipe elbow making machine and means for moving said carriage, means for retaining said carriage in its feed position consisting of one or more racks secured to the frame of the machine, and one or more spring-actuated pawls carried by said carriage and adapted to normally engage said racks, means for automatically disengaging said pawls and racks at the completion of an elbow. 29th. In combination with a pipe feeding carriage of a stovepipe elbow making machine and means for moving said carriage, means for retaining said carriage in its feed position consisting of one or more racks secured to the frame of the machine, and one or more spring-actuated pawls carried by said carriage and adapted to normally engage said racks, means for automatically disengaging said pawls and racks at the completion of an elbow, and means for automatically causing the re-engagement of the said pawls and racks. 30th. In combination with a vertically travelling pipe-feeding carriage, of a stovepipe elbow making machine and means for moving said carriage, one or more racks secured to the frame of the machine, one or more spring-actuated pawls carried by said carriage and adapted to normally engage said racks, said pawls having upwardly extending ends, a lever carried adjacent to each of said pawls and having one end bevelled and extended in close proximity to the upper end of the pawl, and said bevelled end being adapted to be engaged by the frame of the machine at the completion of an elbow, and thus cause said bevelled end to engage the upper end of the pawl and disengage said pawl from its rack, and means for causing the re-engagement of said pawl and rack, substantially as and for the purpose set forth. 31st. In combination with a vertically travelling pipe feeding carriage of a stovepipe elbow making machine, and means for moving said carriage, one or more racks secured to the frame of the machine, one or more spring-actuated pawls carried by said carriage and adapted to normally engage said racks, said pawls having upwardly extending ends, a lever carried adjacent to each of said pawls and having one end bevelled and extended in close proximity to the upper end of the pawl, and said bevelled end being adapted to be arranged by the frame of the machine at the completion of an elbow, and thus cause said bevelled end to engage the upper end of the pawl and disengage said pawl from its rack, a projecting section immovably relatively to said carriage and carried by the machine in line with the bevelled end of said lever and adapted, upon the carriage being moved to a position to receive a pipe length to be operated upon, to engage said lever and disengage same from the pawl, and allow the re-engagement of said pawl and its rack, substantially as and for the purpose set forth. 32nd. In combination with the frame, driving-shaft and pipe-feeding carriage of a stovepipe elbow making machine of clutch mechanism mounted tightly upon said driving shaft, and a driving pulley mounted loosely upon said shaft, a lever fulcrumed adjacent to said clutch mechanism and adapted when moved in one direction to effect the engagement of said clutch mechanism and driving pulley and when moved in the opposite direction to effect the disengagement of such clutch mechanism and driving pulley, a lever fulcrumed to the frame of the machine and adapted to be engaged by said carriage at the completion of an elbow, a lever fulcrumed to the frame of the machine and extending parallel to said last mentioned lever and said clutch operating lever, link connections between said parallel lever and the clutch operating lever and a yielding connection between said parallel lever and the lever to be engaged by said carriage, a U-shaped section having the ends of its arms fulcrumed to the floor, and said section having a lateral projection adapted to project under the treadle and engage or be engaged by same, for the purpose set forth. 33rd. In a stovepipe elbow making machine, the combination with the driving-shaft and pipe-feeding carriage thereof, of clutch mechanism adapted to operatively connect and disconnect said driving-shaft and the elbow-making mechanism, and means actuated by the carriage for causing the disengagement of said clutch mechanism and elbow-making mechanism at the completion of an elbow. 34th. In a stovepipe elbow making machine, the combination with the driving-shaft and pipe-feeding carriage thereof, of clutch mechanism adapted to operatively connect and disconnect said driving-shaft and the elbow-making mechanism, and means actuated by the carriage for causing the engagement and disengagement of said clutch mechanism and elbow-making mechanism at the commencement and completion of an elbow respectively, for the purpose set forth.

#### No. 54,756. Meat Chopper. (*Hachoir pour viande.*)

The Enterprise Manufacturing Company of Pennsylvania, assignees of John Wilson Brown, jr., Philadelphia, Pennsylvania, U.S. A., 26th January, 1897; 6 years. (Filed 14th July, 1896.)

*Claim.*—1st. The combination in a meat chopper of the casing made in one piece and having a hopper, a perforated and tapered forward end and an open rear end, combined feed screw and cutter adapted to be inserted into the casing through the opening in the rear end, and having a shank to which the handle is secured and a follower adapted to the open end of the casing and having an opening greater in diameter than the shank of the feed screw, whereby the combined feed screw and cutter has its bearing solely in the casing, the follower being free from contact with the shank, and serving

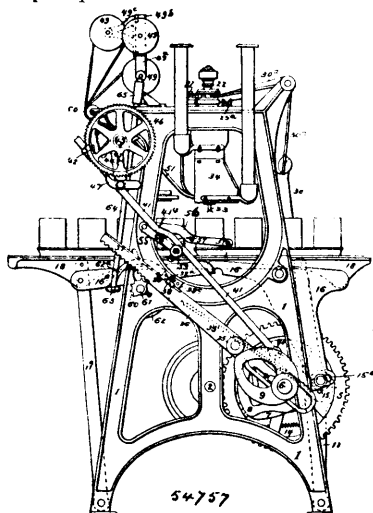
only as a means of forcing the cutting portion of the feed screw against the perforated and tapered front end of the casing, substan-



tially as described. 2nd. The combination in a meat chopper of the casing made in one piece and having an open rear end, a hopper, a straight body with straight longitudinal ribs therein, and a perforated and tapered front end, said ribs terminating at the perforated end portion, with a combined feed screw and cutter, having its bearing within the casing, and a follower adapted to the open rear end of the casing and acting to force the cutting portion of the feed screw against the perforated portion of the casing, substantially as described. 3rd. The combination in a meat cutter, of the casing having a straight barrel and a perforated and tapered end portion, a combined feed screw and cutter having its bearing solely within the casing, the threads of said screw being arranged substantially as shown, one thread extending throughout the length of the screw, another thread extending from the hopper forward, and the two remaining threads commencing at the point where the case tapers and extending to the end, substantially as described. 4th. The combination of the casing having a tapered and perforated end, a hopper, a combined feed screw and cutter having its threads increased in number as they near the perforated and tapered end of the cutter, an opening at the rear of the cutter through which the screw passes, lugs at each side of said opening and a follower having lugs adapted to pass back of the lugs on the casing, said follower being free from the shaft, substantially as described. 5th. A meat cutter having the casing and screw, of the design shown and described, namely the body A, the hopper A<sup>1</sup>, the tapered and perforated portion a, the clamp portion A<sup>2</sup>, the threads of the screw increasing in number as they extend from the hopper to the discharge end of the casing, substantially as described.

**No. 54,757. Can Capping Machine.**

(Machine pour poser les couvercles des boites métalliques.)



George Washington Bush, Washington, Delaware, assignee of Charles Mires Kruse, Bridgetown, New Jersey, both in the U.S.A., 26th January, 1897; 6 years. (Filed 2nd July, 1896.)

*Claim.*—1st. Can feeding mechanism for can capping machines, comprising tray lifting bars and tray feeding bars operating altern-

ately, engaging levers carrying said lifting bars, swinging frames for the feeding bars, and cam- for actuating said levers and frames, the lifter actuating levers having adjustable rollers on which their cams act, substantially as specified. 2nd. In can tray feeding devices for can capping machines, the combination of tray lifting bars and tray feeding bars operating alternately, said tray feeding bars having slotted webs and adjustable plates having lugs or pins for centreing and retaining the trays on the feed bars, substantially as specified. 3rd. In can tray feeding mechanism for can capping machines, the combination of the swinging frames having laterally projecting pins, tray feeding bars, and collars engaging with said bars, and laterally adjustable on the pins, substantially as specified. 4th. In can tray feeding mechanism for can capping machines, the combination of the swinging frames having vertical slots, pins adjustable in said slots and projecting laterally from the frames, and feed bars hung to said pins, substantially as specified. 5th. In can tray feeding devices for can capping machines, the combination of the tray lifters and the tray feeders operating alternately, with engaging levers carrying the lifting bars, a pair of swinging frames carrying the feeding bars, cams for operating said levers and frames, and an adjustable roller on one of the frames on which its cam acts, substantially as specified. 6th. In can tray feeding devices for can capping machines, the combination of the tray lifters, engaging levers carrying the same, the tray feeding bars, the swinging frames carrying the same, cams for actuating said frames and levers, an adjustable stop screw for limiting the movement of one of the frames in one direction, and an adjustable roller on said frame for the action of the cam, substantially as specified. 7th. The combination of the weighted can-cap holder, lifter levers for raising the same, a lever engaging with one of said lifters, a cam for actuating said lever, and an adjustable roller on the lever for engaging with said cam, substantially as specified. 8th. The combination in solder feeding devices for can capping machines, of a feed shaft having a ratchet-wheel, a loose arm having a pawl for engaging with said ratchet-wheel, a reciprocating rod having an inclined portion, projections on the rod and arm for engaging one with the other, and a rod-supporting device having a portion projecting into the path of the can tray whereby said rod is lifted into or dropped out of operative position, depending upon the presence or absence of the cans in position to be acted upon, substantially as specified. 9th. The combination of the solder feed shaft and its ratchet-wheel, the loose arm having a pawl for engaging with said ratchet-wheel, the reciprocating rod having an inclined portion, projections on the rod and arm for engaging each other, and a rock shaft having one arm serving as a support for the rod, and another arm with a projection extending into the path of the can tray, substantially as specified. 10th. The combination of the acid feeding device, the acid vessel, and operating mechanism for said device, comprising a rod guided at its upper end in a swinging bar, a vibrating arm and means whereby the said rod is adjustably connected to the arm, substantially as specified. 11th. The combination of the solder feed shaft and its feed wheels, the presser wheels, arms carrying the same, a suspended rod, and springs connecting the outer ends of said arms to said rod, substantially as specified. 12th. The combination of the solder feed shaft and its feed wheels, the presser wheels, arms carrying the same, adjustable bolts carried by said arms, and springs connected at the upper ends to said bolts and at the lower ends to a fixed rod, substantially as specified. 13th. The combination of the soldering irons, the spindles therefor, collars secured to said spindles and having tapered lower ends, a fixed supporting bar, and plates adjustable on said bar and having tapered seats for said collars, substantially as specified. 14th. The combination of the soldering iron spindle, having a slotted drive plate at the upper end, with a driving sprocket-wheel adapted to a bearing on the fixed frame, and having lugs engaging with the slots of the drive plate, substantially as specified. 15th. The combination of the fixed frame, the acid feeding device, the reciprocating drive rack therefor having a back flange, the bracket for guiding said flange, a stem on said bracket, and a lug secured to the fixed frame and constituting a bearing in which said stem is free to slide and turn, substantially as specified. 16th. The combination of the row of soldering irons, the series of solder spools, one for each iron of the row, and a solder spool frame, comprising the expanded lower portion with spool spindle at each end, the contracted upper portion also having a spool spindle at each end, and a central forwardly projecting bracket having laterally projecting spool spindles at its forward end, substantially as specified.

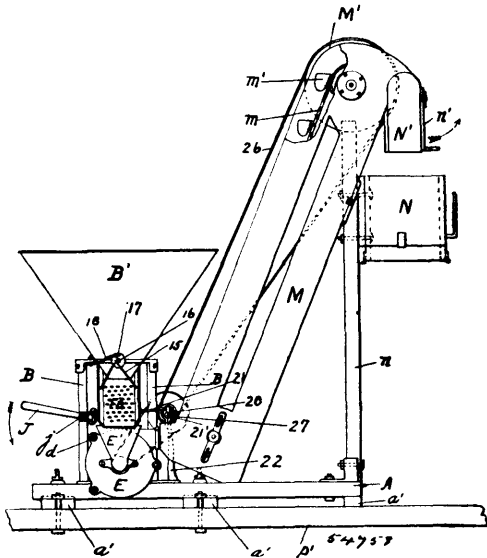
**No. 54,758. Grinding Mill. (Moulin à blé.)**

Samuel Vessot, Joliette, Quebec, Canada, 26th January, 1897; 6 years. (Filed 22nd September, 1896.)

