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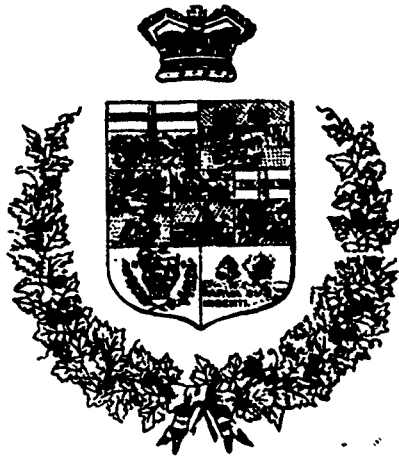
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VOLUME XII, 1884.-INDEX.

INDEX OF INVENTIONS.

Abrading machine, G. H. P. Flag..... 18,408
 Acid, purification of sulphuric, G. Thomson et al..... 18,858
 Acids and lactates, lactic, T. S. Nowell.....18,441, 18,450 18,461
 Advertising device, T. H. Bowles..... 19,109
 Air compressing machinery, G. R. Cullingworth..... 18,804
 " engine, carburetted, E. Eteve et al..... 26,898
 " purifying apparatus, L. P. Roderique et al..... 19,007
 Alarm, draw bridge, E. F. Meyer..... 18,396
 " electric low water, H. W. Page et al..... 18,538
 " gauge, low water, A. Weiden..... 20,111
 " high and low water, J. C. Palmer et al..... 20,418
 " and indicator, electric water, J. C. Blake..... 18,458
 Aluminum, extracting, F. J. Seymour..... 18,873
 Amalgamating apparatus, gold, S. L. Trippe..... 18,825
 Amalgamator, ore, H. Moore..... 19,656
 " silver and gold, T. Walker..... 18,468
 Ammonia, production of, R. Tervet..... 18,864
 Anchor, T. S. Calpin..... 20,645
 " W. Lewis..... 19,709
 " mode of hoisting, etc, R. P. Trefy..... 20,605
 Animal trap, J. A. Williams..... 18,484
 " H. Brubaker..... 19,616
 Annealing pot for wire, H. Roberts..... 18,319
 Apple parer, F. R. Williams..... 20,281
 " paring machine, J. L. Wilcox..... 20,571
 Ash pan for steam boiler, J. C. Anderson et al..... 25,482
 " locomotive, W. H. D. Welsh..... 20,028
 " sifter, B. H. Cook..... 19,877
 " G. A. Blanchard..... 20,500
 " and gravel sifter, A. McKenzie..... 18,880
 Astragal glazing bar for roof lights, W. R. Lester..... 20,853
 Auger and bit blanks, roller dies for making, C. O. Tinker..... 20,264
 Axle blade, C. C. Brooks..... 19,785
 " and axle box, R. C. Parvin..... 19,095
 " bearing, car, O. S. Stearns et al..... 18,594
 " box, car, J. Timms..... 19,228
 " " W. A. Hardy..... 19,915
 " " G. W. Stewart..... 19,470
 " carriage, A. B. Poor et al..... 19,628
 " " dust guard for car, N. M. George..... 19,441
 " carriage, soap for, W. J. Parmelee..... 19,189
 " coupling, J. W. Leete..... 19,184
 " for two wheeled vehicles, A. Gilbert..... 18,580
 " lubricator, A. D. Howe..... 19,7
 " " H. E. Vowburgh..... 20,65
 " " car, C. Page et al..... 19,981
 " " N. M. George..... 19,440
 " " S. A. Flower et al..... 19,229
 " " T. R. Gordon..... 19,499
 " self-ciling, C. H. Carrier..... 19,068
 " skeln, The Illinois, Iron & Bolt Co..... 19,498
 " bus wagon, F. Ulrich..... 19,541
 " vehicle, J. J. Devine..... 29,169
 " M. J. Kloop et al..... 19,999
 Baby jumper, C. T. Gardner..... 18,388
 Bag and twine holder, J. H. Hunter..... 20,194
 " filler, A. Hay..... 18,266
 " for boxing exercise, A. R. Rumsey..... 20,675

Bag holder, W. J. Messervey..... 19,621
 " " and truck, W. James..... 20,184
 " " paper, C. M. Buland et al..... 20,018
 " holding machine, P. E. Ward..... 20,373
 Baking and roasting apparatus, W. Smith et al..... 19,406
 " tin, C. Schmidt..... 18,961
 Ball joint, universal, A. W. Von Schmidt..... 20,035
 Balance spring, T. B. Salter et al..... 20,397
 Bale tie, bag, bundle, D. E. Ladd..... 19,140
 Baling press, A. Buckman..... 20,101
 " " A. Fitts et al..... 19,508
 " " J. McIver..... 19,037
 Band cutter and feeder, F. Hawley..... 19,858
 " wire for boxes, etc., H. Frank et al..... 20,255
 Bandage, S. Perrin..... 20,210
 Bark cutter, J. Daigneau..... 19,295
 " grinding mill, J. T. Phillips et al..... 20,615
 " utilization of birch, E. Guay et al..... 19,727
 Barrel, J. H. Roy et al..... 20,288
 " head, securing, T. L. Tetamore et al..... 18,830
 " heading machine, W. Rand, Jr..... 19,376
 " jacketed, for transportation, L. Frits..... 18,461
 " pulp, W. Mears..... 20,890
 " rack, W. Walter et al..... 19,636
 Basket splint machine, S. Oakman..... 20,878
 " wire, construction of, A. Greenwood..... 19,452
 Battery, galvanic, G. W. O. Harrs et al..... 18,228
 " secondary, electric, D. G. Fitzgerald..... 18,256
 " " W. Hochhausen..... 18,231
 " storage, C. G. Perkins..... 18,591
 Baths, G. Booth..... 20,895
 Bathing apparatus and commode, combined, Q. S. Backus..... 19,078
 Searing, anti-friction, P. Brounley..... 20,621
 Bed bottom, A. L. Jaynes..... 18,918
 " " frame-for, D. Kuowilton..... 19,941
 " " spring, H. Benedict..... 18,402
 " " J. M. Keith..... 19,080
 " " O. L. Fuller..... 19,996
 " " C. M. Burk..... 20,216
 " and spring fram- for, B. Taylor..... 20,618
 " spring, P. Fraser..... 19,788
 " " B. Swayse et al..... 20,486
 " " connection, B. Burnell..... 19,310
 " " S. K. Butterfield..... 19,598
 Bedstead and dressing table, J. W. Jones..... 18,909
 Bee-hive, A. Fraley et al..... 18,700
 " T. P. McCormick..... 19,868
 " wintering apparatus, A. Marshall..... 20,388
 Beer cooler, C. A. Barth..... 18,949
 " " V. Whilkstml..... 18,982
 " cooling apparatus, L. Schlather..... 20,365
 Bell, M. M. Bowers..... 19,427
 Belt carrier, C. P. Peterson..... 20,405
 " conveyor, endless, E. H. Parker et al..... 19,847
 " fastener, D. Lovejoy..... 19,603
 " " E. C. Smith..... 20,186
 " " J. A. Roberts..... 20,562
 " " J. W. Pugh..... 20,426
 " for money, etc., A. H. Kopley..... 19,658
 Belting leather, F. E. Dixon..... 19,136
 Berth, self levelling, A. P. Pickmore et al..... 18,858

Bevel, carpenter's, B. F. Van Auerings et al.....	19,548	Brick, building, J. Lee.....	19,177
Bicycle, D. Kennedy.....	18,688	" burning, C. F. Theodore.....	20,028
" T. H. Robinson.....	19,771	" elevator, J. Tomlin.....	20,398
Billiard cushion, H. Nighlingale.....	19,803	" kiln for burning, D. Laemmle et al.....	20,406
Binder temporary paper, J. T. Shannon.....	19,018	" machine, A. Peel.....	20,594
Bird cage, E. Schultz.....	19,947	" " H. Martin.....	19,926
" J. W. Gregory.....	20,876	" " J. B. Foster.....	19,833
Bit brace, J. Watson.....	18,690	" " H. Konefes.....	18,689
" boring, H. E. Fuller et al.....	18,416	" " W. L. Gregg.....	19,718
" for boring wood, S. P. Graham.....	19,428	Bridge, iron and wood, G. & B. Bear.....	19,194
Blast furnace, V. Collati.....	20,098	Briddles, cheek lines for, G. A. Mace.....	19,929
Bleaching process, J. B. Thomson.....	18,614	Broiler, W. Hailer.....	20,881
Blood, composition for purifying, E. Ruelcot.....	18,829	Bronchitis, composition for, E. Ruelcot.....	18,880
Blower furnace, P. Richards et al.....	19,900	Brom, W. H. Paine.....	19,180
Blue, laundry, M. H. T. L. & J. E. Hargreaves.....	19,487	" holder, A. Fraser et al.....	19,160
Blue-ink compound, G. A. Conant.....	19,538	" " J. M. Van Horn.....	19,614
Boat, H. F. Combs.....	18,889	" support, W. T. Shaffer.....	18,747
" detacher, A. D. Poit.....	19,072	Brush, C. W. Meakins.....	19,026
" hull, T. T. Hodon.....	18,516	" boring machine, J. C. Howell et al.....	19,875
" sut marine, M. Jopling.....	18,998	" " R. C. Fellows.....	18,842
" sea and foot-board for row, J. J. Turpid.....	19,720	" fountain, T. Huntbach.....	20,051
" foot-rest for row, J. E. McIntyre.....	18,956	" paint and whitewash, J. A. Read.....	19,880
Body, display, J. M. Simpson.....	18,285	Bucket, rubber, C. H. Miller.....	18,933
Boller, locomotive, C. B. Coventry.....	20,252	Buckle, H. Kimball.....	21,404
" and steamboat, O. Rothrock.....	19,453	" J. J. Simons.....	20,597
" furnace, W. P. Hall.....	20,082	" J. D. Robinson.....	20,283
" low pressure, D. S. Robillard.....	20,439	" M. W. Biddig.....	20,080
" sectional, W. King.....	19,318	" W. H. Bides.....	20,114
" settlement collector for steam, D. Hanna.....	20,011	" for harness breaking, R. S. Boulter.....	19,610
" steam, J. B. Hannay.....	18,535	" harness, J. A. Gavitt.....	19,730
" and water, E. Gurney et al.....	20,029	Buggy, case, physician's, J. B. Vaughan.....	20,246
" removal of scale in, G. Dawide.....	19,269	" gear, H. Conison.....	19,778
" tubes, W. H. Baldwin.....	18,620	" top, A. M. Cochran.....	20,013
" wood pulp, D. O. Francke.....	20,080	" attachment for, C. Champlon et al.....	19,926
Bolton plate, L. J. Brandon et al.....	25,512	" shifting rail, J. B. Hill.....	18,878
" wagon, A. G. Wilbur.....	18,523	Building, fire proof, G. F. Wright et al.....	20,629
Bolt, strik-er for wash, E. W. Edcott et al.....	18,281	Burglar alarm, F. D. Hill.....	18,446
Book, black leaf check, E. L. Burwell.....	20,400	" " H. Ferris.....	20,440
" cheque, C. E. Sprague.....	18,226	" " catch, R. G. Vanzer.....	19,500
" steel, D. D. Bowman.....	19,083	" " electric, H. C. Rouse.....	20,663
" leaf holder for, A. S. Flint et al.....	19,185	Burial apparatus, A. B. Morrison.....	21,414
Book, G. B. Farmer.....	20,089	Busb roller, J. Nichols et al.....	20,178
" T. Kennedy et al.....	18,757	Buckle, C. W. Highy.....	18,905
" and shoe brusher, S. A. West.....	19,067	Butter dish, J. D. Lucas.....	18,803
" sifter, machine for, S. Ruel.....	19,559	" and pucker, A. Edwards.....	18,805
" loading, G. Bolvin.....	20,007	" tubs, G. Garnett.....	20,191
" legs or other beams, machinery for hauling, L. Allen.....	20,322	" worker, W. F. & M. H. Water.....	20,385
" or glove fastener, G. Vallant.....	18,511	Button, G. W. Prentice.....	19,912
" W. Brown.....	18,410	" C. F. Bailey et al.....	18,808
" and shoes, E. H. Luckley.....	19,202	" J. Bird.....	19,282
" " E. Blunt.....	21,128	" N. C. Newell.....	18,381
" " J. H. Parker et al.....	18,528	" R. Buchman.....	18,301
" " M. R. Kibbidge.....	18,511	" and fastener, The Patent Button Co.....	20,119
" " N. J. Cole et al.....	18,581	" attaching, G. W. Prentice.....	20,007
" " Q. B. Kifer et al.....	18,250	" " T. F. Atwood.....	20,800
" " T. L. Cook.....	19,870	" fastener, C. L. Farnsworth.....	18,789
" " " E. Kempshall.....	20,010	" " fastening, C. B. Madell.....	19,598
" " " M. R. Kibbidge.....	18,510	" or stud fastener, H. F. & E. A. Baxter.....	18,933
" " " machine, J. E. Muzlinger.....	19,217	" and stud fastener, T. W. F. Smith.....	19,110
" " rubber, T. M. Shepard.....	18,153	" securing, W. F. S. Inney.....	18,276
" device for trimming the sides of, J. Weist.....	20,098	" setting machine, The Pratt Mangle Co.....	20,488
" etc., fastening for, T. J. Johnston.....	20,118	" " mechanism, The American Spring Bul-	
" etc., machine for making the uppers and soles of, S. W. Robinson et al.....	19,962	ton Co.....	20,682
" machine for cutting pegs from, Q. Barber.....	18,950	Cabinet for watch cylinder, C. H. Daugherty.....	18,608
" shoes and stockings, machine for making, J. Brandy.....	18,084	" kitchen, H. Hanna et al.....	19,145
Boots, shoes or stocking felt, L. Bach.....	19,475	" postal, L. C. Gray.....	19,111
B-ring machine, Z. C. Phillips.....	19,438	Cable, winding machine, R. S. Waring.....	18,277
Bottle, feeding, J. Thomas.....	18,734	" support, electric, A. S. Weaver et al.....	18,229
" stopper, G. D. Corey.....	18,905	" telegraph, etc., J. C. Chambers et al.....	18,334
" " M. Joo.....	19,931	Calculating machine, interest, J. R. Nicholson.....	18,795
" for aerated liquids, method of stopping, H. Cochrane et al.....	20,556	" wages, table for, H. F. Kierstead.....	18,906
Bottling apparatus, E. M. Turner.....	19,998	Calculator, percentage, S. J. Tucker.....	18,668
Bowl, sugar, H. McCarthy.....	18,067	Calendar and business indicator, G. H. Preston.....	18,896
Bows and scarfs, manufacture of, W. H. Williamson.....	19,895	Can ending machine, E. & O. W. Norton.....	18,841
Box, H. A. Saw et al.....	19,553	" sealing sheet metal, D. A. Jones.....	19,987
" carbonizing, C. G. Perkins.....	18,478	Cans, crimping the ends of, W. West.....	18,576
" for chipping eggs, E. P. A. ger, Sr.....	20,297	" machine for soldering, G. A. Marsh.....	19,778
" braiding machine, F. L. Verkamp et al.....	18,776	Cant hook, C. W. Lord.....	20,161
" brake, for pulleys, etc., J. C. & C. H. Tise.....	18,914	" lever, T. Talbot.....	18,994
" bran and press, for soaking, A. L. Dutton.....	19,061	Car, travelling, W. E. Wood.....	18,659
" machine for dust, G. L. S. Hogeboom et al.....	19,920	" Capstan, B. G. Luther.....	20,531
Braunite, process for converting, A. Markham.....	18,890	" Capstan motor, of gelatine, J. Koehlel.....	19,007
Bread, mode of manufacturing, M. Croydon.....	19,206	Car, T. L. Wilson et al.....	18,345
Breakwater, E. C. G. Thomas.....	18,301	" axle die, J. Smith.....	19,085
		" " journal lubricator, G. F. Gear.....	18,893
		" " " for, W. W. Buckman et al.....	19,851

Car axle lubricator, C. P. Holmes.....	18,986	Car stock, M. H. Walker.....	18,615
" " track, C. C. Epton.....	19,644	" street indicator, T. Beaver.....	20,421
" ballast, T. P. Cordrey.....	18,380	" truck, A. E. McConnell.....	18,808
" brake, A. S. Webster.....	18,708	" " J. Huxon et al.....	18,824
" " C. V. Rote et al.....	18,368	" " L. K. Jewett.....	18,742
" " J. Harding.....	20,529	" wheel, The Alwood Hemp Car Wheel Co.....	18,667
" " shoe, J. J. Luppitt.....	20,618	" " T. Thurber.....	20,258
" " J. M. D'Witt.....	18,237	" " W. I. Lindsay.....	18,982
" " W. Gill.....	19,030	" " W. W. Snow.....	19,328
" " and coupler, D. Green.....	18,440	" " and axle, S. J. Stevenson.....	17,754
" buffer, T. L. McKean.....	19,373	" " casting, W. Wilmington.....	20,617
" " for preventing accidents, J. B. Stevenson.....	19,400	" " chill, J. N. Barr.....	19,175
" " device for preventing lost motion in draw heads, W. B. Turner.....	19,249	" " " W. Wilmington.....	18,741
" coal, J. D. Madors.....	18,977	" " tire, J. A. Facer et al.....	18,670
" coupler, A. A. Dailey.....	18,799	Car, adjustment of draw bars, G. O. S. Conway.....	19,880
" " C. E. Mark.....	19,009	" " bars for dump, W. H. D. Newth.....	18,010
" " C. O. & L. Barnes.....	19,402	" " gate for, E. L. T-vik.....	18,428
" " F. Richmond.....	20,287	" " ventilating, Mann's Boudoir Car Co.....	18,229
" " G. Byrd.....	18,538	" " window.....	19,893
" " J. Hattley.....	19,711	Carbonate of lime into phosphate of lime, converting, J. O'x.....	18,529
" " J. K. Nice et al.....	19,018	Carbonizing box, C. G. Peckham.....	18,476
" " M. C. Crowell et al.....	20,279	Carburetter, metrical, W. M. Jackson.....	18,672
" " R. Blaney.....	18,705	Carling engine cylinder, G. & E. Ashworth et al.....	20,626
" " R. Smith.....	19,444	Carding machine, C. E. Whitworth et al.....	19,881
" " W. Davis et al.....	20,283	Carpet fastener, M. F. Strathy.....	20,601
" " W. V. Brown et al.....	18,673	" " stretchers, S. Meckham.....	20,482
" " and buffer, C. Browning et al.....	19,027	" " sweeper, A. J. Wood.....	20,182
" " coupler, A. McWilliams et al.....	18,253	" " " G. W. Ziegler.....	19,811
" " B. W. Barry et al.....	19,425	Carriage, convertible, A. K. Felton.....	20,889
" " C. B. Downing et al.....	19,028	" " curtain fastening, W. Welker et al.....	19,594
" " C. E. Mark.....	18,408	" " door opening and closing device, H. W. Yunley.....	20,968
" " C. M. Cancy.....	19,262	Carriage gear, J. B. Armstrong.....	20,130
" " C. P. Johnson et al.....	19,319	" " material for covering, E. W. Harra.....	19,881
" " C. W. Spencer.....	19,751	" " running gear, D. Ackland.....	19,966
" " D. Fraser, et al.....	20,807	" " " G. W. Earle et al.....	19,536
" " D. L. Hays.....	20,568	" " " J. Field.....	19,045
" " D. L. Richards.....	18,074	" " shaft support, G. C. Eustman.....	19,246
" " D. P. Kahl.....	18,315	" " side spring, A. P. Marshall.....	20,286
" " E. M. Hobbs et al.....	18,248	" " spring, C. C. Batley.....	18,945
" " N. Inford.....	19,589	" " " H. W. Hamelle.....	19,764
" " F. M. Wright.....	18,717	" " " J. J. Fetzner.....	20,688
" " F. St. Coeur.....	19,827	" " " S. Atkinson.....	20,159
" " F. V. Isoire dit Provençal.....	19,115	" " top, R. L. Kelt.....	20,087
" " G. E. Hoadley.....	20,523	" " " joints, T. F. Van Luyen.....	20,302
" " J. B. Willaman et al.....	20,483	" " two wheeled, G. E. Spure.....	18,993
" " J. C. Bryan.....	36,817	Cart, road, J. C. Bach.....	18,980
" " J. C. Mitchell et al.....	19,084	Cartridge, The American Electric Arms and Ammunition Co.....	20,574
" " J. D. Kieley.....	18,908	Cartridge implement, E. R. Darling.....	18,724
" " J. Gnettel.....	18,356	" " loading machine, F. L. Chamberlain.....	19,787
" " J. G. Peace et al.....	19,698	" " reloading machine, F. A. Winter.....	18,766
" " J. L. Bias et al.....	19,008	" " shells, manufacture of, La Société Anonyme Dynamite Nobel.....	19,725
" " J. LeCourneau.....	18,328	Cash carrier, G. H. Spring.....	20,628
" " J. L. Williams.....	18,866	" " " H. H. Hayden.....	19,860 19,961 20,065 20,455
" " J. Murray et al.....	18,433	Cash and Parcel carrier, H. L. Randle.....	20,823
" " J. P. Lancaster.....	20,115	" " " J. Burns.....	19,572
" " J. Skinner.....	188,007	" " conveying apparatus, J. W. Flagg.....	18,697
" " M. J. Dougherty.....	19,824	" " register, F. M. Tague et al.....	18,684
" " M. Lemieux et al.....	19,265	Caskets, lowering into graves, J. Burns.....	19,797
" " P. E. Mignault et al.....	19,268	Caster attachment, H. McDonald.....	18,528
" " R. D. Southwood.....	18,791	" " trunk, S. M. Michelson.....	19,855
" " T. C. Jones.....	19,471	Castings, moulds for, M. R. Moore.....	19,916
" " T. F. Byron.....	18,699	" " steel, The Francis Man'g. Co.....	19,978
" " T. Gates et al.....	18,530	Cellulose manufacturing apparatus, A. Mitscherlich.....	20,481
" " The Archer Automatic Car Coupler Co.....	19,341	" " stamp mill for, A. Mitscherlich.....	20,446
" " T. L. McKean.....	20,613	Cement, B. W. Lesley.....	29,224 19,325
" " T. Sponner et al.....	20,651	Centre board, folding, for boats, W. Childs.....	19,712
" " W. H. Adams et al.....	19,642	" " for vessels, W. O. Christensen.....	19,015
" " W. H. Thurmond.....	19,707	Centrifugal machine, H. W. Lufferty.....	20,516
" " device, J. N. B. Denver.....	19,695	" " separator, W. P. Northway et al.....	18,877
" " link, J. Warren et al.....	18,783	Chain link, drive, T. F. Hall.....	19,922
" " and draw bars, G. J. Johnson et al.....	19,589	Chair spring, A. H. Ordeway.....	19,617
" door, T. Lee.....	19,187	Chair and bed, child's, J. F. Shaw.....	20,576
" " lock, V. A. Krepps.....	20,478	" " soft bed, combined, W. P. Beun.....	18,786
" " seal lock, J. M. Edgar.....	19,690	" " oscillating spring, H. B. Wells.....	20,476
dumping, S. D. King.....	18,426	Chart dress, L. A. Coll.....	18,243
gate for railway, E. L. Tevis.....	18,494	" " frame, S. C. Rogers.....	19,508
mover, C. T. Barnes.....	20,513	" " and map stand, H. E. Hayes.....	19,243
platform, S. M. Berry.....	19,953	Check book, blank leaf, T. G. Cooper.....	19,943
railway, G. O. S. Conway et al.....	18,792	Cheese bandage and box, F. H. Brenton.....	19,089
" " T. L. Wilson et al.....	19,975	Cheese hoop, G. W. H. y.....	19,167
" " W. H. Holmes.....	19,975	" " press.....	19,561
refrigerator, C. C. Palmer.....	18,486	Cheque book, C. E. Sprague.....	18,325
replacer, W. Thomas et al.....	18,798	Chimney, metallic, S. R. Copeland.....	19,268
roofing, A. W. Gilmore.....	20,199		
seal, F. G. Hunter.....	19,911		
" " T. H. Malone et al.....	19,911		
spring, G. F. Godley.....	19,703		

Chimney, protector, I. A. Smith et al.....	19,184	Cooking utensil, J. D. Storie.....	18,569
" top and ventilator, J. D. Wright.....	19,020	" steam, A. S. Fisher.....	19,644
Cholera, etc., composition for, M. M. Lamontagne.....	19,990	Copying composition, H. S. Myers.....	20,644
Chuck lathe, for gate valves, A. Weber.....	20,275	Corn cutter, green, S. D. Warfield.....	19,885
" socket, S. P. Graham.....	20,475	Corn and bunlan shield, J. J. George.....	18,575
Churn, A. L. Burke.....	20,223	Corn planting machine, J. M. Warner.....	19,507
" J. F. Hart.....	18,151	Corset, I. M. Van Stone et al.....	18,316
" J. L. Taylor et al.....	19,843	Corset clasp, M. H. Henins et al.....	18,343
" J. Kearney.....	18,846	" etc., elastic sections, etc., for, W. R. Hardy.....	18,604
" R. R. Shire.....	19,049	Cots and hammocks, J. C. Dodge.....	18,851
" S. L. Nelson.....	19,013	Cotton, process for treating, W. H. Martin.....	20,402
" S. W. Holmes.....	19,472	" seed, process for treating, United States Cotton	
" W. H. Dryer.....	19,842	" Seed Cleaning Co.....	19,411
" W. H. Stern.....	19,843	Cotton seed, treatment of, J. F. O'Shaughnessy.....	18,423
" W. M. Jones.....	18,558	" treatment of, J. J. Green.....	19,671
" covers, device for securing, A. E. Atax.....	20,078	Cough, composition for, E. Racicot.....	18,880
" mechanism, E. Bertrand.....	18,852	Counter, game, D. K. Horton.....	18,545
Cider press, H. Sells.....	19,884	Counters, forming heel, N. J. Coté et al.....	18,531
Cigar bunching machine, T. E. Roberts.....	20,107	Covers for vessels or packages, sheet metal, J. F. Rusk.....	20,002
" holder, G. W. Keith.....	18,865	Cradle and saw, J. W. Hill.....	18,952
" Wrapper, cutting machine, H. Grunhagen.....	19,675	Crane, S. H. Edgerly.....	18,274
'Cigarette, machine, J. Burns et al.....	19,011	Crate for dairy products, etc., D. Holland.....	19,968
Cider sifter, J. Carmichael.....	19,081	Cream, apparatus for raising, A. Scott.....	20,424
Clamp, P. F. Corbett.....	19,398	" machine for transporting, F. H. Stanley et al.....	19,433
" floor, H. E. Hatch et al.....	20,395	" method of raising, H. W. Kellogg.....	18,804
" friction, H. Sells et al.....	20,192	" purifying process, W. Morton et al.....	18,612
Clasp, E. Binley.....	20,187	Creamer, C. B. Thompson.....	19,677
Clay, colouring and hardening, J. Ambuhl.....	18,164	" G. Sturgeon.....	19,921
" crushing roller, J. H. Penfield.....	20,584	" G. F. Simmonson.....	19,072
Clay pigeon, The Ligow-ky Clay Pigeon Co.....	20,881	" G. J. Ainsworth.....	19,850
" tempering machine, J. F. Dornfeld.....	19,228	" J. Mathews.....	19,866
Clock, H. L. Narramore.....	19,421	" L. W. Harris.....	18,947
" T. Tremblay.....	19,776	" L. W. and D. H. Morrison.....	19,827
Clock, electric, J. F. Kettle et al.....	18,984	" W. Howe.....	19,016
" S. Schisgall.....	18,794	Cribbing plate, horse, A. Quinque.....	18,232
Clod crusher, A. Peterson.....	19,522	Cultivator, E. T. Gregg.....	19,030
Closet, earth, J. Cameron.....	20,045	" H. L. Smith.....	19,503
Closets, apparatus for operating dry earth, W. Heap.....	20,537	" cord, J. H. Young.....	20,429
Cloth pressing machine, J. Shearer.....	19,858	Cuffs and wristlets, B. E. Northrup.....	18,951
" " R. Patrick et al.....	19,056	Cultivating apparatus, J. Cooke.....	18,987
Clothes dryer, J. Bates.....	19,514	" and harvesting beans, machine for, W.	
" drying machine, F. Lockie.....	20,234	" Carver.....	18,818
" line pulley, F. X. St. Charles.....	19,490	Cultivator, J. G. Trump.....	19,787
" lines, appliance for, F. L. D. Pearson et al.....	19,246	" or shoe, C. F. Bell.....	18,585
" machine for mangling, H. R. Ives.....	18,585	" thill, D. L. Barnum.....	18,358
" out of wash boiler, implement to lift, W. Ad-		Culvert and seal trap, J. Tomlinson.....	18,559
" dison.....	18,685	Curved agitator implement, D. M. Macpherson.....	20,463
" washer, J. B. Bell.....	18,434	Current wheel, H. Carré.....	19,356
Clothing sample, E. and W. J. Clayton.....	18,836	Curry comb, A. W. Cox.....	20,466
Clutch device, A. Tétraut.....	20,137	" " F. U. Canfield.....	19,120
" friction, A. M. Beekie.....	18,852	" " H. H. Warren.....	19,083
" " J. H. Blessing.....	18,829	Curtain fixture, A. Sweetland.....	19,754
" " W. H. Rascoe.....	19,741	" " G. E. Swan.....	20,180
" hook, C. Green.....	19,182	" " J. C. Doty.....	19,465
Coal chute, J. E. Clifton.....	19,399	" " spring rollers for, B. Handforth.....	20,076
" preventing the formation of clinkers in, W. Case.....	19,890	Cutlery, J. Rogers & Son.....	19,886
Coat sleeve, C. F. Butterworth.....	19,204	Cylinder lubricator, locomotive, C. B. & C. H. Hodges.....	19,990
" waterproof, T. Robitaille.....	18,870	Decoy duck, E. R. Humphreys.....	19,312
Cobalt, etc., extracting oxides of, H. Herrenschmidt et al.....	18,881	Dental engine, hand piece, J. H. Lincoln et al.....	19,146
Cock, gauge, W. F. Granger.....	20,625	" plate mould, J. H. Hayford et al.....	19,323
" invisible steam escape cylinder.....	19,147	Dentistry, L. T. Sheffield.....	19,547
" stop, J. H. Blessing.....	20,052	Designs from paper, and to sheets of tin, &c., transfer-	
" gauge, L. B. Fulton.....	18,834	" ring printed, H. Mathieson.....	19,322
Cockle machine, M. Crawford.....	18,291	Designs in glass, moulding, A. H. V. Bazerque et al.....	18,505
Coffee, removing tannic acid from, C. H. Remer.....	19,846	Desiccating apparatus, H. Breer.....	20,184
Cold, composition for, E. Racicot.....	18,300	Desk, portable, A. Johannesen.....	19,841
" cough, bronchitis, composition for, M. M. Lamontagne.....	19,988	Die and die-block for forge hammers, J. H. Baker.....	19,806
Collar fastener, horse, E. S. Platt.....	19,767	Die shaping, F. A. Jiddings.....	20,367
" horse, R. Porter.....	19,992	Dish, T. B. Russell.....	20,113
" pad, horse, W. J. Cochran.....	19,168	Disk, polishing, J. W. Smith.....	20,120
Colouring matter, machine for applying, The United States Dyeing Co.....	19,408	Display body, J. M. Simpson.....	18,285
Comb, W. Crabb.....	20,464	Distilling apparatus, wood, C. S. Nellis et al.....	20,147
Commode attachment, C. B. Basford.....	18,437	Ditches, machine for forming, C. H. Case et al.....	18,739
Compass, clinometer, E. F. MacGeorge.....	19,131	Ditches making, M. H. Eaton.....	18,060
" self-registering, R. Pickwell.....	19,184	Ditching machine, M. Milner.....	20,175
Concentrator, ore, J. Miller.....	18,431	" " R. H. Nogar.....	19,589
Condenser and separator for the vapour of petroleum oils, J. and G. Brake.....	18,413	" " road grading, J. W. Otterman.....	19,785
Condiment for table use, R. Heron et al.....	19,726	Door bolt, R. G. Vassar.....	19,489
Conductor, water, G. Ringham.....	19,130	Door catch, J. J. Lamb.....	19,909
Conductor of liquids cut off for, W. F. B. Fisher.....	18,415	" closer, W. A. Howell.....	19,872
Conduit, underground, J. S. Dubois.....	18,491	" hanger, C. Brinton.....	20,449
" for electric wires, J. S. DuBois.....	18,895	" " barn, W. Cronk.....	18,480
" lined, C. Detrich.....	18,425	" " sliding, B. J. Cloes.....	20,328
Conveyor for grain and flour machines, E. S. Edmon-		" holder, W. H. Herricks.....	20,151
" sen et al.....	19,584	" knob, illuminated, R. D. Huntley.....	19,683
		" latch, E. N. Porter.....	18,967
		" lock, W. F. Morgan et al.....	20,420
		" " U. Caron.....	20,655

Door lock car, J. H. Fisher.....	20,581	Electric machine dynamo, S. Z. de Terranti et al.....	19,808
“ mat, H. T. Windt.....	19,254	Electric motor, L. W. Stockwell.....	18,562
“ spring, J. W. Moore.....	18,649	“ regulator, C. G. Perkins.....	18,591
“ “ P. McAleer et al.....	19,941	“ switch “ “.....	18,470 18,478
“ “ W. H. Sherr et al.....	18,800	“ “ and lamp, C. G. Perkins.....	18,447 18,477
“ “ W. S. Barlow.....	18,524	“ wire, C. McIntire.....	19,575
“ stop, J. H. Runyan.....	20,124	“ “ conduits for, J. S. DuBols.....	18,395
Doubletree, W. J. Danby.....	18,527	“ “ housing and insulation of, under ground, C. C. Gilman et al.....	18,452
Dovetail shell, N. Burdick et al.....	18,440	Electric wire insulators, J. F. Martin.....	19,788
Draft bar for sleighs, D. N. Barker.....	18,544	“ wires, underground conductor for, R. M. Hunter.....	19,170
“ equalizer, J. W. & A. B. Lawler.....	18,365	Electrical circuit, C. E. Allen.....	18,858
Draw head device for preventing lost motion, W. E. Turner et al.....	19,249	“ “ F. N. Grisborne.....	19,786
Draw bridge signal, J. N. Williams.....	19,870	“ exercising apparatus, J. H. Shaw.....	18,768
Drawer, manufacture of, J. O. Tracy.....	18,447	“ haulage system, W. E. Ayron et al.....	19,510
Drawing knife, J. S. Cantelo.....	18,482	“ wires, housing and insulation of, C. C. Gilman et al.....	18,452
Dredge, B. R. Osgood.....	19,149	“ “ wires supporting, J. W. Tinsbun.....	18,587
Dredger, J. A. Ball.....	19,854	Electro magnet and armature, I. A. Timmis et al.....	18,989
Dredgers and excavators, hopper for, J. A. Ball.....	18,662	“ magnetic apparatus, C. Oumlings.....	20,456
Dredging machine, A. W. Von Schmidt.....	20,056	Electrophone, J. A. Kingsbury.....	19,426
Dredging and excavating machine, H. E. Hakh.....	20,326	“ trans-mitter, J. A. Kingsbury.....	19,957
“ machinery, H. B. Augell.....	19,288	Elevator gearing, C. E. Pils.....	20,451
Dress maker’s rule, H. Wallace.....	18,272	“ gate, S. J. Laughlin.....	18,234
Dress or bodice fronts, E. Whaples.....	18,241	“ mercantile, C. A. Hofsnough et al.....	19,991
Drying apparatus, J. F. Johnstone.....	18,849	“ and ventilating shaft, fire proof, C. C. Gilman.....	20,610
Drying kiln, G. F. Speer.....	18,397	“ safety catch for, F. A. Weeks.....	19,818
Dumping bottom, carts, ash pans, &c., W. H. D. Newth.....	19,091	Embalsming dead bodies, A. S. Lovett.....	19,761
Dust arrester, A. Backus.....	18,992	Embosling machine, double, M. R. Fletcher et al.....	20,532
“ collector, B. F. Ortman.....	19,521	Embosling surfaces, J. J. Sachs.....	18,590
“ “ The Milwaukee Dust Collector Man’g. Co.....	20,468	Embroidering machine, C. W. Waseon.....	19,907
Dust from air apparatus for separating, The Molotype Man’g Co.....	19,112	“ “ J. Johnson.....	19,997
Dust pan, D. A. White.....	18,521	“ “ J. L. Parks.....	18,786
“ “ F. W. Carpenter.....	19,337	Engine direct acting, C. O. Worthington.....	18,534
“ “ J. S. Folsom.....	19,238	“ “ hydropneumatic, L. G. Cook.....	20,094
Dyeing, mordant for, T. S. Howell.....	18,449	“ rag, J. Hoyt.....	19,280
Dynamometer, The Emery Scale Co.....	19,507	“ revolving cylinder, J. J. Blair.....	18,598
“ “ pressure and vacuum gauge, The Emery Scale Co.....	20,507	“ steam, G. M. Conway.....	18,396
Dyspepsia, composition for, E. Racicot.....	18,830	“ “ W. E. Badger.....	18,548
Earth loosening, S. I. Haseltine.....	18,512	“ “ F. D. Cummer.....	18,554
Edger gang saw, J. A. Robb.....	18,809	“ “ and air, H. A. Depp.....	20,441
Egg carrier, R. H. Harris.....	19,077	“ “ pumping, C. Sints.....	20,554
Egg preserver, G. Conant.....	18,248	Engines, condensing head for the exhaust pipe of, W. C. Lyman.....	18,677
Egg process for preserving, F. J. Praddex.....	20,280	Engines-traction attachment for road, A. S. H. noom.....	19,969
Ejector, W. Hutton.....	20,470	Engraving machine, G. M. and J. C. Guerrant.....	19,892
Electric alarm, circuit closer for, L. A. Brigel.....	18,458	“ “ J. Beam.....	20,621
Electric block signal for railway, S. J. Swayze.....	19,584	Envelope, K. H. Pedrick et al.....	18,368
“ cable, T. G. Turner.....	18,241	Equalizer, draft, J. W. and A. B. Lawler.....	18,368
“ cable, R. S. Warning.....	18,248 18,249 18,240	Evaporating apparatus, J. A. Mathieu.....	20,141
Electric cable or conductor, L. A. F. Hermann.....	18,764	“ sorghum, P. S. Ewins.....	20,641
“ “ support, A. S. Weaver et al.....	18,228	Excavator, C. Howard.....	19,701
“ circuit maker and maker, C. G. Perkins.....	18,544	“ and dredge, R. R. Osgood.....	18,598
“ “ and indicator for temperature, R. Hewett et al.....	18,262	“ grapple, W. Burkett.....	18,838
Electric circuit, switch board for, The Bell Telephone Co.....	20,089	Explosive compound, Toe Bend Roche Power Co.....	18,568
Electric commutator, E. Thomson.....	18,447	“ “ “ “ “ “ 18,497 18,810 18,811	18,568
“ commutator and lamp, C. G. Perkins.....	18,655	Explosive compound, utilizing R. Pashon et al.....	18,599
“ current regulator, E. Thomson.....	18,993	“ “ T. W. Russell et al.....	18,814
“ cut out, C. G. Perkins.....	19,747	Eyebolt machine, L. J. M. Mottisen.....	18,776
“ lamp, E. L. Roussy.....	20,054	“ “ D. L. Tice.....	19,688
“ “ E. Thomson.....	18,819 19,029	“ “ J. Fox.....	20,240
“ “ F. Krizek et al.....	18,249	“ “ and watch holder, W. A. Nichols.....	19,716
“ “ N. S. White et al.....	18,647	“ “ flexible air-tight, D. G. nese.....	20,444
“ “ E. Thomson.....	18,769	Eyesight, art of protecting, W. E. Olegg.....	19,989
“ “ T. L. Kay.....	20,540	Eyes, composition for sore, M. M. Lamontagne.....	20,598
“ “ and switch, C. G. Perkins.....	18,447	Fabric, double embossed, M. R. Fletcher et al.....	20,830
“ “ carbons for, A. Bernstein.....	19,298	“ sheet metal, J. Kinney.....	19,308
“ “ C. G. Perkins.....	18,471 18,474 18,475	“ apparatus for cutting pile, C. Coupland.....	19,321
“ “ safety shunt switch for, E. Thomson.....	19,245	Fabrics, composition for cleaning and renovating, C. F. Clark et al.....	19,198
“ “ etc., switch for, E. Thomson.....	19,211	“ machine for crimping, F. Brompton.....	20,596
“ “ light, manufacture of carbons lectrodes for, J. A. Moffitt et al.....	20,385	“ manufacture of, W. Jackson.....	18,719
Electric lamp lighting, circuit cut out for, W. M. Thomas et al.....	19,287	“ textile, E. Morrison et al.....	19,763
Electric machine dynamo, C. Bichter.....	19,241	“ “ M. H. Pulaski.....	18,247
“ “ “ “ E. Thomson.....	18,488	“ waterproof, fluid for making, O. B. Warner.....	17,436
“ “ “ “ J. Gray.....	20,321	“ “ “ “ W. H. Horner et al.....	20,028
“ “ “ “ N. H. Ederton.....	19,665	Fan, J. Capell et al.....	20,150
“ “ “ “ T. L. Kay.....	20,163	“ rotary, J. M., Seymour.....	19,302
“ “ “ “ W. Hochhausen.....	19,676	Fanning mill, E. J. Devina.....	18,745
“ “ “ mechanism for driving, J. B. Markie et al.....	18,525	“ “ S. McClure et al.....	17,431
Electric machine, magneto and dynamo, A. de Meuron, et al.....	18,562	“ “ W. A. Bickford.....	18,914
		“ “ and grain and seed separator, A. W. Kendrick et al.....	19,818
		Fare box, E. Lusher et al.....	18,979
		“ “ J. R. Hare.....	19,810
		“ “ T. B. Stewart.....	18,584
		Fastener, blank paper, H. J. Morgan.....	19,841

Faucet, H. H. Orbits et al.....	20,116	Fire-escape ladder, A. W. Cowell.....	18,297
" self-closing, A. Prier et al.....	18,771	" or life preserver, M. B. Ingersoll.....	19,073
Featherbone, E. K. Warren.....	20,110	Fire-extinguisher, J. W. Bishop.....	20,287
Feather renovator, C. F. Mule.....	19,840	" alarm apparatus for, C. C. Worth-	
Feed, box for horse, A. L. Kane.....	19,085	ington.....	20,689
" cutting machine, H. C. Slayter & Co.....	19,417	" automatic, C. C. Walworth et al....	18,832
" water, automatic regulator for steam boilers, J. Christman.....	18,671	grenade, J. J. Harden.....	19,368
" heater, O. P. Mangan.....	20,004	" hand grenade, R. P. Pattison.....	20,393
" " and purifier, A. F. Ward.....	19,681	Fire, extinguishing, hand grenade for, J. J. Harden....	18,309
" " " " F. Sturtevant.....	20,678	Fire killer, L. A. Jacques.....	20,552
" " and smoke stack, J. Armstrong.....	19,314	" kindling, E. J. Dunbar.....	18,337
" regulator and alarm for steam boiler, F. Browne et al.....	20,423	" place, C. L. Page.....	19,038
Felly and tire for wheels, P. W. McGuire.....	18,891	" " J. H. Burnham.....	18,405
Felly plate for wheels, P. W. McGuire.....	19,001	Fishing reel fastening for rods, G. L. Bailey.....	19,542
Fence, A. Brown.....	19,842	Flange attachment for pots, &c., V. L. Wilson.....	19,195
" A. C. Scarr.....	19,550	Flaring docks and piers, &c., J. Stanfield.....	20,215
" F. M. Comstock et al.....	20,084	Flooring for buildings, &c., D. Ham.....	20,000
" F. W. Dunn et al.....	20,685	" wood, A. Putney.....	19,613
" J. Elliott.....	19,181	Flour bolt, J. E. Fluke.....	19,082
" J. Newton.....	19,025	" " J. J. and E. T. Faulkner.....	18,601
" W. C. Scarr.....	19,422	" " O. M. Morse.....	20,102
" farm, C. T. Spillburg.....	20,635	" bolting apparatus, The Knitoverbooker Co.....	20,096
" fastener, wire, C. E. Griffith.....	19,216	" dressing machine, J. and J. Riddel.....	19,532
" lock, A. C. Scarr.....	18,552	" " " J. E. Wilson.....	19,509
" picker, F. M. Constock et al.....	20,083	" " " M. Crawford.....	18,290
" portable, J. Eastwood.....	18,516	" " " W. D. Gray.....	18,826
" post, D. Schwelkhard.....	18,522	" packer for iron, &c., J. and B. C. Tryalger.....	18,906
" " E. C. Jones.....	20,442	Flooring paper, E. B. Martindale.....	21,310
" " J. W. Davy.....	20,520	Flue cap, ventilating, H. L. Day.....	19,408
" " T. S. Sharn.....	19,014	" cleaner, boiler, R. P. Gerlach.....	19,348
" driving, H. and B. Dixon.....	18,385	" hot air, J. A. Watrous.....	18,885
" posts, D. Schwelkhard.....	18,522	Fly hook, fishing, T. B. Mills.....	19,273
" wire, J. B. Oliver.....	19,012	Foot power, H. Field.....	19,482
" " W. B. Hitelet.....	20,041	Fog alarm, The Neptune Fog Horn Co.....	20,480
Fences, machine for erecting wire, J. C. Doble.....	18,972	Folding box, P. Fagan.....	20,492
" making, C. A. Everett.....	18,009	Forging machine, radial, J. C. Richardson.....	19,258
Fertilizer distributor, J. S. Kemp.....	19,883	Fork or spoon, table, T. W. Foster.....	20,367
Fertilizing material, F. L. Harris et al.....	20,155	Fountain tip, A. Weber.....	20,436
Fifth-wheel for bugies, R. Green.....	18,541	Frames, corner fastening for, J. E. Stuart.....	19,385
" vehicle, The Fallsten Fifth-Wheel Co.....	19,516	Freezing apparatus, E. Kells et al.....	18,288
" waggons, R. Green.....	18,541	Friction clutch, H. C. Crowell.....	19,891
File and document case, A. W. Volz.....	18,869	" gear, J. H. Totman.....	20,580
" blot and letter, M. B. Hurly.....	19,687	Fruit and vegetable parer and slicer, H. H. Molineux.....	19,322
" coupon, N. O. Cote.....	20,809	" dryer, S. L. Miller.....	20,152
" paper, H. J. Hoffman.....	19,088	" " The Steam Heat Evaporator Co.....	18,424
" " L. A. McCord.....	19,697	" " W. H. Laughend, et al.....	19,118
" three-square, C. M. Fairbanks.....	18,518	" " W. H. Phillips.....	18,802
" letter, W. H. Gilman.....	20,229	" evaporator, G. S. Grier.....	19,570
Filing machine, saw, D. Chambers et al.....	18,348	Fruits, piling and coring, J. W. Fisher.....	19,837
Filter, C. E. Chamberland.....	20,067	Fuel, hay and straw, W. Dwyer, et al.....	18,704
" J. A. Crocker.....	20,873	Fur-clipping machine, O. Simonson et al.....	18,795
" water, W. Ball.....	20,072	Furnace, H. W. Peaslee.....	20,008
Filtration, art of, J. W. Hyatt.....	18,892	" locomotive, L. P. French.....	18,888
Fire alarm and indicator, automatic, F. A. Simonds et al.....	20,490	" boiler, L. W. Van Duzan.....	18,561
" alarm, self-acting, S. A. Cornell et al.....	20,623	" converting, P. Manhe.....	20,224
Fire-arm, M. V. Kacer et al.....	18,805	" for distilling and carbonizing wood, J. A. Mathieu.....	19,869
" W. J. Kris et al.....	20,066	Furnace for steam boilers, hydro-carbon, A. H. Ship-	
" breech-loading, W. H. Whitney.....	20,314	man.....	20,329
" engine, horse power, M. D. Halney.....	20,241	" heating, D. W. Richardson.....	18,421
" steam, W. H. Haven.....	19,009	" heating, D. W. Robb.....	18,894
Fire-escape, A. J. Johnson.....	20,412	" " G. R. Scottes et al.....	18,648
" B. F. Bower et al.....	18,374	" " J. A. Waterous.....	18,835
" O. A. Roberts.....	19,476	" heating, tempering and annealing,	
" C. E. Baker.....	19,845	A. J. Nellie.....	19,005
" C. Kennedy.....	19,782	" hot air, P. H. Sims, et al.....	19,494
" D. B. Clymer.....	18,678	" hot water, E. Chanteloup.....	20,674
" E. Wellings et al.....	19,829	" hydro-carbon, O. D. Orvis.....	18,646
" E. L. Byron et al.....	20,261	" or stove, D. M. Graham.....	18,284
" E. R. Johnson.....	19,375	" ore roasting, J. Walker, et al.....	18,430
" F. O. Davis.....	18,763	" open hearth, steel melting furnace, O. K. Nugden.....	20,586
" G. F. Smith.....	20,129	" reducing, V. O. Han.....	19,023
" G. M. Kim.....	19,934	" and smelting metal, J. T. Morgan et al.....	18,921
" J. B. Smith.....	20,580	" regenerator, The Standard Vapour Fuel, Iron and Steel Co.....	19,435
" J. Dittrich et al.....	20,355	" steam boiler, E. Clark.....	18,741
" J. Ostworne.....	18,748	" straw burning, J. Abell.....	20,112
" M. J. Cook et al.....	20,452	" anti-rheum, The Standard Vapour Fuel, Iron and Steel Co.....	19,461
" O. Hansen.....	18,370	Fuses, safety, W. and J. E. Bringham.....	18,310
" R. Christie.....	18,469	Gas runner, A. H. Armstrong.....	20,550
" S. B. Hitz.....	21,014	Galvanic battery, G. W. O'Hara et al.....	18,323
" S. J. Stoffer.....	13,720	" cell, J. H. Shaw.....	19,207
The New England Fire Escape Co.....	19,070	" " po'e for, B. F. Blackhall.....	18,883
T. Macdonough.....	18,675	Game apparatus and cue, purloir, T. H. Enless.....	20,517
W. H. H. Downie.....	18,737	Gas apparatus, H. J. Rogers.....	18,623
and fire-extinguisher, J. Kennedy.....	18,872		
domestic, T. Hale.....	19,969		

Gas apparatus, J. E. Bicknell.....	18,618	Grate, I. Bannister.....	18,760
" " J. E. Lendley..... 19,041 19,048 19,053	19,054	" bar, W. Salt.....	20,226
" burner, J. A. Wilson.....	19,154	" blower, C. A. Preston.....	19,429
" en. lue, C. W. Baldwin..... 19,808 19,704	20,640	" for boiler furnaces, D. C. Hill.....	19,450
" " H. Denny.....	18,112	" furnace, J. A. Price.....	19,382
" from compressions of matter, G. W. Walker et al	18,257	" oven, W. H. Kating.....	12,218
" from sawdust, G. Walker.....	19,970	Grater mats, E. M. C. Ambrose.....	18,534
" generator, The Standard Vapour Fuel, Iron and		Gridiron and Taster, J. R. Loomans.....	18,827
Sto 1 Co.....	19,402	Grinding mill, E. Rhodes.....	19,193
" generating process, The Standard Vapour Fuel,		" " feed, C. N. McLaughlin.....	19,275
Iron and Steel Co.....	19,416	" " roller, T. Pringle..... 18,974	19,974
" producing material, blocks of, G. W. Walker.....	18,254	" roll, T. Pringle.....	18,976
" purifying screen, E. Provancher.....	19,857	Grindstone, E. M. Mason.....	18,827
Gate, A. W. Chilcott.....	19,555	Grindstones, machines for manufacturing, F. Frier.....	18,366
" J. Fallott.....	18,835	" " turning, F. Frier.....	18,367
" M. W. Foster.....	19,602	Gun, F. X. Lefebvre.....	18,323
Gates, device for opening and closing, sliding, C. W.		" barrels, cleaners for, J. C. Petty.....	20,377
Jones.....	20,363	" electric, The American Electric Arms and Am-	
Gates, firm, M. L. Hitchcock.....	18,489	munition Co.....	20,575
" for mills, canals, etc., water, J. S. Reddin.....	20,349	" line throwing, J. W. Ham.....	20,461
" sliding, J. S. McCluskey.....	19,803	Halter, J. C. Slighthouse.....	19,003
" " W. B. White.....	18,843	" weight, J. Roy et al.....	18,510
Gates, opening and closing fence, J. L. Gamble.....	18,835	Hame, J. McCarty.....	19,789
Gauge, carpenter's, G. S. Forest et al.....	20,328	" fastener, J. R. Finley.....	19,417
Gelatine or glue from hicks, etc., J. A. Mathew.....	19,239	" " D. G. Miller et al.....	18,738
Gliding and ploughing press, F. Freeman, et al.....	20,254	Hammer, power, A. Beaudry.....	18,454
Glimps, machine for pressing, J. S. Lynch.....	20,019	" tilt, J. B. Armstrong.....	21,066
Glass and coating, plate, The Carroll Decorative Plate		Hammock and cut, J. C. D. She.....	18,351
Glass Manufacturing Co.....	19,460	" support holding, J. F. Pincus.....	19,615
" imitation of stained, F. B. Herzog.....	18,840	Harness, covering, H. C. Babcock et al.....	19,199
" moulding, designs in, A. H. V. Bazerque et al.....	18,508	" metal lined, D. Curtis.....	19,160
" stained imitation, E. E. O'Neill.....	20,258	" tug attachment, J. W. Hill.....	18,585
Glassware, manufacture of, E. F. Krell.....	20,182	Harrow, M. C. Witt.....	18,508
" mould for pressed, W. Haley.....	18,779	" A. O. Striveson.....	18,746
Glazing for rooflights, W. R. Leslie.....	20,858	" E. J. Rogers.....	19,567
Glove, fastening W. F. Foster.....	19,151	" and feeder, combined, J. S. Corben et al.....	19,518
" fastener, W. F. Ware.....	19,769	" iron, A. Cullender.....	19,706
" fastening, W. T. Richardson.....	18,483	" spring tooth, T. Gray.....	20,321
Gloves and boots, fastening, Hutton & Co.....	19,524	" tooth, P. Stanton.....	19,108
" and mitts, J. B. A. and F. X. Lanctot.....	18,648	Harvester, A. Harris, Son & Co.....	19,990
" " fastening for, J. B. A. and F. X.		Harrow, C. A. Brewster.....	20,499
Lanctot.....	18,617	Harvester, J. B. Leprie et al.....	20,374
" etc., fastener for, E. F. Rate.....	18,831	" S. D. Mordin.....	20,389
Gold and silver amalgamator, T. Walker.....	18,468	" The McCormick Harvesting Machine Co.....	18,445
" amalgamating apparatus, S. L. Trippe.....	18,625	" attachment, B. and G. Burroughs.....	20,563
" from ores, extraction of, J. Alves et al.....	19,144	" binders, A. Harris, Son & Co..... 18,971	20,336
" roasting, D. W. Birmingham.....	21,218	" binder, W. P. Plant et al.....	18,313
Governor, The Gardner Governor Co..... 20,592	20,598	" binding, J. F. Seiberling..... 18,219 18,261	18,278
" ball, W. E. Badger.....	18,396	" " J. F. Seiberling..... 18,259 18,419	19,085
" for mechanical power, J. J. Rife.....	19,185	" " L. Miller.....	18,543
" for steam engines, etc., M. J. Beaudreau.....	18,775	" bundle carrier for, W. N. Whiteley.....	20,274
" steam engine, J. M. Smith.....	20,501	" cutter, H. L. Hopkins..... 18,841	18,851
Grain and water elevator, J. B. and W. M. Briener.....	19,294	" frame, etc., W. N. Whiteley.....	20,242
" binder, A. Harris, Son & Co.....	19,371	" grain binding, M. E. Hood.....	19,172
" " J. Forsyth.....	20,208	" " W. W. Murab et al.....	19,420
" " automatic, The Massey Mfg Co..... 20,278	20,327	" rake, C. Liden et al.....	19,786
" " gaveling mechanism for, The Toledo		" " The McCormick Harvesting machine	
Mower and Reaper Co.....	20,015	Co.....	19,079
" binding harvester, bundle carrier, W. Collins.....	19,652	" reel, G. G. Hunt et al.....	18,782
" binder, straw band, H. Tuttle.....	19,719	" self-binding, J. C. McLachlan.....	18,912
" cleaner, E. Phelps.....	18,752	Harvesting machine, G. Fichter.....	19,587
" " J. E. Cummins.....	18,593	" " H. McCarthy.....	18,455
" cleaning and cooling, gravitation, W. Shaw.....	19,390	" " H. J. Case et al.....	19,299
" " machine, F. E. Curtis et al.....	19,500	" " J. F. Letherling.....	18,260
" " " R. Z. B. Curtis.....	18,265	" " T. Urie et al.....	18,344
" cutting and tanding machine, C. McLeod.....	20,595	" " bean, W. Carver.....	18,816
" drill, A. Ruttler.....	20,664	" " grain, C. Young et al.....	19,248
" " W. P., Jr., and W. P. Sturbridge.....	19,732	Hat shaded straw, C. De-jardins.....	19,501
" drying process and appliance, E. Thompson.....	19,210	" sizing machine, N. Harper..... 19,536	19,537
" elevator, M. F. Seeley.....	18,797	" reed and wheat band for, G. S. Bracken.....	19,307
" etc., elevator, P. Evans.....	20,218	Hatchet, W. P. Cutter.....	18,418
" elevating, etc., apparatus, F. W. Friesbrock.....	20,386	Hutchway, self-closing, R. D. Tauckatou.....	18,252
" granulator, G. Malcolm.....	20,108	Home fastener, D. G. Miller.....	18,378
" measuring machine, J. and A. Nafriger.....	19,516	Hay, apparatus for unloading, J. L. Howe.....	20,467
" reel, G. A. Paddock.....	20,686	" " aud grain, loading and unloading, apparatus for,	
" riddle for extracting, cockles and wild peas, W.		R. Griwald.....	18,429
Atwell et al.....	18,614	" " rack elevator, P. G. Walker.....	19,582
" sawers, cylinder for, J. H. Chace.....	19,301	" bale hoops, basket ware, etc., apparatus for ob-	
" separating machine, R. Z. B. Curtis.....	18,265	taining from logs strips for, E. Duplessis.....	18,371
" shocking, D. McMillan.....	20,185	" carrier, A. J. Burbank.....	19,638
" shovel mechanism, J. S. Metcalf.....	19,619	" " A. L. and R. C. Jordan.....	19,726
" transferring apparatus, pneumatic and automa-		" " C. C. Chase et al.....	19,497
tic, L. Smith.....	19,984	" " W. G. Ricker.....	19,473
Graining composition, N. S. Briggs.....	18,273	" " horse, J. W. Provan.....	20,200
" for horse decortating, T. Heald.....	20,292	" elevator, C. A. Graham.....	18,241
Grapple, H. J. Chester.....	19,641	" carrier, F. B. and P. G. Strickler.....	19,232
Grappel, A. Sanford.....	20,360	" " track, The Ney mfg Co.....	20,600
Grate, J. C. Jones.....	18,605		

