

Technical and Bibliographic Notes / Notes techniques et bibliographiques

The Institute has attempted to obtain the best original copy available for filming. Features of this copy which may be bibliographically unique, which may alter any of the images in the reproduction, or which may significantly change the usual method of filming, are checked below.

L'Institut a microfilmé le meilleur exemplaire qu'il lui a été possible de se procurer. Les détails de cet exemplaire qui sont peut-être uniques du point de vue bibliographique, qui peuvent modifier une image reproduite, ou qui peuvent exiger une modification dans la méthode normale de filmage sont indiqués ci-dessous.

Coloured covers/  
Couverture de couleur

Covers damaged/  
Couverture endommagée

Covers restored and/or laminated/  
Couverture restaurée et/ou pelliculée

Cover title missing/  
Le titre de couverture manque

Coloured maps/  
Cartes géographiques en couleur

Coloured ink (i.e. other than blue or black)/  
Encre de couleur (i.e. autre que bleue ou noire)

Coloured plates and/or illustrations/  
Planches et/ou illustrations en couleur

Bound with other material/  
Relié avec d'autres documents

Tight binding may cause shadows or distortion along interior margin/  
La reliure serrée peut causer de l'ombre ou de la distorsion le long de la marge intérieure

Blank leaves added during restoration may appear within the text. Whenever possible, these have been omitted from filming/  
Il se peut que certaines pages blanches ajoutées lors d'une restauration apparaissent dans le texte, mais, lorsque cela était possible, ces pages n'ont pas été filmées.

Additional comments: / Various pagings.  
Commentaires supplémentaires:

Coloured pages/  
Pages de couleur

Pages damaged/  
Pages endommagées

Pages restored and/or laminated/  
Pages restaurées et/ou pelliculées

Pages discoloured, stained or foxed/  
Pages décolorées, tachetées ou piquées

Pages detached/  
Pages détachées

Showthrough/  
Transparence

Quality of print varies/  
Qualité inégale de l'impression

Continuous pagination/  
Pagination continue

Includes index(es)/  
Comprend un (des) index

Title on header taken from: /  
Le titre de l'en-tête provient:

Title page of issue/  
Page de titre de la livraison

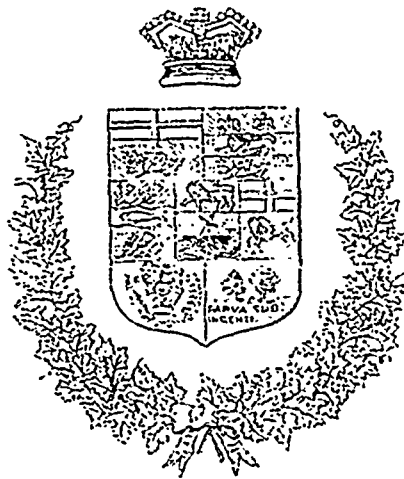
Caption of issue/  
Titre de départ de la livraison

Masthead/  
Générique (périodiques) de la livraison

This item is filmed at the reduction ratio checked below/  
Ce document est filmé au taux de réduction indiqué ci-dessous.

10X	14X	18X	22X	26X	30X
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
12X	16X	20X	24X	28X	32X

THE  
CANADIAN PATENT OFFICE  
RECORD.



VOLUME V.



OTTAWA:

PUBLISHED BY AUTHORITY.

1877.





VOLUME V., 1877.-INDEX.

INDEX OF INVENTIONS.

Acid and salts, tartaric, F. Dietrich .....	8062	" " E. N. Forsyth .....	7234
" pyroligneous, H. M. Pierce .....	6804	" " H. J. Beemer .....	7070
Acids, sowing, R. S. Penniman .....	7581	" " J. Boswick .....	7897
Addressing newspapers, A. Dick .....	7750	" " W. B. Hatch .....	7667
Advertising cards, A. H. Dixon .....	7500	" " W. H. Palmer et al. ....	7837
Air compressors, B. Y. Babbit .....	8118	" " J. D. Powers .....	6907
Alarm boxes, telegraph, S. Mohr .....	7051	" " J. & W. E. P. Rtes. ....	7599
" railway, J. M. Livingston .....	7081	" " J. McGulr .....	7030
Alarms, burglar, C. C. Du-enbury .....	7999	Bedstead, spring, D. B. Channell et al. ....	6895
Allimentary preparations, J. L. Johnston .....	7085	Bell, sleigh, G. W. Tucker .....	8459
Alkalies, recovering, J. W. Dixon et al. ....	7767	Benches, church, C. Potter .....	7187
Anchors, P. Protheroe .....	7595	Billiard cues, H. Platts et al. ....	6797
Animal substances, J. Hopkins .....	7381	Blinders, temporary, G. F. Alexander .....	7413
Areameter, J. H. Williams et al. ....	7923	" " G. W. Emerson .....	7901
Arms, breech-loading, B. B. Hotchkiss .....	7606	Blind fixtures, W. N. Miller .....	7215
Ash sifters, J. Brooks .....	6985	" hinges, W. Jones .....	7879
" " P. W. Peckham .....	7062	Blinds, H. P. Smith .....	7045
Augers, earth, C. D. Pierce .....	7816	" and doors, E. Prescott .....	7980
" post, C. W. Pool .....	7258	" inside, D. C. Donnell et al. ....	7349
Axle box, J. B. Sammis .....	7631	" venetian, R. Jane et al. ....	7374
" " W. W. Whitaker .....	7466	" window, D. Prevost .....	7424
" " car, O. Tomlinson .....	6837	" " J. & W. F. Behel .....	7252
" " oiler, J. N. Smith .....	7611	Blood treating, J. Bliss et al. ....	7931
" boxes, A. Calder .....	7634	Blotters and covers, J. W. Payson et al. ....	7705
" car, T. A. Biswell .....	7834	Boats, life, G. Bates .....	7412
" lubricators, W. H. Wright .....	7354	" " J. H. Hatton .....	7296
" trees, W. Herlhey et al. ....	7032	Bobbins, making, G. W. Glazier et al. ....	7084
Axles, vehicle, B. F. Richardson .....	6936	Boiler cleaners, J. A. Fordon et al. ....	7836
" waggon, M. Lattmer .....	7446	" feeders, F. A. Pratt .....	6909
Bag fasteners, H. Redden .....	7566	" dye cleaner, J. S. Godfrey .....	7928
" holder, C. W. Johnston et al. ....	7070	" injector, W. T. Messinger .....	7783
" holders, E. Collins .....	7250	" injectors, J. Ferguson .....	7256
" paper, T. R. Rhoder .....	7978	Boilers, cleaning, G. R. Lobdell .....	7145
" grain, J. Collins .....	7975	" steam, A. C. Norcross .....	8063
" paper, J. C. Wilson .....	7901	" " C. W. Reed .....	7009
Bags, paper, J. Donnelly et al. ....	7249	" " E. Hamer et al. ....	8038
Baking machines, A. Rannie .....	7147	" " G. H. Millen et al. ....	7109
" sideboard, R. K. M. & J. McCulloch .....	7213	" " H. Purdy .....	7219
Ballettes, F. S. Lennox .....	7042	" " H. S. Coleman .....	7220
" tying, S. D. Purdy .....	7029	" " J. W. Hard et al. ....	7027
Ball, mast, E. C. Seely .....	7912	Bolt, B. P. King .....	7664
Balloons, A. Apraxine .....	8035	" cutter, W. C. Carlton .....	7489
Barrel, J. Tomlinson .....	7707	Bolter and duster, F. G. Wallace et al. ....	8004
" hoops, H. S. Smith .....	5898	Book binding, B. Horsley .....	7821
" stands, D. Scott .....	7825	Boot lacings, T. A. McDonald .....	7025
" staves, H. S. Smith .....	6383	" plate, E. S. Perry .....	7370
Barrels, making, J. Tomlinson .....	7979	" and shoe lasts, J. Bartley et al. ....	8116
Basket, making, J. T. H. and W. Churchhill .....	7976	" " pegs, T. T. Prosser .....	6894
Baths, portable, J. Johnston et al. ....	8121	" " tips, W. Geen .....	7197
Battery, gravity, M. W. Parrish .....	6811	Boots and shoes, C. Edwards .....	7977
Beans, baked, E. W. Brown .....	7896	" " D. H. and J. Laurie .....	7072
Bed bottom, G. B. Izzard .....	7503	" " E. Solomon .....	7550
" " H. Mott .....	7952	" " G. H. P. Flagg .....	7768
" " J. & W. E. Forbes .....	7599	" " G. W. Copeland .....	7891
" " P. Williams .....	7209	" " J. Batley et al. ....	8030
" " T. DeWitt .....	7077	" " J. H. Busell .....	7929
" " T. L. Odell et al. ....	6865	" " J. Keats .....	7866
" " W. W. Bartlett .....	6787	" " J. L. Pelletier .....	8119
bottoms, C. E. Brown .....	8108	" " J. W. Rogers .....	7864
		" " S. J. Parson .....	7795
		" " J. W. Rogers .....	7849
		" " L. W. Baxton et al. ....	7967
		" " M. Bray .....	7658
		" " S. Hanshall .....	7864

Boots and shoes, T. A. McDonald	7949	Car Couplings, W. Craig	7702
" " T. Dann	7153	" " W. Dunn	7159
" " T. and S. Bell	7046	" lubricators, W. H. Wright	7354
" " W. S. Childs	7522	" movers, J. G. Wilber	6997
" " pegs in, J. & E. Popham	6793	" pole, S. A. Otis	7200
" " " J. O. and E. A. Bourret	6919	" trucks, A. Berry	8067
" " " L. Cote	6918	" " I. B. Lyons et al.	6931
" " " L. Goddu	8122	" ventilators, M. A. Morton et al.	8002
Boring machine, J. D. Shoots	8037	" wheels, J. K. Sax	7192
Bottle nozzle, E. B. Requa	6803	" " A. Nicol et al.	7366
" stoppers, S. S. Newton	6986	" " G. Elmslie	7802
Bougles, J. C. Allen	8059	Care, propelling, J. B. Tibbits	7930
Box machines, J. Kisor	7273	" " J. Walton et al.	7376
Boxes, clutch, H. Martin	7151	" railway, B. J. LaMothe	7005
" service, R. Mitchell	7064	" " R. Eaton et al.	7535
Braces and suspenders, N. Van Allen	7881	" " R. P. Cooke	6885
Brake, R. Jacobl	6835	" refrigerator, J. H. Wickes	7180
" railway, J. B. Hyde	8014	" sleeping, G. Leve	8000
" sleigh, J. Powell	7313	" ventilating, R. P. Cooke	6885
" waggon, R. Brown	7431	Carbon, disulphide of, W. G. Smith	7656
" " T. H. Moore	6851	Carbonate of soda, E. Solvay	7019
Brakes, railway, A. F. Gue et al.	7956	Carbureters, A. Wiggin	7385
" " J. D. Johnson	7933	Carbureters, C. Godfrey	7310
" railroad, W. J. Stevens	7635	" gas, O. F. Boomer et al.	7497
" vacuum, F. W. Eames	8218	Cards, advertising, A. H. Dixon	7500
Bread making, E. W. Bateman	7591	" display, H. H. Snow	7123
Brick kilns, H. B. Evans	7810	" postal, C. K. Marshall	7887
" " W. T. Christy	8106	Carpet sweepers, A. S. Hinkley	7679
" machine, C. N. Fisher	6807	Carriage, &c., D. O. Parker	7183
" " D. Davis	7717	" canopy, E. Miller	7274
Brieks, bond, J. Piché et al.	7344	" child's, D. L. Thompson et al.	7427
Bridge piers, E. Wasell	7636	" clips, J. Wood	7765
Bridges and roofs, J. Forbes	7870	" holdbacks, C. Phelps	7068
Broom bag, J. S. McMurray et al.	3402	" shaft, J. E. Hadden	7971
" holder, H. M. Wells et al.	7751	" spring, J. B. Armstrong	7012
" stands, W. Heardon	7114	" Whiffletrees, J. H. Balnton	8129
Brooms and brushes, T. Jesson et al.	7712	Carrriages, A. A. Winsor	7607
" corn, J. D. Bresser	6941	" " J. McBride	7253
Bruises, cure of, N. Mercier	6823	" railway, E. Levetich	6950
Brush handle, J. Waddell	7329	" woodwork of, P. O'Brien	7382
Brushes, H. Rosenthal	7013	Carrots, thinning, J. Carleton	7059
" metallic, J. E. and C. E. Howard	7499	Cattle and horse food, C. F. Brunel	8126
" rotating, J. Kistler	8189	" stanchions, Z. W. Smith	7081
Buggies, J. McBride	7335	" wash, W. Clark	7708
" gear of, J. Field et al.	7557	Cement, R. G. Fraser	6943
" and sleighs, J. Maunder	6912	" and lime, N. Cummings	7943
Buildings, constructing, J. F. Patten	7811	Cements, S. and J. Olley	7494
Bungs, making, T. R. Fuller	7817	Cereals, preparing, J. J. Tyler	7117
Burial cases, J. Askins	7863	Chair, &c., D. O. Parker	7183
Burner, hydro-carbon, C. Holland	7945	" invalid, A. M. S. Goldschmidt	7847
Bush cutters, O. Pickering	7261	Chairs, G. S. de Bonald	6934
Butterdish, H. C. Cone	7582	" J. Tees	7044
" keeping, J. F. Ferguson	7422	" adjustable, G. Wilson	8132
" machines, E. P. Walker	7610	" child's, D. L. Thompson et al.	7427
" manufacture, L. B. Arnold	7222	" dentist, G. W. Archer	7292
" package, A. J. Finnegan	7246	" dentists', H. McLaren	7161
" packages, H. P. Adams	6910	" reclining, N. N. Horton	7959
" " M. W. Spaulding	7163	Chambers, preserving, T. Armstrong, Jr.	7430
" workers, E. Dansereau	7776	Chandeller, extension, W. A. Hull	7713
" " J. R. Smith et al.	7513	" glass, J. H. Hobbs	6851
Butting timber, W. H. Kuhlert	7140	Chairs, baggage, R. F. Livermore	6977
Button fasteners, M. M. Shur	7238	Cheese manufacture, L. B. Arnold	7222
" machines, C. Radcliffe	7690	" presses, A. S. Beach	7717
Buttons, attaching, C. M. Platt	7166	Chisel, mortising, E. Cole et al.	7913
Cages, bird, A. E. Mook	8101	Chuck, plyc holding, J. Flower	7899
Can machines, P. Dillon et al.	7075	Churn, A. McCauley et al.	7286
Can seaming, F. A. Walsh et al.	7798	" A. T. Wholey	7279
Cane cutters, O. Pickering	7261	" M. Sweeney	7454
Canisters for groceries, T. McDonald	7593	" dasher, R. M. Case	6884
Cans, M. Seely et al.	7169	" dashers, D. N. Ellsworth	7518
" meat, G. Brougham	6793	" " J. and A. Ferguson	7720
" metal, L. V. Sone	7480	" powers, S. Weaver	7763
" milk, A. Huff	7110	Churns, E. Brough	7523
" oil, J. Graves	7651	" F. Hughson	7039
Caps for jars, J. A. Chadwick	7181	" J. McDermald	7597
Car axle box, O. Tomlinson	6837	" J. Pennock	7898
" " W. W. Whitaker	7466	" O. W. Davis	7444
" " boxes, T. A. Elsell	7834	" R. P. Liston	7116
" brake, R. Jacobl	6835	" W. H. Bodkin et al.	7863
" brakes, I. H. Congdon et al.	7400	" W. H. Convers	7700
" coupler, N. Wilson	8095	" W. Knaggs	7160
" " J. Johnston	7398	" W. Pettis	7859
" " W. H. Fairn	7328	" W. Wilson	7257
" couplers, L. Terrill	7105	" dash, A. C. Otty et al.	7986
" " D. D. Wright	7815	" rotary, B. C. Bort	7985
" couplings, C. Dobbs et al.	7782	" " J. Burbank	7787
" " D. M. Campbell	7154	Cigar machines, R. Roberts	7886
" " J. M. Keen	7682	Cigarette machines, W. Buchanan et al.	7953
" " J. P. Edwards	7890	Cigars, J. H. Campfield	7692