*Claim.*—1st. In a grinding mill, the combination, with a feed hopper, of an inclined chute supported under the feed hopper, and a perforated tray longer than the chute and carried by it, substantially as set forth. 2nd. In a grinding mill, the combination, with a feed hopper, and a plate supporting it, of an inclined chute, straps supporting the upper end of the chute from the said plate, a shaft journaled in the said plate and provided with a ratchet wheel and a pivoted pawl, straps attached to the said shaft and supporting the middle part of the said chute, and means for shaking the chute, substantially as set forth. 3rd. In a grinding mill, the combination, with a casing formed of two parts, one part being stationary and the other slidable, of bolts and springs holding the two parts to



gether, and grinding devices arranged inside the said casing, substantially as set forth. 4th. In a grinding mill, the combination,



with a casing provided with an air hole, a central inlet, and an outlet on one side, of a grinding disc secured to the casing, a revoluble discharger provided with arms and a feed screw projecting into the said inlet, and a grinding disc secured to the said discharger, substantially as set forth. 5th. In a grinding mill, the combination, with a casing, of a driving shaft provided with projecting pins and a screw-threaded end, a discharger provided with a hub having slots engaging with the said pins, a feed screw engaging with the said end of the shaft and holding the discharger in position, and grinding discs secured to the casing and to the discharger respectively, substantially as set forth. 6th. In a grinding mill, the combination, of two opposed grinding discs, each having inclined grooves giving a shearing cut, and projections in the said grooves having their corners slightly cut down at the points where they meet the sides of the grooves, substantially as set forth. 7th. In a grinding mill, the combination, with a discharger provided with a grinding disc, of a driving shaft, a stationary grinding disc, a spring normally holding the grinding discs apart, and lever mechanism for moving the driving shaft endwise, thereby placing the said discs closer together, substantially as set forth. 8th. In a grinding mill, the combination, with a driving shaft, and a spring pressing it in one direction, of an oil bearing against the end of the said shaft, a pivoted lever bearing against the oiler, a rod pivoted to the said lever, and a pivoted hand lever provided with a wedge-shaped end and operatively connected with the said rod, whereby the said shaft may be moved longitudinally against the pressure of the said spring, substantially as set forth. 9th. In a grinding mill, the combination with a driving shaft provided with a circular plate on its end, of an oil chamber for the said plate to revolve in, an oiler provided with a plate preventing it from revolving in the said chamber, a wiper hook on its upper side, a central hole, and a radial hole connecting the central hole with the base of the hook, and means for pressing the said oiler against the end of the said shaft, substantially as set forth. 10th. In a grinding mill, the combination, with a base, of a casing secured to the base, a discharger and grinding mechanism arranged inside the casing, driving mechanism for revolving the discharger, a feed hopper, an elevator, a receiver supported below the elevator spout, means for driving the elevator, and uprights supporting the said feed hopper, and the said elevator and receiver, substantially as set forth, from the base. 11th. The combination, with an elevator provided with a spout having one side hinged to its main portion, of a receiver supported under the spout, said hinged side being free to move outwards when the material fills the space under the spout, substantially as set forth. 12th. The combination, with a receiver provided with two outlets, each provided with a slide, of a tilting partition arranged between the said outlets, and stops for supporting the said partition, substantially as set forth.

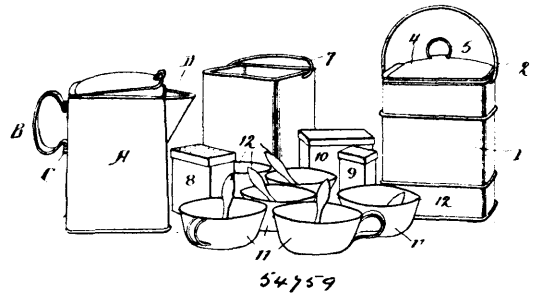
**No. 54,759. Close Packing Utensil.**

(*Ustensile de cuisine.*)

William Edwards Baxter, Frankfort, Kentucky, U.S.A., 26th January, 1897; 6 years. (Filed 19th September, 1896.)

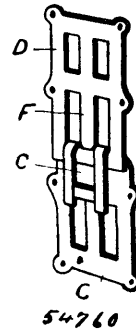
*Claim.*—1st. In a close packing kit, a kettle provided with a cover, a pail of the same general shape as said kettle but a smaller size so as to be placed within said kettle, a coffee-pot having a detachable spout and handle whereby its over-all size may be reduced sufficiently to pass within the pail, and bails detachably secured to said kettle, a pail so formed as to be utilized in securing the coffee pot within the pail, substantially as and for the purposes set forth. 2nd. In combination with a close packing kit consisting of a kettle

and pail adapted to pass therein, of a coffee-pot having a detachable handle and spout whereby its over-all size may be reduced sufficiently



to pass within said pail, and means for securing it therein, substantially as shown and described. 3rd. In combination with a close packing kit as described, a coffee-pot having strips C secured thereto in such manner as to form sockets, a handle B having projecting ends b, adapted to fit within said sockets, whereby said handle may be attached to the pot and detached therefrom, a strip E secured to the front of the coffee-pot so as to form a groove spout D of the flanges d, adapted to be forced into said pot, substantially as and for the purposes set forth.

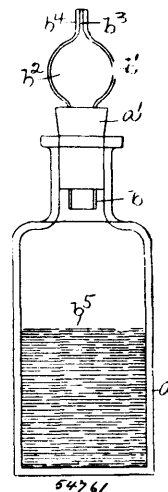
**No. 54,760. Hook and Eye.** (*Agrafe et porte agrafe.*)



Frederick J. Rappold, Erie, Pennsylvania, U.S.A., 26th January, 1897; 6 years. (Filed 4th August, 1896.)

*Claim.*—1st. The combination with a sheet metal hook, having side-bars with an opening between them, and a notch at the end of the longitudinal opening between said side-bars, said side-bars being bent back upon the body portion of the hook, of a sheet metal eye, formed with an integral spring tongue extending in the direction of the length thereof, substantially as specified. 2nd. The combination with a sheet metal hook, having a hooked portion, said bars with an opening between them and a notch at the end, of a sheet metal eye formed with an integral spring tongue, substantially as and for the purpose specified.

**No. 54,761. Bottle.** (*Bouteille.*)

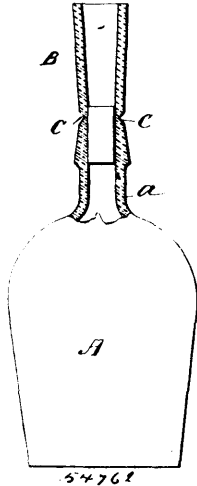


Burnham Roswell Benner, Lowell, Massachusetts, U.S.A., 26th January, 1897; 6 years. (Filed 18th August, 1896.)

*Claim.*—1st. The combination with a bottle provided with a cork or stopper having an opening extended through it, of a measuring device carried by the stopper or cork and consisting of a tube

inserted in said opening and terminating above the body portion of the bottle so as to permit substantially the entire contents of the bottle to be withdrawn through the said tube as described, a bulb attached to the said tube and in communication therewith, and a nipple attached to the bulb and provided with a capillary opening extended to the length of the said nipple, for the purpose specified. 2nd. The combination with a bottle provided with a cork or stopper having a hole or opening extended through it, of a liquid measuring device consisting of a glass tube inserted through said opening to attach the device to the cork or stopper and terminating within the neck of the bottle to permit substantially the entire contents of the bottle to be removed through the said tube, and a bulb integral with the said tube forming a liquid receiving chamber, and provided with an air inlet, substantially as described.

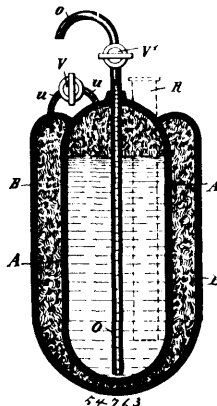
**No. 54,762. Bottle. (Bouteille.)**



Peter P. Wood, Chicago, Illinois, U.S.A., 26th January, 1897; 6 years. (Filed 24th July, 1896.)

*Claim.*—1st. A bottle provided with an extension composed of material which is capable of being rendered pliable, said extension being attached to the bottle by means of a frangible connection and arranged to be bent when in a pliable condition so as to prevent the removal of the cork after the same has been inserted, as set forth. 2nd. A bottle provided with an extension composed of material which is capable of being rendered pliable by heat, said extension being attached to the bottle by a frangible connection, and arranged to be bent, when in a pliable condition, to substantially cover the cork after the latter has been inserted in the mouth of the bottle, as set forth. 3rd. A bottle composed of material which is capable of being rendered pliable by heat, said bottle being provided with an extension, which is formed integral therewith, and is arranged to be bent over the cork when in a pliable condition, the portion of the bottle connecting with the extension consisting of a thin frangible band, as set forth. 4th. A glass bottle provided with an extension formed integral therewith and having its point of juncture with the bottle marked by a circumferential groove, said extension being arranged to be bent when in a pliable condition, over the cork, substantially as described.

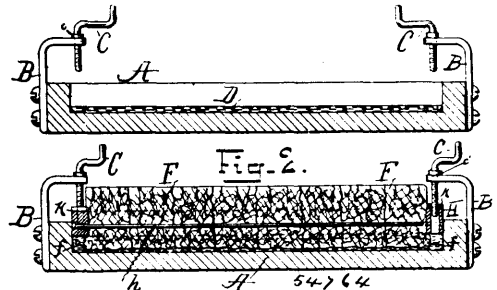
**No. 54,763. Vessel for Liquids. (Vaisseau pour liquides.)**



The Co. Deutsche Bierfass-Automat Gesellschaft, assignee of Johann Heinrich Dräger and Alexander Bernhard Dräger, all of the City of Lubeck, Germany, 26th January, 1897; 6 years. (Filed 11th June, 1896.)

*Claim.*—In a transportable vessel for the preservation and the sale on draught of beer and other liquids, the combination of an inner chamber A and an outer gas chamber B extending about the inner chamber, with an outer pipe u connecting the chambers, and the valve V in said connection for opening the pipe u, if required, substantially as described.

**No. 54,764. Absorbent Pads of Mops, Brushes and the like articles. (Coussinet absorbant pour guipons, brosses, etc.)**

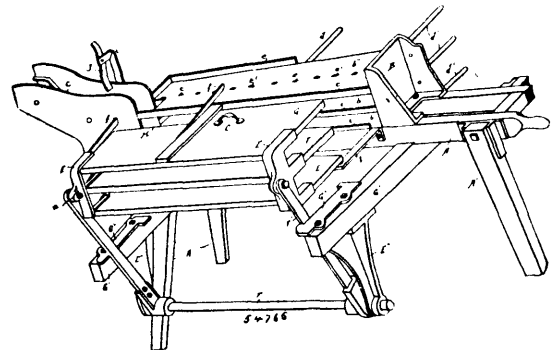


Patrick J. Grace, Brooklyn, New York, assignee of De Lacy Evans Ballam, Saratoga Springs, New York, both in the U.S.A., 26th January, 1897; 6 years. (Filed 31st July, 1896.)

*Claim.*—1st. As a new article of manufacture, a mat-like fabric consisting of separate pieces of sponge and a backing of viscous material hardened on the ends of the sponge fibres, substantially as described. 2nd. The process of manufacturing sponge fabrics consisting in reducing the backing material to a fluid or viscous condition, and placing the same in a mould, then assembling pieces of sponge into a mass, then working the backing material into the pores of the sponge, and finally hardening the backing material on the sponge, substantially as described. 3rd. As a new article of manufacture, a mat-like fabric consisting of sponge, backing material hardened in the pores of the sponge, and an open mesh fabric through the backing material, substantially as described. 4th. A mop or brush consisting of a back and an absorbent pad of sponge or other like substance cemented to the back.

**No. 54,765. Case Filling Machine.**

(Machine pour encaisser les boîtes métalliques.)

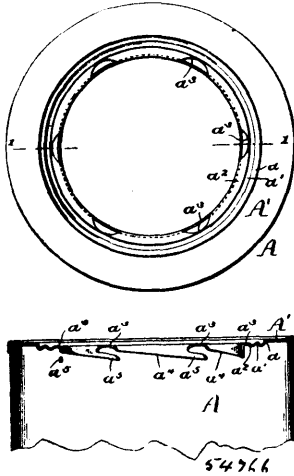


Evan William Cornell and The Cornell & Knapp Company, all of Adrian, Michigan, U.S.A., 26th January, 1897; 6 years. (Filed 6th May, 1896.)

*Claim.*—1st. In a device for the purpose set forth, the combination with the rack having a series of ways to receive the cans in vertical series, the movable agent having a series of leaves or members which engage the cans between said ways in the rack and discharge them therefrom into an adjacent case. 2nd. In a device for the purpose set forth, the combination of the rack having a series of run-ways therein, one above the other, for containing a number of rows of cans, the movable table having leaves arranged in vertical series adapted to enter said ways and slide the cans transversely in the rack, said leaves being of greater width at one end than at the other whereby a portion of the cans within the rack are moved a greater distance by the movement of said table than the remaining portion. 3rd. In a device for the purpose set forth, the combination of the rack having can run-ways therein, said ways being of such width as to permit of the lateral movement of the cans, and means for moving a portion of the cans laterally in the rack a greater distance than the remaining portion. 4th. In a device for the purpose set forth, the combination of the rack having a series of inclined can run-ways therein, the chute for discharging the cans into said ways respectively, the movable device having divided members which engage the cans in said ways and move them laterally, said members being of greater width at their lower than at their upper ends whereby the cans in the lower portion of the rack are moved

lengthwise the distance of two can-lengths while those in the upper end of the rack are moved the distance of one can-length by a single operation. 5th. In a device for the purpose set forth, the combination of the inclined rack having a series of can-ways therein of sufficient width to contain two cans lying end to end, the chute for discharging the cans into said ways respectively so as to form a continuous row along one edge of each way, the reciprocal table having divided leaves or members which engage the cans in said ways and move them laterally, the width of the lower end of said leaves or members being twice that of their upper ends, the receiving bars projecting from the rack opposite the wide ends of the leaves of said table, whereby, by an inward movement of the table the cans in the lower end of the rack are moved outward onto said bars while those in the upper end of the rack are moved across to the opposite side thereof, substantially as set forth. 6th. In a device for the purpose set forth, the combination of the rack having inclined ways therein arranged in vertical order, the chute attached to the upper end of said rack having independent divisions for directing the cans into said ways respectively, and the movable device for discharging a group of said cans laterally from the lower end of said rack. 7th. The combination of the rack having a series of can run-ways therein arranged in vertical order, the movable table having a series of approximate leaves arranged parallel and in vertical order, said table being movable horizontally so as to project said leaves into the ways of the rack, the outer edge of said table being pivoted to the upper end of the downwardly extending arms whose lower ends are attached to a rock shaft journaled in the frame, and means for limiting the movement of said table. 8th. The combination of the rack having a series of run-ways therein which receive the cans in vertical rows, the movable table having leaves adapted to be projected into said ways, and the flexible knives or dividing plates mounted on said leaves for dividing the cans in said ways as the table is actuated. 9th. The combination of the rack having a series of can run-ways therein, said ways being of sufficient width to accommodate two cans lying end to end, each of said ways being provided with a series of bevelled lugs arranged some distance apart and extending through the longitudinal centre thereof, and a series of receiving bars projecting from the rack in the plane of said ways. 10th. The combination of the rack having the can run-way therein, the receiving bars projecting from said rack adapted to contain a number of cans, and means for sliding the cans from the rack onto said bars.