Hay fork, J. R. Fry.....	18,984	Hose coupling, S. Hamer et al.....	19,444
" " car, J. and M. Birrell.....	19,380	" " T. E. Wells.....	19,388
" " and lifter, J. Moore.....	18,650	Hot air furnaces, radiator for, D. T. Richardson	18,920
" knife, J. McMillan.....	19,002	House, portable, O. H. Smith.....	19,794
" " W. H. Carter et al.....	19,858	Hub attaching devices, J. W. Munn et al.....	18,417
" loader, D. C. Jewett.....	18,589	" " and axle, carriage, W. Jones.....	20,351
" " M. McDonald.....	18,602	" " vehicle, K. H. Elliott.....	20,465
" machine for unloading, A. Newell.....	19,922	Hydraulic elevator, H. W. Kerle.....	20,385
" or grain rack lifter, O. Williamson.....	19,938	Hydro-carbon burner, B. Martin.....	18,725
" packing machine, W. C. Johnson.....	19,124	" " furnaces, J. B. McDonald.....	19,851
" press, etc., P. Lord et al.....	19,113	" " generator, R. B. Avery et al.....	18,498
" rack elevator, J. P. Pegg.....	19,923	" " vapour burner, B. Martin.....	18,718
" rake, H. Moody.....	19,266	" " " O. B. Peck.....	20,415
" ricks, L. A. Contean.....	19,809	" " etc., measuring, K. Schmid.....	20,058
" tedders, G. A. Woodford.....	20,217	Ice creeper, C. F. West.....	20,097
" etc., unloading apparatus, M. Griswold.....	18,429	" " crushing machine, J. Y. Fairman.....	19,981
Headlight, E. T. Jenny.....	18,571	" " machine for cutting holes through, R. Fitzgerald.	20,838
" locomotive, A. H. Handlan.....	20,830	" " rubber, E. S. Honn.....	20,610
Heated surfaces, composition for coating and covering		Incandescents, apparatus for treating, C. G. Perkins,	18,435 18,472
J. F. Torrance.....	18,715	18,473
Heating apparatus, F. T. Manny.....	19,449	Incrustation, preventive for, F. Froxel.....	19,296
" " J. Q. C. Searle.....	18,467	Incubators, electric regulator and alarm for, F. Rose-	
" " Mann's Boudoir Car Co.....	18,251	brook.....	12,511
" " R. Crawford.....	20,262	Induction coil, J. A. Wright.....	19,971
" " B. Johnson et al.....	18,670	Injector, A. S. Everman.....	20,496
" " G. Manny.....	18,716	" " W. T. Messinger.....	19,876 20,162
" furnace, D. W. Robb.....	18,394	" " and indicator, air, B. McGregor.....	19,985
" " D. S. Richardson.....	18,422	" " convertible, W. Kremer.....	20,469
" " G. R. Scates et al.....	18,648	Injector, steam, L. Schulte.....	18,354
" stoves, etc., J. A. Watrous.....	18,385	Ink, etc., bottle or can, L. H. Thomas.....	20,560
Head finishing machine, J. L. Lord.....	20,228	Inking, pad, C. W. Crubinger.....	19,074
Hen house, S. Rawson.....	18,767	Ink stand, pocket, O. Jansson.....	18,408
Hides, for tanning and preparing, J. Palmer.....	19,098	Instruction and amusement, device for, J. D. Van	
Hinge, W. H. Carter et al.....	19,354	Bibber.....	19,728
" brace, A. W. Sangster.....	18,555	Insulator, S. Oakman.....	10,447
" for doors, spring, J. S. Stevens.....	20,516	" " pin, machine for making, W. C. Jutte.....	19,143
" lock, D. H. Fitzgerald.....	20,387	" " telegraph, C. C. Hinsdale.....	18,561
" spring, G. M. Lane.....	19,733	Insulators, press for manufacture of glass, L. B. Gray,	
Hitching strap, H. S. Dimock et al.....	19,825	et al.....	19,488
Hoe, D. Humphrey.....	18,817	Intestines, machines for cleaning, S. Oppenheimer.....	19,197
" close weeding and slimming, J. C. Wilson.....	19,611	Iron and steel, manufacture of, T. Griffiths.....	19,865
" ditching, H. and L. Iwan.....	20,402	" " " W. J. Clapp et al.....	19,866
" or cultivator, C. F. Bell.....	18,585	" " process for purifying molten, J. E. At-	
Hoe, scuffle, H. Still.....	19,905	wood.....	20,637
Hoes, combined drill and cultivator, J. Garrow.....	20,275	" " process for treating, A. G. Wedge.....	19,845
" machine for making, M. E. Breed.....	20,474	Ironing board, J. D. Talbot.....	18,532
Hog nose-ring, L. T. Siye et al.....	20,438	" " P. E. Weber.....	20,808
Holisting bucket, G. P. Brown.....	19,099	" " T. F. F. Baker.....	20,493
" machine, J. Boyd.....	18,638	Iron, etc. with lead, coating, J. Makin.....	20,667
" " W. L. H. L., and O. Beaty.....	18,669	Ironing and pressing board, J. E. Ellison.....	19,487
" machinery, brake band for, D. H. Merritt.....	19,473	" " J. D. Talbot.....	18,532
Hook detachable, H. E. Foster.....	20,843	" " stand, N. Scholl.....	18,740
" safety, E. H. Smith.....	18,884	" " table, S. S. Case.....	19,416
Hoop, cutting machine, E. Duplessis.....	19,261	Jewelling tool, J. R. Parsons.....	19,439
" sawing machinery, W. Bowker.....	18,860	Joint, lever, W. B. Hall.....	19,600
Hoops, machines for cutting, J. A. Grant.....	18,640	" " for timber beams, scarfed, J. B. Bélanger.....	19,086
" " preparing, H. F. Campbell.....	20,239	Journal bearing, D. A. Hopkins.....	20,431
	20,291	" " W. A. Hardy.....	20,433
Horse collar, J. F. Frautmann.....	19,334	" " box, L. H. Roberts.....	18,551
" " pad, A. Work.....	20,543	" " anti-friction, E. C. Ridout.....	20,579
" " detaching devices for vehicle, J. Buesche.....	20,178	" " and wrist pins, device for keeping cool, T. S.	
" " overshoe for, J. W. Smith.....	19,680	Wilkins.....	30,214
" " power, C. Sandford et al.....	19,117	Kettle, iron, L. R. Thomas.....	18,466
" " H. Adkins.....	19,624	Knife holder, H. Berolzheimer.....	18,603
" " for machines, P. J. Witt.....	18,957	" " for bread cutters, T. Mirfield.....	20,648
" " machines for lifting up, J. Besette		" " for wood working machine, S. J. Shimer.....	19,505
et al.....	20,081	Knitting machine, G. O. Leighton.....	18,891
" " post, F. B. Bignell.....	19,247	" " J. Bradley.....	18,578
" " halter for, J. Corbett.....	20,495	" " R. Schofield et al.....	20,509
" " rake, L. H. Hébert et al.....	18,778	" " The Byfield Mfg Co.....	20,419
" " T. H. Ramsden.....	19,888	" " W. H. Mayo.....	19,433
" " W. S. Wilson.....	20,538	" " W. Roberts.....	20,388
" rakes, machine for making the teeth of, N.		" " needle, A. Wood.....	18,890
Hanault.....	19,694	" " feed mechanism for, H. Clark.....	20,384
Hose, reel or carriage, D. S. Loomis.....	19,692	" " tubular fabric, art of, W. Esty.....	20,427
Horse shoe, J. B. Burr.....	18,572	Knives, etc., holder for, H. Berolzheimer.....	18,603
" " J. W. Flerbeller.....	18,807	Lace fastener, H. H. Porter et al.....	19,255
" " L. Carrier.....	19,791	Lactose, manufacture of, P. Teronhion.....	20,043
" " S. W. Faruham.....	18,629	Lactates and lactic acids, T. S. Nouell... 18,441	18,450
" " spring, H. Dunning.....	19,186	Ladder, extension, E. F. Bower et al.....	18,374
" " W. Chatterton.....	18,932	" " fire-escape, A. W. Covell.....	18,297
" " nail machine, G. J. Capewell.....	18,991	" " folding, R. Laudes.....	18,487
" " etc., T. H. Heard.....	18,923	" " for gathering fruits, L. H. Titus.....	19,142
" " fastening, A. L. Willson.....	20,294	" " book, J. F. Manahan.....	19,476
" " means of fastening, J. Kitley.....	20,312	" " iron chain, M. Christie.....	18,460
" " supporting, H. O. Sargent.....	20,270	" " step, G. McFarlane.....	19,361
Hose, J. Murphy.....	19,352	" " R. L. Hitchcock.....	18,546
" cart, J. The Noble.....	19,702	" " wash bench and step, J. S. Nelson.....	19,526

Lamp, A. J. Stephens et al.....	19,819	Locomotive tender, coupling attachment for, G. H. Colby.....	20,497
" A. J. D. Ramage et al.....	20,006	" " R. E. Lester et al.....	20,077
" H. E. Shaffer.....	20,254	" " for weaving, G. Keighley.....	20,298
" apparatus for treating incandescent, C. G. Perkins.....	18,435 18,472	" " " double pile fabric, C. Coupland.....	19,167
" and oil stove, wick trimmer, W. C. Seaton.....	18,270	Lubricating engine, H. H. Westinghouse.....	18,577
" and switch, incandescent, C. G. Perkins.....	18,477	" " oil, J. E. Gill.....	19,108
" burner, F. Ream.....	18,988	" " piston rods, glands for, J. S. Park, et al.....	19,689
" " for mineral oils, etc., G. W. Lyth.....	19,880	" " steam engine, machine for, J. V. Renohard.....	18,911
" carbon-holder, incandescent, C. G. Perkins.....	18,474	Lubricator, A. Weber.....	20,277
" " " for electric, " ".....	18,475	" " A. W. Swift.....	20,190
" case, E. S. Piper.....	18,888	" " C. C. Harlow.....	19,540
" chimney cleaner, W. J. Webb.....	19,819	" " C. Page, et al.....	20,284
" electric arc, F. M. Newton.....	20,498	" " J. C. Thayer.....	19,712
" " " N. H. Edgerton.....	19,608	" " J. E. Bell.....	19,041
" " " S. H. Short.....	19,828	" " L. B. Bailey.....	19,455
" " " T. L. Kay.....	19,799	" " S. Hoffmaster et al.....	18,286
" fluid burning, M. Mathews.....	19,530	" " S. R-ld.....	19,784
" globe, B. D. Stevens.....	20,189	" " The McNab and Harlin Mann'f. Co.....	19,942
" incandescent, C. G. Perkins.....	18,471	" " W. A. Lovells et al.....	19,629
" miner's J. L. Williams.....	18,465	" " for steam cylinders, etc., A. W. Swift.....	18,798
" oil, W. Guss.....	20,040	" " universal, J. Potter.....	18,695
" street, L. Henkle.....	18,789	" " oil cap feeder for, J. E. Worwich et al.....	19,413
" wick, adjuster and trimmer for, J. B. Deeds et al.....	19,991	Lumber binder, J. Sealey.....	19,377
" incandescent, sealing carbon holders, C. G. Perkins.....	18,474	" " dryer, A. S. Nichols.....	19,544
" reflector, B. D. Stevens.....	20,189	" " elevator, H. Atkinson.....	20,883
" wick trimmer, T. Reddibough.....	19,539	" " pilling machine, S. Leet et al.....	20,564
" " " W. C. Seaton.....	18,270	Lung diseases, treatment of, J. Ketchum.....	18,548
Land marker, W. H. King.....	19,389	Magneto-electric call, signal apparatus, The Bell Telephone Co.....	18,808
" roller, E. Horton.....	19,125	" " generator, J. P. Siabler.....	19,132
" " K. W. Jones.....	20,517	" " signalling apparatus, W. Painter et al.....	18,459
Lantern, J. B. Stetson.....	19,284	Mall bag catcher, E. W. Thompson et al.....	18,657
" " " ".....	20,227	Mailing Machine, R. Dick.....	18,838
" " globe guard for tubular, J. H. Stone.....	18,807	Maize grater, E. M. C. Anderson.....	18,538
" " signal, C. E. Metyler et al.....	18,595	Mallet, serving, J. F. Cotton.....	20,139
" " tubular, G. A. Kennedy.....	18,582	Malt and hop, drying machine, P. Platt et al.....	20,434
" " " J. H. Stone.....	19,945	" " process for drying, F. Winter.....	19,599
" " " J. Weakley.....	19,407	Manganese, etc., extracting oxides of, H. Harrenschmidt et al.....	18,881
Lath machine, A. Carrier.....	18,327	" " etc., process for converting, A. Markham.....	18,800
Last, flexible, O. L. Higgins.....	18,283	Mangling machine, J. P. Bothwell.....	18,579
Lathe, handle turning, J. Harley.....	20,471	Manure distributor, L. A. Couteau.....	19,625
" " wood " N. Gelson.....	20,677	Match dipping apparatus, E. B. Eddy et al.....	20,572
Leather channelling machine, J. K. Clarke.....	18,889	" " machine, O. Martin.....	18,589
" " etc., treatment of, T. Gare.....	19,060	" " splint cutting machine, A. G. Jones.....	19,872
" " improving and smoothing, L. Coté.....	19,821	" " " machine for arranging, B. T. Steber.....	18,298
" " splitting machine, E. Cummings.....	18,379	" " " silcing and racking machine, T. A. Cook et al.....	19,996
" " washer, and machine for manufacturing same T. Gingras.....	18,848	Mattress frames, W. S. Thatcher.....	18,628
Leg, artificial, S. H. Boone et al.....	19,681	Measure for liquids, automatic, J. Prax.....	19,940
" " frame for men and horses, A. Coté.....	20,391	Measuring area of surfaces, machine for, W. A. Sawyer.....	20,565
Leggings, J. A. King.....	19,066	Meat chopping machine, H. Langevin.....	19,364
Lemon and fruit squeezer, T. C. Newman.....	19,195	" " cutter, W. G. Bell.....	18,843
Letter box, connections for, J. G. Cutter.....	20,288	" " roaster, M. Campbell.....	19,520
Level, M. J. Frames.....	20,654	Mechanical movement, E. M. George.....	18,686
" " pendulum, C. J. & A. W. Parkhurst.....	19,086	" " " J. W. Dodge et al.....	19,680
Levelling and plumbing instrument, O. H. P. Brown.....	19,841	" " " S. Sackitt.....	20,174
" " rod and out tape, H. F. Bean.....	20,105	" " " W. R. Park.....	19,067
" " staff, E. Deniel.....	18,918	" " power, N. J. Rice.....	19,658
Lover, D. Buckley.....	19,545	Medicinal manipulator, J. Rice.....	19,605
Life preservers, C. Ledue.....	20,171	" " compound, C. L. Robinson.....	18,269
Lifting Jack, F. A. Lewis.....	19,263	" " " E. W. B. Schroter.....	20,620
" " " J. Robbins et al.....	18,847	Memorandum book, black leaf, J. H. Frink.....	18,624
" " " I. Rose.....	20,627	Metal, etc., machinery for cutting, J. C. L. Bradeen.....	20,318
" " " M. Smith.....	20,087	" " surface polisher, etc., W. Heard.....	18,786
Limb, artificial, G. Beacock et al.....	19,800	" " working machine, G. McDonald.....	20,009
Liniment, horse and cattle, J. A. Wilcox.....	19,887	Metallic particles, process for collecting, J. Miller.....	18,421
Liquids, treatment of fermented and distilled, C. W. Ramsay.....	19,654	" " plates, etc., making, M. Scheweizer.....	20,689
" " vessel for transporting, D. W. Morris.....	19,360	" " solutions, production of, C. B. A. Wright.....	20,299
Lithographic printing plate, P. C. Moller.....	19,347	" " veins in the earth, means for electrically locating, J. C. Soule.....	19,159
Load lifter, T. Buddell.....	20,416	Metallizing wood, etc., plastic process for, L. Brown.....	18,769
Lock, D. Morris et al.....	18,954	Metals, method of recovering, J. Millar.....	18,432
" " F. A. Guthrie.....	20,237	Microphotoscope, R. G. Mason.....	20,668
" " N. J. Coté, et al.....	20,534	Middlings purifier, J. E. Wilson.....	20,166
" " O. H. & O. L. Woodward.....	19,438	" " " J. J. & R. T. Faulkner.....	18,601
" " and latch combined, T. Fraidrick.....	20,570	" " " J. T. Waller.....	19,260
" " chronometric, H. F. Newbury.....	20,074	" " " The Case Man'f. Co.....	20,230
" " combination, O. Tregoning.....	19,171	" " " The Knickerbocker Co.....	20,117
" " " W. M. Brooks.....	19,404	" " " feed bopper for, W. J. Mitchell.....	19,645
" " hasp, E. Knight.....	18,245	Milk can, J. McHardy et al.....	20,561
Locomotive, W. E. Cole.....	19,263	" " " J. Klein.....	19,306
" " attachment, O. Wetmore.....	20,088	" " " W. Morton et al.....	18,643
" " draw-bar, T. B. Purves et al.....	18,688	" " cooler, G. Spencer.....	20,433
" " pilots, safety device for, O. Rothrock.....	19,367	" " " and refrigerator, B. M. Rockey.....	20,971
" " speed gauge, E. R. E. Cowell.....	19,646	" " " strainer, J. B. Rombrough.....	18,377

Milk cooling process, W. Morton et al.....	18,812	Oiler, reciprocating valve, S. D. Mershon.....	19,374
" treating process, G. Lawrence.....	19,498	Oils, distillation of tractional, The Imperial Oil Co....	19,189
" machinery, drop-lift steps for, L. B. Koale.....	19,187	" for painting purposes, preparation of, D. A. Stewart.....	19,277
Millstone, J. Graner.....	19,078	Ore and mineral separator, R. H. Richards et al.....	18,668
" dressing machine, T. C. Barnes.....	18,267	" concentrator, J. Muller.....	18,181
" driver, H. H. and.....	18,637	" extracting metal from, J. R. Jorion et al.....	18,928
" iron, G. Sumnerion.....	20,360	" mechanism and process for concentrating, The Golden Gate Concentrator Co.....	20,458
Mineral veins, method of electrically detecting and locating, A. P. Tishhl.....	20,522	Ore roasting furnace, F. Walker et al.....	18,480
" waters, machine for manufacturing, J. S. Pearson.....	18,247	" reducing machine, G. A. Raymond.....	19,951
Mines, means for electrically locating metallic veins in, S. C. Soull.....	19,169	" separating apparatus, A. H. Bliss.....	20,622
Mining machine, W. Hilton.....	18,402	" treatment of, C. R. Squire et al.....	20,647
Miter box, W. J. Powell.....	20,267	Ores, amalgamating and treating, E. B. Bluger.....	19,673
Mitering machine, J. B. Young.....	18,382	" apparatus for treating, T. R. Jordan.....	18,925
Mitts and gloves, J. B. A. & F. X. Lunetot.....	18,018	" deoxidizing iron, J. Bridgeford.....	18,989
Moccasin, F. G. L. and.....	19,188	" etc., crushing, J. W. B. Munford et al.....	19,574
" J. Durand.....	19,745	" treating calcareous, J. Cox.....	18,529
" O. Dutocher.....	20,428	Organ, reel, W. E. Leighton.....	19,141
Monkey wrench, F. B. Wilkinson.....	20,020	" pipe, W. H. Young et al.....	18,755
Motion, apparatus for transmitting, G. F. Clemens.....	19,757	" reel, C. B. Ford.....	18,782
" device for converting, A. M. B. Brock.....	19,000	" reel, W. Munroe.....	18,540
" device for converting, G. W. Richardson et al....	20,680	O ganic substances, preservative for, W. F. Grier.....	18,515
" of bodies may be varied or determined, apparatus whereby the relative, H. S. H. Snaw.....	20,811	Ornamenting paper, hanging, J. B. Knofflin.....	18,651
Motive power, J. T. Furlong.....	19,257	Ornamenting walls, ceilings, etc., process for, J. H. Hurling.....	19,387
Motive power, hand, W. H. S. Burgevin.....	19,519	Overall, J. C. Tracey.....	19,647
" obtaining, E. & L. Schramm et al.....	19,228	Overshoes, metal wearing surface for rubber, F. Richardson.....	19,414
" " and applying, T. Roberts.....	19,178	Oversock, R. Greener et al.....	18,816
Motor power, L. Leeback et al.....	18,279	Oxides of cobalt, etc., extracting, H. Herrenschnitt et al.....	18,381
" gen rating, W. L. Lowrey.....	19,215	Package for currency, C. A. Ball.....	19,666
" spring, J. W. Wright.....	18,938	" tying machine, H. Mewweather et al.....	18,730
" " T. K. Austin.....	20,125	Packing box, reshipping, W. M. Baker.....	20,680
Mouse trap, E. J. Jurvis.....	18,618	" metallic, C. T. Sleeper.....	19,798
Mower and reaper knives, machine for grinding, J. N. Parker.....	19,415	" " J. Player.....	18,573
Mower, lawn, C. W. Cheuey.....	19,753	" " T. Johns.....	19,839
" G. Campbell et al.....	19,694	" " piston rod, C. W. Mills.....	20,073
" " and field, H. D. Martin et al.....	28,480	Pad, shield and blotting, M. R. B. Cowan.....	20,001
Mowing machine, C. C. Bradley.....	19,995	Pa die wheel, featherink, C. L. Peterson.....	18,768
" J. Saville.....	19,788	Paint, J. A. S. and.....	20,345
" " W. Keeler et al.....	19,456	" compound, H. C. Petty.....	20,382
" and reaping machine, J. Branch.....	19,698	" distributor, J. W. Whipple.....	18,987
" " J. Marr.....	20,535	" fireproof, E. A. Smyth.....	20,290
Music leaf turner, C. Onslow.....	19,743	" mixed, H. Little.....	14,983
" system of writing, N. Drew.....	20,481	" varnish, L. Grenier.....	19,450
Nail extractor, G. W. Lewis et al.....	18,317	" water and fireproof, G. Learmouth et al.....	29,302
" holding attachment for hammers, C. F. Barber.....	20,013	" waterproof, A. Song et al.....	14,380
" machine, J. A. Coleman.....	20,460	Paints, compound for removing, etc., J. A. Henry.....	19,161
" plate feeder, G. Stoney.....	20,608	Painter's adjustable horse or jack carriage, B. Miller.....	19,846
" " J. C. Gould.....	18,834	Painting and graining, composition for, N. S. Briggs.....	18,373
Nailing machine for packing cases, G. Lines et al.....	20,614	Pantaloons, manufacture of, J. O. Tracy.....	19,647
Nails in serial order, device for arranging, S. Perry.....	19,861	Pants, machine for stretching, K. Allison.....	18,621
Napkins, handkerchiefs, etc, holder for, J. C. Tutt.....	19,424	Paper cutting from rolls, J. H. Earl.....	19,187
Napping tweed, gig for, J. Shearer et al.....	19,333	" " machine, W. F. Hill.....	18,721
Neck yoke, E. H. Hagitt.....	19,669	" fastener, parchment, H. J. Morgan.....	18,584
Necktie supporter, B. B. Sully.....	20,514	" holder, B. F. Eaton.....	19,576
Needle, shoemaker's, A. W. Austin.....	18,931	" machine, T. P. Barry et al.....	20,356
Non-conducting compound heat; W. S. Grubb.....	20,068	" " for holding and cutting rolled, E. W. Hopkins.....	20,176
Non-conductor, compound heat and sound, J. F. Torrance.....	18,772	" " automatic felt guide for, B. A. Schultiger et al.....	19,888
Numbering paper, machine for, J. R. Carter.....	20,235	" pulp, D. O. Francke.....	18,654
Nut forging machinery, The Patent Nut and Bolt Co....	20,259	" " apparatus for, G. H. Pond et al.....	19,323
Nut lock, A. Hebert et al.....	18,808	" " block presser, N. H. Brokaw.....	18,612
" locks, G. Grover.....	18,420	" " boiler for digesting, G. E. Marshall.....	19,448
" lock, J. H. Hanson.....	18,676	" " machines, block presser for wood, N. H. Brokaw.....	18,612
" " N. E. S. W. and W. W. Shaller.....	19,326	" " manufacture of articles from, The American Paper Barrel Co.....	18,813
" " G. Gessinger.....	18,837	Paving block machine, D. G. Ross.....	18,879
" " W. C. Ladd.....	19,948	Pencil clasp and pocket holder, G. A. Schlechler.....	19,583
" " W. L. Moore.....	19,004	" holder, H. Berolynheimer.....	18,603
Nuts and washers, machine for the manufacture of, J. Ashton.....	20,103	Pendulum, compensating, F. C. Greenleaf.....	19,305
Oar, G. B. Stanton.....	19,950	Pen, fountain, L. E. Waterman.....	18,774
" ice boat, W. J. Henley et al.....	18,539	" " J. P. Hoyt.....	19,740
Offal dryer, J. Spratt.....	20,195	" holder, H. Berolynheimer.....	18,603
Oil barrel, metallic, J. W. Cuthbertson et al.....	19,637	" " M. Marcoux.....	18,504
" burner, J. C. Morrison et al.....	20,686	" staff and hand support, W. A. Lamson.....	19,131
" can, J. W. Jackson.....	18,339	Peroxide of manganese, A. Markham.....	18,300
" " O. C. White.....	18,544	Petroleum oils, separator and condenser for vapour of; J. and G. B. Mire.....	18,413
" " R. English.....	19,775	Phosphites, treating calcareous, J. Cox.....	18,529
" cans, machine for holding, H. G. Waterson.....	19,052	Photographic plate-holder, F. W. Jackson.....	18,190
" cap, O. C. White.....	18,661	" " pictures, means for finishing, N. L. Stonor.....	20,338
" manufacture of lining, H. A. Davidson.....	19,168	" printing, R. B. West.....	18,773
Oiler, crank pins for, J. Martin.....	19,401		
" " A. Weber.....	20,476		
" for car wheels, H. A. Barrows et al.....	20,245		
" machinery, F. A. Gardner et al.....	18,811		

Piek, W. Cook et al..... 18,711
 Piano action, upright, T. A. Helnitzman..... 20,313
 " damper, O. Wessell et al..... 18,937
 " forte, attaching the strings to the tuning pins, T. J. Brinmead..... 20,524
 Pianos and organs, transposition key board for, W. Behrer..... 19,386
 Picture brace, C. H. Gatchell et al..... 20,316
 Pigeon hole, H. D. Purcell et al..... 19,729
 Piles, salve for the cure of, W. Richardson..... 19,620
 Pipe, connection for lead, F. George..... 20,661
 " covering, non-conducting of heat & cold, G. Kelly..... 19,552
 " joints, steam and hydraulic, E. W. Penning..... 18,926
 " roll and waste, J. Barrett..... 19,359
 " sheet metal, J. E. Beynoid..... 18,867
 " jongs or wrench, T. Patton..... 19,564
 " water, apparatus for removing incrustations from, E. H. Keating..... 20,106
 Piston for engine, G. Dickmann..... 20,219
 " packing, J. C. Farmer et al..... 20,341
 Pitman coupling, T. Uno et al..... 18,844
 Plating board, T. Dodds..... 20,399
 Plane bench, D. A. Bridges..... 19,123
 Planing machine, J. A. Roberts..... 20,049
 " etc., H. C. Tunis..... 20,245
 " iron, K. Nelid..... 18,622
 " and shaper machine, iron working, W. R. Farmer et al..... 20,016
 Planter, seed, J. N. Newton..... 19,901
 Planting machine for corn and beans, L. M. Bisell..... 18,787
 Plastering compound, H. E. Scales..... 18,485
 " surface, J. Stanley..... 18,857
 Plastic ware moulded, J. F. Paddock..... 18,907
 Platform, dumping, J. T. Savage et al..... 18,303
 Plough, A. C. West..... 18,306
 " F. Chevalier..... 18,489
 " J. McElroy..... 19,219
 " J. T. Miller..... 19,431
 " The South Bend Iron Works..... 18,312
 " and cultivator, sulky, T. Huddleston..... 20,027
 " and pulverizer, C. and S. T. Johnston..... 18,407
 " for submarine work, rotating, A. W. Von Schmidt..... 19,392
 " gang, W. Kimmel..... 19,865
 " gauge and guide, W. H. Ammons et al..... 18,973
 " submarine, A. W. Von Schmidt..... 20,599
 " sulky, C. R. Ross..... 20,206
 " G. Wiant..... 19,480
 " J. W. Barrett..... 19,657
 " J. W. Everhart..... 19,129
 " O. A. Stoveman et al..... 18,855
 " S. W. Burr..... 20,309
 " W. L. Chesley et al..... 19,979
 " thistle cutting attachment for, R. Hall..... 20,340
 Ploughs, rake attachment for, V. Wood..... 18,323
 Plug for pipes, W. F. Cosgruv..... 18,271
 Plum pudding, compound for preparing and preserving, H. J. Allen..... 19,836
 Plumbers' trap, F. N. Duval..... 20,349
 " T. Dark..... 20,138
 Pole tip, vehicle and clamp, J. M. Emerson..... 18,710
 Pool ball rack and spatter, G. Henkel..... 20,449
 Post, auger, J. E. Miller..... 19,456
 " driving machine, H. and B. Dixon..... 18,845
 " hole digger, W. H. Rhodes..... 19,892
 Potato bug, machine for the destruction of, J. A. Clare..... 18,848
 " digger, H. and J. Nelson..... 19,521
 " M. Fetermat..... 18,709
 " planter, J. F. Wick..... 19,425
 " separating machine, J. R. Bellamy..... 19,527
 " screen for picking, L. Montie..... 19,816
 Potatoes, machine for lifting roll from, I. V. Puterbaugh..... 19,648
 Pottery, manufacture of, F. A. Magowan et al..... 19,370
 Powder, apparatus for throwing giant, G. Murry et al..... 19,158
 Power, machinery for transmitting, A. D. Whitton..... 19,250
 Preservative for organic substances, W. F. Grier..... 18,515
 Preserving animal or vegetable substances, J. Echart..... 18,528
 Presses, feed guide for printing, J. Bocher et al..... 20,360
 Printer's dry rack, G. A. Clapper..... 19,285
 Printing and writing machine, stenographic, G. K. Anderson..... 19,678
 " machine, D. T. Simpson..... 20,512
 " platen, A. Godfrey..... 19,205
 " with metal engravings, T. Shields..... 19,777
 " matrix for, C. B. Davis..... 19,313
 " on the, sluc, brass, etc., cold process for drying, H. Mathieson..... 19,192

Printing press, printing in colour, D. E. Mack..... 20,352
 " " colour, H. P. Felter..... 18,770
 " " R. M. Hunter..... 18,579
 " surfaces, J. J. Saeks..... 18,590
 Propeller wheel, H. O. Parsons..... 19,288
 Pulp and hair washing machine, E. J. F. Quinn..... 19,301
 " barrels, manufacture of, The American Paper Barrel Co..... 18,800
 " bleaching of paper, E. Hermite..... 19,714
 Pulley, A. M. Smart et al..... 20,489
 " H. H. Fulton et al..... 18,637
 " O. R. Olsen..... 19,744
 " T. C. Caldwell..... 19,071
 " for the transmission of power, J. E. Waterous..... 18,698
 Pulleys and gear, balancing of, E. Esplin..... 20,450
 Pump, F. G. Cornell..... 18,610
 " J. A. Butler..... 19,765
 " J. Wock..... 18,514
 " S. H. Brooks..... 20,350
 " Sir L. S. Hoyt et al..... 20,630
 " Dr. J. E. Beauchemin..... 19,781
 " chain, C. H. Miller..... 18,833
 " combined boiler and steam, vacuum, C. L. Riker..... 20,515
 " for oil wells, J. Hackins..... 19,874
 " " J. Walker..... 19,878
 " force, M. L. G. Wheeler..... 19,860
 " " J. Bedford..... 18,494
 " hand power, lifting and force, O. Patterson..... 20,160
 " steam, L. B. Orrickburn..... 20,498
 Pumps, water jacket for rotary, A. W. Von Schmidt..... 20,036
 Punch, ticket, C. V. A. Spoberg..... 19,571
 Quilting frame, H. T. Davis..... 19,659
 Railroad, W. Kirkwood..... 20,422
 " for furnace, D. R. Richardson..... 18,422
 " heat, C. C. Longard..... 19,948
 Rail joint, T. H. Gibbon et al..... 18,371
 " insulated, T. A. B. Putnam..... 20,243
 " H. Holgate et al..... 18,332
 Railway alarm, J. J. Walker..... 18,958
 " brakes, flexible tubes for air, F. A. Magowan..... 18,777
 " buffer, J. F. Schiffer..... 19,554
 " cars and rails, safety, J. Denigraud..... 20,285
 " chairs, head-rest for, G. A. Kenedy..... 19,708
 " circular gauges, A. Wood..... 19,749
 " cuttings, ditto, in, C. W. Cox et al..... 18,739
 " device for preventing motion in drawheads, W. B. Turner et al..... 19,240
 " fog signal, W. S. Phelps..... 18,143
 " frog, W. J. Morien..... 18,359
 " frog, for G. M. Garrott..... 20,348
 " permanent way of, F. Schauman..... 20,473
 " pneumatic, E. M. Chase..... 19,148
 " rail joint, C. M. Kerfer..... 20,557
 " " brace, M. R. Perkins..... 20,553
 " " chair, G. Weeks..... 19,050
 " " " J. W. Clark..... 19,152
 " rails, device for securing fish-plates to, J. M. Bark..... 20,222
 " " rails, machine for straightening, etc., P. Fitchell..... 18,874
 " signal, B. Buys et al..... 19,762
 " " H. J. Inson..... 20,555
 " " J. H. Bacon et al..... 20,590
 " " S. J. Swayze et al..... 18,253
 " " apparatus, W. Holden..... 13,942
 " " automatic, T. H. A. Treken..... 19,956
 " " register, electric, J. P. Rogers et al..... 18,792
 " " register, electric, G. W. Babbitt..... 19,553
 " signals and joints, means for working and locking, I. A. Termini et al..... 20,503
 " signalling apparatus, L. C. Hyber..... 19,755
 " snow plough, machine for widening channels in snow drifts, J. L. Baker..... 18,490
 " spike and rolled metal bar for the same, J. P. Perkins..... 19,678
 " structure and car, street, O. D. Orvis et al..... 19,230
 " switch, A. Roy..... 19,986
 " " H. W. Howell..... 19,515
 " " G. Mucotte..... 20,409
 " system, electric, F. H. Donnell..... 19,299
 " switch, The Standard Switch Co..... 18,495
 " " point mover, U. W. Horne..... 18,889
 " tie, E. B. Hungerford..... 19,528
 " " metallic, C. H. Van Orden..... 14,022
 " ties, plates for wear, The Lewis Railroad Tie plate Co..... 20,566

Railway time signal, D. T. Bound et al.....	18,956	Saf., burglar proof, C. A. E. Ruebel et al.....	18,968
" torpedo, C. B. Cole.....	19,085	Safe and vault, fire-proof, H. O. Johnson.....	18,119
" " W. S. Phelps.....	18,442	Salt feeding device, J. Goldsthn.....	19,815
" track, G. Cowdery.....	20,526	Salts, metallic hydride, O. Haepfner.....	19,492
" tracks, device for raising, W. R. Dickerson.....	18,456	Sap bucket, cover for, G. S. Wood et al.....	19,100
" train signal, M. F. Parrish et al.....	18,462	" " attachment for, A. I. Farham et al.....	19,418
" trains, apparatus for preventing collisions of, J. B. Stevenson.....	20,218	" " and its attachments, R. D. Wells.....	19,082
" velocipede, F. W. Randall et al.....	18,652	Sap spout, C. C. Post.....	19,098
Bake, haul, J. Moore.....	18,904	Sash balance, G. W. Arnold.....	20,075
" harrow and thistle cutter, W. Piper.....	19,271	" " W. Shumard.....	19,862
" horse, W. L. Wilson.....	18,275	" bolts, striker for, C. W. Elliott et al.....	18,281
" and loader, W. W. New.....	18,853	" fastener, F. Eberheld.....	18,484
" shoe or runner, C. O. Denner.....	18,900	" " P. Mattes.....	19,174
Balan, machine for knitting, E. L. Taft et al.....	19,772	" frame, R. Stockdale.....	18,286
" scraping and splitting machine, D. Agrof et al.....	20,048	" holder, A. H. Harlan et al.....	19,087
Reamer, expanding, P. Gendron.....	18,781	" " G. E. Gorbam.....	19,977
Reaper knife section sharpener, P. Williams.....	19,722	" " H. Cutting et al.....	18,598
Reapers, truck for, R. Chesnut.....	18,691	" " M. Bourke.....	18,619
Reduction machine, The Case Man'g Co.....	20,320	" skylight, T. Douglas.....	19,666
" " gradual, The Case Man'g Co.....	19,557	" support and fastener, window, W. B. Knight.....	20,578
Reel, centrifugal, W. H. Dickey.....	20,154	Sausage, manufacture of, F. C. Ireland.....	19,770
Reel for exhibiting goods, revolving, M. Bélanger.....	19,857	Saw, cross-cut, W. C. Medill.....	19,153
Refrigerator, A. McKenzis.....	19,378	" blades, sharpening machine, E. Mossberg.....	19,650
" " G. Carille.....	19,162	" buck, T. Beard et al.....	18,703
" " J. A. Baldwin.....	19,218	" drag, M. O. Smith.....	20,618
" " J. F. Hanrahan et al.....	20,334	Saw drag, F. A. Strong.....	20,231
" " car, C. C. Palmer.....	18,486	Saw filing machine, D. Chambers et al.....	18,848
" " or butter cooler, O. M. Whitman.....	19,800	" guard, circular, J. G. Groff.....	18,641
Refrigerators, construction of, J. R. Prowse.....	19,183	" guides, C. H. Weston.....	18,307
Rein carrier, check, L. E. Champlain.....	19,597	" handle, A. Uren.....	19,789
" holder, D. O. Montgomery.....	19,481	" " P. Fraizer.....	19,758
Respirator, D. Gen-se.....	20,126	" jointer and gauge combined, H. Flater.....	19,868
Register, autographic duplicating, J. C. Sgoup.....	20,815	" " set, J. K. Bridges.....	20,539
Reins, etc., attachment for, J. Lepine et al.....	20,337	" mill, J. H. Berkabin et al.....	18,783
Rheumatism, composition for, E. Radcot.....	18,326	" " dog, J. S. and J. Redline.....	18,545
" " liniment for, F. Gaillsuma.....	20,170	" " circular, O. Espino.....	19,884
Ring, split, W. M. Fisher.....	19,682	" " dog, W. Gowen.....	19,994
Riveting machine, J. F. Allen.....	20,041	" " frame, gang, T. S. Wilkin.....	20,062
Road scraper, M. E. Cook.....	19,310	" " gang, " ".....	20,070
Roads, L. De Forest.....	19,792	" " press roller gear of gang, H. D. & E, N. Wicks.....	19,102
" grading, scraping and working, G. H. Waldo.....	19,715	Saw mill, press roller for, A. L. Wright.....	20,573
" machine for making, etc., G. W. Taft et al.....	19,055	Saw mills, steam feed for circular, W. Hamilton et al.....	19,445
Rock drill, E. A. Armstrong.....	18,751	" set, H. Flater.....	18,574
" " H. C. Sergeant.....	18,244	" sharpening machine, M. Covel.....	18,280
Rock drilling, pipe casing for submarine, C. A. Sterling.....	19,902	" shifting lever, D. L. Stevens.....	19,395
Rod, joint, G. B. Turrell.....	19,454	" stretcher, buck, J. C. Dutrich.....	20,422
Rollermill, D. W. Marmon.....	19,499	" swaging device, P. B. Charbonneau.....	19,607
" " et al.....	19,385	" tab securer, J. D. Ryan et al.....	18,728
" " E. Wilson.....	20,112	" tooth, adjustable, G. W. Stinebring.....	19,674
" " J. E. Wilson.....	20,665	" " swage, N. L. Gano.....	19,379
" " J. Livingston.....	19,750	" " gang, C. H. Weston.....	18,307
" " J. Stevens.....	20,480	Saws, gumming and sharpening, S. C. Rogers.....	19,583
" " J. Werrington.....	19,543	" hanging circular, W. D. Sherman.....	18,995
" " S. B. Rickerson.....	18,970	Sawing machine, A. Carrier.....	18,327
" " casing for, The Case Man'g Co.....	20,247	" " lumber, C. W. A. S. Gage.....	20,025
" " feed boxes for, The Case Man'g Co.....	20,249	" " K. K. Olsen.....	19,315
Roller mills, levelling devices for, The Case Man'g Co.....	20,251	" " W. F. Duke et al.....	18,512
Rolling mills, J. J. Roberts.....	19,258	" " W. Lucas.....	19,686
" mill and roll therefore, S. B. Willmot.....	19,882	" " attachment scroll, H. L. Hopkins et al.....	19,898
Roof, composition for, T. Head.....	19,858	Sawing machine chain, F. L. Magaw.....	19,559
Roofing compound, P. A. Way.....	18,282	Scaffolding, J. T. Haskell et al.....	19,267
" machine for seaming joints of sheet metal, O. W. Barritt.....	19,832	Scale, A. A. Houghton.....	19,046
Rope holder or clamp, C. Littlefield.....	19,502	Scale, M. G. Cook.....	18,285
" machine for making, C. O. Colby.....	19,196	Scale, lever platform, The Emery Scale Co.....	20,506
Rotary cutter, spindle and beaming for, C. Coupland.....	19,173	" weighing, The Emery Scale Co.....	20,504
" engine, D. McCoolgan.....	19,227	Searf retainer, J. Sandilands.....	19,474
" " J. H. Phelps.....	19,606	Scraper, road, A. J. Nellis.....	19,519
" motor and pump, G. Lenhardt.....	20,121	" " W. Ellis.....	20,080
" steam engine, W. Duffield.....	19,015	Screen, O. Harley.....	19,317
" " L. L. McPhail et al.....	18,723	Screw driver, C. H. Ol-en.....	15,577
Rowing gear, J. W. Butler.....	20,022	" " D. Nel.....	19,419
Row lock, C. W. Morris.....	18,309	" gimlet pointed, H. A. Harvey.....	18,340
Row lock, J. Beaudreau et al.....	18,615	" wood, G. A. Silles.....	19,595
Rubber, artificial, P. R. Bradley.....	19,156	" machinery for the manufacture of, J. Sheldon.....	20,375
Rubber, hand washing, R. L. Hitchcock.....	18,488	Screws, threading the points of, H. E. Coy.....	19,297
Rule, dressmaker's, W. Wallace.....	18,272	Soyths adjuster and fastener, D. W. Marston et al.....	20,577
Ruler and blotter, W. Lough et al.....	18,729	Seal lock, A. B. Bernard.....	19,165
Sad iron, A. F. A. Chagnon.....	18,815	" " E. O. Walker et al.....	19,897
" ".....	19,864	Seals, lead ribbon for metallic, E. C. Sloan.....	19,208
" ".....	19,864	Seam, C. C. Cobleigh.....	20,364
" P. F. Hatchford.....	20,209	Seat, woven wire, H. Roberts.....	19,368
" holder for, J. R. Loemans.....	18,509	Secondary battery, C. A. Smyth et al.....	19,442
" revolving, A. F. Martel.....	20,095	" " regulator, electric, C. G. Perkins.....	18,591
" case for, J. Cox.....	20,207	Seed sower, broadcast, S. Waddell.....	20,437
Saddle, riding, S. Pagett et al.....	19,104	" " hand broadcast, A. E. Schrock et al.....	19,373
		" planter, A. Smith.....	19,136

Seeding and cultivating machine, W. Dickinson.....	20,047	Signal lantern, C. E. Mstryler et al.....	18,595
" machine, T. W. Galloway.....	20,211	" nautical, M. White.....	19,932
" distributor for, T. W. Galloway.....	20,208	Silver and gold amalgamators, T. Walker.....	18,468
" grain, The Hoosier Drill Co.....	18,714	Sinks, traps for grease, J. Tucker.....	20,811
Semaphore and other elevated signal lights, E. S. Piper.....	19,269	Skate, C. M. and J. Thomson.....	18,935
" signal, A. McWilliams et al.....	18,346	" E. H. Barney.....	18,908
Separator and condenser for the vapour of petroleum oils, J. and G. Brake.....	18,413	" G. R. Marble.....	18,502
Sewage matters, treatment of, W. O. Sillar et al.....	18,378	" P. J. Doherty.....	19,565
Sewer ditches, moving ground in, P. H. McCauley.....	18,596	" R. C. Hindley.....	18,264
Sewars, culvert and trap, A. Medcalf.....	20,527	" S. W. Alward.....	20,679
" device for cleaning, T. Dark.....	18,997	" T. H. Deau.....	19,996
Sewing machine, B. F. Landis.....	20,508	Skates, etc., tools for sharpening, H. U. Klatner.....	18,689
" " C. A. Dearborne et al.....	18,333	Skate, roller, Kitzelman.....	19,428
" " C. Culbey.....	19,506	" " E. H. Barney.....	18,941
" " D. L. Keeler.....	20,518	" " J. B. Lincoln.....	20,046
" " H. T. Lavis.....	18,549	" " J. H. Fenton.....	19,221
" " J. B. Price.....	18,560	" sharpener, X. St. Pierre.....	19,759
" " J. J. Wheat.....	20,347	Skaters, tool for, A. H. McQuilkin.....	20,601
" " J. S. Sackett.....	18,570	Skating, sail for, C. E. Nelson.....	20,871
" " tuck marker, J. S. Sackett.....	20,478	Skins, removing imperfections, etc. from, W. M. Hoffman.....	19,616
" " T. C. Robinson et al.....	19,496	Skirt, S. Dryfoos.....	19,121
" " The Williams Mfg Co.....	18,500	" and bustle hoop, S. M. Blum.....	20,834
" " W. Redelt.....	18,680	" board, W. W. Quigley.....	19,468
" " braiding, F. Leiss.....	19,488	" protector, M. L. Cummings.....	19,482
" " button hole, F. Erge et al.....	20,342	Sled, E. Wagner et al.....	20,379
" " " " The Schott Button Hole Co.....	18,712	Sleds, attachment for logging, J. Donalds.....	20,652
" " table and cover, J. J. Wheat.....	20,348	Sleigh, bob, E. A. Harding.....	19,949
" " lamp, supporting bracket for, M. E. Smith.....	19,212	" shoe, H. A. Morrell.....	20,225
" " needle threader for, E. N. McPherson.....	20,090	" knee, W. Stewart.....	19,220
" " optical attachment for, J. Watt.....	19,188	Sleighs, draft bar for, D. N. Barker.....	18,544
" " quilting attachment for, H. T. Davis.....	18,549	Slate cleaner, J. Burling.....	19,042
" " ruffin attachment, J. S. Sackett.....	18,570	" school, G. Gray et al.....	20,443
" " ruffling " for, J. S. Sackett.....	20,494	" washer, H. L. Weed.....	19,525
" " shuttle for, E. Chavers.....	19,214	Smoke consumer, E. E. Hedley.....	20,612
Shade, adjustable hangers for, J. Wagner.....	20,168	" " G. W. Mears.....	20,042
" roller spring, The Shorey spring Bed and Shade Co.....	19,592	" " H. A. Spear et al.....	18,501
Shaft and tongue support, J. McConnell et al.....	18,744	" consuming furnace, A. Crawford.....	19,868
" bearing and device for obtaining rotating, J. D. Huntington.....	20,948	" stack and feed water heater, J. Armstrong.....	19,314
" coupling, A. Faust.....	20,401	Snow plough, J. H. Russell.....	19,997
" " T. L. Ellis et al.....	20,053	" " J. L. Baker.....	18,490
" " or pulley, fastening for, H. C. Crowell.....	19,914	" " J. Q. Day.....	19,964
" hanger, H. C. Crowell.....	18,858	" " O. Jull.....	18,506
" support, J. F. Pace.....	20,205	" " W. Pearson.....	20,104
Shafting and bearing therefor, T. Sutton et al.....	20,531	" " for cleaning highway, T. S. Chapman.....	20,423
Shears, animal, H. C. Shiles.....	19,821	" " railway, W. S. Bulst.....	19,937
" " L. D. Gleason et al.....	18,390	" shovel, J. Magee.....	20,181
" or clips, A. Fréchetts.....	19,899	Soap sheets, process for making, H. Buczkowski.....	19,396
" reversible, J. L. Stacks.....	19,779	" soft, A. Lafontaine.....	18,781
Sheet metal can, W. Wilson et al.....	19,658	" wrapper, printed paper, R. Henry.....	18,943
" perforating machine, J. W. Hyatt.....	19,938	Sod cutting machine, A. Test.....	18,761
Shepherd's crook, E. E. Deland.....	19,710	Soda ash, purifying, E. H. Russell.....	18,822
Shingle, H. S. Reynolds.....	18,517	Solder making machine, wire, E. L. Young et al.....	18,626
" bracket, G. W. Adams.....	20,585	Soldering iron, J. C. Covert.....	18,242
" machine, L. Fréchetts.....	18,901	" preparing can for, W. West.....	18,676
" " I. M. House.....	19,479	" tool, R. Girouard.....	19,649
" " T. Hodgson.....	19,887	Sole and heel plate, S. Levy.....	18,686
" metal, J. O. West et al.....	18,702	Soup, composition for, F. Fuller.....	19,040
" metallic, J. Mott.....	19,133	Spark arrester, A. Mitchell.....	19,662
Ships, to save drainage, T. Langill et al.....	19,593	" " J. A. Cotter.....	18,236
Shirt, W. A. Greene.....	20,167	" extinguishing machine, A. E. McCaw.....	18,518
Shirts, device for protecting the neck bands, etc. of, W. A. Greene.....	18,214	Speed changing mechanism, B. B. Powell.....	19,290
Shoe, S. C. Crowe.....	19,891	Spigot, self-closing, F. Mayer et al.....	18,616
" brush, fountain, F. Collé.....	19,724	Spike extractor, F. A. Hall.....	18,462
" last, G. S. Nethercut.....	19,370	" for T-rails, J. T. Nulty.....	19,478
Shoemakers' hand-tool, W. D. Frank.....	19,830	Spindles, bush box for, H. Heard.....	18,608
Shoes, device for stretching, H. Glines.....	20,082	Spinning and twisting machine, C. A. Coggeshall.....	19,409
Shoes, manufacturing, G. W. Steeper et al.....	19,089	" frame, thread guard for ring, J. E. Preat.....	19,982
Shot case, Q. A. Ellis.....	18,978	" machine, O. Hanna et al.....	20,459
Shovel for cinders, C. Desjardins.....	20,462	Snake and fellow joint, G. Minchin.....	18,314
Show stand, C. G. Udell.....	20,673	" tenoning and fellow boring machine, H. J. Miller et al.....	19,844
" " S. T. Colp.....	18,448	Spokes, etc., machine forming tenon, W. H. Hoster.....	19,068
Shutter fastener, D. E. and W. E. Doolittle.....	19,604	Sponges for medical purposes, etc., substitute for, S. M. Burrough et al.....	19,169
" operating and locking device, H. J. Hussicker et al.....	19,896	Spool holder, A. A. Murphy et al.....	20,457
Sieves, brushing apparatus for, F. A. Price.....	20,202	Spoon, medicine, J. Mombt.....	19,856
Sifter, ash, J. Cameron.....	18,701	Spring, forming of, G. Norwood.....	19,795
" cinder, J. Carmichael.....	19,794	Sprinkler, lawn, rotary, A. Weber.....	20,455
Sifting machine, cylinder, R. Ough.....	18,650	Squares for builders' and joiners' use, A. G. Olson.....	20,183
Sign, C. C. Seales et al.....	20,185	Squib, miner's G. Hayes.....	19,451
		Stable, G. A. Knight.....	18,999
		Stamping surfaces, J. J. Sachs.....	18,590
		Stanchion for cat le, C. D. Brooks.....	18,948
		Staud; revolving, S. T. Culp.....	18,626
		Staple, S. Frost.....	18,389
		" driving, W. Young.....	20,561
		" extractor, R. Hubbell et al.....	19,582

Staples for fences, C. B. Brainard.....	20,306	Switch stand, The Railway Specialty Manuf'g Co.....	18,494
" machines to form, T. E. Baylis.....	18,323	Syringe, vaginal, J. D. Hawley et al.....	19,274
Starch apparatus, J. H. S. Wildsmith.....	18,980	Table and cloth dryer combined, J. Bates.....	19,514
" manufacture of, J. Polson et al.....	18,963	" " tray, nursery, N. D. Swift.....	20,198
" separating apparatus, T. H. Miller et al.....	18,616	" extension, G. W. Brenn.....	18,897
Stove, jointer, J. F. and W. C. Vogh.....	18,414	Tacks, method of coating, E. S. Morton et al.....	20,017
Stat. in indicating device, A. McWilliams et al.....	18,341	Tag, E. W. Thompson.....	18,658
Stove cutting machine, F. Witzmann et al.....	18,619	" holder, J. Kydd.....	19,855
Steam boiler, A. H. Eude.....	18,781	Tally board blocker and register, W. Brown.....	19,835
" " P. Fitzgibbons.....	18,753	Tau bark, etc., treatment of, W. Maynard.....	20,460
" " vertical sectional, J. E. Waterous.....	19,827	" " preparation of, B. Holbrook.....	20,149
" engine cut-off valve, W. Adamson.....	20,583	Tanning leather, process for hemlock, J. T. Burnett... ..	19,202
" " L. Wiener.....	19,384	Tanning, process for, J. G. Strick.....	20,024
" " balance, H. Field.....	19,953	Target, balls and flying target, J. H. Jeune et al.....	20,417
" " valve gear for H. R. Kilebel.....	18,032	Telegraph apparatus, R. R. Boyle.....	19,398
" " " " L. B. Carriacabin.....	20,282	" table, J. C. Chambers et al.....	18,398
" generator, R. Venator et al.....	19,908	Telegraphic and telephone induction preventer, F. Van Rysselberghe.....	18,517
" heater, The J. F. Pease Furnace Co.....	20,662	Telegraph conductor induction preventer, J. C. Chambers et al.....	18,372
" jet apparatus for mixing steam vapour, air or gases with water, E. Koring.....	18,392	Telegraphic system, C. G. Burke.....	19,430
" pipes, non-conducting covering, H. C. Goodell.....	18,919	Telegraphs, static compensator for duplex and multiplex, F. W. Jones.....	19,899
" trap, G. B. McCracken.....	19,477	Telephone system, C. E. Allen.....	19,380
" trap and boiler feeder, F. H. West.....	19,227	Telephone, C. Egan et al.....	19,160
" trunk lid press, W. E. Lockman.....	19,781	" " W. Gillett.....	18,642
" wisher, R. J. and F. M. Johnson.....	19,628	" cable, J. C. Chambers et al.....	18,338
Steel, etc., process for impointing, G. J. B. Rodwell et al.....	20,271	" condenser, J. C. Chambers et al.....	18,372
" process for manufacturing, J. J. McTigue.....	19,105	" and telegraph induction preventer, F. Van Rysselberghe.....	18,547
" and iron, process for welding, J. E. Armstrong... ..	19,969	Telephone cut-out, C. D. Wright et al.....	18,268
Stencil, E. Walker.....	20,613	" " H. C. Baker.....	18,391
" painting and printing, J. J. O. Traker.....	19,699	" receiver, T. F. Taylor.....	19,581
" plates, for grain and imitating wool, etc., J. J. Callow.....	20,003	" " G. E. Shaw.....	19,329
Step bearing, anti friction, G. L. Brownell.....	20,657	" " J. A. Wright.....	19,859
Stocking heel, H. Hernan.....	18,634	" " adjustable double, D. G. Barnard... ..	19,225
" machine, knitted, J. Pennum.....	18,630	" receiver, S. E. Beady et al.....	18,457
" art of knitting, W. Esty.....	20,425	switch board multiple, The Western Electric Co.....	20,079
Stone, artificial, J. H. Trickey.....	20,220	" signaling apparatus, F. B. Herrog.....	18,706
" " J. L. Rowland.....	20,676	" switch board, The Bell Telephone Co.....	19,245
" crusher, T. A. Blake.....	19,127	" " The Standard Electric Works.....	20,041
" cutting machine, M. S. Oils.....	18,727	" time signal system, J. M. Oran.....	19,529
" dressing " J. W. M. Joy.....	20,418	" transmitter, G. E. Shaw.....	18,427
Stool, device for elevating and securing same, W. A. C. Matthe.....	20,670	" " J. A. Wright.....	19,958
Store service apparatus, H. H. Hayden.....	20,454	" " S. F. Beady et al.....	18,498
Stove, J. H. K. Yser.....	19,108	" " The Bell Telephone Co. of Canada.....	19,591
" M. C. Armour.....	18,298	Telephones, signaling apparatus for, W. Painter et al.....	18,459
" bituminous coal, The Ramon Stove Co.....	18,867	Telephonic and other instruments, support for, C. W. H. Hiden.....	19,251
" ear, K. Fife et al.....	18,823	Telephonic apparatus, induction preventive, F. Van Rysselberghe.....	18,547
" coal oil, A. Cameron et al.....	19,179	Tent peg, E. C. Dawson.....	18,906
" cooking, J. Johnston.....	20,004	Thermometry, G. T. Bellly.....	19,844
" " J. Linton.....	20,056	Thill coupler, D. Green.....	18,601
" heating, W. A. Winfree.....	19,415	" coupling, G. W. Berbe.....	18,826
" hot air, P. H. Sims et al.....	19,535	" " H. H. Stevens.....	20,357
" fire-box lining for cooking, E. E. Hunker et al.....	19,148	" " H. M. Wheeler.....	19,466
" fire-place, J. D. Richards.....	20,188	" " M. E. Company et al.....	21,533
" grate, E. W. Anthony.....	19,081	" " W. S. Shannon et al.....	19,122
" oil, J. Milne.....	19,850	" " carriage, N. A. Primus.....	19,768
" " J. E. Forming.....	18,749	" detacher, D. Green.....	18,400
" pipe thimble, M. McGuire.....	18,024	Thimble, sewing, E. F. McCarthy et al.....	19,086
" plates, sockets in, N. Burdick et al.....	18,440	Thill and pole coupling, H. M. Holiday.....	20,345
" pipe, G. B. Barclay.....	18,253	Thrashing machine, E. R. Jones.....	19,450
" plate, soft metal lining for, N. Burdick et al.....	18,410	" " G. A. Roberts et al.....	19,588
" or furnace, D. M. Crabam.....	18,281	" " G. W. Morris.....	19,010
" pipe elbows, T. S. Evans et al.....	20,242	" " J. Bennett.....	19,852
" feeding, reservoir for, B. Lemay.....	18,644	" " M. L. Horner.....	19,157
" heating, J. A. Watrous.....	18,385	" " W. H. Throsson.....	18,742
" hydro-carbon vapour stove, A. M. Brulard et al.....	19,091	" machines band cutter and feeder, J. A. & F. H. Marshall.....	19,235
Stoves, coal oil heaters for, S. Laudon.....	20,172	Thrashing machine, grain, O. N. Eastman.....	19,209
Strainer, wire, J. E. Pounds.....	20,304	" " grain feeder, etc., O. C. Van Ness.....	18,754
Strap, hitching, S. Birdsall.....	19,880	Tile, drain, J. Dunn et al.....	20,646
Straw cutter, L. M. Batty.....	18,902	" mould, J. Grant.....	19,718
Straw tucker, W. Decken.....	20,272	Type galeys lock, S. D. Webb.....	18,335
Stump extracting, method for, T. W. Russell et al.....	18,799	Tire for road vehicle wheels, J. B. Armstrong.....	19,578
Stump machine, A. A. Howe.....	18,635	Tobacco box, C. H. Seales et al.....	20,511
Stump puller, H. P. Readline.....	18,959	" package, D. C. Mayo.....	19,974
Sugar, manufacture of, L. M. Campbell.....	19,634	" re-sweater, B. Martin.....	20,559
" etc., manufacture of grape, T. P. Kingsford.....	19,034	" re-sweating device, B. Martin.....	19,748
Sugar liquor, syrup and saccharine juices, process for filtering and decolorizing, F. Kleeman.....	19,279	Toboggan, A. S. Lane.....	19,075
Sugar refiner's heater for utilizing the heat, of char washing in, S. M. Little.....	19,820	" " W. F. Hutchins et al.....	20,085
Super-heater, The Standard Vapour, Fuel, Iron & Steel Co.....	19,463	Toe weight for horses, E. G. Miles.....	19,721
Suspender, G. F. Atwood et al.....	19,116	Tool, combination, F. W. & J. Ritchie et al.....	20,886
" " A. M. Freeman.....	18,707	" " J. F. Call.....	19,068

Tool, combination, J. H. Bearley.....	19,076	Vehicle, two-wheeled, A. Reichle.....	19,203
" holder, R. Neld.....	18,622	" " " F. L. Perry.....	20,157
" " for grindstones, J. I. Carr et al.....	19,517	" " " O. B. Fysh.....	20,304
" " for grinding, J. R. Kennell.....	19,638	" " " O. Willson.....	19,224
" pneumatic, J. S. McCoy.....	20,389	" " " W. T. Robb.....	19,059
" wheelwright, A. Wright.....	19,084	" wheel, C. Snyder.....	18,661
Toothache, composition for, R. E. Mills.....	20,122	" " " J. J. Bush.....	19,640
Torpedo, composition for fire charging, J. B. Coghill.....	20,642	" " " wire, J. E. Ladd.....	19,017
" etc., under water, apparatus for maintaining, R. M. Rock et al.....	20,552	Vehicles, running gear, C. M. Muroh.....	19,047
Towel holder, C. S. Gifford.....	19,793	" sand band for, W. M. Farr.....	20,059
Toy blocks, S. B. Scott.....	19,096	Velocipede, J. M. Staples.....	18,908
" device for, F. W. A. Schneider.....	20,061	" ice, C. Sandford et al.....	20,168
Trace holder, B. R. Hughes.....	20,411	Ventilating apparatus, L. J. Wing.....	19,358
Truss laying machine, railway, F. F. Voigt.....	18,302	" " " car, Mann's Boudoir Car Co.....	18,229
Traction engine for rail or other roads, W. Wilkinson.....	19,238	Ventilating fan, rotary, W. D. Smith.....	18,862
" wheel, D. M. Osborne.....	20,608	" roofs and houses, G. You.....	19,685
Treadle, H. McDonald.....	20,539	Ventilator, J. M. Ayer.....	18,738
" attachment, H. B. Springstein et al.....	20,361	" ten, P. Lewis.....	20,624
Tricycle and like velocipedes, E. R. Settle.....	19,371	" R. S. Knight.....	20,198
Truck barrel, J. Holden.....	20,177	Vessel, jacketed, for transportation, L. Fritz.....	18,401
" car, J. Hudson et al.....	18,324	Vice, D. Davis et al.....	18,720
Truck and carrier, stove, M. K. Leavenworth.....	18,408	" G. H. Wood.....	18,980
Trunk, tray, S. M. Michelson et al.....	19,317	" J. O. Barrett.....	20,244
Truss hernia, A. S. & A. J. L. Armstrong.....	18,387	" bench, M. J. Lewis.....	19,434
" pad, G. L. Gerard.....	19,358	Vices, metal moulds for casting, W. E. Snediker.....	19,612
Tubes and pipes, machine for bending, E. P. Follett.....	20,136	Vice, parallel, H. F. Read et al.....	18,949
Tubes or cylinders, sheet metal, E. K. Cuas et al.....	19,978	Waggon, B. C. Seaton.....	20,516
Twin, cordage, etc., machine for making, G. L. Brownell.....	18,692	" N. J. Warner.....	20,265
Twine or string cutter, J. Darling.....	20,296	" buckboard, J. Jackson et al.....	20,193
Twist drill, G. H. Burroughs.....	20,099	" " " J. M. Moyer.....	18,457
Type locking, T. Moore et al.....	19,918	" " " W. Lockwood.....	20,011
" lock galley, S. D. Webb.....	18,385	" dumping, W. & J. H. Leonhardt.....	20,050
" rubbing machinery, G. S. Eaton.....	19,568	" jack, E. Fields.....	19,881
" writer, W. H. Gilman.....	20,095	" " " J. F. Lindsey.....	19,644
Types, printing, L. B. Benton.....	18,428	" " " T. Maxon et al.....	19,320
Typography, matrix for printing, C. H. Davids.....	19,313	" running gear, W. H. Fanning.....	19,674
Umbrella holding device, J. Castle.....	19,811	" steps, J. Hatlet.....	18,785
Under garments, manufacture of, P. Baker.....	19,155	" spring, H. J. Kreinheder.....	18,631
Under waist, M. E. Higgins.....	18,295	Wardrobe and bedstead, B. M. Houston.....	18,296
Urinal, flexible, C. S. Murphy.....	18,780	Warming apparatus, cars and building, J. Q. C. Searle.....	18,167
Valve, A. G. Alexander.....	20,197	Washboard, C. Boeckh.....	18,788
" C. L. Burgermaster et al.....	20,100	" J. P. Reynolds.....	18,887
" J. H. Blessing.....	20,033	Washers and nuts, machine for the manufacture of, J. Ashton.....	20,103
" balanced slide, J. Bewcher.....	20,109	Washing machine, A. Genest.....	18,567
" check, J. H. Blessing.....	18,984	" " " C. K. Buchanan.....	20,510
" combined check and stop, J. H. Blessing.....	20,021	" " " C. K. and W. F. Jones.....	18,894
" cut off, G. M. Conway.....	18,398	" " " C. W. Dennis.....	19,924
" for gas manufacture, water cooler, J. Hunlan.....	19,904	" " " E. Goodwin.....	20,232
" for steam traps, R. Newton.....	19,410	" " " apparatus for working, F. Godin et al.....	19,252
" for water closets, etc., W. Scott.....	19,760	" " " G. L. Ferris et al.....	19,316
" gear, F. B. Nichols et al.....	18,575	" " " H. Pickard et al.....	20,808
" for steam engines, H. K. Kriebel.....	18,532	" " " J. St. Onge.....	18,875
" lock up, pop safety, J. Hettlinger.....	20,448	" " " J. O. Hardwick.....	19,081
" " safety, R. Mitchell.....	19,019	" " " J. P. Rothwell.....	18,579
" mechanism, C. Selknap et al.....	19,556	" " " J. W. Jacobs.....	19,931
" pop safety, F. H. Hills.....	20,548	" " " L. K. Dutton.....	18,871
" safety, A. Orme et al.....	19,242	" " " M. Wood.....	19,917
" steam, T. P. Barry.....	20,362	" " " R. J. Shannon.....	20,201
" " H. Kessler.....	18,681	" " " S. L. Wegener.....	20,212
" stop, J. H. Blessing.....	19,176	" " " S. Pariseau.....	18,567
" " C. F. Murdock.....	18,893	" rubber, hand, R. L. Hitchcock.....	18,438
" " D. Kearney.....	18,305	Watch, The Fahy Watch Case Co.....	19,533
" straight-way, A. Weber.....	20,269	" case, G. S. Ladd.....	19,580
Vapour and steam, hydro-carbon mixer, D. E. Bangs et al.....	18,496	" " " J. Feby.....	20,146
Vapour burner, D. E. Bangs.....	18,867	" movement box, C. W. Harmon et al.....	19,679
" " C. V. Best.....	19,516	Watches, anti-magnetic shield for, C. R. Giles.....	19,842
" condenser and separator, hydro-carbon, J. & G. Brake.....	18,413	" winding stem for, The Brooklyn Watch Case Co.....	20,118
Varnish, J. A. Shepard.....	20,410	Water closet, J. Muirhead.....	18,796
Vegetable steamer, L. M. Marr.....	19,394	" ventilator, J. H. McGovern et al.....	19,778
Vehicle, H. Hartop.....	18,507	" " " lavatories, etc., trap for, J. Bennor.....	19,213
" attachment, L. P. Bruneau.....	18,314	" " " closets, urinals, etc., flushing device, W. Far- mer.....	19,236
" body, H. P. Colby.....	20,491	" " " etc., distilling apparatus, W. H. Herrick.....	20,034
" running gear, J. B. Armstrong.....	20,133	" " " filter, appliances for, J. P. Jackson.....	20,091
" J. B. Armstrong.....	18,611	" " " filter and cooler, E. C. Hall et al.....	20,289
" seat, J. P. Johnson.....	20,544	" " " heater, M. Mathews.....	20,323
" " spring, S. Hunt.....	18,505	" " " brewers, H. A. Gautert.....	19,491
" spring, H. B. Cornish et al.....	18,632	" " " gas, T. Fletcher.....	19,369
" " M. W. Tucker.....	18,762	Waterproofing and preserving, compound for building, B. DeNico et al.....	19,331
" " R. J. Cook.....	20,407	Waterproof fluid for making fabrics, etc, C. B. War- ner.....	18,227
" " gear, R. McLaughlin.....	19,531	Water wheel, A. O. Wheeler.....	20,288
" " seat, G. W. Heartley.....	20,301	" " " scoop, S. T. Markin.....	20,354
" steam, O. B. Kidall et al.....	20,536	" " " turbine, H. R. Austin.....	18,820
" top, T. B. McCurdy.....	20,567		
" torsion spring, D. Budd.....	19,094		