Cigars, M. Gelston.....	7644	Drilling machine, F. Keenan.....	7805
" and cigarettes, A. Pearl.....	7113	Drills, graft, J. C. Buck.....	7346
" making, A. and J. Marengo.....	7379	" metal, J. P. Thompson.....	7775
Clap boarding, E. Barrett.....	7766	" rock, S. Ingersoll.....	7146
Clothes scourers, H. Carter.....	6915	" " U. Cummings.....	8142
Clover hullers, A. R. Appleman.....	7616	" seed, J. W. Reid.....	6952
Coal burning, H. A. Ives.....	6963	" " W. H. Rowe.....	7308
Coats, A. P. Silvy.....	7016	Drivers, first, &c., W. D. Westman.....	6913
Cock, gas stop, A. W. Morgan.....	8105	Dryer, J. Bates.....	7570
" gauge, W. Andrews et al.....	7092	" clothes, M. L. Smith.....	8093
Coffee pots, J. Cromwell.....	7146	" fruit, C. W. & E. A. Jones.....	6684
Coffee, preparing, R. Goundry.....	7312	Dryers, clothes, F. M. Earle.....	7231
Coffin, lifters, O. Girard.....	7318	" " H. W. Coulter.....	7858
Coffins, J. Askins.....	7863	" " J. P. Hill.....	7293
" J. McCarthy.....	7339	Dryers, grain, J. Guardiola.....	7136
" marble, T. E. Dunfels.....	7237	" lumber, G. W. Read.....	7047
Collars for garments, G. Farewell.....	7175	Drying, fish, N. Durkee.....	7201
" horse, E. Stroud.....	7052	" house, S. W. Craven.....	7726
" M. Turley.....	7553	" wheat, J. V. Price.....	7060
Coloring compositions, G. S. Wolf.....	7843	Ear muffler, H. G. Creveling.....	6839
Colors, grinding, J. J. Lancaster.....	7890	" mufflers, W. Abbott.....	6915
Coudenser, W. J. & W. A. Austin.....	7172	" muffs, J. A. Fraux.....	7139
Cookers, feed, J. P. Martin.....	7174	" slippers, I. B. Kleinert.....	7756
Cooking apparatus, C. R. Gilbert et al.....	7817	Egg boxes, A. H. Lucas.....	6972
" ranges, J. Briggs.....	7920	Electrical apparatus, J. Forbes.....	7870
" stoves, C. A. Hamelth.....	7727	Electric telephony, A. G. Bell.....	7789
" J. Milne.....	7346	Elevators, hay, F. Ward.....	8090
Cooler, milk, W. Cooley.....	7330	" hydraulic, E. Brewer.....	7381
Coolers, milk, G. R. Ingalls.....	7100	Engine, gas, J. Werthelm.....	7045
" T. DeWitt et al.....	7152	Engines, direct acting, E. S. Winchester et al.....	7481
Corking machines, D. R. Shaw.....	7565	Engines, fire, W. Scott.....	7659
Corn planter, J. Custer.....	7914	" V. Straube.....	7482
Corset, J. S. Guthrie.....	6817	" gas, J. Werthelm.....	6923
Corsets, L. C. and I. Warner.....	7496	" pulp, A. Gardner et al.....	7015
" abdominal, C. A. Griswold.....	6927	" S. L. Gould.....	7861
Covers and blotters, J. W. Payson.....	7705	" pulping, A. Fickett.....	7873
Cracker machine, A. Ruger.....	8052	" J. Chase.....	8012
Cradles, baby, A. Woodward.....	7297	" steam, B. Holland et al.....	7533
" rocking, J. W. Miller et al.....	7251	" G. G. Lafayette et al.....	7440
Cranks, compensating, R. D. Milne.....	7125	" G. Maskell.....	8087
Cream keeping, J. F. Ferguson.....	7122	" J. Fee et al.....	7137
Crimping leather, J. Smith.....	7601	" J. M. Simpson et al.....	7826
Cryptography, A. Berghold.....	7270	" J. Storer et al.....	7298
Cure of cuts, &c., N. Mercier.....	6823	" S. Warrick et al.....	6829
Cultivators, G. Bettschen.....	7115	" W. Clubine.....	7862
" harrow, C. LaDow.....	7584	" water, J. Fee et al.....	7137
" and sowers, R. B. Sheldon.....	7890	Envelope machine, H. J. Wickham.....	6897
Cuspadores, J. C. Moore.....	7251	Envelopes, J. H. Valpey.....	7087
Curtain fasteners, N. Campbell.....	8036	" P. C. Carter.....	7005
" fixture, D. S. Lloyd.....	7364	" safety, A. Christey.....	7243
" E. F. McComas et al.....	7421	Erasers, S. Darling.....	7974
" fixtures, A. B. Shaw.....	7574	Escapement, R. Barclay.....	6816
" A. Fontagne et al.....	7026	Explosive compound, A. Nobel.....	6869
" N. Campbell.....	7709	" compounds, E. Judson.....	7148
Cutlery, W. Eccleston.....	7051	Fabrics, smoothing, J. F. Fresno.....	8033
Damper, G. E. J. Hauwell et al.....	6862	" woven, E. Possett.....	7357
Dental plates, C. F. Barnard.....	7919	Fanning mill, J. Bennett.....	7289
" pluggers, C. King.....	7604	" J. P. & G. Cairns.....	6806
Derrick machines, R. R. Osgood.....	7701	" J. Riddell.....	6869
Derricks, N. K. Connolly.....	7026	" T. Wilson.....	7803
Designs ornamental, H. Silver.....	7301	" mills, A. W. and C. T. Kendrick.....	7791
Desks, R. W. Simpson.....	7069	" C. Saunders.....	7515
" school, B. N. Hemenway.....	8051	" R. J. Horton.....	7403
Dies and taps, J. Flower.....	7894	" T. Barnes.....	6989
Dish, butter, H. C. Cone.....	7582	" W. H. Emerson et al.....	7143
" warmers, N. Clark.....	7275	" W. McKenzie.....	7198
Dishes, grocers, C. O. Ingersoll.....	7400	Fare registers, W. H. Hornum.....	7779
Distilleries, materials for, G. Ellenberger.....	8055	Faucets, F. C. Lillis.....	8073
Ditching machines, M. J. Austin.....	8150	Feather renovating, M. McKellar.....	7592
Divider and sliding hook, H. Sherman.....	7938	" N. H. Shaw.....	6892
Door fastening, J. G. Phillips.....	6930	" renovators, W. Biggar et al.....	7568
" fastenings, J. Cairns et al.....	7026	Feed cookers, J. P. Martie.....	7474
" J. Wright.....	7860	Felly joint, D. T. Rowerman.....	7134
" hanger, J. Dayer et al.....	7281	Felt hardening, J. Keats.....	7965
" hinge, W. Gillillan et al.....	6824	" roofing, J. B. Slichter.....	8123
" securer, W. Ascough.....	7303	Felts, lined, T. Samuel.....	7738
" spring, &c., M. Brown.....	6954	Fence barb, J. Halsb.....	7521
" springs, A. A. Stinson et al.....	7361	" posts, G. Shelton.....	6982
" thresholds, R. B. Hamor.....	7856	" wire, H. W. Putnam.....	7830
Doors, R. W. Semple et al.....	7854	" T. S. Seabury.....	6822
" and blinds, E. Prescott.....	7980	Fences, C. L. Toplit.....	7204
Dough raising, W. and R. L. Skillen.....	7772	" J. Burt.....	7319
Drains and sewers, F. X. Rousseau.....	7845	" J. Vance.....	7968
Drawing instrument, R. Duthie.....	7792	" barbed, E. M. Crandal.....	7911
" instruments, J. R. Peel.....	7040	" iron, H. Jones.....	7960
Dredging machines, C. O. Davis.....	7778	" movable, H. Harrington.....	7818
" R. P. Osgood.....	7706	" T. Rohfrich.....	6904
Dress platters, S. J. Seymour et al.....	7225	" portable, E. H. Overholt.....	7383
Drill, grain, J. S. Bogle.....	6808	" J. B. Goff.....	7814

Fences, portable, R. Murray	7128	Gas manufacturer, F. H. Dato	7227
"  snow, J. C. Steele et al.	7108	"  "  M. H. Strong	7077
Fencing, gas pipe, W. C. Hobbs	7755	"  motor, N. A. Otto et al.	8023
Fibres, treating, J. S. Butler	7142	"  pipe, A. O'Neill	0800
Fibrous material cutting, E. M. Jewett	0886	"  purification, T. N. Kirkham et al.	7770
Filters, B. Schiefelin	0915	"  regulators, G. Taylor	7802
"  liquid, J. Foley	0907	"  retorts, J. Burns	7310
"  water, J. Brach	0951	"  "  T. H. Hieles et al.	7101
"  "  J. Foley	7828	"  "  W. Korr	7282
"  "  W. Nugent	8099	"  stoves, W. M. Jackson	7107
Fire engines, V. Straube	7182	Gases, heating, T. Whitwell	0700
"  escape, H. Turner et al.	7016	Gate pivots, L. & J. R. Baldwin	7212
"  "  J. Amess	7936	"  post, J. Emond	0906
"  "  ladder, P. Lord	7818	"  spring, &c., M. Brown	0951
"  escapes, C. A. Gregory	8021	Gates, D. Root	7410
"  "  H. Elbe	7576	"  E. Young	7104
"  "  I. H. Allen	7677	"  H. A. Stearns	8010
"  "  S. L. and B. F. McKee	7687	"  J. Van Heekman	8050
"  extinguishers, A. Tenner	7649	"  R. E. Stephens	7003
"  proof safes, T. Fuller	7795	"  T. F. Timby	7338
Fireman's apparatus, W. Murray	7586	"  farm, J. E. Strong	7957
Fires, kindling, C. D. Bradley	7093	"  lock, T. B. Townsend	7205
Fish cases, J. L. Giffin	7621	"  railway, E. Garon	7095
"  drying, N. Durkee	7201	"  "  J. S. Win-or	7232
"  preserving, A. Walker et al.	0912	Glass bows, &c., G. L. Fessenden	0911
Floors, compound for, A. McLean	7609	"  chandelier, J. H. Hobbs	0851
Flour, Van B. Ryerson	7792	"  jars, J. N. Tarbox	7023
Flower stands, P. McNeill	7733	"  ornamenting, W. C. Barnes et al.	8041
Food, J. T. Cragin	7758	"  tempering, F. B. A. Royer de la Bastie	0880 0881
"  animal, J. L. Johnston	7416	"  veneers, J. Budd	7113
"  cereals for, J. J. Tyler	7117	Glasses, spectacle, A. & B. K. M.	7241
"  horse and cattle, C. F. Brunel	8126	Glycerine, utilizing, W. G. Smith	7656
"  preservation, P. P. E. M. Koch	7731	Gold ore, A. B. Croby et al.	7073
Forging hammers, D. Maydole	7228	Grain blenders, E. R. Whitney et al.	7291
Fork, grain, B. S. Wells	7931	"  blending, W. A. Kirby	8017
Forks, horse, H. Fisher	7411	"  cleaning, F. R. Hawkins	7812
"  "  W. W. Ellis	7544	"  distributing, D. D. Brazel	7111
Frames, picture, C. Lippe	7169	"  drills, J. C. Buck	7345
"  gilding, S. G. Crow	7311	"  "  W. H. Nauman	7007
Freezers, C. Boss	7334	"  dryers, J. Guarkola	7130
"  and refrigerators, A. Adams	7214	"  separators, J. D. Van Dusen et al.	7411
Fringing machines, J. B. Lincoln	7438	"  "  W. P. Clifford	0902
Fruit drying, G. A. Johnston	7541	"  threshing, J. Brown	7510
"  jars, A. Decker	7476	"  "  J. H. Edward	7112
"  "  J. A. Chadwick	7181	Grates, H. and J. H. Rogers	7135
"  "  J. N. Tarbox	7023	Grinding and mashing, G. Ellenberger	8055
"  pickers, J. Sager et al.	7955	"  mills, R. P. Gillett et al.	7102
Fruits, preserving, L. Bradley	7759	"  wheat, J. S. Dewiler	7480
Funnel and strainer, J. Pfeifer	0918	Grocers' scoops, S. L. Rockfellow	7602
Funnels, J. Findlay et al.	7217	Grooving and plating, C. F. Brau'ron	8075
Furnace, combustion in, J. D. Mulreman	0875	Guard, dust, E. Leverich	0950
"  roasting, R. G. Leckle	7851	Gum, chewing, F. Sibley et al.	7511
"  water, E. Chanteloup	0853	"  waterproof, D. M. Lamb	8013
Furnaces, C. D. Smith	7530	Gun, toy, S. G. Stryker	0828
"  H. and J. H. Rogers	7135	Gymnasium apparatus, G. W. Wood	7352
"  O. Churland	7312	Hair treating, J. F. Greene	7842
"  R. L. Walker	7278	Halter fastenings, J. C. Dillon	7073
"  and stoves, C. Dion et al.	8055	Hame fasteners, G. Jeffrey	7080
"  gas, K. M. Jarvis	0981	Hammers, forging, D. Maydole	7228
"  hot air, T. F. Hemmlich et al.	0921	"  stone dressing, A. McDonald	0676
"  puddling, S. Caddick	7822	Harness, A. B. Coleman	7800
"  smelting, A. F. Holmes	7997	"  "  J. H. Van Sice	7634
"  smoke consuming, C. B. Bryant et al.	7211	Harrow, J. Flight et al.	0843
Furniture legs, W. W. Tico	7261	"  "  J. Johnson	0830
Galters, C. Libby	7065	"  cultivators, C. LaDow	7881
"  over, W. W. Whitcomb et al.	7392	"  rotary, S. H. Shaw	7082
Garments, buttons, C. M. Platt	7100	Harrows, B. Wetherbie	7771
"  collars for, G. Farewell	7175	"  wheel, E. R. Powell et al.	7236
"  under, P. H. Lee	7875	"  "  F. Bramer	8130
"  waterproof, S. L. Worth et al.	7823	"  wheeled, E. J. Lockwood	8028
Gas and water cock, A. W. Morgan	8105	Harvester, S. Noxon, Jr.	0903
"  and water pipes, F. Jarecki	7355	"  knives grinding, H. S. Stevens	0887
"  apparatus, J. S. Thomas	7365	"  putmans, R. Thomson et al.	7990
"  burner lighter, H. B. Stockwell et al.	0900	"  powers, S. Noxon	7209
"  carburettors, O. F. Boomer et al.	7197	"  rakes, D. Maxwell	5909
"  engine, J. Worthelm	7645	Harvesters, G. Pyc	7832
"  engines, J. Worthelm	7928	"  W. F. Goodwin	8021
"  furnaces, K. M. Jarvis	0984	"  W. N. Whiteley	7561
"  generating, P. P. Pratt	0889	"  pen, W. Boyd et al.	7090
"  generator, C. Holland	7945	Harvesting and reaping, W. A. Kirby	8187
"  generators, A. N. N. Aubin	7587	"  machines, R. Thomson et al.	7988 7080
"  governor, J. C. Flsk et al.	8143	"  "  W. A. Kirby	8010 8011
"  illuminating, H. Aitken	8069	"  machines, J. Sweet et al.	7050
"  "  J. H. Needles	7916	"  "  M. T. Neale	7927
"  lamps, R. W. Park	8017	"  "  W. Deering	7122
"  "  S. G. L. Fox	8049	Hat cord, F. E. Phillips	0987
"  lighter, J. Ruthven	7459	"  machines, A. Hills	7194
"  "  K. Vogel et al.	7739	Hay carriers, L. W. Noyes	7038
"  lighting, J. Ruthven	7185	"  elevating, G. A. Dickson	7762

Hay preparing, J. B. Lahtle .....	7970	Jars, fruit, A. Dickey .....	7476
" presses, P. K. Dederick.....	7612 to 7615	" " J. A. Chadwick.....	7181
Heater, sad iron, W. H. Haylock .....	7748	" " J. N. Tarbox.....	7023
Heater, water, W. J. & W. A. Austin.....	7472	" " rings for, .....	6998
Heaters, E. E. Spencer.....	7426	Joint, oscillating, N. P. Otis.....	7588
Heating, air, D. McAllister .....	7420	Journal box, W. E. Wilcox et al.....	7900
" " ranges, J. Briggs.....	7920	Keys, railway rail, E. Burstow.....	7940
" " stoves, G. A. Hamlin.....	7227	Kilns, brick, H. B. Evans.....	7810
Heel counters, E. Salomon .....	7550	" " W. T. Christy .....	8106
Hides, raw, J. A. J. Shultz .....	7519	" " drying, E. V. Wingard .....	7035
Hinge, door, W. Hillian et al.....	6824	Kitchen safe, J. B. Harrison.....	7162
Hinges, A. A. Stimson et al.....	7948	Knife scourers, S. M. Haskell.....	7036
" " J. Beaudet .....	7892	Knives, bread, P. Payette et al.....	7810
" " P. Houle.....	7423	" " mower, H. F. and M. L. Bush.....	7850
" " blind, W. Jones.....	7870	" " polishing, M. Coté .....	7813
" " spring, L. Bommer .....	8054	" " sharpening, F. J. Henry.....	7551
Hoe, horse, W. H. Rowe .....	7308	Lace fastenings, T. A. McDonald .....	7940
" " sprig, J. S. Boglo .....	6808	Ladder, extension, H. Turner et al.....	7618
Hoes, C. D. Hyde et al.....	7418	" " step, D. O. Parker .....	7183
" " M. Johnston et al.....	7471	Ladders, " J. C. Blauvelt.....	7360
" " spring, R. Kuhns et al.....	7350	" " S. C. Blauvelt.....	7248
Holsting apparatus, F. A. Clarkson .....	8136	Lamp burners, J. Carzou .....	6930
" " M. Pennypacker .....	7239	" " J. G. Hallas et al.....	7506
" " machines, C. Knowlton.....	7152	" " chimneys, E. W. Blackhall .....	7656
" " T. Mann.....	7853	" " F. S. Sitrley .....	7390
Holdback for carriages, C. Phelps.....	7068	" " collars, W. E. S. Baker .....	7806
Hoop staving, S. Parker.....	6919	" " extinguishers, C. L. Girard .....	7529
Hoops, D. H. Burrell et al.....	7498	" " shade holder, C. Vottl .....	6810
Horse and cattle food, C. F. Brunel.....	8126	" " stands, J. Forster.....	7728
" " boots, J. B. Hall et al.....	7536	Lamps, A. Burbank et al.....	7781
" " collars, E. Stroud.....	7053	" " A. French.....	6791
" " J. M. Liculiter.....	7813	" " C. F. A. Helrichs .....	8074
" " M. Turley.....	7553	" " E. M. Lowden .....	7972
" " feet curving, H. Soper.....	6933	" " J. H. Lewars et al.....	7520
" " nail, G. P. Clapp et al.....	7223	" " L. H. Olmsted.....	7286
" " P. Dunn et al.....	6903	" " coal oil, S. May .....	7590
" " R. Hersey.....	7419	" " electric, P. Jablochhoff.....	7963
" " W. Keys.....	7221	" " fountain, W. A. Butler .....	7309
" " nails, C. W. Woodford.....	7065	" " gas, R. W. Parks .....	8017
" " J. D. Sumner.....	7693	" " St. G. L. Fox.....	8049
" " powers, F. Trutender et al.....	7090	" " signal, S. Coxon.....	7287
" " T. E. Adams .....	7083	Lanterns, F. Dietz.....	8135
" " T. Moore et al.....	7099	Lasts, shoe, S. J. Parsons.....	7674
" " rocking, D. O. Parker .....	7183	Lath, spool, W. R. Landfear .....	6788
" " shoe blanks, H. K. Flagler et al.....	7774	Laths, metallic, A. B. Lawler et al.....	8044
" " machines, H. K. Flagler et al.....	7359	Leather belting, J. A. J. Shultz.....	7655
" " shoes, T. Thistlewood .....	7132	" " crimping, J. Smith.....	7681
" " C. Taylor.....	7690	" " cutting, J. I. and H. Pellerin.....	7510
" " G. T. Atkinson.....	7653	" " seams, W. W. Whitcomb et al.....	8068
" " J. C. Brightman .....	7050	Lenses, C. F. Houghton .....	7322
" " S. T. Banc.....	7508	" " semaphore, C. F. Houghton .....	7261
" stall, J. Fless.....	6856	Letter envelope, C. K. Marshall.....	7882
Hose couplings, C. A. Bissett .....	7843	Letters, ornamental, H. Silver.....	7301
" " J. A. Caldwell.....	7632	Life-boats, G. Bates.....	7412
" " reels, W. Neracher.....	7410	" " J. H. Hatton.....	7296
Hub, elastic, J. B. Sammis .....	7619 7630	Lift gauge, O. D. Thayer.....	7465
Hubs, W. Corris.....	6940	Lightning rods, J. C. Schonnemaker .....	7061
Hydrants, C. S. Clover et al.....	6920	" " J. M. Davies.....	7066
" " W. Todd et al.....	7743	Lime and cement, U. Cummings.....	7943
Hydraulic elevators, E. Brewer .....	7381	Liquors, aging, H. G. Dayton.....	7672
Hydrocarbon, treating substances with, W. Adamson.....	6816	Lock gate, T. B. Townsend .....	7265
Hydro-carbons, T. H. Hicks et al.....	7158	Locks, E. Moore .....	7492
Ice boxes, J. E. Gauthier.....	8007	" " keys for, R. A. Abbott et al.....	7703
" " creepers, S. Horsford .....	7950	" " safety, G. W. Pitt.....	7578
" " T. Gimsalus.....	7785	" " scal, F. W. Brooks.....	6924
" " houses, J. E. Baril.....	7740	" " time, T. W. Spencer.....	7650
Indicators, hotel, A. Fucus.....	7432	Locomotive feed, H. N. Waters .....	7216
Inhalers, S. J. Letts.....	7210	" " railroad, H. G. Ashton.....	6874
Injector, steam boiler, W. T. Messenger.....	7783	Looms, weaving, J. & W. Lyall.....	7461
Injectors, J. T. Hancock .....	7011	Lounge and chair, A. M. S. Goldschmidt .....	7847
" " steam boiler, J. Ferguson.....	7256	Lubricating compounds, G. G. Munger .....	8033
Ink, indelible, W. A. Weed.....	7652	" " P. Sweeney.....	8107
Inking apparatus, L. L. G. Rice.....	7611	Lubricators, F. W. Carpenter.....	7088
Iron cutting, A. Broderick et al.....	8089	" " axie, W. H. Wright.....	7354
" " nning, C. G. Patterson .....	7525	" " steam, W. Gowenlock et al.....	7108
" " W. T. Lake .....	6805	Lumber dryers, G. W. Read .....	7047
" " heater, sad, W. H. Haylock .....	7748	Malt syrup, O. F. Boomer et al.....	7033
" " heaters, M. Little et al.....	7220	Mantle pieces, A. Young .....	7610
" " making, J. J. Green .....	7052	Marine signal, E. E. Mann .....	7133
" " phosphorus from, J. B. Kunkel .....	6932	Mashing and grinding, G. Ellenberger .....	7055
" " wrought, C. P. Haughlan .....	7107	Mast ball, E. C. Seely .....	7912
Ironing board, O. Llugentelster et al.....	7827	Match safe, C. F. Harlow .....	7326
" " fabrics, J. F. Frese .....	8053	" " I. C. Cowles.....	7054
Irons, fluting, N. R. Streeter et al.....	7168	" " splints, G. Hargreaves.....	7208
" " W. I. McCausland .....	7547	" " H. Wright .....	7903
" " heating, W. Kestler .....	8025	" " sticks, M. Young .....	7463
Jack, lifting, G. W. Hunter.....	7096	Mattresses, spring, E. L. Bushnell.....	7983
Jacks, screw, J. Findlay et al.....	6926	Measures, bias, J. K. Somes et al.....	7625
" " wagon, J. A. Fox .....	7874	Measuring rules, E. D. Waterbury .....	7948