**No. 54,766. Closure for Cans, Bottles, etc.**  
(*Fermeture de canistres, bouteilles, etc.*)



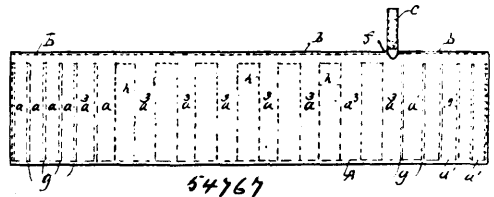
Daniel Elmer, assignee of Albert S. Lambert, both of Bridgetown, New Jersey, U.S.A., 27th January, 1897; 6 years. (Filed 24th September, 1896.)

*Claim.*—1st. A closure consisting of an integral piece of sheet metal having a horizontal flange, an adjacent vertical wall, a bottom and two or more lips projecting outward from the vertical wall and formed from the metal of the closure. 2nd. A closure consisting of an integral piece of sheet metal having a horizontal flange, an adjacent vertical wall, a bottom, a depending bead extending around the bottom, and two or more lips projecting outward from the vertical wall and formed from the metal of the depending bead closure. 3rd. A closure consisting of an integral piece of sheet metal having a horizontal flange, an adjacent vertical wall, a bottom and two or more lips projecting outward from the vertical wall and formed from the metal of the closure, in combination with a sheet metal bail plate C clamped in the walls of the depressed centre of the closure. 4th. A can-head having an opening therein, a depressed bead  $a^1$  formed in the head and extending around the opening, a flange  $a^2$  extending inward from said bead having notches  $a^3$  cut in it to or nearly to the bead  $a^1$ , and inclined downwardly-extending edges  $a^4$  between said notches in combination with a can-closure having a flange  $b$  adapted to lie on the depressed bead  $a^1$ , a depressed centre

adapted to enter the opening in the can-top and outward projections from said centre adapted to enter the notches  $a^3$  and engage the edges  $a^4$ . 5th. A can-head having an opening therein, a depressed bead  $a^1$  formed in the head extending around the opening, a flange  $a^2$  extending inward from said bead having five or more notches  $a^3$  cut in it to, or nearly to the bead  $a^1$ , and inclined downwardly-extending edges  $a^4$  between said notches in combination with a can-closure having a flange  $b$  adapted to lie on the depressed bead  $a^1$ , a depressed centre adapted to enter the opening in the can-top and outward projections from said centre corresponding in number with and adapted to enter the notches  $a^3$  and engage the edges  $a^4$ . 6th. A sheet metal closure B having a flange  $b$  adapted to lie on a can-top, a depressed centre  $b^1$  adapted to enter an opening therein and outwardly extending lugs  $b^2$  integral with the closure formed by pushing out the sheet metal at the lower edge of the centre  $b^1$  in combination with a sheet metal bail-plate C clamped in the walls of the depressed centre.

**No. 54,767. Sweat-band for Hats.**

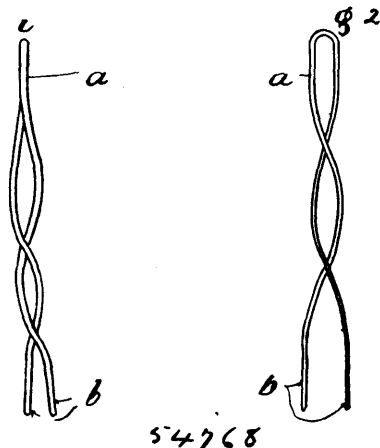
(*Buvar de chapeau, etc.*)



Joseph E. Frick and Charles H. Stoner, both of Fremont, Nebraska, U.S.A., 27th January, 1897; 6 years. (Filed 28th September, 1896.)

*Claim.*—1st. As an article of manufacture, a sweat-band for hats having a series of separated but communicating parallel air-chambers and means whereby to inflate said band, substantially as described and for the purpose set forth. 2nd. As an article of manufacture, a sweat-band for hats having a series of transversely disposed parallel air-chambers which communicate with each other, said chambers being of greater width and a greater distance apart at the side of the head and narrower and closer together at the ends, and means whereby to inflate all of said chambers from a single point, substantially as described and for the purpose set forth.

**No. 54,768. Hair Pin.** (*Epingle à cheveux.*)



Charles Wylde Hughes, London, England, 27th January, 1897; 6 years. (Filed 3rd October, 1896.)

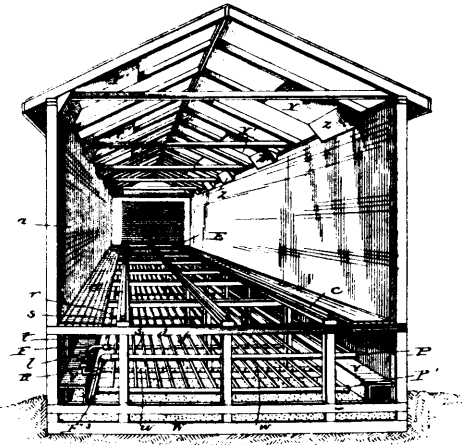
*Claim.*—A hair pin having the limbs or legs of same bent or twisted in a spiral or screw-shaped form, substantially as described and illustrated.

**No. 54,769. Drying Kiln.** (*Four à sécher.*)

Lafayette Moore, Cordele, Georgia, U.S.A., 27th January, 1897; 6 years. (Filed 24th September, 1896.)

*Claim.*—1st. A lumber-kiln comprising an inclosure having a normally closed upper portion, condensing-flues in the bottom portion of the inclosure, vertical side flues opening into the upper portion of the inclosure and connecting with the said condensing-flues, thereby providing means for conveying the moisture-laden air directly to the condensing-flues, and a heater for heating the air within the inclosure, substantially as described. 2nd. A lumber-kiln comprising a substantially air-tight inclosure having condensing-flues in its bottom portion communicating with the outer air and with the interior of the inclosure, vertical side flues connecting at their lower ends with the condensing-flues, top flues forming a continuation of the said side flues, and a heater placed in the inclosure

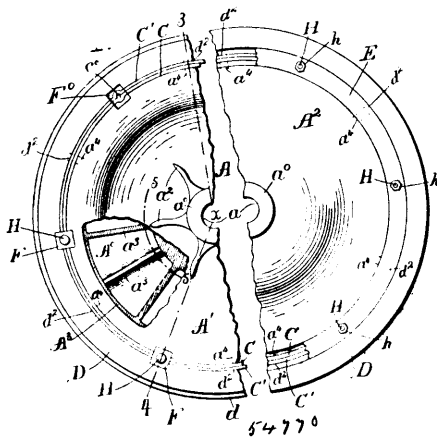
in a higher plane than the condensing-flues, substantially as set forth. 3rd. A lumber-kiln comprising a substantially air-tight



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inclosure, longitudinal condensing-flues, transverse flues connecting at their ends with the condensing-flues and having their upper portions perforated, flues connecting the condensing-flues with the upper portion of the inclosure, and a heater arranged above the said transverse flues, substantially as specified. 4th. A lumber-kiln comprising a substantially air-tight inclosure, longitudinal flues opening at their ends into the outer air, transverse flues connecting at their ends with the longitudinal flues and having a series of perforations in their upper portions, vertical side flues connecting at their lower ends with the longitudinal flues top flues forming a continuation of the side flues, and a heater placed above the transverse flues, substantially as described. 5th. In a drying-kiln having a normally closed upper portion, the combination of a series of perforated pipes placed beneath the heating pipes and adapted to convey the live steam to the interior of the inclosure, condensing-flues, and perforated air-flues located beneath the perforated pipes and in connection with the condensing-flues, substantially as described. 6th. In a drying-kiln normally closed excepting at the base, the combination with header-pipes placed one above the other, of an upper and a lower series of steam-heating pipes inclining in inverse order to drain to the lower header-pipe, and having their ends connected, respectively, to the upper and the lower header-pipes, a series of perforated pipes beneath the heating pipes and connected with a source of supply whereby the substance under treatment may be subjected to a bath, condensing-flues, and transverse air-flues beneath the perforated pipes and in communication with the condensing-flues, substantially as described.

**No. 54,770. Car Wheel. (Roue de chars.)**



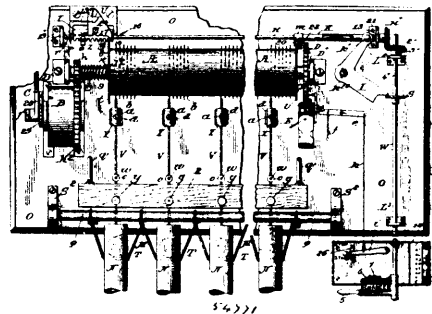
The Noiseless Wheel Company, assignee of Thomas Patrick Murphy, New Orleans, Louisiana, U.S.A., 27th January, 1897; 6 years. (Filed 8th July, 1896.)

*Claim.*—1st. In a car wheel, the combination with a central portion provided with an annular chamber therein, with interpenetrating ribs projecting from each side of said chamber, of non-resonant material placed in said chamber, and a hollow tire secured over the periphery of said central portion, and filled with non-resonant material, substantially as described. 2nd. In a car wheel, the combination with a central portion, of a hollow tire mounted thereon and provided with alternate stays set at approximately right angles and extending across the hollow portion of said tire, and non-resonant material filled into said tire, substantially as

herein described and shown in the drawings hereunto annexed. 3rd. A tire for car wheels, provided with an annular chamber therein, with alternate ribs or stays extending diagonally across said chamber, and non-resonant material filled into said chamber, substantially as herein described and shown in the drawings hereunto annexed. 4th. A tire for car wheels, provided with a flange bulged outwards in the line of the periphery of said wheel, and provided with an annular chamber within said tire, with alternate ribs or stays projecting diagonally across said chamber, substantially as herein described and shown in the drawings hereunto annexed. 5th. A tire for car wheels, provided with a flange bulged outwards in line with the periphery of said tire, and the said tire being provided with an annular chamber therein, with alternate ribs or stays extending diagonally across said chamber, and non-resonant material filled into said chamber, substantially as herein described and shown in the drawings hereunto annexed. 6th. In a car wheel, the combination with a hollow central portion provided with transverse grooves and filled with non-resonant material, and a tire also provided with transverse grooves, of two rings having loops adapted to project into said transverse grooves and to fit between the said tire and the said central portion, a butt-ring lapping over said rings and partly lapping over said central portion and said tire, with washer plates on the opposite side of said wheel, and bolts or rivets passing through said washer plates, said loops in said rings and said butt-ring, and firmly holding these parts together, substantially as herein described and shown in the drawings hereunto annexed. 7th. In a car wheel, the combination with a hollow central portion provided with transverse grooves and filled with non-resonant material, and a hollow tire also provided with transverse grooves and also filled with non-resonant material, of two rings having loops adapted to project into said transverse grooves and to fit between the said tire and the said central portion, and bolts or rivets passing through said loops, with plates beneath the heads thereof for holding said central portion, said tire and said rings together, substantially as herein described and shown in the drawings hereunto annexed. 8th. In a car wheel, the combination with a hollow central portion provided with transverse grooves and filled with non-resonant material, and a hollow tire also filled with non-resonant material, of two rings having loops adapted to project into said transverse grooves and to fit between the said tire and the said central portion, a butt-ring covering the edge of said rings and lapping partly over said central portion and said tire, washer plates on the opposite edge of said rings, and bolts or rivets passing through said washer plates and said loops and said butt-ring and firmly holding these parts together, substantially as herein described and shown in the drawings hereunto annexed. 9th. In a car wheel, the combination with a hollow central portion provided with transverse grooves and filled with non-resonant material, of a hollow tire also filled with non-resonant material and provided with transverse grooves, of two rings having loops adapted to project into said transverse grooves and to fit between the said tire and the said central portion, a butt-ring let into the face of said tire and said central portion and covering the edge of said rings, washer plates on the opposite side of said rings and also let into the said tire and the said central portion and into said rings, and bolts or rivets passing through said washer plates and said loops and said butt-ring, and firmly holding these parts together, substantially as herein described and shown in the drawings hereunto annexed. 10th. A composition for use in noiseless car wheels and like purposes, consisting of coal tar, asphalt and rosin oil, mixed together in such proportions as to constitute a spongy and non-resonant mass. 11th. A hollow noiseless car wheel filled with a fused mixture of coal tar, asphalt and rosin oil, substantially as described.

**No. 54,771. Chiming Mechanism.**

(Mécánisme de carillon.)



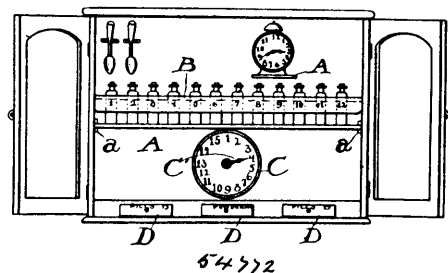
Thomas Joseph Flanagan, assignee of Allan Everett Olney, Holyoke, Massachusetts, U.S.A., 27th January, 1897; 6 years. (Filed 18th November, 1896.)