Blair, I. L., et al., combined check and socket.....	20,475	Brook, W. E., fruit and vegetable parer and slicer.....	19,323
Blair, J. J., revolving cylinder engine.....	1, 380	Brokaw, N. H., block presser for wood paper pulp machines.....	18,612
Blake, F., switch board.....	19,335	Brooks, K. K., et al., whip and line holder.....	20,260
" " for electric circuit.....	19,234	Brooklyn, Watch Case Co., winding stem for watches..	20,118
" J. E., water indicator and alarm.....	18,458	Brooks, C. C., axle blade.....	19,785
" T. A., stone crusher.....	19,127	" C. D., stanchion for cattle.....	18,948
Blanchard, A. E., et al., press for baling goods.....	19,508	Brookes, S. H., pump.....	20,359
" G. A., coal sifter.....	20,500	Brostrom, C. A., harrow.....	20,499
Blessing, J. H., check valve.....	18,964	Brown, A., fence.....	19,842
" " combined check and stop valve.....	20,021	" A. E., et al., wood distilling.....	20,147
" " friction clutch.....	18,829	" C., magneto-electric call.....	18,808
" " stop cock.....	20,052	" C. E., et al., tool-holder for grindstone..	19,517
" " valve.....	19,176	" F. L., et al., boots and shoes.....	18,250
" " valve.....	20,033	" G. P., hoisting bucket.....	19,099
Bliss, A. H., process and apparatus for separating gold, etc. from their ores by means of mercury.....	20,622	" J. B., rack for holding barrels.....	19,636
Bloch, J., et al., feed guide for printing presses.....	20,380	" L., et al., plastic process for metallizing wood, etc.....	18,759
Blood, M. E., grain binding harvester.....	19,172	" O. H. P., levelling and plumbing instruments..	19,811
Blossom, B., et al., water indicator and alarm.....	18,458	" P., et al., feed water regulators and alarms for steam boilers.....	20,428
Bidan, F. S. M., et al., corset clasp.....	18,343	" W., boots.....	18,410
" S. M., hoop skirt and bustle.....	20,634	" W., tally board block or register.....	19,835
Boas, F., et al., spoon holder.....	20,457	" W. E., et al., machine for painting wire fences.	19,013
Bodwell, J. R., et al., bay knife.....	19,353	" W. V., et al., car coupler.....	18,673
" " knife.....	19,354	Brownell, F., et al., smoke consumer.....	18,501
Boeckl, B., washboard.....	18,788	" G. L., anti-friction step bearing.....	20,657
Bohrer, W., transposition bay board for pianos and organs.....	19,386	" " twine, cordage, etc. machine.....	18,692
Bolaveri, O., et al., car-coupling.....	19,824	Browning, C., car-coupler and buffer.....	19,027
Bolvin, G., manufacture of lacing boots.....	20,607	" " coupling.....	19,028
Boles, W. H., buckle.....	20,114	Brownley, P., anti-friction bearing.....	20,621
Bollinger, E., amalgamating and treating ores.....	19,573	Brubaker, J. H., animal trap.....	19,616
Boone, C. B., et al., railroad time signal.....	18,955	Brumey, L. P., attachment of horse vehicle.....	18,314
" G., et al., shutter operating and locking device..	19,898	Bryan, J. C., car-coupling.....	20,485
Booth, G., bath.....	20,305	Buchanan, C. K., et al., washing machine.....	20,510
" M. C., et al., bath.....	20,305	Buch, W., whiffletree for three horses.....	20,204
Bouchard, F., et al., appliance for clothes lines.....	19,246	Buckley, D., lever.....	19,545
Boulter, R. S., buckle for harness breechings.....	19,610	" E. H., manufacture of boots and shoes.....	19,202
Bonnd, F. F., railroad time signal.....	18,955	Buckman, A., et al., baling press.....	20,101
Bourveau, A., et al., compound for table.....	19,726	" " machines for making cigarettes.....	19,011
Bourke, M., sash holder.....	18,619	Buczowski, H., process for making soap sheets.....	19,396
Bower, B. F., fireman's ladder.....	18,374	Budd, D., torsion spring for vehicle.....	19,094
Bowers, M. M., bell.....	19,427	Buerkel, J. F., et al., heating apparatus.....	18,670
Bowker, W., hoop sawing machine.....	18,382	Buesche, J., horse detaching devices for vehicle.....	20,178
Bowler, T. H., advertising devices.....	19,109	Buist, W. S., railway snow plough.....	19,937
Bowman, D. D., revolving book stand.....	19,683	Bumbaugh, H., et al., fire box lining for cooking stoves.....	19,148
Boyd, G., car-coupler.....	18,553	Burbank, A. J., hay carrier.....	19,698
" J., hoisting machine.....	18,638	Burdick, N., et al., sockets in stone plates.....	18,440
Boyden, W. A., lubricator.....	19,942	Burgermaster, C. L., et al., valve.....	20,100
Boyle, R. K., telegraph apparatus.....	19,398	Burk, C. M., bed bottom spring.....	20,216
Bracker, G. S., reed and hat sweat.....	19,307	Burk, A. L., churn.....	20,223
Bradford, J. C. L., machinery for cutting metal, etc.....	20,318	Burke, C. G., telegraphic system.....	19,430
Bradford, A., lubricator for car axle journal.....	19,849	Burke, J. M., device for securing fish-plates to railway rails.....	20,222
" E. H., et al., door spring.....	19,850	Burket, W., et al., excavator and grapple.....	18,798
Bradley, C. C., carriage spring.....	19,851	Burleigh, C. H., et al., machine for making, repairing and cleaning roads.....	19,055
" " mowing machine.....	19,995	Burling, J., slate cleaner.....	19,042
" J., knitting machine.....	18,578	Burnell, B., bed spring connection.....	19,810
" J. W., et al., valve mechanism.....	19,632	Burnham, E. S., washing machine.....	20,510
" P. R., artificial rubber.....	19,556	" J. H., fire place.....	18,405
Brady, P., et al., telegraph cable.....	19,156	Burns, J., cash and parcel carrier.....	19,572
" " conductor.....	18,338	" " lowering caskets into graves.....	19,797
Brainard, A. M., et al., hydro-carbon vapour stove.....	18,372	" " et al., car-coupling.....	19,693
" C. B., staple for fences.....	19,091	" " machine for making cigarettes.....	19,011
Brake, J. & G., condenser and separator for the vapour of petroleum oils.....	20,306	" M., lace fastener.....	19,255
Bramhall, E. C., et al., boring bit.....	18,413	Burr, J. E., horse shoe.....	18,572
Branch, I., mowing and reaping machine.....	18,416	Burrell, J. H., et al., signal lantern.....	18,595
Brandon, I. J., et al., bolster plate.....	18,598	Burritt, E., et al., car-coupling link.....	19,695
Brandstetner, J., et al., sled.....	20,542	" O. W., machine for seaming joints of sheet metal.....	19,332
Brandy, J., machine for making felt boots, shoes or stockings.....	20,379	Burroughs, B. & G., harvester attachment.....	20,583
Breed, R. E., machine for making hoes.....	18,684	" G. H., twist drill.....	20,099
Breer, H., desiccating apparatus.....	20,474	" S. M., et al., substitute for sponges for medical purposes, etc.....	19,169
Breer, H., desiccating apparatus.....	20,181	Burt, J. S., et al., artificial leg.....	19,681
Brenn, G. W., extension table.....	18,897	Burwell, E. L., book.....	20,400
Brenton, F. W., cheese bandage and box combined....	19,059	Busb, J. J., vehicle wheel.....	19,640
Bridges, D. A., bench plane.....	19,123	Butler, J. A., pump.....	18,785
Bridgford, J., apparatus for deoxidizing iron ores.....	18,985	" T. P., et al., nut lock.....	19,808
Bridges, J. R., saw jointer and set.....	20,539	Butterfield, S. R., bed spring connection.....	19,596
Bridgman, A., et al., nailing machine for packing case.....	20,614	Butterworth, C. F., coat sleeve.....	19,204
Bridgel, L. A., circuit closer for electric alarm.....	20,476	Bye, E., et al., railway signal.....	19,762
Briggs, N. S., painting composition.....	18,273	Byar, L. N., grate for cellar windows.....	18,479
Brimer, J. B. & W. M., automatic grain and water elevator.....	19,298	Byneid, J., circular knitting machine.....	20,419
Brinsmead, T. J., attaching the strings to the tuning pins of piano fortes.....	20,524	" Mfg Co., circular knitting machine.....	20,419
Brinton, C., door hanger.....	20,449	Byington, A. R., et al., washing machine.....	20,510
Brobet, D., roofing compound.....	18,282		

Byron, E. L., et al., fire escape.....	20,261	Cheney, C. W., lawn mower.....	19,758
" T. F., car-coupling.....	19,471	Chesnut, R., truck for reapers.....	18,690
Cable, A. D., et al., railway car.....	18,592	Chester, H. C., grapple.....	18,641
Cady, M. O., et al., fire-box lining for cooking stoves..	19,148	Chevalier, F., plough.....	18,469
Cairns, G. F., et al., fire-escape.....	20,855	Chew, J., et al., steam feed for circular saw mills.....	19,445
Caldwell, F. C., pulley.....	19,071	Chidley, E. D., et al., box.....	19,553
Call, J. F., combination tool.....	19,968	Childcott, A. W., gate.....	19,555
" L. A., dress chart.....	18,383	Childs, W., folding center board.....	19,713
Callender, A., iron harrow.....	19,706	Chiles, H. C., animal shears.....	19,826
Callow, J. J., stencil plates for graining and imitating wood, marble, etc.....	20,003	Christenser, W. O., center board for vessels.....	19,043
Calpin, T. S., anchor.....	20,845	Christie, R., fire-escape.....	18,469
Cameron, A., et al., coal oil stove.....	19,179	Christmap, J., feed water regulator.....	18,871
" J., cylinder sifter.....	18,701	Church, H. D., et al., freezing apparatus.....	18,288
" " et al., earth closet.....	19,614	Claoy, C. M., car coupling.....	18,409
Campbell, G., et al., lawn mower.....	19,614	Clapp, W. J., et al., manufacture of iron and steel.....	19,866
" H. F., machine for preparing hoops.....	20,291	Clapper, G. A., printers' dry rack.....	19,285
" M., meat roaster.....	19,520	Clare, J. A., machine for the destruction of potatoe bugs.....	18,848
" " et al., riddle for extracting cockle and wild peas from grain.....	18,614	Clark, E., steam boiler furnace.....	18,741
Camp, L. M., manufacture of sugar.....	19,634	" H., feed mechanism for circular knitting machines.....	20,334
Cannell, F. U., curry comb.....	19,120	" N. J., et al., window shade roller.....	20,055
Cantelo, J. S., drawing knife.....	18,482	" T. K., machine for channelling leather.....	18,889
Cantolan, H., buggy gear.....	18,773	" C. E., et al., composition for cleaning and renovating fabrics.....	19,821
Capell, G. M., et al., fan.....	20,028	" C. L., et al., circuits and indicators.....	18,282
Capwell, G. J., horse shoe nail machine.....	18,991	Clayton, E. & W. J., clothing sample.....	18,838
Carley, H., et al., electric low water alarm.....	18,546	Clegg, W. E., art of protecting eyesight.....	20,444
Carble G., refrigerator.....	19,162	Clemens, G. F., apparatus for transmitting differential rotary motion.....	19,757
Carmichael, J., cylinder sifter.....	19,061	Clifton, J. E., coal chute.....	19,390
Caron, U., door lock.....	20,655	Clinton, T. J., et al., ratan scraping and splitting machine.....	20,049
Carpenter, F. W., dust pan.....	19,237	Clock, L., et al., door spring.....	18,868
" J. W., et al., waggon jack.....	19,920	Cloes, B. J., et al., hanger for sliding doors.....	20,328
Carr, J. I., et al., tool-holder for grindstones.....	19,517	Close, J. W., railway rail chair.....	19,152
" R. L., mechanism for warping, spooling and re-coupling yarn directly from cops.....	19,294	Clymer, D. R., fire-escape.....	18,678
Carre, H., current wheel.....	19,455	Cous, E. K., et al., sheet metal tubes or cylinders.....	19,978
Carricaburn, L. B., steam pump.....	20,493	Coates, A. R. & J. S., et al., spoke tenoning and fellow boring machine.....	19,844
" " valve gear for steam engine.....	20,332	Cobleigh, C. C., seam.....	20,364
Carrier, A., lath machine.....	18,327	Coburn, D. J., et al., broom holder.....	19,150
" C. H., self-oiling axle.....	19,063	Cochran, A. M., buggy top.....	20,012
" L., horse shoe.....	19,791	" W. J., horse collar pad.....	19,168
Carriere, J. B., et al., railroad switch.....	20,409	" H., et al., method of stoppening bottles for airtight liquids.....	20,556
Carrol, J. J., decorated plate glass.....	18,460	Coe, F. W., et al., merchantile elevator.....	19,691
" Decorative Plate Glass Manufacturing Co., decorated plate glass.....	19,460	Coffin, G. G., et al., ore and mineral separator.....	18,663
Caster, J. F., et al., ore-roasting furnace.....	18,430	Coggeshall, C. A., spinning and twisting machine.....	19,409
" J. R., machine for numbering paper.....	20,285	Coghill, J. B., composition for charging fire.....	20,612
" W., knitting machine.....	18,812	Colby, C. C., art of manufacturing wire rope and wire rope machine.....	19,200
" W. H., et al., bay knife.....	19,358	" G. H., coupling attachment for locomotive tender.....	20,497
" " hinge.....	19,354	" C. C., machine for making rope.....	19,194
Carver, W., machine for cultivating and harvesting beans.....	18,818	" H. P., vehicle body.....	20,491
Case, C. W., et al., machine for forming ditches.....	18,739	Colder, R. A., et al., piston packing.....	20,341
" H. J., et al., harvesting machine.....	18,299	Cole, C. B., railway torpedo.....	19,085
" J. M., adjusting and levelling device for roller mills.....	20,251	" W. E., locomotive.....	19,283
" " casings for roller mills.....	20,247	Coleman, J. A., nail machine.....	20,490
" " feed boxes for roller mills.....	20,248	Collan, V., furnace.....	20,093
" " middlings purifier.....	20,250	" " " for reducing ores, etc.....	19,023
" " reduction machine.....	20,246	Ceiller, G. S., et al., shafting and bearing therefor.....	20,581
" Manfg Co., adjusting and levelling device for roller mills.....	20,251	Collins, W., bundle carrier for grain binding harvester Company, M. E., et al., thill coupling.....	20,633
" " " boxes for roller mills.....	20,248	Comstock, F. M., et al., fence.....	20,084
" " " casings for roller mills.....	20,247	" " " picket.....	20,088
" " " gradual reduction machine.....	19,557	Conant, G., egg preserver.....	18,246
" " " middlings purifier.....	20,250	" G. A., bluing compound.....	19,538
" " " reduction machine.....	20,246	Constable, M., et al., extracting oxides of cobalt, etc.....	18,381
" S. S., ironing table.....	19,416	Conroy, G. M., cut-off valve.....	18,398
" W., compound for preventing the formation of clinkers in coal.....	19,890	" G. O. S., et al., adjustment of draw-bars of railway cars.....	19,980
Cassaday, W. L., et al., sulky plough.....	19,979	" " " " " railway car.....	19,955
Chagnon, A. Ft A., sad iron.....	18,615	Cook, B. H., ash sifter.....	19,877
Chamberlain, C. F., filter.....	20,067	" L. G., hydro-pneumatic engine.....	18,824
Chambers, D., et al., hand saw filing machine.....	18,348	" M. E., road scraper.....	19,340
" J. O., et al., telegraph cable.....	18,333	" M. G., scales.....	18,235
" " " " conductor.....	18,372	" M. J., et al., fire-escape.....	20,452
" " " " " conductor.....	20,365	" R. J., vehicle spring.....	20,407
Champlon, C., et al., attachment for attaching a buggy top to the seat.....	19,926	" T. A., et al., match sliding and racking machine.....	19,906
Champlain, L. E., check rein carrier.....	19,597	" W., et al., pick.....	18,711
Chauce, A., et al., car axle lubricator.....	18,499	Cooke, J., cultivating apparatus.....	18,887
Chanteloup, E., hot water furnace.....	20,874	Coombs, H. F., boat.....	18,389
Chapman, T. S., snow plough for cleaning highways..	20,423	Combs, J., et al., wrench.....	18,852
Charbonneau, P. B., saw swaging device.....	19,607	Cooper, J., et al., adjustment of draw-bars of railway cars.....	19,980
Chase, K. M., pneumatic railway.....	19,143		
" J. H., cylinder for grain scourers.....	19,801		
" L. C., et al., hay carrier.....	19,497		
Chavers, E., shuttle for sewing machine.....	19,214		

Cooper, J., et al., railway car.....	19,955	Curtis, J. D., manufacture of barbed wire.....	19,717
" J. J., et al., car coupler.....	20,283	" R. Z. B., grain cleaning machine.....	18,265
" T. G., et al., black leaf check book.....	19,943	" W., et al., bark breaking and grinding mill.....	20,615
" Y. G., " ".....	20,148	Cushling, A., et al., press roller for saw mills.....	20,578
Copeland, S. R., metallic chimney.....	19,268	Cushman, S. S. et al., hand saw filing machine.....	18,768
Corber, C. F., et al., spinning machine.....	20,459	Cuthbertson, J. W., et al., metallic oil barrel.....	19,637
Corbett, J., halter for horse.....	20,495	Cutter, J. G., connection for letter boxes.....	20,288
" P. F., clamp.....	19,393	" W. P., batchet.....	18,418
Corbin, J. S., et al., combined harrow and seeder.....	19,058	Cutting, H., et al., sash holder.....	18,598
Cordey, T. P., ballast car.....	18,339	Dade, C. R., et al., composition of matters for extract-	
Corey, G. D., bottle stopper.....	18,865	ing wool from delaine.....	20,591
Cornell, F. G., pump.....	18,610	Daigneau, J., bark cutter.....	19,295
" " wind engine.....	18,586	Dalley, A. A., car-coupler.....	18,790
" " wind mill.....	18,600	Dake, W. F., et al., sawing machine.....	19,512
" S. A., et al., self-acting fire alarm.....	20,622	Danby, W. J., doubletree.....	18,527
Cornish, H. B., et al., vehicle spring.....	18,682	Danchell, E. H., system of electric railway.....	19,299
Cosgrove, W. F., plug for pipes.....	18,271	Dandereau, J., et al., car axle lubricator.....	19,981
Coté, A., spring leg frame for horse and man.....	20,391	Dark, T., device for cleaning street sewer.....	18,997
" L., impressing or marking and smoothing leather.....	19,821	" " plumber's traps.....	20,188
" N. J., et al., heel counters.....	18,531	Darken, W., et al., braiding machine.....	18,376
" " " lock.....	20,534	Darling, E. R., cartridge implement.....	18,724
" N. O., file coupon.....	20,609	" " J., twine or string cutter.....	20,296
" P., fountain shoe brush.....	19,724	David, E., et al., utilization of birch bark.....	19,727
Cotter, J. A., spark arrester.....	18,236	Dauids, C. H., typography.....	19,313
Cotton, J. F., serving mallet.....	20,139	Davidson, G., et al., knitting machine.....	20,509
Coupland, C., apparatus for cutting pile fabrics.....	19,308	" H. A., manufacture of linseed oil.....	19,163
" " loom for weaving double pile fabrics.....	19,187	Davis, C. W., sewing machine.....	18,500
" " spindle and bearing for rotary cutter.....	19,173	" D., et al., vice.....	18,726
Cousolle, J., et al., horse rake.....	18,778	" E. H., et al., sign.....	20,165
Couteau, L. A., manure distributor.....	19,625	" " " car.....	18,345
" " portable covers for hay or corn ricks,		" " " railroad car.....	18,399
etc.....	19,609	" F. E., machine for cleaning intestines.....	19,197
Coval, M., saw sharpening machine.....	18,280	" H. T., sewing machine.....	18,549
" A. W., fire escape ladder.....	18,297	" " quilting frame.....	19,659
Coventry, C. B., locomotive boiler.....	20,252	" J. S., gaveling mechanism for grain binders.....	20,015
Covert, J. C., soldering iron.....	18,242	" O. F., fire escape.....	18,768
Cowan, M. R. B., shield and blotting pad.....	20,001	" S., et al., railway car.....	18,349
" W. E., et al., self-acting fire alarm.....	20,623	" W., " car coupler.....	20,283
Cowdry, G., railway track.....	20,526	Davy, J. W., fence post.....	20,520
Cowell, E. R. E., speed gauge for locomotives.....	19,646	Dawson, E. C., tent peg.....	18,996
Cox, A. W., curry comb.....	20,466	Day, H. L., ventilating flue cap.....	19,408
" J., case for sad irons.....	20,207	" H. M., et al., scythe adjuster and fastener.....	20,577
" " treating calcareous phosphofites.....	18,529	" J. M., et al., method of stopping bottles for	
" W. E., et al., telephone.....	19,160	erated liquids.....	20,556
" F., et al., self-closing spigot.....	18,618	Day, J. C., snow plough.....	19,964
Coy, F. W., Abrading machine.....	18,406	Dean, F. H., skates.....	19,906
Coy, C. E., machine for threading the points of lag-		Dearborn, C. A., et al., sewing machine.....	18,333
screws.....	19,297	Dearing, A. C., machine for crimping elastic fabrics....	19,198
Crabb, W., comb.....	20,464	De Bock, H. F., fire escape.....	20,129
Cragin Man'g. Co., et al., hydro carbon vapour stove.....	19,091	De Braam, J. A., et al., carburetted air engine.....	20,398
Crass, C. F., et al., mowing machine.....	19,456	De Castro, J. W., et al., apparatus for separating starch	
Crawford, A., smoke consuming furnace.....	19,863	Decker, J. C., et al., pole for galvanic batteries.....	18,983
" M., cockle machine.....	18,291	" W., et al., straw stacker.....	20,272
" " flour dressing machine.....	18,290	Deeds, J. B., et al., wick adjuster and trimmer for	
" R., heating apparatus.....	20,262	lamps.....	19,991
Criley, T. F., et al., row-lock.....	18,615	De Ferranti, S. Z., et al., dynamo electric machine or	
Crocker, J. A., filter and filtering machine.....	20,673	electric generator.....	19,308
Crompton, F., machine for crimping elastic fabrics.....	19,198	De Forest, L., roads.....	19,792
" " et al., corset.....	18,316	Deland, E. E., shepherd's crook.....	19,710
Cronk, W., barn door hanger.....	18,480	Délaney, F. J., et al., sash holder.....	18,593
Crowe, S. C., shoe.....	19,891	Demer, C. O., rake shoe or runner.....	18,900
Crowell, H. C., friction clutch.....	19,893	Dénéchaud, J., safety railway cars and rails.....	20,285
" " shaft hanger.....	18,858	Dentel, E., operations of boring and levelling, etc.....	18,918
" " taper sleeve fastening for machine pul-		DeNiss, B. et al., compound for waterproofing and pre-	
leys.....	19,914	serving buildings.....	19,381
Crowell, M. C., et al., car coupler.....	20,279	Denney, H., gas engine.....	18,412
Croydon, M., mode of manufacturing bread.....	19,206	Dennis, C. W., washing machine.....	19,924
Crutinger, C. W., inking pad.....	19,074	Denver, J. N. B., device for coupling railway cars.....	19,707
Cuenod, H., et al., magneto and dynamo electric ma-		Depp, H. A., steam and air engine.....	18,554
chine.....	18,563	Dershon, S. D., reciprocating valve oiler.....	19,374
Colley, C., sewing machine.....	19,506	Delloho, D. M., wrench.....	20,659
Cullingworth, G. R., air compressing machinery.....	18,804	Desjardins, C., fire shovel.....	20,482
Culp, I. H., et al., steam vehicle.....	20,536	" " shade straw hat.....	19,601
" S. T., revolving stand.....	19,623	" M., hay rake.....	19,266
" " show stand.....	18,448	De Smedt, E. J., cement.....	19,324
Cummer, F. D., steam engine.....	18,548	Detrioh, C., lined conduits.....	18,425
Cumming, J. B., et al., carpenter's bevel.....	19,548	Devins, J. J., axles for vehicles.....	20,169
" C., electro-magnetic apparatus.....	20,456	Devins, E. J., fanning mill.....	19,302
" E., leather splitting machine.....	18,379	D'Ewart, W. J., et al., apparatus for annealing, clean-	
" M. L., skirt protector.....	19,432	ing and galvanizing wire.....	36,319
" R. F., et al., oiler for car wheels.....	20,445	Dewey, W. C., et al., means for rendering buildings	
Cummins, J. E., grain cleaner.....	18,598	fireproof.....	20,629
Currie, S. C. C., et al., electro magnet and armature..	18,939	De Witt, J. M., car brake.....	18,237
" " means for working and locking		Dick, R., mailing machine.....	18,888
railway signals and points.....	20,508	Dickerman, A., et al., window screen.....	18,317
Currier, W. M., et al., leather splitting machine.....	10,848	Dickerson, W. R., device for raising, etc., railroad	
Curtis, D., metal lined harness.....	19,166	tracks.....	18,456
" F. E., et al., grain cleaning machine.....	19,500	Dickey, W. H., centrifugal reel.....	20,154

Dickinson, W., seeding and cultivating machine.....	20,047	Elkan, A., et al., wire band for boxes.....	20,255
Dickmann, G., plattens for engines.....	20,210	Elliot, C. W., et al., striker for sash bolts.....	18,281
Dietrick, J. C., buck saw stretcher.....	20,402	" J., fence.....	19,181
Dinock, H. S., et al., hitching strap.....	19,825	" K. H., et al., vehicle hub.....	20,465
Dion, P., et al., car coupling.....	19,265	Ellis, J. F., et al., ploughing and gliding progs.....	20,258
Dittrick, J., et al., fire escape.....	20,865	" Q. A., shot case.....	18,978
Divine, S. R., explosive compound.....	18,810 18,811 18,833	" T. L., et al., shaft coupling.....	20,053
Dixon, F. E., leather bagging.....	19,136	" W., road scraper.....	20,030
Dixon, H. & B., post driving machine.....	18,365	Ellison, A., et al., electric automatic railway signal.....	19,558
Doane, W. H. H., fire escape.....	18,877	" " " railway signal.....	20,590
Dobbins, W. O., et al., seal lock.....	19,787	" J. E., ironing and pressing board.....	19,487
Doble, J. C., machine for erecting wire fences.....	18,973	Eltringham, W. & J., safety fuses.....	18,310
Dodds, T., plating board.....	20,399	Emerson, J. M., pole tip and clamp.....	18,710
Dodge, D. B., et al., lawn and field mower.....	18,490	Emery, A. H., lever platform scale.....	20,508
Dodge, J. A., skates.....	18,502	" " " pressure and vacuum gauge and dynamometer.....	20,507
" " wrench.....	18,816	Emery, A. H., weighing machine and dynamometer.....	20,508
" J. C., hammocks and cots.....	18,351	" " " machinery.....	29,505
" J. W., et al., mechanical movement.....	19,030	" " " scale.....	20,504
Doherty, C., et al., self-closing faucet.....	18,771	" Scale Co., lever platform scale.....	20,506
" F. " two wheeled vehicle.....	19,059	" " " pressure and vacuum gauge and dynamometer.....	20,507
" P. J., skate.....	19,585	Emery Scale Co., weighing machine and dynamometer.....	20,508
Dole, W. S., et al., electric lamp.....	18,647	" " " machinery.....	20,505
Donale, J., attachment for lagging sleds.....	20,652	" " " scale.....	20,504
Donnelly, M., et al., striker for sash bolts.....	18,281	Emond, L. N., et al., hand broadcast seed sower.....	19,272
Doollittle, W. E. and D. E., shutter fastener.....	19,604	English, A. M., et al., button setting machine.....	20,488
Dornfeld, J. D., clay tempering machine.....	19,228	English, R., oil can.....	19,775
Doty, J. O., curtain fixture.....	19,485	Expin, O., circular saw mill.....	19,881
Dougherty, C. H., cabinet for watch crystals.....	18,606	" " elevator.....	20,451
Dougherty, M. J., car coupling.....	18,607	" " method of balancing gears and pulleys.....	20,450
Douglass, T., skylight sash.....	18,606	Esty, W., art of knitting widened tubular fabrics.....	20,427
Dowell, A., et al., machine for transporting cream.....	19,123	" " art of knitting stockings.....	20,427
Downer, J. R., et al., machine for making cigarettes.....	19,011	Eteve, E., et al., carburetted air engine.....	20,396
Downie, G., prevention and removal of scale in boilers.....	19,289	Ethridge, M. R., boots and shoes.....	18,511
Doyle, J. I., et al., carriage axle box.....	19,623	" " " lasting boots and shoes.....	18,510
Drew, N., system of writing music.....	20,481	Eton, G. W., machine for cutting feed.....	19,447
Dryfoos, L., skirt.....	19,121	Engle, A. H., steam boiler.....	18,731
Dubois, F. N., plumber's trap of wrought lead.....	20,343	Engliss, T. H., parlour game apparatus and cue.....	20,547
Dubois, J. S., conduits for electric wires.....	18,397	Evans, P., elevator for grain and other cereals.....	20,218
" " " under-ground conduits.....	18,491	" Y. S., et al., stove pipe elbow.....	22,242
Duffield, W., rotary steam engine.....	19,015	" W. C., et al., housing and insulation of electrical wires.....	18,452
Dunbar, E. J., fire kindling.....	19,337	Everett, C. A., machine for making fences.....	18,609
" R. & G. H., et al., oiler for machinery.....	18,311	" P. E., et al., self-closing faucet.....	18,771
Dunlop, R. A., hand motive power.....	19,549	Ewing, T., composition for cleaning and renovating fabrics.....	19,321
Dunn, F. W., et al., fence.....	20,635	Ewins, P. S., sorghum evaporator.....	20,144
" J., et al., drain tile.....	20,646	Facer, J. A., et al., car wheel tires.....	18,679
" H. H., et al., fence.....	20,035	Fagan, P., folding box.....	20,492
Dunning, H., spring horse shoe.....	19,186	Fahy, J., watch case.....	20,146
Duplessis, E., apparatus for obtaining from logs, strips for hay vane hoop basket ware, etc.....	19,261	Fahey's Watch Case Co., watch.....	19,533
Durand, J. Moccasin.....	19,745	Fahey's Watch Case Co., watch cases.....	20,146
Durgin, H. J., et al., machine for painting wire fences.....	19,913	Fairbanks, C. M., three square files.....	18,513
Durocher, O., moccasin.....	20,128	" H., fire escape.....	19,070
Dutton, S. K., Washing machine.....	18,871	Fairman, F., et al., adjustment of draw bars of railway cars.....	19,980
Duval, J., gun.....	18,322	Fairman, F., et al., railway car.....	19,955
Dwite, W., et al., hay and straw fuel.....	18,704	" J. Y., ice crushing machine.....	18,981
Dyer, S., et al., holder machine for wire.....	18,626	Fallesen, C., et al., fifth wheel for vehicle.....	19,586
" " mechanism for knotting grain band in grain binders.....	20,273	" Fifth Wheel Co., fifth wheel for vehicle.....	19,586
Dyer, W. H., churn.....	19,342	Fanning, W. H., waggon running gear.....	19,674
Earl, J. H., cutting paper from rolls.....	19,137	Farlin, D., et al., rail joint.....	18,371
Earle, G. W., et al., running gear for carriages.....	19,336	Farmer, G. B., boot.....	20,069
Earnshaw, H. W. T. & J., et al., spinning machine.....	20,459	" J. C., et al., piston packing.....	20,341
Eastburn, D. B., meat roaster.....	19,520	Farmer's Friend Man'g. Co., et al., grain drill.....	20,664
Eastman, G. C., carriage shaft supporter.....	19,286	Farmer, W., flushing device for water closet, urinals, etc.....	19,236
" O. N., grain thrashing machine.....	19,209	Farmer, W. R., et al., iron working, planing and shaper machine.....	20,016
Eastwood, J., portable fence.....	18,556	Farnham, A. I., et al., attachment for sap bucket cover.....	19,418
Eaton, B. F., paper holder.....	19,576	Farnham, S. W., horse shoe.....	18,629
" C. C., car axle truss.....	19,648	Farnsworth, C. L., button fastener.....	19,789
" G. S., type rubbing machinery.....	19,563	Farr, W. M., sand band for vehicles.....	20,059
" M. H., making ditches.....	18,660	Faulkner, J. J. & E. T., middlings purifier.....	18,601
Ebbert, J., spike extractor.....	18,462	Faust, A., shaft coupling.....	20,401
Eberhart, J. W., sulky plough.....	19,129	Felster, H. P., colour printing press.....	18,770
Eberlein, F., sash fastener.....	18,481	Fellows, R. C., brush boring machine.....	18,342
Ebermau, F. S., injector.....	20,496	Felthousen, J. D., et al., car coupling.....	20,651
Echart, J., preserving animal or vegetable substances.....	18,588	Felton, A. K., convertible carriage.....	20,860
Eddy, E. B., et al., match dipping machine.....	20,572	" J. H., roller skate.....	19,221
Edgar, J. M., seal lock for car doors.....	20,479	Ferris, G. D., washing machine.....	19,316
Eggerly, S. H., crane.....	18,274	" G. L., et al., washing machine.....	19,316
Edgerton, N. H., electric arc lamp.....	19,608	" H., burglar alarm.....	20,440
" " " machine, dynamo.....	19,655	Fetrier, J. J., carriage spring.....	20,638
Edmonson, E. S., et al., conveyor for grain and flour machines.....	19,584	Field, B., balance steam engine.....	19,958
Edwards, A., combined butter dish and package.....	18,805	" H., foot power.....	19,482
Egan, C., et al., telephone.....	19,160		
Egge, F., et al., button hole attachment for sewing machines.....	20,342		
Einig, J., steam whistle.....	20,266		
Elfrich, W. H., et al., grain cleaning machine.....	19,500		

Field, J., running gear for carriage.....	19,045	Fuller, T., composition of matter for making soap.....	19,040
" T. L., et al., fertilizing material.....	20,165	Fulton, H. H., et al., pulley.....	18,687
Fielder, G., blinding harvester.....	18,278	" S. B., gauge cocks.....	18,834
" " harvesting machine.....	19,587	Furlong, J. F., motive power.....	19,257
Fields, C. W., hand embroidering machine.....	19,907	Fysh, O. B., two-wheeled vehicle.....	20,804
" E., wagon jack.....	19,881	Gage, C. W. & A. S., machinery for sawing lumber.....	20,025
Fierheller, J. W., horse shoe.....	18,807	" J. E., et al., paper machine.....	20,856
Fife, R., et al., car stove.....	18,822	" " steam valve.....	20,363
Finley, J. R., et al., hame fastener.....	19,417	Galloway, T. D., distributor for seeding machine.....	20,208
Fisher, A. S., steam cooking utensils.....	19,644	" " seeding machine.....	20,211
" C. A., et al., cut out of telephone.....	18,289	Gamble, J. L., opening and closing fence gates.....	18,855
" E. E., oscillating spring chair.....	20,476	Gamgee, J. S., substitute for sponges for medical purposes, etc.....	19,169
" J. H., car door lock.....	20,581	Gano, N. L., saw tooth swage.....	19,967
" J. W., paring and covering fruits.....	19,837	Gardner, C. T., baby jumper.....	18,888
" W. F. B., cut off for conductors of liquids.....	18,415	" F. A., et al., oiler for machinery.....	18,311
" W. M., split ring.....	19,682	" H. L., hose reel or carriage.....	19,692
Fiske, J. E., flour bolt.....	19,063	" R. W., governor.....	20,592
Fitts, A., et al., press for baling goods.....	19,508	" & J. W., governor.....	20,593
Fitzgerald, D. G., accumulator.....	18,256	" Governor Co., governor.....	20,592
" D. H., lock hinge.....	20,887	Gare, T., treatment of leather, etc.....	19,060
" R., machine for cutting holes through ice.....	20,336	Garfoot, G. M., fog signal for railways.....	20,846
Fitzgibbons, P., steam boiler.....	18,758	Garnett, G., butter tub.....	20,191
Flagg, G. H. J., abrading machine.....	18,400	Garrity, L., et al., sulky plough.....	18,355
" J. W., cash conveying apparatus.....	18,697	Garrow, J., Jr., combined drill and cultivator axes.....	20,275
Flater, H., saw jointer and gauge.....	19,862	Gatchell, C. H., et al., picture brace.....	20,316
" " saw set.....	18,574	Gates, P. C., et al., spring shade roller.....	18,592
Fleming, J. B., et al., fruit tryer.....	19,118	" T., et al., car-coupling.....	18,699
" J. E., oil stove.....	18,749	Gaubert, H. A., water heater.....	19,491
Fletcher, M. R. and J. M., et al., double embossing machine.....	20,532	Gauntlett, J., et al., spring bed.....	20,486
Fletcher, M. R. and J. M., et al., double embossed fabric.....	10,598	Gavitt, J. A., et al., harness buckle.....	19,730
Fletcher, T., heating water by means of gas.....	19,369	Gay, W., et al., horse power.....	19,117
Flint, A. S., et al., leaf holder for books.....	19,135	Gear, G. T., car axle journal lubricator.....	18,883
Floeter, R., et al., riddle for extracting cockle and wild peas from grain.....	18,614	Geisen, N., wood burning lathe.....	20,677
Flower, S. A., et al., car axle lubricator.....	19,229	Gendron, B., expanding reamer.....	18,781
Folsy, F. G., et al., lubricator.....	20,234	Genese, D., flexible air-tight eye guard.....	19,718
Follett, E. P., machine for bending tubes and pipes.....	20,136	" " respirator.....	20,126
Follott, J., gate.....	18,835	Genest, A., washing machine.....	18,566
Folsom, F., dust pan.....	19,233	George, C. B., et al., hanger for sliding doors.....	29,828
Ford, C. R., reed organ.....	18,782	" E. M., mechanical movement.....	18,686
Fordham, S. E., et al., securing barrel head.....	18,880	" F., connection for lead or other pipes.....	20,661
Forrest, G. S., et al., carpenter's gauge.....	20,326	" J. J., corn and bunion shield.....	18,575
Forsyth, J., grain blinder.....	20,208	" N. M., dust guard for car axle box.....	19,441
Fortier, H. C., et al., boat.....	18,757	" " car axle lubricator.....	19,440
Foster, H. E., detachable hook.....	20,343	Gerard, G. L., truss pad.....	19,358
" J. A., et al., double embossed fabric.....	20,598	Gerlach, J. C., et al., carding machine.....	19,841
" " embossing machine.....	20,532	" R. P., boiler flue cleaner.....	19,348
" J. B., brick machine.....	19,888	Gibbon, T. H., et al., rail joint.....	18,371
" J. G., et al., manufacture of carbon electrodes or pencils for electric illumination.....	20,335	Gibbon, D., weather ships.....	19,696
Foster, M. W., gate.....	19,602	Gibbs, M. A., et al., apparatus for thawing giant powder, etc.....	19,158
" T. W., table fork or spoon.....	20,367	Gifford, A. T., electric lamp.....	18,447
" W. F., glove fastener.....	19,151	" E. N., car coupling.....	18,296
Fox, I., eye-glass.....	19,688	" G. S., towel holder.....	19,798
Froxel, F., incrustation preventative for steam boilers.....	19,298	Gilbert, F., axle for two wheeled vehicles.....	19,560
Fraley, A., et al., bee-hive.....	18,700	Giles, C. K., anti-magnetic shield for watches.....	19,812
Frambes, R. L., level.....	20,654	Gill, J. E., lubricating oil.....	19,103
Francis, G. W., manufacture of steel castings.....	19,978	" W., car brake.....	19,939
Frank, H., et al., wire band for boxes, etc.....	20,255	Gillett, W., telephone.....	18,542
Frank, W. D., hand tool for shoemakers.....	19,830	Gilliland, E. J., bag and twine holder.....	20,194
Frankce, D. O., paper pulp.....	18,654	Gilman, C. C., combined fire-proof elevator and ventilating shaft.....	20,619
Frasch, H., distillation of hydro-carbon oils.....	19,189	" " et al., housing and insulation of electrical wires.....	18,453
Fraser, D., et al., car coupling.....	19,751	" W. H., letter type.....	20,229
" P., spring bed.....	19,768	" " type writer.....	20,095
Frache, D. O., wood pulp boiler.....	20,090	Gilmore, A. W., car roofing.....	18,988
Fraizer, P., saw handle.....	19,766	Gingras, T., leather washer.....	18,525
Fraizler, A., et al., broom holder.....	19,150	Girdley N. C., et al., telegraph conductor.....	18,372
Frechette, A., construction of shears or clips.....	19,899	Girouard, R., soldering tool.....	18,649
" I., shingle machine.....	18,901	Gisborne, F. M., arrangement of electrical circuit.....	19,786
" P., machine for straightening nails, etc.....	18,874	Gislinger, S., nut lock.....	18,837
Freeman, A. M., suspenders.....	18,707	Glaze, J., et al., straw stacker.....	20,272
" T., ploughing and gliding press.....	20,258	Gleason, E. P., et al., parallel vice.....	18,949
Fregurba, J., support for telephonic and other instruments.....	19,251	" L. D., et al., animal shears.....	18,890
French, J. H., bee hive.....	19,068	Glines, H., device for stretching shoes.....	20,032
" L. P., furnace.....	18,883	Globe Buffer Co., abrading machine.....	18,408
Friedrich, T., combined lock and latch.....	20,570	Godfrey, A., platen printing machine.....	19,205
Friesbrock, F. W., apparatus for elevating, drying and purifying grain, etc.....	20,386	Godin, F., et al., apparatus for working washing machines.....	19,252
Frink, J. H., memorandum or sale slip.....	18,624	Goettel, J., car coupling.....	18,908
Fritz, S., packeted vessel.....	18,401	Golden Gate Concentration Co., mechanism and process for concentrating ore.....	20,458
Frost, S., staple.....	18,369	Goldie, J., et al., conveyor for grain and flour machines.....	19,584
Fry, J. R., fork for hay tedder.....	18,984	Goldstein, J., salt feeding device.....	19,815
Fryberger, J. & B. C., packer for flour, bran, etc.....	18,905	Goodell, H. C., non-conducting covering for boilers.....	18,910
Fuller, H. E., et al., boring bit.....	18,416	Goodwin, E., washing machine.....	20,232
" O. L., spring bed bottom.....	19,996		

Gordon, J., et al., refrigerator.....	20,384	Hall, C. S., et al., apparatus for annealing, cleaning and galvanizing wire.....	20,319
" J. A., Wrench.....	18,386	" C. E., et al., water filter and cooler.....	20,039
" T. R., car axle lubricator.....	18,409	" F., et al., fire alarm and indicator.....	20,490
" W., et al., mechanical movement.....	19,630	" J., et al., bolster plate.....	20,542
Gorham, G. E., sash holder.....	19,977	" J. C., et al., brush block boring machine.....	19,875
Gould, J. C., nail plate feeder.....	18,834	" L. C., et al., vaginal syringe.....	18,274
" O. P., wringing machine.....	20,179	" O. B., et al., automatic fire extinguisher.....	18,832
Goulland, L., et al., car axle lubricator.....	19,981	" P. A., spike extractor.....	18,462
Gowen, W., saw mill dog.....	19,994	" S. E., et al., vehicle spring.....	18,682
Goyr, R., et al., pitman coupling.....	18,344	" T., et al., welt cutter.....	18,559
Graham, C. A., hay elevator.....	18,244	" T. F., drive chain link.....	19,622
" D. M., stove or furnace.....	18,284	" W. B., joint lever.....	19,600
" J. W., et al., stand.....	19,689	" W. F., furnace boiler.....	20,092
" S. P., et al., combined check and socket.....	20,475	Hallett, J., detachable steps for waggons.....	18,785
" bit for boring wood.....	19,423	Halsey, M. D., horse power fire engine.....	20,241
Grand Rapids Electric Light and Power Co., et al., cut out for electric lighting and other electric circuits.....	19,287	Ham, D., flooring for buildings, etc.....	20,000
Granger, E. L., car coupler.....	19,115	" J., et al., press for glass insulators.....	19,483
Granger, J., millstone pick.....	19,078	Hamelie, H. W., carriage spring.....	19,764
" W. E., gage cock.....	20,625	Hamer, S., et al., hose coupling.....	19,444
Grant, J., tile mould.....	19,746	Hamilton, J., et al., windlass.....	19,631
" J. A., machine for cutting hoops.....	18,840	" W., et al., steam feed for circular saw mills.....	19,445
Graves, M. B., et al., spring shade roller.....	19,592	" W. B., et al., drop lift step for mill machinery.....	19,457
Gray, G., machine and process for spiralling wire.....	19,850	Hamlin, C. A., stove for bituminous coal.....	18,867
" et al., school slate.....	20,443	" E. B., telephone switch board.....	20,641
" J., dynamo-electric machine.....	20,321	Hanna, D., sediment collector for steam boilers.....	20,611
" L. E., et al., press for glass insulators.....	19,483	" H., et al., kitchen cabinet.....	19,145
" L. C., postal cabinet.....	19,111	" O., et al., spinning machine.....	20,459
" T., spring tooth harrow.....	20,324	Hannay, J. B., steam boiler.....	18,535
" W. C., et al., rake shoe or runner.....	18,900	Hancliffe, A., et al., welt cutter.....	18,559
" W. D., flour dressing machine.....	18,826	Handforth, B., curtain fixture for spring rollers.....	20,076
Green, C., clutch hook.....	19,182	Handlan, A. H., locomotive head light.....	20,380
" et al., sheet metal can.....	19,658	Hanlault, N., machine for making the teeth of horse rakes.....	19,894
" D., thill coupler.....	18,400	Hanlon, J., manufacture of gas.....	20,143
" E., et al., excavator and grapple.....	18,898	" " water cooled valve for gas manufacture.....	19,904
" J. J., treatment of cotton seed.....	19,671	Hannon, A. T., et al., oil cup feeder for lubricators.....	19,418
" R., fifth-wheel for buggies.....	18,541	Hannahan, J. F., et al., refrigerator.....	20,384
Greene, W. A., device for protecting the neck bands, etc. of shirts.....	18,294	Hanscom, H. S., traction attachment for road engines.....	18,677
" shirt.....	20,167	Hansen, O., fire-escape.....	18,370
Greener, R., et al., oversock.....	18,846	Hanson, F., et al., wood working machine.....	20,038
Greenleaf, F. C., compensating pendulum.....	19,305	Harden, J. J., hand grenade for extinguishing fire.....	19,809
Greenwood, A., construction of wire baskets.....	19,452	Harder, F. P., et al., machine for making cigarettes.....	19,011
Gregg, E. F., cultivator.....	19,030	Harding, E. A., bob sleigh.....	19,949
" W. L., brick machine.....	19,818	" J., car brake.....	20,529
Gregory, J. W., bird cage.....	20,376	" J. H., process for ornamenting walls, ceilings, etc.....	19,887
Grema, J., weiffetree.....	19,304	Hardwick, J. O., washing machine.....	19,081
Grasier, L., paint varnish.....	19,450	Hardy, W. A., car axle box.....	19,915
" wood pulp coating.....	19,513	" " journal bearing.....	20,483
Grice, A. P., et al., nail extractor.....	18,847	" W. R., elastic sections, etc., for corsets, etc.....	18,904
Gridley, N. C., et al., telegraph cable.....	18,338	Hare, J. R., street car fare box.....	18,979
Grier, G. S., fruit evaporator.....	19,570	Hargreaves, M. H. T. L. & J. E., manufacture of laundry blue.....	19,487
" W. F., preservative for organic substances.....	18,515	Harles, J., handle-turning lathe.....	20,471
Griffith, C. E., wire fence fastener.....	19,216	" J. M., et al., manufacture of starch.....	18,963
Griffiths, T., means or apparatus employed in the manufacture of iron and steel.....	19,364	" O., screen.....	19,817
" et al., means or apparatus employed in the manufacture of iron.....	19,366	Harlow, C. C., lubricator.....	19,540
Griswold, R., hay, etc. carrying apparatus.....	18,429	Harmon, O. W., et al., watch movement box.....	19,679
Groff, J. G., circular saw guard.....	18,641	Harper, N., hat sizing machine.....	19,536
Gross, R., et al., plano damper.....	18,937	Hartal, E. W., material for covering carriages.....	19,381
Grove, F., et al., feed guide for printing presses.....	20,360	Harrass, B., manufacture of ligenous compounds and of articles moulded therefrom in imitation of wood.....	18,881
Grover G., nut locks.....	18,420	Harris, A., Son & Co., grain binder.....	19,371
Grubb, W. S., non-conducting compound.....	20,088	" " " harvester.....	19,090
Grubhaber, H., cigar wrapper cutting machine.....	19,675	" " " binder.....	18,071
Guay, E., et al., utilization of birch bark.....	19,727	" F. L., et al., fertilizing material.....	20,155
Guerrant, G. M. & J. C., engraving machine.....	18,969	" J., harvester.....	19,090
Guggisberg, W. E., et al., baking and roasting apparatus.....	19,408	" " binders.....	19,971
Guilleuma, F., liniment for rheumatism.....	20,170	" L. W., creamer.....	18,947
Gurnet, J. F., process for changing hemlock tanned leather to oak.....	19,292	Harrison, J., sulky plough.....	20,309
Gurney, E., et al., steam and water boiler for heating purpose.....	20,029	Harry, B. W., et al., car coupling.....	19,425
Guss, W., oil lamp.....	20,040	Hart, J. F., churn.....	18,951
Guthrie, F. A., lock.....	20,237	Harter, M. D., et al., car brake.....	18,862
Hadden, W., railway signal apparatus.....	18,042	Hartley, J., car-coupler.....	19,711
Hadley, G. G., et al., wrench.....	18,360	Hartson, A. H., et al., sash holder.....	19,087
Haepfner, C., metallic halloid salts.....	19,492	Harvey, H. A., gimlet pointed screw.....	18,340
Haggs, G., miner's squib.....	19,651	Haseltine, S. I., loosening earth, etc.....	18,512
Haight, E. H., neck yoke.....	19,662	Hasenclever, F. A., nut forging machinery.....	21,256
Halles, W., boiler.....	20,381	Haskell, J. F., et al., scaffolding.....	19,267
Haines, H. G., et al., railway velocipede.....	18,652	Hatch, H. E., et al., flour clamp.....	20,395
Hale, T., domestic fire-escape.....	19,969	Hathaway, T. J., well drilling machine.....	20,671
Haley, W., mould for pressed glass ware.....	18,779	Havens, W. H., steam fire engine.....	19,009
Hall, A. W., anti-friction journal box.....	20,579	Hawk, H. E., dredging and excavating machine.....	20,528
" C. A., et al., water indicator and alarm.....	18,458		

Hawley, J. A., et al., vaginal syringe.....	19,274	Hoffnagle, C. A., et al., mercantile elevator.....	19,691
Hay, A., sack filler.....	18,266	Hofboom, L. S., et al., machine for dusting bran.....	19,920
" G. W., cheese press.....	19,561	Hohmeier, P., et al., air furnace.....	18,494
Hayden, H. F., et al., reducing and smelting metals and furnace therefor.....	18,021	" " hot air stove.....	19,585
" H. H., cash carrier.....	19,960	Holbrook, B., preparation for an bark.....	20,149
" " store service apparatus 20,065 20,454	20,454	" Manfg Co., preparation of tan bark.....	20,149
Hayes, H. E., revolving chart and map stand.....	19,243	Holden, C. W., support for telephonic and other in- struments.....	19,251
Hayford, J. W., et al., dental plate mould.....	19,823	" J., barrel truck.....	20,177
Hays, D. L., car-coupling.....	20,307	Holgate, H., et al., rail stringer.....	18,382
Head, T., composition of matter for house decora- ting.....	20,292	Holiday, H. M., till and pole coupling.....	20,345
" " composition of matter for roofs.....	19,866	Holland, D., crate for dairy-products etc.....	19,662
Heap, W., apparatus for operating dry earth closets.....	20,537	Holman, J. W., et al., car brake.....	18,363
Heard, H., bush box for spindles.....	18,608	Holmes, C. P., car axle lubricator.....	18,984
" " millstone driver.....	18,637	" P. H., machine for making wood fibre.....	19,270
" T. H., horse shoes, etc.....	18,923	" S. W., churn.....	19,472
" W., metal surface polisher, etc.....	18,736	" W. H., railway car.....	19,975
Hearley, F. W., spring seat for vehicle.....	20,301	Holwell, W. A., automatic door closer.....	19,872
Heath, M. A., et al., machine for pressing gimp.....	20,019	Hooster Drill Co., grain seeding machine.....	18,714
Hebbard, H. H., apple parer.....	20,281	Hoover, G. W., et al., car coupling.....	20,613
Hébert, A., et al., nut lock.....	19,808	Hopkins, D. A., journal bearing.....	20,431
" L. H., et al., horse rake.....	18,778	" H. L., et al., scroll sawing machine attach- ment.....	19,898
Hedden, W. A., et al., oversock.....	18,546	Hopkins, H. L., harvester cutter.....	18,841
Hedley, E. E., smoke consumer.....	20,612	" R. W., machine for holding and cutting rol led paper.....	20,176
Heebner, W. D., et al., car-coupler.....	19,018	Horne, G. W., switch stand.....	18,494
Heffner, T. F., et al., carriage curtain fastening.....	19,594	" " " point mover.....	18,989
Heintzman, T. A., upright piano action.....	20,313	Horner, M. L., thrashing machine.....	19,167
Henderson, M., et al., carpenters' bevel.....	19,548	" W. H., et al., waterproofing fabrics.....	18,436
Henigan, J., et al., cylinder cock invisible steam es- cape.....	19,147	Horton, D. K., game counter.....	18,545
Henins, M. W., et al., corset clasp.....	18,343	" E., land roller.....	19,125
Henkel, G., pool ball rack and spotter.....	20,549	Hortop, H., vehicle.....	18,597
Henkle, L., street lamp.....	18,780	Hoskins, J., pump for oil wells.....	19,874
Henley, W. J., et al., ice boat oar.....	18,589	Hoster, W. H., machine for forming tenons on spokes, etc.....	19,068
Henry, E. N., et al., riding saddle.....	19,104	Hongen, H. P., et al., machinery for transmitting power.....	19,250
" J. A., compound for removing paint, etc.....	19,161	Houghton, A. A., scale.....	19,048
" R., printed paper wrapper for soap.....	18,943	House, I. M., shingle machine.....	19,479
" V., et al., device for converting motion.....	20,660	Howard, C., excavator.....	20,641
Herrmann, L. A. F., electric cable or conductor.....	18,764	" L. D., et al., car axle lubricator.....	18,499
Hermite, E., bleaching of paper pulp.....	19,714	Howe, A. A., stump machine.....	18,885
Herrenschmidt, H., et al., extracting oxides of cobalt, etc.....	18,381	" D., axle lubricator.....	19,784
Herrick, W. H., apparatus for distilling water, etc.....	20,034	" J. L., apparatus for unloading hay.....	20,461
Herricks, W. H., door holder.....	20,151	Howell, H. W., Jr., automatic railway switch.....	19,515
Herron, J. P., et al., testing fabrics.....	18,719	Howell, W. H., child's suspended and adjustable chair and bed.....	20,576
Heron, R., et al., compound for table use.....	19,726	Howells, W. C., construction of shears or clips.....	19,899
Herzog, F. E., imitation stained glass.....	18,840	Howes, W., creamer.....	20,221
" " telephone signalling apparatus.....	18,706	Hoyt, J., rag engine.....	20,094
Hettinger, J., lock up pop safety valve.....	20,448	" J. P., fountain pen.....	19,740
Hewitt, C., et al., hay carrier.....	19,497	" L. S., et al., air pump.....	20,630
" R., et al., circuits and indicators.....	18,262	Hubbard, J., et al., burglar proof safe.....	18,988
" B., et al., obtaining motive power.....	19,228	Hubbell, B., et al., staple extractor.....	19,523
Hey, G. W., cheese hoop.....	19,467	Huber, L. C., railroad signalling apparatus.....	19,755
Hice, H., et al., car brake.....	18,363	Huddleston, T., combined sulky plough and culti- vator.....	20,027
Higby, C. W., bustle.....	18,722	Hue, L. V., et al., moulding and designs in glass.....	18,508
Higgins, C. L., flexible last.....	18,283	Huff, J. C., et al., washing machine.....	19,316
" M. E., under waist.....	18,295	Hughes, B. R., trace holder.....	20,411
Hill, A. G., et al., combined harrow and seeder.....	19,058	" J., et al., spring balance.....	20,397
" A. H., sliding window blind.....	19,191	" R., et al., door lock.....	20,420
" D. C., moving grate for boiler furnaces.....	18,850	Hull, R., thistle cutting plough.....	20,340
" F. D., burglar alarm.....	8,446	Hummel, J. H., weather strip.....	18,924
" J. H. harness tug attachment.....	18,885	Humphrey, D., hoe.....	18,817
" J. W., cradle and seesaw.....	18,902	Humphreys, H. K., decoy duck.....	19,312
" W. F., paper cutting machine.....	18,721	Hungerford, E. B., railway tie.....	19,528
Hillthorn, F. S., et al., galvanic battery.....	18,228	Hunn, E. S., ice rubber.....	20,610
Hills F. H., pop safety valve.....	20,548	Hunsicker, H. J., et al., shutter operating locking de- vice.....	19,896
Hilton, W., mining machine.....	18,492	Hemsicker, I. C., et al., car coupler.....	19,018
Mindley, R. C., skate.....	18,264	Hunt, G. G., et al., harvester reel.....	18,732
Mines, B., ship windlass.....	20,257	" S., vehicle's seat spring.....	18,506
Hinsdale, C. C., telegraph insulator.....	18,561	Huntbach, T., fountain brush.....	20,051
Hitchcock, R. L., farm gate.....	18,439	Hunter, R. M., printing press.....	18,519
" " hand washing rubber.....	18,438	" F. G., car seal.....	20,199
" " step ladder.....	18,546	" J. H., bag and twine holder.....	20,194
Hoadley, G. E., car-coupling.....	19,115	" R. M., underground conductor.....	19,179
Hobbs, E. M., et al., car-coupling.....	18,315	Huntington, J. D., device for suspending machinery and obtaining rotating centres.....	20,043
Hochhausen, W., dynamo-electric machine.....	19,676	Huntley, R. D., illuminated knob for doors, etc.....	19,633
" " secondary battery.....	18,231	Hurd, S. P., et al., pole tip and clamp.....	18,710
Hodges, C. B., & C. H., locomotive lubricator.....	18,990	Hurly, M. B., bill and letter file.....	19,687
Hodgson, T., shingle machine.....	19,887	Huson, J., et al., car truck.....	18,824
" J. G., can ending machine.....	19,844	Huston, R. M., combined wardrobe and bedstead.....	18,765
Hodson, T. T., boat bull.....	18,516	" W., ejector.....	20,280
Hoednaker, J. A., et al., galvanic battery.....	18,228	Hutchins, W. F., et al., toboggan.....	20,085
Hoet, A., et al., animal shears.....	18,390		
Hoffman, H. J., file for paper.....	19,085		
" J., knife, etc., holder.....	18,608		
" W. M., removing imperfections from skins.....	19,918		
Hoffmaster, S., et al., lubricator.....	18,288		