Meat cutters, L. Nicol et al.....	7033	Ores, sulphur from, " ".....	7867
Meats, preserving, A. Walker et al.....	6942	" treating, A. B. Crosby et al.....	7078
" " J. Harvey.....	7202	" " H. F. Howell.....	8070
Medicine triturating, J. J. Lancaster.....	6890	Organ, S. Turney.....	6838
Medical compound, W. Turner.....	6840	" reed, W. Boll.....	7277
" compounds, E. Rohrer.....	7307	" stop actions, J. H. Kydd.....	7095
Metall patching sheet, J. C. Mackey et al.....	8117	Organs, J. A. Smith.....	7000
Metals, producing, J. Holloway.....	7106	" blowing, G. M. Henly.....	7162
Motor, water, J. C. Clapp et al.....	6852	" reed, A. H. Hammond.....	7383
Meters, " W. Smith.....	7324	Oven, steel, G. F. Simonds.....	7068
Middlings purifier, J. P. Reel et al.....	7562	Ozone machines, H. Milson.....	7056
" separator, J. Parkyn et al.....	3091	Packing, piston, B. Holland et al.....	7583
" separators, M. Palmer.....	7581	" " C. R. James.....	6866
Milk cans, A. Hull.....	7110	Paint ship's, E. Moseley.....	7373
" coolers, G. R. Ingalls.....	7100	Painting cylindrical bodies, C. T. Brandon.....	7742
" " H. A. Hannum.....	8057	Pans, bake, J. Gilbert.....	7020
" " O. J. S'ields.....	7800	" dust, C. J. T. Fox.....	7378
" " T. D. Witt et al.....	7152	Pantaloon, shaping, E. B. Viets.....	8127
" cooling, V. P. Hill.....	7455	Paper barrels, W. H. Murphy.....	7310
" keeping, J. F. Ferguson.....	7422	" packages, " ".....	7323
" pan, T. Roach et al.....	7029	" waterproofing, D. Felton.....	7935
" " W. Cooley.....	7330	Paraffine purifying, F. Q. Barstow.....	6871
" pans, B. C. Bort.....	7984	Pavement, concrete, C. M. Warren.....	7710
" " F. W. Pierce.....	6994	" street, A. Pelletier.....	6834
" " W. Fleeton et al.....	8040	Pavements, compound for, A. McLean.....	7669
" waggons, A. L. Fish.....	7006	Peach parers, G. Bergner.....	7191
Mill, floating, P. Mayrand, sr.....	6900	Pedal power, J. Dyer.....	7013
Mill-stone dress, R. S. Williams.....	7697	Pen cases, C. M. Johnson.....	6937
Millstones, dressing, J. S. Young.....	7436	Pens, fountain, J. M. Might et al.....	7617
Mining machine, F. M. Lechner et al.....	7002	Pencils, W. J. Holton et al.....	7651
Moccasins, G. Bolvin.....	7507	Pessarles, C. N. Fowler.....	7906
" G. Boulter.....	7904	Petroleum deodorizing, D. M. Lamb.....	6842
Mortising machines, H. Carter et al.....	7315	" distilling, T. Cochrane.....	7052
Motion converting, A. G. Smyth et al.....	7753	" products, J. Cole, jr.....	7165
Motive powers, A. R. McLennan.....	7372	" utilizing, G. B. de Ferrari et al.....	7022
" " J. S. Nelson.....	7615	Photographie portraits, F. N. Forster.....	7055
Motor, gas, N. A. Otto et al.....	8023	" printing frames, L. Ray.....	7711
Motors, electric, W. W. Gary.....	7572	Photographs, enamelling, F. C. Long.....	7580
" springs, I. Solomon.....	7939	Piano finger guard, M. Suddertek.....	8009
Motors, atmospheric, R. Jos, and Jas. Mayer.....	7332	" fortes, J. Herald.....	6939
Moulding, sand, J. B. McCune et al.....	7425	Picture frames, C. Lippe.....	7469
Mower knives, F. J. Henry.....	7551	" " J. W. Grote.....	7268
" " H. F. and M. L. Bush.....	7850	Piers, bridge, E. Wasel.....	7636
" Sprague, A. Reckle.....	8131	Pigments, H. Knight.....	7932
Mowers and reapers, A. G. Gray.....	7189	Pin cushion, I. C. Cowles.....	7054
" " W. N. Whiteley.....	7443	Pipe cleaner, water, J. S. Godfrey.....	7928
" " W. T. Jones.....	7335	" core barrels, G. Bisset, jr, et al.....	7760
Mowing and reaping, C. Wheeler, jr.....	8109 to	" elbows, G. Choate.....	8029
" machines, W. N. Whiteley.....	7711	" holding chuck, J. Flower.....	7899
Music leaf turner, O. W. Clark.....	7655	" joints, A. O'Neill.....	6794
Musical instruments, A. R. Koerber et al.....	7527	" metallic, D. A. Ritchie.....	6826
" " M. H. Collins.....	7561	Pipes from bursting, preventing, A. Bujac.....	7217
" top, E. Mets.....	7912	" gas and water, F. Jurecki.....	7835
Muzzles, calf, S. Tilton.....	7419	" metal, C. F. Henis.....	7190
Nail, horse, G. P. Clapp et al.....	7223	" " H. K. Flinger.....	7624
" " J. M. Laughlin.....	6801	" sheet metal, J. F. Starr, jr.....	7865
" " P. Dunn et al.....	6903	" tobacco, S. B. Dummer.....	7781
" " R. Hersey.....	7146	" water and gas, A. O'Neill.....	6800
" " W. Keys.....	7221	Plating machine, R. Duffy.....	7377
" machine, horse, T. H. Fuller.....	8079	" machines, H. Albrecht.....	7804
" machines, I. Briggs.....	7179	" " L. B. Berrien.....	7889
" point turning, D. Herald.....	6377	Plane guides, A. J. Teaver.....	7206
Nails, cutting, O. P. Cobb.....	7192	Planing and grooving, C. T. Brandon.....	8075
" horse, C. W. Woodford.....	7065	" machines, W. C. Broekers et al.....	7294
" " J. A. Huggett.....	8138	Planters, seed, W. Nevins.....	7151
" " J. D. Sumner.....	7693	Plants, raising, G. Loskamp.....	7699
Newspapers, addressing, A. Dick.....	7750	Plaster, electric, R. P. Hall.....	7272
Night soil, W. H. Barrett.....	7079	" of Paris, J. M. Reid.....	6891
Nitro-glycerine, R. S. Penniman.....	7551	Plasters, voltaic, W. B. Potter.....	7034
Nut locks, D. Dull.....	7014	Plate, heel, L. W. Baxton et al.....	7967
" " F. W. Carpenter.....	7091	Plates and tubes, S. Fox.....	8046
" " F. W. Sullivan.....	7570	Plough, J. Reich.....	7894
" " K. C. Naylor.....	7973	" clevises, C. Robinson.....	7502
" " O. B. Latham.....	7098	" " D. Uguhart.....	7467
" " T. J. Sawyer.....	8100	" frames, D. W. Vary.....	7195
Oakum process, W. E. Geer.....	7178	" gang, B. W. Walton.....	8097
Oars, boat, C. H. Parker et al.....	7607	" handles, W. S. Babcock.....	7004
Oatmeal finishing, W. Scott et al.....	7118	" shares, R. Smith.....	7399
Oil cabinets, H. A. Sharp.....	6962	" snow, J. T. Jensen.....	7737
" cans, J. Graves.....	7681	Ploughs, E. G. Whiting.....	7229
" cup, M. Latimer.....	7446	" H. McDiarmid.....	7666
" deodorizing, D. M. Lamb.....	6482	" J. Wislurt.....	7409
" distilling, T. Cochrane.....	7520	" N. F. Patennudo.....	7777
" sludge, W. P. Jeunoy.....	7368	" gang, A. T. Button et al.....	7343
" stoves, O. Edwards.....	7097	" " G. Gray.....	7358
" tanks, C. A. Mungor.....	7211	" " R. Lude.....	7637
" treatment of, H. Frusch.....	7691	" " T. Hind et al.....	7327
Ordinance, &c., A. Krupp.....	7105	" " W. Ross.....	6914
Ores, furnace for, R. G. Leckle.....	7851	" snow, C. Peare.....	8001

Ploughs, snow, J. Anderson et al.....	7514	Registers, alr, N. K. Joyce.....	7372
Pole and shaft, J. E. Hadden.....	7371	"    fare, W. H. Hornum.....	7779
"    attachments, S. A. Otis.....	7588	Rein, check, H. L. Godfray.....	6348
Porcelain manufacture, A. d'Estampes.....	7174	"    holders, F. E. Hall et al.....	7533
Postage stamps, I. C. Cowles.....	7051	"    supporter, J. L. Ryder.....	7105
Postal cards, C. K. Marshall.....	7387	"    driving, J. McLean.....	7638
Post hole boring, T. Elliott.....	7157	"    "    J. Staples et al.....	7336
"    "    digger, W. H. Rhodes.....	7057	Reins, riding and driving, D. T. Shaw.....	7330
Potato bugs, J. Labelle.....	7393	Road scrapers, D. Clarke.....	7751
"    diggers, J. R. Hopper.....	7295	"    "    J. Stubbs.....	7018
"    "    L. A. Asplwall.....	7788	"    "    W. Murphy.....	7178
"    planter, J. Custer.....	7911	Rollers, land, J. S. Palmer.....	7722
Powder, blasting, C. Folhoon.....	7936	Roof coverings, W. H. Kershaw.....	7511
Power transmitting, J. E. Waterous.....	6533	Roofing composition, J. Cérat.....	6902
Powers, dog, A. Hamlin.....	8081	"    compositions, C. B. Hutchins.....	7311
Presses, balling, G. Brewster.....	7331	"    felt, J. B. Silchler.....	8123
"    hay, P. K. Dederick.....	7485	Roofs and bridges, J. Forbes.....	7370
"    printing, I. L. G. Rice.....	7611	"    compound for, A. McLean.....	7669
"    "    T. S. Bowman.....	8015	Rings, lap, G. W. Atkins et al.....	7585
Printing machine, G. Blair.....	6332	Rivet cutter, W. C. Carlton.....	7189
"    surfaces, G. P. Drummond.....	7396	Rubber, vulcanised, H. P. Danbar et al.....	6908
Privy boxes, R. Mitchell.....	7061	Rulers, blotting, M. P. McElhinney.....	6993
"    vaults, emptying, J. Bradley.....	6818	Rules, measuring, E. D. Waterbury.....	7910
Propeller, screw, D. Rodgers et al.....	7628	Saddle girths, A. Stefnack.....	7716 8133
Propellers, paddle, W. Davenport.....	7088	"    trees, W. H. & S. Taylor.....	7076
"    screw, J. Burson.....	7280	Safes, fire proof, T. Fuller.....	7705
Propellers, steering, F. G. Fowler.....	7400	Sail banks, A. Méhu.....	7021
Pulleys, loose, W. H. Essery et al.....	7215	Sails, reeling, J. W. Sharret.....	7186
Pulp engines, A. Gardner.....	7015	Salts, tartaric acid and, F. Dietrich.....	8082
"    "    S. L. Gould.....	7351	Sand moulding, J. B. McCune et al.....	7425
Pulping "    A. Fickett.....	7373	"    papering, J. Shackleton.....	7591
"    "    J. Chase.....	8012	Sap spouts, E. Willis.....	8145
Pulverizing machines, A. B. Lipsey.....	7089	"    "    H. R. Ives.....	7203
Pump, J. Cochran, Jr.....	6358	Sash fasteners, A. A. Gerrish et al.....	7921
"    bucket, T. Hoyt.....	6873	"    rebating, W. H. Fisher.....	7175
"    force, G. W. Hooper.....	7543	Saw frames, E. Andrews.....	8092
"    "    W. & G. Rusk.....	6547	"    "    J. Kinney et al.....	7186
Pumps, C. Powell.....	7622	"    grinders, E. P. Terrell.....	731
"    E. Stovel.....	7809	"    horses, L. H. Goff.....	6916
"    G. Lander.....	7073	"    mills, H. Gawley.....	7041
"    H. Gilmore et al.....	7601	"    "    eth, N. W. Spaulding.....	7808
"    M. Lescarbeau.....	7608	Sawing machine, H. McCoy.....	8043
"    W. S. Laney.....	6913	"    machines, C. N. Trump et al.....	7231
"    floating, C. Harris.....	7715	"    "    J. Abell.....	7156
"    force, E. L. Byron.....	8110	"    "    J. Lamb.....	7071
"    "    W. Scott.....	7689	"    "    S. H. Richardson.....	8102
"    sbtps', A. F. Ellis et al.....	7362	"    scroll, A. H. Shipman et al.....	6929
"    "    E. Sanders.....	7388	"    stone, B. C. Tilghman.....	7548
Punching machine, A. W. Comstock.....	6820	Saws, circular, J. J. Squire.....	7276
"    "    M. Gluck.....	7786	"    cross-cut, J. C. Dietrich.....	7188
"    machines, G. Choate.....	8045	"    jointing circular, R. Aitken.....	7668
Quilting frames, H. T. Davis.....	7505	"    sharpening, S. Freeze.....	7528
Rack, towel, E. Pullan.....	7532	Scaffold, window, H. C. Traphagen.....	6827
Railway alarm, J. M. Livingstone.....	7081	Scale platform, D. A. Gilbert.....	7437
"    rull joint, C. F. Arnold.....	6790	Scales, weighing, H. Hennessy.....	7306
"    "    keys, E. Burstow.....	7910	Scoops, grocers', S. L. Rockfellow.....	7602
"    rails, J. N. Whitman.....	7112	"    "    W. T. Sherer.....	7402
"    ties, D. S. Whittenhall et al.....	6966	Screen holder, W. R. Smith.....	6789
"    track cleaner, A. Day.....	6893	"    window, J. C. Walker et al.....	7790
Railways, suspension, A. R. Howse et al.....	7559	Screw cutting, S. W. Martin.....	7337
Rake, horse, G. M. and N. Cossitt.....	8080	"    fastenings, J. McCarthy.....	7193
"    wheel, W. H. Patten et al.....	7626	"    machines, A. R. Munson.....	8065
Rakes, harvester, D. Maxwell.....	7509	"    wood, T. J. Sloan.....	6886 6905
"    hay, H. F. Smith.....	8022	Screws, making, H. S. Lansdell.....	7173
"    "    R. B. Sheldon.....	7567	"    metal, N. C. Hubbell.....	7369
"    horse, J. B. Armstrong.....	7729	Sealing devices, E. A. Locke.....	7657
"    "    J. E. Wisner.....	7671	Seats, adjustable, B. N. Hemenway.....	8050
"    "    R. Wilson.....	7271	"    folding, J. L. Kapple.....	8358
"    "    T. Galloway et al.....	7170	Seed drills, J. W. Reid.....	6952
"    "    W. J. Lane et al.....	3976	Seeding machines, J. M. Westcott.....	7441
Ranges, cooking, J. Briggs.....	7920	"    "    J. Westlick.....	7757
Rattins, rigging, J. C. Knowlton.....	7691	Semaphore lenses, C. F. Houghton.....	7261
Reaper tables, W. Russell.....	7133	"    signals, F. Culham.....	7177
Reapers and mowers, W. N. Whiteley.....	7143	Sewer traps, T. Guerin.....	7646
Reaping and harvesting, W. A. Kirby.....	8137	"    "    emptying, J. Bradley.....	6818
"    and mowing, C. Wheeler, Jr.....	8112	Sewers and drains, F. X. Rousseau.....	7805
"    machines, J. Abell.....	7905	Sewlug machines, A. Wilson.....	6955 7367
"    "    N. W. Brown.....	7937	"    "    E. C. Sproul et al.....	7730
"    "    S. Rawson et al.....	7164	"    "    J. Keats.....	7998
Reflectors, compound, F. L. Senour.....	7723	"    "    J. M. McCloskey.....	6990
Refrigerating apparatus, P. H. Bate.....	7141	"    "    I. M. Rose.....	7393
"    dry air, K. Knobb.....	8003	"    "    J. S. Hall.....	7191
Refrigeration system, J. J. Bate.....	6938	"    "    M. H. Pearson.....	8018
Refrigerator cars, J. H. Wickes.....	7130	"    "    T. A. Macaulay.....	7263
Refrigerators, A. Adams.....	7214	"    "    W. H. Thomas et al.....	681
"    "    J. J. Bates.....	6991	"    "    W. Mulr.....	7982 7477 7981
"    "    J. O. Beck.....	7763	"    "    W. Randel et al.....	7631
"    "    W. W. Wickes.....	7299	Shade fixtures, J. Chase.....	7573