*Claim.*—1st. A chiming mechanism containing the following instrumentalities, viz.: a rotatable actuating shaft, a chime barrel thereon, provided with a plurality of groups of hammer operating pins, and having a plate and lip, a plurality of hammers, a movable controlling device having rack teeth and co-operating with said plate and lip, to effect the sliding of the barrel on its shaft inter-

mittingly, and a spring to return the said barrel into its operative position, to operate, as set forth. 2nd. A chiming mechanism containing the following instrumentalities, viz.: a rotatable actuating shaft, a chime barrel thereon, provided with a plurality of groups of hammer operating pins and having a plate and lip, a plurality of hammers, a movable controlling device co-operating with said plate and lip, to effect the sliding of the barrel on its shaft intermittently, to operate, as set forth. 3rd. A chiming mechanism containing the following instrumentalities, viz.: a rotatable actuating shaft, a chime barrel mounted thereon, and provided with a plurality of hammer operating pins, and having a head, a plurality of hammers, and a barrel sliding device to engage the edge of said head to slide the barrel on its shaft, substantially as described. 4th. A chiming mechanism containing the following instrumentalities, viz.: a rotatable actuating shaft, a chime barrel mounted thereon, and provided with a plurality of hammer operating pins, and having a head, a plurality of hammers, a barrel sliding device to engage the edge of said head to slide the barrel on its shaft, and a spring to move the said barrel in the opposite direction, substantially as described. 5th. A chiming mechanism containing the following instrumentalities, viz.: a rotatable actuating shaft, chiming barrel thereon provided with a plurality of hammer operating pins, and having at one end a plate, a plurality of hammers, and a pivoted controlling device co-operating with said plate to slide the chime barrel intermittently on its actuating shaft, and a spring to return said barrel, substantially as described. 6th. A chiming mechanism, including the following instrumentalities, viz.: a rotatable actuating shaft, a chime barrel thereon provided with a plurality of hammer operating pins, and having at one end a plate provided with a lip, a plurality of hammers, a movably mounted controlling device having a cam finger and co-operating with said plate, and lip to slide the chime barrel, the said lip by its contact with the said finger elevating the said controller, substantially as described. 7th. A chiming mechanism, including the following instrumentalities, viz.: a rotatable actuating shaft, a chime barrel thereon provided with a plurality of hammer operating pins, and having at one end a plate provided with a lip, a plurality of hammers, a movably mounted controlling device having a cam finger and co-operating with said plate, and lip to slide the chime barrel, the said lip by its contact with the said finger elevating the said controller, and a spring to move the barrel in the opposite direction, substantially as described. 8th. In a chiming mechanism, a chime barrel, having at one end a plate, a controlling device having teeth and spaces to be engaged by said plate, and a pin, combined with a latch having a finger and a shouldered slot co-operating with said pin, to operate, substantially as described. 9th. A chime barrel having a plurality of groups of hammer operating pins and provided at one end with a plate having its edge extended radially, a shaft on which said chime barrel is mounted to slide, a movably mounted controlling device having teeth and spaces to co-operate with said plate, combined with a shaft, means to rock it, and devices between said shaft and controlling device to move the latter and release the controlling device from the said plate, substantially as described. 10th. In chiming mechanism, the following instrumentalities, viz.: a pivoted barrel-controlling device having a series of teeth thereon, a chime barrel having one or more groups of hammer-operating pins thereon and having a plate fixed thereto and engaging by its periphery with the teeth of said controlling device, and means for rotating said barrel, and for swinging said controlling device toward and from the periphery of said plate, combined and operating substantially as set forth. 11th. In chiming mechanism, the following instrumentalities, viz.: a chime barrel having one or more groups of hammer-operating pins thereon, and having a plate whose periphery projects beyond the plane of the surface of the barrel and has a laterally extending cam-lip, a pivoted barrel-controlling device having a series of teeth thereon for engagement with the periphery of said plate, a cam-finger adjustably secured on said rack for engagement with said cam-lip, and means for rotating said barrel, and for swinging said controller towards and from said barrel, to operate substantially as set forth. 12th. In chiming mechanism, the following instrumentalities, viz.: a pivoted barrel controller having teeth and provided with a pin, a pivoted latch co-operating therewith and having a lip 10 and a shouldered slot in which said pin is made movable, and a spring to move said latch and cause the said shoulder to engage said pin, combined with the chime barrel having a plate whose periphery engages said teeth periodically, and also said lip 10, substantially as set forth. 13th. In chiming mechanism, a pivoted barrel controller having teeth and a pin, a pivoted latch having a lip, and a slot having a shoulder, a spring to move said latch to enable the shoulder to engage said pin, combined with a chime barrel having a plate whose periphery engages said teeth and periodically said lip, a shaft, and devices between it and the said controller to lift the latter, whereby at desired times the controller may be lifted and cause the pin thereon to engage the shoulder of the latch and hold the controller in its inoperative position, substantially as set forth. 14th. The barrel controller, the shaft having an arm thereon to engage said controller, and means for rocking said shaft whereby said controller may be lifted when desired, combined and operating substantially as described. 15th. The barrel controller, a shaft having an arm thereon to engage said controller, a vertical rod, gearing between said rod and shaft, and an operating handle for said rod whereby the latter may be rotated, substantially as set forth. 16th. In chiming apparatus, a chime barrel having one or more groups of hammer-operating pins thereon, and a plate

whose periphery projects beyond the plane of the surface thereof, and a head, a shaft for said barrel on which the same has a longitudinal movement, a spring for sliding said barrel in one direction, a pivoted barrel controller having a series of teeth thereon for engagement with the periphery of said plate, and a pin 24, a pivoted latch co-operating with said controller, said latch having a lip thereon for engagement with the side of said plate, and a spring for swinging said latch, combined with means for rotating said barrel and for lifting said rack and latch and for engaging said head to slide said shaft against the action of said spring, whereby the periphery of said plate is brought to different positions under the tooth-bearing border of said rack-member, substantially as set forth. 17th. In a chiming mechanism, the following instrumentalities, viz.: a chime barrel provided with pins and having a plate and a head, a barrel controller engaged by said plate, a rock-shaft co-operating with said controller to move the latter, a sleeve sliding on said rock-shaft and engaging the head of said barrel, a rocking and endwise-moving rod having a pinion engaging a pinion on said shaft, an elbow lever L engaging said sleeve, and a handle for operating said rod, substantially as described. 18th. The rocking and sliding rod W, a handle fixed to said rod, and a locking device to hold said handle, a flange, a rock-shaft, bevel gears between said shaft and rod, a sleeve on said shaft, combined with an elbow lever L engaging by one arm said sleeve and by its other arm said flange, substantially as set forth. 19th. In a chiming mechanism, the following instrumentalities, viz.: a rotatable chime barrel having a plurality of groups of hammer operating pins, a barrel controller adapted to be engaged by a plate connected with said barrel to move the latter longitudinally in one direction, a plurality of bells, a plurality of hammers operated by said pins, means to effect the automatic disengagement of said controller from the plate of said barrel, and a spring to return the barrel to its starting point, substantially as set forth. 20th. In a chiming mechanism, a hammer, and a shank to carry the hammer, a clip and a holder pivoted thereon and in which the hammer shank is adjustably secured, substantially as described. 21st. In a chiming mechanism, a hammer, a hammer-shank, a hammer-holder in which the said shank is adjustably mounted, a clip on which the hammer-holder is pivoted, a bell, and a spring connected at one end to said hammer-shank, and adjusting devices connected to the opposite end of said spring to regulate the blow of the hammer, substantially as described. 22nd. In a chiming mechanism, a hammer-holder in which the said shank is adjustably mounted, a clip on which the hammer-holder is pivoted, a bell, and a spring connected at one end to said hammer-shank, adjusting devices connected to the opposite end of said spring to regulate the blow of the hammer, and an adjustable damper against which the hammer-shank swings, substantially as described. 23rd. A chiming mechanism containing the following instrumentalities, viz.: a rotating shaft, a chime barrel, splined thereon, having a plate and lip; devices controlled by the hand of the operator to slide the barrel on the said shaft, in one direction, and a barrel controller having teeth and co-operating with the said plate and lip to automatically slide the barrel intermittently on the said shaft, substantially as described. 24th. A chiming mechanism containing the following instrumentalities, viz.: a rotating shaft, a chime barrel, splined thereon, a device to engage a head of the barrel, a lever connected therewith, and a slide rod having a flange, combined with a locking device to retain the said rod in any one of several positions in which it may be placed to thereby ensure the repetition of any tune during the rotation of the barrel, substantially as described. 25th. A chiming mechanism containing the following instrumentalities, viz.: a chime barrel, a barrel controller to automatically slide the barrel intermittently on its operating shaft, means to lift said controller, a spring to move the barrel in a direction opposite that in which it is moved by the controller, a device connected with and moved by the head of the barrel, a flange or plate changeable in its positions to arrest the said device connected with the head of the barrel in one or another position according to the number of tunes which it is desired to repeat from the whole number of tunes represented by the barrel, substantially as described.

**No. 54,772. Medicine Cabinet. (Cabinet de médecine.)**

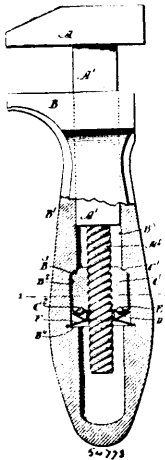


Narcissa Smith Springer, Cleveland, Ohio, U.S.A., 27th January, 1897; 6 years. (Filed 29th November, 1896.)

*Claim.*—1st. A medicine-cabinet comprising in its construction the following elements a bottle-rack consisting of a horizontal and

vertical portion, the horizontal portion provided with openings to receive the bottles, and the vertical portion adapted to have characters formed or printed thereon to designate the bottles or contents, and a lower sliding shelf to support the bottom of the bottles, substantially as and for the purpose shown and described. 2nd. In a medicine-cabinet, the combination with a bottle-rack and shelf, the said rack being provided with a horizontal portion provided with holes for receiving and retaining the bottles, and a vertical portion for receiving the necessary characters to designate the bottles or contents, of an indicator having characters corresponding with the characters on the rack, said indicator being provided with a movable pointer, substantially as and for the purpose shown and described.

**No. 54,773. Wrench. (Clé à écrou.)**

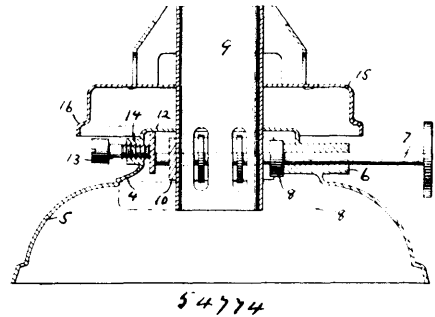


Milton Wenger, New Holland, Pennsylvania, U.S.A., 27th January, 1897; 6 years. (Filed 24th November, 1896.)

*Claim.*—1st. In a wrench, one jaw of which is provided with a portion having screw threads of long pitch and the other jaw of which is provided with a cavity adapted to engage with and hold without interfering with its rotation a threaded rotatable adjusting nut or screw, the combination of an adjusting nut or screw engaged in the cavity aforesaid and with the long pitch threads of the other jaw, a friction clutch arranged to engage the adjusting nut or screw with one end wall of the cavity in which it is placed when the jaws of the wrench are forced apart, and a yielding support placed between the other side of the nut or screw and the other end wall of the cavity, to permit the said nut or screw to move away from the clutch side of the cavity and to turn freely when the jaws are moved together. 2nd. In a wrench, one jaw of which is provided with a portion having screw threads of long pitch and the other jaw of which is provided with a cavity adapted to engage with and hold without interfering with its rotation a threaded rotatable adjusting nut or screw, the combination of an adjusting nut or screw engaged in the cavity aforesaid and with the long pitch threads of the other jaw, a clutch arranged to engage the adjusting nut or screw with one end wall of the cavity in which it is placed when the jaws of the wrench are forced apart, and a yielding ball-bearing support placed between the other side of the nut or screw and the other end wall of the cavity to permit the said nut or screw to move away from the clutch side of the cavity and to turn freely when the jaws are moved together. 3rd. In a wrench, one jaw of which is provided with a portion having two or more screw threads of long pitch and the other jaw of which is provided with a cavity adapted to engage with and hold without interfering with its rotation a threaded rotatable adjusting nut or screw, the combination of an adjusting nut or screw engaged in the cavity aforesaid and with the long pitch threads of the other jaw, a friction clutch arranged to engage the adjusting nut or screw with an end wall of the cavity in which it is placed when the jaws of the wrench are forced apart, and a yielding ball-bearing support placed between the other side of the nut or screw and the other end wall of the cavity to permit the said nut or screw to move away from the clutch side of the cavity and to turn freely when the jaws are moved together. 4th. In a wrench, the combination with the fixed jaw and a shank projecting therefrom, said shank having threads of long pitch, and a movable jaw having a shank or yoke adapted to embrace said first mentioned shank and having also a cavity to receive an adjusting nut or screw, of an adjusting nut or screw mounted in said cavity and having threads of long pitch to mesh with the threads on the shank of the fixed jaw, and a cone-shaped frictional clutch member formed on or secured to it, a conical clutch member formed on or secured to the cavity aforesaid to engage the clutch member aforesaid, and a spring for forcing said adjusting nut or screw forward and so as to engage the clutch members, all substantially as set forth. 5th. In a wrench, the combination with a fixed and a movable member, one of said members having a portion with threads of long pitch, of a hollow adjusting screw having threads of long pitch to mesh with said first mentioned threaded portion, said adjusting screw being adjusted in

one member of the wrench, and a spring located within said nut and adapted to force it into frictional contact with the member of the wrench in which it is supported, substantially as set forth. 6th. In a wrench, the combination with a fixed member and a movable member having a portion with threads of long pitch, of a hollow adjusting screw having threads of long pitch to mesh with said first mentioned threads and revolvably mounted in one member of the wrench, said adjusting screw being adapted to have a slight longitudinal movement and to have frictional contact with the member of the wrench in which it is mounted, an internal shoulder in the hollow of the adjusting screw, anti-friction balls bearing against said shoulder, a washer in the hollow of the adjusting screw bearing against said anti-friction balls, a fixed pin having a head at one end and passing loosely through the adjusting screw and washer for revolvably supporting the same, and a spring within said adjusting screw bearing at its respective ends against said washer and against the head of the pin on which the adjusting screw is mounted, substantially as set forth. 7th. In a wrench, the combination with a fixed jaw and a shank projecting therefrom, said shank having a rack formed of threads of long pitch on one edge, of a movable jaw, a yoke on said movable jaw embracing said shank, said yoke having a cavity formed in it for the adjusting screw and one wall of said cavity having a conical recess therein, a hollow externally threaded adjusting screw situated in said opening, a pin fixed in the yoke and passing through the adjusting screw for revolvably supporting the same, one end of said adjusting screw being made conical to enter said conical recess, an internal shoulder formed in the hollow adjusting screw, anti-friction balls bearing against said shoulder, a washer encircling the pin on which the adjusting screw is mounted and bearing against said anti-friction balls, a shoulder at the rear end of the pin aforesaid, and a spring located within the adjusting screw and bearing at its respective ends against said last mentioned shoulder and the washer within the screw, all substantially as and for the purposes set forth.