Hutton & Co., lacing for gloves and boots.....	19,524	Jordan, T. R., apparatus for treating ores.....	18,925
Hyatt, J. W., art of filtration.....	18,892	" " extracting metals from their ores.....	18,928
" " sheet metal perforating machine.....	19,033	Joslyn, M. H., band cutter and feeder.....	19,853
Hyde, F., et al., waterproofing fabrics.....	18,496	Jull, O., snow plough.....	18,606
Iddings, F. A., shaping die.....	20,366	Jutte, W. C., machine for making insulator pins.....	19,443
Illinois Iron and Bolt Co., axle skein.....	19,493	Kacer, M. V., et al., fire arm.....	18,895
Imbach, M. G., brush boring machine.....	18,342	Kahl, D. P., car-coupling.....	18,674
Imperial Oil Co., distillation of hydro-carbon oils.....	18,189	Kandeler, C. F. T., art of burning bricks.....	20,023
Ingalls, C. E., et al., attachment for sap bucket cover.....	19,418	Kane, A. L., feed box for horses.....	19,985
Ingersoll, M. B., fire escape or life preserver.....	19,073	Kay, T. L., dynamo electric machine.....	20,153
Ireland, F. C., manufacture of sausages.....	19,770	" " electric arc lamp.....	19,799
Ivotre dit Provençal, F. W., car-coupling.....	19,827	" " electric lamp.....	20,540
Ives, H. K., machine for mangling clothes.....	19,585	Kearney, D., stop valve.....	18,305
Iwan, H. & L., ditching hoe.....	20,403	Kearney, J., churn.....	18,946
Jack, M. L., et al., pulley.....	20,489	Keating, E. H., apparatus for removing incrustations, sediment or deposits from water pipes.....	20,106
Jackson, F. W., photographic plate holder.....	19,190	Keating, L. N., et al., window screen.....	18,317
" J., et al., buckboard waggon.....	20,193	" W. H., oven grate.....	18,243
" J. P., appliance for water filtering.....	20,091	Keefer, C. M., railroad rail joint.....	20,557
" J. W., oil can.....	18,839	Keeber, D. L., sawing machine.....	20,518
" R., et al., harvester rake.....	19,736	Keeler, S. C., et al., illuminated knob for doors, etc.....	19,833
" W., manufacture of textile and other fabrics.....	20,596	" W., et al., mowing machine.....	19,456
" " M., metrical carburetter.....	18,672	Keller, S. B., et al., boots and shoes.....	18,250
Jacobs, J. W., washing machine.....	19,931	Kelchley, G., looms for weaving.....	20,293
Jacques, L. A., fire kindler.....	20,582	Kelshhead, S. F., creamer.....	19,072
James, W., bag holder and truck.....	20,134	Kelsted, H. N., table for calculating wages.....	18,966
Jans-on, O., pocket inkstand.....	18,408	Kelth, G. W., cigar holder.....	18,865
Jarvis, E. J., mouse trap.....	18,613	" J. M., spring bed bottom.....	19,080
Jaynes, A. L., bed bottom.....	18,913	" R. L., carriage top.....	20,037
Jennings, C. W., et al., water filter and cooler.....	20,039	Kelzer, L. R., et al., magneto signalling apparatus.....	18,459
Jenny, E. S., headlight.....	18,571	Kellogg, H. W., method of raising cream.....	18,804
Jenson, J. M., et al., fifth wheel for vehicle.....	19,567	Kelly, G., non-conducting covering.....	19,552
Jerrod, J. E., et al., valve.....	20,100	Kelly, J., et al., scroll sawing machine.....	19,898
Jeune, J. H., et al., manufacture of target ball and flying targets.....	20,417	" J. A., et al., hub attaching device.....	18,417
Jewell, P. L. B. & C. A., et al., harness covering.....	19,199	Kelle, E., et al., freezing apparatus.....	18,238
Jewett, D. C., hay loader.....	18,599	Kemp, J. S., fertilizer distributor.....	19,883
" L. K., car truck.....	19,742	Kemp, W., et al., purification of sulphuric acid.....	18,856
" W. G., et al., street indicator for cars.....	20,421	Kempshall, E., button fastener.....	20,010
Johannesen, A., portable adjustable reading desk.....	19,341	Kendall, O., et al., steam vehicle.....	20,536
Johns, T., metallic packing.....	19,839	Kendrick, A. W., et al., fanning mill separator.....	18,944
Johnson, A. J., fire escape.....	20,412	Kennedy, C., fire escape.....	19,782
" C. P., car coupling.....	19,202	" C. E., et al., fire escape.....	20,261
" E. L., yoke for draft animals.....	20,588	" D., et al., bicycle.....	18,683
" E. R., fire escape.....	19,375	" G. A., sleeping head rest for railway chairs.....	19,708
" G. J., et al., means of preventing the withdrawal of draw-bars for coupling cars.....	18,783	" " tubular lantern.....	18,582
Johnson, H., railway signal.....	20,555	" " fire escape and fire extinguisher.....	18,872
" H. C., fire proof safe and vault.....	19,119	" T., et al., boot.....	18,757
" J., embroidering machine.....	19,397	Kennett, J. R., tool holder for grinding tools.....	18,638
" J. P., vehicle seat.....	20,544	Kepley, A. H., belt for money, etc.....	19,638
" L. P., reel for wire.....	19,752	Kerie, H. W., hydraulic elevator.....	20,385
" R., et al., heating apparatus.....	18,670	Kessler, H., steam actuated valve.....	18,681
" R. J. & F. M., steam washer.....	19,628	Ketchum, J., treatment of lung diseases.....	18,543
" T. J., fastening for boots, etc.....	20,116	Kettle, J. F., et al., electric clock.....	18,934
Johnston, C. W., feed water regulator and alarm for steam boiler.....	20,428	Keyser, J. H., stove.....	19,106
Johnston, C. & S. T., plough and pulverizer.....	18,407	Kiddy, J., leather belting.....	19,136
" W. C., machine for packing hay.....	19,124	Kieffer, J. C., et al., car-coupling.....	19,425
" W. P., et al., hay and straw fuel.....	18,704	Kiely, J. D., car-coupling.....	18,411
Johnstone, J., cooking stove.....	20,064	Killam, R. C., press roller for saw mills.....	20,573
" J. F., drying apparatus.....	18,849	Kim, G. M., fire escape and hook and ladder.....	19,934
Jones, A. G., match splint cutting machine.....	19,373	Kimball, H., buckle.....	20,404
" C. K. & W. F., washing machine.....	18,894	Kimmel, V., gang plough.....	19,865
" C. W., device for opening and closing sliding gates.....	20,363	King, J. A., leggin.....	19,066
Jones, D. A., hermetically sealing sheet metal cans.....	19,987	" S. D., dumping car.....	19,690
" " wax extractor.....	19,379	" W., sectional boiler.....	19,318
Jones, E. C., fence post.....	20,442	" W. H., land marker.....	19,389
" E., et al., apparatus for maintaining torpedoes, etc., under water.....	20,552	Kingsbury, J. A., electrophone.....	19,428
Jones, E. R., thrashing machine.....	19,459	Kingsbury, J. A., electrophone transmitter.....	18,957
" F. W., static compensator for telegraphs.....	19,809	Kingsford, T. P., manufacture of dextrine glucose, maltose and grape sugar from wheat, corn, etc.....	19,034
" G., gas generator.....	19,462	Kinne, P. S., et al., ice velocipedes.....	20,158
" " process for generating gas.....	19,446	Kinney, I., sheet metal fabric.....	20,339
" " regenerator furnace.....	19,435	Kirk, I., et al., automatic felt guide for paper machines.....	19,838
" " superheater.....	19,463	Kirkwood, W., radiator.....	20,422
" " furnace.....	19,461	Kistner, H. U., tools for sharpening skates.....	18,630
" J. C., grate.....	18,605	Kiteley, J., means of fastening shoes on horses.....	20,312
" L. M., et al., grain binder.....	19,371	Kitselman, A. L., roller skate.....	19,428
" J. W., bedstead and dressing table.....	18,909	Kleeman, F., process for filtering and decolorizing sugar, liquor, syrups and saccharine juices.....	19,279
" W., carriage hub and axle.....	20,351	Klein, J., milk can.....	19,306
" W. H., cash and parcel carrier.....	20,325	Klopp, M. J., et al., vehicle axle.....	19,989
" K. W., land roller.....	20,517	Klueckerbocker Co., bolting apparatus.....	20,096
" T. C., car coupling.....	18,791	" " flour bolt.....	20,102
" W. M., churn.....	18,558	" " middlings purifier.....	20,117
Joe, M., bottle stopper.....	19,954	Knight, E., hasp lock.....	18,245
Jopling, M., submarine boat.....	19,998	" G. A., staple.....	18,999
Jordan, A. L. & R. C., hay carrier.....	19,728	" R. S., ventilator.....	20,196
		" W. B., window sash support and fastener.....	20,578

Mears, G. W., smoke consumer	20,042	Morgan, J. T. & J. H., et al., reducing and smelting metals and furnace therefor.....	18,921
" W., pulp barrel.....	20,390	Morgan, W. F., et al., door lock.....	20,420
Medcalf, A., culvert and trap for sewers.....	20,527	Morrell, H. A., sleigh shoe.....	20,225
Medill, W. C., cross-cut saw.....	19,153	Morris, C. W., row-lock.....	18,389
Mellier, A. A., physician's buggy case.....	20,286	Morris, D., et al., lock.....	18,954
Melvin, W. B., et al., heating furnace.....	18,648	" G. W., thrashing machine.....	10,010
Merchant S., carpet stretcher.....	20,432	Morrison, A. B., burial apparatus.....	20,414
Mereweather, H., et al., package tying machine.....	18,730	" E., et al., testing fabrics.....	18,719
Merrill, G., et al., treatment of ores containing precious metals.....	20,647	" J. C., et al., oil burner.....	20,660
Merrill, G. P., et al., wrench.....	18,360	" S. W. & D. R., creamer.....	19,327
Merritt, D. H., brake band for hoisting machinery.....	19,478	Morse, E. A., et al., process and apparatus for manufacturing paper pulp.....	19,323
Messervey, W. J., bag holder.....	19,621	Morse, O. M., flour bolt.....	20,102
Messinger, W. T., injector.....	19,816 20,162	" middlings purifier.....	20,117
Metcalf, J., grain shovel mechanism.....	19,619	Mortensen, L. J. M., et al., machine for forming eye bolts.....	18,814
Metcalf, J., et al., attachment for attaching a buggy top to the seat.....	19,926	Morton, E. S., et al., method of coating tacks.....	20,017
Metzler, C. E., et al., signal lantern.....	18,595	" W., et al., milk can.....	18,642
Meuron, de A., et al., magneto and dynamo electric machine.....	18,568	Mossberg, E., machine for sharpening saw blades.....	19,056
Meyer, E. F., draw-bridge alarm.....	18,696	Mott, J., metallic shingle.....	19,133
Michelson, S. M., et al., trunk caster.....	19,355	Moulton, W. F., et al., vehicle hub.....	20,465
" " tray.....	19,317	Mousseau, E., et al., match dipping apparatus.....	20,572
Mignault, P. E., et al., car-coupling.....	19,285	Moyer, J. M., buckboard waggon.....	18,451
Millar, C., et al., friction clamp.....	20,192	Multhead, J., water closet.....	18,796
Millen, G. H., et al., match dipping apparatus.....	20,572	" R. B., et al., churn.....	19,848
" J. T., plough.....	19,481	Mullally, W., et al., car-coupling.....	19,425
Miller, B., carriage-painters' adjustable horse or jack..	19,346	Munford, T. W. B., et al., crushing ores, etc.....	19,574
" C. H., rubber bucket.....	18,383	Munn, S. J., et al., train signal.....	18,252
" D. G. & C. C., et al., hame fastener.....	18,378	Munroe, W., organ reed.....	18,580
" G. W., attachment to windmills.....	18,882	Murch, C. M., running gear for vehicles.....	19,047
" H. J., et al., spoke tenoning and fellow boring machine.....	19,844	Murdoch, C. F., stop valve.....	18,893
" J., method of recovering metals.....	18,432	Murphy, A. A., et al., spool holder.....	20,457
" " ore concentrator.....	18,431	" C. S., flexible urinal.....	18,780
" " process for collecting metallic particles.....	18,421	" J., hose.....	19,852
" L., binding harvester.....	18,583	Murray, G., et al., apparatus for thawing giant powder, etc.....	19,158
" L. L., et al., vapour burner.....	19,546	Murray, J., et al., car-coupling.....	18,866
" S. L., fruit dryer.....	20,152	Myers, H. S., composition pad for copying.....	29,644
" T. H., et al., apparatus for separating starch..	18,916	Nafziger, J. & A., automatic grain measuring machine.....	19,516
Miles, E. G., toe weight for horses.....	19,721	Narramore, H. L., clock.....	19,421
" J. E., post augers.....	19,486	Nel, D., screw driver.....	19,419
Mills, C. W., metallic packing for piston rods.....	20,073	Neil, M., et al., driving staple.....	20,561
" R. R., composition for toothache.....	20,122	Neild, R., tool holder.....	18,622
" T. B., fly book.....	19,273	Nellis, A. J., heating, tempering and annealing furnace.....	19,005
" W. M., turbine water wheel.....	19,253	Nellis, A. J., road scraper.....	19,519
Miling, J., oil stove.....	19,859	" C. S., et al., distilling wood.....	20,147
Milner, M., ditching machine.....	20,175	" H. C., et al., rake shoe or runner.....	18,900
Milroy, S., et al., hame fastener.....	19,417	Nelson, C. H., skating sail.....	20,371
Milwaukee Dust Collector Man'g Co., dust collector..	20,468	" H. & J., potato digger.....	19,521
Minchin, G., spoke an ' fellow joint.....	19,814	" J. S., wash bench and step ladder.....	10,528
Mirfield, S., et al., knife for bread cutters.....	20,848	" S. L., churn.....	19,013
Mitchell, A., spark arrester.....	19,662	Neptune Fog Horn Co., fog alarm.....	20,480
" J. C., et al., car coupling.....	20,317	Nethercut, G. S., shoe lasts.....	20,372
" R., lock up safety valve.....	19,019	New, W. W., hay rake and loader.....	18,853
" W. J., feed hopper for roller reduction mills and windings purifiers.....	19,645	Newbury, H. F., chronometric lock.....	20,074
Mitcherlich, A., armature and tube coupling.....	20,484	Newell, A., machine for unloading hay.....	19,922
" " stamp mill for cellulose.....	20,446	Newell, N. C., button.....	18,331
Moffitt, J., medicine spoon.....	19,856	Newman, T. C., fruit and lemon squeezer.....	19,195
" J. A., et al., manufacture of carbon electrodes, or pencils for electric illuminations.....	20,335	Newmeyer, H. F., window bead fastener.....	19,038
Mollineux, H. H., fruit and vegetable parer and slicer.....	19,322	Newth, W. H. D., dumping bottom.....	19,021
Mollar, P. C., lithographic printing plate.....	19,447	" " locomotive ash pan.....	20,028
Monette, S., screen for picking potatoes.....	19,816	" " rotating bars adapted to dump cars.....	18,910
Montgomery, D. C., rein holder.....	19,481	Newton, F. M., electric arc lamp.....	20,498
" W. J., et al., plough gauge and guide.....	18,978	" J., fence.....	19,025
Montrose, S. H., et al., metal shingle.....	18,702	" J. R., seed planter.....	19,901
Moody, H., hay rake.....	19,266	" R., valve for steam traps.....	19,410
Moodie, R., et al., crushing ores, etc.....	19,574	New England Fire E-cape Co., fire escape.....	19,070
Moore, H., ore amalgamator.....	19,656	New York Insulated Wire and Vulcanite Co., covering wire for electrical purposes.....	19,114
Moore, A. M., et al., mail bag catcher and deliverer.....	18,658	Ney, J., hay elevator track.....	20,600
" J., hand, field and lawn rake.....	18,904	Ney Man'g Co., hay elevator track.....	20,600
" " hay fork and lifter.....	18,550	Nichols, A. S., lumber dryer.....	19,544
" J. W., door spring.....	18,669	" F. B., et al., valve gear.....	18,375
" M. R., machinery for tamping or ramming moulds for castings.....	19,916	" J., et al., roller bush.....	20,173
Moore, S. J., et al., black leaf check book.....	19,943	" W. A., eye glass and watch holder.....	20,240
" T., et al., locking type.....	19,618	Nicholson, J. R., interest calculating machine.....	18,705
" T. B., et al., composition of matters for extracting wool from delaines.....	20,591	Nickel, A., et al., piano damper.....	18,937
Moore, W. S., nut lock.....	19,004	Nelson, N., et al., machine for forming eye bolts.....	18,814
Morency, J., et al., machine for elevating lumber for piling.....	20,633	Nightingale, H., billiard cushion.....	19,808
Morden, W. J., railway frog.....	18,369	Noble, J. T., hose cot.....	18,703
" " ".....	19,278	Nogar, R. H., ditching machine.....	19,589
" " ".....	18,584	Normandin, J., et al., heel counters.....	18,531
Morgan, H. J., parchment blank.....	18,584	Norris, D. W., vessel for containing and transporting liquids, etc.....	19,360
		Northrup, B. E., driving cuffs and wristlets.....	18,861

Simonds, F. A., et al., automatic alarm and indicator.....	20,490	Spencer, J. E. & G. S., et al., advertising wind mill.....	20,169
Simonson, G. F., creamer.....	19,072	Spilsbury, C. T., farm fence.....	20,658
" O. et al., fur clipping machine.....	18,795	Spl, W. F., method of securing buttons.....	18,276
Simpson, C. G. C., attachment of horse vehicle.....	18,814	Sprague, C. E., cheque book.....	18,225
" D. T., printing machine.....	20,512	Spratt, J., offal dryers.....	20,195
" J. M., display body.....	18,285	Spring, G. H., cash carrier.....	20,926
" L., et al., pick.....	18,711	Springstein, H. B., et al., treadle attachment.....	20,361
Sims, P. H., et al., air furnace.....	19,494	Spratt, J. D., et al., lubricator.....	19,629
" " air stove.....	19,585	Sqlre, O. R., et al., treatment of ores containing pre- cious metals.....	20,647
Sjoberg, C. J. A., ticket punch.....	19,571	St. Charles, F. X., clothes line pulley.....	19,490
" " et al., button hole attachment for sewing machines.....	20,342	St. Coeur, F., car-coupling.....	18,717
Skidmore, H. G., et al., watch movement box.....	19,079	St. Germain, J., barrel.....	20,263
Skinner, J., car-coupling.....	20,145	St. Onge, J., washing machine.....	18,875
Slater, J. W., et al., treatment of sewage matters.....	18,378	St. Pierre, X., skate sharpener.....	19,759
Sleeper, C. T., metallic packing for piston and valve, etc.....	19,790	Stabler, J. P., magneto generator of electricity.....	19,182
Sleepar, G. W., et al., manufacturing shoes.....	19,089	Stacy, G., nail plate feeder.....	20,606
Sloan, E. C., lead ribbon for metallic seals.....	19,208	Standfield, J., floating docks and pontoons, etc.....	20,215
Sly, W. W., et al., hame fastener.....	18,378	Standard Electrical Works, telephone switch board.....	20,081
Slye, L. T., et al., nose ring for swine.....	20,438	" Switch Co., railroad switch.....	18,495
Smart, M. A., et al., pulley.....	20,489	Standard Vapor, Fuel, Iron and Steel Co., gas gene- rator.....	19,462
Smith, A., seed planter.....	19,128	Standard Vapor, Fuel, Iron and Steel Co., process for generating gas.....	18,446
Smith, E. C., belt fastener.....	20,186	Standard Vapor, Fuel, Iron and Steel Co., regenerating furnace.....	19,485
" E. H., safety hook.....	18,384	Staddard Vapor, Fuel, Iron and Steel Co., superheater.....	19,463
" F. B., et al., machine for dusting bray.....	19,920	" " " " " " superheater furnace.....	19,461
" F. R., et al., fire escape.....	20,452	Stanley, F. H., et al., machine for transporting cream.....	19,123
" G. T., fire escape.....	20,129	Stanley, J., plastering surface.....	18,357
" " centrifugal reel.....	20,154	Stanton, G. B., car.....	19,950
" H. L., cultivator.....	19,503	Stanton, P., harrow tooth.....	19,108
" J., car axle die.....	19,685	Stapley, J. M., velocipede.....	18,908
" J. A., et al., car coupling.....	20,317	Starks, J. L., reversible shears.....	19,779
" " chimney protector.....	19,134	Starr, W. J. F., et al., automatic felt guide for paper machines.....	19,838
" J. B., fire escape.....	20,530	Staver & Co., H. C., machine for cutting feed.....	18,447
" et al., thill coupling.....	19,122	Steam Heat Evaporator Co., fruit dryer.....	18,424
" J. J. C., process and apparatus for covering wire for electrical purposes.....	19,114	Stearns, D., et al., hydro-carbon generator, etc.....	18,496
" J. M., steam engine governor.....	20,501	" O. S., et al., car axle bearing.....	18,594
" J. W., overshoe for horses.....	19,680	Steber, B. T., machine for arranging match splints.....	18,293
" " polishing disk.....	20,120	Stephens, A. J., et al., lamp.....	19,319
" L., pneumatic and automatic grain transfer apparatus.....	19,984	Stephenson, F. M., et al., extension ladder.....	18,374
" M., lifting jack.....	10,087	Sterling, C. A., pipe casing for submarine rock drilling.....	19,992
" " E., lamp supporting bracket for sewing machines.....	19,272	Sterns, W. H., churn.....	19,833
" M. O., drag saw.....	20,618	Stetson, J. B., lantern.....	19,284
" O. H., portable house.....	19,795	Stevens, B. D., combined reflectors and globes for lamps.....	20,189
" R., car-coupler.....	19,484	Stevens, D. L., saw shifting lever.....	19,395
" R. H. & L. R., et al., process for imprinting in steel.....	20,271	" H. H., thill coupling.....	20,357
" R., et al., oil burner.....	20,666	" J., roller mill.....	20,430
" T. M., et al., fertilizing material.....	20,155	" J. A., means of obtaining and applying motive power.....	19,178
" portable windlass.....	19,391	Stevens, J. S., et al., spring hinge for doors.....	20,515
" et al., baking and roasting apparatus.....	19,406	" W. H., et al., floor clamp.....	20,395
" W. D., rotary ventilating fan.....	18,892	Stevenson, J. B., apparatus for preventing accidents to cars.....	19,400
" " window.....	19,805	Stevenson, J. B., apparatus for preventing the collision of trals.....	20,213
" G. W., stranchion for cattle.....	18,948	Stevenson, S. J., car wheel and axle.....	19,758
Smittler, T. W. F., button and stud.....	19,110	Stewart, D. A., preparation of petroleum or olefine and other mineral oils for painting.....	19,277
Smyth, C. A., et al., secondary battery.....	19,442	Stewart, G., car axle box.....	19,470
Smyth, E. A., fire-proof paint.....	20,290	Stewart, T. B., fare box.....	19,300
Snediker, W. E., metal moulds for casting vices.....	19,072	" W. sleigh knee.....	19,320
Snee, W., machine for making insulator pins.....	19,448	Stiles, G. A., et al., wood screw.....	19,595
Snow, C. B., et al., automatic high and low water alarm for steam boilers.....	20,418	Still, H., scuffle hoe.....	19,905
Snow, W. W., car wheel.....	19,328	Stinebring, G. W., adjustable saw tooth.....	19,672
Snyder, C., vehicle wheel.....	18,661	Stiveson, A. O., harrow.....	18,748
" H. J., et al., sewing machine.....	18,333	Stoddale, R., sash frame.....	18,285
Société Anonyme Dynamite Nobel, manufacture of cartridges.....	19,725	Stoddard, B. F., wrench.....	19,876
Solomon, C., et al., car coupling.....	18,315	Stockton, C. A., et al., iron working, planing and shaper machine.....	20,016
Solt, W., grate bar.....	20,228	Stockwell, S. W., electric motor.....	18,592
Sox, A., et al., waterproof paint.....	18,880	Stofer, S. J., fire escape.....	18,720
Soule, I. C., electrically locating veins for metal in the earth.....	19,159	Stone, J. H., globe guard for tubular lantern.....	19,807
Souster, T., et al., car-coupling.....	20,613	" " tubular lantern.....	19,945
South Bend Iron Works, sulky plough.....	19,979	" N. S., means for finishing photographic pla- tars.....	20,388
" " " plough.....	18,312	Stoneman, O. E., et al., sulky plough.....	18,365
Southwood, C. D., car coupling.....	19,268	Storan, F., feed water heater and purifier.....	20,678
Southworth, A. H., axle skeld.....	19,498	Storie, J. D., cooking utensil.....	18,589
Spare, G. E., two wheel carriage.....	18,998	Stout, E., boots and shoes.....	20,123
Sparham, T., et al., artificial limb.....	19,800	Stral, G. S., et al., renning gear for carriages.....	19,386
Spear, H. A., et al., smoke consumer.....	18,501	Strangway, G., et al., fanning mill.....	18,745
Speer, G. F., drying kiln.....	18,397	Stratby, M. F., carpet fastener.....	20,804
Spence, A., sectional boiler.....	19,318	Stratton, C., et al., car-coupling.....	20,528
Spencer, C. W., car-coupling.....	19,349		
" G., milk cooler.....	20,463		
" G. M., et al., composition for cleaning and renovating fabrics.....	19,321		

Stratton, J. D., et al., door spring.....	18,868	Thurber, T., car wheel.....	20,558
Streater, H. O., et al., scaffolding.....	19,267	Thureson, W. H., thrashing machine.....	18,742
Strickler, F. B. and P. G., hay elevator carrier.....	19,232	Thurmond, W. H., car-coupling.....	19,642
Stringer, J. A., et al., hitching strap.....	19,835	Tice, D. L., eye glass.....	18,776
Stroh, J. G., process for tanning.....	20,024	Ticknor, T., show stand.....	18,448
Strorg, F. A., drag saw.....	20,281	Timms, I. A., et al., electro magnet and armature.....	18,930
" G. H., et al., tool-holder for grindstones. 19,517	19,518	" " " means for working and locking	
" J. W., et al., thill coupling.....	20,693	" " " railway signals and points.....	20,503
Stuart, J. E., corner fastening for frames.....	19,855	Timms, J., car axle box.....	19,223
Stubbe, J., wire fence.....	19,012	Tingley, C. E., et al., boots and shoes.....	18,528
Sturgeon, G., creamer.....	19,921	Tinker, O. H., roller dies for making auger and bit	
" J. C., et al., window shade roller.....	20,065	blanks.....	20,264
Summerton, G., et al., self-adjusting millstone iron.....	20,860	Tinkham, A. B., et al., car-coupling.....	20,317
Summy, W., et al., excavator and grapple.....	18,898	Tise, J. C., & C. H., brake for pulleys.....	18,914
Sutherland, G. C., cigar holder.....	18,865	Titus, L. H., portable ladder for gathering fruits.....	10,142
Sutton, T., et al., shafting and bearing therefor.....	20,581	Tobey, H. P., et al., mechanism and process for con-	
Swan, G. E., curtain fixture.....	20,180	centrating ore.....	20,458
" N., et al., lamp.....	20,008	Todd, L. I., et al., safety valve.....	19,242
Swayze, R., et al., spring bed.....	20,486	Toledo Mower and Reaper Co., gaveling mechanism	
" S. J., electric block signal for railways.....	19,534	for grain blunders.....	20,015
" " et al., railway signal.....	18,258	Tomlin, J., brick elevators.....	20,298
Sweetland, A., curtain fixture.....	19,754	Tomlinson, T., culvert and seal trap.....	18,859
Swift, A. W., lubricator.....	20,190	Toombs, W., et al., railway car replacer.....	18,798
" " " for steam cylinders, etc.....	18,793	Torrance, J. F., coating and covering heated sur-	
" N. D., childrens' table tray.....	20,198	faces.....	18,715
Sylvester, G., et al., trunk castor.....	19,355	" " " fireproof non-conductor of heat and	
" " " " tray.....	19,317	sound.....	18,772
Taft, E. L., et al., machinery for knitting ratan.....	19,772	Tracy, C., et al., car-coupling.....	18,856
" G. W., et al., machine for making, repairing and		" J. C., manufacture of drawers, pantaloons and	
clearing roads.....	19,055	overalls.....	19,647
Tague, M., et al., cash register.....	18,664	Traher, J. J. C., art or process of perforated stencil	
Talbot, J. D., ironing board.....	18,582	painting and printing.....	19,699
" T., cant hook-lever.....	18,994	Trautman, J. F., horse collar.....	19,334
" W. R., et al., manufacture of buttons.....	18,808	Trefry, R. P., mode of holting, securing and discharg-	
Taylor, B., spring frame for beds, etc.....	20,616	ing anchors.....	20,605
" E. A., et al., shaft and tongue support.....	18,744	Tregea, T. F. A., automatic railway signal.....	19,958
" H. R., et al., dust collector.....	20,521	Tregoning, C., combination lock.....	19,171
" J. L., et al., churn.....	19,843	Tremblay, T., clock.....	18,776
" T. F., telephone receiver.....	19,581	Tribe, T., et al., window screen.....	18,317
Teronbloton, P., manufacture of lacrosse.....	20,043	Trickey, J. H., process and composition for making	
Tervet, R., armonsia.....	18,864	artificial stone, etc.....	20,220
Test, A., machine for cutting sods.....	18,761	Trier, F., machine for manufacturing grindstones.....	18,866
Tetamore, T. L., et al., securing barrel heads.....	18,830	" " " " truing grindstones.....	18,867
Tetrault, A., clutch device.....	20,137	Tringham, J. W., supporting electrical wires.....	18,587
Tovis, E. L., gate for cars.....	18,426	Trippe, S. S., gold amalgamating apparatus.....	18,625
Thackston, R. D., hatchway.....	18,292	Trotman M., et al., harvester blinder.....	18,813
Thatcher, G. W., et al., railway car replacer.....	18,798	Trump, F., lawn mower.....	19,579
" W. S., mattress frame.....	18,628	" J. G., cultivator.....	19,787
Thayer, G. B., et al., mechanism and process for con-		Tucker, C. E., et al., explosive compound.....	18,899
centrating ore.....	20,458	" " " method of extracting stumps.....	18,799
" J. C., lubricator.....	19,240	" J., grease trap for sluks.....	20,311
" W. C., et al., lamp.....	19,319	" M. W., vehicle spring.....	18,762
Therlen, J. O., et al., vehicle axle.....	19,999	" S. J., percentage calculator.....	18,663
Thomas, C. A., et al., wrench.....	19,852	Tunis, H. C., machine for planing, tonguing and groov-	
" E. C. G., breakwater.....	18,361	ing boards.....	20,245
" E. H., et al., means of preventing the with-		Turner, E. M., outfitting apparatus.....	19,998
drawal of draw-bars for coupling cars to-		" T. G., electric cable.....	20,477
gether.....	18,783	" W. B., et al., device for preventing lost motion	
" J., feeding bottle.....	18,734	in draw-heads and buffers.....	19,249
" L. H., bottle or can for luk, etc.....	20,560	Turpel, J. J., seat and foot board for row boats.....	19,720
" L. R., iron kettle.....	18,466	Turrell, G. B., rod coupling.....	19,454
" W. M., et al., out-out for electric lighting and		Tuttle, H., straw band grate-binder.....	18,719
other electric circuits.....	19,237	Tutt, J. C., spring holder for napkins, handkerchiefs,	
Thompson, A., et al., dynamo electric machine.....	19,303	tyer, G. L., et al., leather splitting machines.....	19,848
" C. B., creamer.....	19,677	Udell, C. G., show stand.....	20,672
" C. O., lactic acids and lactates.....	18,441	Ulrich, F., wagon axle truss.....	19,541
" E., grain drying process and appliance.....	19,210	Underwood, N., et al., seed guide for printing presses..	20,360
" E. W., et al., mail bag catcher and de-		United States Cotton Seed Cleaning Co., process for	
liverer.....	18,667	treating cotton seed.....	19,411
" J. B., bleaching process.....	18,694	" " Dyeing Co., machine for applying col-	
Thomson, C., et al., valve gear.....	18,376	ouring matter.....	19,403
" C. M. & J., skate.....	18,935	Upton, A. F., et al., electric lamp.....	18,647
" E., dynamo electric machine.....	18,498	Uren, A., handle for cross-out saws.....	19,739
" " " electric commutator.....	20,089	Urie, T., et al., pitman coupling.....	18,344
" " " current regulator.....	18,155	Usborne, J., fire escape.....	18,748
" " " arc lamp.....	19,029	Vallant, G., boot or glove fastener.....	19,551
" " " lamp.....	18,819	Van Bibber, J. D., device for instruction and amuse-	
" " " machine regulator.....	18,330	ment.....	19,723
" " " electro magnetic retarding device in		Van Campen, H. D., explosive compound.....	18,899
electric lamps, etc.....	18,760	" " " method for extracting stumps.....	18,799
" " " safety self-closing shunt switch for elec-		Van Duxee, C. A., et al., fanning mill separator.....	18,944
tric lamps, motors, etc.....	19,211	Van Duxen, E. W., boiler furnace.....	18,565
" " " safety self-closing shunt switch for elec-		Van Dwyer, A. J., et al., treadle attachment.....	20,381
tric lamps.....	19,245	Van Horn, J. M., broom holder.....	19,614
" G., et al., purification of sulphuric acid.....	18,856	Van Loven, T. F., carriage top joints.....	20,202
" J. L., et al., pulley.....	20,489	" " " fence.....	19,842
" J. R., churn.....	18,952	Van Ness, O. C., grain feeder and band cutter for thrash-	
		ing machines.....	18,754

Van Norman, H. C., child's suspended and adjustable chair and bed.....	20,576	Watt, A. C., harrow.....	18,503
Van Orden, C. H., metallic railway tie.....	19,022	Watts, J., optical attachment for sewing machines....	19,138
Van Ryseberghe, F., telegraphic apparatus.....	18,547	Way, P. A., roofing compound.....	18,282
Van Stone, I. M., et al., corset.....	18,316	Wayne, J. B., et al., mechanism for driving dynamo electric machines.....	18,825
Vanwart, G. W., et al., picture brace.....	20,316	Weakley, J., tubular lantern.....	19,407
Vassar, R. G., burglar alarm catch.....	19,501	Weathers, J., lifting jack.....	18,847
" door bolt.....	19,489	Weaver, A. S., et al., electric cable support.....	18,228
Vaughan, H. W., machine for applying colouring matter.....	19,403	Webb, S. D., galley type lock.....	18,338
" J. B., physician's buggy case.....	20,286	" W. J., lamp chimney cleaner.....	18,819
Veerkamp, F. L., braiding machine.....	18,376	Weber, A., crank pin oiler.....	20,276
Venator, R., et al., steam generator.....	19,908	" " chucks for gate valves.....	20,278
Ver Genius, C. A. R. L., et al., road grading and ditching machine.....	19,735	" " fountain tip.....	20,486
Vernon, C. W., welding steel and iron.....	19,963	" " lubricator.....	20,277
Vincent, A., et al., apparatus for working washing machines.....	18,252	" " rotary sprinkler.....	20,485
Vinet, J. B. & A. S., et al., press for hay, etc.....	19,113	" " straightway valve.....	20,269
Vizer, R. R., et al., utilizing explosive compounds.....	18,566	" P. F., ironing board.....	20,308
Vogt, J. F. & W. C., stove jointer.....	18,414	Webster, A. S., car brake.....	18,708
Volght, F. F., track-laying machine.....	18,302	Wedg, A. G., process for treating iron.....	19,845
Voltz, A. W., document and file case.....	18,660	Wedlake, J., et al., grain binder.....	19,371
Von Schmidt, A. W., dredging machine.....	20,056	Weed, H. L., slate washer.....	19,525
" " rotating plough for submarine work.....	19,392	Weeke, F. A., safety catch for elevators.....	19,813
" " submarine plough.....	20,599	" G., railway rail chair.....	19,050
" " universal ball joint.....	20,035	Well, F., et al., gland.....	19,889
" " water jacket for rotary pumps.....	20,036	Weir, R., et al., lumber piling machine.....	20,584
Vosburgh, H. E., means of lubricating axles.....	20,650	Welch, F. B., et al., sewing machine.....	19,496
Waddell, S., broad cast seed sower.....	20,437	Weldon, A., low water alarm gauge.....	20,111
Wade, G. A., et al., lace fastener.....	19,255	Welker, C., et al., gland.....	19,889
Wagner, S. L., washing machine.....	20,212	" W., et al., carriage curtain fastening.....	19,594
Wagner, E., et al., sled.....	20,379	Wellcome, H. S., et al., substitute for sponges for medical purposes, etc.....	19,169
" J., adjustable hangers for shades.....	20,16f	Wells, J., et al., steam generator.....	19,908
Waite, C. N., mordant for dyeing.....	18,449	Wellings, E., et al., fire escape.....	19,829
Wakefield, N. S., machine for cutting pegs from boots.....	18,950	Wells, J. L., et al., wire cushion and pillow.....	20,569
Walco, G. H., machine for grading, scraping, and working roads.....	19,715	" R. D., cover and its attachments for sap buckets.....	19,082
Waldt, F., et al., halter weight.....	18,540	" T. E., hose coupling.....	18,388
Walker, A. B., et al., saw buck.....	18,703	Welsh, J., device for trimming the soles of boots.....	20,098
" B., stencil.....	20,519	Wessell, O., et al., piano damper.....	18,937
" C. O., wire strainer.....	20,394	West, A. C., plough.....	18,996
" G., gas from saw dust.....	19,970	" C. F., ice creeper.....	20,097
" " et al., gas from composition of matter.....	18,257	" F. H., steam trap and boiler feeder.....	19,227
" " " producing material.....	18,254	" J. C., et al., metal shingle.....	18,702
" J., pump for oil wells.....	19,378	" R. B., photographic printing.....	18,773
" J. J., railway alarm.....	18,958	" S. A., burnishing machine for boots and shoes... ..	18,669
" M. H., stock car.....	18,645	" W., crimping the ends of cans.....	18,676
" P. G., hay and grain rack elevator.....	19,582	Westcott, J. M., grain seeding machine.....	18,714
" R. G., et al., seal lock.....	19,897	Western Electric Co., multiple switch board.....	20,070
" T., gold and silver amalgamator.....	18,468	Westover, B., et al., constitutions of ships to save drainage from cargoes.....	19,593
" " et al., ore roasting furnace.....	18,480	Westinghouse, H. H., engine lubricator.....	18,577
Walkey, S. T., et al., car-coupling.....	19,262	Weston, C. H., saw guides.....	18,307
Wallace, W., dress makers' rule.....	18,272	" H., et al., wire cushion and pillow.....	20,569
" " et al., car-coupling.....	18,255	Wetmore, O., locomotive attachment.....	20,088
" " " semaphore signals.....	18,346	Wetzel, C. M., et al., driving staple.....	20,561
" " " station-indicating device.....	18,341	Whaples, E., attachment for dress or bodice fronts....	19,281
Walmer, J., horse collar pad.....	20,543	Wheat, J. J., sewing machine.....	20,347
Walsh, T., hydro carbon lamp.....	18,750	" " " table and cover.....	20,348
Walter, J. T., middling purifiers.....	19,260	Wheeler, A. O., water wheels.....	20,288
" W., et al., rack for holding barrels.....	19,636	" H. M., thill coupling.....	19,466
Walworth, C. C., et al., automatic fire-extinguisher....	18,832	Wheeler, M. L. G., force pump.....	19,860
Ward, A. F., feed water heater and purifier.....	19,884	Whilhelme, V., beer cooler.....	18,982
" P. E., machine for holding bags.....	20,873	Whipple, J. W., paint distributor.....	18,987
Ware, W. F., glove fastener.....	19,790	Whitcomb, C. M., apparatus for annealing, cleaning, and galvanizing wire.....	36,219
Warfield, S. D., green corn cutter.....	19,885	White, D. A., dust pan.....	17,521
Warner, C. B., fluid for making fabrics waterproof, etc.....	18,227	White, L. N., et al., plastic process for metallizing wood, etc.....	18,769
" J. M., machine for planting corn.....	19,207	White, M., nautical signal.....	19,932
" N. J., wagon.....	20,295	" N. S., et al., electric lamp.....	18,647
Waring, R. S., electric cables. 18,238 18,239 18,240 18,241	18,248	White, O. C., oil can.....	18,564
" " submarine cable.....	18,277	" W. R., sliding gate.....	18,842
Warren, E. K., featherbone.....	20,110	Whiteley, W. N., automatic grain binder.....	20,327
" H. H., curry comb.....	19,083	" " bundle carrier for harvester.....	20,274
" J., et al., car-coupling link.....	19,695	" " barvester frame, etc.....	20,282
Warrington, J., roller mill.....	19,543	" " mechanism for knotting grain bands in the automatic grain binder.....	20,273
" " et al., roller mill.....	19,338	Whiting, G. A., et al., method of attaching car seal....	19,911
Watland, H., et al., lifting jack.....	18,847	Whitman, O. M., refrigerator, or butter cooler.....	19,300
Waterman, L. E., fountain pen.....	18,774	Whitney, W. H., breech loading fire arm.....	20,844
Watkins, T. J., et al., car-coupler.....	20,279	Whitton, A. D., et al., machine for transmitting power.....	19,250
Waterous, J. E., vertical sectional steam boiler.....	19,627	Whitworth, C. E., et al., carding machine.....	19,831
" " pulley for the transmission of power.....	18,698	Wiard, G., sul'ry plough.....	19,480
Waters, W. F. & S. H., butter worker.....	20,535	Wick, J. P., potato planter.....	19,485
Waterson, H. G., machine for holding coal oil cans....	19,052	Wicks, H. D. and E. N., press roller gear of gang saw mill.....	19,102
Watrous, J. A., hot air flue.....	18,385		
Watson, J., bit brace.....	18,690		

Wickersham, J. P., ejector.....	20,280	Wisner, L., steam engine.....	19,884
Wight, A. P., et al., smoke consumer.....	18,501	Wiswell, T. A., art of manufacturing wire rope and wire rope machine.....	19,200 19,201
Wightman, C. F., et al., harness buckle.....	19,730	Wiswell, F. A., et al., machine for making rope.....	19,198
Wilbur, A. O., waggon bolter.....	18,523	Wittrmann, F. et al., stove cutting machine.....	18,649
Wilcox, F., et al., railway signal.....	19,761	Wock, J., pump.....	18,514
" J. A., liniment for ulcers, cup bruises, etc., upon horses and cattle.....	19,897	Wolmer, E., weighing machine.....	19,101
Wilcox, J. L., apple paring machine.....	20,571	Womeldorf, J. W., et al., spinning machine.....	20,459
Wildsmith, J. H. S., starch apparatus.....	18,930	Wonsen, C. H., et al., sheet metal tubes or cylinders..	19,973
Wilkin, T. S., device for keeping journals and wrist pins cool.....	20,214	Wood, A., circular gravity railway.....	19,749
Wilkin, T. S., gang saw mill.....	20,070	" " knitting machine needle.....	18,890
" " gang saw mill frame.....	20,063	" A. J., carpet sweeper.....	20,182
Wilkinson, F. B., monkey wrench.....	20,020	" G. H., vice.....	18,980
Wilkinson, W., traction engine for tram rail, or other roads.....	19,238	" G. S., et al., cover for sap bucket.....	19,100
William, J. B., et al., car-coupling.....	20,523	" J. J., winding stem for watches.....	20,118
Willet, M., et al., faucet.....	20,115	" M., washing machine.....	19,917
Willford, J. S., et al., centrifugal separators.....	18,377	" V., rake attachment for plough.....	18,823
William, F. R., apple parer.....	20,261	" W. E., travelling cap.....	18,959
Williams, J., line throwing gun.....	20,461	Woodford, G. A., hay tedders.....	20,217
" J. A., animal trap.....	18,464	Woodruff, B., process for treating iron.....	19,845
" J. L., car-coupling.....	18,323	Woodward, N. S., fog alarm.....	20,480
" " miner's lamp.....	18,465	" " O. H. O. L., lock.....	19,488
" J. N.; drawbridge signal.....	19,070	Woodyatt, A. R., tilt hammer.....	20,406
" P., reaper knife section sharpener.....	19,722	Work, A., horse collar pad.....	20,543
" Manfg. Co., sewing machine.....	18,500	Worswick, J. E., et al., oil cup feeders for lubricators..	19,413
Williamton, A., hay or grain rack lifter.....	19,938	Worthington, C. C., alarm apparatus for automatic fire extinguishers.....	20,609
" W. H., manufacture of bows and scarfs..	10,895	Worthington, C. C., direct acting duplex engine.....	18,737
Willis, H. B., oscillating spring chair.....	20,476	Wright, A., wheelwright's tool.....	19,084
" W., et al., car truck.....	18,324	" A. S., et al., press roller for saw mills.....	20,573
Wilson, A. S., horse shoe fastening, etc.....	20,294	" C. B. A., production of metallic solution.....	20,259
" J. H., et al., closet ventilator.....	19,778	" C. D., et al., cut out of telephone.....	18,268
" O., two wheeled vehicle.....	19,224	Wright, D., furnace grate.....	19,332
Wilmington, W., method of casting car wheels.....	20,617	" F. M., car-coupling.....	19,339
" " car wheel chill.....	18,744	" G. F., et al., means for rendering buildings fire proof.....	20,629
Wilmo, S. R., rolling mill and roll therefor.....	19,882	Wright, J. A., induction coil.....	19,971
Wilson, E., roller mill.....	20,142	" " spring motor.....	18,936
" J. A., gas burner.....	19,154	" " telephone receiver.....	19,959
" J. C., close weeding and thinning hoe.....	19,611	" " transmitter.....	19,958
" J. E., flour dressing machine.....	19,509	" J. D., chimney top and ventilator.....	19,020
" " roller mill.....	20,665	" J. H., et al., package tying machine.....	18,730
" " middlings purifier.....	20,168	" N., et al., lock.....	18,954
" J., et al., machine for pressing cloth.....	19,056	Writt, P. J., horse power.....	18,957
" T. L., et al., car.....	18,345	Wyllie, A. A., et al., automatic high and low water alarm for steam boilers.....	20,418
" " railway car.....	18,592	Yon, G., ventilating roofs and houses.....	19,635
" " railway car.....	18,319	Yonley, H. W., device for opening and closing carriage doors.....	20,368
" V. L., flange for pots, etc.....	18,495	Young, C., et al., grain harvesting machine.....	19,248
" W., et al., sheet metal can.....	19,658	" C. F., et al., pole for galvanic batteries.....	18,983
" W. S., horse rake.....	18,275	" E. L., et al., wire solder machine.....	18,626
Windt, H. T., door mat.....	19,254	" J. B., mitering machine.....	18,382
Winfres, W. A., heating stove.....	19,495	" J. H., corn cultivator.....	20,429
Wing, L. J., ventilating apparatus.....	20,353	" W., driving staple.....	20,561
Wingfield, C., cutlery.....	19,886	" W. H., et al., pipe organ.....	18,755
Winter, F., process for drying malt.....	19,599	Zeigler, G. W., carpet sweeper.....	19,311
" F. A., cartridge reloading machine.....	18,766	Zingling, G. S., et al., dental plate mould.....	19,823
Winton, W. W., et al., sewing machine.....	18,383		
Wisner, L., cinder lifting machine.....	18,650		

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CONTENTS.

INVENTIONS PATENTED.....	1
ILLUSTRATIONS.....	21
INDEX OF INVENTIONS.....	I
INDEX OF PATENTES.....	II

INVENTIONS PATENTED.

NOTE—Patents are granted for 15 years. The term of years for which the fees have been paid, is given after the date of the patent.

No. 18,225. Cheque Book. (*Livret de Mandats.*)

Charles E. Sprague, New York, N. Y., U. S., 1st December, 1883, 5 years.

Claim.—A book composed of leaves of detachable blank forms, alternating with permanent record leaves, each record leaf having one of its sides prepared for receiving the records of the cheques, or other documents, and having the other side prepared as a surface to which to fasten the cheques, or other documents, when they have been returned.

No. 18,226. Electric Cable Support.

(*Support de Câble électrique.*)

Albert S. Weaver and Oscar N. Beader, Providence, R. I., U. S., 1st December, 1883; 5 years.

Claim.—1st. The improved electric cable support, or hanger, made of a single piece of material, and having a slotted tongue C, and two shorter tongues D and D' at one end of it, and at its opposite end a shorter tongue D, all arranged and being for use in manner, with an electric cable and its sustaining rod, substantially as set forth. 2nd. The combination of the joint sealing strip as described, with the cable-hanger, substantially as set forth, made of a single piece of material, having a slotted tongue and two shorter tongues at one end of it, and a shorter tongue at its opposite end, arranged and bent in manner essentially as represented.

No. 18,227. Process for the Manufacture of Fluid for rendering various Fabrics, Materials, or Things Water-Resisting, and Proof against Moths, Mildew, &c.

(*Procédé de fabrication d'un fluide propre à rendre divers tissus, matières ou choses imperméables et à l'épreuve des mites, de la moisissure, &c.*)

Clara B. Warner, London, England, 1st December, 1883; 15 years.

Claim.—1st. Dissolving caoutchouc, or other elastic gum, and paraffine, in a mixture of absolute alcohol, naphthaline and bisulfidation of carbon with American naphtha, or benzoline. 2nd. The purification of the compound by distillation, substantially as described, whereby the acid is eliminated without the use of an alkali. 3rd. The use of the residual liquid from the still for treating the fresh materials, as above described.

No. 18,228. Galvanic Battery.

(*Batterie Galvanique.*)

George W. O'Harra, John A. Hoedmaker, Daniel O. Roberts and Frank S. Hillhorn, Kalamazoo, Mich., U. S., 1st December, 1883; 5 years.

Claim.—1st. In a galvanic battery, a cell composed of a cup of zinc, or carbon, located within a rubber cup, said inner cup being provided with an axis-pole secured in its enclosed end, and extending out through the end of the rubber cup, the opposite end of the cell also

being provided with an axis-pole secured in the end of the stick of zinc, or carbon, and extending out through the cover, in combination with a cabinet provided with axial supports, all substantially as set forth for the objects specified. 2nd. The combination, with the rubber cup, having the concave recess in the inclosed end, the inner cup having the pole secured thereto and passing out through the end of the rubber cup into said concave recess, the opposite end of the cell also having a pole serving as an axis, of a cabinet provided with the S-shaped supports at each end of the cell, all substantially as described and shown for the objects stated. 3rd. The combination, with a cabinet provided with axial supports, of a cell having an axis at each end revolvably located in said axial supports, substantially as described. 4th. A cell having an axis at each end, in combination with a cabinet having axial supports, provided with open slots in the upper end, whereby the cell is both detachably and revolvably supported by said axial supports, substantially as set forth. 5th. A revolvable cell provided with axial bearings at each end, said cell having a concavity in one end, substantially as described and shown.

No. 18,229. System and Apparatus for Ventilating Railway Cars. (*Système et appareil de ventilation des voitures de rail-roules.*)

Mann's Boudoir Car Company (Assignee of William D. Mann), New York, N. Y., U. S., 1st December, 1883; 5 years.

Claim.—1st. The system described for ventilating railway cars in warm weather, consisting in, first, drawing in a copious supply of air through a funnel located outside the car; second, cleansing, filtering and cooling said air by passing it through a filter and refrigerator; third, distributing such filtered and cooled air throughout the interior of the car by conducting it into a flue extending through, or along same and allowing it to escape through apertures in said flue; and, fourth, exhausting the air as it becomes vitiated by a number of outlets having suction devices, substantially as set forth. 2nd. The system described for ventilating railway cars in cold weather, consisting in, first, drawing in a copious supply of air through a funnel located outside the car; second, cleansing and filtering said air by passing it through a filtering chest, and warming said air by bringing it into contact with the car-heater and its pipes; third, distributing such filtered and warmed air throughout the interior of the car by conducting it into a flue extending through, or along same, and allowing it to escape through apertures in said flue; and, fourth, exhausting the air as it becomes vitiated by a number of outlets having suction devices, substantially as set forth. 3rd. In a railway car ventilating system, the double-mouthed funnel A having swinging door, or damper B, adapted to close the aperture at either end automatically, in combination with the pipe C, for conducting air to the interior of the car, substantially as and for the purpose specified. 4th. The combined filtering and cooling chest C having water at its bottom, a filtering medium above said water, and an ice chamber above said filtering medium, in combination with means for collecting and discharging the air which passes through said chest, substantially as and for the purpose set forth. 5th. The filtering chest C having water at its bottom, and the filtering medium, in combination with the closed D, heater D₁ and its pipes, and means for collecting and discharging the air which passes through said chest and closet, substantially as and for the purpose set forth. 6th. In a railway car, the combination, with the closet D, and means for forcing purified air thereinto, of the flue E running through the car, or along same, and provided with apertures *et cetera*, substantially as and for the purpose specified. 7th. In a railway car, the combination, with the closet D, containing heater D₁, and with means for forcing purified air into said closet, of the flue E containing heating pipes E₁, running throughout the car and provided with apertures *et cetera*, substantially as and for the purpose specified.

No. 18,230. Railroad Car-Coupler.

(*Attelage de Wagons de Railroute.*)

Edward Casper, Collinsville, Penn., U. S., 1st December, 1883; 5 years.

Claim.—1st. In a railroad car-coupler and in combination with the draw-head, the hinged or movable stop C, substantially as set forth. 2nd. In a railroad car-coupler and in combination with the draw-head A, the stop C, as described, and the automatically acting coupling pin

E, as and for the purposes described. 3rd. In a railroad car-coupler and in combination with the draw-head A, the hinged, or movable stop C and the lifting device D, substantially as described. 4th. The swinging coupling-pin E, having journals e and handle e', combined with draw-head A, having socket a' and arched chamber a3, substantially in the manner shown and described. 5th. The draw-head A, having arched top a3, socket a' and chamber a, combined with the stop C, on the floor of said chamber, hinged or jointed at its rear end, and having the groove or chamber c at its front end, and movable by a lift and pin E, substantially as shown and described.

No. 18,231. Storage or Secondary Battery.

(*Pile d'emmagasinage ou secondaire.*)

William Hochhausen, New York, N. Y., U. S., 1st December, 1883; 15 years.

Claim.—1st. The combination, with an electric generator and line wires to distant working devices, of a switch to change the direction of current, a polarized switch at one, or more distant stations, and circuit connections and storage battery, substantially as set forth, to direct the current through such storage battery, or to disconnect the same from the electric circuit, substantially as set forth. 2nd. The combination, with a storage battery, of the magnets O and N, switches and circuit connections, substantially as set forth, for diverting the electric current from the storage battery, when the same is charged, substantially as set forth. 3rd. The combination, with the storage battery, of the magnet M, in a shunt of said battery, and a circuit changer, operated by such magnet, substantially as set forth. 4th. The combination, with the secondary battery and the main electric circuit, of the polarized switch, the magnet O, switches h i k l, operated by the same, the magnet M, of high resistance, the magnet N, of low resistance, and the circuit connections between the respective battery, with a storage battery, of circuit connections, a switch and a floating device, similar to a hydrometer, to operate such switch according to the strength of the liquid in such storage battery, substantially as set forth. 6th. The plates for secondary, or storage batteries, made of oxide of lead mixed with lead, substantially as set forth. 7th. The lead foundation for the battery plates, having transverse channels for the reception of the oxide of lead, substantially as set forth.

No. 18,232. Cribbing Plate for Horses.

(*Plaque pour empêcher les chevaux de ronger.*)

August Quinque, Harleyville, Pa., U. S., 4th December, 1883; 5 years.

Claim.—1st. The cribbing-plate shown and described, consisting of the hooked plates a, a' and the central fastening plate f, the plates a, a' being adapted to be drawn together by screws, substantially as and for the purposes set forth. 2nd. The combination, with the curved plates a, a', of the staple plate f, held between the adjacent ends of arms e, e', substantially as shown and described and for the purpose set forth. 3rd. The plates a, a', provided with the books b, the lugs c and the projections g, in combination with the screws d and the staple plate f, substantially as shown and described.

No. 18,233. Dress Chart. (*Mesure de Vêtements.*)

Libbie A. Call, Oskosh, Wis., U. S., 4th December, 1883; 5 years.

Claim.—The described pattern chart having a square end and a rounded end, a graduated straight edge and the curved edge a, substantially as set forth. 2nd. The described pattern chart, or form, having a square end B and a rounded end B', joined by the edge a, gradually curving from the rounded end to the other end, and a graduated straight edge, or rule, all formed in one piece, substantially as set forth. 3rd. The described pattern chart, or form, having a square end B, with the following words described thereon: "Top rounded end B, having marked thereon the following: " " Neck point," " Dart form," " Hip point," " Side body form," " Back arm-size point," " Front arm-size turn-over" and edge a, gradually curving from the rounded end and joining with the square end, and a graduated straight edge, or rule, all substantially as set forth. 4th. In dress charts, the combination of the form, or pattern, scale comprising a series of gradually increasing scales connected together, as set forth. 5th. In dress charts, the combination of the edge a, with the scale comprising a series of scales connected together, each of the scales gradually increasing in length and divided into spaces that increase in size proportionately with the increasing length, as set forth. 6th. A pattern chart, or form, having a square rounded end and a curved edge, the curve of said edge gradually decreasing from the rounded end to the square end, as set forth. 7th. In a dress chart, the scale comprising a series of scales and divided into spaces that increase in size proportionately with the increasing length, as set forth.

No. 18,234. Self-Acting Elevator Gate.

(*Châssis d'ascenseur automatique.*)

Samuel J. Laughlin, Guelph, Ont., 4th December, 1883; 5 years.

Claim.—The combination of the arms B B and the catches C C, operating on the gate E and slide D, in their double ascending and descending motion, by means of said arms and the slide piece D and grooved piece K, substantially as and for the purposes set forth.

No. 18,235. Scales. (*Balance.*)

Moses G. Cook, Ashfield, Mass., U. S., 4th December, 1883; 5 years.

Claim.—1st. In a scale, or weighing apparatus, the combination, with the scale beam provided with notched weight-lifting bars, of the corresponding notched weight-supporting plates, and series of flat weights provided with projections adapted to be received in the

notches of the said bars and plates, and to be transferred from one to another, in the movement of the scale beam, substantially as described. 2nd. The series of flat weights provided with guiding notches, combined with the weight-lifting bars and weight-supporting plates, and the guide co-operating with the said notches, whereby the said weights are properly transferred from the former to the latter, substantially as described. 3rd. The dial having figures to indicate the amount in half ounces, and the number of postage stamps required to take that number of half ounces of mailable matter through the mails, a pointer co-operating with the said dial, and a shaft to carry the said pointer combined with a scale beam having connected lifting bars, a series of weights, weight supporting plates from which the said weights are taken and upon which they are placed in succession, as described, and with means between the said scale beam and the pointer carrying shaft to rotate the said pointer, substantially as and for the purpose described.

No. 18,236. Spark-Arrester and Conductor.

(*Arrête-flammèche et Conducteur.*)

John A. Cotter, Saginaw, Mich., U. S., 4th December, 1883; 5 years.

Claim.—In a spark-arrester and conductor, the combination, with the smoke-stack having an elbow, a damper, and means for operating the latter, of the pipe B and the support F having swivelled adjustable hanger O N, as set forth.

No. 18,237. Car Brake. (*Frein de Wagon.*)

James M. DeWitt, Greeley, Col., U. S., 4th December, 1883; 5 years.

Claim.—1st. The combination, with the shaft B, ratchet wheel C and pawl D, of the lever F and a suitable spring, the lever being adapted to be shifted for controlling the pawl, as and for the purposes set forth. 2nd. The pivoted lever F, adapted to be held in different positions by the plate H, in combination with the semi-elliptical spring G and the pawl D, the spring being adapted to impinge upon opposite ends of the pawl as the lever is shifted, as and for the purposes set forth.

No. 18,238. Improvement in Electric Cables. (*Perfectionnement des Câbles Électriques.*)

Richard S. Waring, Pittsburgh, Pa., U. S., 4th December, 1883; 15 years.

Claim.—1st. The method of forming hoops or branches in lead covered cables, at any point thereof, which consists in removing the lead armor from around one of the conductors of said cable, severing said conductor, bending each of the several ends outward, removing the insulation from the severed ends and electrically uniting them with the ends of the loop or branch, substantially as set forth. 2nd. The method of forming hoops or branches in lead covered cables, at any point thereof, which consists in removing the lead armor from around one of the conductors of said cable, severing the conductor, bending each of the severed ends outward, removing the insulation from the severed ends, electrically uniting them to the ends of the loop or branch, covering the union with insulating material and then covering the union with lead, substantially as set forth.

No. 18,239. Improvement in Electric Cables. (*Perfectionnement des Câbles Électriques.*)

Richard S. Waring, Pittsburgh, Pa., U. S., 4th December, 1883; 15 years.

Claim.—An electric cable composed of a tubular body of lead, or other ductile material, having external longitudinal ribs, and two, or more series of concentrically-grouped insulated wires extending through said body, each wire of the outer series extending through one of the ribs of the cable, substantially as specified.

No. 18,240. Improvement in Electric Cables. (*Perfectionnement des Câbles Électriques.*)

Richard S. Waring, Pittsburgh, Pa., U. S., 4th December, 1883; 15 years.

Claim.—1st. A flexible electric cable having a lead body, or center of circular form, in cross section, with a series of separate ribs, or flutes, extending longitudinally on its surface, and having insulated conducting-wires inclosed within and covered by the ribs, substantially as and for the purposes set forth. 2nd. A flexible electric cable, having a central body of soft ductile metal, with a series of separate longitudinal flutes B, divided from each other by grooves e, and connected to the central body along one side as at e', and having insulated conducting-wires inclosed within such flutes, substantially as and for the purposes set forth. 3rd. A cable containing a group of insulated electric circuit-wires, arranged around a naked central conducting wire, such central and surrounding wires being imbedded in, and covered by a body of flexible metal, substantially as and for the purposes set forth. 4th. An electric cable containing a group of insulated circuit wires, arranged around a naked central wire, such wires being imbedded in and covered by a body of flexible metal as described, in combination with electric conductors leading from such naked central wire to ground, substantially as set forth.

No. 18,241. Improvement in Electric Cables. (*Perfectionnement des Câbles Électriques.*)

Richard S. Waring, Pittsburgh, Pa., U. S., 4th December, 1883; 15 years.

Claim.—1st. The method, herein described, of uniting two or more sections of lead-covered cable which consists in removing the lead covering and insulating material for a suitable distance, thereby ex-

posing the ends of the conductors of the cables, electrically uniting such exposed ends, covering the union and exposed conductors with insulating material, wrapping the insulated union and conductors with fibrous material, and lead-covering the unions and conductors with a sleeve, uniting the sleeve to the cable sections and then filling said sleeve with insulating material, substantially as set forth. 2nd. The method, herein described, of uniting two or more sections of lead-covered cable which consists in electrically uniting the ends of the conductors of said cables, covering the union with insulating material and surrounding said union with a protecting sleeve, substantially as set forth.

No. 18,242. Soldering Iron. (*Fer à souder.*)

James C. Covert, West Troy, N.Y., U.S., 4th December, 1883; 15 years.

Claim.—1st. The forks C, C1, recessed to form a circular rim I and provided with a suitable handle, in combination with threaded pivot D and nut E, or its equivalent, and the copper-point A, provided with tongue H, substantially as and for the purposes set forth. 2nd. A jointed soldering-iron, having the contact surfaces between the ears, or forks which form the joint, limited to a circular rim I of the said tongue and forks, substantially as described and for the purposes set forth.

No. 18,243. Oven Grate. (*Grille de fourneau.*)

William H. Keating, Boston, Mass., U.S., 4th December, 1883; 5 years.

Claim.—As an improved article of manufacture, the oven grate described, the same consisting of the base A and table B, constructed, combined and arranged to operate substantially as set forth.

No. 18,244. Hay Elevator. (*Monte-foin.*)

Charles A. Graham, Ernestown, Ont. 4th December 1883; 5 years.

Claim.—1st. In a hay lifting and carrying implement, the car body B, having splayed chamber a, and the sliding latch lock C, trip latch D and pulley b working in slots formed for their reception in said car body, substantially as set forth. 2nd. The combination of the car body B, having the splayed chamber a, latch block C, trip latch D and pulley b, with the tilting pulley block E, having the shank e, and knob f, substantially as set forth. 3rd. In a hay lifting and carrying implement, the combination of the car body B, having the splayed chamber a, latch block C, trip latch D and pulley b, arms c, and wheels d, with the pulley block E, having the shank e and knob f, and the rail A, substantially as shown and described.

No. 18,245. Hasp Lock. (*Serrure à mortailon.*)

Edgar Knicht, Bridgetown, Ct. U.S., 4th December 1883; 15 years.

Claim.—1st. In a hasp-lock the combination, with the shank or stem A, carrying the lock-case B, of the recess C and the plate E, with its opening e, adapted to receive and retain the head of the fastening screw, or bolt D, as described and for the purpose specified. 2nd. In a hasp-lock, the combination of the shank or stem A, the lock-case B, the recess C, the plate E, the screw or bolt D, together with the recess F, adapted to receive and enclose the staple G, as and shank, or stem A, of the rearwardly opening recess B, constituting the lock case, the rearwardly opening recess C and its plate E, and the rearwardly opening recess F, together with the fastening bolt or screw D, and the staple G, substantially as and for the purpose specified. 4th. In a hasp-lock, the combination, with the shank A, carrying the lock-case B, of the recess C with its slot c, the plate E with its opening e, and the screw D, as and for the purpose set forth. 5th. The described hasp-lock frame, or bar, having the rearwardly opening recesses B, B1 and C, the recess B being adapted to receive a lock, and the recesses B1 and C adapted for the insertion therein, of the head of the screw D, as and for the purposes described.

No. 18,246. Egg Preserver. (*Boîte à œufs.*)

George Conant, Marshfield, Mass., U.S., 4th December 1883; 5 years.