Shaft and pole, J. E. Hadden.....	7971	Spinning wheels, J. Brown et al.....	6956
" buggy, W. Hewitt.....	7121	Spittoons, J. C. Moore.....	7254
Shafting bearings, J. L. Reed et al.....	6925	Spool stamping, T. E. King.....	7819
" boxes, J. Tomlinson.....	7715	Spring attachment, R. and J. Doty.....	7845
Shearing machine, A. W. Comstock.....	6820	" carriage, J. B. Armstrong.....	7012
" " M. Gluck.....	7786	" door, &c., M. Brown.....	6954
Shears, prunng, J. Chuse.....	7325	" " W. Gillilan et al.....	6824
" sheet metal, G. Choate.....	8039	" machine ellipse, J. S. Pessenger et al.....	6795
Sheep wash, W. Clark.....	7708	Spring, furniture, G. A. Coulson.....	7504
Shelves, stove pipe, C. Allen.....	7725	" vehicle, G. H. Spencer.....	6802
Shingle machine, R. Smith.....	7375	Springs, railway, G. F. Godley.....	7464
" machines, J. A. Mumford.....	7917	" vehicle, W. Foote.....	7855
Ship boats, A. B. Crulekshank.....	7080	" waggon, L. Pulliam.....	7595
" bottoms, J. B. Slichter.....	8123	Sprinklers, water, J. Baker.....	6980
" fastenings, H. Squier.....	7129	Stall, horse, J. Arless.....	6856
" flooring, J. Arless.....	6819	Stamps, hand, H. Silver.....	7301
" lines, drawing, R. Duthie.....	7792	" " T. Hawthorn.....	8101
" paint, E. Moseley.....	7373	Steak beating, O. Jetté et al.....	7150
" pumps, A. F. Ellis et al.....	7362	Steam generating, G. B. de Ferrari et al.....	7022
" " E. Saunders.....	7888	" generators, L. F. Renshaw.....	7038
" rattlins, J. C. Knowlton.....	7694	" lubricators, W. Gowenlock et al.....	7108
" sheating, J. Bettely.....	7685	" valves, J. Nell.....	7479
Shipment, timber, H. Atkinson.....	7643	Steel, A. B. Mullett.....	7120
Ships, port holes of, W. H. Forbes.....	7824	" filing, C. G. Patterson.....	7525
" raising, P. W. Davis.....	6988	" making, J. J. Green.....	7052
Shirt fronts, O. Lingenfelter et al.....	7827	" " S. Barker et al.....	7338
Shirts, S. J. Angus.....	6935	" manufacture, A. B. Mullett.....	7176
" men's, A. E. Fish.....	7429	" oven, G. F. Simonds.....	7088
Shoe fastenings, F. G. Farnham.....	7168	" wrought, C. P. Haughlan.....	7107
" sole buffers, F. Winslow.....	7184	Steering apparatus, C. H. Herson.....	7793
" " buffing, J. W. Rogers.....	7819	Stereotyping machine, G. Blair.....	6852
Shoes, wooden soled, T. R. Hyde.....	8061	Still, rectifying, J. Kast.....	7996
Shovels, H. W. Shepard.....	7150	Stone, artificial, J. A. Murray.....	8128
" snow, C. H. Victory et al.....	7829	" " L. L. Leathers.....	7552 7909
" " H. W. Searle.....	7001	" " S. McCammon.....	6749
Show cases, R. A. Tyrrel.....	7149	" cutting, B. C. Tighman.....	7676
Shutters, A. Bjur.....	8006	" dressing, A. McDonald.....	6975
Sickle grinding, W. S. Ingraham.....	7516	" " T. Woods.....	7101
Sideboard, baking, R. K. M. & J. McCullock.....	7243	" frame, grind, S. T. Packham.....	7938
Sifters, ash, J. Brooks.....	6985	" grind, H. F. and M. L. Bush.....	7850
" " P. W. Peckham.....	7062	" sawing, B. C. Tighman.....	7518
Signal lamps, S. Coxon.....	7287	" " R. A. ".....	7537
" marine, E. E. Main.....	7153	" " W. C. Huffman.....	7796
Signals, fog, The Neptune Fog Horn Co.....	7876	" walling, J. Heard.....	7642
" semaphore, F. Cullham.....	7177	Stove heating, J. Dwyer et al.....	6814
Silver ore, A. B. Crosby et al.....	7078	" " &c., J. Van B. Carter et al.....	6876
Sine traps, J. Magee.....	8084	" legs, R. D. Ryerson.....	8002
Sinks and water closets, G. Jennings.....	7730	" " W. W. Tice.....	7262
Skate fastenings, E. H. Barney.....	6979	" pipe, G. Choate.....	7207
" holder, E. C. Henderson et al.....	7293	" " cleaners, H. Welbanks.....	7240
" sharpeners, W. H. Fisher.....	7111	" " collars, H. Wandby.....	7058
Skates, C. Brewer.....	6261	" " elbow, F. & A. Hoelge.....	6786
" F. C. Ireland.....	6958	" " G. H. Johnson et al.....	6861
" H. Grist.....	7094	" " W. H. Landon.....	6825
" S. Horsford.....	7922	" " elbow machine, C. H. Amann.....	7711
" attaching, H. Grist.....	7095	" " joint, J. Draper.....	8113
" roller, C. W. Saladee.....	7505	" " thimbles, C. Inward et al.....	6959
Skills, shooting, G. Wain.....	8008	Stoves, G. Moreau.....	7620
Skirt supporters, L. S. Weed.....	8048	" and furnaces, C. Dion et al.....	8085
Skylights, D. Condon et al.....	6973	" coal, J. W. Elliott.....	7182
Slates, blnged, T. Van Kannel et al.....	7534	" cooking, J. Milne.....	7346
Sleigh bell, G. W. Tecker.....	6359	" " and heating, C. A. Hamlin.....	7727
" brake, J. Powell.....	7315	" dumb, W. McGulre.....	6947
" knees, P. Fillman.....	6996	" gas, W. M. Jackson.....	7167
Sleighs and buggies, J. Maunder.....	6912	" heating, J. Dwyer et al.....	8031
" bob, G. G. Keith.....	7355	" " J. E. Gridley.....	7596
Slippers, J. L. Pelletier.....	6901	" " P. O. Jenkins.....	7871
Smoke consumers, J. Fee et al.....	7103	" " W. S. Garrison.....	6846
" consuming, C. McWilliams et al.....	6917	" oil, D. Shields.....	7947
" " H. A. Ives.....	6967	" " et al.....	7941
Smoothing and glossing, J. F. Frese.....	8055	" " H. P. Malone.....	7487
Soap manufacture, C. Maggill.....	8066	" " J. R. Held et al.....	6957
Soda, carbonate of, E. Sulway.....	7184	" " O. Edwards.....	7097
Sofas, J. H. Corrin.....	7907	Strainers and funnel, J. Pfeifer.....	6948
Solder wire, H. G. Hubbard.....	7569	Straw-cutter, D. Maxwell.....	7623
Sole buffers, J. W. Rogers.....	7964	Stud inclng, M. Bray.....	7558
" channeiling, J. Keats.....	7966	Stamp extractor, M. V. Center.....	7869
Soles, edges of, J. H. Russell.....	7929	" extractors, A. M. & W. Michaels.....	7563
Sowers, J. Fraser.....	7501	" " J. Brokenshlte.....	6971
" and cultivators, R. B. Sheldon.....	7880	" " J. Bruce.....	7921
" broad cast, C. E. Alden et al.....	8088	" " W. W. Mason.....	7165
" seed, E. R. Powell et al.....	7236	" machine, W. H. Brandon et al.....	7877
Spark arrester, C. H. Waterous, Jr.....	7735	Sulkies, trotting, J. W. Wood et al.....	7290
" arresters, &c., D. Hawkesworth et al.....	6978	Sulphur separating, R. G. Leckle.....	7867
" " F. M. Stevens et al.....	7172	Suspenders and braces, N. Van Allen.....	7881
" " W. Rushton.....	8019	Switch, railway, W. Hodgson.....	6867
Spectacle glasses, A. & B. Kent.....	7241	Switches, " A. Quinby.....	6999
Spikes, E. R. Whitney.....	7764	" " J. J. Golden.....	6995

Switches, Railway, J. S. Williams	7589	Turbine, water, T. Rose	7371
" " R. Bagnall et al.	7121	" wheel, T. H. Russell et al.	7680
Syringes, J. S. Parsons et al.	7773	Turbines, J. H. Staples	8032
Syrup, malt, O. F. Boomer et al.	7033	Turnip topping, J. Leonard	8027
Syrups and mineral water, H. L. Bowkers	7749	Turnips thinning, J. Carlton	7059
" making, H. W. Walker et al.	7173	Twine waxing, R. & W. C. Blackiston	7300
Table, J. Bates	7579	Type printing, J. Bartlett et al.	7603
" extension, J. W. Bent	6855	Umbrellas, &c., A. A. Valentine et al.	7018
Tables, work, M. F. Scott	7196	" " R. S. Galbraith et al.	7609
Tablets, writing, J. H. Hodder	7019	" " folding, G. B. Kirkham	7417
Tack machine, W. H. Rittenhouse et al.	6896	Valve, safety, H. G. Ashton	6868
Tanning skins, M. Soderberg et al.	6879	" governor, J. Judson	7285
Tape measures, W. L. May et al.	7318	" safety, F. B. Scovell	7321 7131
Taper lights, J. Scollick et al.	7324	" " J. Hoffman	7267
" making, J. B. Lanier	7603	" slide, E. Leonard	6953
Tapes, securing, W. H. Stafford et al.	7826	" steam, J. Neff	7179
Taps, F. C. Lillis	8073	Vegetable substances, J. Hopkins	7381
" and dies, J. Flower	7894	Vegetables, preserving, L. Bradley	7759
Targets, E. B. Beer	7571	Vehicle axle, &c., B. F. Richardson	6936
Teakettle, J. Keller	7857	" braces, C. L. Rice	6974
Telegraph alarm boxes, S. Mohr	7951	" brake, R. Jacob	6835
" speaking, T. A. Edlson	8026	" seats, F. Oppenheim	7158
Telephony, electric, A. G. Bell	7789	" " W. Bristol	7883
Thill couplings, A. P. Ladd	7761	" spring, G. H. Spencer	6802
" " D. W. Copeland	8111	" " W. Foote	7855
" " E. C. Spencer et al.	7962	Vehicles, " J. Murphy	7488
Thread winder, W. Jones	6872	" gearling for, L. D. Hurd	7554
Threshers, grain, J. L. Foster	7397	" hubs for, J. B. Sammis	7619
Threshing machine, R. Mowry	7618	" seats for, D. Conboy	7617
" " A. Kline	8096	" spring, L. A. Fogg	7497
" " J. Abell	7731	Ventilating garments, S. L. Worth et al.	7823
" " J. Brown	7516	Ventilation, G. F. Godley	7380
" " I. H. Green	8961	" system, J. J. Rate	6938
" " T. H. Brown	9103	Ventilators, C. R. Hicks	7517
Ties, bale, E. S. Lennox	7012	" and traps, F. X. Rousseau	7805
" railway, D. S. Whittenhall et al.	6966	" car, M. A. Morton et al.	8062
Timber butting, W. H. Knight	7140	" window, D. Clushman et al.	7799
" shipment, H. Atkinson	7613	Veneers, glass, J. Budd	7453
Time pieces, S. E. Thomas	6981	Vessels cleaning, H. J. Cole	7698
Tire upsetter, J. G. Mole	6821	" for inflammable matters, W. G. Warden	8070
" upsetters, M. W. Griffiths	7878	" motive power for, T. S. Seabury	7148
" upsetting, D. W. Copeland	7283	" propelling, A. Crosby et al.	7353
Tires, upsetting, H. Ross	7018	" sails of, J. W. Sharret	7486
Tobacco-cutter, C. F. Harlow	7326	Vises, bench, E. H. Brower	8091
" " J. Farrar et al.	7074	Wagon, G. Bellamy	7575
" " M. McGinn	7678	" box, E. R. Langs	7903 7719
" plug, A. Pearl	7213	" brake, R. Brown	7131
Toe protectors, T. and S. Bell	7046	" dumping, S. Rachand	6831
Towel rack, E. Pullan	7532	" racks, A. McCallum et al.	7987
Toy gun, S. G. Stryker	6828	" spring, R. & J. Doty	7845
Toys, S. B. Marshall	6960	" " L. Pulliam	7595
Toys, educational, E. S. Fisher	7108	" trestles, L. M. Fitch et al.	8038
Trace carriers, W. and E. T. Fitch	7115	" " H. Leggett	7969
" " W. H. Main et al.	7115	" gearling for, L. D. Hurd	7554
" fastening, C. I. Calvert	6378	Walling, stone, J. Heard	7642
" " J. K. Lake et al.	6922	Wash bench, P. E. Rudel	7854
Traces, spring, A. Berry	7131	" board, L. M. Crosby	6857
Tramways, G. F. Deacon	7552	" leg planing, C. T. Brandon	8075
" suspension, A. R. Howse	7559	" boards G. Groom	7205
Trap, fly, J. M. Harper	6844	" " W. F. Wilkins et al.	7992
Traps and ventilators, F. X. Rousseau	7805	" boiler, E. M. Mallett et al.	6812
" animal, C. M. Orton	8042	" sheep and cattle, W. Clark	7708
" " J. H. Morris	7911	Washer, clothes, A. Poirier	7456
" " R. McConnell	7356	" railway, J. M. Mackay	7542
" " S. Snell	7521	Washing clothes, L. Ruel	7387
" stench, E. D. Smith et al.	7925	" machine, J. Maw	6785
" " J. P. Schmitz	7915	" " J. R. Bower	7736
Tree hole digger, W. H. Rhodes	7057	" " J. and T. Grover	8071
Trolley, H. C. Brush	7266	" " J. W. E. Darby	7304
Troughs, dough, J. W. Martin et al.	7797	" " P. Anger	7329
" " caves, W. F. Moulton	7255	" " A. H. Calkins	7037
Truck, C. W. Johnson et al.	7670	" " A. P. Ladd	7762
" hand, E. L. Byron et al.	7627	" " C. E. Haynes	6964
" " H. R. Ferris	6809	" " G. Seger et al.	7199
Trucks, car, L. B. Lyons et al.	6931	" " H. Labrecque	6968
Trunks, W. S. Soule et al.	7317	" " I. Cooley	7526
Trusses, J. R. Alexander	7259	" " M. A. Caldwell	7063
" P. Werum	7180	" " M. W. Robinson	8034
Tube expanders, J. E. Minshall	7807	" " W. Church	7560
" welding, T. H. Roberts	8020	" " W. Warne	7401
Tubes, J. B. Root	6983	" " potato, A. Steele	6819
" and plates, S. Fox	8046	Washstand, folding, S. Kinder	7171
" brass, J. Workmeninger et al.	7457	Watch movements, C. S. Mosely	7724
" making, J. B. Root	6970	" winding, W. H. Bray et al.	7926
" metal, H. K. Flagler	7624	Watches, stop, H. A. Lugin	7660
Tubing, flexible, H. Wakeman	7119	Water closets, J. H. Keyser	8005
Turbine, water, C. Barber	8072	" " J. Robertson	7127
" " J. Talloy, Jr.	7662	" and stinks, G. Jennings	7730

Water and syraps, mineral, R. H. Lowker.....	7749	Anderson, J., et al., snow ploughs.....	7514
“ elevators, J. M. Balm.....	8111	“ J. W., “ snow fences.....	7493
“ power, M. L. King.....	7898	Andrews, E., saw frames.....	8092
“ purifiers, J. Foley.....	7816	“ S. C., et al., hydrants.....	7743
“ supply, H. R. Newton.....	7075	“ W., et al., guano cock.....	7092
Waterproof garments, S. L. Worth et al.....	7823	Angus, S. J., shirts.....	6935
“ gum, D. M. Lamb.....	8013	Anthony, C. S., et al., store windows.....	7855
Waxing, twine, R. and W. C. Blackston.....	7300	Anthony, P. W., et al., horse powers.....	7099
Well boring, T. Elliott.....	7157	Appelman, A. R., clover hullers.....	7610
Wheat drying, J. W. Price.....	7080	Apraxine, Cte A., balloons.....	8035
“ grinding, J. S. Detwiler.....	7439	Archer, G. W., dentist chairs.....	7292
“ scouring, H. J. Livergood.....	7791	Arless, J., horse stall.....	6856
Wheel hub, J. Foreman.....	6870	“ “ ships' flooring.....	6819
Wheels, car, A. Nichol et al.....	7366	“ “ stall for horses.....	7716
“ “ G. Elmslie.....	7802	Armstrong, C. N., preserving meats, &c.....	6942
“ “ J. K. Sax.....	7192	“ J. B., carriage spring.....	7012
“ motion of, G. E. J. Hanwell et al.....	6850	“ “ horse rake.....	7729
“ paddle, W. C. Thompson.....	7311	“ M., et al., tanning skins.....	6879
“ splaining, J. Brown et al.....	6956	“ T., Jr., preserving chambers.....	7430
“ turbine, T. H. Russell et al.....	7650	Arnold, C. R., door fastenings.....	6830
“ vehicle, B. F. Richardson.....	6936	“ L. B., butter and cheese.....	7222
“ water, A. Edwards.....	7391	Arnould, Charles F., rail joint.....	6790
“ “ C. Barber.....	8072	Ascough, U., door securer.....	7303
“ “ C. Harris.....	7715	Ashton, H. G., railroad locomotive.....	6874
“ “ J. Talley, Jr.....	7662	“ “ safety valve.....	6868
“ “ T. Rose.....	7371	Askins, J., barrel cases.....	7863
Whiffletrees, W. Shannon.....	7519	Aspinwall, L. A., potato diggers.....	7788
“ carriage, J. H. Balton.....	8129	Atkins, G. W., et al., lap rings.....	7585
Windmills, C. J. and D. Nysewander.....	7811	Atkinson, G. T., horse shoes.....	7653
“ E. Stata et al.....	7226	“ H., timber shipment.....	7613
“ F. X. de Vault et al.....	7138	Aubin, A. N. N., gas generators.....	7387
Wind wheels, R. J. Stead et al.....	7605	Audet, F., et al., wind mills.....	7138
Window blind, W. N. Miller.....	7245	Auger, P., washing machine.....	7329
“ “ D. Prevost.....	7421	Ault, W., et al., steam engines.....	7826
“ “ J. & W. F. Bebel.....	7252	Austin, L. A., faucets.....	8073
“ curtain, E. F. McComas et al.....	7421	“ M. J., ditching machines.....	8130
“ scaffold, H. C. Traphagen.....	6827	“ W. J. & W. A., condenser.....	7472
“ screen, J. C. Walker et al.....	7790	Babbitt, B. T., air compressors.....	8118
“ shade, J. Chase.....	7573	Babcock, W. S., plough handles.....	7004
“ ventilators, C. Clusman et al.....	7799	Bachand, Stephen, dumping waggon.....	6831
Windows, H. P. Smith.....	7015	Badger, F. O., et al., blood treating.....	7931
“ store, C. S. Anthony et al.....	7885	“ O., wheel harrows.....	7230
Wine, treatment of residuus, F. Dietrich.....	8082	Baguall, R., et al., railway switches.....	7124
Winnowers, grain, J. L. Foster.....	7397	Bain, J. M., water elevators.....	8141
Wire indenting, T. Prosser.....	6792	Balnton, J. H., carriage whiffletrees.....	8129
“ solder, H. G. Hubbard.....	7569	Baker, J., water sprinklers.....	6980
Wood planing, H. M. Wilcox et al.....	6928	“ W. E. S., lamp collars.....	7806
“ preserving, L. S. Robbins.....	7902	Baldwin, L. & J. R., gate pivots.....	7212
“ working, W. Weaver et al.....	7993	Bane, S. T., horse shoes.....	7507
“ treating, N. Mary.....	7388	Barber, C., turbine water wheel.....	8072
Wrenches, A. B. Lipsey.....	8098	Barbour, G. H., et al., heating stoves.....	8031
Wringer, clothes, P. E. Rudel.....	7854	Barclay, Robert, escapements.....	6816
“ “ A. Israel et al.....	8053	Baril, J. E., ice houses.....	7740
“ rollers, J. Graeen, Jr.....	8060	Barker, S., et al., steel making.....	7338
Wringing machines, J. K. Dugdale.....	7017	Barlow, C., et al., rocking cradles.....	7251
“ “ J. Kinleyside.....	7991	Barnard, C. F., dental plates.....	7919
“ “ J. S. Fox.....	7658	Barnes, T., fanning mills.....	6989
		“ W. C., et al., glass ornamenting.....	8041
		Barney, E. H., skate fastenings.....	6979
		“ L. C., et al., smoke consuming.....	6917
		Barnum, C. H., et al., planing machines.....	7294
		Barrett, E., clapping.....	7766
		“ P., et al., thill couplings.....	7962
		“ W. H., night soil.....	7079
		Barrow, J. F., et al., plating machines.....	7801
		Barstow, F. Q., paraffine purifying.....	6871
		Bartlett, et al., J., gas lighter.....	7739
		“ “ printing type.....	7663
		“ W. W., bed bottom.....	6787
		Batchelder, H. J., horse shoe blanks.....	7774
		“ H. J., et al., horse shoe machines.....	7359
		Bate, J. J., refrigerators.....	6991, 7126,
		“ “ system of ventilation, &c.....	6938
		“ P. H., refrigerating apparatus.....	7144
		Bateman, E. W., making bread.....	7591
		Bates, G., life boats.....	7412
		“ J., clothes drier.....	7579
		Batley, J., et al., boots and shoes.....	8930
		“ “ boot and shoe last.....	8116
		Baur, J., manufacture of steel.....	7170
		“ J., steel.....	7120
		Baylis, J., et al., stoves and furnaces.....	8085
		Beach, A. S., cheese presses.....	7717
		Beaudet, J., hinges.....	7892
		Bechard, A. M., railway washer.....	7542
		Beck, J. O., refrigerators.....	7763
		Beemer, H. J., bed bottoms.....	7070
		Beer, E. B., targets.....	7570