**No. 54,774. Lamp Burner. (Bec de lampe.)**

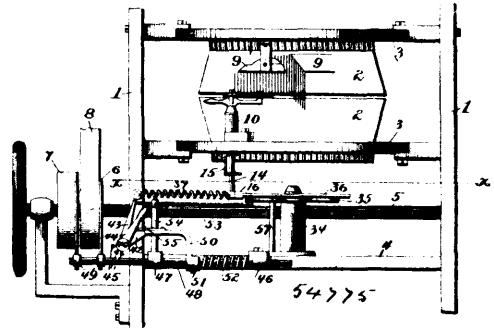


Edward Miller & Co., assignee of William Clifford Homan, all of Meriden, Connecticut, U.S.A., 27th January, 1897; 6 years. (Filed 27th November, 1896.)

*Claim.*—1st. A lamp burner having a shouldered wick raising shaft and devices for exerting an endwise pressure on said shaft and forcing the shoulder thereof against its bearing, substantially as described. 2nd. A lamp burner having a shouldered wick raising shaft in combination with the yielding lug bearing against the end of said shaft and the adjusting screw for bearing on said lug, substantially as described.

**No. 54,775. Stop Attachment for Knitting Machines.**

(*Mécanisme d'arrêt pour machines à tricoter.*)



Charles Cooper, assignee of Daniel Hurley, both of Bennington, Vermont, U.S.A., 27th January, 1897; 6 years. (Filed 27th November, 1896.)

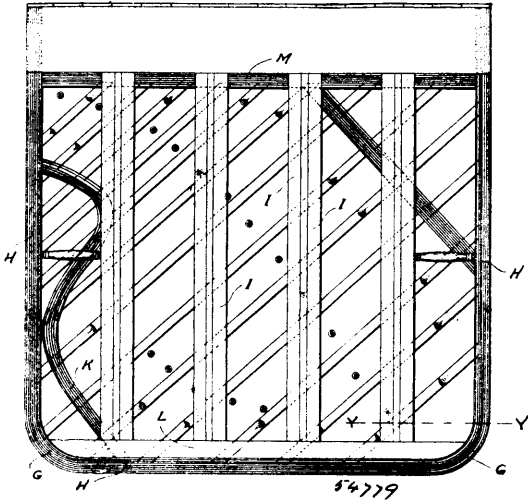
*Claim.* 1st. In a knitting machine, the combination with the belt, of a spring actuated sliding rod 48, a belt shipper on said rod engaging the belt, a shaft journalled in a suitable bearing on the frame of the machine, a tripping lever, a dog, and a hand lever secured on said shaft to turn therewith, an angle arm on the rod 48



able bracket within the cylinders adapted to be secured to the upper or lower cylinder for holding a rod for operating the take-up above or below the cylinders, as and for the purpose set forth.

**No. 54,779. Sounding Board Frame for Pianos.**

(*Cadre de table d'harmonie pour pianos.*)

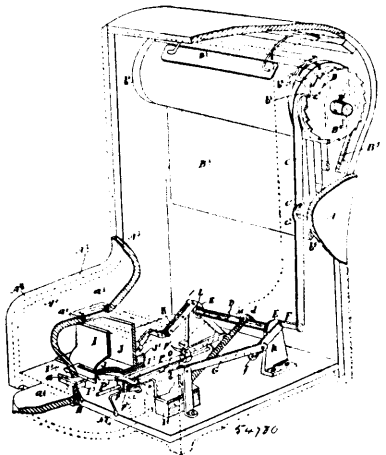


Antonio Pratte, Village of Huntingdon, Quebec, Canada, 27th January, 1897; 6 years. (Filed 28th November, 1896.)

*Claim.*—1st. In a sounding board frame for pianos, a frame having both its sides and bottom continuous and U-shaped and made out of thin strips or veneers glued together, substantially as described and for the purposes set forth. 2nd. In a sounding board frame for pianos, the securing of the sounding board to its frame by means of a rabbeted joint, substantially as described and for the purposes set forth.

**No. 54,780. Match Delivering Machine.**

(*Machine à débiter les allumettes.*)

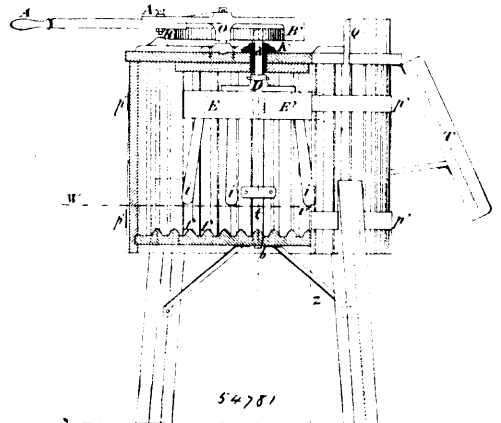


Andrew H. Wallace, Renfrew, and George D. Pringle, Guelph, both of Ontario, Canada, 27th January, 1897; 6 years. (Filed 28th November, 1896.)

*Claim.*—1st. The combination with the finger key, the bar connected thereto, the roller, the ratchet wheel with which the dog-shaped end of the bar engages, the rocking shaft, the match receptacle and means connecting the rocking shaft with the sliding adjustable bottom of the receptacle whereby a match is received into the slot upon each downward depression of the finger key and thrown out of such slot upon the key returning to its normal position as and for the purpose specified. 2nd. In a machine of the class described, an advertising roller comprising flaps with folded inner ends, notches to receive the inner ends, bars extending within the fold and end rings for holding the bars in position, as and for the purpose specified. 3rd. The combination with the finger key, bell crank, rocking shaft supported in suitable journals, the lever on the rocking shaft, the match receptacle, the sliding bottom thereof held in suitable ways and the slot therein, the connecting bar between the back of the sliding bottom and the top of the lever on the rocking shaft, the spring attached to the rocking shaft at one end and connected to the frame at the other, and means below the

match receptacle for receiving and holding the match deposited through the slot when the sliding bottom is thrust forward, and the slot in the case through which the match is ejected, as and for the purpose specified. 4th. The combination with the finger key, bell crank, rocking shaft, supported in suitable journals, the lever on the rocking shaft, the match receptacle, the sliding bottom thereof held in suitable ways, and the slot therein, the connecting bar between the back of the sliding bottom and the top of the lever on the rocking shaft, the spring attached to the rocking shaft at one end and connected to the frame at the other, and means below the match receptacle for receiving and holding the match deposited through the slot when the sliding bottom is thrust forward, the slot in the case through which the match is ejected and a receiving tray beneath and to the front of the slot outside the case, as and for the purpose specified. 5th. The combination with the finger key, bell crank, rocking shaft supported in suitable journals, the lever on the rocking shaft, the match receptacle, the sliding bottom thereof held in suitable ways, and the slots therein, the connecting bar between the back of the sliding bottom and the top of the lever on the rocking shaft, the spring attached to the rocking shaft at one end and connected to the frame at the other, and the guiding supporting bars extending underneath the sliding bottom and the slot in the case through which the match is ejected, as and for the purpose specified. 6th. In combination the match receptacle, the sliding bottom thereof supported in suitable guideways, the slot in such bottom, means for supporting the match when the bottom is thrust forward and the match passes through such slot, and means for imparting a forward and backward movement to the sliding bottom, as and for the purpose specified. 7th. In combination the match receptacle, the sliding bottom, the slot in the bottom, the supporting guides for the match beneath the bottom, the connecting bar between the back of the sliding bottom and the rocking shaft, the guiding rod, the bar and link connecting such bar to the opposite end of the lever on the rocking shaft, and the carrier fingers attached to the front end of the bar and designed to project above the supporting and guiding rods, as and for the purpose specified. 8th. In combination the case, the match receptacle held in suitable supports above the bottom of the case, an opening in the top front portion of the case above such receptacle, a frame and glass designed to be securely locked in such opening, as and for the purpose specified. 9th. In combination the case, the match receptacle supported above the bottom thereof, the sliding bottom suitably supported, means for moving the same, the slot in the bottom, the supporting guideways extending forward of the bottom, carrier fingers and means for imparting a forward and backward movement thereto, and the slot in the front of the case, all arranged as and for the purpose specified.

**No. 54,781. Washing Machine.** (*Machine à laver.*)



Louis Lavergne dit Renaud, Montréal, Québec, Canada, 27 janvier 1897; 6 ans. (Déposé le 18 novembre 1896.)

*Résumé.*—1° Dans une machine à laver le linge, la combinaison du levier A, de l'arc denté B, du pignon C monté sur l'axe en fer D. 2° Dans une machine à laver le linge, la combinaison du moulinet E, excentré, monté sur l'arbre D. 3° Dans une machine à laver le linge, la combinaison des deux types de douves m, n, les douves de l'un des types faisant saillie à l'intérieur, et la face extérieure de ces mêmes douves formant coin, permettant le serrage à l'aide du cercle en fer p'. 4° Dans une machine à laver le linge, l'emploi d'un fond formant saillie, de forme analogue à celle des douves. 5° Dans une machine à laver le linge, la combinaison de la tige en bois t, du bouchon b et de la manette d.

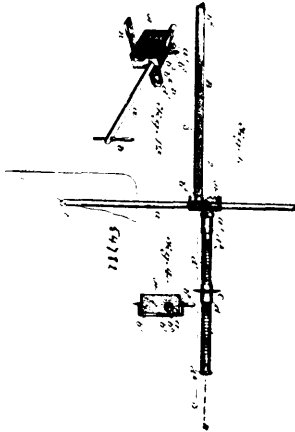
**No. 54,782. Planimeter.** (*Planimètre.*)

Alpheus C. Lippincott, New York, U.S.A., 28th January, 1897; 6 years. (Filed 1st December, 1896.)

*Claim.*—1st. A planimeter, provided with a measuring wheel having a rotary and longitudinal movements, a shaft therefor of



translucent material, a graduated scale enclosed in said shaft, and a tracer-bar, as set forth. 2nd. A planimeter, provided with a



measuring wheel having a rotary and longitudinal movements, a frame, a shaft for said wheel removably held at one end to said frame and formed of translucent material, a graduated scale enclosed in said shaft, a tracer-bar and a guide therefor, as set forth. 3rd. A planimeter, provided with a measuring wheel having a rotary and longitudinal movements, a frame, a tracer-bar, a guide therefor, a holder extending from one side of said frame, a hollow shaft for said wheel secured in said holder and formed of translucent material, and a graduated scale within said shaft, as set forth. 4th. In a planimeter having a wheel capable of a rotary and longitudinal movements, a hollow shaft for said wheel, of glass and closed at its ends, and a graduated scale within said shaft, substantially as set forth. 5th. In a planimeter having a frame and an adjustable tracer-bar, a depressible pin carried by said frame, and a spring engaging said pin for normally holding the same elevated, as and for the purpose set forth. 6th. A planimeter having a frame, an adjustable tracer-bar, a guide-bar pivoted to said frame, and a depressible pin having its lower point in alignment with the pivot of said guide-bar, as set forth. 7th. A planimeter having a frame, and an adjustable tracer-bar, a guide-bar pivoted to said frame, a depressible pin having its ends in alignment with the pivot of said guide-bar, and the spring acting on said pin, substantially as set forth. 8th. A planimeter having a frame-block, a tracer-bar adjustable in said frame-block having a tracer-pin at one end, a guide-bar, a hollow screw pivoting the latter to said frame-block, and the depressible spring-held pin extended through said hollow screw and a coincident opening in said frame block, substantially as set forth. 9th. The herein-described planimeter, comprising the frame-block, the longitudinally adjustable tracer-bar, the removable shaft having a graduated scale, the wheel thereon, the pivoted guide-bar, and the depressible pin having its ends in line with the pivot of said guide-bar, substantially as set forth.