Claim.—1st. In an egg preserver, substantially such as described, the rack E, provided with the rails J, for receiving and holding the eggs, said rack being centrally pivoted and adapted to be tilted to turn the eggs, substantially as set forth. 2nd. In an egg preserver, substantially such as described, the racks E, F, centrally pivoted in a framework, or support, and coupled, or connected by the wire K, whereby they may be tilted conjointly, or in unison, substantially as specified. 3rd. In an egg preserver, substantially such as described, the rack G, having the elevated end pieces H and rails J, and preserver, substantially such as described, the grooved standards B, B1, with the pins d, in combination with the rack G, provided substantially as specified. 5th. The improved egg preserver described, the same consisting of the base A, bar D, standards B, provided with the grooves m and pins d, rack E, provided with the pins V, racks F, G, provided with the pins x, and wire K, constructed, combined and arranged to operate, substantially as set forth. 6th. In an egg preserver, substantially such as described, the standards L, substantially as and for the purpose set forth.

No. 18,247. Machine for the manufacture of Mineral Waters. (*Machine pour la fabrication des eaux minérales.*)

James S. Pearson, Hamilton, Ont., 4th December 1883; 5 years.

Claim.—1st. The combination or one or more double pumps with the mineral water machine, as and for the purpose hereinbefore set forth. 2nd. The partition E with hole F in the condenser A, as set forth. 3rd. The combination of equilibrium valve and condenser, substantially as and for the purpose herein set forth. 4th. The com-

bination of pressure piston regulator B, with condenser A, for engine, substantially as and for the purpose hereinbefore set forth. 5th. The combination of steam engine and mineral water machine, in the manner herein described and for the purpose specified and substantially set forth.

No. 18,248. Improvement in Electric Cables.

(*Perfectionnement des câbles électriques.*)

Richard S. Waring, Pittsburg, Pa., U.S., 4th December 1883; 15 years.

Claim.—The method of forming branches in a cable having a series of insulated conductors inclosed in an armor of ductile material, the same consisting in cutting the ductile material longitudinally between the conductors and bending the separated parts laterally, forming a series of independent metal-armed and insulated conductors, substantially as specified.

No. 18,249. Electric Lamp. (*Lampes électrique.*)

Franz Krizik and Ludwig Piette, Pilsen, Austria, 5th December 1883; 15 years.

Claim.—1st. The herein described method of regulating the arc of an electric lamp by the attractive influence of a solenoid coil, on a tapering iron core attached at its large end to the holder of one of the carbons of the lamp, and partly balanced by the other carbon and its holder. 2nd. The construction of electric arc lamp with regulating solenoid and tapering iron core, substantially as herein described.

No. 18,250. Improvements in Boots and Shoes. (*Perfectionnements dans les chaussures.*)

Simon B. Keffer and Fred L. Brown, Des Moines, Iowa, 5th December 1883; 5 years.

Claim.—An improved metallic counter support, for boots and shoes, consisting of a metal plate, of the form shown and described, and provided with perforations at one end, and with a longitudinal slot or slots in its central bent portion, substantially as and for the purposes set forth.

No. 18,251. Heating apparatus for Railway Cars. (*Calorifère des voitures de railroute.*)

Mann's Boudoir Car Company, (assignee of William D. Mann,) New-York, N.Y., U.S., 5th December 1883; 5 years.

Claim.—1st. The combination, with a car heater, stove or fire box, of a water chamber or jacket wholly or partially surrounding the fire or heating chamber, and having one or more outlets or discharging pipes, and a supply tank connected with said water chamber or jacket, substantially as and for the purpose specified. 2nd. In a car heater, the combination, with the base B, grate C and fire-pot C1, of the double casing E, outlet pipe L, connecting pipe H, supply pipe J and supply tank K, having over-flow pipe I, substantially as and for the purpose specified. 3rd. In a car heater, the combination, with the base B, grate C, fire-pot C1 and steam coil D, of double casing E, outlet pipe L, connecting pipe H, supply pipe J and supply tank K, having over-flow pipe I, substantially as and for the purpose specified.

No. 18,252. Train Signal. (*Signal de convoi.*)

Marcus F. Parrish, Schuyler J. Munn and Lewis Beeson, Niles, Mich., U.S., 5th December 1883; 15 years.

Claim.—1st. The combination of a rail of the track, and a line of wire along said track, with two or more engines or vehicles provided with alarums, generators, connecting electrodes and conducting arms, all substantially as set forth. 2nd. The combination, with a vehicle located on a metal track and having a conducting arm, of a line of wire located along the line of said track, substantially as described and shown. 3rd. In a method of train signaling, substantially as described, a reversible conducting arm adapted to be thrown from one side of the vehicle to the other, substantially as set forth. 4th. The combination, with an engine cab or other vehicle, provided with means for receiving and communicating signals or messages, of a line of wire along the vehicle track, and a conducting arm pivotally connected to a support, and means for causing a yielding engagement of said arm and wire, substantially as described and shown. 5th. The cab provided with a tube-support and a relative-shaft in said support, in combination with a conducting-arm connected with said shaft, and means for rotating said shaft in throwing the conducting arm from one position to another, substantially as set forth. 6th. The combination, with a tube-support, a rotative thumb at the top of said support, a rotative shaft in said tube-support, a pivoted conducting-arm and spring-braces connecting said thumb and arm, substantially as shown. 7th. An engine provided with an electrical generator, an alarm and telephone, in combination with a line of wire along the track of said engine, a conducting-arm, and electrode-wire connecting the conducting-arm generator and alarm with the metal parts of the engine, substantially as described. 8th. The combination, with the insulated tube-support, the rotative-shaft and a pivoted conducting-arm, of a generator and an alarm or telephone, or equivalent device, substantially as set forth. 9th. The method of transmitting signals or messages between two approaching trains by means of a wire along the line of the track, a device for supplying the electrical current, an instrument for receiving and transmitting signals or messages, and conducting-arms adapted to engage the line of wire, and electrodes connecting the conducting-arms with a rail of the track, all substantially as set forth. 10th. The combination, with the short lines of wire along the lines of two roads which cross each other, said wires connecting with each other where they cross, of the conducting arms of the engines or trains, said arms adapted to engage said wires, for the purpose set forth, substantially as specified. 11th. The combination, with two or more engines or vehicles provided with generators, alarums or telephones and conducting-arms, of a line of wire along the line of two crossing-roads, said wires crossing and

connecting with each other at a point where the roads cross, all substantially as described and shown 12th. In a train signalling apparatus, a rotative shaft having a lever connecting with the lower end, in combination with a conducting-arm pivotally connected with the upper end of said shaft, and of electrodes, alarms and generators, all substantially as set forth. 13th. The combination, with the pivoted conducting arm, of a double incline rest all adapted substantially as described. 14th. The combination, with a line of wire, of the supporting-posts having the extended arms, and the wire-supports terminating at the upper end in grippers adapted to hold the wire and allow the conducting-arm to pass over, substantially as set forth. 15th. The combination, with the conducting-arm and its supporting shaft, of a rest beneath said arm adapted to cause an upward movement thereof, should the arm be thrown laterally, substantially as described.

No. 18,253. Stove Pipe. (*Tuyau de poêle*)

George B. Barclay, Petrolia, Ont., 5th December 1883; 5 years.

Claim.—The seam with double fold E and clear edge F, and also the draw screw C, substantially as and for the purposes hereinbefore set forth.

No. 18,254. Improvement in the Manufacture of Compressed Blocks of Gas-producing Materials. (*Perfectionnement dans la fabrication des blocs de matières agglomérées produisant le gaz.*)

George Walker and Edward W. Rathbun, Deseronto, Ont., 5th December, 1883; 5 years.

Claim.—The manufacture of blocks from the admixture of saw-dust, charcoal and a hot tarry distillate by compounding, moulding and compressing the matter while the tar is hot.

No. 18,255. Car-Coupling.

(*Accouplage de wagons.*)

Andrew McWilliams and William Wallace, Galt, Ont., 5th December, 1883; 5 years.

Claim.—1st. The combination, with an ordinary pin and link draw-head, a detachable strap fastened to the draw-head and having pivoted to it, below the draw-head, a peculiarly-shaped bar or plate, one end of which extends beyond the mouth of the draw-head and forms an oblique link-guide, while the other end behind the pivot-point is weighted so as to balance the weight of the link, substantially as and for the purpose specified. 2nd. In combination with an ordinary pin and link draw-head, a detachable strap fastened to the draw-head and having pivoted on one of its sides a bar or plate, the upper end of which is bent so as to extend beyond the pin while, its end below the pivot point is weighted so as to keep the bent end against the pin, when the latter is raised, substantially as and for the purpose specified. 3rd. A bar or plate pivoted on the lower side of a strap fastened to the draw-head, the said plate having an end extending beyond the mouth of the draw-head, and slanting downwardly so as to form a guide for the link as it approaches the draw-head, in combination with a bar or plate pivoted on one side of the strap and having its upper end bent so as to extend beyond the pin, while its lower end is weighted, substantially as and for the purpose specified. 4th. In a draw-head provided with an ordinary coupling-pin and link, and in which the pin when lifted is supported by a pivoted bar, as described, a rod connected at its upper end to a crank-rod journal end of the end of the car, and at its lower end to the front side of the coupling-pin so that the pin may be raised and the pivoted bar for supporting it kept from extending over the top of the pin when the latter is down, substantially as and for the purpose specified.

No. 18,256. Secondary Battery or Accumulator. (*Pile secondaire ou accumulateur.*)

Desmond G. Fitzgerald, Srixton, Eng., 5th December, 1883; 5 years.

Claim.—In secondary batteries or accumulators, the employment, in combination with the electrodes and more particularly the anode, of a partial covering of impervious and insulating material, applied in such a form and way as to protect portions of the electrolyte and leave a continuous network or framework of unaltered metal, substantially as specified.

No. 18,257. Improvement in Making Gas from Compositions of Matter.

(*Perfectionnement dans la fabrication du gaz avec des compositions de matières.*)

George Walker and Edward W. Rathbun, Deseronto, O. t., 5th December, 1883; 5 years.

Claim.—The manufacture of illuminating gas by charging a retort with promiscuously-inserted compressed blocks of compounded gas-producing materials, and subjecting the charge to destructive distillation by heating the retort.

No. 18,258. Automatic Railroad Signal.

(*Signal automatique de chemin de fer.*)

Stephen J. Swayze and John C. Lane, Sag Harbour, N. Y., U. S., 8th December, 1883; 5 years.

Claim.—1st. The combination, in automatic signals, of the signal board having the shield adapted to rise and descend simultaneously therewith, the clock, or retarding mechanism, the rack connected to the signal board and engaging with the retarding mechanism, the interchangeable fan and the bent lever connected by a rod to the said rack, substantially as and for the purpose set forth. 2nd. In a signal, the clock mechanism D having the interchangeable fan m, in combination with the signal board B having rack d, connecting-rod g and

the bent operating lever E, substantially as and for the purposes set forth. 3rd. The combination, with signal board B and lever E, bent to form arm h and crank h', of the arms b b', attached to plates g g' and pivoted to crank h', substantially as and for the purpose set forth.

No. 18,259. Grain-Binding Harvester

(*Moissonneuse-lieuse.*)

John F. Seiberling, Akron, Ohio, U. S., 8th December, 1883; 5 years.

Claim.—1st. The combination of the spur-pinion C₂, the ratchet-wheel I, the pawl i, the spur-wheel C₁ provided with the cam-projection C₅, the sliding hinged piece I₂, adapted to be interposed between the pawl and cam-projection, and the compressor shaft h connected with piece I₂, for automatically stopping and starting the binder, substantially as described. 2nd. The compressor-arm h' and the cut-off h₂, both rigidly connected with a common shaft h, in combination with the cam C₄, and intermediate connecting devices for actuating said shaft, substantially as described. 3rd. The combination, with the adjustable binder-frame, of the slotted binder-table and packer-shield, the compressor-arm, the cut-off, the elevating packer-teeth working up through said table and shield, and the overhanging binder-arm shaft with its binder-arm arranged and operating, substantially as described. 4th. The binder-arm shaft provided with holes or grooves in its journal portions only, for adapting the cord to be passed to the needle on the outside of the shaft. 5th. The combination, with adjustable binder-frame, of the binder-arm shaft having grooved or perforated journal, for the passage of the band to the binder-arm, a binder-arm upon one end, and a driving-wheel on the opposite end of said shaft, and a band-carrier and guide, all secured to and adjustable with said binder-frame. 6th. The binder-arm curved at its outer swinging end, in combination with the needle secured to, said curved end, whereby the said arm is adapted to pass by the knoter hook or head, and at the same time to carry the needle under said head, substantially as described. 7th. The combination of the knoter-stripper N₁, and the inoline or wedge on one side of the point of the needle, for moving said stripper, subsequently as described. 8th. The hollow knoter-shaft provided with the fixed jaw, in combination with the slotted sliding-rod passing through said shaft, a movable jaw pivoted to said fixed jaw and passing through the slot in and, operated by said rod, and mechanism for actuating the latter, substantially as described. 9th. The combination of the knoter-hook, the hollow shaft, the sliding rod passing through said shaft, the movable knoter jaw passing through a slot in said sliding rod, the spring for closing said jaw, and the cam and roller for depressing the jaw, all arranged and operating substantially as described. 10th. The combination, in a grain-binding harvester, of the grain-table, or receptacle, located between the platform-carrier and the driving wheel, the rotating packer located underneath said receptacle, and operating to lift the grain from the platform-carrier and into said receptacle, the overhanging binder-arm shaft and the grain-guard U, provided with the lower yielding compressor arm U₂, located over the packer-teeth, substantially as described. 11th. The packer shafts provided with crank arms, in combination with the fixed cam F₆, and the pivoted extension F₇ of the latter, for holding the packer teeth up to their work in forming the bundle, and allowing them to drop back without packing the grain, while the bundle is being bound, substantially as described. 12th. The rocking packer shafts provided with the inwardly-bent crank portions, allowing the point of the needle-arm to pass within the circle in which said shafts move, substantially as described. 13th. The hinged cam piece F₇, in combination with the rod g₅, the slotted standard F₅, the rod G₁ and the crank shaft g₃, for operating the same, substantially as described. 14th. The crank-shaft g₃, provided with the crank-arms g₂, in combination with lever G₁ connecting it with the cam groove C₄, the cam extension F₇ and intermediate connecting devices for operating said extension, substantially as described. 15th. In combination with a carrying platform and packers, for moving the grain therefrom to the binder-table a cut-off independent of said packers, arranged to hold the grain on said platform and prevent its reaching the packer-teeth, while the binding mechanism is in operation, substantially as described. 16th. The combination of the packer, the carrying-platform, the cut-off between the packers and platform arranged to work automatically, simultaneously with the stopping of the platform, substantially as described. 17th. The combination of the cut-off shaft, the arm X₂ on the end thereof, the pawl V and the ratchet-wheel W for automatically stopping and starting the platform-rake, when the cut-off is operated, substantially as described. 18th. The combination, with the platform-apron or carrier and a packing mechanism located at the inner end thereof, for taking the grain from said carrier and delivering it to the binding mechanism, of a cut-off interposed between said carrier and packing mechanism connected with the binding mechanism, substantially as described, whereby its movements are timed to those of the binding mechanism for preventing the grain from reaching and being acted upon, by the packers, when the binding mechanism is operated to bind a bundle. 19th. The combination of the cut-off shaft, the crank X on the end thereof, the connecting-rod X₁ and the cam C₄ with connecting devices, substantially as described, for automatically rocking said cut-off shaft at proper intervals.

No. 18,260. Harvesting Machine. (*Moissonneuse.*)

John F. Seiberling, Akron, Ohio, U. S., 8th December, 1883; 5 years.

Claim.—1st. The combination of the frame provided with toothed brackets, the drive-wheel axle provided with gear-wheels and a chain pulley, the chain connecting said pulley with the grain end of the frame, and the grain-wheel secured to a bracket hinged to the frame over which said chain passes, substantially as and for the purpose described. 2nd. The combination of the frame of the machine, the grain-wheel bracket pivoted thereto, a stud-axle secured to the bracket in rear of its pivot, a chain-sheaf secured to the bracket above the axle, and a chain secured to the grain-end of the frame, that passes over the sheaf of the bracket, to a driving or adjusting mechanism upon the stubble side of the machine, substantially as described. The combination of the frame, the grain-wheel, the stud-axle bracket, the sheaf on the bracket, the sheaf upon both the grain and stubble sides of the rear end of the platform and rear of the

wheels, and the drive-wheel axle adjustable upon the frame and provided with a pulley upon the end of the axle, and the chain passing over said sheaf and connecting the pulley of the drive-wheel axle with the grain side of the frame, substantially as described. 4th. The combination of the frame, the bracket secured thereto and formed with toothed segment racks, the drive-wheel axle and gear-pinion supported and adjusted upon said brackets, the ratchet-wheel secured to the axle, the pawl for holding the ratchet-wheel in its adjusted position, and means for revolving the axle to adjust it, substantially as described. 5th. The combination of the frame, the adjustable drive-wheel axle, the ratchet-wheel secured thereto, the retaining pawl, the bearing-plate pivoted to the pawl and provided with an arm for operating the same, and the lever for operating the ratchet-wheel, substantially as and for the purpose set forth. 6th. The lifting, or ratchet-wheel lever, crooked at its end to embrace the shaft or hub of the ratchet-wheel, provided with spur upon said lever, to engage with the teeth of the ratchet, substantially as and for the purpose described. 7th. The combination of the frame of the drive-wheel, the axle upon which the drive-wheel revolves, the cogged gears secured to the axle, the toothed segment brackets secured to the frame upon which the axle and its gears are adjusted, the ratchet-wheel pawl and hand lever for adjusting said axle, and a pulley on the axle connected by a chain with the grain-wheel and grain end of the frame, substantially as and for the purpose described.

No. 18,261. Grain-Binding Harvester.

(*Moissonneuse-lieuse.*)

John Seiberling, Akron, Ohio, U. S., 8th December, 1883; 5 years.

Claim.—1st. In a grain-binding harvester, in which revolving packers are located below a table rising from the inner end of the travelling platform apron or carriers, to the grain receptacle where the sheaf is bound, the points of the said packers extending through the table for the purpose of carrying the grain from the inner end of the travelling platform apron to the grain receptacle, the combination of a cut-off located at the inner end of the travelling platform apron or carriers, and operated by mechanism timed to move simultaneously with the binding mechanism, so that the supply of grain shall be cut off from the grain receptacle during the period in which the sheaf is being bound. 2nd. In a grain-binding harvester, in which revolving packers are located at the inner end of the travelling platform apron and below the grain receptacle when the sheaf is bound the combination of a cut-off located at the inner end of the travelling platform apron and provided with mechanism by which it is caused, at certain periods, to hold the grain clear of the revolving packers. 3rd. The cut-off shaft F located at the inner end of the apron A, and provided with fingers E and crank G, in combination with the pivoted lever I, one end of which is connected to the crank G and its other end to the cam slot K, made in the disc E, which is fastened to, and works with the needle-shaft M.

No. 18,262. Improvements in Circuits and Apparatus for Electric Temperature and Pressure Indicators.

(*Perfectionnements aux circuits et appareils des indicateurs électriques de la température et de la pression.*)

Robert Hewett, Jr., and Charles L. Clarke, New York, N. Y., 8th December, 1882; 5 years.

Claim.—1st. The combination, substantially as hereinbefore set forth, of a thermometer, an electric generator, a contact-arm movable to and fro by the expansion and contraction of said thermometer, a series of contacts corresponding in number to the arbitrary divisions of the thermometric scale, a common conductor to which all the said contacts are united, two movable contact-stops, upon one or the other of which the said contact-arm impinges according to the direction of its movement, two main conductors respectively extending from said movable stops to an observing station, an electro-magnet in each of said main conductors at said observing station, and an index, the movements of which, in one direction or the other, are controlled by the action of the respective electro-magnets. 2nd. The combination, substantially as hereinbefore set forth, of a normally open main circuit, an automatically operated circuit-closing arm, a local circuit closed by the operation of said arm, an electro-magnet included in said local circuit, acting, while vitalized, to close said normally open main circuit, and a second electro-magnet acting to temporarily interrupt said local circuit, when said main circuit is closed. 3rd. The combination, substantially as hereinbefore set forth, of a normally open main electric circuit, an automatically operated circuit-closing arm, a local circuit closed by the operation of said arm, an electro-magnet included in said local circuit acting, while vitalized, to close said main circuit, an electro-magnet included in the main circuit, an armature and armature-lever actuated by the last-named electro-magnet, and a pendant arm actuated through the movement of said armature-lever to temporarily interrupt said local circuit. 4th. The combination, substantially as hereinbefore set forth, of an automatically operated circuit-closing arm, a contact-arm extending in proximity to said circuit-closing arm, an electro-magnet, its armature and armature-lever, means, substantially as described, for successively closing and interrupting an electric circuit of said circuit-closing and contact-arms, a pawl carried upon said armature-lever, a ratchet-wheel engaged by said pawl for moving said contact-arm out of contact with said circuit-closing arm, when the circuit through said electro-magnet is interrupted. 5th. The combination, substantially as hereinbefore set forth, of a circuit-closing arm automatically revolved in either direction, two contact-arms, one adjacent to each side of said circuit-closing arm, means, substantially as described, for transmitting electric impulses to a distant station and means, substantially as described, for revolving both of said contact-arms in the direction of the motion of said circuit-closing arm, when said impulse has been transmitted. 6th. The combination, substantially as hereinbefore set forth, of a shaft or arbor capable of rotation in either direction, two pawls or pallets, one for imparting a

direct and the other a retrograde movement to said shaft or arbor two electro-magnets included in separate circuits for actuating said pawls or pallets respectively, and a device actuated by said shaft or arbor, whereby, when the same is moved in either direction by the action of one or the other of said electro-magnets, the electric circuit of the actuating electro-magnet will be immediately broken. 7th. The combination, substantially as hereinbefore set forth, of a shaft or arbor capable of rotation in either direction, two pawls or pallets, one for imparting a direct and the other a retrograde movement to said shaft or arbor, two electro-magnets in separate circuits for actuating said pawls or pallets respectively, a device actuated by said shaft or arbor, whereby, when the same is moved in either direction by the action of one or the other of said electro-magnets, the electric circuit of said actuated electro-magnet will be immediately broken, and a circuit-closing arm normally held in equilibrium between two forces, one or both of which may be variable, whereby said circuit is completed or restored through one or the other of said electro-magnets, according to the direction of the resultant force acting upon said circuit-closing arm. 8th. The combination, substantially as hereinbefore set forth, of an automatically actuated circuit-closing arm, two contact-arms, one upon each side of the same, a battery having one pole connected with said circuit-closing arm, and its remaining pole connected through independent conductors with said contact-arms respectively, an electro-magnet included in each of said conductors, acting when vitalized to complete the circuit of said battery independently of said circuit-closing arm, two additional electro-magnets likewise respectively included in said conductors, and acting, when successively magnetized and demagnetized, to effect the movement of said contact-arms in the direction of the movement of said circuit-closing arm. 9th. The combination, substantially as hereinbefore set forth, with one or more indicating arms or fingers, of an automatically actuated circuit-closing arm, a contact-arm extending in proximity thereto, a battery having its opposite poles respectively connected with said circuit-closing and contact-arms, three or more electro-magnets included in series in the circuit of said battery, one of said electro-magnets acting to complete the circuit of the same, when it is vitalized independently of said circuit-closing and said contact-arms, a second of which electro-magnets acts to effect the movement of said contact-arm away from said circuit-closing arm, while the remaining one or more electro-magnets effect the movement of said indicating arms or fingers co-relatively with the movement of said contact arm. 10th. The combination, substantially as hereinbefore set forth, of a battery, an automatically actuated circuit-closing arm electrically connected with one pole of said battery, two contact-arms near said circuit-closing arm, which contact-arms are electrically connected with branch-conductors leading to the remaining pole of said battery, two electro-magnets respectively included in said branch-conductors, an armature and armature-lever applied to each of said electro-magnets, each acting to move both of said contact-arms in the direction of motion of said circuit-closing arm, whenever the movement of the latter has completed the circuit of said battery through the corresponding electro-magnet, two additional electro-magnets respectively included in said branch-conductors, an armature and armature-lever applied to each of the last-named electro-magnets, an index arm or finger actuated by the movements of the last-named levers co-relatively with the movements of said contact-arms, and two circuit-interrupters applied to one pair or the other of said electro-magnets and respectively included in said branch-circuits, each of which circuit-interrupters is caused by the movements of the corresponding armature-lever, to momentarily interrupt the connections of the branch-circuits in which it is included. 11th. The combination, substantially as hereinbefore set forth, of a revolving circuit-closing arm, one or more revolving contact-arms near said circuit-closing arm, a battery having one of its poles connected with said circuit-closing arm, and its other pole connected with the said contact-arm or arms, and an electro-magnet, acting, when vitalized, to complete a shunt-circuit around said circuit-closing and contact-arms, and to interrupt said shunt-circuit when demagnetized. 12th. The combination, substantially as hereinbefore set forth, of a battery, an automatically actuated circuit-closer, a series of electro-magnets included in the circuit of said battery, one of which electro-magnets is so constructed that its armature and armature-lever respond last in said series, and a circuit-interrupter included in said circuit, which is caused by the movements of said last actuated armature-lever to interrupt the circuit of said battery, after it has been completed by the action of said circuit-closer. 13th. The combination, substantially as hereinbefore set forth, of a toothed wheel, a battery, an electro-magnet, its armature and armature-lever, a resilient arm carried upon said lever, a pin projecting laterally from said arm, a stationary arm normally projecting above said pin, and a lateral opening formed in said stationary arm, whereby, at each vibration of said armature, said resilient arm is first caused to engage and advance said wheel and to be subsequently released therefrom.

No. 18,263. Lifting Jack. (*Cric.*)

Frank A. Lewis, Minneapolis, Minn., U. S., 8th December, 1883; 5 years.

Claim.—1st. The herein described lifting-jack consisting of the curved lever B, provided with the curved tooth rack E, in combination with the wheel A and the bearings or side pieces C, all constructed to operate, substantially as and for the purpose described. 2nd. The lifting-jack herein described consisting of the curved tooth rack E on the curved lever B, in combination with the wheel A, bearings or side pieces C and foot D, constructed as herein described, for the purpose specified.

No. 18,264. Skate. (*Patin.*)

Robert C. Hindley, Racine, Wis., U. S., 8th December, 1883; 5 years.

Claim.—1st. The herein described blank for the manufacture of skates consisting of sole part a, runner part b, ears c, e and d and connecting-strips e, substantially as shown. 2nd. The herein described skate consisting of two sheet metal blanks, each constituting one-half of the sole plate and one side of the runner, and a spacing strip of softer material interposed between the side plates of the runner, and the whole united substantially as explained. 3rd. In a skate, a

runner consisting of two thin steel side plates and an intermediate filling of softer material, adapted to wear away more rapidly than the steel, and thereby to render the skate self-sharpening. 4th. In combination with the skate-body, a clamping or fastening mechanism consisting of slide C, levers D, E and sliding clamps F, all constructed and arranged to operate, substantially as set forth. 5th. In combination with the skate having ears d, the clamping mechanism consisting of slide C, levers D, E and sliding clamps F, arranged and operating as explained. 6th. In combination with the skate having a metal sole-plate and with a clamping mechanism, such as shown, a slide C, provided with a clamping-face f and depending lips l, to pass beneath the sole-plate. 7th. In combination with a skate, a clamping mechanism consisting of slide C, levers D, E and sliding clamps F, the pivot joining said levers being thrown out of line with those connecting the levers with the slide, and one of the levers being adjustably connected to its slide or slides, substantially as shown and described. 8th. In a skate, a runner consisting of thin steel side plates b, intermediate wooden strip B and rivets or fastenings i, passing through said parts and binding them together, as set forth. 9th. A skate blank, substantially such as described and shown, provided with a series of lips projecting from the runner portion, substantially as shown and described. 10th. A skate blank, substantially such as shown and described, having the runner portion provided with a series of conical or tapering holes, for the purpose explained. 11th. In a skate, a runner or blade consisting of two-sheet metal facing plates provided with inwardly-projecting ears, and a filling and binding material filling the space between the plates and enveloping the lips, substantially as shown and described. 12th. In a skate, a runner blade composed of sheet metal facing plates provided with conical perforations and a soft metal filling occupying the space between the facing plates and passing through the perforations therein. 13th. The herein described method of forming a runner or blade for skates consisting in placing, at suitable distance apart, two sheet-metal blanks provided with perforations, a d projecting lips, or either, and pouring into the space between them molten soft metal or like substance, whereby the said substance is caused to unite the parts, as explained. 14th. The process herein described of forming skate runners, which consists in first turning two sheet-metal blanks of the desired form of the runner separating said blanks, to give the required thickness of the blanks and permitting it to cool therein. 15th. In a skate, a sheet-metal sole plate provided with lips d, figure q, corrugated substantially as shown and described, for the purpose explained.

No. 18,265. Machine for Cleaning and Separating Grain. (*Machine à nettoyer et séparer les grains.*)

Ruby Z. B. Curtis, Minneapolis, Minn., U.S., 8th December, 1883; 10 years.

Claim.—1st. The combination of blast-fan B, screen b, inclined from the fan and provided, at its upper end, with sieve d and metallic bottomed-chamber e, its lower portion covered with perforated zinc d' and having the chamber h with closed bottom screen b', inclined toward the fan and provided with chamber h' having closed bottom and located over screen b', substantially as and for the purpose hereinbefore set forth. 2nd. The combination, in a grain separator, of a reciprocating shoe or frame and a concave wire-gauze cleaning and discharging conduit rigidly secured to said shoe or frame transversely of the line of reciprocation thereof, substantially as and for the purpose hereinbefore set forth. 3rd. The combination of a blast-fan, a longitudinally reciprocating shoe provided with sieves and having a concave wire-gauze cleaning-conduit rigidly secured beneath and to said shoe, transversely of the line of reciprocation thereof, and a section air-trunk which is provided, at its lower end, with curved wings to give the air a spiral motion receiving the grain, as it is discharged from said shoe, substantially as and for the purpose set forth.

No. 18,266. Sack Filler. (*Ensachoir.*)

Alexander Hay, Coshocoten, Ohio, U.S., 8th December, 1883; 5 years.

Claim.—1st. In a bag-holder, the combination of a standard provided with a guide-pulley, a funnel sliding on the standard and having hooks secured thereto, a counterbalancing weight and a cord connecting the funnel and the weight, and passing over the guide-pulley, substantially as set forth. 2nd. The combination of a hollow base adapted to hold a ball of cord and having a suitable cord-exit, a hollow standard mounted on said base, a guide-pulley journaled in the upper end of said standard, a funnel, a counterbalancing-weight, and a suitable cord connecting the funnel and the weight, all substantially as and for the purpose set forth. 3rd. The bag-holder consisting of a twine-box base, a standard mounted thereon, a funnel sliding on the standard and having bag-holding hooks connected therewith, a counterbalancing-weight a, d, a pointed bar extended laterally from the standard and adapted to hold the bags, all as and for the purpose set forth.

No. 18,267. Diamond Millstone Dressing Machine. (*Machine à diamant pour rabiller les meules.*)

Thomas C. Barnes, Logansport, Ind., U.S., 8th December, 1883; 5 years.

Claim.—1st. In a machine for dressing millstones, the combination, with the pivoted tipping or adjustable bolster N having slats P P, and the radiating beam B connected therewith, of the shouldered gudgeon I having clamp-screw Z, for securing said beam in any adjustment around its own axis, and the centre pivot-bolt J fixed in frame A, all as shown and described. 2nd. In a machine for dressing millstones, the combination, with the pivoted beam B having lip R, and the bed-plate A, of the notched plate M, the spirally-grooved feeder C, trigger D connected with the latter, the diamond carrying slide U and its attached gage S, all as shown and described to operate as and for the purpose specified.

No. 18,268. Cut-out of Telephone.

(*Interrupteur de Téléphone.*)

Charles D. Wright and Charles A. Fisher, Petersburg, Ill., U.S., 8th December, 1883; 5 years.

Claim.—1st. A telephone cut-out, made substantially as herein shown and described, and consisting of a clock-work mechanism adapted to be released automatically by the current passing through the instrument, combined with a lever connected with one wire of the cut-out circuit and adapted to be brought in contact, by the clock-work, with the contact piece connected with the other wire of the cut-out, whereby a circuit of less resistance than that which passes through the instrument will be formed and the instrument will be practically cut-out, as set forth. 2nd. In a telephone cut-out, the combination, with a telephone receiver, of a clock-work mechanism, a pivoted lever for locking the clock-work mechanism, an electromagnet provided with an armature in such a manner as to release the clock-work mechanism, a notched disk mounted on one of the shafts of the clock-work mechanism, a spring lever connected with one end of the line of the cut-out circuit and provided with a projection resting against the edge of the disk and of a contact piece connected with the other end of the line of the circuit, against which contact piece the said spring lever is adapted to be pressed, substantially as herein shown and described. 3rd. The combination, with a telephone instrument and a cut-out, of levers projecting between the call bells and adapted to close the circuit for operating the cut-out, substantially as herein shown and described. 4th. The combination, with a telephone instrument and a cut-out mechanism connected with the same, of levers projecting between the call bells, the said levers being in the circuit of the cut-out mechanism, substantially as herein shown and described. 5th. The combination, with a telephone instrument and a cut-out mechanism connected with the same, of levers projecting between the call bells and springs for holding the same parallel, which levers are in the circuit of the cut-out mechanism, substantially as herein shown and described. 6th. The combination, with a telephone instrument and a cut-out mechanism connected with the same, and projecting between the call bells, substantially as herein shown and described. 7th. The combination, with a telephone instrument and a cut-out mechanism connected with the same, of the ebonite plate M, the levers O, O' pivoted to the same and the levers O, O', the bells K and the hammer L, substantially as herein shown and described. 8th. The combination, with a telephone instrument and a cut-out mechanism connected with the same, of the ebonite plate M, the levers O, O' pivoted to the same, the platinum wires S, S' on the levers O, O', the bells K and the hammer L, substantially as herein shown and described. 9th. The combination, with a vibrating lever, of two levers held separated at the side of the same and adapted to be brought in contact by the vibrating lever, which levers are connected with the opposite poles of an electric circuit, substantially as herein shown and described.

No. 18,269. Medicinal Compound.

(*Composition médicinale.*)

Charles L. Robinson, Oakland, Cal., U.S., 8th December, 1883; 5 years.

Claim.—The herein described medical compound for fever and ague consisting of olive-oil, milk, flowers of arnica, spirits of red lavender and essence of Jamaica ginger, substantially in the proportions specified.

No. 18,270. Wick Trimmer. (*Ciseaux à mèche*)

William C. Seaton, Quebec, Que., 8th December, 1883; 5 years.

Claim.—In a wick trimmer, the combination of the hollow cylinder A, having the fixed heads a and b and the longitudinal openings c, d and e, with the rotary brush B journaled in the heads a and b and having the crank C, substantially as described. 2nd. In a wick trimmer, the hollow cylinder A, having the longitudinal openings c, d and e with the inturred edges f, with the surrounding sheath E having the oblong opening g, substantially as shown and described.

No. 18,271. Automatic Stop Plug for Gas and Oil Pipes. (*Tampon automatique pour les tuyaux de gaz et d'huile.*)

William F. Cosgrove, Jersey, N.J., U.S., 8th December, 1883; 15 years.

Claim.—1st. The combination, with the coupling A provided with the tapering socket C and the apertured removable cap F, of the plug D provided with the slotted stem E passing through the aperture of the said cap, and the fusible key G passing through the said stem on the outside of the cap, substantially as herein shown and described. 2nd. In an automatic stop plug, the combination, with the apertured cap F, the slotted stem E and the fusible key G, of the non-heat-conducting washers I, J, substantially as herein shown and described, whereby the said cap and stem are kept from conducting the heat away from the said key, as set forth. 3rd. In an automatic stop plug, the combination, with the stem E, the plug D and the key G, of the set screw K, substantially as herein shown and described, whereby the said plug can be drawn firmly into place, as set forth.

No. 18,272. Dress-Maker's Rule.

(*Règle à moiste.*)

William Wallace, Oakland, Cal., U.S., 11th December, 1883; 5 years.

Claim.—The herein described dress-makers' rule having the long arm or side A, short arm or side B and the curvatures N, I and No. 2, said arms and curvatures being marked with the various scales for showing the proportionate measures of the different parts of the form, substantially as specified.

No. 18,273. Composition of Matter for Painting and Graining Wood
(Composition de matières pour peindre e. imiter le bois)

Noah S. Briggs, Hamilton, Ont., 11th December, 1883; 5 years.
Claim.—1st. The herein described composition of matter to be used for painting and graining consisting of cider vinegar, gum arabic or squills, spirits of turpentine and coal oil, as specified. 2nd. In combination with the compound above described and used with it, a roll composed of Potter's clay or putty, whiting and oil, for graining after the former has been applied.

No. 18,274. Crane. (Grue.)

Samuel H. Edgerly, Jackson, Mich., U. S., 11th December, 1883; 15 years.
Claim.—1st. A jib for a crane consisting of a tapering central web and two or more pairs of curved flange plates of decreasing lengths, all bolted together, substantially as shown and described. 2nd. In a crane, the combination of a stationary mast having a movable ring around its lower end, and a movable cap on its upper end, a V-shaped frame secured to, and turning with said ring and cap, and a jib pivoted to one side of said frame removably attached to the other side thereof, and having therein a hole adapted to loosely encircle the mast, substantially as shown and described. 3rd. In a crane, a jib pivoted in a supporting frame and having its rear end adjustable in said frame, substantially as and for the purposes specified.

No. 18,275. Horse Rake. (Râteau à cheval.)

William S. Wilson, Ayr, Ont., 11th December, 1883; 5 years.
Claim.—1st. In a horse-rake, in which the wheels revolve freely on spindles fixed to the axle, to which axle the teeth are attached, a pulley-shaped hub formed on the inside of the wheel, in combination with a friction clamp adjustably attached to the axle and having two flanges opposite to each other, one flange designed to fit the outer surface of the pulley hub, and the other flange the inner surface thereof, with mechanism arranged to actuate the bracket so as to press its flanges against the pulley-shaped hub, and thereby form a friction connection between the wheel and axle, as and for the purpose herein specified. 2nd. In a horse-rake, in which the wheels revolve freely on their axles, with which the rake-teeth are connected, a friction clamp adjustably attached to the axle and having two projecting flanges formed on it, to fit against the pulley-shaped hub of the wheel, as specified, in combination with a curved cap designed to fit the outer surface of the pulley-shaped hub and located immediately over the flange designed to fit against the inner surface of the hub, a crank-rod journaled on the bracket and having its crank-end attached to the cap, so that, by rolling the rod, the cap and flanges are caused to press against the hub, substantially as and for the purposes specified. 3rd. In a horse-rake, in which the friction dump is formed by the flanged clamp H J and cap K, fitting against the pulley-shaped hub F, a crank-rod L, journaled on the bracket and connected to the cap, as specified, in combination with the set-screws d, arranged to act against the rod L, substantially as and for the purpose specified. 4th. In a horse-rake, in which the wheels revolve freely on spindles fixed to the wooden axle, and the rake-teeth are attached to the said axle, the combination of an iron bracket fixed to each end of the axle and having a hub formed on it, through which the wheel spindle passes and upon which the flanged clamp is supported, the said bracket having also extending from it an arm to support the end of the rider-bar, substantially as and for the purpose specified. 5th. In a horse-rake, in which the friction dump is formed by an adjustable flanged clamp and cap, arranged to clamp the inner and outer surfaces of the pulley-shaped hub of the wheel, the combination of a rod journaled on the axle and having on its inner end a crank connected to the clamping lever, and a hook on its outer end and upon which the clamping cap is suspended, substantially as and for the purpose specified. 6th. In a horse-rake, in which the wheels revolve freely on spindles fixed to a wooden axle, a truss-rod extending from end to end of the axle on its bottom side, substantially as and for the purpose specified. 7th. In a horse-rake, in which the wheels revolve attached, the combination of a truss-rod extending from end to end of the axle immediately below its bottom edge, so as to form a support for the teeth, the end of the rod passing through elongated holes in the flanged clamp and being provided with nuts, hold the same in position, substantially as and for the purpose specified. 8th. In a horse-rake, a driver's seat arranged to extend behind or immediately above the axes of the carrying wheels, substantially as and for the purpose specified. 9th. In a horse-rake, in which the teeth are attached to the axle and arranged to come in contact with the throttle-iron, substantially as and for the purpose specified. 10th. In a horse-rake, the thills R, braced together by the diagonally-crossed bars S, extending outwardly to a point near the carrying-wheels, in combination with thill-irons fixed to the outer ends of the cross-bars and thills are braced together by diagonally-crossed bars S, a metal bracket V, bolted to the cross-bars S and shaped to form a pivot point for the hand-dumping lever U, and a pivot point for the whiffletree T, substantially as and for the purpose specified.

No. 18,276. Method of Securing Buttons.
(Mode d'assujétir les boutons)

William F. Spinney, Reading, Mass., U. S., 11th December, 1883; 5 years.
Claim.—1st. The improvement, in the art of attaching buttons or other articles to garments, &c., consisting in inserting a portion of the fabric into the tubular or open part of the button, then placing a suitable compressible substance therein, and flattening or expanding the same, as set forth. 2nd. The combination of the button or other article having an opening receiving part of the fabric and an expanded plug, substantially as specified.

No. 18,277. Submarine Electric Cable.
(Câble électrique sous-marin.)

Richard S. Waring, Pittsburgh, Penn., U. S., 11th December, 1883; 15 years.

Claim.—1st. An electric cable having insulated electric conducting wires embedded in, and covered by a body of lead, and a series of hard metal protecting-wires also embedded in the lead outside of the conducting wires, substantially as and for the purposes set forth. 2nd. An electric cable having a tubular lead body A, a compound conductor B, filling its central passage, such conductor being composed of wires of different size, a part being lead-covered and all being twisted together, as described, insulated conductors a embedded in the body of lead, and strengthening and protecting wires a' embedded in the lead outside of the wires a, substantially as set forth. 3rd. An electric cable having a tubular body of lead, a series of insulated conductors embedded within the lead, near the inner surface of the tubular body, and a series of hard-metal wires alternating in arrangement with the conducting wires and embedded within the lead, near the outer surface of the tubular body, substantially as set forth. 4th. An electric cable having a tubular lead body and a compound conductor filling the tubular passage, such conductor being composed of separately insulated wires, a part of which are also covered exteriorly with an electric conducting material, and all being twisted together, substantially as set forth.

No. 18,278. Cord Binding Harvester.
(Moissonneuse-lieuse à ficelle.)

George Fielden, Dundas, Ont., 11th December, 1883; 5 years.

Claim.—1st. The combination of the cord disk A, cord-holder a swinging frame B, pawl lock C and cam gear shaft H, as and for the purposes hereinbefore set forth. 2nd. The combination of the cord disk A, connecting rod F, pawl G, ratchet wheel I and set screw J in connecting rod, as and for the purpose hereinbefore set forth.

No. 18,279. Motor Power. (Pouvoir moteur.)

Louis Seebach and Joseph Betschen, Gowanstown, Ont., 11th December, 1883; 5 years.

Claim.—1st. As an improved motor, the weight or weight-N, connected by a chain or rope L to a drum or drums K, which is or are connected by the crank B, gear wheels to the shaft B, in combination with the crank B, connected by the pitman D to the lever C, which is pivoted to the frame A, and arranged to impart a reciprocating movement to a churn or other machine, substantially as and for the purpose specified. 2nd. In a motor deriving its power from the descent of a weight or weights, the combination of a governor connected to the main shaft, driven by the descending weights in such a manner that the motion of the governor imparts a resisting power to the shaft, in proportion to the power consumed by the machine driven by the motor, substantially as and for the purpose specified.

No. 18,280. Saw-Sharpening Machine.
(Machine à limer les scies)

Milo Covel, Chicago, Ill., U. S., 11th December, 1883; 5 years.

Claim.—1st. The combination, with the irregular shaped cam-wheel B, of the lever B₁ pivoted at one end, the opposite end being adapted to rise and fall, the friction-roller a₂, the rod B₂, the graduated arm C provided with a number of apertures arranged at regular intervals, and the adjustable connecting-rod B₃, whereby motion is transmitted to the emery-wheel and the shape and depth of the teeth determined, substantially as described. 2nd. The combination, with the sleeve b, having a loose joint at the lower end, and the shoulder b₃ on the upper end of the rod C₁, and the hand-lever C₂, whereby the emery-wheel may be raised from contact with the saw without stopping the machine, substantially as described. 3rd. The combination, with the cam B, adapted to perform the functions of a crank-wheel, of the connecting-rod D, the graduated arm B₁, the adjustable companion rod D₁, the vertical lever D and the feed-finger d, whereby the required movement and adjustment are given to said feed-finger, substantially as described. 4th. The combination, with the feed-finger d, of the adjustable rest d₂ provided with the elongated slot d₃, whereby said feed-finger may be adapted to conform to teeth of various shapes and depths, as set forth. 5th. The combination, with the eccentric clamping-lever E, provided with the head F, and the handle F₁, substantially as and for the purpose set forth.

No. 18,281. Striker for Sash and Door Bolts.
(Gâche de verrou de fenêtre et de porte.)

Charles W. Elliott, Horatio N. Ruggles and Mathias Donnelly, Boston, Mass., U. S., 11th December, 1883; 5 years.

Claim.—A bolt striker formed from a metal tube having its outer surface forced inwards, to form a bevelled face at each end, and adapted to be inserted in a door or window frame, as set forth.

No. 18,282. Roofing Compound.
(Composition à toiture.)

Phoebe A. Way, (Assignee of Daniel Brobst), Portia d. Mich. U. S., 12th December, 1882; 5 years.

Claim.—The herein described roofing compound consisting of coal-tar, asphalt, gum-shellac, glue, salt, alum, gypsum, cement, sulphur, resin and benzine, in proportions specified.

No. 18,283. Flexible Last. (Forme élastique.)

Charles L. Higgins, Montreal, Que., 12th December, 1883; 5 years.

Claim.—1st. The described method of preparing boots and shoes for examination and show, which consists in placing therein an inflat-

able device capable of being forced into substantial conformity with the shape thereof, and then inflating the same until restrained by a mild tension of the leather, substantially as described. 2nd. A device for expanding the uppers of boots and shoes adapted to be placed within the boot or shoe, and then inflated outwardly against the inside walls of the same and into substantial conformation with the shape thereof, substantially as described. 3rd. A device for expanding the uppers of boots and shoes, the same being composed of rubber or a similar elastic material having an outline and size similar to, but slightly smaller than that of a boot or shoe, and adapted to be placed within the same, and then expanded by inflation, to completely fill the chamber of the upper and produce slight tension on the walls thereof, substantially as described.

No. 18,284. Improvements in Stoves or Furnaces. (*Perfectionnements dans les poêles ou calorifères.*)

Daniel M. Graham, Philadelphia, Penn., U. S., 13th December, 1883; 5 years.

Claim.—The combination of the stove and the drum arranged within it, and provided with flue pipes and air ducts disposed as set forth, with the two hot air induction pipes having dampers and arranged with such stove and drum, substantially as represented.

No. 18,285. Display Body. (*Caléidoscope jouet.*)

Josiah M. Simpson, Chicago, Ill., U. S., 13th December, 1883; 5 years.

Claim.—1st. In devices for display bodies, the wheel A with downwardly turned buckets α , in combination with an inverted concave cone or cone F, to form a continuous curve from the cone to the outer ends of the bucket, as and for the purpose specified. 2nd. A gas-globe or other similar device hung suspended from the rotating wheel A α , which is supported by the standard G passing through the globe and fastened to a gas or lamp burner, as and for the purpose specified. 3rd. The plumbage pivot H, in combination with the stone X, as a bearing for rotating display bodies which are driven by heat, as specified.

No. 18,286. Adjustable Sash Frame.

(*Châssis mobile de croisée.*)

Richard Stockdale, Ottawa, Ont., 13th December, 1883; 5 years.

Claim.—1st. A box sash frame having the hanging stile A notched into the frame head and butt ended upon the sill, the lower end of said stile provided with a rack E meshing into a pinion F journaled below, and fitted with a cam f , engaging a lug e in said rack E, the lock plates G secured to the stile A, in combination with the sashes. 2nd. A movable hanging stile of a box sash frame moved and controlled by means of a rack and pinion with cam, and provided with a lock plate G. 3rd. A movable hanging stile of a box sash frame notched into the frame head and butt-ended upon the sill. 4th. The controlling mechanism consisting of the rack E having the lug e , the pinion F and cam f mounted upon the spindle f , provided with a knob F and journaled below the rack and meshing therewith, in combination with the hanging stile and sill, all substantially as described and for the purpose set forth.

No. 18,287. Lubricator for Piston Rods.

(*Graisseur des tiges de pistons.*)

Solomon Hoffmaster, Harrisburg, and George W. Arthur, Altoona, Penn., U. S., 13th December, 1883; 5 years.

Claim.—The combination, with a piston rod or valve stem, of the gland having an annular chamber terminating in a wide mouth at the upper edge of the flange, for increasing the capacity of the chamber, and providing for filling the same, the mouth being provided with a cover, substantially as and for the purpose set forth.

No. 18,288. Process and Apparatus for Freezing Paraffine, &c. (*Procédé et appareil de congélation de la paraffine, &c.*)

Edward Kells and Henry L. Church, Cleveland; Ohio, U. S., 13th December, 1883; 5 years.

Claim.—1st. The process of freezing or chilling paraffine, paraffine-wax and other products of petroleum, consisting in passing the material upward, through a body of liquid refrigerants and in immediate contact therewith, substantially as described. 2nd. The process of chilling paraffine-wax or other products of petroleum, consisting in passing the material in a divided state upward through a liquid refrigerant and in immediate contact therewith, substantially as described. 3rd. The steps in the process of chilling and separating paraffine-wax and other products of petroleum, consisting in passing the material upward through a refrigerating liquid and in immediate contact therewith, and then carrying the product to a refrigerating chamber, substantially as described. 4th. The process of chilling paraffine and other products of petroleum, the same consisting in conducting the material to be operated under pressure or by gravity into a column of refrigerating liquid, at or near the bottom of said column, substantially as described. 5th. The apparatus for effecting the above described purpose consisting of refrigerating tank A, chamber B having perforated top c , conducting pipe K with inlet a and spout S, substantially as shown and specified. 6th. The receptacle D surrounded by outer jacket or refrigerating chamber E, and furnished with spout or orifice F to conduct the frozen material from the spout S into the said chamber D, which is provided with the sliding bottom I and drawer J, substantially as shown and specified. 7th. In combination with tank A, the receptacle D surrounded by jacket E and having spout

or orifice F, to conduct the frozen material from spout S into the receptacle D, which is provided with sliding bottom I and drawer J substantially as shown and specified.

No. 18,289. Rowlock. (*Toiletère.*)

Charles W. Morris, Lowestoft, Eng., 13th December, 1883; 5 years.

Claim.—1st. The combination of the sliding headed tholes A with the gunwale B and cross-pins D, constructed to operate substantially as described. 2d. The combination of the sliding headed tholes A with the gunwale B, slotted plate F and catch G, constructed to operate substantially as described.

No. 18,290. Flour Dressing Machine.

(*Blutoir.*)

Middleton Crawford, Wiarton, Ont., 13th December, 1883; 5 years.

Claim.—1st. In a flour-dressing machine, an endless web-sieve carried on rollers in a horizontal frame, the said frame having imparted to it a vibratory movement, while the sieve travels around the rollers, so that the fine flour is sifted through the sieve, while the coarser flour is carried over the end of the frame by the travelling sieve, substantially as and for the purpose specified. 2nd. In a flour dressing machine, an endless web-sieve carried on revolving rollers and presenting a horizontal travelling surface, in combination with stationary brushes set so as to come in contact with the surface of the sieve, in order to clean the meshes of the sieve as it travels over the brushes, substantially as and for the purpose specified.

No. 18,291. Cockle Machine.

(*Machine à nelle des blés.*)

Middleton Crawford, Wiarton, Ont., 13th December, 1883; 5 years.

Claim.—1st. In a cockle machine, a sieve formed in an endless web carried on rollers and caused to travel in an upward direction, the angle at which the sieve is set being such as will cause the grain to roll down while the cockle and small grain, which stuck in the meshes of the sieve, are carried over the top edge of the sieve, substantially as and for the purpose specified. 2nd. In a cockle machine, provided with ordinary fixed sieves carried in a vibrating frame, the combination of a sieve formed in one endless web carried on rollers journaled in a frame, so pivoted on the vibrating frame that the angle of the endless sieve may be adjusted, substantially as and for the purpose specified. 3rd. In a cockle machine, in which the sieves are carried in a frame flexibly connected to one main or stationary frame of the machine, a strap connected at one end to the vibrating frame and at the other to an eccentric, in combination with a spring arranged to operate the vibrating frame in the opposite direction to that in which it is moved by the eccentric, substantially as and for the purpose specified.

No. 18,292. Self-Closing Hatchway.

(*Ecouille à fermeture automatique.*)

Richard D. Thackston, St. Louis, Mo., U. S., 13th December, 1883; 5 years.

Claim.—1st. In a self-closing hatchway, the counterbalances consisting of removable disks secured to the ends of pivoted arms, substantially as and for the purpose set forth. 2nd. In a self-closing hatchway, the friction rollers consisting of two grooved disks riveted together and provided with a soft band and secured to the ends of pivoted arms, substantially as and for the purpose set forth. 3rd. In a self-closing hatchway, the combination of cage doors, independent pivoted arms connected to the doors, counterbalances and friction rollers secured to the ends of the pivoted arms and cams upon the cage, all constructed and operating substantially as shown and described for the purpose set forth. 4th. In a self-closing hatchway, a cam or cams secured to the top of the cage for opening the door or doors, in combination with a spring secured to the cam, the two being arranged in such a manner that the breakage of the spring will not prevent the cam from accomplishing its function, as set forth. 5th. In a self-closing hatchway, a spring cam hinged to the bottom of the cage, its free end being guided and supported by suitable mechanical means, as set forth. 6th. In a self-closing hatchway, the combination of the cam J secured to the cage, slotted hanger J_1 secured to the bottom of the cage, perforated projection J_2 in the hanger post J_3 on the cam, and the spring J_4 surrounding the post, substantially as and for the purpose set forth. 7th. The combination of the cage E and doors D, ropes N, pivoted counterbalanced arms L, pulleys O and cams secured to the cage, all substantially as shown and described and for the purpose set forth.

No. 18,293. Machine for Arranging Match Splints for Dipping. (*Machine pour disposer les allumettes à soufrer.*)

Bernard T. Steber, Utica, N. Y., U. S., 13th December, 1883; 15 years.

Claim.—1st. In a machine for arranging match splints for dipping, the combination, with a pair of clamping slats constructed to contain a row of match splints, of vertically movable pushing bars arranged to bear against alternate splints, whereby a portion of a row of splints is moved longitudinally, and spaces formed between adjoining splints at the top and bottom of the row, substantially as and for the purpose described. 2nd. The combination, with travelling clamping slats, of pushing bars arranged to bear against alternate splints, as the clamping slats pass over them, with a portion of the rows of splints moved longitudinally, and spaces formed between adjoining match splints at top and bottom of the row of splints, substantially as and for the purpose described. 3rd. The combination, with clamping slats constructed to contain a row of match-splints, and with vertically movable bars arranged to bear against alternate splints, of notched top plates secured to one of the clamping bars, substantially as and for the purpose described.

No. 18,294. Device for Protecting the Neck Bands, Collars and Cuffs of Shirts when packed together Transportation. (*Appareil pour protéger les cols, faux-cols et manchettes des chemises empaquetées pour le transport.*)

William A. Greene, Jr., Toronto, Ont., 14th December, 1883; 5 years.

Claim.—1st. A false collar A, set within the neck-band of a shirt and shaped so that its top edge shall project slightly above the neck-band B, substantially as and for the purpose specified. 2nd. A false collar A, in combination with projecting fingers B arranged to fit within the neck-band of a shirt, substantially as and for the purpose specified. 3rd. A bridge D, made of card board or other stiff material and so shaped that, when placed upon the bosom of the shirt, it will project slightly above the cuff or neck-band, so as to form a protection for the same, substantially as and for the purposes specified.

No. 18,295. Underwaist. (*Ceinture de dessous.*)

Mary E. Higgins, Cadillac, Mich., U. S., 14th December, 1883; 5 years.

Claim.—1st. The combination, with an underwaist or corset, of pendant flap pieces for supporting the hose attached to the inside of the said waist or corset at a point near or above the waist line and under the arm holes and having a broad connection at their upper edges with the underwaist or corset, as and for the purpose described. 2nd. The combination, with an underwaist or corset, of hip pads provided with points or hooks, or connections for sustaining the skirt, as set forth. 3rd. An underwaist or corset having hose supporting skirts attached to be inside of the waist or corset, and hip pads with skirts supporting the vices attached to the outside of the same, as described. 4th. The combination, with a waist or corset, of an imitation chemise or skirt S attached to the inner side of the lower edge thereof, as described.

No. 18,296. Car-Coupling. (*Accouplage de wagons*)

Erza N. Gifford, Cincinnati, Ohio, U. S., 14th December 1883; 5 years.

Claim.—1st. In a car-coupling, the combination, with a draw-head having a guideway extending above the draw-head, said guideway provided near its upper end with a locking-recess, and with inwardly projecting flanges over the locking-recess, of a coupling-pin provided with laterally-projecting locking-lugs adapted to move vertically within said guideway, and rearwardly into said locking-recess, substantially as set forth. 2nd. In a car-coupling, the draw-head having a guideway cast integral therewith, said guideway having undercut recesses in its upper end, and a bar L secured at its ends within said recesses, substantially as set forth. 3rd. In a car-coupling, the combination, with a coupling-pin having locking-lugs cast integral therewith near its upper end, of a guideway provided with a locking-recess in its upper end, and provided with lugs j that extend above the bottom or floor of said recess, substantially as set forth. 4th. In a car-coupling, the combination, with a coupling-pin having locking-lugs cast integral therewith near its upper end, of a guideway provided with passages m located above the floor of the locking-recess, for the insertion of the locking-lugs on the coupling-pin, substantially as set forth. 5th. In a car coupling, the combination, with a draw-head having a guideway extending above the draw-head, said guideway provided with a locking-recess near its upper end, and with lugs j locking-lugs formed with concave bearing on their under-sides, substantially as set forth. 6th. In a car-coupling, the combination, with a coupling-pin having locking-lugs cast integral therewith near its upper end, of a draw-head having a guideway cast integral therewith and constructed substantially as described, whereby the coupling-pin may be raised, its head moved rearwardly and its locking-lugs lowered into a locking-recess located in the upper portion of said guideway, substantially as set forth. 7th. In a car-coupling, the combination, with a coupling-pin provided with locking-lugs, of a draw-head provided with a guideway constructed substantially as described, whereby the coupling-pin may be raised, its head moved rearwardly and supported so as to cause the pin to fall by concussion and automatically couple the cars, substantially as set forth. 8th. In a car-coupling, the combination, with a coupling-pin provided with locking-lugs, of a draw-head provided with a guideway constructed substantially as described, whereby the pin may be raised, its head moved rearwardly and its locking-lugs lowered into a locking-recess, substantially as set forth.

No. 18,297. Fire-Escape Ladder. (*Echelle de sauvetage*)

Arthur W. Covell, Lombardy, Ont., 14th December 1883; 5 years.

Claim.—1st. An iron ladder composed of sections constructed of sides A, A' and step-bar B, and consecutively connected by bolts C, or hooked intersecting ends, whereby the ladder will fold, as set forth. 2nd. The ladder sections composed of two sides A, A' and having arms D, to keep the sections distanced from the wall, as set forth.

No. 18,298. Stove. (*Poêle.*)

Michael C. Armour, Chicago, Ill., U. S., 14th December 1883; 5 years.

Claim.—1st. Combined in a stove, two combustion apparatuses, an oven between them, a top, every part of which is in substantially the same plane, and an oven adapted to rest over either combustion apparatus or over the oven between them, substantially as set forth. 2nd. Combined in a stove, two combustion apparatuses, an oven be-

tween them having its lateral and top walls perforated, a top standing in a plane above said combustion apparatuses and top wall of the oven, and forming with said wall a combustion current flue, and a ventilated oven adapted to rest over either combustion apparatus or over the oven between them, whereby it may, under different conditions, be heated either by the passage through it of the products of combustion and by a current of hot air induced thereby, or by simple radiation of heat, substantially as set forth. 3rd. In a stove, two combustion apparatuses, an oven or induction flue placed between them and communicating therewith, a top placed above said combustion apparatuses and oven and having, in substantially a common plane, an imperforate section over each of said apparatuses, and a perforate section over said oven or induction flue, substantially as set forth. 4th. Combined in a stove, combustion apparatuses, combustion current and induction flues, a top having imperforate and perforate sections, and a ventilated oven adapted to rest and slide upon said top, whereby, under different conditions, it may be heated by the passage therethrough of the products of combustion, and a current of air heated thereby, or by simple radiation of heat, substantially as set forth. 5th. In a stove, a top having imperforate and perforate sections standing in substantially the same plane, the imperforate sections being heated by the action thereupon of the combustion current, and the perforate section by said current, and a current of air induced and heated thereby, combined with an oven adapted to rest upon said top and to be moved to different points in its length, substantially as set forth. 6th. In a stove, a top having imperforate and perforate sections in substantially the same plane, combined with a ventilated oven having a grated bottom and adapted to be moved along the length of said top, so that said oven may be brought over either the perforate or imperforate sections, and thereby be heated under different conditions, substantially as set forth. 7th. In a stove, the combination of a heating apparatus, a top having imperforate and perforate sections, combustion current and induction flues, and an adjustable oven adapted to be placed over either the imperforate or perforate sections of the top and which, when removed from the perforate section, allows of the free escape of the products of combustion through the same, and of their utilization for other purposes of heating, substantially as set forth. 8th. In a stove, a combustion apparatus at each end thereof, an intermediate oven or induction flue, a top having imperforate and perforate sections, and a ventilated oven adapted to rest and slide upon said top, substantially as and for the purposes set forth. 9th. In a stove, a top having imperforate sections and a perforate section provided with ridges or protuberances b, said sections being in substantially the same plane, combined with the adjustable oven A, having the rack or grating a₃ and the ventilating perforations a₁, substantially as and for the purposes set forth. 10th. In a stove, a combustion apparatus at each end, an intermediate oven or induction-flue having perforations h, h₁, the stove-top having imperforate sections and a perforate section provided with ridges or protuberances b₃, the flue B being formed below said stove-top as shown, combined with the adjustable oven A, having the rack or grating a₃ and the ventilating apertures or perforations a₁, substantially as and for the purposes set forth. 11th. In a stove, a top having imperforate and perforate sections, combined with a sliding oven having guiding flanges adapting it to be retained upon, and moved along said top, substantially as set forth. 12th. A stove provided with flanges e and d₁, one on the combustion apparatus and the other on the stove proper, substantially as set forth. 13th. A stove having on its top a sliding oven open at the bottom, and provided with flanges for guiding it, substantially as set forth. 14th. In a stove, two combustion apparatuses, an oven or space between them, a top placed above said combustion apparatuses and oven, and having an imperforate section over each of said apparatuses, and a perforate section over said oven or space, substantially as set forth. 15th. In a stove, a flue provided with an equilateral covering-plate having a depending flange, substantially as set forth. 16th. A stove provided with a covering-plate, having ridges or protuberances projecting above the general level of the top of the stove, and also having perforations between said ridges, substantially as set forth. 17th. A stove provided with a chimney-frame chamber, a removable chimney-frame therein, and chimneys in said chimney-frame and removable therefrom, substantially as set forth. 18th. The combination of cones F having apertures f₁, with the studs or flanges f₂, substantially as set forth. 19th. In a stove, a cone-plate with cone entirely below it, in combination with chimneys, substantially as set forth.