## INDEX TO PATENTEES.

Abbott, R. A., et al., keys for locks.....	3770
“ W., ear mullers.....	6944
Abell, J., reaping machines.....	7718,
“ “ sawing.....	7718,
“ “ threshing.....	7714,
Adams, A., freezers and refrigerators.....	7214
“ A. P., et al., snow shovels.....	7829
“ H. P., butter packages.....	6910
“ T. E., horse powers.....	7683
Adamson, W., treating substances.....	6815
Adlan, S., hose couplings.....	7632
Aitken, H., illuminating gas.....	8069
“ R., jointing circular saws.....	7668
Albrecht, H., plating machines.....	7801
Alden, E. C., et al., broadcast sowers.....	8058
Alexander, G. F., temporary binders.....	7113
“ J. R., trusses.....	7259
Allan, J. C., bougles.....	8059
Allen, C., stove-pipe shelves.....	7725
“ I. H., fire ladders.....	7577
Amann, C. H., stove-pipe elbow.....	7741
Amess, J., fire-escape.....	7936
Amlraux, J., ear muffs.....	7139
Amory, F., et al., treating ores.....	7078



Churchill, J., T. H. and W., making baskets.....	7976	Darville, D., et al., gang ploughs.....	7327
Cipperly, J. W., et al., sewing machines.....	7631	Date, F. H., gas manufacture.....	7227
Clapp, G. P., et al., horse mill.....	7223	Davenport, W., paddle propellers.....	7688
" J. C., " water meter.....	6852	Davies, E., et al., steam boilers.....	8086
Claric, C., et al., steel making.....	7338	" J. M., lightning rods.....	7066
" H. K., et al., fluting irons.....	7168	Davis, D., brick machines.....	7747
" H. J., " sand iron beaters.....	7220	" C. O., dredging machines.....	7778
" N., dish warmers.....	7275	" H. T., quilting frames.....	7505
" O. W., music leaf turner.....	7655	" O. W., churns.....	7441
" W., sheep wash.....	7708	" P. W., raising ships.....	6988
Clarke, D., road scrapers.....	7751	Day, A., railway track cleaner.....	6893
Clarkson, F. A., hoisting apparatus.....	8136	Dayer, J., et al., door hanger.....	7281
Clary, J., et al., can machines.....	7075	Dayton, H. G., aging liquors.....	7672
Clifford, W. P., grain separators.....	6992	Deacon, G. F., tramways.....	7852
Clover, C. S. & H. H., et al., hydrants.....	6020	Dederick, P. K., hay presses.....	7485 7612 7613 7614
Clubine, W., steam engines.....	7862	Deering, W., harvesting machines.....	7122
Cushing, C., et al., window ventilators.....	7799	Dennis, H., et al., axle trees.....	7082
Cobb, O. P., cutting nails.....	7190	D'Estampes, A., manufacture of porcelain.....	7174
Cochran, J. Jr., pump.....	6858	Detwiler, J. S., grinding wheat.....	7139
Cochrane, T., petroleum distilling.....	7529	De Vaulh, F. X., et al., wind mills.....	7138
Cole, E., et al., mortising chisel.....	7913	De Witt, T., spring bed.....	7077
" H. J., cleansing vessels.....	7698	" T., et al., milk coolers.....	7152
" J., Jr., petroleum products.....	7155	Dick, A., addressing newspapers.....	7750
" J. C., et al., sewing machines.....	7631	Dickey, A., fruit jars.....	7476
Coleman, A. B., harness.....	7866	Dickson, G. A., hay elevating.....	7752
" A. B., whiffletrees.....	7519	Dietrich, F., tartaric acid and salts.....	8082
" H. S., steam boilers.....	7260, 7250	" J. C., cross cut saws.....	7188
Collins, E., bag holders.....	7250	Dietz, F., lanterns.....	8135
" E. A., et al., lamps.....	7512	Dillon, J. C., huller fastenings.....	7673
" J., grain bags.....	7975	" P., et al., can machines.....	7075
" M. H., musical instruments.....	7561	Dion, C., et al., stoves and furnaces.....	8085
Conant, T., et al., grain blenders.....	7291	Disher, B. M., et al., horse powers.....	7099
Conboy, D., seats for vehicles.....	7647	Dixon, A. H., advertising cards.....	7500
Condon, D., et al., skylights.....	6973	" J. W., et al., recovering alkalies.....	7767
Cone, H. C., butter dish.....	7582	Dobbs, C., " car couplings.....	7782
Constock, Austin W., punching machine.....	6820	Donnelly, J., et al., paper bags.....	7249
Congdon, J. H., et al., car brakes.....	7409	Doty, W. R. and J., spring attachment.....	7845
Connolly, N. K., derricks.....	7025	Douglas, W., et al., hoes.....	7471
Convers, W. H., churns.....	7709	Draper, J., stove-pipe joint.....	8113
Cook, F., et al., iron cutting.....	8089	Dresser, J. D., corn brooms.....	6911
" S. S., " securing tapes.....	7826	Drummond, G. P., printing surfaces.....	7396
" T. A., " bread knives.....	7810	Duffy, R., plating machine.....	7377
Cooke, R. P., ventilating cars.....	6855	Dugdale, J. K., wringing machines.....	7017
Cooley, L., washing machines.....	7526	Dugan, T., et al., brooms and brushes.....	7712
" O., harvester pitmans.....	7990	Dull, D., nut locks.....	7011
" " harvesting machine.....	7989	Dummer, S. R., tobacco pipes.....	7784
" W., milk pan.....	7330	Dunbar, H. P., et al., vulcanized rubber.....	6908
Cooper, J. S., et al., stoves.....	6957	Dunn, P., et al., horse wall.....	6903
Copeland, D. W., thill couplings.....	8141	" W., car couplings.....	7159
" " fire upsetting.....	7283	Dunsbaugh, W., et al., funnels.....	7217
" G. W., boots and shoes.....	7891	Durkee, N., fish drying.....	7201
Cornell, D. S., et al., inside blinds.....	7319	Dusenbury, C. C., burglar alarms.....	7999
Corrin, J. H., sofas.....	7907	Duthie, R., drawing ships' lines.....	7792
Corris, W., hubs.....	5940	Dwyer, J., heating stove.....	6814
Corry, J. W., et al., window screen.....	7790	" J., et al., ".....	6876, 8031
Cossitt, G. M. & N., horse rake.....	8080	Dyer, J., pedal power.....	7043
Côté, L., peg cutting.....	6918	Eames, F. W., vacuum brakes.....	8120
" M., polishing knives.....	6813	Earle, F. M., clothes dryers.....	7231
" M., et al., meat cutters.....	7633	Eaton, R., et al., railway cars.....	7535
Coughran, S., et al., grinding mills.....	7102	Eccleston, W., cutlery.....	7051
Coulson, G. A., furniture spring.....	7504	Edgar, Butler, ear muller.....	6839
Coulter, H. W., clothes dryer.....	7858	Edison, T. A., speaking telegraphs.....	8026
Cowles, I. C., match safe, &c.....	7054	Edmans, W. M., bed bottom.....	7952
Coxon, S., signal lamps.....	7287	Edward, J. H., grain threshing.....	7112
Cragin, J. T., food.....	7758	Edwards, A., water wheels.....	7391
Craig, W., car-couplings.....	7702	" C., boots and shoes.....	7071
Crandal, E. M., barbed wire fences.....	7911	" J. P., car couplings.....	7890
Craven, S. W., drying hose.....	7726	" O., oil stoves.....	7097
Creveling, Herman G., ear muller.....	6839	Earle, H., Jr., et al., tobacco cutter.....	7071
Cromwell, J., coffee pots.....	7146	Elbe, H., fire escapes.....	7576
Crosby, A., et al., propelling vessels.....	7353	Elkins, O. N., et al., hoes.....	7418
" A. B., " treating ores.....	7078	Ellenberger, G., mashing and grinding.....	8055
" L. M., wash board.....	6657	Elliot, A. J., et al., dash churns.....	7980
Crossley, F. W. and W. J., et al., gas motor.....	8023	" J. W., coal stoves.....	7182
Crow, S. G., quilting frames.....	7341	" T., boring machines.....	7157
Cruikshank, A. B., ship's boats.....	7080	Ellis, W. W., horse forks.....	7514
Callam, F., semaphore signals.....	7177	Ells, A. F., et al., ships' pumps.....	7362
Cummings, U., lime and cement.....	7943	Ellsworth, D. N., churn dashers.....	7518
" " rock drills.....	8142	Elmslie, G., car wheels.....	7802
Custer, J., potato planters.....	7914	Emerson, G. W., temporary blinders.....	7961
Curzon, J., lamp burners.....	6930	" W. H., et al., fanning mills.....	7143
Daggitt, J. C., et al., oter galters.....	7392	Emond, J., gate post.....	6965
Daniels, T. E., marble collins.....	7212	Essery, W. H., et al., loose pulleys.....	7215
Dann, T., boots and shoes.....	7153	Ethridge, M. Van B., areometer.....	7923
Dansereau, E., butter workers.....	7776	Evans, H. B., brick kilns.....	7810
Darby, J. W. E., washing machine.....	7304	" S. B., heating sad irons.....	8025
Dark, H., et al., milk pan.....	7629	Fairley, J., et al., sharpening saws.....	7528
Darling, S., erasers.....	7974	Fairn, W. H., railway car-coupler.....	7328



Farewell, G., collars for garments.....	7175	Fuller, T. H., horse nail machine.....	8077	8078	8079
Farnham, F. G., shoe fastenings.....	7168	" T. R., making bungs.....			7817
Farnsworth, G. C., heaters.....	8125	" T. R., et al., broom bag.....			7540
Farrar, J., et al., tobacco cutter.....	7071	" " " holder.....			7751
Fee, J., " smoke consumers.....	7103	Fullerton, G. A., boots and shoes.....			7765
" " water engines.....	7137	Galbraith, R. S., et al., umbrellas.....			7609
Feely, W., " steam boilers.....	7109	Galloway, T., et al., horse rakes.....			7170
Felhoen, C., blasting powder.....	7386	Gardner, A., et al., pulp engines.....			7015
Fell, T. M., et al., utilizing glycerine.....	7556	Garon, E., railway gates.....			7995
Felton, D., waterproofing paper.....	7935	Garrison, N. S., heating stoves.....			6846
Fergus, J., steam boiler injectors.....	7236	Gary, W. W., electric motors.....			7572
Ferguson, J. F., keeping milk.....	7122	Gauthier, J. E., ice boxes.....			8007
" J. & A., churn dashers.....	7720	Gawley, H., saw mills.....			7011
Ferrari, G. R. de, et al., steam generating.....	7022	Geen, W., boot and shoe tips.....			7197
Ferris, Hiram R., hand truck.....	6809	Geer, W. E., oakum process.....			7178
Fessenden, G. L., glass bowls, &c.....	6911	Gelston, M., cigars.....			7644
Fickett, A., pulping engines.....	7873	Gerlach, A., et al., fruit pickers.....			7955
Field, G. F., et al., railway brakes.....	7956	Gerrish, A. A., et al., sash fasteners.....			7924
" J., " gear of buggles.....	7557	Gilbert, C. R., et al., cooking apparatus.....			7317
" J. E., " penells.....	7651	" D. A., platform scale.....			7437
" W. H., " horse rakes.....	6976	" J., bake pans.....			7020
Fillman, P., sleigh knees.....	6996	Gillilan, W., door hinge.....			6824
Findlay, J., et al., funnels.....	7217	Gillet, R. P., et al., grinding mills.....			7102
" J., " screw jacks.....	6926	Gillmore, H., et al., pumps.....			7601
Finuagan, A. J., butter package.....	7246	Gilrad, C. L., lump extinguisher.....			7529
Fish, A. E., men's shirts.....	7429	" O., coffin lifters.....			7348
" A. L., milk waggons.....	7006	Glazier, G. W., et al., making bobbins.....			7081
Fisher, Charles N., brick machine.....	6807	Gluck, M., punching machine.....			7756
" E. S., educational toys.....	7108	Goddu, L., boots and shoes.....			8122
" H., horse forks.....	7411	Godfray, H. L., check rein.....			6918
" J. A., et al., recovering alkalies.....	7767	Godfrey, C., carbureters.....			7310
" W. H., sash rebating.....	7175	" J. S., boiler flue cleaner.....			7928
" W. H., skate sharpeners.....	7111	Godley, G. F., railway springs.....			7464
Fisk, J. C., et al., gas governor.....	8113	" G. F., ventilation.....			7880
Fitch, E. T. & W., trace carriers.....	7115	Goff, J. B., portable fences.....			7814
" L. M., et al., wagon trestles.....	8038	" S. H., saw horses.....			6916
Fitte, E., " raising plants.....	7699	Golden, J. J., railway switches.....	6995		7868
Fithian, L. S., " increasing the motion of wheels.....	6850	Goldschmidt, A. M. S., chair and lounge.....			7817
Flagg, G. H. P., boots and shoes.....	7768	Goodwin, W. F., harvesters.....			8024
" I., et al., wood working.....	7993	Good, A. H. W., et al., car wheels.....			7366
Flagler, H. R., pipes and tubes.....	7624	" S. L., et al., pulp engines.....			7861
" H. K., et al., engines.....	7481	Goudry, R., preparing coffee.....			7312
" " " horse shoe blanks.....	7774	Gowenlock, W., et al., steam lubricators.....			7168
" " " machines.....	7339	Graves, J., oil cans.....			7651
Flanders, M. P., lamp extinguisher.....	7529	" J., shovels.....			7450
Fleeton, W., et al., milk pans.....	8040	Gray, A. G., mowers and reapers.....			7189
Flight, J., " harrow.....	6843	" G., gang ploughs.....			7338
Flower, J., pipe holding chuck.....	7899	Greacen, J., Jr., wringer rolls.....			8060
" J., taps and dies.....	7394	Grealey, J. P., et al., heel plate.....			7967
Fogg, L. A., spring vehicles.....	7407	Green, I. H., threshing machines.....			8061
Foley, J., liquid filters.....	6967	" J. J., iron and steel.....			7052
" J., water filters.....	7828	Greene, G. F., hair treating.....			7842
" J., purifiers.....	7816	Gregory, C. A., fire escapes.....			8021
Fontague, A., et al., curtain fixtures.....	7021	Gridley, J. E., heating stoves.....			7596
Footo, A., vehicle springs.....	7855	Griffin, J. L., fish cases.....			7621
Forbes, J., electrical apparatus.....	7870	Griffiths, M. W., tire opener.....			7878
" J. and W. E., bed bottom.....	7599	Grist, H., attaching skates.....			7095
" W. H., port holes of ships.....	7824	" H., skates.....	7093		7091
Fordan, J. A., et al., boiler cleaners.....	7836	Griswold, C. A., abdominal corsets.....			6927
Foreman, J., wheel hub.....	8870	Groom, G., wash boards.....			7205
Forster, F. N., photographic portraits.....	7055	Gross, C. S., et al., grain separators.....			7414
" J., lamp stands.....	7728	Grote, J. W., picture frames.....			7268
Forsyth, E. N., bed bottom.....	7234	Grover, J. & T., washing machines.....			8071
" R., et al., pulp engines.....	7015	Guardiola, J., grain dryers.....			7136
" W., " threshing machine.....	7648	Gue, A. F., et al., railway brakes.....			7956
Foster, J. L., grain threshers.....	7397	Guerin, T., sewer traps.....			7646
" W. T., toys.....	6960	Gunsalus, T., ice creepers.....			7785
Fowler, C. N., pessaries.....	7906	Guthrie, Joseph S., corsets.....			6817
" F. G., steering propellers.....	7160	Hadden, J. E., shaft coupling.....			7971
" J., et al., bougies.....	8059	Haddock, W., cutting nails.....			7190
Fox, C. J. T., dust pans.....	7378	Haish, J., fence barb.....			7521
" " wagon jacks.....	7874	Hall, F. E., et al., rein holders.....			7533
" J. S., wringing machines.....	7658	" J., " railway switches.....			7124
" S., tubes and plates.....	8016	" J. B., " horse boots.....			7536
" St. G. L., gas lamp.....	8019	" J. S., sewing machines.....			7491
Frasch, H., treatment of oils.....	7691	" R. P., electric plaster.....			7272
Fraser, H., et al., skate holder.....	7293	Hallas, J. G., et al., lamp burner.....			7506
" J., sowers.....	7501	Hammer, E., et al., steam boilers.....			8086
" R. G., cement.....	6846	" C. A., cooking and heating stoves.....			7727
Frederick, C., et al., scroll sawing.....	7284	Hamlin, A., dog-power.....			8081
Freeman, J., et al., spinning wheels.....	6956	Hammill, R. E., et al., gear of buggles.....			7537
Freeze, S., et al., sharpening saws.....	7528	Hammond, A. H., reed organs.....			7363
French, Alonzo, lamps.....	6791	Hamor, R. B., door threshold.....			7856
" G., et al., fire escape.....	7018	Hancock, J. T., injectors.....			7011
" O. S., " spark arrester.....	7735	Hannon, E. W., et al., treating ores.....			8078
Frese, J. F., smoothing and glossing.....	8053	Hannum, H. A., milk coolers.....			8057
Fuchs, A., hotel indicators.....	7432	Hanwell, G. E. J., et al., damper.....			6862
Fuller, T., fire-proof safes.....	7795	" " " increasing the motion of wheels.....			6550