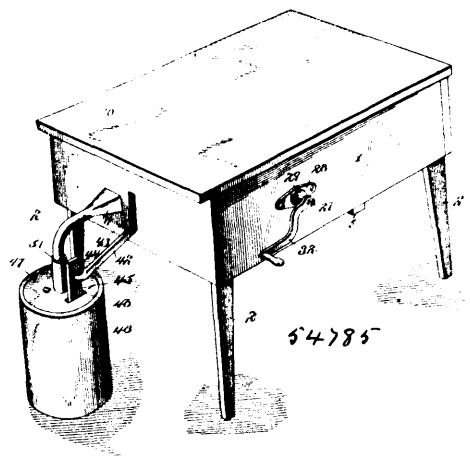
securing the tongues at the desired adjustment, substantially as specified. 3rd. In a device of the class described, the combination of a longitudinally slotted tongue-bar, and tongues provided with securing devices engaging said slot and adapted to be adjusted to bring the tongues into the desired positions with relation to the strings of the instrument, substantially as specified. 4th. In a device of the class described, the combination of a longitudinally slotted tongue-bar, tongues carried by the bar, and securing-bolts engaging the tongues respectively and extending through the slot in the tongue-bar, whereby the tongues may be adjusted longitudinally upon the bar, substantially as specified. 5th. In a device of the class described, a tongue-bar having a longitudinal slot, flexible tongues depending from the bar and provided near their upper extremities with round openings, securing-bolts extending through the slot and said openings respectively in the tongue, and wear-plates interposed between the tongues and the nuts for securing said bolts at the desired adjustment, whereby the tongues may be adjusted longitudinally and angularly upon the bar, substantially as specified. 6th. The combination with a tongue-bar mounted for movement into and out of operative position, of a pedal, connections between the pedal and tongue-bar whereby movement of the former may be communicated to the latter, and a lock arranged in operative relation with the pedal to secure the latter in its depressed or operative position, substantially as specified. 7th. A piano pedal-lock adapted to be pivotally mounted contiguous to a pedal within reach of the toe of the operator's foot, substantially as specified. 8th. The combination with a pedal, of a pivotal lock mounted to swing thereover and provided with a projection accessible by the toe of a foot arranged upon the pedal, substantially as specified. 9th. The combination with a pedal, of a pivotal pedal-lock mounted contiguous to and adapted to swing over the ped when the latter is depressed, and a releasing-ear projecting forwardly from the pedal-lock and adapted to receive pressure to displace the lock, substantially as specified. 10th. The combination with a pedal, of a pedal-lock pivotally mounted contiguous to the pedal and adapted to swing thereover and hold the pedal in its depressed position, said pedal-lock having a base-plate or body-portion provided with a bevelled or rounded corner to facilitate the displacement of the lock by the upward pressure of the pedal, substantially as specified. 11th. The combination with a pedal, of a pivotal pedal-lock mounted contiguous to and adapted to swing over the pedal to secure it in its depressed position, and a stop arranged in the path of the pedal-lock to limit its swinging movement, substantially as specified.

**No. 54,784. Printing Plates. (Plaque d'imprimerie.)**

Georg Isaac, Charlottenburg, Prussia, German Empire. 28th January, 1896; 6 years. (Filed 4th March, 1895.)

*Claim.*—1st. The employment of hardened and toughened lime, plaster of Paris, magnesia, cement and other similar substances capable of becoming stiff or hard, in the production of printing plates, substantially as described. 2nd. The production of printing plates for printing books, newspapers, paper-hangings and the like by casting a pulp composed of lime, plaster of Paris, magnesia, cement or other similar substance capable of becoming stiff or hard on gelatine, wood, metal or other relief, substantially as described. 3rd. In a process of printing or production of printing plates, the addition to the lime or other similar pulp, of gelatinous, starchy, or other substances, for the purpose of retarding the setting or hardening of such pulp, and for increasing the firmness and tenacity of the lime or other similar plate, substantially as described.

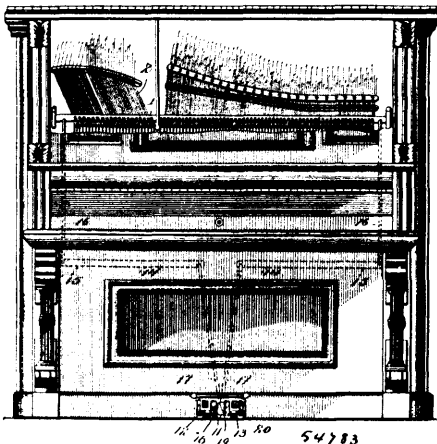
**No. 54,785. Churn. (Baratte.)**



Jason W. Board, assignee of Edward B. Hyre, both of Hereford, West Virginia, U.S.A., 28th January, 1897; 6 years. (Filed 14th December, 1896.)

*Claim.*—In a churning apparatus, the combination with a supporting frame, of a bellows having movable and fixed walls, a bell-

**No. 54,783. Piano Attachment. (Attache de pianos.)**

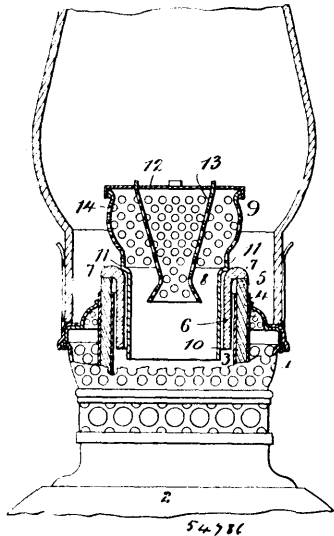


Jesse Heckler Moyer, Temple, Texas, U.S.A., 28th January, 1897; 6 years. (Filed 30th November, 1896.)

*Claim.*—1st. In a device of the class described, a flexible striker having a tongue which is split or bifurcated transversely at its lower extremity to form front and rear faces, and a flat rectangular metallic weight interposed between said faces and exposed at its side and lower edges, substantially as specified. 2nd. In a device of the class described, the combination with a tongue-bar, of tongues mounted for longitudinal adjustment upon the bar, and means for

crank lever, a yoke terminally attached to the movable walls of the bellows and connected with one arm of the bell-crank lever. a rotary driving shaft provided at one end with a disc having a plurality of perforations arranged at different distances from the centre of rotation, a rock-shaft having one of its arms connected to a dasher-rod, a pitman connected to a crank arm on said rock-shaft and provided with a lateral trunnion 35, fitted in one of the perforations in said disc, and a second pitman connected at one end to the second arm of the bell-crank lever and provided at the other end with an eye fitting loosely upon said lateral trunnion of the first-named pitman, whereby the trunnion forms a common axis and a common means of attachment for both pitmen, substantially as specified.

**No. 54,786. Lamp Burner.** (*Bec de lampes.*)



Stephen Burrows Morss, Rahway, New Jersey, U.S.A., 28th January, 1896; 6 years. (Filed 30th November, 1896.)

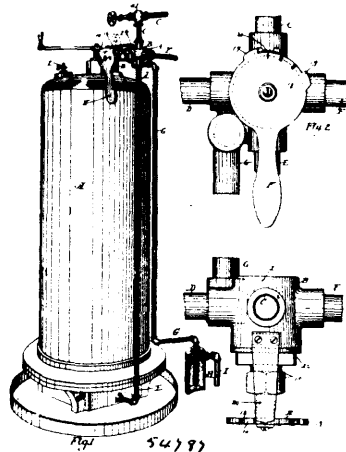
*Claim.*—1st. A combined wick tip and extinguisher comprising a rigid capillary or porous incombustible block or piece adapted to rest upon the top of a fibrous wick and having a greater horizontal cross-section than the wick so as to abut against the top of the wick-casing when the wick is lowered and substantially close the casing to act as an extinguisher, said piece being provided with a guide for directing its vertical movement, substantially as described. 2nd. The combination, with wick-casing tubes, and a fibrous wick therebetween, of a rigid capillary or porous incombustible wick-tip resting upon said wick when the latter is raised above the casing but arranged to rest upon the casing tubes and substantially close the casing when the wick is lowered below the same, to act as an extinguisher, said wick-tip being provided with a guide to direct its vertical movement, substantially as described. 3rd. The combination, with inner and outer wick-casing tubes, and a fibrous wick therebetween, of a rigid capillary or porous incombustible wick-tip resting upon said wick when the latter is raised above the casing but arranged to rest upon the casing when the wick is lowered below the same, and having, nearer the centre than the inner wick-casing tube, an annular shoulder, and a perforated thimble resting upon said shoulder, substantially as described. 4th. The combination, with inner and outer wick-casing tubes, and a fibrous wick therebetween, of a rigid capillary or porous incombustible wick-tip resting upon said wick when the latter is raised above the casing but arranged to rest upon the casing when the wick is lowered below the same, and having a cylindrical depending guide within the wick-casing, and a perforated thimble having a cylindrical portion within the guide, an outwardly extending shoulder above the cylindrical portion supporting the thimble upon the wick-tip, and a perforated portion above the shoulder supplying air to the flame above said tip, substantially as described.

**No. 54,787. Water Filter.** (*Filtere.*)

James H. Blessing, Albany, New York, U.S.A., 28th January, 1897; 18 years. (Filed 30th November, 1896.)

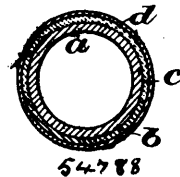
*Claim.*—In a multi-ported cock for filtering apparatus, the combination with a casing, 1, having a series of ports, 2, 3, 4, 5 and 6, opening into its bore, the ports 2, 3, 4, and 5 being arranged about equidistantly about the bore of said casing, and the port 6 intermediately between the ports 3 and 4, of a turning plug J, fitted to receive a partial rotation in said casing, said turning plug being provided with passages 7, 9 and 10, the passage 7 having an enlargement, 8 at one end, and the passage 10 having a lateral branch, 13, leading therefrom, the passage 10 forming a communication between the ports 2 and 3 when the enlargement 8 is positioned to communicate with the ports 4 and 6, said passage 10 also forming a commu-

nication between the ports 2 and 3 when the passage 9 forms a communication between the ports 4 and 5, and the passage 7 forming a



communication between the ports 2 and 4 when the passages 10 and 13 are positioned to communicate between the ports 3 and 6, substantially as specified.

**No. 54,788. Pneumatic Tire.** (*Bandage pneumatique.*)



The Boston Woven Hose and Rubber Company, of Boston, assignee of Robert Cowen, of Cambridge, all in Massachusetts, U.S.A., 28th January, 1897; 6 years. (Filed 19th December, 1896.)

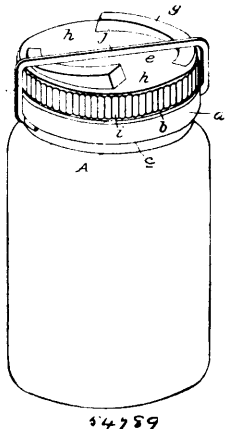
*Claim.*—1st. The herein described method of manufacturing pneumatic tires, which consists in building up an endless tube of or containing unvulcanized rubber, temporarily covering the tread surface of the inflated unvulcanized tube with a fabric adapted to make fine indentations therein, securing the said tread covering fabric temporarily in position pressing upon the said tube, vulcanizing the tube while so covered, and then removing the temporary covering to leave the completed vulcanized tube ready for use, substantially as described. 2nd. The described method of manufacturing pneumatic tires, which consists in building up an endless tube of or containing unvulcanized rubber, arranging the same upon a form, temporarily covering the said tire with a fabric adapted to make fine indentations therein, temporarily securing the latter in position pressing upon the tube on the form, vulcanizing the covered tube while on its said form, removing the temporary covering fabric from the tire and removing the tire from the form, substantially as described. 3rd. The improved method of manufacturing pneumatic tires, which consists in building up an endless tube of or containing rubber, arranging the said tube upon and surrounding a suitable form, temporarily covering the said tube with a fabric adapted to make fine indentations therein, temporarily binding the covered tube upon the form by a spirally wound binder, vulcanizing the covered tube while on the form, removing the temporary covering and binder from the tube, and the tube from the form, substantially as described. 4th. The improved method of manufacturing pneumatic tires, which consists in building up an endless tube of or containing rubber, inflating the same, temporarily covering the tread surface of the inflated vulcanized tube with a fabric adapted to make fine indentations therein, confining the said covering fabric in position pressed upon the inflated tube, vulcanizing the temporarily covered and confined tube while inflated, and removing the said temporary covering to leave the finished tire substantially as described. 5th. The herein described method of manufacturing pneumatic tires, which consists in building up an endless tube of or containing unvulcanized rubber, covering the tread surface of the unvulcanized tube with a fabric adapted to make fine indentations therein, temporarily securing the said tread covering fabric to impress the latter into and to form indentations in the former, vulcanizing the tube while so covered and inflated, then removing the temporary covering to leave the complete vulcanized tube ready for use, substantially as described.

**No. 54,789. Fruit Jars.** (*Jarre à fruit.*)

Joseph L. De Steiger, La Salle, Illinois, U.S.A., 28th January, 1897; 6 years. (Filed 15th December, 1896.)