No. 18,299. Harvesting Machine. (*Moissonneuse.*)

Henry J. Case and David M. Osborne, Auburn, N. Y., U. S., 14th December 1883; 15 years.

Claim.—1st. A butt-board supported on a horizontal arm hinged to, and adjustable around a vertical axis, in combination with a crank shaft for operating the said butt-board, arranged centrally within said axis, substantially as described. 2nd. The butt-board upheld by, and adapted to slide longitudinally on a hinged supporting arm, in combination with a connecting rod and crank, the shaft of which is coincident with the axis of the supporting arm, for imparting a longitudinally reciprocating and a laterally oscillating motion to said board, substantially as described. 3rd. A butt-board supported by, and sliding longitudinally on an arm, free to swing or be adjusted in a horizontal plane on its axial support, in combination with an adjusting bar connected with said supporting bar and extending within reach of the driver in his seat, and means for holding said bar supporting arm and butt-board at any desired adjustment, substantially as described. 4th. The longitudinally reciprocating and laterally oscillating butt-board, in combination with its hinged supporting and adjusting arm, and the shaft for actuating said butt-board, arranged within the axial centers of said supporting arm and geared to, and operated from the upper roller of the lower elevating canvas, substantially as described. 5th. The combination of the butt-board I, hinged supporting arm B arranged to vibrate around the crank-shaft actuating the butt-board as a centre, the crank-shaft actuating said butt-board geared to, and operated from the upper roller of the lower elevating canvas, and means for adjusting said supporting arm and butt-board, substantially as described.

No. 18,300. Process for Converting Manganite, Braunite and Manganese into blue Peroxide of Manganese. (*Procédé pour convertir la manganite, la braunite et le manganèse en peroxyde bleu de manganèse.*)

Alfred Markham, Markhamville, N. B., 14th December 1883; 5 years.

Claim.—1st. The process for converting protoxide of iron and manganese combined to peroxide of manganese, substantially as described. 2nd. As a new article of manufacture, peroxide of manganese produced from protoxide of iron and manganese combined.

No. 18,301. Button. (*Bouton.*)

Richard Roschman, Waterloo, Ont., 14th December 1883; 5 years.

Claim.—1st. A button having a circular recess cut in its face, and a groove cut around the inner edge of the recess, to receive and retain in position a piece of cloth or other similar material. 2nd. In a button having a circular recess cut in its face, and a groove cut around the inner edge of the recess, in combination with a piece of cloth inserted within this said recess, and held there by glue or other adhesive. 3rd. In combination with a button having a circular recess cut in its face, and a groove cut around the inner edge of the recess, to receive and retain in position a piece of cloth, a plunger working within a hollow cylinder having a flange *b* to project into the recess of the button, substantially as and for the purpose specified.

No. 18,302. Track Laying Machine.

(*Machine à poser les voies de fer.*)

Ferdinand F. Voigt, Walla Walla, Washington, U.S., 14th December 1883; 5 years.

Claim.—1st. In a track laying device, a construction train, the cars of which are each provided with a track *a*, in combination with trucks adapted to travel upon said tracks, to transport material from one portion of the train to the other, substantially as herein described. 2nd. In a track laying device, a construction train, the cars of which are each provided with track *a*, in combination with trucks adapted to travel on said tracks, and intermediate coupling track sections between the cars, to enable the trucks to pass from one to the other, substantially as herein described. 3rd. In a track laying device, a construction train, the cars of which are each provided with a track *a*, and the coupling sections of the track *c* having a gauge narrower than the gauge of the track *a* in combination with the trucks *b*, having wheels *d* with a central flange, and rolling surfaces on each side of the flange, to fit respectively the wide and narrow gauge of tracks *a* and *c*, substantially as herein described. 4th. In a track laying device, a train of cars having each a track *a*, and the coupling track sections *C* joined to the cars by coupling pins *c*3, passing through slots *c*2 in said section, to enable them to conform to changes of direction in the cars, in combination with trucks *b* adapted to changes of direction *a* and pass from one car to another over coupling tracks *C*, substantially as herein described. 5th. In a track laying machine, the end car *B* and extension frame *D* in front in combination with the carrier *E* and a means for advancing and withdrawing said carrier on the frame *D*, substantially as and for the purpose herein described. 6th. In a track laying machine, the car *B* having a track *a* for a truck, and a central recess with a track *e*, and the extension *D* in front, in combination with the T-shaped carrier *E* having wheels *e*1 on its rear-head, for travelling on the side of the front extension *D*, and a track *e*1 on its front, and means for advancing and withdrawing said carrier, substantially as and for the purpose herein described. 7th. In a track laying machine, the end car *B* and extension *D*, in combination with the carrier *E* and means for advancing it out on the extension consisting of the chain *H*, sheave *G*, shaft *F*, pinion *i*, gear *J*, ratchet *K* and the lever *L* having a link pawl *l* engaging with the ratchet *K*, substantially as and for the purpose herein described. 8th. In a track laying machine, the end car *B* and extension *D*, in combination with the extensible carrier *E*, and the means for withdrawing said carrier rapidly, consisting of the chain *H*, sheave *G*, shaft *F*, pinion *i*, gear *J*, crank *M* and pinion *m*, all arranged and operating substantially as and for the purpose herein described. 9th. In a track laying machine, the end car *B* having a frame work *N*, in combination with the forwardly extending derrick frame *O*, the derrick ropes *p* having rail clamps *Q* and the winding drum *P*, all arranged and operating substantially as and for the purpose herein described. 10th. In a track laying machine, the car *B* having a track *a* upon it, and a frame work *N*, in combination with the swinging track sections *R* mounted above in said frame work and adapted to incline to either end, to receive a truck from track *a* to carry it over the car, substantially as and for the purpose herein described. 11th. In a track laying machine, the car *B* having a track *a* and a frame work *N*, in combination with a swinging track section *R* centrally pivoted in said frame and adapted to incline to either end, and a pivoted catch *S* to hold said swinging section horizontal, and rope *s* to trip the catch, substantially as and for the purpose herein described. 12th. In a track laying machine, the end car *B* having track *a* and frame work *N*, and the extension frame *D*, in combination with the extensible carrier *E* having track *a*1, and the swinging track sections *R*, all arranged and operating substantially as and for the purpose herein described. 13th. In a track laying machine, the swinging track section *R* having a pivoted catch *T*, as shown, in combination with a truck *b* adapted to be moved upon said track section and to be held by the catch, substantially as and for the purpose herein described.

No. 18,303. Dumping Platform.

(*Plateforme à bascule.*)

John T. Savage and John Love, Rockford, Ill., U. S., 15th December, 1883; 5 years.

Claim.—1st. In combination with the track-beams or dumping portion of the contrivance, and the ordinary scale-platform, means for

operating or turning said track-beams from a horizontal to an inclined position and *vice versa*, at the pleasure of the operator of said mechanism, all substantially as set forth. 2nd. The combination, with the gear-toothed segments fixed to the pivoted track-beams or dumping portion of the platform, of spur-toothed gear-pinions to engage the gear-teeth of the segments, substantially as and for the purpose set forth. 3rd. The combination, with the spur-toothed gear-pinions having a gear-toothed connection with the gear-toothed segments, of a sprocket-wheel and chain-belt connection therewith, substantially as and for the purpose set forth. 4th. The combination, with the sprocket-wheel and chain-belt connecting with the spur-toothed gear-pinions, of a hand-wheel or winch to impart motion to the parts, substantially as and for the purpose set forth. 5th. The combination, with the sprocket-wheel and chain-belt connecting with the spur-toothed gear-pinions, of a ratchet wheel and pawl mechanism, substantially as and for the purpose set forth. 6th. The combination, with the pivoted track-beams, or dumping portion of the platform, of detents operating to limit the descent of the dump, substantially as set forth.

No. 18,304. Method of Raising Cream.

(*Mode de production de la crème.*)

Henry W. Kellogg, Ripon, Wis., U.S., 15th December, 1883; 5 years.

Claim.—The improved method of raising cream from milk, which consists in applying ice directly to the lower stratum of milk contained in a receiver, substantially as described.

No. 18,305. Stop Valve. (*Souape d'arrêt.*)

Daniel Kearney, Montreal, Que., 15th December, 1883; 5 years.

Claim.—1st. In combination with the basement or chambers in a building, the parts *Q*, *R*, through which hydraulic pressure is transmitted, as described, the cylinder *K*, piston *L*, piston rod *M*, stop valve *P*, cylinder *A*, having valve-seat *I* and connections *B* for supply pipe *G*, and *C* for service pipe *H*, substantially as described. 2nd. The combination of the cylinder *K*, piston and piston rod *L*, *M*, stop valve *P*, cylinder *A* having valve seat *I* and connections *B* and *C* for supply and service pipes, substantially as described. 3rd. The combination of the tubes *Q*, *R*, through which hydraulic pressure is applied to operate a piston or surface upon which the pressure acts, to move the same and operate a stop-valve, substantially as described.

No. 18,306. Plough. (*Charrue.*)

Adam C. West, Blanchard, Mich., U.S., 15th December, 1883; 5 years.

Claim.—The combination, with the cast iron plough joint *A*, of a steel plate covering thereto, constructed both to form both the share *B* and coulter *C*, and the separate and detachable cap point *D*, applied to the point and assisting to hold the share and coulter in position, essentially as described.

No. 18,307. Oscillating Guides for Gang Saws. (*Guides oscillants pour les scies verticales.*)

Clinton H. Weston, Mount Clemens, Mich., U. S., 15th December 1883; 5 years.

Claim.—1st. In a gang saw mill, in which the saw sash is arranged to work up and down, within oscillating guides comprised in a single frame, the combination of the supporting frame with the saw sash working in oscillating guides, said guides being pivoted to the frame at a point near to, but below the centre and in rear of the upper guides, as and for the purposes set forth. 2nd. The combination of the vibrating side pieces *E*, *E*, having upper guides *c*, arranged to incline forwardly in a downward direction, and lower guides *d*, with the swinging pivots *f* for said side pieces, arranged back of the upper guides and nearer the lower than the upper ends thereof, of the pins *g*, the rods *h*, the rod shaft *h*, the cranks *i*, *k*, the rod *l*, the eccentric *m*, the shaft *A*, crank pin *a*, the rod *b* and the saw sash *B*, for operation in relation with each other, essentially as shown and described.

No. 18,308. Magneto-Electric Call Signal Apparatus. (*Appareil avertisseur électro-magnétique.*)

The Bell Telephone Company, (Assignee of Charles Brown,) Montreal, Que., 15th December, 1883; 5 years.

Claim.—The combination of the armature *A*, electro-magnets *C*, *C*, with armature *D* and rod *E*, bells *G*, *G* and switch lever *H*, with projection *H*2 on same, put in circuit by spring *K* with springs *L*, all constructed, arranged and operating with their several connections, as herein set forth and for the purposes described.

No. 18,309. Rowlock. (*Toilette*)

Charles W. Morris, Lowestoft, Eng., 15th December, 1883; 5 years.

Claim.—The combination of the rowlock *A* with the gunwale *B*, circular recess *C*, grooves *D* and flanges *E*, to work substantially as set forth.

No. 18,310. Miners' Safety Fuses.

(*Fusées de sûreté pour les mineurs.*)

William Eltringham, Minersville, and John Eltringham, Sr., Branchdale, Penn., U. S., 15th December, 1883; 5 years.

Claim.—1st. The herein described safety-fuse or squib for blasting, the same consisting of the powder-containing tube *A* and match or touch paper *D*, fixed upon the upper end of the tube, said tube *A* having a transverse diaphragm *C* of tissue-paper or equivalent material, separating the charge, in the powder-containing tube, from its match or touch paper. 2nd. A safety-fuse or squib for blasting

consisting of a powder-containing tube, a match or touch paper saturated with sulphur and fixed upon the top of the powder-containing tube, said tube having a transverse diaphragm of tissue-paper or equivalent material, separating the charge in the powder-containing tube from its match or touch paper.

No. 18,311. Oiler for Machinery. (Graisseur de machine.)

Frederick A. Gardner, Robert Dunbar and George H. Dunbar, Buffalo, N. Y., U. S., 15th December, 1883; 5 years.

Claim.—1st. The combination, in an oil cup, of a piston or pump arranged below the valves, outside of the oil cup, and provided with a spring for keeping it downward, a lever a3 secured to the frame by a pin a1, an eccentric for operating it and a thumb-screw, and the lever or handle a2, being arranged between the pump eccentric and resting against the thumb-screw, substantially as and for the purposes described. 2nd. In an oil cup, a pivoted lever or handle arranged between the bottom of the pump and the eccentric a2, and its free end resting against an adjustable screw, thereby adapting it to be operated automatically or by hand, substantially as specified.

No. 18,312. Plough. (Charrue.)

The South Bend Iron Works. (assignees of Charles Anderson and James Oliver,) South Bend, Ind., U. S., 15th December, 1883; 5 years.

Claim.—1st. The combination, with a standard and a reversible plow point, of a spring actuated locking lever for securing the point against displacement, substantially as set forth. 2nd. The combination, with a standard and a reversible plow-point having notched prongs or jaws, adapted to be inserted through openings formed in the standard, of a locking lever adapted to engage in the notches of said prongs or jaws, substantially as set forth. 3rd. The combination, with a standard and a reversible plow-point having notched prongs or jaws, extending rearwardly from the point and adapted to be inserted through openings formed in the standard, of a locking lever having its head constructed with bevelled surfaces adapted to fit the correspondingly bevelled surfaces of the notches in the prongs or jaws, substantially as set forth. 4th. The combination, with a plow standard, of a reversible plow point provided with grooves on its upper and lower sides, of a reversible plow point constructed with T-shaped flanges that fit within the grooves in the foot of the standard, substantially as set forth. 5th. The combination, with a standard having grooves formed on the upper and lower sides of its foot portion, and a web on the lower portion of the standard and in rear of the grooved foot, of a reversible plow point adapted to fit within the grooves in the standard, and provided with prongs that extend through openings in the standard, substantially as set forth. 6th. The combination, with a standard having a grooved foot and a web constituting a sole plate, and forming a protected recess in rear of the foot, of a reversible plow point having prongs that extend back into said recess, substantially as set forth. 7th. The combination, with a standard having a grooved foot, of a reversible plow point having prongs extending rearward from the ends of the flanges of the plow point, the upper prong extending beneath the mould-board, and the lower one between the foot and a web, substantially as set forth. 8th. The combination, with a standard provided with grooves extending back to the mould-board, of a reversible plow point having correspondingly-inclined flanges provided, on their inner or adjacent faces, with ribs that extend through the entire length, substantially as set forth. 9th. The combination, with the standard constructed with grooves on the upper and lower sides of its foot portion, and an open slot in the front edge thereof, of a reversible plow point provided with T-shaped flanges that fit within said grooves and open slot, substantially as set forth. 10th. The combination, with the standard and mould board, of a reversible plow point provided with prongs that extend beneath the mould board and in contact therewith, substantially as set forth. 11th. The combination, with the standard and reversible plow point, of a reversible plow share having bevelled faces on opposite surfaces and opposite ends, substantially as set forth.

No. 18,313. Harvester Binder.

William P. Plant and Moses Trotman, London, Ont., 15th December, 1883; 5 years.

Claim.—1st. The combination of the tumbling rod G1, shaft B1, bevelled gears N N1, sprocket wheels M1 and chain belt O provided with pin link O1, for moving the pocket P1 as well as the swinging arm P in a curvilinear motion, substantially as shown and described and for the purpose specified. 2nd. The combination of the circular rack G2 provided with cogs on its upper face, toothed wheel R, lug R2, knotter cam S, shaft B2 and pocket P1 for operating the knotter cam S, to tie the knot on its backward movement, substantially as shown and described. 3rd. The combination of the wiper U, lugs G1, K1, shaft B4, crank arms T, T1, connecting rod V, As, substantially as shown and described and for the purpose specified. 4th. The combination of the curved spring wiper U1 provided with a notch C1, latch C2 and pin C3, substantially as shown and described and for the purpose hereinbefore set forth. 5th. The combination of the movable carriage L, flanges Z1, Z2, connecting rods J3, J4, bell crank Js, lever J1 and cog segment J2, substantially as shown and described and for the purpose specified. 6th. The combination of the tumbling rod G1, shaft B1, bevelled gears H, H1, which operate rake J, substantially as shown and described and for the purpose specified. 7th. The combination of the stationary portion N2 of the binder table, pocket N4, screw R3 and spring N5, movable link R7 of the binder table, pivotal fork N5, clutches N6, tumbling pocket P1, flanged lug N6, wiper N9 secured on the outer end of the shaft X1, X2. 8th. The combination of the folding grain table X3, hinges X1, X2, frame C, axle side X5, axle X6 and wheel X4, substantially as shown and described and for the purpose specified.

No. 18,314. Attachment of Horses to Vehicles. (Système d'attelage.)

Louis P. Bruneau, (Co-inventor with Charles G. C. Simpson,) Montreal, Que., 15th December, 1883; 5 years.

Claim.—1st. The combination of the whiffle-trees G having loops H arranged as described, with shackles D having ring E and bar F, substantially as set forth. 2nd. The combination of the whiffle-trees G, loops H, tug strap K and breeching O, substantially as described. 3rd. The combination of the buckle S having eye T, trace M, M1, tug-strap K and breeching O, substantially as shown and set forth. 4th. The combination of the buckle S having eye T, trace M, M1, tug-strap K, breeching O and saddle strap P, substantially as described.

No. 18,315. Car-Coupling. (Accouplage de Wagons.)

Elijah M. Hobbs and Charles Solomon, Santa Rosa, Cal., U. S., 15th December, 1883; 10 years.

Claim.—1st. In a car-coupling, the open top draw-head A and the swinging latches D, in combination with the coupling pin C secured in the draw-heads and having shoulders et, with which the swinging latches engage, substantially as herein described. 2nd. An automatic coupling consisting of the open top draw-head A provided with the passage p, hole c in its floor, and side walls m, in combination with the coupling-pin C, having in its forward end shoulder et, its rear end bevelled to correspond with passage b, and having a rear under shoulder d and middle shoulder e, and the externally pivoted link latch D, all constructed, arranged and operated as set forth. 3rd. The open top draw-heads A having chambers a, and the latches D having elongated slots h1 through which they are pivoted to the shank of the draw-heads by pins or bolts A, whereby a play is given to the latches to bear against the front wall of chamber a and relieve the pins h, in combination with the coupling pins C secured in the draw-heads and having shoulders et, with which the latches engage to couple the draw-heads, substantially as herein described. 4th. In a car-coupling, the open top draw-head A having passage p and hole c, in combination with the coupling pin C adapted to fit and be secured in said draw-head and having a rear top shoulder p, and the link latch D for securing said pin C, substantially as herein described. 5th. In a car-coupling, the open top draw-head A in combination with the externally pivoted link latch D, provided with a cover or cap P, substantially as and for the purpose herein described. 6th. In a car-coupling, the draw-head A, coupling pin C and pivoted link latch D, in combination with the rod q having a hand-loop q1 at its top, and secured to the link latch by a chain r, substantially as herein described. 7th. In a car-coupling, the draw-head A provided with passage b and hole c and side walls m, and the pivoted link latch D, in combination with the link pin C having a rear bevelled end, with shoulder d, for engaging in the hole c of the draw-head, and a link portion n on its forward end, substantially as herein described. 8th. In a car-coupling, in combination with opposite draw-heads and suitable latching devices, a coupling link or pin having a hinged or pointed body adapting it to conform to any direction, to engage with the draw-heads, substantially as herein described. 9th. In a car-coupling, in combination with the draw-heads A and link latches D, the link pin C adapted to fit in said draw-heads and to engage with said latches, said link pin having a jointed or hinged body at w, substantially as and for the purpose herein described.

No. 18,316. Corset.

Isaac M. Van Stone and Frederick Crompton, Toronto, Ont., 15th December, 1883; 5 years.

Claim.—1st. The improvement in corsets consisting in stiffening the sections thereof by a collection of hairs bound together, in a continuous length, by a thread externally wound thereon and inserted between the inner and outer materials of the corset, and secured by parallel rows of stitching, as set forth. 2nd. The improved stiffening for corsets consisting of a collection of hairs bound together, in a continuous length, by a thread externally wound thereon, the lengths laid side by side and collectively re-enforced at both ends by a metallic tip D, bent up on the outside and inserted in a pocket formed by stitching the inner and outer materials of the corset in parallel rows, as set forth.

No. 18,317. Rolling Window Screen

Thomas Tribe, Colorado Springs, Col., Loftus N. Keating and Albert Dickerman, Muskegon, Mich., U. S., 15th December, 1883; 15 years.

Claim.—1st.—A rolling screen or shade having cords threaded, through the fabric of which it is composed, near the edges, substantially as set forth. 2nd. The combination, with a rolling screen or shade, of elastic strips arranged near its edges and attached to the rollers and bottom slot, substantially as set forth. 3rd. The combination with a rolling screen or shade having cords threaded, through the fabric of which it is composed, near the edges, of elastic strips arranged near said cords and having their upper and lower ends attached to the roller and bottom slot, respectively, as set forth. 4th. The combination of the window frame, the spring roller E, the screen D having cords O threaded through its fabric near the edges, and the guide strips L having pockets M and slits N, as set forth. 5th. The combination of the spring rolling, the roller screen, the transverse guide strips P, Q and the wire netting box R, as and for the purpose set forth. 6th. The combination, with the window-frame, of the blocks G having grooves H, the bearings or brackets F and the screen roller, substantially as set forth. 7th. The combination of the rolling screen, the cords threaded longitudinally through the same, and the bottom slot having laterally projecting plates to which the lower ends of said cords are secured, as set forth. 8th. The combination of a spring roller, a screen or shade cords threaded longitudinally through the same near the edges, a bottom slot having laterally projecting guide plates, and the vertical guide strips L having slits N and pockets M, as set forth. 9th. The combination of the window frame, the rolling screen having bottom slot S provided with spring bolts Y, the con-

necting cord B; having central pendent loop D, and the guide strips L having notches A, as and for the purpose set forth.

No. 18,318. Wire Wiping Apparatus.

(Appareil pour essuyer le fil de fer.)

Henry Roberts, Pittsburgh, Penn., U. S., 18th December, 1883; 15 years.

Claim.—The combination of a series of reciprocating packers T with the box K containing wiping material k, and with the revolving roll L, as and for the purposes specified.

No. 18,319. Annealing Pot for Wire.

(Chaudière pour recuire le fil de fer.)

Henry Roberts, Pittsburgh, Penn., U. S., 18th December, 1883; 5 years.

Claim.—1st. The annealing pot described, composed of the annular vessel D having the external flange D₁ and internal lugs D₂, and adapted to serve as and for the purposes herein specified. 2nd. The chain M, tongs G, H, pivot I, headed rod K, K₁ and plate L, in combination with the annealing-pot D, D₁, D₂ and adapted to serve therewith, as and for the purposes herein specified.

No. 18,320. Apparatus for Feeding Wire.

(Appareil pour servir le fil de fer.)

Henry Roberts, Pittsburgh, Penn., U. S., 18th December, 1883; 5 years.

Claim.—1st. In combination with a metal bath M and take-up mechanism O, a series of wire-delivering reels B, B, and corresponding guide pulleys C, and movable pulleys D, one set for each wire, each with its slotted guide J arranged to serve, as and for the purpose herein specified. 2nd. In a wire-feeding apparatus, the delivering drums B, pulleys C, P, guides J and guide-bars F, in combination with each other and with the traversing pulley D, rope H, pulley G and weight I, all substantially as herein specified. 3rd. In a wire-feeding apparatus, the movable pulleys D and ropes H, with means for inducing tension on the latter, in combination with the pulleys C, P, reels B and metal bath M, and with a check-rope K for each movable pulley, as herein specified.

No. 18,321. Apparatus for Pickling Wire.

(Appareil pour décaper le fil de fer.)

Henry Roberts, Pittsburgh, Penn., U. S., 18th December, 1883; 5 years.

Claim.—1st. The reel A with its removable pin D and lifting-bail A, in combination with the stand G (G₁) adapted to serve relatively to each other and to the series of bundles of wire m, as herein specified. 2nd. The pins D and bushings A₂, in the reel A, arranged to serve relatively to the bundles of wire and to the stand G (G₁), as herein set forth.

No. 18,322. Shooting and Army Gun.

(Fusil de Chasse et de Muniti n)

François X. Lefebvre (Assignee of Joseph Duval), Laprairie, Que., 18th December, 1883; 5 years.

Reclame.—1o. Dans un fusil de chasse et de guerre combiné, l'excentrique U en combinaison avec la cavité U₁, la clef double U₂, le ressort U₃, le pivot U₄ et le levier U₅, le tout tel que ci-dessous décrit et pour les fins sus-mentionnées. 2o. Dans un fusil de chasse et de guerre combiné, la clef de sûreté S₁, en combinaison avec la détente P P₁ P₂ et la sous-garde T, le tout tel que plus haut décrit et pour les fins sus-mentionnées. 3o. Dans un fusil de chasse et de guerre combiné, le ressort N, en combinaison avec le frappeur I I₁ I₂ et le bâti W, le tout tel que ci-dessus décrit et pour les fins sus-mentionnées. 4o. Dans un fusil de chasse et de guerre combiné, la détente P avec les projections P₁, P₂, en combinaison avec le pivot R et le frappeur I I₁ I₂, le tout tel que ci-dessus décrit et pour les fins sus-mentionnées. 5o. Dans un fusil de chasse et de guerre combiné, la coulisse G, avec la cavité l, en combinaison avec le levier J et le frappeur I I₁ I₂, le tout tel que ci-dessus décrit et pour les fins sus-mentionnées. 6o. Dans un fusil de chasse et de guerre combiné, le ressort à détente Q, en combinaison avec la vis Q₁, la détente P P₁ P₂ et le frappeur I I₁ I₂, le tout tel que ci-dessus décrit et pour les fins sus-mentionnées. 7o. Dans un fusil de chasse et de guerre combiné, la combinaison de l'excentrique U, de la clef de sûreté S₁, du ressort N, la détente P, de la coulisse G, et du ressort Q, avec le bâti W, le levier J, le frappeur I I₁ I₂, le tire-cartouche T₁ T₂, la boîte B et le canon D, le tout tel que plus haut décrit et pour les fins sus-mentionnées.

No. 18,323. Machine for Cutting Off and Bending Wire to form Staples.

(Machine à couper et plier le fil de fer pour former les Crampes.)

Thomas S. Baylis, Toronto, Ont., 18th December, 1883; 5 years.

Claim.—1st. A revolving drum having, fixed on its periphery, one or more pairs of projecting fingers or formers K, in combination with a finger G situated as described, so that the formers K, in revolving will pass on either side of the finger G, thereby bending the wire over the said finger, substantially as and for the purpose specified. 2nd. In a staple machine, a revolving drum C having forming fingers K and cutting-off knives A arranged on its periphery, as specified and operating in connection with the finger G and knife K₁, for the purpose of cutting off and forming the staples from the wire F led in by the rollers D, substantially as and for the purpose specified. 3rd. In a staple machine having feed rollers, tuned to feed the wire into the cutting-off and bending mechanism at a regular speed, a groove f for guiding the wire, and a shouldered-fixed knife K₁, in combination with the revolving drum C having fingers K and knives K, substantially as and for the purpose specified.

No. 18,324. Car Truck. (Train de Char.)

Joseph Huson and William Willis, Jr., Rochester, N. Y., U. S., 18th December, 1883; 5 years.

Claim.—1st. In a car truck, the frame composed of the bars A, B, having the parallel longitudinal bars E, E₁, in combination with the downwardly projecting brackets, or hangers G, G vertically slotted, and the inner hangers N, having at the lower ends the circular apertures N₁, substantially as and for the purpose shown. 2nd. In car trucks, the hangers N, having the circular apertures N₁ at the lower ends, in combination with the sleeve or tubular arm O, connecting the said lower ends at the hangers, provided centrally with the bearing-brasses P and with the axle T, substantially as shown. 3rd. In car-trucks, the frame and hangers, as described, having the slots or guides ways J and the tubular arm or sleeve O, provided with bearing-brasses P, in combination with the anti-friction wheel L, the axle I carrying the flange-wheel V and the axle-bearing W, substantially as and for the purpose shown.

No. 18,325. Grain-Binding Harvester.

(Moissonneuse-lieuse.)

John F. Seiberling, Akron, Ohio, U. S., 18th December, 1883; 5 years.

Claim.—1st. The combination, in a grain-binding harvester, of the main supporting and driving-wheel, the driver's seat located on the axle, on the outer side of said wheel, a dumping bundle-carrier supported upon said axle, in rear of the driver's seat, a cutting apparatus located centrally of the driving-wheel, on the opposite side from the driver's seat, and a binding mechanism located on the platform side of said wheel, substantially as and for the purpose described. 2nd. The combination of the driver's seat with the thimble-support on the outer end of the main axle, the supporting brace having a sliding connection, with the tongue of the machine and the foot-rest on said brace, substantially as described. 3rd. The gear support A provided with the main drive-wheel axle, projecting from its side near one end, and a sleeve-bearing for the secondary shaft, projecting on the opposite side near the other end, in combination with the harvester frame-bar D provided with the sleeve D₁ and hook-bracket D₂, arranged and operating substantially as described. 4th. The combination of shaft gear support A provided with the drive-wheel axle A₁ and pinion-shaft sleeve A₂, the harvester frame-bar D provided with the sleeve D₁ and hook-bracket D₂, and the lifting lever mounted on the gear support, as and connected by chain with the hook-bracket D₂, substantially as described. 5th. The rib or flange d on the harvester-frame thimble D₁, in combination with the hook d on the gear support A, for keeping said thimble in place, substantially as described. 6th. The combination of the crank-shaft I, the spur-pinion C₂, the shaft J and the spur-wheel J₁, and sliding pinion J₂ thereon, for transmitting motion from the harvester to the binding mechanism, substantially as described.

No. 18,326. Car-Coupling. (Accouplage de Chare.)

Jay L. Williams, Lone Tree, Iowa, U. S., 19th December, 1883; 5 years.

Claim.—1st. The draw-head A, having a flaring mouth of a width somewhat in excess of the breadth of the link and of a greater height, and terminating in a long throat having the width of the link and provided with a spiral spring E, the lug B, to abut against the end of the car, a supplemental pin G passing through a suitable perforation in the throat, and holding the full sectioned end of the link F therein, the coupling pin H, having a shoulder h and passing through perforations in the mouth of the draw-head, one of the said perforations having a facing I above, and notches i, i₁ within, to engage the shoulder h and retain the pin in an elevated position, the link F having a full sectioned end, and the forward or projecting end bevelled to an edge and running out to a point. 2nd. A draw-head having a flaring mouth C, terminating in a long throat d, of a sufficient width to receive the link, and perforated to receive the pin G, the upper external part of the mouth provided with a facing I, perforated to receive the coupling pin H, and having the notches i, i₁. 3rd. A coupling-pin H, of angular or other section, which will prevent the same turning in its seat, having its lower end formed with an edge and running out to a point, the other end of square, circular or other full cross section, all substantially as described and for the purpose set forth.

No. 18,327. Machine for Manufacturing and Sawing Laths. (Machine à fabriquer et scier la latte.)

Arthur Carrier, Bay City, Mich., U. S., 19th December, 1883; 5 years.

Claim.—1st. In a circular sawing machine having the solid press roller frame E located over the saws, and provided with the press roller P suitably attached to the front end thereof, the back end being rigidly attached to the shaft F, which is located back of the saws, the combination of the press roller frame E and press roller P, and shaft F, with the clips p, substantially as shown and for the purpose specified. 2nd. In a lath sawing machine, a shield or guard consisting of the press roller frame E, constructed of one solid piece placed over the saws and at an angle inclined forward, and having suitably attached to its front end and under side, and in front of the saws, the press roller P, the rear end of the frame being rigidly attached by the clips p to the shaft F, which is located back of, and above the saws, all combined to operate substantially as and for the purpose specified. 3rd. The combination of a circular sawing machine with the foot L, being placed in the rear of the saw and consisting of the back portion of the portion of which is slightly turned up, and provided with the slot I, turned up at right angles with the foot, and secured to the foot by the bolt W, and secured to the cross piece H by the bolt V, the cross piece H being provided with the slots c and secured to the standard G by the bolt d, all constructed substantially as and for the purpose specified. 4th. The combination of a lath sawing machine with a spreader, consisting of a plate R provided with the slots S and T, the spreader plates L between which are placed the dividing pieces o, all outside pieces C, and held together by the bolt d, and held to the plate R by the bolts C.

which are attached to the outside pieces *o*, substantially as described and shown. 5th. In a circular sewing machine, a table *m* located above and covering the entire machinery, and supported by the legs *n* and *u*, which are secured to the under side of the table *m*, as described, the lower end of the legs *n* resting on the bed *B*, and the back legs *u* being screwed to the bed *B* by the hinges *r*, all in combination and operating substantially as shown and for the purpose specified.

No. 18,328. Composition of Matters for Rheumatism. (*Composition de Matières pour le Rhumatisme.*)

Elie Racicot, Quebec, Que., 19th December, 1883; 5 years.
Réclame.—Un remède composé de poivre rouge, poivre blanc, camphre, clous moulus, muscade, cannelle, huile de kagiput et de frêne-biquant, le tout mélangé avec l'alcool dans les proportions et pour les fins décrites.

No. 18,329. Composition of Matters for Purifying and Strengthening the Blood. (*Composition de matières pour purifier et renforcer le sang*)

Elie Racicot, Quebec, Que., 19th December, 1883; 5 years.
Réclame.—Un remède composé de carbonate de fer, réglisse en poudre, jalape également en poudre, le tout mélangé dans du vin dans les proportions et pour les fins décrites.

No. 18,330. Composition of Matters for Cough, Cold, Bronchitis and Dyspepsia. (*Composition de matières pour la Toux, le Rhume, les Bronchites et la Dyspepsie.*)

Elie Racicot, Quebec, Que., 19th December, 1883; 5 years.
Réclame.—Un remède composé de mélasse, d'eau, de gomme de sapin, de gomme de pin et d'huile de cannelle, dans les proportions et pour les fins décrites.

No. 18,331. Button. (*Bouton*)

Nelson C. Newell, Springfield, Mass., U. S., 19th December, 1883; 5 years.
Claim.—1st. The within-described improved button, consisting of the shell *a* made from elastic material, substantially as described, and having a cup-shaped face, the face piece *b* made from pearl or other similar material, substantially as described, and the metallic eyelets *c* inserted through the face-piece into the shell, substantially as set forth. 2nd. A button consisting of a back *a* having a face-piece *b* of pearl or analogous material, substantially as described, secured to its face by the two eyelets *c*, inserted through the face-piece into the back, which also serve to form passages through which thread is carried, which secures the button to a fabric, substantially as set forth.

No. 18,332. Rail Stringer. (*Ceinture de Rails.*)

Henry Holgate, Toronto, and Robert Bagnall, Hamilton, Ont., 19th December, 1883; 5 years.
Claim.—1st. As an improved rail stringer, two I-rails *A* laid on their bases side by side, the inner edges of their bases touching each other, or nearly so, a similarly-shaped centre rail *B* inverted and slipped between the two rails *A*, the flanges of its base resting on the heads of the side rails, and the bottom of its base presenting a level support for the running rail *C*, in combination with clips arranged to combine the rails together, substantially as and for the purpose specified. 2nd. The rails *A* and *B* arranged, as described so as to form a support for the running rail *C*, the clip plates *D* and bolts *E* arranged to combine the rails together, in combination with packing pieces *F* inserted between the rails *A* and *B*, and between the rails *A* and clip-plates *D*, substantially as and for the purpose specified. 3rd. In combination with a rail-stringer composed of the rails *A* and *B*, arranged and combined together, as described, a plate *H* placed on the timber *G* and held there by spikes driven into the timbers, through the holes in the plate and notches cut in the outer edges of the flanges of the rails *A*, substantially as and for the purpose specified.

No. 18,333. Sewing Machine. (*Machine à coudre.*)

Charles A. Dearborn, Walter W. Winton and Hiram J. Snyder, New York, N. Y. U. S., 19th December, 1883; 5 years.
Claim.—1st. In a sewing machine, the combination, with a rotary driving shaft *f*, a needle operating lever *d* and shuttle operating lever *e*, and an eccentric, or its equivalent, on the driving shaft connected with the needle lever, or the elbow lever *n* having one arm linked with the eccentric strap, and the opposite arm coupled with the shuttle lever, substantially as and for the purpose set forth. 2nd. In a sewing machine, the combination, with the needle lever *d*, shuttle lever *e*, driving shaft *f* and eccentric *k*, of the strap *l* and pitman *u*, and link *p* connecting the eccentric with the needle lever, and the elbow lever arranged and operating substantially as and for the purpose set forth. 3rd. In a sewing machine, the combination, with a driving shaft having a fast and loose pulley, of a pivoted or swinging bobbin winder from one pulley to the other, and operatively connected with the bobbin winder, whereby the depression of the bobbin winder will bring the bobbin winder into contact with the loose pulley and simultaneously shift the belt thereon, whereas the opposite movement of the bobbin winder will withdraw its roller from the loose pulley and shift for the purpose set forth. 4th. In a sewing machine, the combination, with a fast and loose pulley, a shifting belt and a shifting bobbin winder, of the belt shifting lever *v* engaging the belt at one end and operatively connected with the bobbin winder at the other end,

and arranged to automatically shift the belt by the movement of the bobbin winder, substantially as and for the purpose shown and described. 5th. The combination, in a sewing machine, with fast and loose pulleys, a shifting belt and a pivoted bobbin winder, of the belt shifting lever *v* and a spring *y* arranged to constantly press one arm of the shifting lever against one arm of the bobbin winder, the said contacting arms being so disposed that, when the bobbin winder is raised out of action, said arms are placed at right angles or nearly so, whereas, when the winder is depressed into position for action, said arms are paralleled or nearly so, whereby the spring impelled lever *v* tends to hold the winder in either position in which it may be placed, and tends to hold the winding roller against the loose pulley when so placed, substantially as shown and described. 6th. The combination, with the pivoted bobbin winder *r*, the fast and loose pulleys *u*, i. belt shifter *v* and its spring *y*, arranged and operating, substantially as and for the purpose set forth. 7th. A sewing machine presser foot formed with the semi-tubular shank *f*₁, convex on the outer side of the foot and perforated with the key hole slot *k*₁, substantially as and for the purpose set forth.

No. 18,334. Gauge Cock. (*Indicateur d'eau.*)

Louis B. Fulton, Pittsburgh, Penn., U. S., 19th December, 1883; 5 years.
Claim.—1st. In a gauge-cock having a valve seating against the pressure and capable of rotation, the combination, with said valve, of a rotative device located at a point forward of the valve and seat, substantially as described. 2nd. In a gauge-cock having a valve seating against the pressure, the combination, with said valve and its seat, of an enlarged cylindrical chamber in front of said valve and seat and a device, on the valve or its stem, located in front of said valve and seat and in said chamber, and adapted to rotate said valve by the projectile force of escaping steam of water, substantially as described. 3rd. In a gauge-cock having a valve seating against the pressure and means of rotation therefor, under the projectile force of steam or water, the combination therewith of guiding and centering devices located in front, or forward of said valve and inside the cock, substantially as described. 4th. A gauge-cock provided with two valves and a corresponding number of valve seats, both said valves being on a single stem, one valve arranged to close positively and the other to close by the boiler pressure, substantially as described. 5th. In a gauge-cock, the combination of the sections *A*, *B* having the respective valve seats *b*, *c*, chamber *a* and outlet *d*, *e*, with loose reciprocating or sliding stem *g* having the valves *i* and *k*, the former arranged to close positively and open by the boiler-pressure, and the latter arranged to open positively and close by the boiler-pressure, substantially as described. 6th. In a gauge-cock, the combination of the rotating valve stem *g*, nipple *p* having recess *s*, and hard metal plate *r*, substantially as described. 6th. In a gauge-cock, the combination, with a valve seating against the pressure, of a chamber in front of said valve, larger in diameter than the valve seat, and guiding device on the valve fitting said chamber and serving to guide the said valve to its seat, substantially as described.

No. 18,335. Galley Type Lock. (*Serre-forme d'imprimerie.*)

Samuel D. Webb, Washington, D. C., U. S., 19th December, 1883; 5 years.
Claim.—1st. A galley type lock consisting of the combination of two strings of preferred dimensions, curved to the arc of a circle, rivetted together at their central convex surfaces working in the same plane, and two sliding clasps, all arranged substantially in the manner and for the purposes set forth. 2nd. A galley type lock consisting of the combination of two strings of preferred dimensions, curved to the arc of a circle, rivetted together at the central convex surfaces working in the same plane, and having the edges suitably notched, plane convex tips on the ends of said springs and two sliding clasps, all arranged substantially in the manner and for the purposes set forth. 3rd. In a galley type lock, the combination of the curved springs firmly connected and working in the same plane, having longitudinal slots and indentations on the outer sides of the springs, at right angles to, and along the sides of said slots, and two sliding bolts working in said slots, substantially as set forth.

No. 18,336. Lock Winch. (*Grue de porte d'écluse.*)

James A. Gordon, Sherbrooke, Que., 19th December, 1883; 5 years.
Claim.—1st. In a lock gate winch, the counter-weights *X* on each side of the valve rod *Y*, as described and for the purpose set forth. 2nd. In a lock gate winch, the gear wheels *C* and *D*, spur-wheels *E*, *F* and *J*, ratchet *D*, pawl *L*, rods *M*, rack *G* having lugs *V* and eye *H* pivoted to foot board *B* by lugs *N*, in combination with sheaves *I*, wire-ropes *U* and counter-weights *X*, as shown and described, and for the purposes set forth.

No. 18,337. Window Shade. (*hideo de fenêtre.*)

Andrew Barrickle, Jersey, N. J., U. S., 19th December, 1883; 5 years.
Claim.—A window shade composed wholly or in part of translucent material, said translucent material having similar designs on both sides, lithographed or otherwise, formed directly upon the surface of the translucent material itself, such design, when so lithographed or otherwise formed directly upon both sides of the shade, corresponding or registering, substantially as shown and described.

No. 18,338. Telegraph and Telephone Cable. (*Câble de télégraphe et de téléphone.*)

Josephus C. Chambers, Cincinnati, Ohio, Nelson C. Girdley, Chicago, Ill., and Preston Brady, Detroit, Mich., U. S., 19th December, 1883; 5 years.
Claim.—1st. In a telegraph or telephone cable, one or more induction wires, rods, bands or strips insulated from the electrical conductors, and from the earth, and having the terminal ends thereof extended beyond the ends of the cable proper, and upturned and provided with one or more points, substantially as and for the purpose

specified. 2nd. The combination, with a series or groups of telegraph or telephone electrical conductors severally, having coverings of insulating material, of one or more induction wires, rods, bands or strips arranged in electrical proximity to the telegraph or telephone electrical conductors, and insulated therefrom and from the earth and having disconnected terminal ends so as not to form a closed circuit, substantially as and for the purpose specified. 3rd. The combination, with a series or groups of telegraph or telephone electrical conductors severally, having coverings of insulating material, of one or more induction wires, rods, bands or strips arranged in electrical proximity to the telegraph or telephone electrical conductors and insulated therefrom, and a surrounding covering of insulating and water-proof fabric or material, substantially as and for the purpose specified. 4th. The combination, with a series or groups of telegraph or telephone electrical conductors severally, having coverings of insulating material, of one or more inductions wires, rods, bands or strips, arranged in electrical proximity to the telegraph or telephone electrical conductors, and insulated therefrom and from the earth, and having its terminal ends upturned and provided with one or more points, substantially as and for the purpose specified. 5th. The combination, with a series or groups of telegraph or telephone electrical conductors severally, having coverings of insulating material, of one or more induction wires, rods, bands or strips arranged in electrical proximity to the telegraph or telephone electrical conductors, and insulated therefrom and from the earth, and having attached thereto between its terminal ends, and so as to project therefrom, one or more similar wires, rods, bands or strips D, provided with one or more points e, substantially as and for the purpose specified.

No. 18,339. Ballast Car. (*Char à gravier.*)

Thomas P. Cordrey, Massillon, Ohio, U. S., 20th December, 1883; 5 years.

Claim.—1st. In a ballast-car, the combination of the bottom frame thereof and a series of transverse rods D secured thereto, with a horizontally movable plate B having bearing wheels resting upon said rods, and mechanism for moving said plate sidewise from either end of the car, substantially as and for the purpose described. 2nd. The combination of the frame of a car carrying a hopper-receiver, and a series of transverse rods D pendient therefrom, a horizontally movable plate B, and its bearing wheels P, with rod E extending longitudinally of the car, guide pulleys K, chains F and F₁, wound upon said rod E, in opposite directions, and mechanism for rotating said rod E from the end of the car, substantially as described. 3rd. The combination of the frame of a ballast car, a series of transverse rods D pendient therefrom, the plate P and its bearing wheels with rod E extending longitudinally of a car, chains F and F₁, wound upon said rod E, in opposite directions, and secured in opposite sides of the plate B, pulleys K, sprocket-wheel L, chain L and rod M, substantially as and for the purpose described. 4th. The combination of the frame of a ballast-car having its sides inclined towards the central opening, with the scraper or leveller W having its sides converging and united to form an acute edge over the centre of the track, and its suspension hooks X, whereby said scraper is adapted to swing over the track, substantially as shown and described.

No. 18,340. Gimlet Pointed Screw.

(*Vis à pointe en vrille.*)

Hayward A. Harvey, Orange, N. J., U. S., 20th December, 1883; 15 years.

Claim.—A pointed screw having the spiral rib, which forms the thread raised from the body of the blank, in contradistinction to cutting a spiral groove in the blank, said raised spiral rib continued around the pointed part of the body, and forming a gimlet point, substantially as described.

No. 18,341. Device for Indicating Railway Stations. (*Appareil pour indiquer les stations de railroutes.*)

Andrew McWilliams and William Wallace, Galt, Ont., 20th December, 1883; 5 years.

Claim.—1st. As a station indicator, a band having the names of the stations printed on its surface and connected to two drums, so that it can be wound from one drum to the other, only one name at a time being exposed between the two drums, a spur wheel journaled between the two drums and so geared to them that the revolving of the spur-wheel shall impart a similar movement to the two drums, causing the band to unwind off one as it is wound on the other, in combination with a ratchet-wheel connected to the spur-wheel, and operated by a pivoted arm provided with a ratchet pawl, substantially as and for the purpose specified. 2nd. In a station indicator in which the drums holding the printed band are operated by ratchet gearing, as described, an arm having the ratchet pawl pivoted to it and extending between two stops, which permit it to move only a given distance, in combination with an elastic cord act to actuate the arm, substantially as and for the purpose specified. 3rd. In a station indicator, in which the drums holding the printed band are operated by ratchet gearing, as described, an arm journaled on the spindle of the ratchet-wheel and having a reversible ratchet pawl pivoted on it, and an extension piece fixed to it and having a quadrant shaped slot, in combination with a spring rigidly held at one end of the frame of the machine, and adjustably connected at its other end to the quadrant slot, so that the action of the spring may be altered to suit the reversed position of the pawl. 4th. In a station indicator, in which the drums holding the printed band are caused to revolve by intermittently revolving mechanism, a bell in combination with a pivoted hammer operated by corrugations on a collar fastened to the spindle of the ratchet driving mechanism, substantially as and for the purpose specified. 5th. In a railway train provided with an ordinary bell rope and a station indicator in one or more of the cars, station indicator, and to the bell rope at its other end, the latter car not being such that the bell rope may be pulled from within the engine driver will communicate motion to the station indicator, substantially as and for the purpose specified.

No. 18,342. Brush Boring Machine.

(*Machine à percer les brosses.*)

Richard C. Fellows, (assignee of Martin J. Imbach,) New York, N. Y., U. S., 20th December, 1883; 5 years.

Claim. 1st. The combination, substantially as before set forth, of the swivelling back-holder, the back pattern and the index. 2nd. The combination, substantially as before set forth, of the mandrel, the swivelling back-holder, the back pattern and the index.

No. 18,343. Corset Clap. (*Agrafe de corset.*)

Max W. Henius, New Haven, and Ferdinand S. M. Blau, Waterbury, Ct., U. S., 20th December, 1883; 5 years.

Claim.—1st. The integral corset clasp plate having a main stud eye, for the reception of a corset-stud, and divided at its outer end into two springs, substantially as described, whereby a stud is embraced at its shank between said springs, and is capable of being released at its outer end by slightly twisting said plate, as set forth. 2nd. The integral clasp-plate provided with the main eye and the retaining eye, and divided into two springs at its outer end for grasping or closing upon a stud, when in position for use, at or near the outer end of the corset, substantially as described, thereby preventing said stud from freely re-entering the main eye and becoming disengaged, as set forth. 3rd. The integral clasp-plate divided or slitted at its outer end, and formed two springs, and provided with the main eye, the retaining eye, and the straight-sided slot connecting said eyes, for adapting a stud to be released from the outer end by slightly twisting said plate, substantially as described. 4th. The combination, with a pair of corset steels or busks, of a headed stud and an integral clasp-plate divided into two springs at its outer end, for grasping or closing upon the stud, when in position for use, and provided with a main eye and a retaining eye. 5th. The combination, in a corset-clasp, of the integral clasp-plate divided into two springs at its outer end, with the covering plate B, substantially as described.

No. 18,344. Pitman Coupling for Harvesting Machine. (*Joint de bielle de moissonneuse.*)

Thomas Urie and Richard Goyn, Boulder, Col., U. S., 20th December, 1883; 5 years.

Claim.—The pitman-coupling for harvesting machines consisting of the arms A, A₁, having elbows B and B₁, top plate C and cone-shaped projections F and F₁, in combination with the adjusting-bolt D having a nut E, substantially as and for the purposes shown and specified.

No. 18,345. Car. (*Char.*)

Thomas L. Wilson, Port Hope, and Eugene H. Davis, Toronto, Ont., 24th December, 1883; 5 years.

Claim.—1st. In a car having hoppers constructed in its bottom with a series of transverse joists permanently secured over the top of the hoppers, a plank placed longitudinally in the centre of the car and resting on top of the transverse joists, in combination with doors hinged on either side of the car and arranged, when closed, to form a bottom to the car over the said hoppers, substantially as and for the purpose specified. 2nd. In a car having hoppers constructed in its bottom with a series of transverse joists, permanently secured over the top of the hoppers, and a plank in the centre of the car resting on top of transverse joists, the doors hinged on either side of the car and arranged, when closed, to be flushed with the centre plank, in combination with the shelf pieces, arranged to support the outer edges of the doors and form a joist around the hoppers, as specified.

No. 18,346. Mechanism for Operating Semaphore Signals. (*Mécanisme pour faire fonctionner les signaux sémaphores.*)

Andrew McWilliams and William Wallace, Galt, Ont., 24th December, 1883; 5 years.

Claim.—1st. A semaphore arm fixed to a spindle suitably journaled and having a spur-wheel keyed or otherwise fastened to it, a rod provided with a rack to mesh with the spur wheel and connected to an arm of a pivoted bell-crank, in combination with a cable fixed to the other arm of the bell-crank and extending on either side of it to the wheels of a passing train actuate the cable, so as to impart a vertical adjustment to the rack-rod and, through it, operate the semaphore, substantially as and for the purpose specified. 2nd. A revolving semaphore lamp having its lenses of one colour, and below the plane of its lens of a contrasting colour, in combination with a fixed blind so situated that, when the lamp is revolved, the lenses will hide from view the lenses of one colour, while exposing the lenses of the other, substantially as and for the purpose specified. 3rd. A semaphore arm fixed to a spindle suitably journaled and having a bevelled pinion keyed to it, to mesh with a bevelled pinion on the spindle of a revolving lamp, a spur-wheel fastened to the semaphore spindle and meshing with a rack on a vertically adjustable rod connected to one arm of a pivoted bell crank, in combination with either side fixed to the other arm of the bell crank and extending on either side of it to points on the railroad track, where mechanism is provided by which the wheels of a passing train actuate the cable, so as to impart a vertical adjustment to the rack rod and, through it, operate the semaphore and lamp, substantially as and for the purpose specified. 4th. A vertically adjustable rod connected to one arm of a pivoted bell crank, a cable attached to the other arm of the bell crank and extending on either side of it to points on the railroad track, where mechanism is provided by which the wheels of a passing train actuate the cable, so as to impart a vertical adjustment to the rack-rod formed upon or attached to the rod, in combination with a pivoted bell hammer, one end of which is forked and fits into the rack, while its other end strikes a bell as the hammer is rocked on its pivot through the vertical adjustment of the rod. 5th. A cable I carried on

pullies J, located below the track K and fixed to a spindle N, having attached to it the segment O having ratchet teeth cut on it, an arm P journaled on the spindle and having pivoted on it, the dogs Q, in combination with the pivoted bar R, one end of which fits into the slot, i in arm P, while its upper end extends up in proximity to the rail K and, when in a vertical position, will be slightly above the rail, substantially as and for the purpose specified. 6th. The pivoted arm R carrying the dogs Q, in combination with the dogs S, pivoted on either side of the arm R and arranged, as specified, to tilt the arm, substantially as and for the purpose specified.

No. 18,347. Nail Extractor. (*Arrache-clou.*)

George W. Lewis and A. P. Grice, Portsmouth, Va., U. S., 24th December, 1883; 5 years.

Claim.—1st. A nail and spike extractor made, substantially as herein shown and described, and consisting of a lever having its lower end forked and provided with angular arms at the ends of the fork shanks, to the ends of which arms a bit or jaw is pivoted, having a transverse pintle passing into longitudinal slots in the shanks of the forks, as set forth. 2nd. In a nail and spike extractor, the combination, with the lever A having its lower end forked, and provided with angular arms B, at the ends of the fork shanks, of the jaw C, pivoted to the ends of the jaw B, and having a bearing block G at its lower end, and of the jaw D, having its upper end pivoted to the upper end of the jaw C, and of the pintle E passing through the jaw D and into longitudinal slots F, in the shanks of the forks, substantially as herein shown and described and for the purpose set forth.

No. 18,348. Saw Filing Machine.

(*Machîne à limer les scies.*)

David Chambers and Sturgis S. Cushman, Hull, Que., 24th December 1883; 5 years.

Claim.—1st. The combination, with the bed-plate A, of the frame B, yoked boxes G, G, screw post I, shaft K, dial plate O, file-holder carrier S and file-holder T, as and for the purpose set forth. 2nd. The combination, with the bed-plate A and a reciprocating file-holder L, as set forth. 3rd. The combination of the bed-plate A, horizontally adjustable frame D and vertically adjustable shaft K, as set forth. 4th. The combination, with the bed-plate A, of the frame D carrying shaft K, file-holder carrier S and file-holder T, as set forth.

No. 18,349. Railway Car. (*Char de railroute.*)

Thomas L. Wilson, Port Hope, and Samuel Davis, Montreal, Que., 24th December, 1883; 5 years.

Claim.—1st. In a railroad car provided with trucks, the combination of two or more brackets rigidly fastened to the bottom of the car, and extending below the bottom of the transom, or other truck timber, in such a position as will prevent the truck slewing or the car from jumping off the track. 2nd. In a railroad car provided with trucks, a boiler-plate sheet having brackets rigidly bolted to its surface, the upper arms of the said brackets being set at right angles to the sheet and bolted to the longitudinal timbers of the car, in combination with two or more, bars rigidly fastened to the same boiler-plate sheet, at or near either end thereof, and having their lower ends which project below the sheet, bent at right angles and arranged to fit below the truck transom or timbers, substantially as and for the purpose specified. 3rd. In a railroad car provided with trucks, the combination of brackets rigidly fastened to the truck side timbers in such a position that they will come in contact with the body bolster of the car, should the truck slew more than is necessary to allow it to follow the curves in the track. 4th. In a railroad car provided with trucks, two or more brackets rigidly fastened to the bottom of the car, and formed so as to fit below the transom or other truck timber, in combination with brackets rigidly fastened to the top of the truck side timbers, the whole being arranged substantially as and for the purpose specified.

No. 18,350. Creamer. (*Boite à lait.*)

George J. Ainsworth, Madrid, N. Y., U. S., 24th December, 1883; 5 years.

Claim.—The combination of the cooling tank A and a set of milk pans C, one pan having an observing glass E to be viewed through a watertight opening in the tank, and all the pans provided with an outlet pipe furnished with a stop-cock G, and having connection with a hose-neck I, adjustable to draw off the milk to a level corresponding to the depth of cream in the pans, and depressible to consequently draw off the cream, as set forth.

No. 18,351. Improvements in Hammocks and Cots. (*Perfectionnements aux hamacs et lits de camp.*)

John C. Dodge, Boston, Mass., U. S., 24th December, 1883; 5 years.

Claim.—1st. The combination of ropes e, notched slats A, A1, 2, spreaders C and suspension cords or bridles F, substantially as described. 2nd. The combination of ropes e, notched slats A, A1, A2, spreaders C1, bridles F2 and side lines f, substantially as described. 3rd. The combination of ropes e, notched slats A, A1, A2, spreaders C, C1, bridles F, F2 and side lines f, substantially as described.

No. 18,352. Churn Working Mechanism.

(*Mécanisme faisant fonctionner les barattes.*)

Elie Bertrand, Kingsville, Ont., 24th December, 1883; 5 years.

Claim.—In a churning machine, the combination of the churn B and dasher-rod a, with a machine frame having the guide bar b and gears c, e and H, bridge pieces C and G, spur pinion D, balance wheel E, having the crank pin f, the set collar g, spur wheel F, connecting rod I, crank shaft j, bridge piece G and hand crank I, all substantially as described and for the purpose set forth.

No. 18,353. Process and Apparatus for Evaporating Liquids. (*Procédé et appareil d'évaporation des liquides.*)

Jean A. Mathien, Port Leyden, N. Y., U. S., 24th December 1883; 5 years.

Claim.—1st. The kettle A, pipe B having a rose thereon, steam pipe S and exhaust pipe C, substantially as shown and described. 2nd. The combination of a tank E having steam pipe G, pipe F, metallic vessel M and door N, and exhaust pipe W, all constructed and arranged and operating substantially as herein shown and described. 3rd. The herein described process of separating solid matters from any fluid holding the same in solution, consisting in subjecting the same in a heated and finely divided state to the action of a partial or entire vacuum.

No. 18,354. Steam Injector. (*Injecteur de vapeur.*)

Louis Schutte, Philadelphia, Pa., U. S., 24th December 1883; 5 years.

Claim.—1st. In a jet apparatus for the forcing of liquids or fluids, an overflow-valve, substantially as described, arranged to be acted upon on one side by the pressure of the discharge, and on the other side by the pressure of the steam or fluid by which the apparatus is operated, whereby an excessive counter pressure or resistance causes the automatic opening of the overflow valve. 2nd. In a steam jet apparatus, substantially such as shown, an overflow-valve communicating with the discharge end and subject to the pressure of the out-going fluid, combined with a closing piston having an area greater than that of the valve, and a conductor or passage, whereby the pressure of the steam or actuating fluid is applied to hold the overflow normally in a closed position. 3rd. In a steam jet apparatus for moving fluids, a main-valve for admitting the actuating steam to the apparatus, an overflow and starting valve at the delivery end, a piston to close the overflow valve, and a valve connected and arranged to admit steam behind the piston after the opening of the main-valve, substantially as described, whereby the overflow valve is relieved from the closing pressure and permitted to remain open until after the apparatus has been set in motion. 4th. In a jet apparatus for moving fluids, the combination of the overflow-valve, the piston to close the same, the passages F, Q and the valve O acting in connection with said passages and with the steam supply. 5th. In a steam apparatus, an overflow relief valve constructed and arranged, substantially as described, to receive upon its outer side a fluid pressure, in excess of the normal pressure of the fluid discharge by the apparatus. 6th. In a jet apparatus of the character herein represented, the combination of the valve G, piston H, spring K, passages M, P, Q and valve O.

No. 18,355. Sulky Plough. (*Charrue à siège.*)

Orville A. Stoneman and Lawrence Garrity, Minneapolis, Minn., U. S., 24 December 1883; 5 years.

Claim.—1st. Il a sulky plough, an axle and axle frame formed of sections of tubes, and with means for supporting the beam of the plough laterally within said axle frame, substantially as set forth. 2nd. In a sulky plough, an axle and axle frame formed of sections of tubing, in combination with clamps H, H2, adapted to be adjusted and to support the beam of the plough laterally, substantially as specified. 3rd. In a sulky plough, an axle and an axle frame, and means for supporting the beam of the plough laterally within said axle frame, in combination with brace rods M1, M2, connecting the forward end of said beam with said axle, and means for lengthening and shortening said rods, substantially as and for the purpose specified. 4th. In a sulky plough, an axle, an axle frame and means for supporting the beam of the plough laterally within said axle frame, in combination with clamps N1, N2, brace rods M1, M2, provided with screw swivels M3, M4, clamps K1, K2, plough and beam P1, substantially as and for the purpose set forth. 5th. In a sulky plough, an axle, an axle frame and means for supporting the plough beam laterally within said axle frame, in combination with adjustable brace rods M1, M2, connecting the forward end of said plough beam with said axle, and means for elevating and depressing the forward end of said plough beam, substantially as and for the purpose specified. 6th. In a sulky plough, the combination, with an axle frame of a tongue supporting sleeve R1, of a greater width on its interior than said tongue, as and for the purpose set forth.

No 18,356. Car-Coupling. (*Accouplage des chars.*)

John G. Peace, Eben B. Sankey, Salem, Carter Tracy, A. de Witt Rouse & Henry S. Bennett, Springfield, Mo. U. S., 24th December 1883; 5 years.

Claim.—1st. In a car-coupling, the combination of sliding block E with projection E2, draw-bar B with groove F, and projection B1, pin G, secured out of its centre of gravity, lever H to which the pin is secured, pivoted to the draw-head and having counter-balance H1, and lifting crank J1 or rod J, all substantially as shown and described. 2nd. In a car-coupling, the lock-bar or yoke K, for holding the lever H down, adapted to be raised by the crank J1, as set forth.

No. 18,357. Metallic Plastering Surface.

(*Surface métallique pour crépir.*)

James Stanley, New York, N. Y., U. S., 24th December 1883; 5 years.

Claim.—1st. A metallic plastering surface consisting of the wire cloth B corrugated or ribbed, substantially as and for the purposes described. 2nd. The wire cloth B ribbed or corrugated, as shown at a, and attached to the joists or studding A by staples b, or other fastenings, the ribs a being arranged transverse to the joists or studding, substantially as described.

No. 18,358. Thill Cultivator.

(*Cultivateur à limoniers.*)

David L. Barnum, Wilson, N. Y., U. S., 24th December 1883; 5 years.

Claim.—1st. In a thill-cultivator, the combination of the side

pieces A, cross-pieces A¹, A₂, A₄, adjustable thill B, rearward projecting piece A₃, adjustable plough standards F, F, stationary plough standard F and bolts *d*, *d*, all constructed and combined as and for the purpose described.

No. 18,359. Railway Frog. (*Rail de croisement*.)

William J. Morden, Chicago, Ill., U.S., 24th December 1883; 15 years.