Hard, J. W., et al., steam boilers.....	7027	Hulet, D., et al., gas purification.....	7770
Harger, J. P., et al., making steel.....	7338	Hull, J., et al., clothes wringers.....	8083
Hargreaves, G., match splints.....	7208	" W. A., extension chandler.....	7713
Harlow, C. F., tobacco-cutter.....	7326	Hunter, G. W., lifting jack.....	7096
Harper, J. M., fly-trap.....	6844	Hurburt, W. H., et al., sheet metal patching.....	8117
Harrington, H., movable fences.....	7818	Hurd, L. D., gearing for waggons.....	7554
Harris C., water wheels.....	7715	Hutchins, C. B., roofing compositions.....	7311
" J. C., et al., lap rings.....	7555	Hutchinson, H. J., et al., guage cock.....	7092
" T., et al., horse malls.....	6903	Hutchison, W., et al., oatmeal.....	7118
Harrison, J. B., kitchen safe.....	7162	Hyde, C. D., et al., hoes.....	7418
Hartnoll, J., stone dressing.....	6975	" J. B., railway brake.....	8011
Harvey, J., meat preserving.....	7202	" T. R., wooden soled shoes.....	8061
Haskell, S. M., knife scourers.....	7036	Ingalls, G. R., milk coolers.....	7100
Hastehurst, T. E., sewing machines.....	7631	Ingersoll, C., grocers' dishes.....	7106
Hatch, W. B., bed bottoms.....	7667	" S., rock drills.....	7115
Hatton, J. H., life-boats.....	7296	Ingraham, W. S., sickle grinding.....	7516
Haughlan, C. P., iron and steel.....	7107	Inward, C., et al., pipe thimbles.....	6959
Hawkesworth, D., et al., spark arresters, &c.....	6978	Ireland, F. C., skates.....	6958
Hawkins, F. R., grain cleaning.....	7812	Israel, A., et al., clothes wringers.....	8083
Hawthorn T., hand stamps.....	8101	Ives, H. A., burning coal, &c.....	6963
Hayes, G. W., elastic hub.....	7630	" H. R., sap spouts.....	7203
Haylock, W. H., sad iron heater.....	7748	Izzard, G. B., bed bottom.....	7503
Haynes, C. E., washing machines.....	6961	Jablochkoff, P., electric lamps.....	7963
Healy, G. M., blowing organs.....	7162	Jackson, W. M., gas stove.....	7167
Heard, J., stone walling.....	7612	Jacob, Rodolf, brake.....	6835
Heath, J., et al., pumps.....	7601	James, C. R., piston packing.....	6866
Heimrichs, C. F. A., et al., lamps.....	8071	Jameson, S., et al., hand truck.....	7027
Hemenway, B. N., adjustable seats.....	8050	Jane, R., et al., venetian blinds.....	7371
" school desks.....	8051	Jarecki, F., gas and water pipes.....	7835
Hemmich, T. F., et al., furnaces.....	6921	Jarves, J. J., et al., steam generating.....	7022
Henderson, E. C., et al., skate holder.....	7293	Jarvis, K. M., gas furnaces.....	6981
Heus, C. F., metal pipes.....	7190	Jeffrey, G., hame fasteners.....	7656
Hennessy, H., weighing scales.....	7306	" J. A., et al., minjng machines.....	7002
Henry, F. J., mower knives.....	7551	Jenkus, P. O., heating stoves.....	7871
Henshaw, S., boots and shoes.....	7864	Jenney, W. P., sludge oil.....	7368
Herald, J., piano fortes.....	6939	Jennings, G., sinks and water closets.....	7730
" D., nail point turning.....	6877	Jensen, J. T., snow ploug.....	7787
Herlihey, W., et al., axle trees.....	7082	Jesson, T., et al., brooms and brushes.....	7712
Hersey, R., horse shoe nail.....	7223	Jetté, O., et al., steak beating.....	7150
Herson, C. H., steering apparatus.....	7419	Jewell, T. J. M., cans.....	7169
Hess, J., chairs.....	7044	Jewett, E. M., cutting fibrous material.....	6888
Hewitt, W., buggy shaft.....	7121	Johnson, J. D., railway brakes.....	7933
Hicks, C. R., ventilators.....	7517	" C. M., pen cases.....	6937
" T. H., et al., gas retorts.....	7101	" C. W., et al., truck.....	7670
" T. H., et al., hydro carbons.....	7458	" G. H., et al., stove.....	6861
Hill, J. P., clothes dryers.....	7235	" John, harrow.....	6836
" V. P., cooling milk.....	7155	" M., et al., hoes.....	7171
Hills, A., hat machine.....	7194	Johnston, G. A., fruit drying.....	7531
Hind, T., et al., gang ploughs.....	7327	" J., car-coupler.....	7398
Hinkley, A. S., carpet sweepers.....	7679	" J., et al., portable baths.....	8121
Hobbs, J. H., glass chandelier.....	6851	" J. L., alimentary preparations.....	7085
Hobs, W. C., gas pipe fencig.....	7755	" J. L., animal food.....	7446
Hodder, J. H., writing tablets.....	7049	Jones, E. W. & E. A., fruit dryer.....	6864
Hodgson, W., railway swith.....	6867	" H., iron fence.....	7960
Hoeltge, F. A., stove-pipe elbow.....	6786	" J. A., et al., door hinge.....	6821
Hoffman, J., safety valves.....	7267	" W., blind hinges.....	7879
Holden, C. W., et al., areameter.....	7923	" W., thread winder.....	6872
Holland, B., et al., piston packing.....	7583	" W. T., mowers and reapers.....	7539
" C., gas generator.....	7915	Joyce, N. K., air registers.....	7872
Holloway, J., producing metals.....	7106	Judson, E., explosive compounds.....	7148
Holmes, A. F., smelting furnaces.....	7997	" J., governor valves.....	7285
" H. G., et al., spark arresters.....	7172	June, R. B. D., et al., spark arrester.....	7735
Holmwood, J., Jr., et al., chewing gum.....	7541	Kapple, J. L., folding seats.....	8058
Holton, W. J., et al., pencils.....	7051	Karr, W., gas retorts.....	7282
Hooper, G. W., force pump.....	7543	Kast, J., still for spirits.....	7896
Hopkins, J., animal substances.....	7381	Kay, A., sewing machines.....	6955
Hopper, J. R., potato diggers.....	7295	Kayser, A., gas generating.....	6889
Hornum, W. H., fare registers.....	7779	Kents, J., felt hardening.....	7965
Horsford, S., ice creepers.....	7950	" " sewing machines.....	7998
" skates.....	7022	" " sole channelling.....	7966
Horsley, B., book binding.....	7821	" J., et al., boot and shoe lasts.....	8116
Horton, N. N., reclining chairs.....	7959	" " boots and shoes.....	8030
" B. J., fanning mills.....	7103	Keen, J. M., car-couplings.....	7682
Hortop, W., et al., propelling cars.....	7376	Keenan, F., drilling machine.....	7895
Hotchkiss, B. B., breech loading arms.....	7606	Kelth, G. G., bob sleighs.....	7355
Houghton, C. F., semaphore lenses.....	7322	Kellar, J., tea kettle.....	7857
Houle, P., hinges.....	7423	Kelsey, L. A., et al., journal box.....	7900
Hovey, D., et al., lamps.....	7781	Kendrick, A. W. and C. T., fanning mills.....	7791
Howard, J. E. and C. E., metallic brushes.....	7499	Kennedy, F. C., et al., wheel harrows.....	7236
Howell, H. F., treating ores.....	7994	" R. D., et al., piston packing.....	7583
Howse, A. R., et al., suspension tramway.....	7559	Kent, A. & B., spectacle glasses.....	7211
Hoyt, T. & E., pump bucket.....	6873	" E. R., et al., glass ornamenting.....	8011
Hubbell, N. C., metal screws.....	7369	Kershaw, W. H., roof coverings.....	7511
Hubbard, H. G., solder wire.....	7569	Kestler, W., heating irons.....	8025
Huff, A., mill cans.....	7110	Keys, W., horse-shoe nail.....	7221
Huffman, W. C., stone sawing.....	7796	Keyser, J. H., water closets.....	8005
Huggett, J. A., horse pails.....	8138	Kieran, J., et al., hydrants.....	6920
Hughson, F., churrs.....	7039	Klinder, S., folding wash-stand.....	7171

King, B. P., bolt	7664	Lindsey, G. M., door seener	7303
" C., dental pluggers	7604	Lingenfelter, O., ironing board	7327
" M. L., water power	7898	Lippe, C., picture frames	7470
" T., et al., furnaces	7214	Lipsey, A. B., pulverizing machines	7089
" T. E., spool stamping	7819	" wrenches	8098
Kinkead, R., et al., spring bedstead	6895	Liston, R. P., churns	7116
Kinleyside, J., et al., wringing machines	7991	Little, B., et al., bond bricks	7341
Kinney, J., et al., saw frames	7186	" M., et al., sad iron heaters	7220
Kirby, W. A., grain binding	8017	Ilvergood, H. A., scouring wheat	7791
" harvesting machine	8011	Livermore, R. F., baggage checks	6977
" reaping machine	8137	Livingstone, J. M., railway alarm	7081
Kirkham, G. B., folding umbrellas	7117	Lloyd, C. V., et al., steam boilers	7027
" T. N., et al., gas purification	7770	" D. S., curtain fixture	7361
Kisor, J., box machines	7273	Loddell, G. R., cleaning boilers	7115
Kistler, J., rotating brushes	8139	Locke, E. A., sealing devices	7657
Klantz, C., et al., lamp collars	7806	Lockwood, E. J., wheeled harrows	8028
Kleinert, I. B., ear slippers	7756	Long, F. C., enamelling photographs	7580
Kline, A., threshing machines	8096	Lord, P., fire-escape ladder	7848
Knaggs, W., churns	7160	Loskamp, C., raising plants	7899
Kuelsly, C. F., et al., spring hoes	7350	Lothrop, T. C., vulcanized rubber	6908
Knight, H., pigments	7932	Loud, S. C., et al., ships' pumps	7362
" W. H., timber butting	7110	Lowden, E. M., lamps	7972
" W. H., et al., pipe core barrels	7760	Lucas, A. H., egg boxes	6972
Knott, K., dry air refrigerating	8003	Lugrin, H. A., stop watches	7660
Knowlton, C., hoisting machines	7152	Lundy, S. J., et al., gang ploughs	7313
" J. C., rigging ratlines	7694	Lyall, D. C., et al., cigarette machines	7953
Koch, P. P. E. M., food preservation	7731	" J. & W., weaving looms	7461
Koerber, A. R., et al., musical instruments	7527	Lyons, D. M. & L. B., car track	6931
Krapp, A., ordnance, &c.	7103	McAllister, D., air heating	7420
Kuhns, B., et al., rpring hoes	7350	McBride, A., et al., churns	7163
Kunkel, J. B., eliminating phosphorous	6932	" J., buggies	7335
Kydd, J. H., organ stop actions	7695	" J., carriages	7253
Kyle, T., et al., watch winding	7926	McCall, E. R., et al., hoes	7471
Labelle, G., potato bugs	7893	McCallum, A., et al., waggon racks	7987
Labrecque, H., washing machines	6968	McCammon, Samuel, artificial stone	6799
Ladd, A. P., thill couplings	7761	McCannon, G., et al., threshing machine	7618
" washing machines	7762	McCarthy, D., lamps	7512
Lade, R., gang ploughs	7637	" J., collars	7389
LaDow, C., harrow cultivators	7881	" screw fastenings	7193
Lafayette, G. G., et al., steam engines	7110	McCauley, A., et al., churn	7286
Lafitte, J. B., bay preparing	7970	McCausland, W. I., fluting irons	7547
Lake, J. K., et al., trace fastenings	6922	McCloskey, J., sewing machines	6990
" P. C., et al., harrow	6843	McCune, J. R., et al., sand moulding	7125
" William T., refining iron	6805	McComas, E. F., et al., curtain fixture	7121
Lamb, D. M., petroleum deodorizing	6812	McConnell, R., animal traps	7356
" D. M., waterproof gum	8013	McCoy, H., sawing machine	8043
" J., sawing machines	7071	McCollock, R. K. M. & J., baking slide-board	7243
La Mothe, B. J., railway cars	7005	McCully, S. E., et al., turbine wheels	7680
Lancaster, J. J., grinding colors, &c.	6890	McDermald, J., churns	7597
Lander, G., pumps	7073	McDevitt, B., et al., trace fastenings	6922
Laudfear, William R., lute	6788	McDermid, H., ploughs	7666
Landon, William H., stove	6825	McDonald, A., stone dressing	6975
Lane, W. J., et al., horse rakes	6976	" T., canister for groceries	7593
Lauey, W. S., pumps	6913	" T., et al., funnels	7217
Langs, E. R., waggon box	7903	" T. A., boot lacing	7025
Lanier, J. B., taper machines	7603	" T. A., lace fastenings	7949
Lansdell, H. S., making screws	7173	McEachen, J. D., et al., hoops	7498
Larsen, J., et al., horse rake	7170	McElhinney, M. P., blotting rulers	6993
Lash, J. F., blind fixtures	7245	McGin, M., tobacco cutters	7078
Latham, O. B., nut locks	7098	McGuire, J., spring beds	7030
Latimer, M., axle oil-cup	7447	" W., dumb stoves	6917
Laughlin, J. M., horse shoe nails	6801	McKay, J., et al., fanning mills	7143
Laurie, D. H. & J., boots and shoes	7072	McKee, S. I. and B. F., fire escapes	7687
Lawler, A. B. and J. H., et al., metallic laths	8011	McKellar, M., feather renovating	7392
Leach, N. P., sap spouts	7203	McKenney, T., et al., venetian blinds	7671
Leathers, L. L., artificial stone	7552 7909	McKerzie, W., fanning mills	7198
Lechner, F. M., et al., mining machines	7002	McLaren, H., dentists' chairs	7161
Leckie, R. G., roasting furnace	7851	McLaren, A., compound for roofs	7609
" separating sulphur	7867	" J., driving relus	7538
Lee, P. H., under-garments	7875	McMurray, J. S., et al., broom bag	7510
Leggott, H., dumping waggons	7969	McMurry, W. J., et al., sewing machine	6811
Legyo, W. A., skates	6958	McNeil, P., flower stands	7733
Lennox, E. S., bale ties	7042	McWilliams, C., et al., smoke consuming	6917
Leonard, E., slide valves	6953	Mans, C., et al., brass tubes	7457
" J., turnip topplug	8027	Macaulay, T. A., sewing machines	7263
Lescarbeau, M., pumps	7608	Mackay, J. M., railway washers	7542
Letts, J. S., inhalers	7210	Mackey, J. C., et al., sheet metal patching	8117
Love, G., sleeping cars	8000	MacLennan, A. R., motive powers	7372
Lovorich, E., dust guard	6950	Magee, J., sink traps	8084
" G., elastic hubs	7619	Maggio, C., manufacture of soap	8066
Lewars, J. H., et al., lamps	7512	Main, W. H., et al., trace carriers	7415
" " lamp collars	7806	Mallet, E. M., et al., wash boiler	6812
Lewis, W. K., baked beans	7896	Malone, H. P., oil stoves	7487
Libby, C., galters	7665	Manheim, J., et al., store windows	7885
Liehliter, J. M., horse collars	7813	Mann, E. E., marine signal	7133
Liddle, R. Z., et al., oil stoves	7941	" T., hoisting machines	7853
Lillis, F. C., faucets	8073	Manning, C., et al., steam lubricators	7108
Lincoln, J. B., fringing machines	7438	Manville, M. W., et al., taper lights	7224