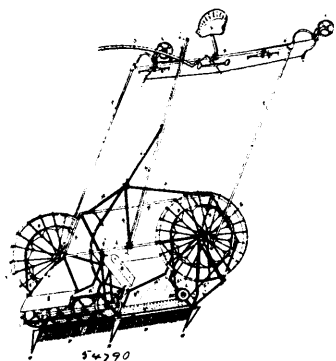
*Claim.*—The jar or bottle having the external annular flange a, at an intermediate point in the height of its neck, forming an upper

and a lower shoulder, in combination with the gasket surrounding the neck and arranged on the upper shoulder, the cover adapted to



embrace the mouth and having the depending flange *f* to bear on the gasket on said upper shoulder, and also having the two oppositely directed curvilinear inclined elevations on the upper side, and the metallic fastener comprising the horizontal portion *i*, and the two depending branches *k*, terminating in the lateral and curvilinear branches turned in opposite directions to engage the lower shoulder of said flange, substantially as specified.

**No. 54,790. Machine for Harvesting and Threshing.**  
(*Machine à moissonner et battre*)



William Maloney and T. Hatchard Stedman, Calgary, North-west Territories, Canada, 28th January, 1897; 6 years. (Filed 19th December, 1896.)

*Claim.*—1st. In a header, harvester and thresher, a header provided with revolving reels A, B, which act as both reels and cutters, substantially as and for the purposes hereinbefore set forth. 2nd. In a header, harvester and thresher, a header provided with a combined carrying and dumping box for the purpose of receiving the heads of the grain from the knives, carrying the heads and depositing them in piles, substantially as and for the purposes hereinbefore set forth. 3rd. In a header, harvester and thresher, a harvester provided with a fork Z<sup>1</sup>, to lift the grain from the ground and carry it to the thresher or stack, substantially as, and for the purposes hereinbefore set forth. 4th. In a header, harvester and thresher, a series of lugs G, on the outer circumference of the wheels A of the revolving reels A, B. The lugs G are so shaped that their outer surface is on a line, tangent to the outer circumferences of the wheels A of the revolving reels A, B; the lugs G are thus formed to give the required set to the knives F, F, to allow of their use for the purposes of reels, as well as for cutters, substantially as and for the purpose hereinbefore set forth. 5th. In a header, harvester and thresher, a series of knives F, F, attached to the lugs G on the reel wheels A. The knives F, F, owing to the set given to them by the form of the lugs G on the reel wheels A, are made to cut only when their cutting edges are directly over the cutting edges of the knives F, F, on the cutter-bar H, substantially as and for the purposes hereinbefore set forth. 6th. In a header, harvester and thresher, a direct double power of drive on the cutter reels A, B. This direct double power is attained by the direct connection of each small sprocket C on the reel shaft B, by means of an endless chain E<sup>1</sup>, with each of the large sprockets D on the main driving wheels E. Owing to the comparative diameters of the sprockets D, on the main driving wheels E, with the sprockets C on the reel shaft B, a sufficient speed of rotation is given to the reel shaft B, and to the reels A, B, which revolve with the reel shaft without using any intermediate gearing. By this special method of gearing, and the forms used in constructing the cutting portions of the machine, the power required to run

the machine is greatly decreased, substantially as and for the purposes hereinbefore set forth. 7th. In a header, harvester and thresher, the increasing or decreasing of the speed of the revolutions of the reel shaft A, B, by removing the sprockets C and replacing them by other sprockets, of a greater or less diameter as may be required; the sprocket wheels C being connected onto the reel shaft B by means of slip keys and set screws so that they can be easily and quickly changed, substantially as and for the purposes hereinbefore set forth. 8th. In a header, harvester and thresher, the separate and direct power given by the revolution of the main driving wheels E to each large sprocket D on these wheels, and communicated to the sprockets C on the reel shaft B, by means of the endless chains E<sup>1</sup>, each section of the reel shaft and reels is given an independent power of revolution, so that while turning the machine one half of the reel A, B, will work forward, while the other half will work backward, substantially as and for the purposes hereinbefore set forth. 9th. The construction and arrangement of the frame X, X, and lever K<sup>1</sup>, which by being solidly framed together, revolve with each other from and around the main axle V, thus giving an oscillating motion to the entire body of the machine, and to the reels A, B. By this oscillating motion of the reels A, B, the knives are raised or lowered to such a distance from the ground as may be required to head grain of any height, substantially, and for the purposes hereinbefore set forth. 10th. In a header, harvester and thresher, the entire body of the machine, so centred on and fixed solidly to the axle V, that each portion, including reels A, B, and the driving power, always retaining the same relative position to the axle, the driving power is not interfered with by any oscillating motion of the body of the machine or the reels A, B, substantially, and for the purposes hereinbefore set forth. 11th. In a header, harvester and thresher, the entire control of the raising or lowering of the reels A, B, or the oscillating motion of the body of the machine, and all other working of the machine directly from the driver's seat, by means of the one lever K<sup>1</sup>, substantially, and for the purposes hereinbefore set forth. 12th. In a header, harvester and thresher, the method of constructing the main frame X, X, and the solid connection between the main frame X, X, the main tilting lever K<sup>1</sup>, and the cutter-bar H, by means of the cross braces M, M, connected to the back corners of the main frame X, X, and the lever braces N, N; the braces M, M, and N, N, joined to the brace D which is carried down to the cutter bar H, and the side braces L<sup>1</sup>, L<sup>2</sup> and L<sup>2</sup> from the main axle and the bottom of the frame to the cutter-bar. By means of these braces the whole of the machine is attached and braced solidly together so as to ensure its working without any jar or uneven pressure on any of its parts or the possibility of any portion getting out of line, substantially and for the purposes hereinbefore set forth. 13th. In a header, harvester and thresher, a tongue P<sup>1</sup>, P<sup>1</sup> on each side, outside the line of the main driving-wheel E, E, connected to the main axle V by means of the drop irons Q<sup>1</sup>, to which they are secured by pin and collar attachment so as to allow of the tongues P<sup>1</sup>, P<sup>1</sup>, being readily removed, while putting in or taking out the horses. The tongues P<sup>1</sup>, P<sup>1</sup>, are connected at back by a cross-frame R<sup>1</sup> to which the driver's seat L<sup>1</sup>, guiding attachment R<sup>2</sup>, and tilting bar Q<sup>1</sup> are attached. The tongues P<sup>1</sup>, P<sup>1</sup>, after passing the cross-bar R<sup>1</sup> are bent downward and inward and braced to the cross-bars by the braces Q<sup>2</sup>, the tongues P<sup>1</sup>, P<sup>1</sup>, after passing the cross-bar R<sup>1</sup>, R<sup>1</sup>, are bent downward to receive the guiding-wheels T<sup>1</sup>, T<sup>1</sup>, to which are attached the rudders U<sup>1</sup>, U<sup>1</sup>. The rudders U<sup>1</sup>, U<sup>1</sup>, are connected by side rods V<sup>1</sup>, V<sup>1</sup>, to the foot lever R<sup>2</sup> below the driver's seat. By the motion of the foot lever R<sup>2</sup> transferred to the guiding-wheels T<sup>1</sup>, by the side rods V<sup>1</sup>, and the rudders U<sup>1</sup>, the machine is afforded a double guiding power, controlled directly from the driver's feet, substantially, and for the purposes hereinbefore set forth. 14th. In a header, harvester and thresher, a thresher driven from behind by means of horses working between the double tongues P<sup>1</sup>, P<sup>1</sup>, connected to the outside of the main driving-wheels by the drop irons Q<sup>1</sup> joined at the back by the cross-brace R<sup>1</sup>, and supported on the guiding-wheels T<sup>1</sup>, substantially and for the purposes hereinbefore set forth. 15th. In a header, harvester and thresher, a thresher attached to the same main frame X, X, which is used for the header, and so centred on the main axle V between the main driving-wheels E, as to give an oscillating motion, controlled from the driver's seat L<sup>1</sup> by means of the lever K<sup>1</sup>, substantially and for the purposes hereinbefore set forth. 16th. In a header, harvester and thresher, a thresher consisting of the cylinders A, B, and the concaves I<sup>1</sup> provided with teeth, the cylinders A, B, being driven by direct power from the main driving-wheels E by the connection of the endless chains E<sup>2</sup>, from the large sprockets D, on the main driving-wheels E, to the small sprockets C, on the cylinder shaft B, substantially and for the purposes hereinbefore set forth. 17th. In a header, harvester and thresher, the cylinders A, B, of the thresher being in two sections and centred from the main axle V, and controlled by the revolutions of the main driving-wheels E, E, each section of the cylinders A, B, can revolve in a direction different from the other, as the revolutions of the main driving-wheels E, E, are varied or reversed, so that, turning the machine in any direction does not cause any stoppage or interference with the working of the machine, substantially and for the purposes hereinbefore set forth. 18th. In a header, harvester and thresher, by the forward motion of the machine when working, the grain is brought in by the cylinder bars K<sup>1</sup> and threshed, by the combined action of the teeth of the cylinder bars, and the teeth on the concaves L<sup>1</sup>, the straw and threshed heads return to their former



*CERTIFICATES OF THE PAYMENT OF FEES FOR FURTHER TERMS HAVE BEEN ATTACHED TO  
THE FOLLOWING PATENTS.*

4589. AMOS CLINTON STILSON, 2nd term of No. 38,025, from the 2nd January, 1897. Journal Boxes or Bearings, January 2nd, 1897.
4590. THE RATHBUN COMPANY (assignee), 2nd term of No. 25,742, from the 15th January, 1897. Filtering System, January 4th, 1897.
4591. THE RATHBUN COMPANY (assignee), 2nd term of No. 25,743, from the 15th January, 1897. Fire-proof Structures, January 4th, 1897.
4592. THE RATHBUN COMPANY (assignee), 2nd term of No. 25,753, from the 15th January, 1897. Filtering Cistern or Vat, January 4th, 1897.
4593. THE RATHBUN COMPANY (assignee), 2nd term of No. 25,754, from the 15th January, 1897. Filtering Material, January 4th, 1897.
4594. THE RATHBUN COMPANY (assignee), 2nd term of No. 25,755, from the 15th January, 1897. Fire-proof Structures, January 4th, 1897.
4595. THE RATHBUN COMPANY (assignee), 2nd term of No. 25,756, from the 15th January, 1897. Art of Making Porous Earthenware, January 4th, 1897.
4596. THE RATHBUN COMPANY (assignee), 2nd term of No. 25,850, from the 25th January, 1897. Porous Earthenware Product with Strengthening Cores, January 4th, 1897.
4597. THE RATHBUN COMPANY (assignee), 2nd term of No. 26,365, from the 2nd April, 1897. Kiln for Making Charcoal, January 4th, 1897.
4598. THE RATHBUN COMPANY (assignee), 2nd term of No. 26,662, from the 9th May, 1897. Fireproof Posts and Columns, January 4th, 1897.
4599. THE RATHBUN COMPANY (assignee), 2nd term of No. 26,731, from the 16th May, 1897. Pavement, January 4th, 1897.
4600. THE RATHBUN COMPANY (assignee), 2nd term of No. 26,732, from the 16th May, 1897. Sidewalk, January 4th, 1897.
4601. THE RATHBUN COMPANY (assignee), 2nd term of No. 26,847, from the 4th June, 1897. Construction of Tunnels, Subways or Arches, January 4th, 1897.
4602. THE RATHBUN COMPANY (assignee), 2nd term of No. 40,024, from the 25th August, 1898. Roofing Composition, January 4th, 1897.
4603. THE RATHBUN COMPANY (assignee), 2nd term of No. 40,025, from the 25th August, 1898. Underground Conduit for Electric Wires or Cables, January 4th, 1897.
4604. PIERRE O. GOSSELIN, 2nd term of No. 38,193, from the 2nd February, 1895. Hydraulic Motor, January 5th, 1897.
4605. THE CONSOLIDATED CAR HEATING CO. (assignee), 2nd term of No. 38,131, from the 16th January, 1897. Temperature Regulator, January 7th, 1897.
4606. WARREN CURTIS, 3rd term of No. 25,821, from the 20th January, 1897. Wood Pulp Machine, January 7th, 1897.
4607. THE NOXON BROTHERS MANUFACTURING CO. (assignee), 2nd term of No. 38,129, from the 16th January, 1897. Knotter for Harvester Binders, January 9th, 1897.
4608. THE NOXON BROTHERS MANUFACTURING CO. (assignee), 2nd term of No. 38,130, from the 16th January, 1897. Knotter for Harvester Binders, January 9th, 1897.
4609. JOSEPH FRANCIS HANRAHAN, 2nd term of No. 38,132, from the 20th January, 1897. Refrigerator Car and Building, January 11th, 1897.
4610. GEORGE ANDREWS, 2nd term of No. 39,036, from the 1st June, 1897. Apparatus for Trapping Animals and Birds, January 11th, 1897.
4611. SIDNEY W. MILLER, AUGUST MAYER, FREDERICK H. POST AND ALBERT W. BERRY, 2nd term of No. 38,179, from the 1st February, 1897. Tank Discharging Apparatus, January 12th, 1897.
4612. THE MASSEY MANUFACTURING CO. (assignee), 3rd term of No. 25,775, from the 17th January, 1897. Knotting Device for Grain Binders, January 16th, 1897.
4613. NARCISSE DUVAL AND THEODORE BELANGER, 2nd term of No. 38,143, from the 22nd January, 1897. Water Wheel and Wind Wheel, January 18th, 1897.
4614. THE TORONTO RADIATOR MANUFACTURING CO. (assignee), 2nd term of No. 38,832, from the 2nd May, 1897. Moulding Machine, January 18th, 1897.
4615. GEORGE VALIANT, 2nd term of No. 38,153, from the 26th January, 1897. Boot and Shoe, January 20th, 1897.
4616. A. LEROY BURKE, 2nd term of No. 38,788, from the 22nd April, 1897. Washing Machine, January 23rd, 1897.
4617. HENRY N. RUTTAN, 2nd term of No. 38,158, from the 26th January, 1897. Flushing Siphon, January 26th, 1897.
4618. THE WOOLF VALVE GEAR COMPANY (assignee), 2nd term of No. 38,269, from the 12th February, 1897. Valve for Engines, January 26th, 1897.
4619. S. CHENEY AND SON (assignee), 2nd term of No. 38,247, from the 7th February, 1897. Stove Pipe Thimble, January 26th, 1897.
4620. THE AMERICAN BANK NOTE COMPANY (assignee), 2nd term of No. 38,190, from the 2nd February, 1897. Distinctive Paper, January 27th, 1897.
4621. HAMILTON A. JUKES, 2nd term of No. 38,325, from the 22nd February, 1897. Earth Closet, January 27th, 1897.
4622. JAMES MASSIE, 2nd term of No. 38,168, from the 30th January, 1897. Bedstead, January 28th, 1897.