Claim.—1st. A railway frog point or piece C, provided with wings or flanges *a*, *a*, all in one piece, substantially as shown and described. 2nd. In a railway frog, a centre piece or point C, provided with wings or flanges *a* and connecting pieces *b* and *b*, all in one piece, substantially as described and shown. 3rd. In a railway frog, a centre piece or point C, provided with wings *a*, *a*, having connecting pieces *h*, *h*, all cast or made in one piece, in combination with, and secured to the wing-rails, substantially as shown and described. 4th. In a railway frog, the combination, with the wing rails A, A and point rails B, B, of the centre piece or point C, having shank C₁ and trough-shaped wings or flanges *a*, *a*, substantially as shown and described.

No. 18,360. Wrench. (*Clé à cerou*)

George G. Hadley and George P. Merrill, Toledo, Ohio, U. S., 24th December 1883; 5 years.

Claim.—1st. The combination, in a monkey wrench, of a ferrule cylindrical sliding shank carrying the lower movable jaw, spring pawls and stationary shank, carrying the fixed jaw and having serrations at each side, substantially as set forth. 2nd. In a wrench, a cylindrical shank carrying the movable jaw, combined with the ferrule adapted to guide the cylindrical shank, substantially as set forth.

No. 18,361. Breakwater. (*Brise-lame*.)

Edward C. G. Thomas, London, Eng., 26th December, 1883; 5 years.

Claim.—1st. The combination and use of a sloping body or air chamber *x* with the buoy A, substantially as hereinbefore described and shown by figures 2 and 3, sheet 2, on the accompanying drawings. 2nd. The combination of the buoys A₁, A₁ with each other and with an air chamber E, substantially as hereinbefore described and shown by figures 4 and 5, sheet 3, in the accompanying drawings. 3rd. The combination and use, with my improved buoys, of anchors F, substantially as hereinbefore described and shown by figure 2, sheet 2, on the accompanying drawings.

No. 18,362. Machine for Sawing Hoops. (*Machine à scier les cercles*.)

William Bowker, Somerville, Mass., U. S., 26th December, 1883; 5 years.

Claim.—1st. In a hoop-sawing machine, one or more knot cutters and their enclosing vibrating mouth pieces, in combination with one or more saws, the whole being arranged as set forth. 2nd. The two vibrating arms F, F, provided with cutter arbors, and the knot cutters and their enclosing vibratory mouth pieces adapted to the arbors, in combination with means, such as described, for moving the arms in opposite ways, as set forth.

No. 18,363. Car Brake. (*Frein de char*.)

Charles V. Rote, John W. Holman, Robert M. Agnew, Lancaster, Henry Hice, Beaver, Penn., and Michael D. Harter, Mansfield, Ohio, U.S., 26th December, 1883; 15 years.

Claim.—1st. The combination, with the sliding draw-bar, of an adjustable block or dog connected to, and moving with said draw-bar, and adapted at its inner end to act on a brake-lever, one end of which is projected within the path of said block or dog, whereby said block or dog can be adjusted to actuate said lever, or moved aside to permit its inner end to pass the brake-lever without actuating it. 2nd. The combination, with the brake-lever, of a dog or block pivoted at its outer end to the sliding draw-bar, and adapted at its inner swinging end, when properly adjusted, to vibrate said brake-lever for actuating the brakes, substantially as described. 3rd. The combination, with the sliding draw-bar, of the pivoted block or dog, the brake-lever projected within the path of dog or block, and the cam-lever, by the adjustment of which the said dog can be set to act on the brake-lever, or be allowed to swing aside without actuating it, substantially as described. 4th. The brake-lever, in combination with the sliding draw-bar, and the dog or block pivoted thereto for actuating said brake-lever, and a fixed stop for preventing displacement of the brake-lever, and holding its inner end in position to be acted upon by said pivoted block or dog, substantially as described. 5th. The combination of the sliding draw-bar, an adjustable block or dog secured to, and moving with said draw-bar, a brake-lever, one arm of which is projected within the path of said block or dog, a cam-lever, for adjusting said block or dog, whereby it can be set for causing the block or dog to act on the brake lever, or to allow the block or dog to move aside without actuating said brake-lever, substantially as described. 6th. The brake-lever E, actuated by the adjustable block or dog on the sliding-bar, in combination with the spring *e*₂, interposed between said brake-lever and the brakes, substantially as and for the purposes described.

No. 18,364. Automatic Car Brake. (*Frein de char automatique*.)

Charles V. Rote, John W. Holman, Robert M. Agnew, Lancaster, and Henry Hice, Beaver, Penn., U.S., 26th December, 1883; 15 years.

Claim.—1st. The combination, with the sliding draw-bar, of the brake-lever, the dog or block adjustable on said draw-bar, for actuating the brake-lever, a cam-lever for adjusting said dog or block and a gravity-stop for automatically locking said cam-lever, substantially as described. 2nd. The combination, with the sliding draw-bar, of the brake-lever, the dog or block adjustable on the draw-bar, for

actuating or relieving said brake-lever, a cam-lever for adjusting or relieving said dog or block, a gravity-stop for locking said cam lever and mechanism, substantially as described, for automatically lifting said gravity-stop and releasing the cam-lever. 3rd. The combination of the movable draw-bar, the adjustable dog or block connected therewith, the brake-lever projecting within the path of said dog or block, a cam-lever for adjusting said dog or block, and mechanism, substantially as described, for automatically locking and releasing said cam-lever controlled by the speed of movement of the car, substantially as described. 4th. A cam-lever for setting and relieving the brake-actuating mechanism, in combination with an automatically-actuated latch for locking and releasing said cam-lever, substantially as described. 5th. The cam-lever, for adjusting the brake-lever, in combination with a gravity-stop for locking said cam-lever, a jointed and weighted lever on the axle, and mechanism interposed between said stop and jointed lever, for adapting the latter to act upon said stop and release the cam-lever, substantially as described. 6th. The combination, with the brake-actuating mechanism, of a gravity-stop for setting said mechanism, levers connected with said stop for raising it and releasing the brake mechanism, levers having pendent semi-annular arms surrounding the axle, and jointed and weighted levers on the axle for actuating said semi-annularly armed levers, arranged and operating substantially as described. 7th. The combination, with the gravity-stop I₂, of the levers I and I₁, semi-annularly armed levers K and K₁, and jointed levers on the axle, for actuating said semi-annularly armed levers, and raising and releasing the gravity-stop, substantially as described. 8th. The levers K and K₁ having curved pendent arms, in combination with jointed levers on the axle disconnected from said levers K and K₁, for actuating the latter and automatically setting and releasing the brake-actuating mechanism, substantially as described. 9th. The combination, with the semi-annularly armed levers K and K₁ and intermediate lever or levers, connecting said levers with the gravity-stop I₂, of jointed levers on the axle for actuating said levers K and K₁, substantially as described. 10th. Jointed levers on the axle, in combination with levers having curved or semi-annular arms provided with relieving points or depressions on the adjacent concave sides for setting and releasing said jointed levers, substantially as described. 11th. In a mechanism for setting and releasing the brake-actuating mechanism, jointed levers on the axle, consisting of a lever arm, a weighted arm and a pivoted latch or dog actuated by the weighted arm, for setting and releasing the lever arm, substantially as and for the purpose described. 12th. The jointed levers on the axle, provided with lever arms having friction rollers for actuating the levers, and with latch or stop for releasing the brake-actuating mechanism, and sliding dogs for locking and releasing said lever arm, the jointed described. 13th. The combination, with the car-axle, of the jointed levers P composed of the lever-arm *p*, weight *p* and dog *p*₂, and the spring *u*, applied and operating substantially as and for the purpose described. 14th. The combination, with the cam-lever for setting and relieving the brake mechanism, of the gravity pin or stop I₂, locking the cam-lever, and the levers I and I₁ for lifting said stop, arranged and operating substantially as described. 15th. The combination, with the pivoted dog on the draw-bar, for actuating said dog brake-lever, of the cam-lever F for adjusting or relieving said dog brake-lever in angular or bell-crank form, with its long arm F₁ extending inward longitudinally of the car, substantially as described. 16th. The cam-lever F, made in the bell-crank or angular form quadrant A, in combination with the transversely-arranged guiding quadrant B, substantially as and for the purpose specified. 17th. The cam-lever F for adjusting or relieving the dog, actuating the brake mechanism, made in angular or bell-crank form, in combination with the cam-lever F₁ for adjusting said lever, substantially as described. 18th. The combination, with the levers I and I₁ and the angular levers K and K₁, for raising the gravity-stop I₂, of the links J and J₁ provided with adjustable loops or eyes, substantially as described.

No. 18,365. Machine for Driving Fence Posts. (*Machine à chasser les pieux de clôture*.)

Henry Dixon and Breckon Dixon, Nottawasaga, Ont., 27th December, 1883; 5 years.

Claim.—1st. In a machine for driving fence posts, a horizontal frame carried on wheels and supporting a triangularly braced vertical frame, in combination with a vertical guiding frame on which the weight slides, the said guiding frame being adjustably connected to the apex of the triangular frame, so that it may be maintained in a perpendicular position, notwithstanding any unevenness of the ground upon which the wheels of the horizontal frame may at the time be resting. 2nd. In a machine for driving fence posts, a guiding frame upon which the weight for driving the posts is fitted, in combination with a frame or carriage resting on the ground, and connected so as to maintain a perpendicular position, irrespective of the angle of the frame supporting it. 3rd. In a machine for driving fence posts, in which the weight for driving the posts is fitted on to a guiding frame, as specified, the combination of the lever R, pivoted to the frame and having a notched end, into which the bottom edge of the weight fits, when it is desired to adjust the posts below it. 4th. In a machine for driving fence posts, a weight or block N, in combination with guides to fit over the frame J, and a V-shaped head *n*, provided with a cross-head O similarly attached to the frame J, and carrying the spring tongs P arranged to grip the V-shaped head formed on the block N, substantially as and for the purpose specified.

No. 18,366. Machine for Manufacturing Grindstones. (*Machine à fabriquer les meules*.)

Frank Trier, Westminster, Eng., 27th December, 1883; 5 years.

Claim.—1st. In machines for making grindstones, one or more circular rolling cutters secured to moving arms by means of adjustable slides, such as described, said arms being adapted to be moved in a plane or planes parallel to the surface of the stone to be dressed.

the movement of such cutter carrying arms being in a straight line or if said arms are hinged, then through an arc of a circle toward the eye or centre of the stone, as set forth. 2nd. In machines for making grindstones, the sliding or swinging frames E provided with the cutter carrying arms E1, E2 and devices, substantially as described, for automatically moving the cutters into their proper position with relation to their point of contact with the stone, as set forth. 3rd. In machines for making grindstones, the sliding or swinging frames E provided with the cutter carrying arms E1, E2, said arms being provided with cutter holding devices, which are adjustable toward and from the stone, as and for the purpose set forth. 4th. In machines for dressing or making grindstones, the sliding frame E provided with the cutter carrying arms E1, E2, in combination with the screw T, nut a, bevel wheels c and d, and the driving shaft G, whereby the cutter carrying frame is automatically fed forward to the work, as set forth. 5th. The combination of the cutters g and L, the bars carrying which are provided with the arms L and M and connected together by the bar or link K, with the rods l, bell crank levers N, arm E2 provided with the stationary cutter-holder, in combination with the cutter carrying arm E1 provided with an adjustable cutter-holder, as and for the purpose set forth. 6th. The sliding frame carrying the slide and cutter-holders, in combination with the rack pinion and shaft, whereby the cutters are adjusted to dress or finish the edge of the stone. 7th. The combination of a cutter carrying arm substantially as described, for dressing the grinding edge or periphery of the stone, as and for the purpose set forth. 8th. The sleeve being secured in an inclined hole in the cutter carrying bars, whereby the cutter may be adjusted in any desired position with relation to the face of the stone.

No. 18,367. Machine for Truing Grindstones. (*Machine pour dégauchir les meules.*)

Frank Trier, Westminster, Eng., 26th December, 1883; 5 years.

Claim.—1st. In a machine for dressing or truing grindstones, the cutter-bar or carrier mounted in a suitable guide and provided with a cylindrical sleeve adjustable thereon, said sleeve, together with the cutter and cutter-carrier, being themselves adjustable to and from the work, as set forth. 2nd. In a stone-dressing machine, the cylindrical sleeve adapted to be detachably secured to the cutter carrying bar, provided with a lug p and slot q, whereby the angle of inclination of the cutter can be changed by the partial rotation of the sleeve. 3rd. The combination of the cutter carrying slide B and cutter-carrier g, as set forth. 4th. A means for truing or dressing crowning curved path on said track and provided with a suitable dressing tool, and a journal screw engaged with said carriage, so as to move the same along the curved track, as set forth. 5th. The combination of the cutter carrying bar e provided with the sleeve E, with the set screws f and H. 6th. In a machine for dressing stone, the frame A provided with a right and left-handed screw r, in combination with the cutter-carriers M and N set at the same time on different levels, as and for the purpose set forth. 7th. A tool for dressing stone or other material consisting of a thin metallic cone-shaped disk, strengthened or supported in its inner side by a cone-shaped filling piece, as described, or a series of smaller metallic cones fitting within the cutter and within each other, as set forth. 8th. As a new article of manufacture, a cone-shaped metallic cutter for dressing stone, struck up, or out of sheet steel, or other suitable material.

No. 18,368. Draft Equalizer. (*Régulateur du tirage.*)

James W. Lawler and Albert B. Lawler, Rushville, Ill., U. S.; 27th December 1883; 5 years.

Claim.—1st. The combination, with the double tree and the lever f, of the double lever c having its longer arm c2 arranged in rear of the lever f, the anti-friction rubber d journalled on the end of the shorter arm of the lever c, the chain g coupled to the longer arm of lever c and to the fast to one end of the double-tree, and its other end carried around the anti-friction roller d, and made fast to the opposite end of said double-tree, substantially as set forth.

No. 18,369. Staple. (*Crampe.*)

Stiles Frost, Boston, Mass., U. S., 27th December 1883; 5 years.

Claim.—As a new article of manufacture, a staple A having the inside c of the bottom of one or both legs b bevelled downward and outward from c to a point d, and the portion of each leg, which is to be outside d and inside c, or on either its inside or outside only, in order to enable the legs of the staple to separate from each other in the plane passing through their centres, and to afford an increased amount of fiber resisting surface to oppose the force applied to withdraw it, substantially as described.

No. 18,370. Fire-Escape. (*Sauveteur d'incendie.*)

Ole Hansen, Walnut Grove, Cal., U. S., 27th December 1883; 5 years.

Claim.—1st. In fire-escapes, the ladder described having the outer rail A and folding rounds Z attached or pivoted at C and D, in combination with the platform L constructed and operated in connection with a building, substantially as and for the purposes set forth. 2nd. In fire-escapes, the projection B in combination with the ladder described, constructed and operated substantially as and for the purposes set forth. 3rd. In fire-escapes, the cord or cable K and balance weight H, to balance the weight of the folding ladder described, constructed and operated as and for the purposes set forth. 4th. In fire-escapes, the lever J in combination with the weight H and weight

cord, and folding ladder described, for the purpose of ringing the bell or sounding the alarm, substantially as and for the purposes set forth. 5th. In fire-escapes, the bevel gear composed of the bevel wheels O and pinions P, and line shaft Q or their mechanical equivalents, constructed and operated substantially as and for the purposes set forth.

No. 18,371. Rail Joint. (*Joint de rail.*)

Thomas H. Gibbon and Dudley Farlin, Albany, N. Y., U. S., 27th December 1883; 5 years.

Claim.—1st. In a rail-joint, the rails A having the heads of their adjoining ends cut away as at a1, and a connecting piece B consisting of a head b that conforms to the heads a of the adjoining rails, side plates b1 having a uniform length with the head b, and vertical flanges b2 of greater length than the side plates b1 and pointed with openings b4, as herein described, in combination with a fastening plate C adapted to engage in the openings b4, for the purpose of securing the rails A to the connecting piece B, substantially as herein specified. 2nd. In a rail-joint, the combination, with the rails A having the heads of their adjoining ends cut away as at a1, and a connecting piece B consisting of a head b that conforms to the heads a of the adjoining rails, side plate b1 having a uniform length with the heads b, vertical flanges b2 of greater length than the side plates b1 and provided with openings b4, as herein described, of the fastening plate C adapted to engage in the openings b4, and the cross-tie D provided with transverse grooves, for receiving the vertical flanges b3 of the connecting piece B, as and for the purpose herein specified.

No. 18,372. Aerial Telegraph and Telephone Conductor. (*Conducteur de télégraphe et de téléphone aériens.*)

Joseph C. Chambers, Cincinnati, Ohio, Nelson C. Girdley, Chicago, Ill., and Preston Brady, Detroit, Mich., U. S., 27th December 1883; 5 years.

Claim.—1st. The combination, with an aerial telegraph or telephone line consisting of one or more electrical conductors, insulated from the supports and connected with the earth, of one or more induction wires, rods, bands or strips arranged in electrical proximity to the telegraph or telephone electrical conductors, and insulated from the supports, from the telegraph or telephone electrical conductors and from the earth, and having disconnected terminal ends so as not to form a closed circuit, substantially as and for the purpose specified. 2nd. The combination, with an aerial telegraph or telephone line consisting of one or more electrical conductors insulated from the supports and connected with the earth, of one or more induction wires, rods, bands or strips arranged in electrical proximity to the telegraph or telephone electrical conductors, and insulated from the supports, from the telegraph or telephone electrical conductors and from the earth, and having its terminal ends turned upward and pointed, substantially as shown and described and for the purpose specified. 3rd. The combination, with an aerial telegraph or telephone line consisting of one or more electrical conductors, insulated from the supports and connected with the earth, of one or more induction wires, rods, bands or strips arranged in electrical proximity to the telegraph or telephone electrical conductors, and insulated from the supports, from the telegraph or telephone electrical conductors and from the earth, and having its terminal ends turned upward and pointed, and provided at intervals, between its terminal ends, with electrical conducting-barbs or points pointing in opposite directions, substantially as shown and described and for the purpose specified.

No. 18,373. Preparation of Agents used in the Treatment of Sewage Matter. (*Préparation des agents employés dans le traitement des produits des égouts.*)

William C. Sillar, Blackheath, and John W. Slater, London, Eng., 27th December 1883; 5 years.

Claim.—1st. The preparation of crude muriate of alumina, or muriate of alumina and iron, for use in the treatment of sewage, by mixing a solution of sulphate of alumina, or the lixivium of shales, or other minerals containing sulphate of alumina alone, or sulphate of alumina and sulphate of iron, with a solution of chloride of calcium, substantially as hereinbefore described. 2nd. The preparation of an agent for use in the purification of sewage by adding sulphuric acid, or muriatic acid, or both, to the deposit or sediment obtained by treating sewage by any process in which salts of alumina or clay, or salts of alumina and clay, have been used, substantially as hereinbefore described. 3rd. The use, in the treatment of sewage, of the product resulting from the treatment with sulphuric acid or muriatic acid, or both, of the mud or precipitate produced by treating sewage by any process in which salts of alumina, or clay, or salts of alumina and clay, are used.

No. 18,374. Fireman's Extension Ladder. (*Echelle à rallonge de sauvetage.*)

Benjamin F. Bower and Francis M. Stephenson, Ripley, Ohio, U. S., 28th December 1883; 5 years.

Claim.—1st. The combination, substantially herein described, of a turn-table provided with the socket-abutments N, N and sockets k, k, with a fireman's extensible ladder, the lower ends of the lower section A whereof are adapted for detachable support and connection, with said socket-abutments, and a derrick P adapted for detachable support and connection within the said turn-table-sockets k, k, for the purpose specified. 2nd. The turn-table of a fireman's extensible ladder, provided with the socket-abutments N, N, each having a curved back and closed at their sides, in combination with the main ladder section A, the lower ends of the side bars of which are rounded and adapted to fit within said sockets, between their closed sides, substantially as described. 3rd. The turn-table of a fireman's extensible ladder provided with the socket-abutments N, N, each having a curved back and closed at their sides, in combination with

the main ladder section A, the lower ends of the side bars of which are rounded and provided with pins *j*, and the hooks *i* pivoted to said socket abutments, substantially as described, for the purpose specified. 4th. In a fireman's extension ladder, the combination of a turn-table provided with socket-abutments N, N and sockets *k*, *k*, and aladder adapted to be supported within said socket-abutments, substantially as described, with a derrick P for raising the ladder, having picket-points supported upon said turn-table independent of said ladder, means whereby said derrick is connected with the truck, the windlass and the ladder elevating rope T, substantially as described. 5th. In combination, in a fireman's ladder, the turn-table having the socket-abutments, the ladder having extensible sections and an elevating windlass therefore, the derrick having picket points, its supporting guy rope or ropes and hoisting-rope connecting said derrick with the ladder, substantially as described for the purpose specified. 6th. The ladder sections A, B, C, arranged one within the other, the middle section between the flat guides *a*1, *a*1, and the upper section C between the flat guides *b*, *b*, sections A and B having the grooves *c*, *g*, as described, in combination with the sheaves *h*, *h* in the section B, the ropes *f*, *f*, attached to the lower ends of the upper section passing over said sheaves and attached to the side bars of the main section A, the sheaves *e*, *e*, in the main section, the ropes *d*, *d* and the double windlass D D carried by said main section, substantially as described for the purpose specified. 7th. The combination, in a fireman's ladder, of the turn-table and the derrick, with the supporting guy-ropes therefor, and one or more slide-bars for said guy-ropes fixed to the platform or truck frame, substantially as described for the purpose specified. 8th. The turn-table of a fireman's extensible ladder, provided with socket-abutments, in combination with the main ladder section having rounded ends, and means for securing said ladder ends within said socket-abutments, substantially as described, for the purpose specified. 9th. In combination, the truck platform M, the turn-table K, the extensible ladder and the derrick and its stay R, the said ladder having a double extension windlass D D connected by suitable ropes with the ladder sections, and the said derrick having the windlass and rope T for elevating said ladder, the latter and its hoisting derrick being carried by, and detachably supported upon the turn-table, and the derrick connected with said platform, substantially as described. 10th. The combination of the truck platform with the ladder and the derrick, and with means, substantially as described, whereby they are detachably connected with the turn-table, and means substantially as described, whereby the derrick is detachably connected with the truck.

No. 18,375. Valve Gear. (*Distribution par tiroir.*)

Frederick B. Nichols and Cathcart Thomson, Halifax, N. S., 28th December 1883; 5 years.

Claim.—1st. The adjustable cams E, W and rack G oscillating on pivot T, in combination with reciprocating rack H, valve stem B attached to valves X, Y, stops *r*, *r* and counterbalance weight U, all in combination in the manner and for the purpose specified. 2nd. The arm D and roller A, on piston rod C, in combination with the adjustable cams E, W, racks G and H, valve stem B and valves X, Y, all in the manner set forth.

No. 18,376. Braiding Machine.

(*Machine à appliquer la passementerie.*)

Florenz L. Veerkamp, Charles F. Leopold, William Darker, and Cunningham S. Patterson, Philadelphia, Pa., U. S., 28th December, 1883; 5 years.

Claim.—1st. The combination, in a rotary braiding machine, of a set of upper bobbin carriers and bobbins, a revolving carrier bearer, a set of lower bobbins and devices for supporting the same, with mechanism for revolving the upper and lower bobbin holders in contrary directions from each other, in concentric annular paths but in different planes, and stationary guides and push prongs, whereby the threads from each of the lower bobbins are made to alternately cross the threads from each of the upper bobbins, and be plaited for the purpose of forming cord braid, as set forth. 2nd. The carrier bearers E, constructed as described. 3rd. The grooved ring L and mechanism for revolving the same in an opposite direction to the carrier bearers, in combination with said carrier bearers E, and the push prongs *d* to guide the course of the lower threads, substantially as described. 4th. The horizontal guide arms M, arranged as described, for alternately changing the position and course of the lower threads. 5th. The bobbin carrier *c*, constructed and operating substantially as described. 6th. The combination of the upright rod K having projections *o*, *s* and cam Y, the rod X and bolt-shifting mechanism, with the droppers *p*, bolt *r*, a frame carrying said droppers and bolt and adapted to supply one set of braiding thread, a carrier adapted to supply a second set of braiding threads, means for rotating said frame and carrier in opposite directions and crossing the threads, and means for elevating said bolt on the breakage of one of the upper braiding threads carried by said carrier, substantially as described. 7th. The tension springs N, constructed and arranged as described, in combination with the stationary horizontal guide arms M, and means for supporting the same, mechanism for impelling the thread along the guide arms, and a revolving frame adapted to hold a set of lower bobbins and supply a set of braiding threads, substantially as and for the purpose set forth.

**CERTIFICATES OF THE PAYMENT OF FEES FOR FURTHER TERMS HAVE BEEN ATTACHED TO
THE FOLLOWING PATENTS.**

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| <p>129. W. C. SILLAR, R. G. SILLAR and C. RAWSON, 3rd 5 years of No. 2899, from the 5th day of December 1883. Improvement on Deodorizing, Purifying and Utilizing Sewage, Urin, Night Soil, Excreta and Excrementitious and Refuse Matters, 5th December 1883.</p> <p>130. M. J. EGERY and THE HINCKLEY and EGERY IRON CO., 2nd and 3rd 5 years of No. 9607, from the 23rd day of January 1884. Improvement on Machines for Sawing Lumber, 5th December 1883.</p> <p>131. W. McCLAVE and J. A. PRICE, 2nd 5 years of No. 9499, from the 18th day of December 1883. Improvements on Stove Grates, 5th December 1883.</p> <p>132. THE REV. REND B. FOLTZ, 2nd 5 years of No. 9466, from the 10th day of December 1883. Neck Yoke Attachment for Ironing Draft Polls, 6th December 1883.</p> <p>133. THE REVEREND R. DICK, 2nd 5 years of No. 9457, from the 10th day of December 1883. Improvements on Folding Chairs, 7th December 1883.</p> <p>134. M. T. BUCHANAN, 2nd 5 years of No. 9470, from the 10th day of December 1883. Improvements on Hay Pitching Machines, 7th December 1883.</p> <p>135. E. O'CUMPAUGH, 2nd 5 years of No. 9469, from the 10th day of December 1883. Improvement on Heating Apparatus, 10th December 1883.</p> <p>136. D. CAMPBELL, 2nd 5 years of No. 9538, from the 31st day of December 1883. Improvements on Adjustable Chairs, 10th December 1883.</p> <p>137. J. C. WARD, 2nd 5 years of No. 9465, from the 17th day of December 1883. Improvements on Hernia Trusses, 10th December 1883.</p> | <p>138. N. DUTTON, 2nd and 3rd 5 years of No. 9494, from the 17th day of December 1883. Improvements in coverings for spring bed bottoms. 14th December 1883.</p> <p>139. T. G. RICE, 2nd 5 years of No. 9486, from the 17th day of December 1883. Improvements on Animal Traps, 14th December 1883.</p> <p>140. M. T. BOULT, 2nd 5 years of No. 2941, from the 15th day of December 1883. Improvements on Wood Working Machines. 14th December 1883.</p> <p>141. R. THOMSON, jr., 2nd 5 years of No. 9514, from the 24th day of December 1883. Improvements on Skate Fastener, 18th December 1883.</p> <p>142. G. F. SMITH, H. C. SMITH, C. W. WOODS and A. REGINALD, 2nd 5 years of No. 9500, from the 18th day of December 1883. Improvements on Refrigerators, 18th December 1883.</p> <p>143. R. W. GRAY and T. S. FOSTER, 2nd 5 years of No. 9527, from the 28th day of December 1883. Improvement of Abdominal Supporters, 24th December 1883.</p> <p>144. THE HAMILTON POWDER CO., 2nd 5 years of No. 9509, from the 24th day of December 1883. Improvements on Apparatus for the Manufacture of Nitric Acid, 24th December 1883.</p> <p>145. W. J. INGALLS, 2nd 5 years of No. 9530, from the 28th day of December 1883. Improvements in Tools for Cylindrically Cutting Iron Bars, Pipes, Shoulders and Axles, &c., 27th December 1883.</p> <p>146. A. W. WATKEYS, 2nd 5 years of No. 9535, from the 21st day of December 1883. Improvements on Valves for Steam Engines, 29th December 1883.</p> |
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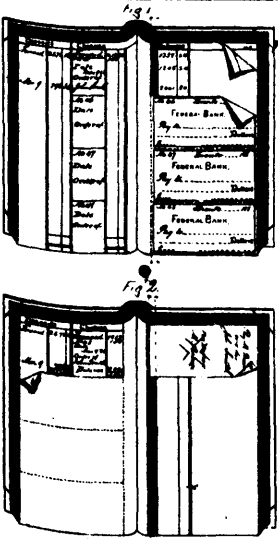
THE CANADIAN PATENT OFFICE RECORD.

ILLUSTRATIONS.

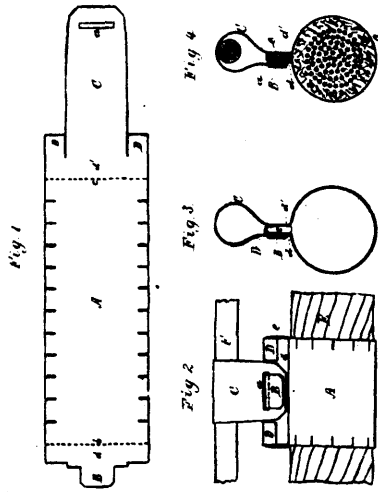
Vol. XII.

JANUARY, 1884.

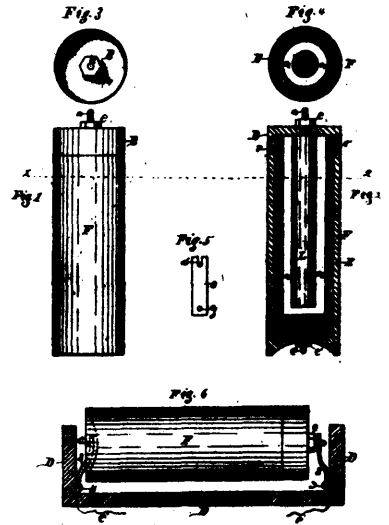
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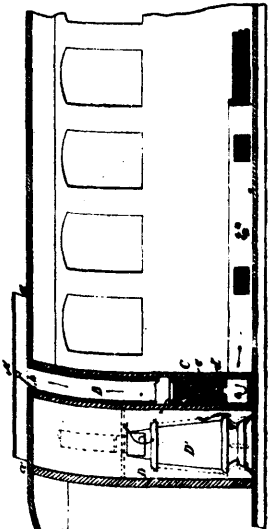
18226 Sprague's Cheque Book.



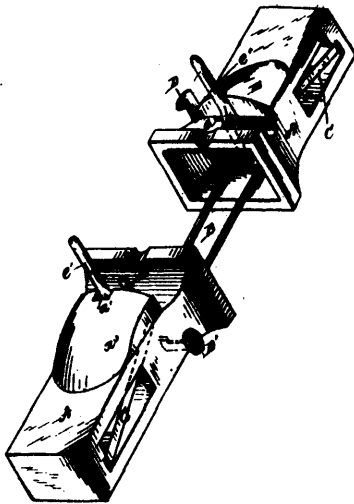
18226 Weaver's Electric Cable Support.



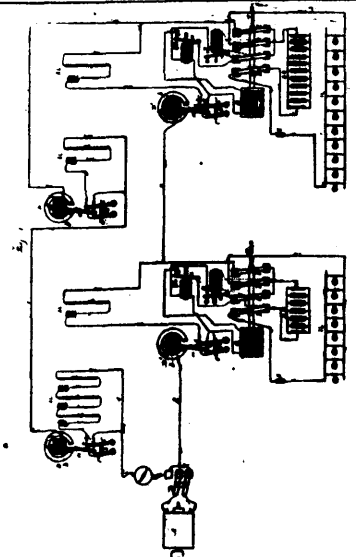
18228 O'Harra's Galvanic Battery.



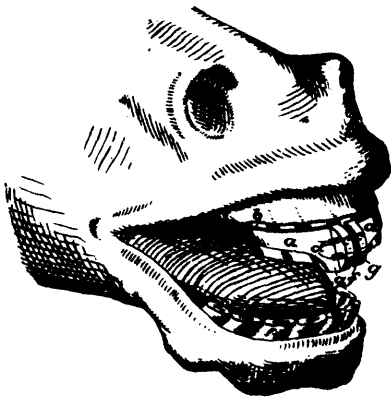
18230 Mann's System and Apparatus for Ventilating Railway Cars.



18230 Casper's Railroad Car-Coupler.



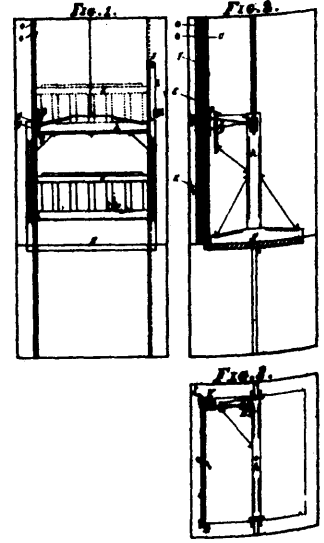
18231 Hochhausen's Storage or Secondary Battery.



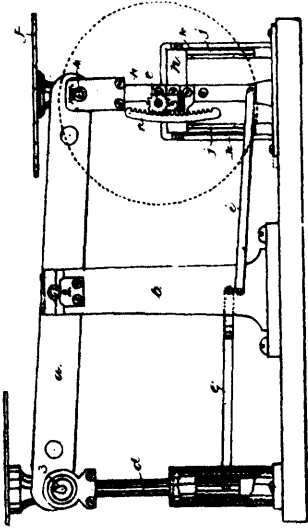
18232 Quinque's Cribbing Plate for Horses.



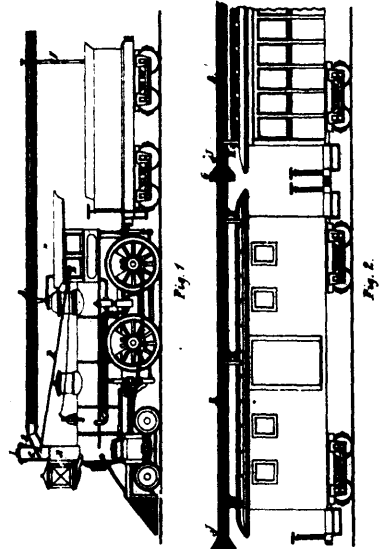
18233 Call's Dress Chart.



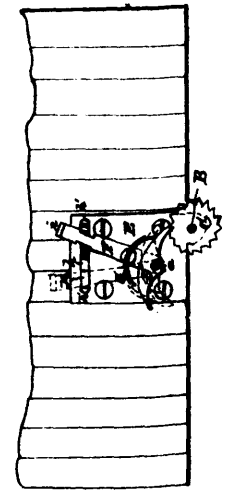
18234 Laughlin's Self-Acting Elevator Gate.



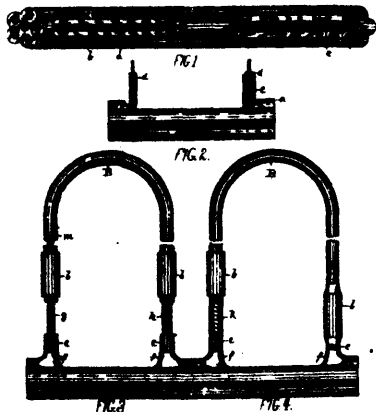
18236 Cook's Scales.



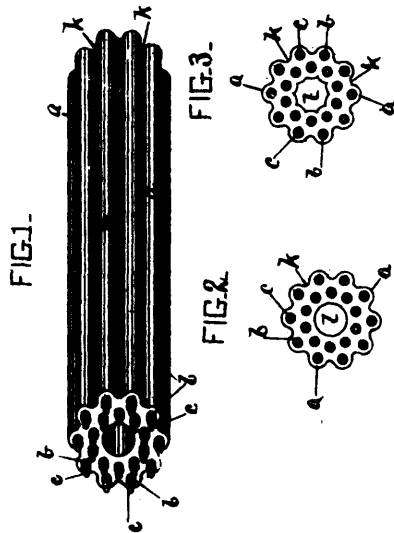
18236 Cotter's Spark-Arrester and Conductor.



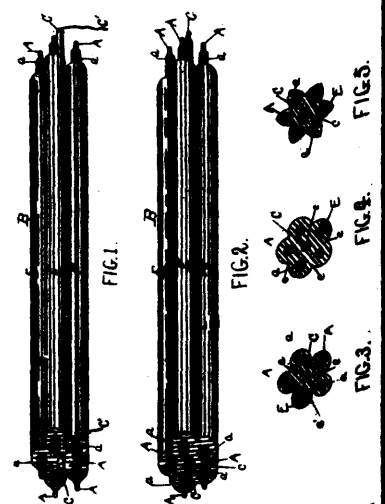
18237 DeWitt's Car Brake.



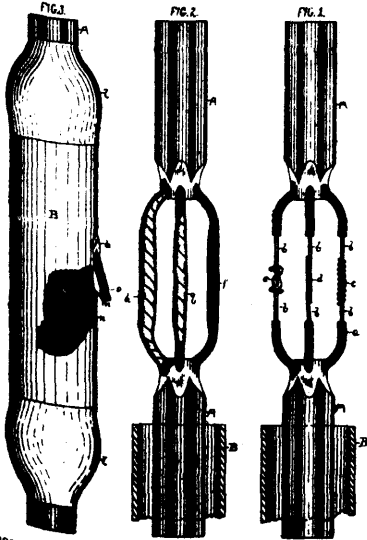
18238 Waring's Improvement in Electric Cables.



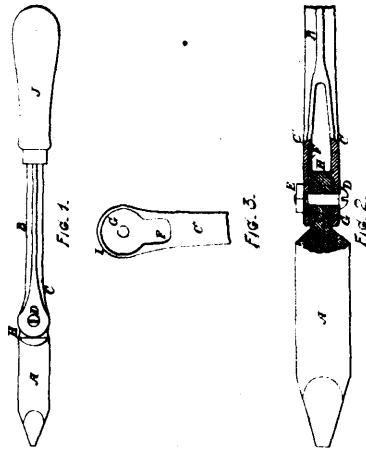
18239 Waring's Improvement in Electric Cables.



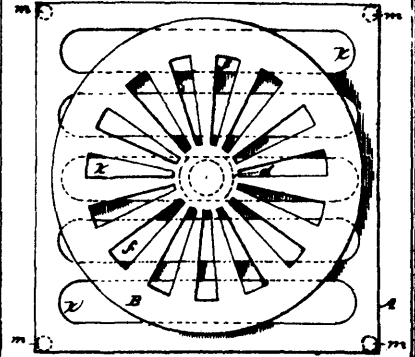
18240 Waring's Improvement in Electric Cables.



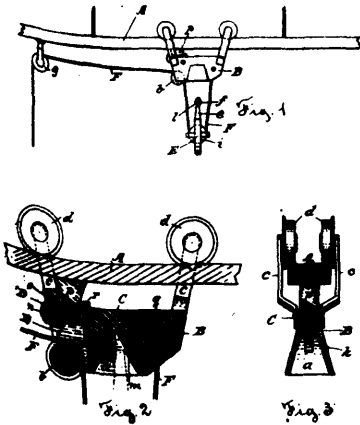
18241 Waring's Improvement in Electric Cables.



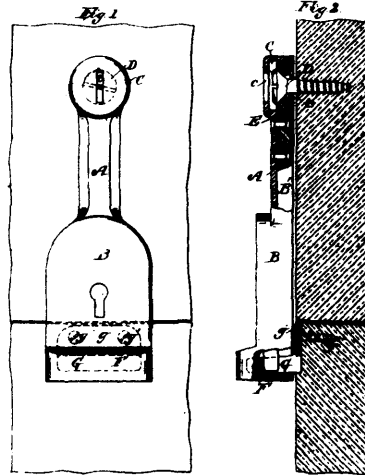
18242 Covert's Soldering Iron.



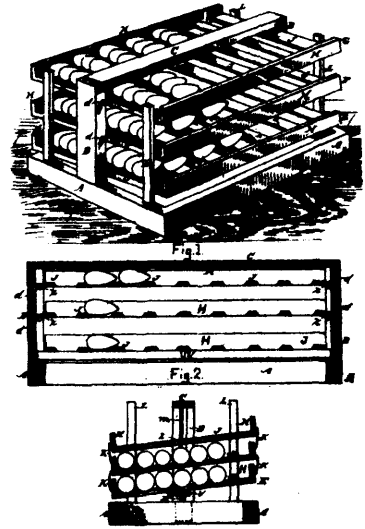
18243 Keating's Oven Grate.



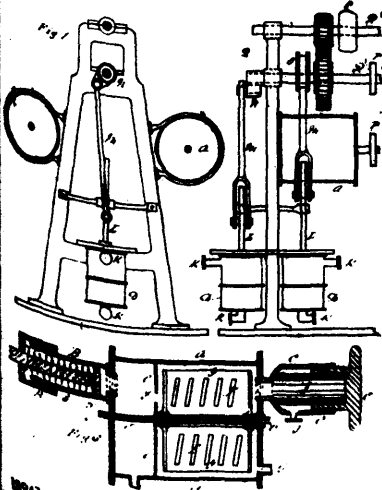
18244 Graham's Hay Elevator.



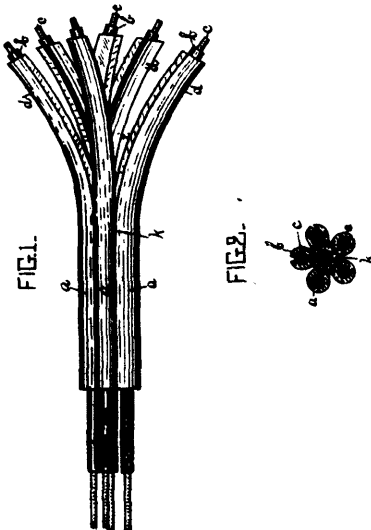
18245 Knight's Hasp Lock.



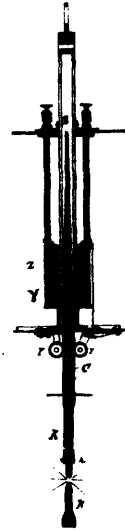
18246 Conant's Egg Preserver.



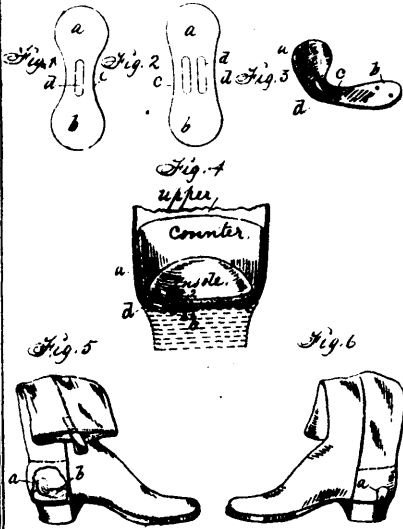
18247 Pearson's Machine for the Manufacture of Mineral Waters.



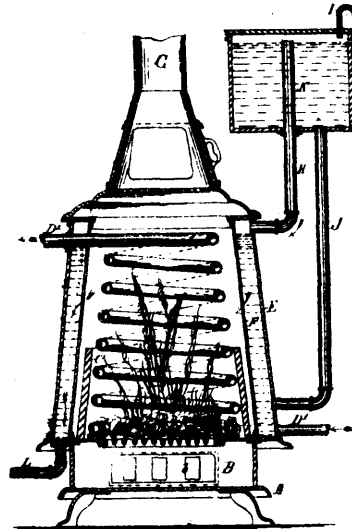
18248 Waring's Improvement in Electric Cables.



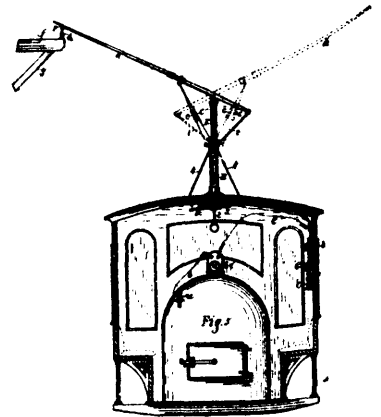
18249 Krislik & Plette's Electric Lamp.



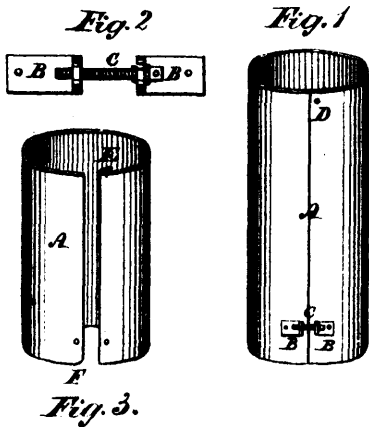
18250 Keffer's Improvements in Boots and Shoes.



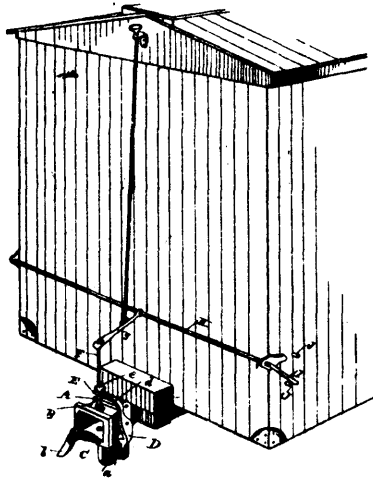
18251 Mann's Heating Apparatus for Heating Railway Cars.



18252 Parrish & Munn's Train Signal.



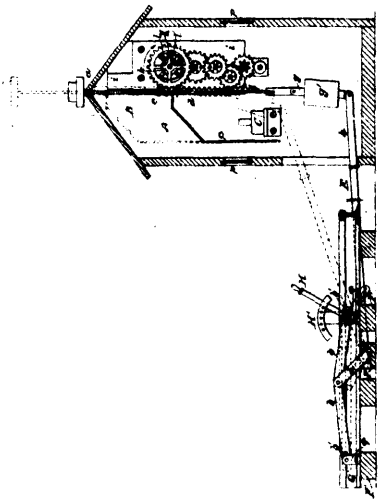
18253 Barclay's Stove Pipe.



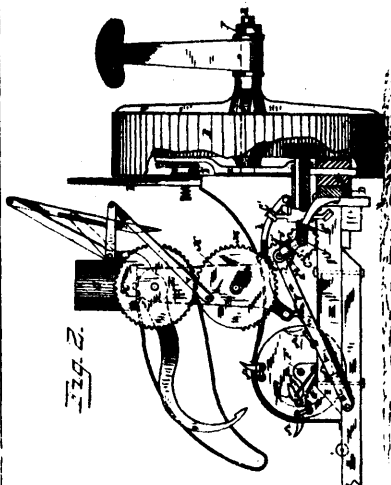
18255 McWilliam's Car-Coupling.



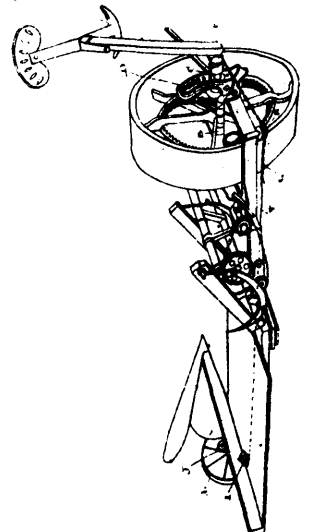
18256 Fitzgerald's Secondary Battery of Accumulator.



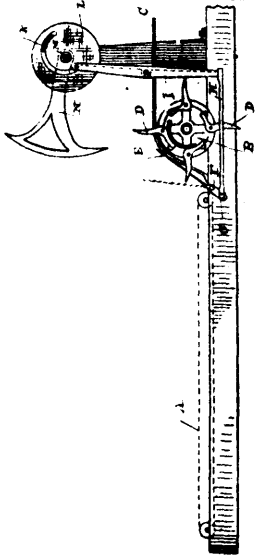
18258 Swayse & Lane's Automatic Railroad Signal.



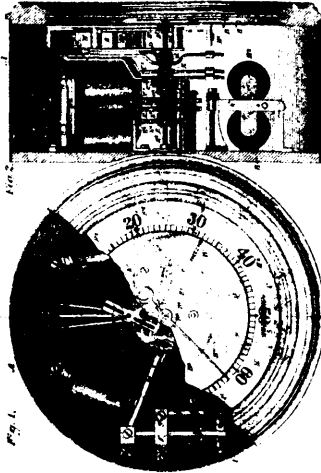
18259 Seiberling's Grain Binding Harvester.



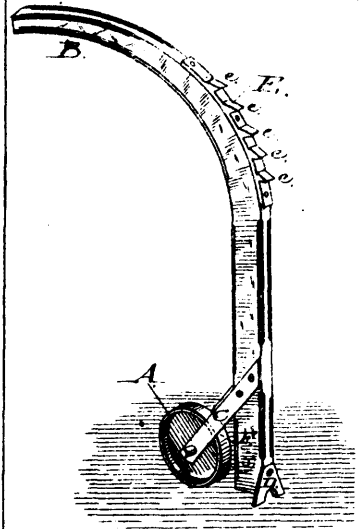
18260 Seiberling's Harvesting Machine.



18261 **Seiberling's Grain Binding Harvester.**



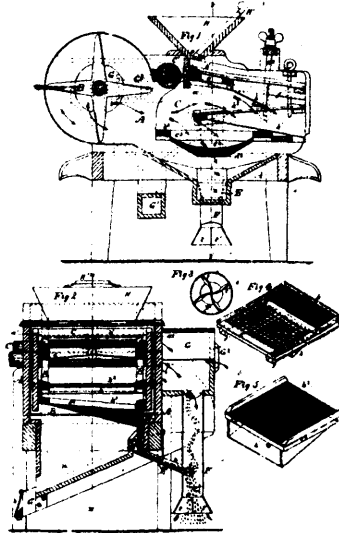
18262 **Hewitt & Clark's Improvement in Circuits and Apparatus for Electric Temperature and Pressure Indicators.**



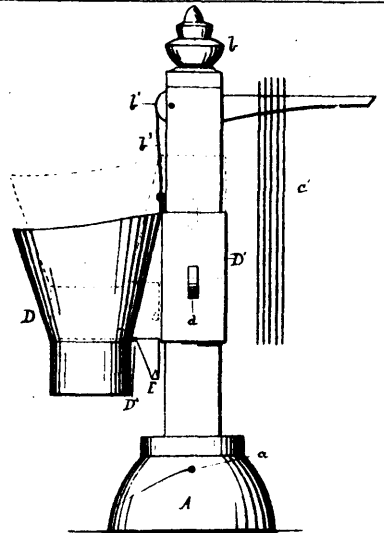
18268 **Lewis' Lifting Jack.**



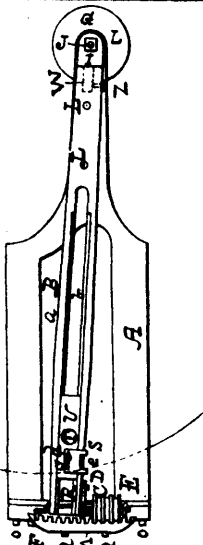
18264 **Hindley's Skate.**



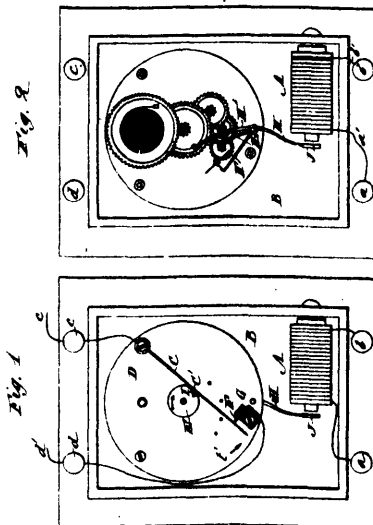
18265 **Curtis' Machine for Cleaning and Separating Grain.**



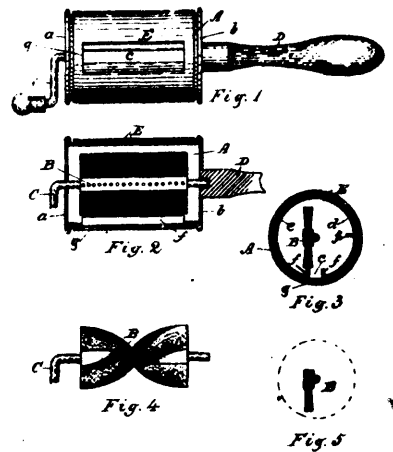
18266 **Hay's Sack Filler.**



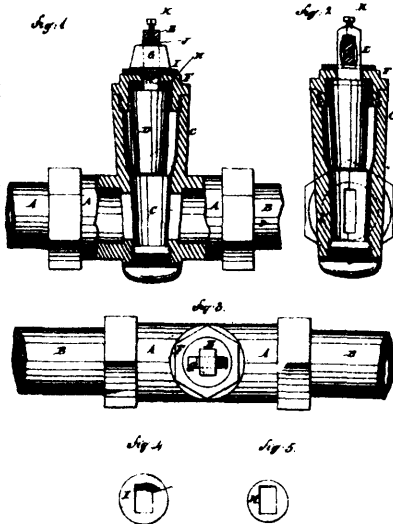
18267 **Barnes' Diamond Millstone Dressing Machine.**



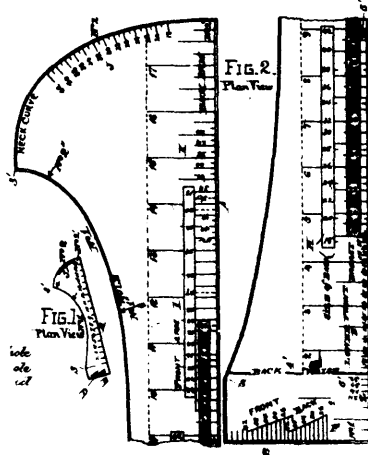
18268 **Wright & Fisher's Cut-Out of Telephone.**



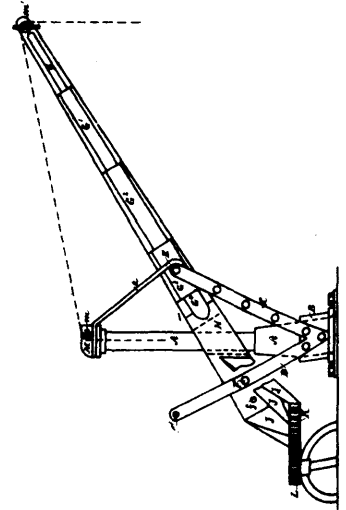
18270 **Sexton's Wick Trimmer.**



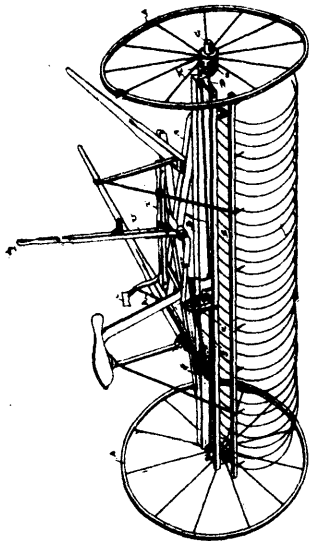
18271 Cosgrove's Automatic Stop Plug for Gas and Oil Pipes.



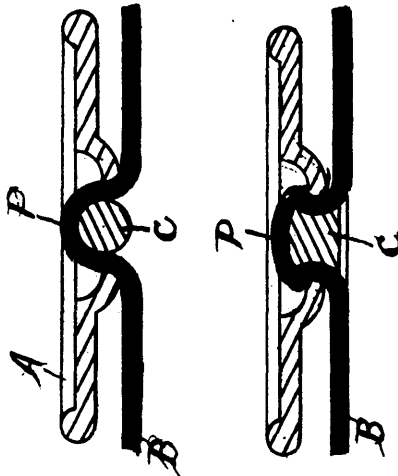
18272 Wallace's Dress-maker's Rule.



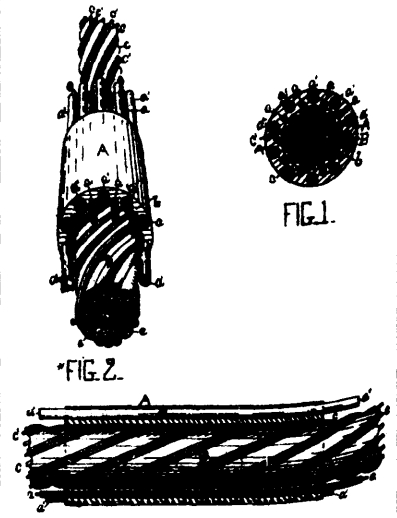
18274 Edgerley's Crane.



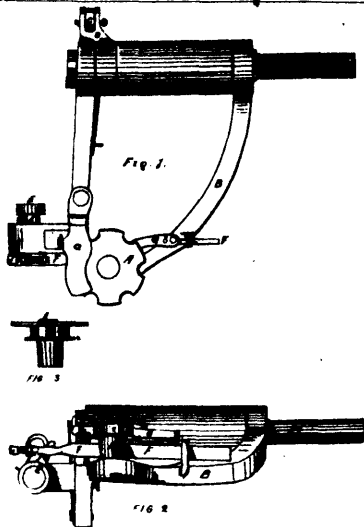
18275 Wilson's Horse Rake.



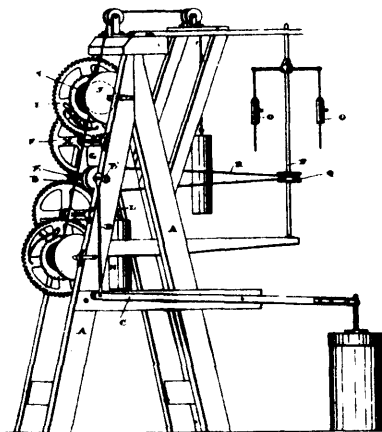
18276 Spinning's Method of Securing Buttons.



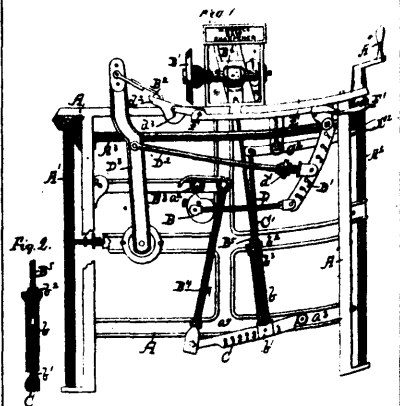
18277 Waring's Submarine Electric Cable.



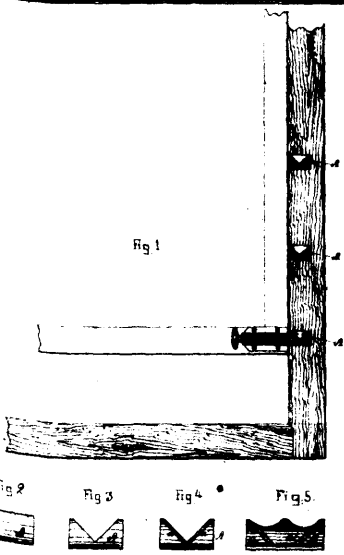
18278 Fielden's Cord Binding Harvester.



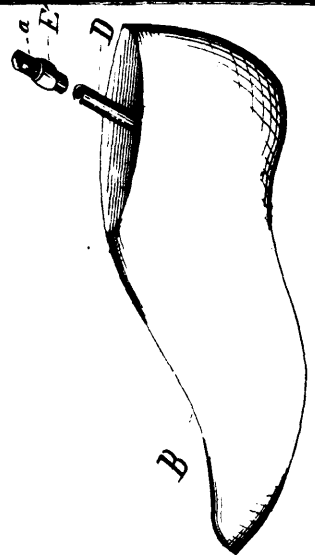
18279 Seebach & Bettschen's Motor Power.



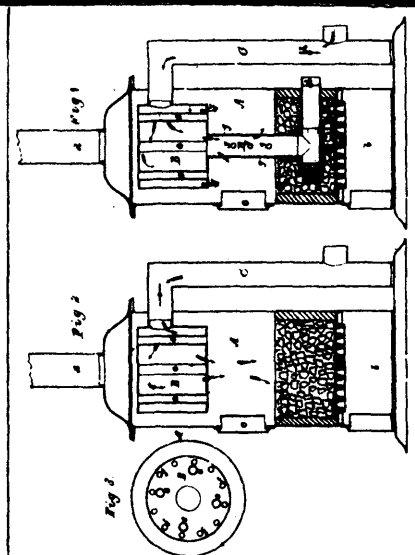
18280 Covel's Saw-Sharpening Machine



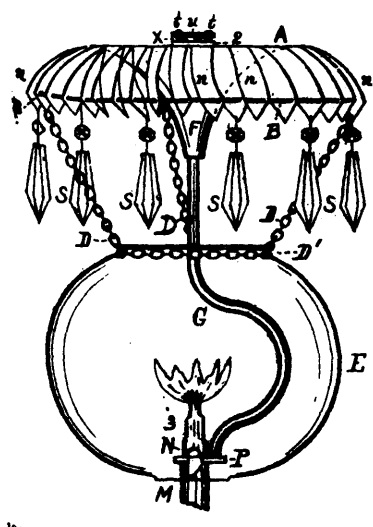
18281 Elliott's Striker for Sash and Door Bolts.



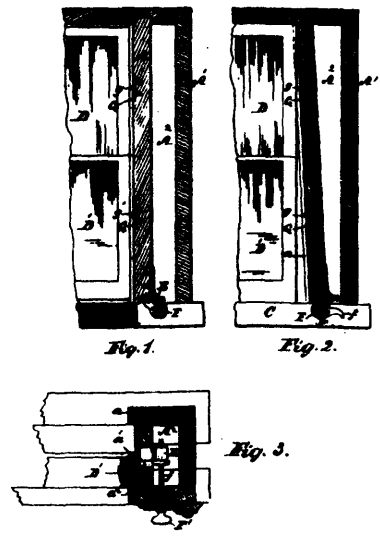
18283 Higgin's Flexible Last.



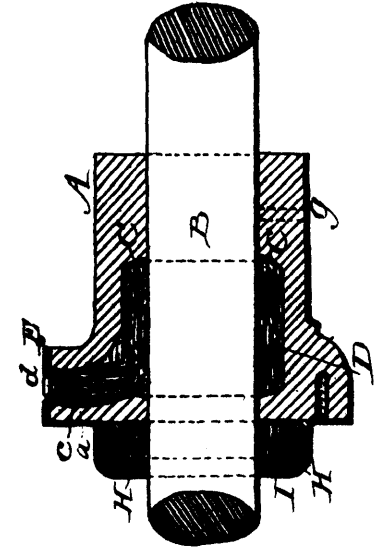
18284 Graham's Improvement in Stoves or Furnaces.



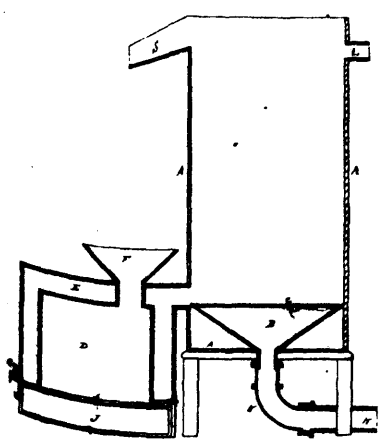
18285 Simpson's Display Body.



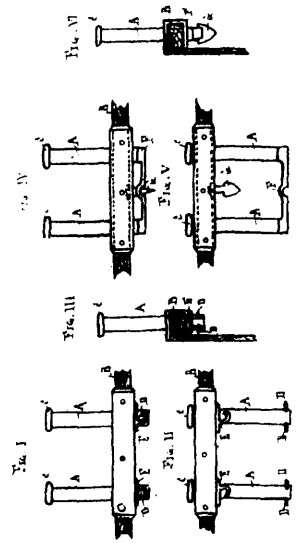
18286 Stockdale's Adjustable Sash Frame.