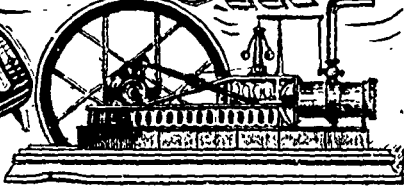
Pierce, R. O., temporary binders.....	7113	Roe, C. C., steam engines.....	8087
Pillow, J. A., horse nail.....	7223	Roesser, H. F., et al., bed bottoms.....	7837
Pitt, G. W., safety locks.....	7578	Rogers, H. and J. H., grates.....	7135
Platt, C. M., garment buttons.....	7106	“ J. W., shoe sole buffing.....	7849
Platts, H., et al., billiard cues.....	6797	“ “ sole buffers.....	7904
Poirier, A., clothes washer.....	7456	Rohrfrieh, T., movable fences.....	6901
Pontifex, J. H., et al., waterproof garments.....	7823	Rohrer, E., medical compounds.....	7307
Pool, C. W., post augers.....	7258	Root, D., gates.....	7116
Poole, J. T., shoe lasts.....	7671	“ J. B., pipes and tubes.....	7624
Popham, J. and E., boots and shoes.....	6798	“ “ making “.....	6969
Porter, C. et al., window ventilators.....	7799	“ “ tubes.....	6983
Possett, E., woven fabrics.....	7357	Rose, J. M., sewing machines.....	7393
Poetter, C., church benches.....	7187	“ T., water wheels.....	7371
“ W. B., voltaic plasters.....	7031	Rosenthal, H., brushes.....	7013
Powell, C., pumps.....	7622	Ross, H., upsetting tires.....	7918
“ E. H., et al., wheel harrows.....	7236	“ W., gang ploughs.....	6914
“ J., sleigh brake.....	7313	Roth, L., et al., wagon trestles.....	8038
Powers, C. T., thread winder.....	6872	Rousseau, P. X., sewers and drains.....	7805
“ D. J., bed lounges.....	6907	Rowe, W. H., seed drill.....	7308
Pratt, F. A., boiler feeders.....	6909	Rowell, B., car-couplings.....	7702
“ P. P., gas generating.....	6889	Royer de la Bastie, F. B. A., tempering glass 6880 6881	6882
Prescott, E., doors and blinds.....	7980	Rudel, P. E., clothes wringer.....	7854
Prevost, D., window blinds.....	7424	Ruel, L., washing clothes.....	7387
Price, J. W., drying wheat.....	7059	Ruger, A., cracker machines.....	8052
Pringle, T., et al., middlings separator.....	8094	Rushtown, W., spark arresters.....	8019
Prosser, T. T., boot and shoe pegs.....	6894	Rusk, W. and G., force pump.....	6847
“ “ indenting wire.....	6792	Russell, T. H., et al., turbine wheels.....	7680
Protheroe, P., anchors.....	7598	“ W., reaper tables.....	7433
Pullan, E., towel rack.....	7532	Ruthven, J., gas lighting.....	7185
Pulliam, L., wagon springs.....	7595	Ryal, J. H., et al., window screen.....	7790
Pullman, A. B., et al., car brakes.....	7100	Ryder, J. L., rein supporter.....	7195
Purdy, H., steam boilers.....	7219	Ryerson, R. D., stove legs.....	8002
“ S. D., bale tying.....	7029	“ Van B., flour.....	7732
Putnam, H. W., fence wire.....	7830	Sabln, C. T., et al., door springs.....	7301
Pye, G., harvesters.....	7831, 7832	“ “ hinges.....	7948
Quimby, A., railway switches.....	6999	Sager, J., et al., fruit pickers.....	7955
Radcliffe, C., button machines.....	7690	Saladee, C. W., roller skates.....	7305
Randall, H. R., et al., gas carbureters.....	7497	Salomon, E., heel counters.....	7550
“ H. B., et al., malt syrup.....	7033	Sammis, J. B., elastic hub.....	7619 7630
Randel, W., et al., sewing machines.....	7631	Samuel, T., lined felts.....	7788
Randell, H. E., et al., curtain fixtures.....	7021	Saunders, E., ships' pumps.....	7888
Ranple, A., baking machines.....	7147	Sanderson G., et al., railway cars.....	7535
Rapp, C. F., et al., hinged slates.....	7531	Saugster, J., cutting fibrous material.....	6888
Rawson, I. and S., et al., reaping machines.....	7164	Sargent, G. M., et al., car brakes.....	7400
Ray, L., photographic printing frames.....	7711	Sault, T., washing machines.....	7560
Read, G. W., lumber dryers.....	7047	Saunders, C., fanning mills.....	7545
Reardon, W., broom stands.....	7114	Sawyer, J. T., et al., wash-boards.....	7992
Rebasz, L. A., faucets.....	8037	“ T. J., nut locks.....	8100
Reckie, A., Sprague mower.....	6131	Sax, J. K., car wheels.....	7192
Redden H., bag fasteners.....	7566	Schieffelin, B., filters.....	6915
Redhea-, J., gas manufacture.....	7227	Schmitz, F. E., book binding.....	7821
Reed, C. W., steam boilers.....	7009	“ J. P., stench traps.....	7915
“ J. L., shafting bearings.....	6925	Schnader, D. C., et al., furnaces.....	6921
“ J. P., et al., middlings purifier.....	7562	Schoen, C., et al., trotting sulks.....	7290
Reich, J., plough.....	7391	Schoonmaker, J. C., lightning rods.....	7061
Reid, J. M., plaster of Paris.....	6391	Scolliek, J., et al., taper lights.....	7224
“ J. R., et al., stoves.....	6957	Scott, D., barrel stands.....	7825
“ J. W., seed drills.....	6952	“ M. F., work tables.....	7196
Reistle, C., et al., lamps.....	8074	“ W., pumps and engines.....	7689
Renshaw, L. F., steam generators.....	7038	“ W., et al., oatmeal.....	7118
Requa, Elias B., bottle stoppers.....	6803	Scovell, F. B., safety valves.....	7321 7431
Rhoder, T. R., paper bag machine.....	7978	Scratch, B., et al., churn.....	7286
Rhodes, D., et al., fluting irons.....	7168	Seabury, T. S., motive power for vessels.....	7448
“ W. H., tree hole digger.....	7057	“ “ wire fence.....	6822
Rice, C. L., vehicle braces.....	6971	Searle, H. W., snow shovels.....	7001
“ I. L. G., inking apparatus.....	7611	Seely, E. C., mast ball.....	7912
“ S. M., et al., stench traps.....	7925	“ “ et al., skylights.....	6973
Richardson, B. F., vehicle axles, &c.....	6936	“ N., “ cans.....	7169
“ C. F., et al., rein holders.....	7533	Seger, G., et al., washing machines.....	7199
“ S. H., sawing machines.....	8102	Semple, R. W., et al., doors.....	7954
Rickman, S. S., et al., sewing machines.....	7780	Senour, F. L., compound reflectors.....	7723
Riddell, J., fanning mill.....	6860	Seyler, A. J., et al., middlings purifier.....	7562
Riley, A., collars for garments.....	7175	Seymour, G., et al., steam engines.....	6829
Rinehart, L. G., et al., truck.....	7670	“ S. J., et al., dress platters.....	7225
Ritche, David A., pipe.....	6826	Shackleton, J., sand papering.....	7594
Rittenhouse, W. H., et al., tack machine.....	6896	Shannon, W., whistletrees.....	7519
Roach, T., et al., milk pan.....	7629	Sharp, H. A., oil cabinets.....	6962
Robbins, L. S., wood preserving.....	7902	Sharret, J. W., reefing sails.....	7486
Roberts, R., cigar machines.....	7886	Shaver, J. H., cracker machines.....	8052
“ J. H., tube welding.....	8020	Shaw, A. B., curtain fixtures.....	7574
Robertson, J., water closets.....	7128	“ D. V., corking machines.....	7565
“ W., et al., door hanger.....	7281	“ D. T., riding and driving reins.....	7839
Robinson, A. J., ventilators.....	7517	“ G. A., et al., doors.....	7954
“ C., plough cleaves.....	7502	“ N. H., renovating feathers.....	6892
“ M. W., washing machines.....	8034	“ S. H., rotary harrows.....	7032
“ S. L., et al., car-couplings.....	7782	Sheldon, R. B., cultivators and sowers.....	7880
Rockfellow, S. L., grocer's scoop.....	7602	“ “ hay rakes.....	7547
Rodgers, D., et al., screw propeller.....	7626	Shelton, G., fence posts.....	6982





# The Canadian Patent Office

## RECORD

Vol. V—No. 1.

JANUARY, 1876.

{ Price in Canada \$2.00 per An  
United States - \$2.50 "

### CONTENTS.

INVENTIONS PATENTED .....	1
INDEX OF INVENTIONS .....	XI
INDEX OF PATENTILLS .....	XI
ILLUSTRATIONS .....	II

### INVENTIONS PATENTED.

#### No. 6785. Improvements in Washing Machines. (*Perfectionnements aux machines à laver.*)

John Maw Montreal, Que., 20th November, 1876, for 5 years.

*Claim.*—1st. Any washing machine in which the material to be washed is passed between a large corrugated roller and two or more smaller smooth ones, the arrangement and construction whereby an independent yielding resistance is imparted to the said smaller rollers 2nd The combination of the frame A A, rollers D D, and D<sub>2</sub> links E E and bands F, 3rd. In combination with the machine the shelf B.

#### No. 6786. Process and Appliance for Making Stove-pipe and other Elbows. (*Procede et appareil pour faire des coudes de tuyaux de poeles et autres.*)

Frederick Hoeltge and Augustus Hoeltge, Cincinnati, Ohio, U. S., 20th November, 1876, for 5 years.

*Claim.*—1st. The process of forming sheet metal elbows by stamping in a suitably formed blank a central concavity and two lateral ridges, and bending the sides forward and toward each other, so that the bends therein will form the inner curve of the elbow, and the central concavity will form the outer curve. 2nd The blank A formed with two convex sides a and two concave sides a' as to adapt it to be stamped and bent into the shape of an elbow 3rd The successive dies A B, the former having an oblong or elliptic cavity and the other a similar or deeper cavity contracted at the sides by transverse ridges 4th The final die B with a central longitudinal cavity and transverse ridges flanked by diagonal depressions adapted to stamp a sheet metal blank into the required shape to be bent into elbow form in the manner explained, 5th. The elbow formed from a blank of peculiar outline and of sheet metal of ordinary or uniform thickness.

#### No. 6787. Spring Bed Bottom. (*Pond de lit à ressorts.*)

William W. Bartlett, Portland, Me., U. S., 20th November 1876 for 5 years.

*Claim.*—1st. The combination of the holders C with the supporting frame B and the series of springs S. 2nd Each spring S as provided with the clip D 3rd Each clip D grooved on its opposite edges or formed to enter and fit to the spring clip D 4th The supporting frame, the series of slats, the springs and the devices for connecting such springs to the said frame and slats.

#### No. 6788. Lathe for Turning Spools. (*Tour à tourner les bobines.*)

William R. Landfear, Brooklyn, N. Y., U. S., 20th November, 1876, for 5 years.

*Claim.*—1st. The combination with the supply tube A of the spool blank conveyor B provided with the jaws e and f for holding and releasing the spool, and having its upper surface constructed to form a cut off to the spool supply tube 2nd The sleeve n in combination with the sliding spindle I, the stops or collars n' the nut n adjustable on said sleeve and the grooved cam G, 3rd The combination of the eccentric pin S on the shaft L with the sliding rod I, the spring u the stop or nut e and the knife carriage M 4th The combination of the grooved cam G with the vibrating arm E by which the spool blank cut off and conveyor B is operated and the nut n by which the sliding spindle I is actuated.

#### No. 6789. Screen Holder. (*Pied d'écran.*)

Worth R. Smith, (Assignee of Gardner A Blodget), Elmira, N. Y., U. S., 20th November, 1876, for 5 years.

*Claim.*—1st.—The continuous wire holder made with four or more dependent loops to hold the card, said loops being held in their proper position

by substantially horizontal parts of the same wire, and the whole terminating in a standard which connects the holder to its support, 2nd. The continuous wire holder in combination with a double wire standard upon which the holder slides vertically 3rd A standard provided with the guide loops d in combination with the adjustable screen holder provided with loops b b.

#### No. 6790. Railroad Rail Joint. (*Joint de rail de railroute.*)

Charles F. Arnold, Titusville, Pa., U. S., 20th November, 1876, for 5 years.

*Claim.*—1st. The combination of the bed plate a clamps e and staples g. 2nd The combination of the clamps e having the links h secured thereto, slots i and wedge o.

#### No. 6791. Improvements in Lamps and other Glass Vessels. (*Perfectionnements dans les lampes et autres vases de verre.*)

Alonzo French, Philadelphia, Pa. U. S., 20th November 1876, for 5 years

*Claim.*—1st. The socket or column D provided with screw threads at the upper end in combination with the bolt F or other equivalent mechanical contrivance for uniting a glass vessel to a metal base or stand 2nd The socket or column A concave or dish shaped at the upper end and provided with a screw thread between the ends in combination with the bolt F or other equivalent mechanical contrivance for uniting a glass vessel to a metal base or stand 3rd The combination of the drip cup C made with a screw or socket D and the fount B supported in each drip cup by means of the stem B fitting into or upon said socket.

#### No. 6792. Machine for Indenting the Surface of Wire. (*Machin à indenter la surface du fil metallique.*)

Treat T Prosser, Chicago Ill., U. S., 20th November 1876, for 5 years

*Claim.*—1st The combination with the both rotating and reciprocating rolls of guides for confining the wire so as to compel it to pass in a straight line through between the rolls 2nd The combination with the rotating rolls of the boxes supporting them and eccentrics and rods for reciprocating the boxes and rolls 3rd The combination with the driving shaft the rolls and their supporting boxes of the wormwheels for imparting through intermediate gearing a rotary motion to the rolls and the eccentrics and rods for reciprocating the boxes and rolls at the same time.

#### No. 6793. Improvements on Meat Cans. (*Perfectionnements aux boites à conserves alimentaires.*)

George Brougham, Chicago, Ill., U. S., 20th November, 1876, for 5 years.

*Claim.*—The preserved meat can having heads with an outward bulge capable of becoming an inward bulge while the heads are secured to the sides, and having straight sides, the height of the can being not greater than the diameter of the heads or of the larger of unequal heads, whereby sufficient metal is allowed in the heads to accommodate the collapse produced by atmospheric pressure and the strength and substantial form of the sides is preserved.

#### No. 6794. Improvements in Pipe Joints. (*Perfectionnements aux joints de tuyaux.*)

Andrew O'Neill, Baltimore, Md., U. S., 20th November 1876, for 5 years

*Claim.*—1st The pipe ends formed with lugs or flanges in combination with the collar provided with corresponding flanges or lugs for drawing the two ends of the pipe together 2nd The pipe end formed with lugs or flanges for the reception of the collar and with a bead behind said lugs or flanges to receive a jack for pressing the pipe ends together 3rd The combination of the recessed pipe end the spigot end and a suitable basket C pressed between them, 4th The jack K L M N constructed and employed for pressing coupling lugs on the ends of cut or common pipes.

#### No. 6795. Elliptic Spring Fitting Machine. (*Machin à fabriquer les ressorts elliptiques.*)

John S. Pessinger, Birmingham, Ct., and George W. Pessinger, Brooklyn, N. Y., U. S., 20th November, 1876, for 5 years.

*Claim.*—1st A positive former for use in fitting or setting elliptic springs, in combination with a flexible upper die or series of weights or hammers, the former being constructed with an upper surface of the required shape and



marginal flanges to gauge the edges of the spring plate or leaf; 2nd. A positive former constructed with passages for air or water to provide for chilling the bottom or convex side of the bent plate or leaf and for removing scale and for keeping the former cool; 3rd. A sliding bed adapted to receive interchangeable formers in combination with a flexible upper die composed of weights or hammers, two more of which can be supported in elevated position to adapt the series to a short former; 4th. The combination of the driving pulley P and shaft S, pinion P<sub>2</sub>, spur wheel W a clutch C, the shaft S<sub>2</sub> and cam C<sub>2</sub> for reciprocating the sliding bed so that the spring plate or leaf shall receive distinct blows from the successive weights or hammers for the displacement of the hot metal; 5th. The sliding sleigh sleeve projected by springs and retracted by the action of a cam flange and spring bolt under control of a treadle, in combination with the inner keyed sleeve K spur wheel W shaft S<sub>2</sub> and cam C<sub>2</sub> for stopping the sliding bed in its elevated or lowered position at will.

### No. 6796. Apparatus for Heating Air and Gases. (*Appareil à chauffer l'air et les gaz.*)

Thomas Whitwell, South Stockton, Eng. 20th November 1876, for 5 years.

*Claim.*—The construction of apparatus for heating air and gases with vertical walls or partitions A so arranged as to divide the current and cause it to pass in the same direction along two or more adjacent walls or partitions in place of alternately over and under them as heretofore; the combination with apparatus for heating air and gases (in which two structures are alternately heated and caused to impart their heat to the air or gas) of metal pipes P, through which the air or gas is caused to pass whilst the apparatus is heating such air or gas being then discharged into a second apparatus previously heated in which a further amount of heat is imparted to it.

### No. 6797. Improvements on Billiard Cues and Tips. (*Perfectionnements aux queues et aux procédés des queues de billard.*)

Hervey Platts Ithaca, N. Y., U. S., and Francis G. Taylor, Toronto, Ont., 20th November, 1876, for 5 years.

*Claim.*—The fasteners D fitting friction tight into without touching the bottom of the holes E in the end of the cue A, in combination with the leather tip B having a hardened side C.

### No. 6798. Machine for Breaking the Pegs in Boots and Shoes. (*Machine à casser les chevilles dans les chaussures.*)

James Popham and Ebenezer Popham Montreal, Que. 20th November, 1876, for 5 years.

*Claim.*—The combination of the revolving shaft having a grooved pyramidal cutter with an increasing horn and gear bearing cutter exposed at upper side to protect insole and leather.

### No. 6799. Manufacture of Artificial Stone. (*Fabrication de la pierre artificielle.*)

Samuel McCammon, Gananoque, Ont., 20th November, 1876, for 5 years.

*Claim.*—1st. The manufacture of artificial stone of two compositions a coarser and finer, the latter forming the finished face when consisting of marble or granite, dust or other pulverized mineral or metallic ore and cement with or without coloring matter mixed with water separately moulded, and the coarser mass moulded into union therewith, while both compositions are in a plastic state; 2nd. An artificial block formed by moulding a finer grade of materials to form the finished face and a coarser grade to form the body of the stone, the impact being formed while both grades of materials are in a plastic state in the mould.

### No. 6800. Mode of Constructing and Laying Water and Gas Pipes. (*Méthode de fabriquer et poser les tuyaux d'eau et de gaz.*)

Andrew O'Neill, Baltimore, Md., U. S., 20th November, 1876, for 5 years.

*Claim.*—1st. The chilled convex pipe and constructed with lateral lugs formed with faces convex in both directions in combination with bearings within the bell curved to correspond therewith; 2nd. The pipe bell constructed with a recessed flange E for the reception of the lugs B and with a notched concavity C for the gasket D; 3rd. The lug J on the external shoulder of the bell to receive a pin by which one section is held while the other is twisted by a jack; 4th. The stop K to limit the turning of the pipe within the bell; 5th. The concentric convex gasket D constructed on either side with an annular ridge or leather edge and with external lugs d; 6th. The combination of a central pipe end cast with hollow lugs or their equivalent B, a bell end flanged and recessed to receive said lugs and a compressible gasket to form a tight flexible joint; 7th. The chilled billet B formed on the spaced end of the pipe with lugs projecting therefrom; 8th. The dead end B constructed with a conical bearing face b and convex lugs B adapted to the bell end and with lugs for the application of a jack for twisting in the said dead end; 9th. The ferrule P constructed with a tapering end surrounded by a tubular m of softer metal to form a close joint when driven into an aperture; 10th. The outlet O at the T or intersection of A main constructed with a gasket seat and inclined formed for the option of reception of a cap N or a service T; 11th. The annular cap N employed to close the outlet O by means of a suitable gasket, or to receive a wrought iron or other service pipe.

### No. 6801. Horse Shoe Nail Machine. (*Machine à clou à cheval.*)

Joseph M. Laughlin, Boston, Mass., U. S., 20th November, 1876, for 5 years.

*Claim.*—1st. In combination with a punching machine of a bevelling machine provided with bevelling rollers for forming indentures or depressions, and suitable connecting mechanism by which a rotary but intermittent motion is imparted to the rollers n n from the punching machine; 2nd. In combination with a bevelling machine of the roller provided with projections around its circumference; 3rd. In combination with a punching machine and a feeding or bevelling machine of the automatic stop motion consisting of

the bent lever J, lever I, fulcrum 2 and spring or its equivalent 4 combined with the treadle 5 and suitable connecting mechanism to the driving shaft; 4th. In combination with a punching machine of a bevelling machine provided with bevelling rollers for forming a groove or grooves, and suitable connecting mechanism by which a rotary but intermittent motion is imparted to the rollers n n from the punching machine; 5th. The bevelling machine consisting of the rollers n n or their equivalents, one of which is provided with an annular projection for bevelling the nail.