## TRADE - MARKS

Registered during the month of January, 1897, at the Department of Agriculture--  
Copyright and Trade-Mark Branch.

5852. REID BROTHERS AND COMPANY, London, Ont. Corsets, 2nd January, 1897.
5853. CHARLES SIMPSON, The Limes, Duston Road, Northampton, and 10 Victoria Street, Liverpool, County of Lancaster, England. Soaps, Candles, Detergents, Starch, Blue and other Laundry Preparations, 4th January, 1897.
5854. WILLIAM BURROW, CHARLES STEWART AND JOHN MILNE, Hamilton, Ont., trading as BURROW, STEWART & MILNE. Heating and Cooking Apparatus, 7th January, 1897.
5855. FRED. W. HUDSON, Toronto, Ont. Pills, Pellets or Beans for medicinal purposes, 8th January, 1897.
5856. CHARLES BEAUPRÉ, Montréal, Qué. Remède contre la toux, le rhume, la bronchite, etc., 9 janvier 1897.
5857. WILLIAM LOCHEAD DODDS, Toronto, Ont. Dodds' Liver Pills, 11th January, 1897.
5858. WILLIAM HOLLINS AND COMPANY (NOTTINGHAM) LIMITED, Pleasley Works, Mansfield, Nottingham, England. Cloths and Stuffs of Wool, Worsted or Hair and other similar goods, 11th January, 1897.
5859. R. DACK AND SON, Toronto, Ont. Medicinal Preparations, 12th January, 1897.
5860. WILLIAM A. LAWSON, Brantford, Ont. Business Device as applied to Coupons for the encouragement of a cash system amongst the retail merchants, 13th January, 1897.
5861. S. DAVIS AND SONS, Montreal, Que. Cigars, Cigarettes and Tobaccos. 13th January, 1897.
5862. HERMANN H. WOLFF AND COMPANY, Montreal, Que. Underwear, 14th January, 1897.
5863. NELSON B. SMITH AND REUBEN P. PROCTOR, Halifax, N.S., trading as SMITH & PROCTOR. Butter and Cheese, 15th January, 1897.
5864. )  
5865. )  
5866. ) HUNT AND COMPANY, Montreal, Que. Tea, 15th January, 1897.  
5867. )  
5868. )
5869. HORMISDAS LAPORTE, Montreal, Que. Tea, 18th January, 1897.
5870. J. B. BROOKS AND COMPANY, Criterion Works, Great Charles Street, Birmingham, England. Cycle Saddles, Saddlery, Harness and Leather Goods, Bicycles, Tricycles and other Velocipedes, and the component parts, accessories and fittings of velocipedes, 20th January, 1897.
5871. OSWALD MAY MALCOLM, Vancouver, B.C. Canned Salmon, 21st January, 1897.
5872. GEORGE WALTER SADLER, Montreal, Que., and GEORGE FREDERICK HAWORTH, Toronto, Ont., trading in said respective cities as SADLER & HAWORTH. Leather Belting and Lace Leather, 22nd January, 1897.
5873. AMERICAN WRITING MACHINE COMPANY, Ilion, New York, U.S.A. Typewriter Supplies, 22nd January, 1897.
5874. THE GALT KNITTING COMPANY, LIMITED, Galt, Ont. Knitted Underwear, 25th January, 1897.
5875. POPE MANUFACTURING COMPANY, Portland, Maine, and Hartford, Connecticut, U.S.A. Bicycles and like vehicles, 25th January, 1897.
5876. THE MARTIN, BOLE AND WYNNE COMPANY, Winnipeg, Man. A Medical Compound known as Dr. Clark's White Liniment, 26th January, 1897.
5877. THE RALEIGH CYCLE COMPANY, LIMITED, Nottingham, England. General Trade Mark, 27th January, 1897.





## COPYRIGHTS

Entered during the month of January, 1897, at the Department of Agriculture—  
Copyright and Trade-Mark Branch.

8939. THE WESTMINSTER. (A Paper for the Home.) Vol. II. No. 1. January, 1897. The Westminster Co., Toronto, Ont., 2nd January, 1897.
8940. GRAMMAIRE FRANÇAISE. (Cours Élémentaire, Cours Moyen, et Cours Supérieur.) Jean Routhier, Montréal, Qué., 2 janvier 1897.
8941. COURSE OF BUSINESS PENMANSHIP, 1ST, 2ND, AND 3RD ORDERS, AVEC LIVRET DE MODELES 5TH, 6TH AND 7TH ORDERS AND SUPPLEMENT. Jean Routhier, Montréal, Qué., 2 janvier 1897.
8942. THE KHAN'S CANTICLES. By R. K. Kernighan, Rockton, Ont., 4th January, 1897.
8943. ART SUPPLEMENT OF THE DAILY MAIL AND EMPIRE, TORONTO, SATURDAY, 2ND JANUARY, 1897. The Mail Printing Co., Toronto, Ont., 4th January, 1897.
8944. THE LIFE AND TIMES OF SIR LEONARD TILLEY. By James Hannay, St. John, N.B., 4th January, 1897.
8945. AN EXPOSITION OF THE LAWFUL AND UNLAWFUL DEBTS. By Donald McLennan, Amberley, Ont., 5th January, 1897.
8946. THE BABY. (Song.) Words by Frank Lawson. Music by E. Roselle. Henry J. Jones & Co., London, Ont., 7th January, 1897.
8947. A CALL TO ALL MEN AND WOMEN WHO HAVE A SPARK OF HONESTY LEFT IN THEM. By W. L. Sinton, Toronto, Ont., 7th January, 1897.
8948. SHORTHAND SIMPLIFIED. A New and Logical Exposition of Phonography based on the Pitmanic Alphabet. Published in "The Montreal Star." R. S. Wright, Montreal, Que., 7th January, 1897. (Temporary Copyright.)
8949. MUNICIPALITÉS ET PAROISSES DANS LA PROVINCE DE QUÉBEC. Compilées par C. E. Deschamps, Québec, Qué., 7 janvier 1897.
8950. THE BELL TELEPHONE COMPANY OF CANADA, LIMITED, TORONTO AND TORONTO JUNCTION EXCHANGES, SUBSCRIBERS' DIRECTORY, ONTARIO DEPARTMENT, DECEMBER, 1896. The Bell Telephone Company of Canada (Ltd.), Montreal, Que., 7th January, 1897.
8951. JUST WHEN THOU WILT. (Sacred Song.) Music by Chas. E. Wheeler. The Anglo-Canadian Music Publishers' Association (Limited), London, England, 8th January, 1897.
8952. GENERAL BOOK-KEEPING BLANK FOR ALL EXAMINATIONS. Prepared by J. A. Wismer M.A. No. 12. With Hints and Explanations. The Copp, Clark Co. (Ltd.), Toronto, Ont., 8th January, 1897.
8953. ART SUPPLEMENT OF THE DAILY MAIL AND EMPIRE, TORONTO, SATURDAY, 9TH JANUARY, 1897. The Mail Printing Co., Toronto, Ont., 9th January, 1897.
8954. THE CANADIAN MAGAZINE. (January, 1897.) The Ontario Publishing Co. (Ltd.), Toronto, Ont., 9th January, 1897.
8955. ALMANAC FOR 1897. (In the Icelandic Language.) Olafur S. Thorgeirsson, Winnipeg, Man., 9th January, 1897.
8956. MASSEY'S MAGAZINE. (January, 1897.) The Massey Press, Toronto, Ont., 11th January, 1897.
8957. THE CROSS OF GOLD. Words and Music by Monroe H. Rosenfeld. Whaley, Royce & Co., Toronto, Ont., 11th January, 1897.
8958. MY CONTEMPORARIES IN FICTION. By David Christie Murray. Published in "The Canadian Magazine," Toronto. (Temporary Copyright.) National Press Agency (Limited), London, England, 11th January, 1897.
8959. ANNALS OF NIAGARA. By Wm. Kirby, F.R.S.C., Niagara, Ont., 12th January, 1897.

8960. DON'T SEND HER AWAY. (Song.) Words by Raymond A. Browne. Music by Monroe H. Rosenfeld. Whaley, Royce & Co., Toronto, Ont., 13th January, 1897.
8961. THE DELINEATOR. (A Journal of Fashion, Culture and Fine Arts. February, 1897.) The Butterick Publishing Co. (Ltd.), New York, N.Y., U.S.A., 13th January, 1897.
8962. THE GLASS OF FASHION UP TO DATE. (February, 1897.) The Butterick Publishing Co. (Ltd.), New York, N.Y., U.S.A., 13th January, 1897.
8963. AUDIT NOTE-BOOK. Harry Vigeon, Toronto, Ont., 14th January, 1897.
8964. THE CIRCULAR OF THE YORK COUNTY LOAN AND SAVINGS COMPANY. Joseph Phillips, Toronto, Ont., 14th January, 1897.
8965. IN THE BAGGAGE COACH AHEAD. (Song and Refrain.) Words and Music by Gussie L. Davis. Whaley, Royce & Co., Toronto, Ont., 15th January, 1897.
8966. LE GUIDE DES INVENTEURS. Joseph A. Marion, Montréal, Qué., 15 janvier 1897.
8967. L'ÉCOLE AUX APPARITIONS MYSTÉRIEUSES. Par l'Abbé Ph. F. Bourgeois, Memramcook, N.B., 15 janvier 1897.
8968. ART SUPPLEMENT OF THE DAILY MAIL AND EMPIRE, TORONTO, SATURDAY, 16TH JANUARY, 1897. The Mail Printing Co., Toronto, Ont., 16th January, 1897.
8969. THE CIRCUIT GUIDE—SPRING ASSIZES, 1897. By George Allan Kingston, Toronto, Ont., 18th January, 1897.
8970. THE FARMER'S FRIEND (*re* Horses). George Pittock, Hamilton, Ont., 19th January, 1897.
8971. MAP OF THE DISTRICT OF MONTREAL, AND THE EASTERN TOWNSHIPS. E. R. Smith & Son, St. Johns, Que., 20th January, 1897.
8972. ELEMENTARY COMPOSITION EXERCISE BOOK, No. 3. By S. E. Lang, B.A. (For use in Fourth Book Classes.) The Copp, Clark Co. (Ltd.), Toronto, Ont., 22nd January, 1897.
8973. ART SUPPLEMENT OF THE DAILY MAIL AND EMPIRE, TORONTO, SATURDAY, 23RD JANUARY, 1897. The Mail Printing Co., Toronto, Ont., 23rd January, 1897.
8974. CRUISE TO THE MEDITERRANEAN. Published in "The Flag", Ottawa. (Temporary Copyright.) Richard Nettle, Ottawa, Ont., 25th January, 1897.
8975. THE BELL TELEPHONE COMPANY OF CANADA, LIMITED, HAMILTON AND DUNDAS EXCHANGES, SUBSCRIBERS' DIRECTORY, ONTARIO DEPARTMENT, JANUARY, 1897. The Bell Telephone Company of Canada (Ltd.), Montreal, Que., 26th January, 1897.
8976. MACDONALD'S UNIVERSAL SYSTEM OF FARMING. Published in "The Patriot," Charlottetown, P.E.I. (Temporary Copyright.) J. A. Macdonald, Hermanville, P.E.I., 28th January, 1897.
8977. MAP SHOWING APPROXIMATE LOCATIONS OF MINERAL CLAIMS IN THE VICINITY OF SHOAL BAY AND PHILIPP'S ARM, BRITISH COLUMBIA. Ernest A. Cleveland, Vancouver, B.C., 29th January, 1897.
8978. EXERCISES IN RHETORIC. Edited by J. E. Wetherell, B.A. The Copp, Clark Co. (Ltd.), Toronto, Ont., 29th January, 1897.
8979. SNAP SHOTS FROM BOY LIFE. By F. C. T. O'Hara, Ottawa, Ont., 29th January, 1897.
8980. ART SUPPLEMENT OF THE DAILY MAIL AND EMPIRE, TORONTO, SATURDAY, 30TH JANUARY, 1897. The Mail Printing Co., Toronto, Ont., 30th January, 1897.
8981. THE WESTMINSTER. (A Paper for the Home.) Vol. II. No. 2. February, 1897. The Westminster Co., Toronto, Ont., 30th January, 1897.
8982. BREAD PYRAMID. (Photograph.) The McClary Manufacturing Co., London, Ont., 30th January, 1897.
8983. THE CANADIAN SCHOOL SYSTEM OF SHORTHAND. By Pearson J. Wells, Toronto, Ont., 30th January, 1897.