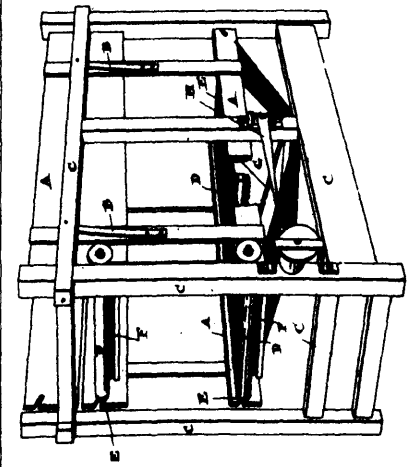
18287 Hoffmaster & Arthur's Lubricator for Piston Rods.



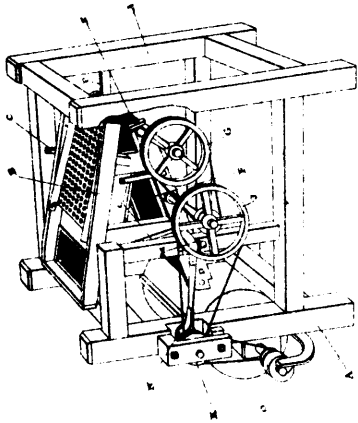
18288 Kells & Church's Process and Apparatus for Freezing Paraffine, &c.



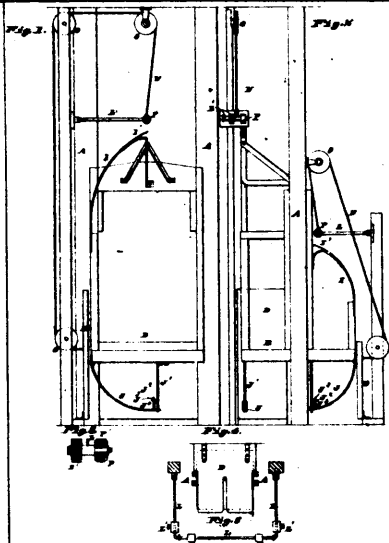
18289 Morris' Rowlock.



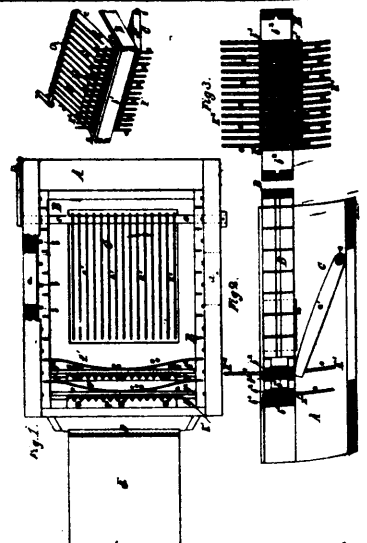
18290 Crawford's Flour Dressing Machine



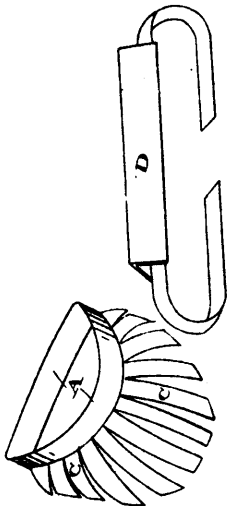
18291 Crawford's Cockle Machine.



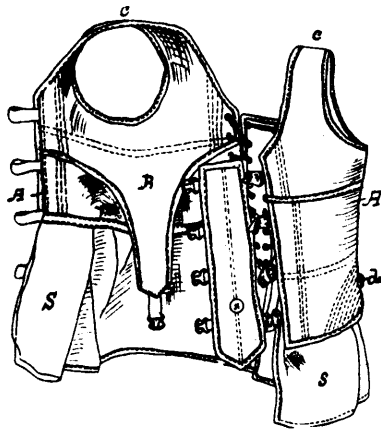
18292 Thackston's Self-Closing Hatchway.



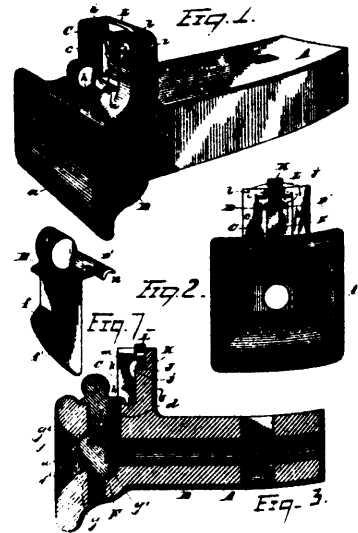
18293 Steber's Machine for Arranging Match Splints for Dipping.



18294 Green's Device for Protecting the Neck Banks, Collars and Cuffs of Shirts when Packed for Transportation.



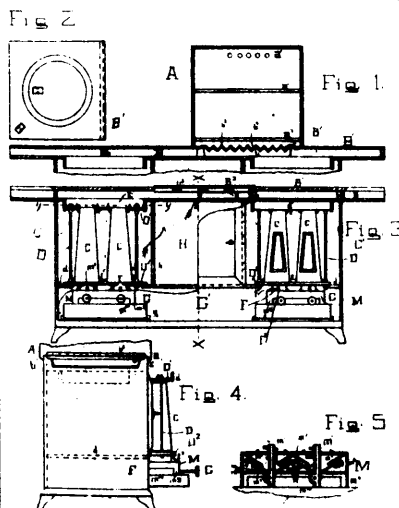
18295 Higgins' Under Waist



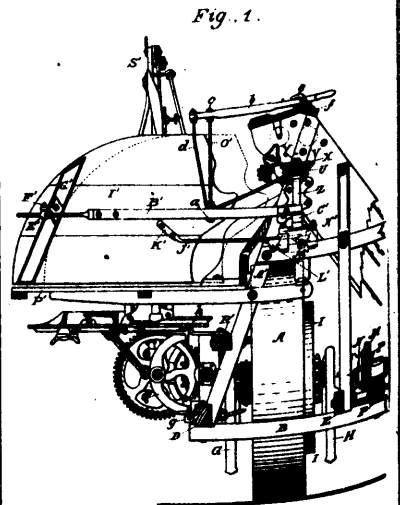
18296 Gifford's Car-Coupling.



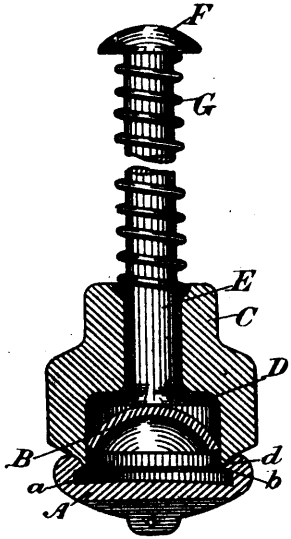
18297 Covell's Fire-Escape Ladder.



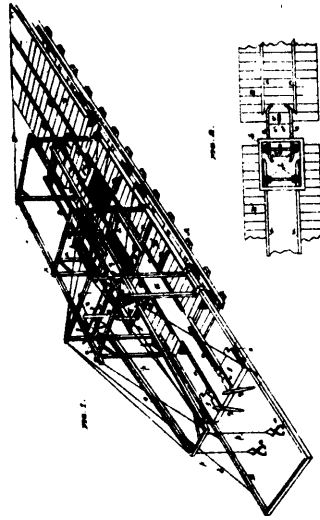
18298 Armour's Stove.



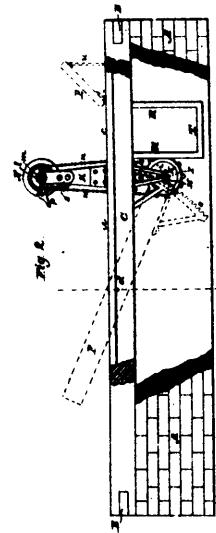
18299 Case's Harvesting Machine.



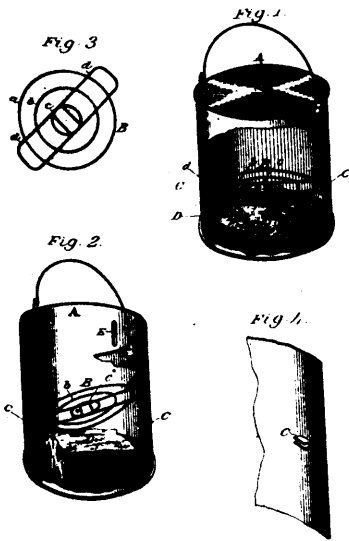
18301 Roschman's Button.



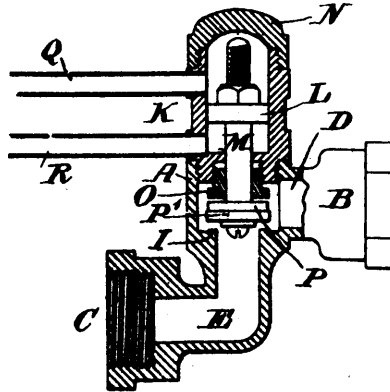
18302 Volgt's Track-Laying Machine.



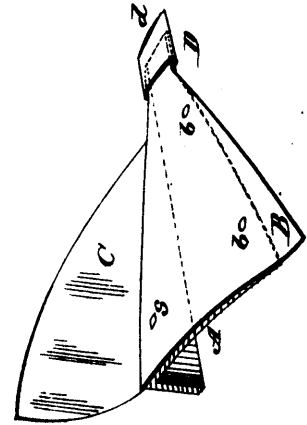
18803 Savage & Love's Dumping Platform.



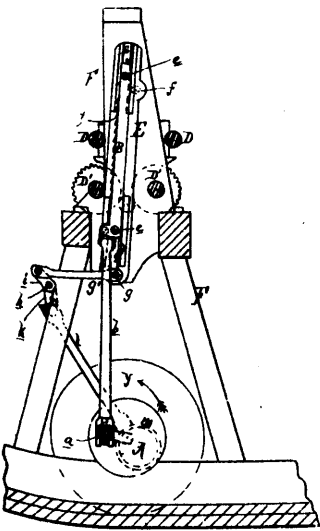
18304 Kellogg's Method of Raising Cream.



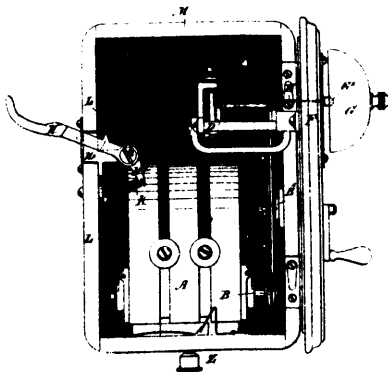
18305 Kearney's Stop Valve.



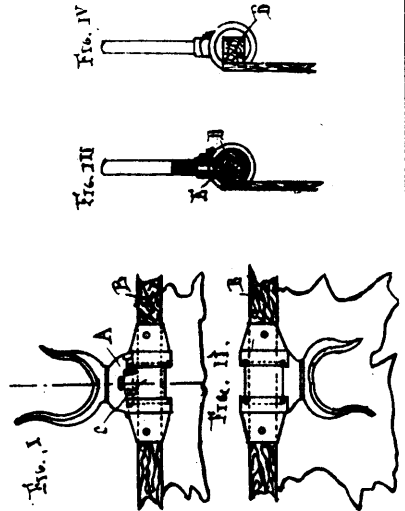
18306 West's Plough.



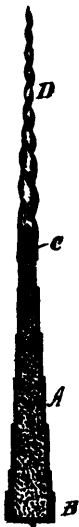
18307 Weston's Oscillating Guides for Gang Saws.



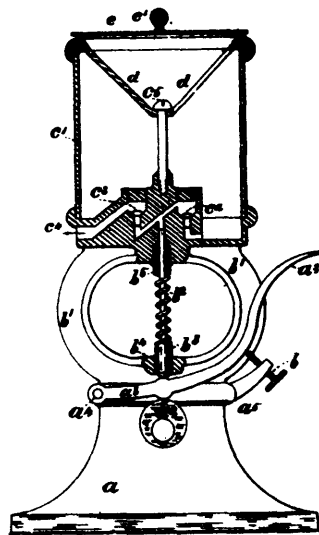
18308 Brown's Magneto-Electric Call Signal Apparatus.



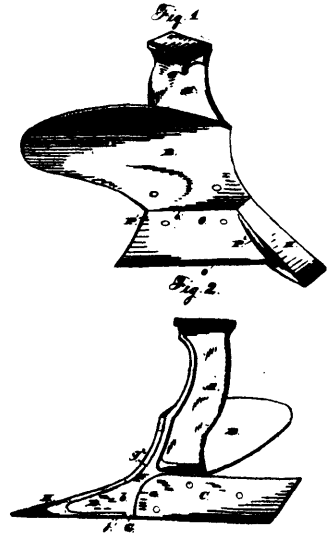
18309 Morris' Bowlock.



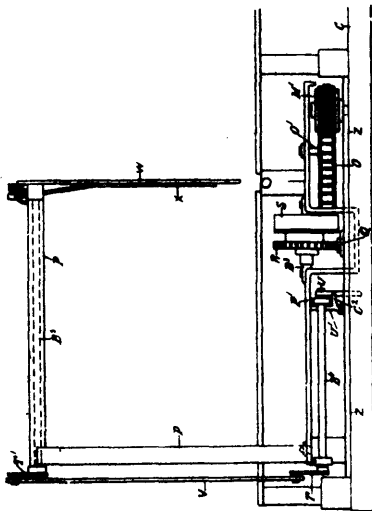
18310 Eltringham's Miners' Safety Fuses.



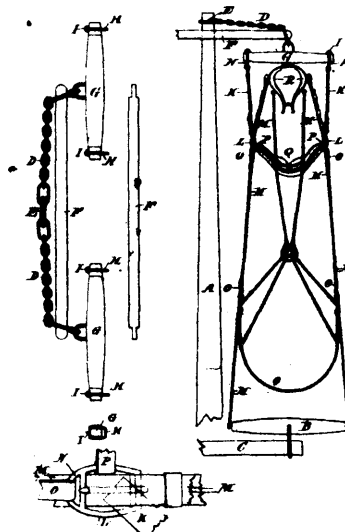
18311 Gardner's Oiler for Machinery.



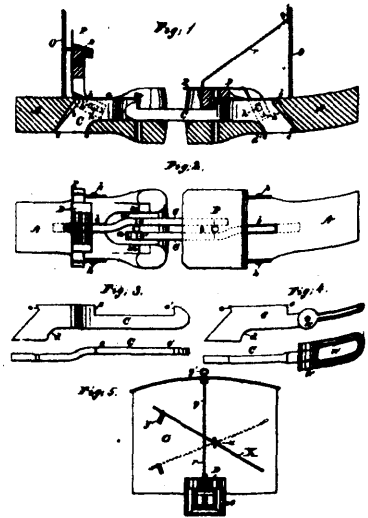
18312 Anderson & Oliver's Plough.



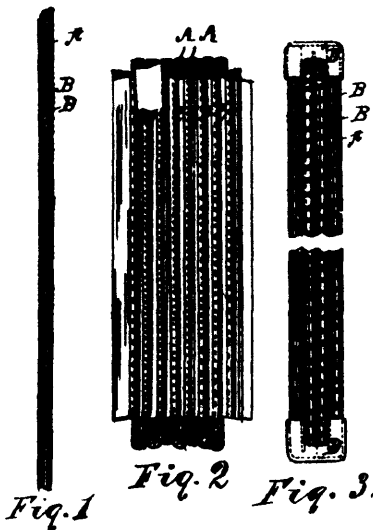
18313 Platt's Harvester Binder.



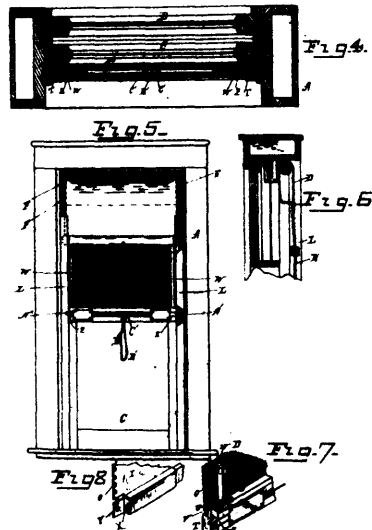
18314 Bruneau & Simpson's Attachments of Horse Vehicle.



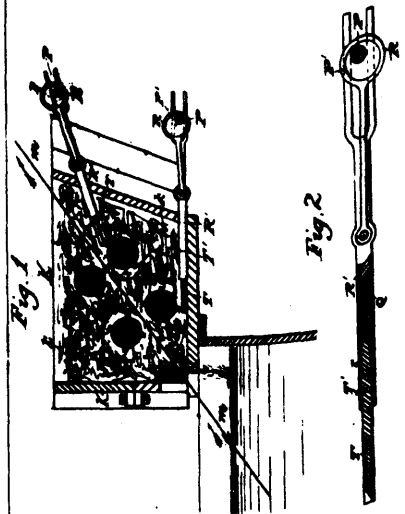
18315 Hobbs' Car-Coupling.



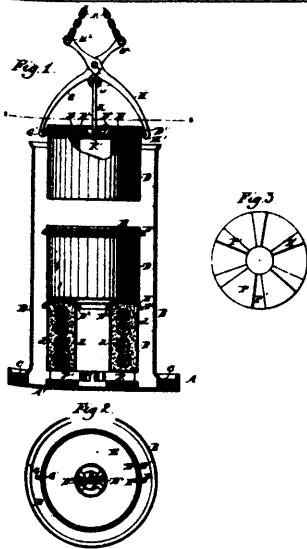
18316 Van Stone's Corset.



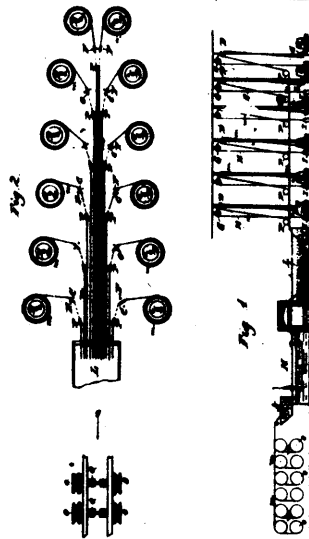
18317 Tribe's Rolling Window Screen.



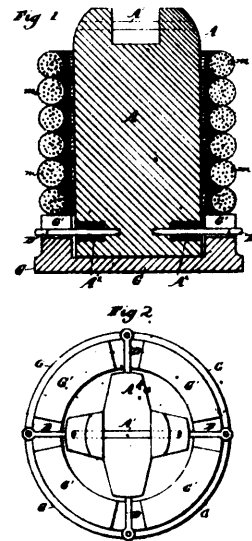
18318 Roberts' Wire Wiping Apparatus.



18319 Roberts' Annealing Pot for Wire.



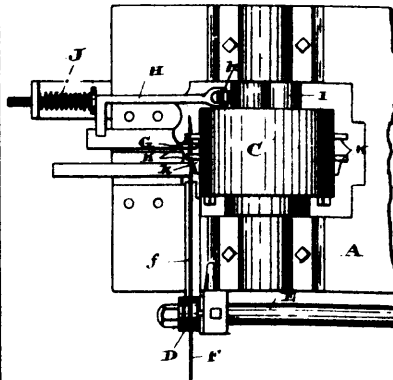
18320 Roberts' Apparatus for Feeding Wire.



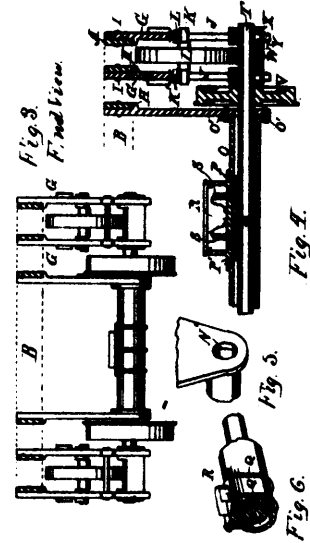
18321 Roberts' Apparatus for Pickling Wire.



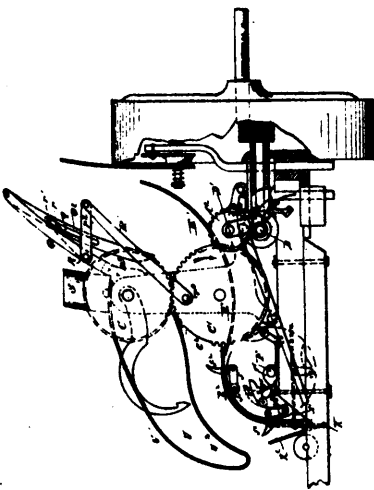
18322 Duval's Gun.



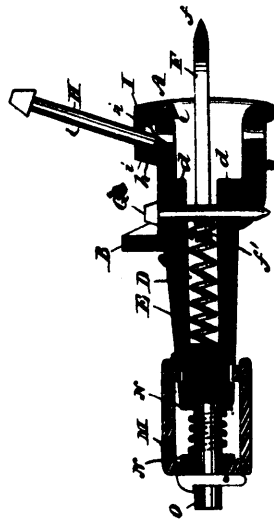
18323 Baylis Machine for Cutting Off and Bending Wire to Form Staples.



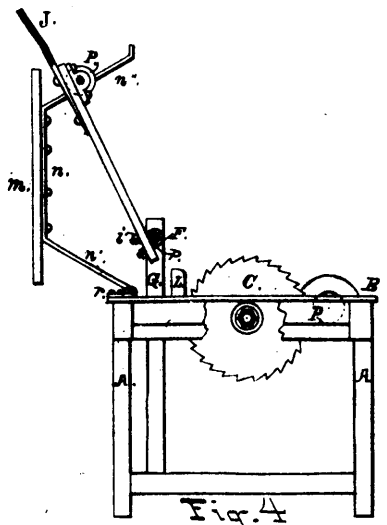
18324 Huson's Car Truck.



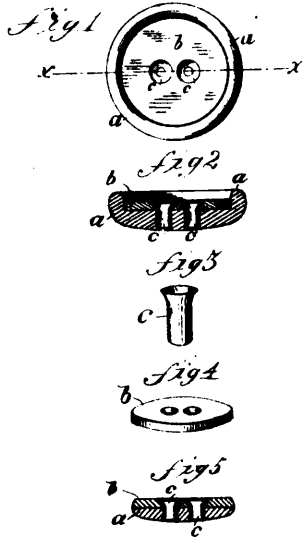
18325 Seiberling's Grain Binding Harvester.



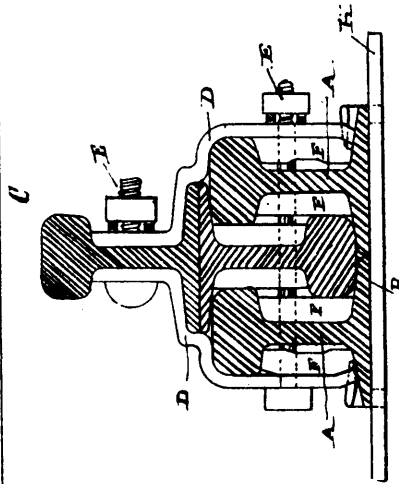
18328 Williams' Car-Coupling.



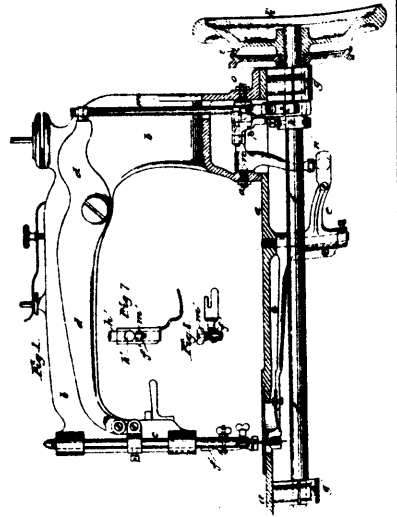
18327 Carrier's Machine for Manufacturing and Sawing Laths.



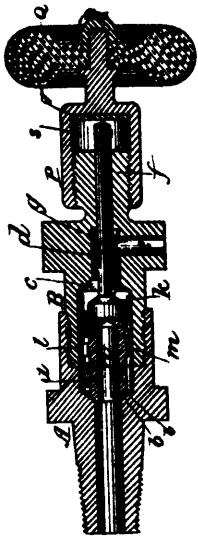
18331 Newell's Button.



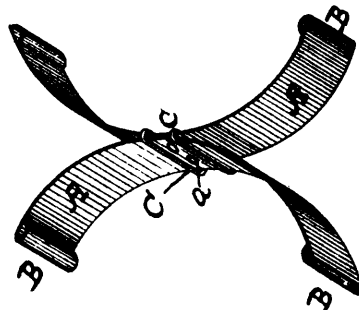
18332 Holgate & Bagnall's Rail Stringer.



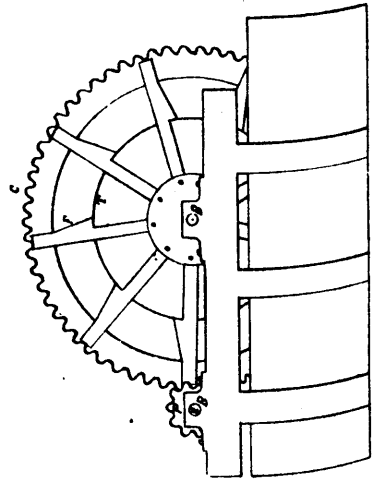
18333 Dearborn's Sewing Machine.



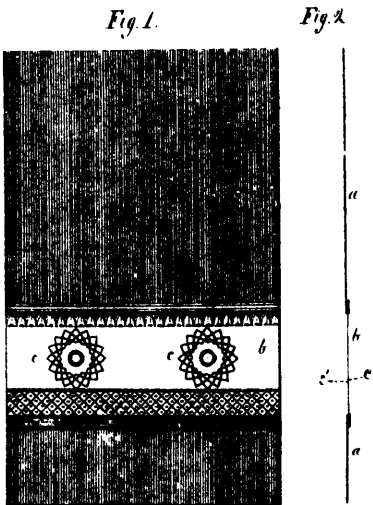
18334 Fulton's Gauge Cocks.



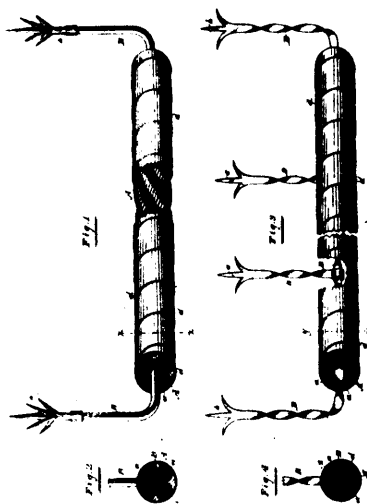
18335 Webb's Galley Type Lock.



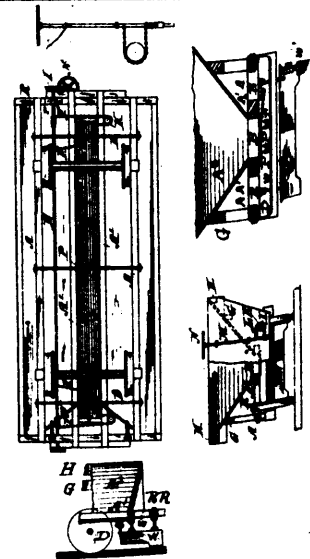
18336 Gordon's Lock Winch.



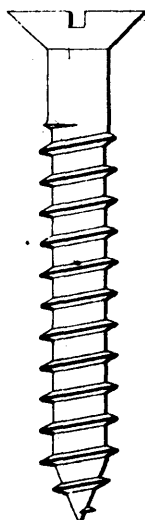
18337 Barrickie's Window Shade.



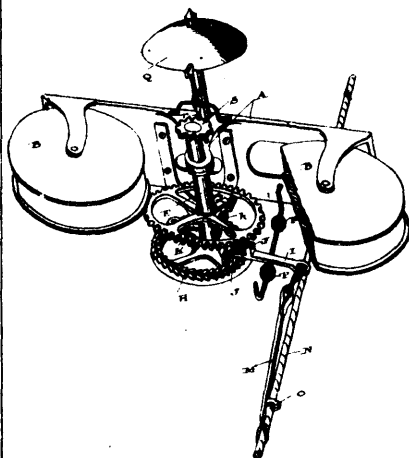
18338 Chambers' Telegraph and Telephone Cable.



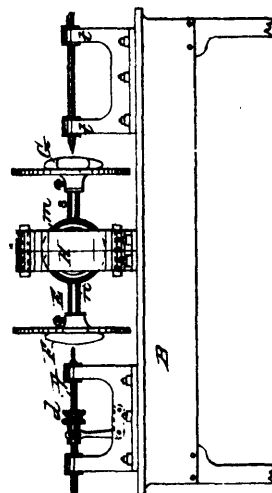
18339 Cordrey's Ballast Car.



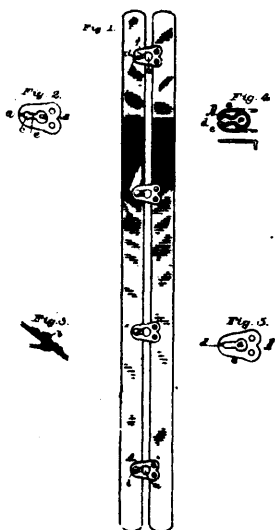
18340 Harvey's Gimlet Pointed Screw.



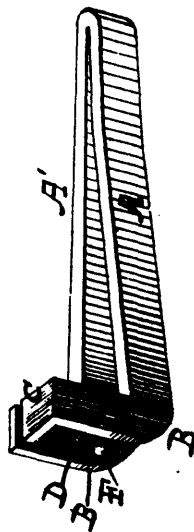
18341 McWilliams' Device for Indicating Railway Stations.



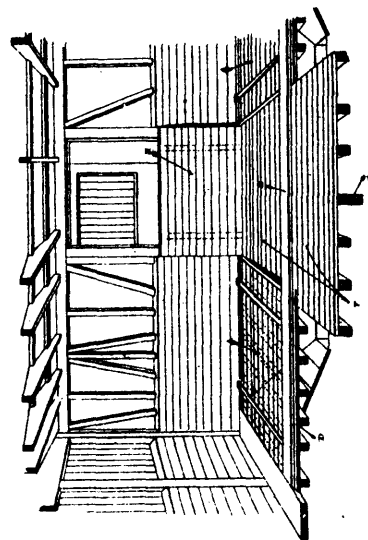
18342 Imback's Brush Boring Machine.



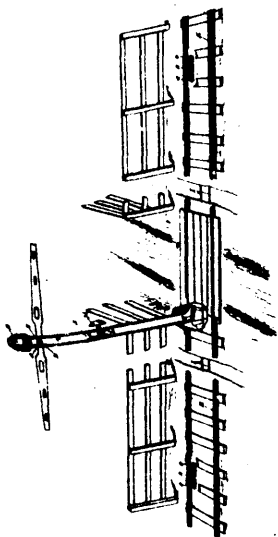
18343 Henias' Corset Clasp.



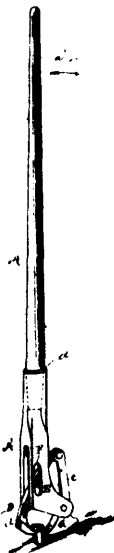
18344 Urie's Pitman Coupling for Harvesting Machine.



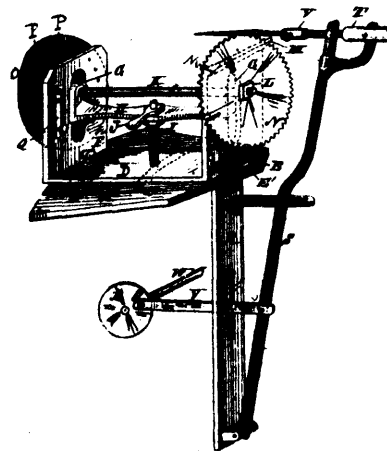
18345 Wilson's Car.



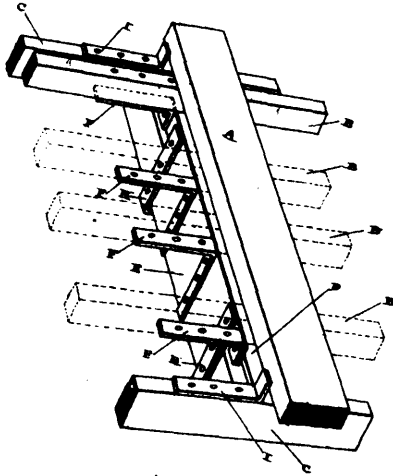
18346 McWilliams' Mechanism for Operating Semaphore Signals.



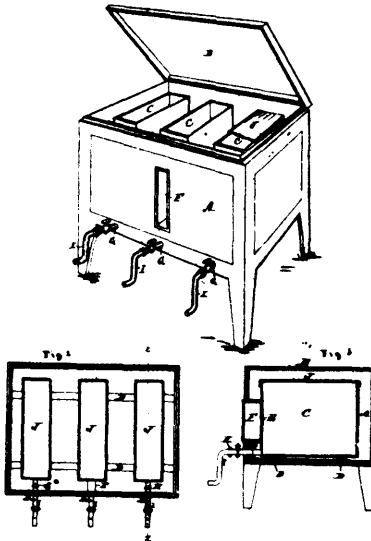
18347 Lewis' Nail Extractor.



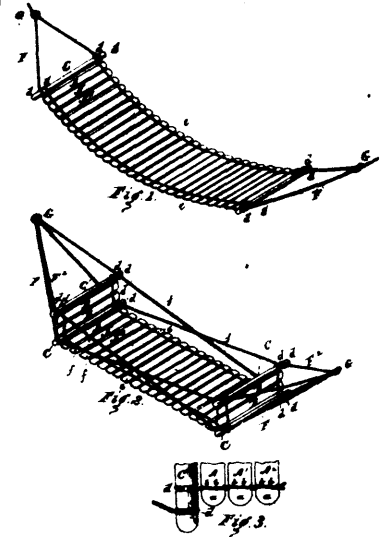
18348 Chambers' Saw Filing Machine.



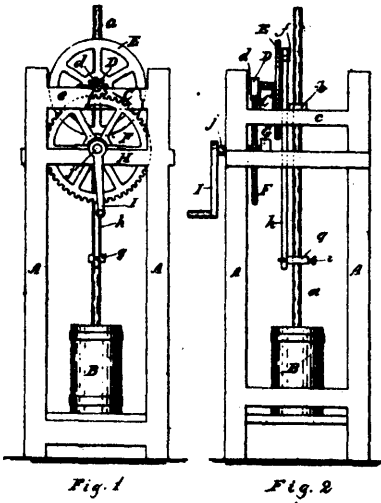
18349 Wilson's Railway Car.



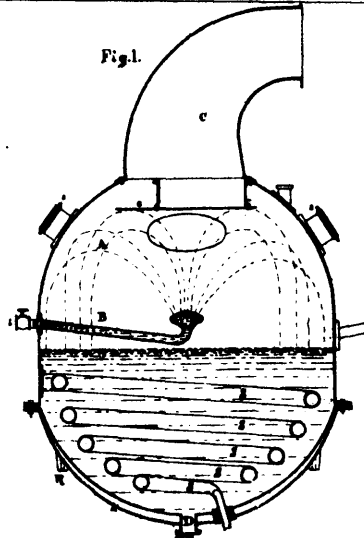
18450 Ainsworth's Creamer.



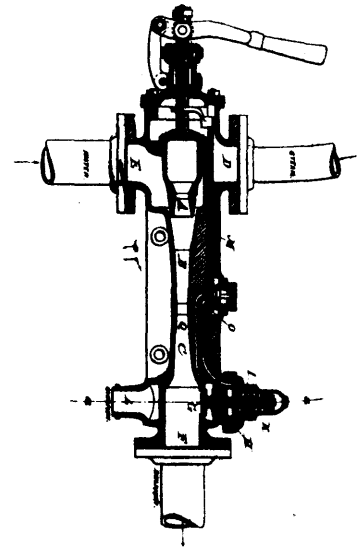
18351 Dodge's Hammocks and Cots.



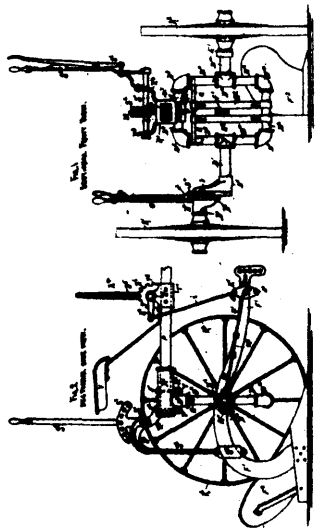
18352 Bartrand's Churn Washing Mechanism.



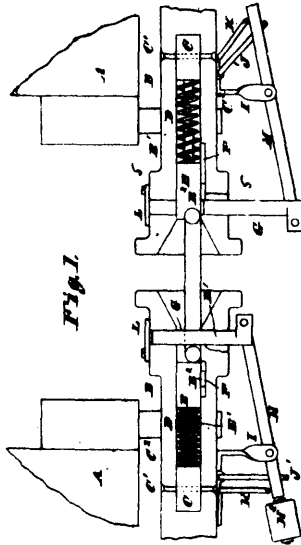
18353 Mathieu's Process and Apparatus for Evaporating Liquids.



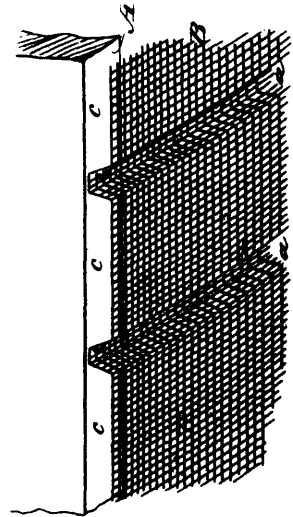
18354 Schatte's Steam Injector.



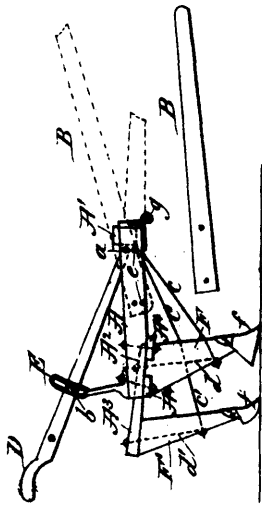
18355 Stoneman's Sulky Plough.



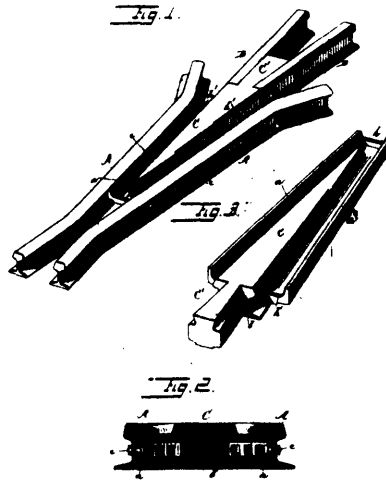
18356 Pease & Sankey's Car Coupling.



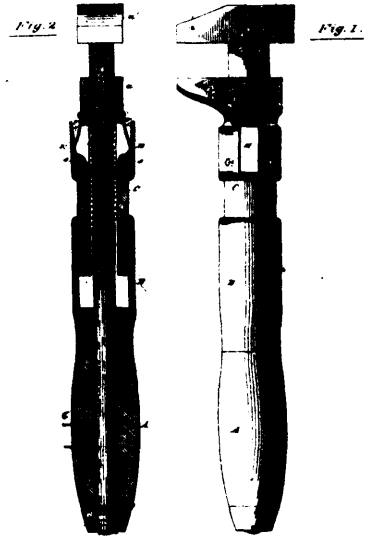
18357 Stanley's Metallic Plastering Surface.



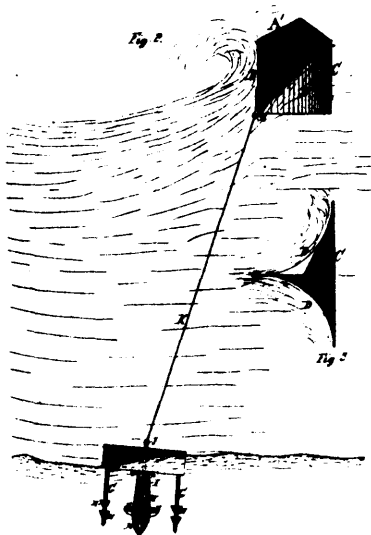
18358 Barnum's Thill Cultivator.



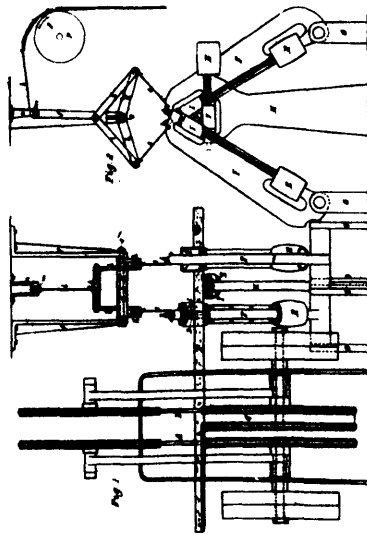
18359 Morden's Railway Frog.



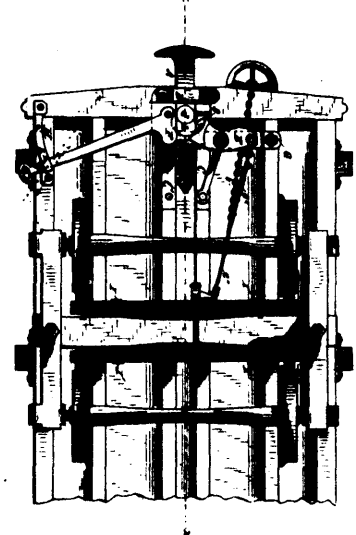
18360 Houlehan's Wrench.



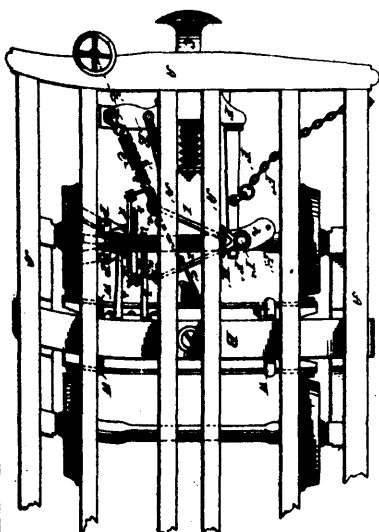
18361 Thomas' Breakwater.



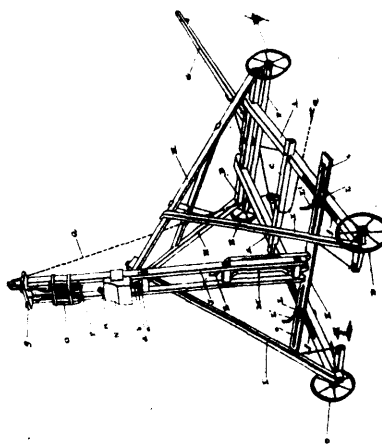
18362 Bowker's Machinery for Sawing Hoops.



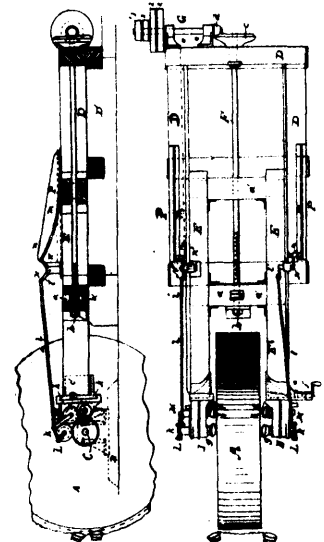
18363 Rote's Car Brake.



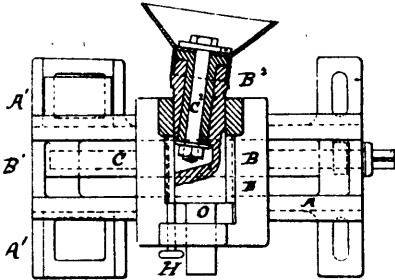
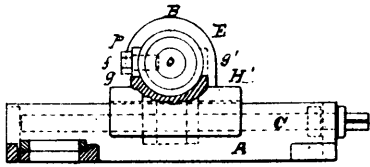
18364 Rote's Automatic Car Brake.



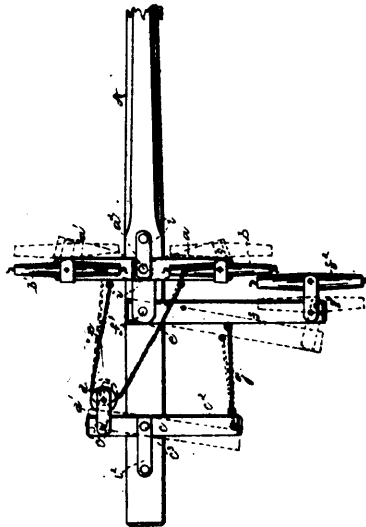
18365 Dixon's Machine for Driving Fence Posts.



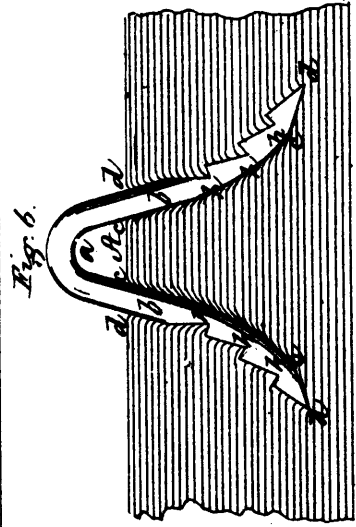
18366 Trier's Machine for Manufacturing Grindstones.



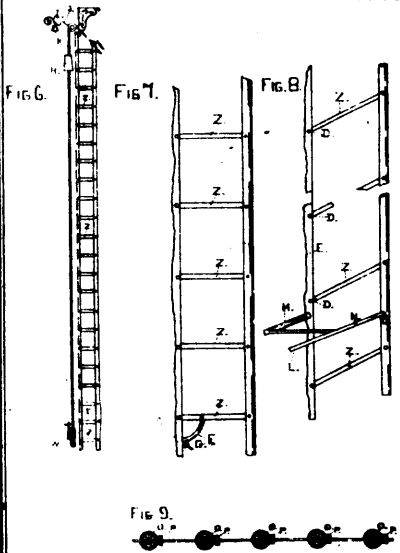
18367 Trier's Machine for Truing Grindstones.



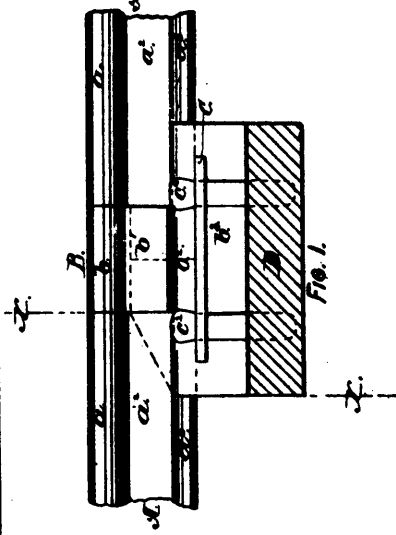
18368 Lawler's Draft Equaliser.



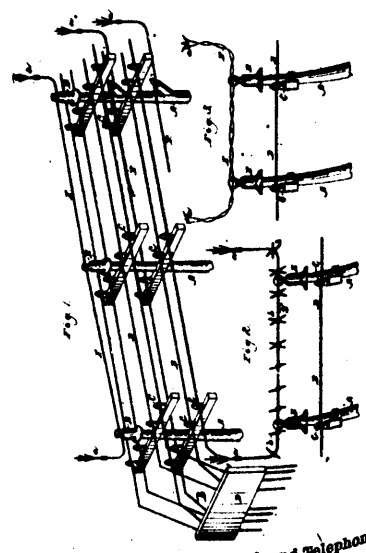
18369 Frost's Staple.



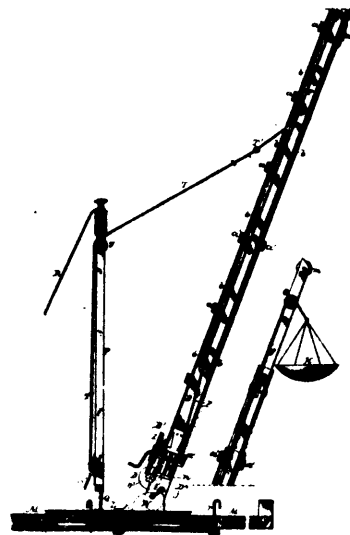
18370 Hausen's Fire Escape.



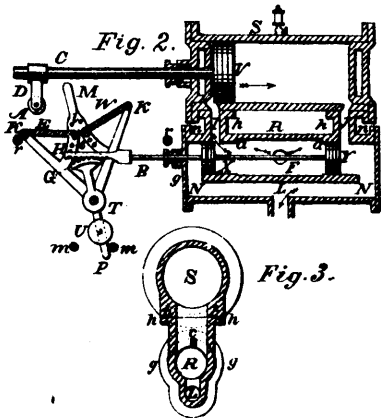
18371 Gibbon's Ball Joint.



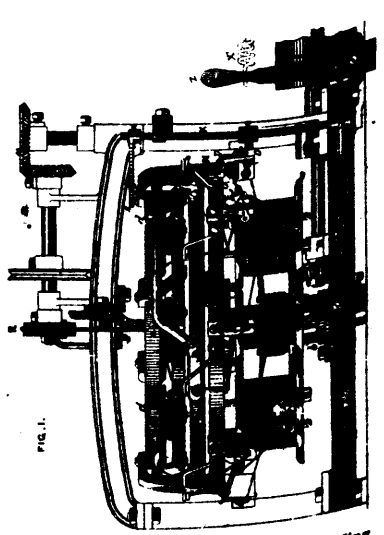
18372 Chambers' Aerial Telegraph and Telephone Conductor.



18374 Bower's Fireman's Extension Ladder.



18375 Nichols' Valve Gear.



18376 Veerkamp, Leopold & Darker's Braiding Machine.

Soldering iron, J. C. Covert.....	18,242
Spark arrester, J. A. Cotter.....	18,236
Staple, S. Frost.....	18,369
" machine to form, T. S. Bayles.....	18,323
Station indicating device, A. McWilliams, et al.....	18,341
Stove, M. C. Armour.....	18,298
" or furnace, D. M. Graham.....	18,284
" pipe, G. B. Barclay.....	18,253
Strengthening blood, composition for, E. Racicot.....	18,329
Stringer rail, H. Holgate, et al.....	18,332
Striker for sash bolts, C. W. Elliott, et al.....	18,281
Support, electric cable, A. S. Weaver, et al.....	18,226
Telegraph cable, J. C. Chambers, et al.....	18,338
" conductor, J. C. Chambers, et al.....	18,372
Telephone cable, J. C. Chambers, et al.....	18,338
" conductor, J. C. Chambers, et al.....	18,372
" cut-out, C. D. Wright, et al.....	18,268
Track laying machine, F. F. Volt.....	18,302
Trimmer, wick W. C. Seaton.....	18,270
Truck car, J. Huson, et al.....	18,324
Type lock, galley, S. D. Webb.....	18,335
Underwaist, M. E. Higgins.....	18,295
Valve gear, F. B. Nichols, et al.....	18,375
" stop, D. Kearney.....	18,305
Vehicle, attachments of horse, L. P. Bruneau.....	18,314
Ventilating apparatus, Mann's Boudoir Car Co.....	18,229
Waterproof, &c., fluid for making fabrics, C. B. Warner.....	18,227
Waters, mineral, J. S. Pearson.....	18,247
Wick trimmer, W. C. Seaton.....	18,270
Winch, lock, J. A. Gordon.....	18,336
Wiping apparatus, wire, H. Roberts.....	18,318
Wire, annealing pot for, H. Roberts.....	18,319
" cutting and bending machine, T. S. Bayles.....	18,323
" feeding apparatus, H. Roberts.....	18,320
" pickling apparatus, H. Roberts.....	18,321
" wiping machine, H. Roberts.....	18,318
Wood graining, N. S. Briggs.....	18,273
Wrench, G. G. Hadley et al.....	18,360

INDEX OF PATENTEES.

Agnew, R. M., et al., car brake.....	18,363	18,364
Ainsworth, G. J., creamer.....		18,350
Anderson, C., et al., plough.....		18,312
Armour, M. C., stove.....		18,298
Arthur, G. W., et al., lubricator.....		18,286
Bagnall, R., et al., rail stringer.....		18,332
Barclay, G. B., stove pipe.....		18,253
Barnes, T. C., millstone dressing machine.....		18,287
Barnum, D. L., thill cultivator.....		18,358
Barrickle, A., window shade.....		18,337
Bartrand, E., churn mechanism.....		18,352
Bayles, T. S., wire cutting and bending machine.....		18,323
Beeson, L., et al., train signal.....		18,252
Bell (The) Telephone Co., magneto-electric call.....		18,308
Bender, O. N., et al., electric cable support.....		18,226
Bennell, H. S., et al., car-coupling.....		18,356
Betschen, J., et al., motor power.....		18,279
Blun, F. S. M., et al., corset clasp.....		18,343
Bower, B. F., firemen's ladder.....		18,374
Bowker, W., hoop sawing machinery.....		18,302
Brady, P., et al., telegraph cable.....		18,338
" " " conductor.....		18,372
Briggs, N. S., painting composition.....		18,273
Brobst, D., roofing compound.....		18,282
Brown, C., magneto-electric call.....		18,308
" F. L., et al., boots and shoes.....		18,250
Bruneau, L. P., attachment of horse vehicle.....		18,314
Call, L. A., dress chart.....		18,233
Carrier, A., lath machine.....		18,327
Case, H. J., et al., harvesting machine.....		18,299
Chambers, D., et al., saw filing machine.....		18,348
" J. C., et al., telegraph cable.....		18,338
" " " " conductor.....		18,372
Church, H. L., et al., freezing apparatus.....		18,288
Clarke, C. L., et al., circuits and indicators.....		18,262
Conant, G., egg preserver.....		18,246
Cook, M. G., scales.....		18,235
Cordrey, T. P., ballast car.....		18,339
Cosgrove, W. F., plug for pipes.....		18,271
Cotter, J. A., spark-arrester.....		18,236
Covel, M., saw sharpening machine.....		18,280
Covel, A. W., fire escape ladder.....		18,297
Covert, J. C., soldering iron.....		18,242
Crawford, M., cockle machine.....		18,291

Crawford, M., flour dressing machiae.....	18,290
Crompton, F., et al., corset.....	18,316
Curtis, R. Z. B., grain cleaning machine.....	18,265
Cushman, S. S., et al., saw filing machine.....	18,348
Darker, W., et al., braiding machine.....	18,376
Davis, E. H., et al., car.....	18,345
" S., et al., railway car.....	18,349
Dearborn, C. A., et al., sewing machine.....	18,333
DeWitt, J. M., car brake.....	18,237
Dickerman, A., et al., window screen.....	18,317
Dixon, H. & B., post driving machine.....	18,365
Dodge, J. C., hammocks and cots.....	18,351
Donnelly, M., et al., striker for sash bolts.....	18,281
Dunbar, R. & G. H., et al., oiler for machinery.....	18,311
Duval, J., gun.....	18,322
Ederly, S. H., crane.....	18,274
Elliott, C. H., et al., striker for sash bolts.....	18,281
Eltringham, W. & J., safety fuses.....	18,310
Farlin, D., et al., rail joint.....	18,371
Fellows, R. C., brush boring machine.....	18,342
Fielden, G., binding harvester.....	18,278
Fisher, C. A., et al., cut out of telephone.....	18,268
FitzGerald, D. G., accumulator.....	18,256
Frost, S., staple.....	18,369
Fulton, L. B., gauge cocks.....	18,334
Gardner, F. A., et al., oiler for machinery.....	18,311
Garrity, L., et al., sulky plough.....	18,355
Gibbon, T. H., et al., rail joint.....	18,371
Gifford, E. N., car-coupling.....	18,296
Girdley, N. E., et al., telegraph operator.....	18,372
Goyn, R., et al., pitman coupling.....	18,344
Graham, C. A., hay elevator.....	18,244
" D. M., stove or furnace.....	18,284
Greene, W. A., device for protecting the neck bands, &c., of shirts.....	18,294
Grice, A. P., et al., nail extractor.....	18,347
Gridley, N. C., et al., telegraph cable.....	18,338
Hadley, G. G., et al., wrench.....	18,360
Hansen, O., fire-escape.....	18,370
Harter, M. D., et al., car brake.....	18,368
Harvey, H. A., gimlet pointed screw.....	18,340
Hay, A., sack filler.....	18,266
Henius, M. W., et al., corset clasp.....	18,343
Hewett, E., et al., circuits and indicators.....	18,262
Hice, H., et al., car brake.....	18,363
Higgins, C. L., flexible last.....	18,364
" M. E., under waist.....	18,295
Hillhorn, F. S., et al., galvanic battery.....	18,228
Hindley, R. C., skate.....	18,264
Hobbs, E. M., et al., car-coupling.....	18,315
Hochhausen, W., secondary battery.....	18,281
Hoedmaker, J. A., et al., galvanic battery.....	18,228
Hoffmaster, S., et al., lubricator.....	18,286
Holgate, H., et al., rail stringer.....	18,332
Holman, J. W., et al., car brake.....	18,364
Huson, J., et al., car truck.....	18,324
Imbach, M. G., brush boring machine.....	18,342
Kearney, D., stop valve.....	18,305
Keating, L. N., et al., window screen.....	18,317
" W. H., oven grate.....	18,243
Keffer, S. B., et al., boots and shoes.....	18,250
Kellogg, H. W., method of raising cream.....	18,304
Kells, E., et al., freezing apparatus.....	18,288
Knight, E., hasp lock.....	18,245
Krizik, F., et al., electric lamp.....	18,249
Lane, J. C., et al., railroad signal.....	18,258
Laughlin, S. J., elevator gate.....	18,244
Lawler, J. W. & A. B., draft equalizer.....	18,368
LeFebvre, F. X., gun.....	18,322
Leopold, C. F., et al., braiding machine.....	18,276
Lewis, F. A., lifting jack.....	18,363
" G. W., et al., nail extractor.....	18,347
Love, J., et al., dumping platform.....	18,303
McWilliams, A., et al., car-coupling.....	18,255
" " " semaphore signals.....	18,346
" " " station indicating device.....	18,341
Mann's Boudoir Car Co., heating apparatus.....	18,251
" " " ventilating.....	18,229
" J. D., heating apparatus.....	18,251
" W. D., ventilating apparatus.....	18,229
Markham, A., process for converting mauganite, &c.....	18,300
Mathieu, J. A., evaporating apparatus.....	18,358
Merrill, G. P., et al., wrench.....	18,359
Morden, W. J., railway frog.....	18,309
Morris, C. W., rowlock.....	18,289
Munn, S. J., et al., train signal.....	18,253
Newell, N. C., button.....	18,331
Nichols, F. B., et al., valve gear.....	18,375

O'Harra, G. W., et al., galvanic battery.....	18,228	Sprague, C. E., cheque book.....	18,225
Oliver, J., et al., plough.....	18,312	Stanley, J., plastering surface.....	18,357
Osborn, D. M., et al., harvesting machine.....	18,299	Steber, B. T., machine for arranging match splints.....	18,293
Farrish, M. F., et al., train signal.....	18,252	Stephenson, F. M., et al., extension ladder.....	18,374
Patterson, C. S., et al., braiding machine.....	18,376	Stockdale, R., sash frame.....	18,285
Peace, J. G., et al., car-coupling.....	18,356	Stoneman, O. A., et al., sulky plough.....	18,355
Pearson, J. S., mineral waters.....	18,247	Swayze, S. J., et al., railroad signal.....	18,258
Plette, L., et al., electric lamp.....	18,249	Thackston, R. D., hatchway.....	18,292
Plant, W. P., et al., harvester binder.....	18,313	Thomas, E. C. G., break water.....	18,361
Quinqui, A., cribbing plate for horses.....	18,232	Thomson, C., et al., valve gear.....	18,375
Racicot, E., composition for rheumatism.....	18,328	Tracy, C., et al., car-coupling.....	18,356
“ “ “ “ the blood.....	18,329	Tribe, T., et al., window screen.....	18,317
“ “ “ “ cold, &c.....	18,330	Trier, F., machine for manufacturing grindstones.....	18,366
Rathburn, E. W., et al., gas producing material.....	18,254	“ “ “ “ truing “.....	18,367
“ “ “ “ from composition of matter.....	18,257	Trotman, M., et al., harvester binder.....	18,318
Roberts, D. O., galvanic battery.....	18,228	Urie, T., et al., pitman coupling.....	18,344
“ H., amehaling pot for wire.....	18,319	Vanstone, I. M., et al., corset.....	18,316
“ “ wire wiping apparatus.....	18,318	Veerkamp, F. L., braiding machine.....	18,376
“ “ “ feeding “.....	18,320	Voight, F. F., track laying machine.....	18,302
“ “ “ pickling “.....	18,321	Walker, G., et al., gas from compositions of matter.....	18,257
Robinson, C. L., medicinal compound.....	18,269	“ “ “ “ producing material.....	18,254
Roschanan, B., button.....	18,301	Wallace, W., dressmakers' rule.....	18,272
Rote, C. V., et al., car brake.....	18,363	“ “ et al., car-coupling.....	18,255
Rouse, A. W., et al., car-coupling.....	18,356	“ “ “ semaphore signals.....	18,346
Ruggles, H. N., et al., striker for sash bolts.....	18,281	“ “ “ station indicating device.....	18,341
Sanky, E. B., et al., car-coupling.....	18,356	Waring, R. S., electric cables, 18,238, 18,239, 18,240, 18,241, 18,248.....	18,248
Savage, T., et al., dumping platform.....	18,303	Waring, R. S., submarine cable.....	18,277
Schutte, L., steam injector.....	18,354	Warner, C. B., fluid for making fabrics water proof, &c.....	18,227
Seaton, W. C., wick trimmer.....	18,270	Way, P. A., roofing compound.....	18,282
Seebach, L., et al., motor power.....	18,279	Weaver, A. S., et al., electric cable support.....	18,226
Selberling, J. F., binding harvester.....	18,259, 18,261	Webb, S. D., galley type lock.....	18,335
“ “ “ “ harvesting machine.....	18,260	West, A. C., plough.....	18,306
Sillar, W. C., et al., treatment of sewage matters.....	18,373	Weston, C. H., saw guides.....	18,307
Simpson, C. G. C., attachment of horse vehicle.....	18,314	Williams, J. L., car-coupling.....	18,326
“ J. M., display body.....	18,285	Willis, W., jr., et al., car truck.....	18,324
Slater, J. W., et al., treatment of sewage matters.....	18,373	Wilson, T. L., et al., railway car.....	18,349
Snyder, H. J., et al., sewing machine.....	18,333	“ “ “ “ car.....	18,345
Solomon, C., et al., car-coupling.....	18,315	“ W. S., horse rake.....	18,275
South Bend (The) Iron Works, plough.....	18,312	Winton, W. W., et al., sewing machine.....	18,333
Spinney, W. F., method of securing buttons.....	18,276	Wright, C. D., et al., out-out of telephone.....	18,268