### No. 6802. Spring Attachment for Vehicles. (*Appareil des ressorts de voitures.*)

George H. Spencer Jersey City N. J. U. S. 20th November 1876, for 5 years.

*Claim.*—1st. The frame A, its hook a the sliding rod B and one or more springs c arranged to be compressed by the downward movement of the rod; 2nd. The frame A consisting of the metal tube cast in one piece with the hook a; 3rd. The Babbot or friction metal collar c<sub>1</sub> interposed between the rod and the frame; 4th. The yielding bearing 5th. The annular rib; 6th. The combination of the metal socket D and the hollow wooden case A; 7th. The cross-piece C having a socket h and flange k in combination with the cross-strip E and recessed plate l; 8th. The bar H adapted for application to the standard G and for supporting the rod B and frame A; 9th. The combination with the standards G of detachable spring supports for the body of the vehicle; 10th. The metallic standard G, its socket y and recess and spring r; 11th. The metallic standard constructed to support the rod B and its sliding case.

### No. 6803. Valved Nozzle for Bottle Stoppers. (*Buse valvee pour les bouchons de bouteilles.*)

Elias B. Requa, Jersey City Heights, N. J., U. S., 24th November, 1876, for 15 years.

*Claim.*—The combination with the tube and the valve of the cap D provided with a nozzle E and having projections within so arranged as to rest on and hold the valve against its seat when said cap is screwed down, and when unscrewed slightly will allow the liquid or other contents to escape by the nozzle.

### No. 6804. Process for Obtaining Pyrolygneous Acid. (*Procédé pour obtenir de l'acide pyrolygneux.*)

Henry M. Pierce Detroit, Mich., U. S., 24th November, 1876, for 5 years.

*Claim.*—Condensing to hot volatile products evolved in the course of carbonization of wood by expelling them until the acid vapours are liquified, the temperature of the condensing chamber at the same time being maintained at such height that the diluting water shall be separated and permitted to escape in a vaporized condition.

### No. 6805. Compound for Toughening, Hardening and Refining Iron. (*Composé pour durcir, trempier et recuire le fer.*)

William T. Lake, Picton, Ont., 24th November, 1876, for 5 years.

*Claim.*—The process of hardening toughening and refining iron by immersing it when white hot in a mixture consisting of eight quarts of soluble chloridum, one pound of prussiate of iron, one pound of saltpetre, one pound of prussiate of potash, one pound of blue vitriol, one quart of cast oil and fifteen gallons of water.

### No. 6806. Improvements on Fanning Mills. (*Perfectionnements aux fanages.*)

John Cairns, Peter Cairns and George Cairns, Barris, Ont., 24th November, 1876, for 5 years.

*Claim.*—1st. Constructing the shoe of the mill of three sections I, each section connected by a pivot link K and containing a screw whereby a variable shake may be given to each shoe; 2nd. In combination with a shoe connected in sections the sieve N having a chute Q; 3rd. The rock shaft F, arms G and pitmans H in combination with a shoe, the sections being by links K.

### No. 6807. Improvements on Brick Machines. (*Perfectionnements aux machines à briques.*)

Charles N. Fisher Willis, Texas, U. S., 24th November, 1876, for 5 years.

*Claim.*—1st. An endless chain of moulds at the bottom of the pug mill A driven by means of a wheel on shaft B engaging with the studs on link G; 2nd. The pressure plate I and cut-off P combined with the endless chain of brick moulds and their guideways D D; 3rd. The links G constructed with pivoted hooks d, notched lugs e and plate G.

### No. 6808. Improvements on Spring Hoes, or Teeth for Grain Drills. (*Perfectionnements aux houes à ressort, ou dents de semoir-traceurs.*)

James S. Bogle, Springfield, Ohio, U. S., 24th November, 1876, for 5 years.

*Claim.*—1st. The jointed link c c connecting the locking stud or lever d and spring H adapting the part connecting with the spring to move in right lines; 2nd. The spring H arranged between and in the same horizontal plane with the bars B B forming the drag bar; 3rd. The link c attached to the locking stud d at a point at or nearly vertically above the pivotal point of said locking stud and operation; 4th. The spring compressing disc g and its adjusting nut h provided with the clutch faces.

### No. 6809. Improvements on Hand Trucks. (*Perfectionnements aux camions à bras.*)

Hiram B. Ferris, Cleveland, Ohio, U. S., 24th November, 1876, for 5 years.

*Claim.*—The combination of the pipes or cylinders B B, the chain E with its hook e and the catches C C with the hand truck A; 2nd. The serrated or toothed edge to the cross bar D.



**No. 6810. Improvements on Lamp Shade-holders.**

*(Perfectionnements aux supports d'abat-jour des lampes.)*

Carl Voth, Newark, N. J., U. S., 24th November, 1876, for 5 years.  
*Claim.*—The combination of the shade C shade holder B constructed of transparent material and provided with a downwardly extending socket e, and disk-shaped flange d with the cone b having a flange A provided with apertures for the admission of air to the outside and inside of the cone.

**No. 6811. Improvements on Gravity Batteries.**

*(Perfectionnements aux batteries de gravité.)*

Myron W. Parrish, Jackson, Mich., U. S., 24th November, 1876, for 5 years.  
*Claim.*—1st. A copper hanger adapted to complete the circuit through contained solution and to suspend or sustain the zinc plate in the latter. 2nd. The copper hangers D D forming a basket for sustaining the zinc plate in the superatant solution of a gravity battery and adapted to complete the circuit through the solutions independently of the zinc plate.

**No. 6812. Improvements on Steam Wash Boilers.**

*(Perfectionnements aux laundrières à vapeur de laundries.)*

Emmor M. Mallott, Westville, and David Stuart, Stinton, Mich., U. S., 24th November, 1876, for 5 years.  
*Claim.*—The combination of the wash boiler A A with cover B and having a circuit formed by the upwardly tapering end tubes C C, outside of said boiler provided with perforated flanged false bottom D, the middle slotted plate E, edge bent plate F and angle plate G.

**No. 6813. Machine for Polishing Knives.**

*(Machine à retoucher la coutellerie.)*

Majorique Côté, Sherbrooke, Que., 24th November 1876, for 5 years.  
*Résumé.*—La combinaison de la roue du commandement B avec les roues aux en liège C, la boîte D la vis de compression E et la poulie de frottement F, le tout combiné avec le cadre A.  
*Claim.*—The combination of the driving wheel B with the cork rollers C box D, pressing screw E and friction pulley F the whole combined with the frame A.

**No. 6814. Improvements in Heating Stoves.**

*(Perfectionnements aux poêles de chauffage.)*

James Dwyer, Detroit, Mich., U. S., 24th November, 1876, for 10 years.  
*Claim.*—1st. A dividing the heating stove the flues of which are within the flue of the stove in a projection thereof upon the rear, an opening in the descending flue or flues covered by a damper or dampers by means of which the products of combustion may be diverted in their downward passage over the top, down the rear side and along the bottom of the oven. 2nd. A dividing the heating stove the flues of which are within the body of the stove in a projection thereof upon the rear an opening in the ascending flue or flues covered by a damper or dampers by means of which the products of combustion may be diverted in their upward passage along the bottom up the rear side and over the top of the oven. 3rd. In combination with a diving the heating stove, a double walled oven resting upon the base of the stove and adapted to be heated by the products of combustion either in their upward or downward passage as may be desired. 4th. In combination with a diving the heating stove, the flues of which are within the body of the stove in a projection to the rear, a low down double walled oven the base of which is supported upon the base of the stove while the top is opposite the combustion chamber.

**No. 6815. Process of Treating Substances with Hydrocarbon.**

*(Procédé pour traiter les substances par l'hydrocarbure.)*

William Adamson, Philadelphia, Pa., U. S., 24th November, 1876, for 5 years.  
*Claim.*—1st. The mode of treating substances with liquid hydrocarbon for the purpose of extracting therefrom fatty, oily and resinous matters for cleansing different materials and for preserving substances. 2nd. The mode of treating substances with hydrocarbon vapour for the purpose of extracting therefrom fatty, oily and resinous matter for cleansing different materials and for preserving substances. 3rd. The process of causing the liquid to pass through the substances to be treated in one vessel then causing the liquid to be washed in another vessel and finally separating the washed and purified hydrocarbon from the foul water preparatory to reusing it in the first vessel. 4th. The process of causing the vapour to pass through substances to be treated in one vessel, then causing it to be simultaneously washed and condensed in another vessel and finally separating the washed and purified liquid hydrocarbon from the foul water preparatory to reevaporating it in the first vessel.

**No. 6816. Improvements on Escapements.**

*(Perfectionnements aux échappements.)*

Robert Barelay Paris, Ont., 24th November 1876, for 5 years.  
*Claim.*—The combination of the parallel spindles D and I, the spindle D provided with bifurcated lever F and disk pullets E E having inclined faces and the spindle I provided with balance wheel J and disk H having pin G adapted to engage with the bifurcated lever F.

**No. 6917. Improvements on Corsets.**

*(Perfectionnements aux corsets.)*

Joseph S. Guthrie, London, Ont., 24th November, 1876, for 5 years.  
*Claim.*—1st. The bosom A, front piece B, gore B, side piece C, back piece D, gore E, side piece F. 2nd. In combination with the first chain the whalebones I K L and protector G. 3rd. In combination with the skirt supporter or rattle M of an arched wire N and cap 4; 4th. In combination with a pair of shoulder straps or braces N N of the elastic strips O O.

**No. 6818. Apparatus for Emptying Privy Vaults, Sewer Traps, &c.**

*(Appareil à vider les fosses d'aisance, puisards d'égoûts, &c.)*

Jerome Bradley, Washington, U. S., 24th November, 1876, for 5 years.  
*Claim.*—1st. The automatic gauge valve in the air exhaust coupling of the barrel. 2nd. The double acting air pump having in combination with the cylinder and piston the ports a, b, passage c, d and valves e, f, g. 3rd. The combination of an air pump mounted upon trucks, a suitable flexible pipe connecting said air pump with the top of a barrel intermediate between said pump and the vault to be cleaned, a gauge valve in the air exhaust pipe and a suitable flexible pipe to lead from said barrel into said vault. 4th. The method of emptying privy vaults cess pools &c situated below the level of the street by first fitting a barrel by a vacuum created in the same and then forcing the material into a barrel placed above the first by air pressure. 5th. The combination of the double acting air pump, the barrel L, the reversible hose connecting said barrel and pump, the barrel N and the leading hose M.

**No. 6819. Potato Washing Machine.**

*(Machine à laver les patates.)*

Abel Steele, Lobo, Ont., 24th November, 1876, for 5 years.  
*Claim.*—The fork J operated by shaft D, pinion F, cog wheel G and crank H in combination with the inner vessel B and outer vessel or tub A.

**No. 6820. Combined Punching and Shearing Machine.**

*(Machine à poinçonner et découper.)*

Austin W. Comstock, Mount Pleasant, Iowa, U. S., 24th November, 1876, for 5 years.  
*Claim.*—1st. The levers C C placed across each other and pivoted by the fulcrum pin b to the fulcrum block B having a punch c, and its corresponding die in the jaws c, c and outer plates D D fixed to the sides of the levers C C, and the two levers C C operated by a third or actuating lever H. 2nd. The actuating lever H having two arms a, a, attachable at pleasure by means of the pins to the two lugs e, e of the lever C C and held down to the lever C C by means of the spring F and its fulcrum pin f. 3rd. The spring F and its fulcrum pin f arranged to connect the lever H with the lever C C. The detachable spring guard G for holding the work down on the cutters B B. 4th. The cutters D D having the cutting edge of one of them straight and of the other convex. 5th. The measuring gauge and stop I H.

**No. 6821. Improvements in Tire Upsetters.**

*(Perfectionnements aux machines à refuser les bandages de roues.)*

John G. Meade, Batavia, Ill., U. S., 24th November, 1876, for 5 years.  
*Claim.*—The combination of the stationary arm C formed with jaw D dog G, operating lever H connecting bar F, foot piece L, with notches H H and movable arm C' with jaw D.

**No. 6822. Improvements in Wire Fences.**

*(Perfectionnements aux clôtures en fil métallique.)*

Thomas S. Seabury, St. James, N. Y., U. S., 24th November, 1876, for 5 years.  
*Claim.*—The covers D with longitudinal slot g, in combination with the wire C, and posts A A.

**No. 6823. Composition of Matter for the Cure of Cuts, Burns, Bruises, &c.**

*(Composé pour la guérison des coupures, brûlures, contusions, &c.)*

Nazaire Mejeier, Montreal, Que., 24th November 1876, (extension of Patent No. 1239, for 5 years.  
*Claim.*—The novel compound of hog's lard, rosin, bees wax, elder flower, elder tree bark and Canada balsam.

**No. 6824. Combined Door Spring and Hinge.**

*(Pouture-s ressort de porte.)*

William Giffillan and Jane A. Jones, assignees of James K. Giffillan, Syracuse, N. Y., U. S., 24th November 1876 for 5 years.  
*Claim.*—1st. The plate A having the strengthening ribs a, and provided with an aperture L in combination with the curved lever E spring B connecting plate b, screw H connecting bar I and casing hook G; 2nd. The combination of the curved lever E pivoted directly at the rear surface of the plate A and connecting bar I, casing hook G, the plate A being extended and provided with the recesses J, J, knuckles M M; 3rd. The plate A having knuckles L and L, and provided with recesses J or without said recesses. 4th. The combination of the plates A and A' with the cross bars K having offsets N N with bolts and nuts P. 5th. The cross bars K having knuckles N N.

**No. 6825. Improvement in Stoves.**

*(Perfectionnement des calorifères.)*

William H. Landon, Princeton, Ont., 2nd December, 1876, (extension of Patent No. 1229, for 5 years.  
*Claim.*—1st. The extension of the revolving flume line e e e to the top of the stove. 2nd. The damper d. 3rd. Placing the ventilating damper g within the stove plates and its form and mode of operation.

**No. 6826. Improvements on Metallic Pipes.**

*(Perfectionnements aux tuyaux métalliques.)*

David A. Ritchie, Charlestown, Mass., U. S., 2nd December, 1876, (extension of Patent No. 2861), for 5 years.

### No. 6827. Improvements in Window Scaffolds.

(Perfectionnements aux échafaudages de fenêtres.)

Helen C. Traphagen, New York, U. S., 2nd December, 1876, for 5 years.

Claim.—1st. The cross clamp T legs N N and set screws r and s, in combination with the beams A A and legs H H with notches m; 2nd. The hinged standards E D E D with slats F and hinged cross piece G, in combination with the beam S A A and platform C.

### No. 6828. Improvements in Toy Guns.

(Perfectionnements aux fusils-jouets.)

Samuel G. Stryker Elmira, N. Y. U. S., 2nd December, 1876, for 5 years.

Claim.—1st. The combination with the stock A provided with a shoulder and with an opening extending through both the stem and handle of a tubular or coiled spring bearing on said shoulder and guided by the stem. 2nd. The hollow stock A, its shoulder y and slots z z adapted to receive the ends of a cross bar a on the arrow or projectile between which bar and the shoulder a spring may be compressed.

### No. 6829. Improvements on Steam Engines.

(Perfectionnements aux machines à vapeur.)

Samuel Warrick and George S. Brush, Montreal, Que., 2nd December, 1876, for 5 years.

Claim.—1st. The combination of the two cylinders A A, exhaust receiver E, d. u. b. piston J J, open guides L L, eccentric O and sliding box N. 2nd. The combination of the double piston J J, connecting rod L and crank O. 3rd. The combination of the two eccentrics S S and valve P with tapered guides U U. 4th. The combination of two or more split journal rings W W and an adjustable plate X.

### No. 6830. Improvements on Door Fastenings.

(Perfectionnements aux fermetures des portes.)

John G. Phillips, Bangor, N. Y., U. S. (Assignee of Charles R. Arnold), 2nd December, 1876, for 5 years.

Claim.—1st. A door fastening or lock made of front and rear plates B with handles or buttons C turning on a connecting centre bolt a, by which turning the locking device is moved in locked position, or withdrawn or detached according as the handles are turned in the one or the opposite directions. 2nd. The combination of the recess plates B with the countersunk staple K to admit the attaching of a padlock for locking the door; 3rd. The combination of the stationary pin i, or other suitable devices for holding the plates B in locked position.

### No. 6831. Improvements on Dumping Waggon.

(Perfectionnements aux wagons à bascule.)

Stephen Bachand, Cowansville, Que., 2nd December, 1876, for 5 years.

Claim.—1st. The swinging compartments F formed by the bottoms G and the sides H. 2nd. The manner of attaching the bottoms G of the swinging compartments F to the iron rods K together with the iron rods K and the supports L.

### No. 6832. Improvements on a Machine for Printing or Stereotyping.

(Perfectionnements à une machine à imprimer ou stéréotyper.)

George Blair, Prescott, Ont., 2nd December, 1876, for 5 years.

Claim.—1st. The arrangement of the type arms upon an axis which is not a complete circle but some segment of a circle and compensating (if necessary) for the loss of type space thereby incurred by arranging the type arms in two or more concentric tiers; 2nd. A mechanical arrangement by which the paper or matrix is moved from right to left after the printing of each letter or other character by a space exactly proportional to the breadth of that letter or character; 3rd. The use of a color ribbon in the shape of an endless band which extends across the page from top to bottom instead of from side to side, moved intermittently by the same pressure of the finger that causes the type to descend and the paper or matrix to move and pass in its course through a reservoir of coloring liquid; 4th. The introduction of a press or stamper which, either by the action of a treadle or by the pressure of the finger upon the keys working at a great mechanical advantage, is caused to press upon the back of each type after the latter is thrown down upon the paper or matrix and which admits of being so adjusted as to press all the types down to exactly the same uniform depth in any soft or yielding substance; 5th. The preparation of a matrix peculiarly adapted for common and domestic use in connection with the machine described, the peculiarity of which matrix consists in coating a thin sheet of wax or of some other soft and plastic substance with tin-foil or some other metallic leaf which forms a part of the stereotype plate when completed; 6th. The application of machines to the production of matrices from which stereotype plates may be cast or which may themselves be used either in whole or in part as stereotype plates; 7th. The arrangement described or any arrangement substantially the same in principle for preventing the descent of more than one type at a time.

### No. 6833. Method of Transmitting Power.

(Méthode de transmission de la puissance.)

Julius E. Waterous, Braintree, Ont., 2nd December, 1876, for 5 years.

Claim.—1st. The movable tightening pulley G, movable friction wheel G, in combination with the wheels E D and belt E; 2nd. The combination of the ways L, sliding frame H H, tightening pulley G, friction wheel G, windlass K and cords J; 3rd. The combination of the disks M, wheels E D and belt F.

### No. 6834. Improvements on Street Pavements.

(Perfectionnements au pavage des rues.)

Antonio Pelletier, Washington, D. C. U. S., 2nd December, 1876, for 5 years.

Claim.—1st. The combination of broken stone or gravel with hydraulic lime or tuel terra alba, flour spar, or other similar hydraulic lime, oxide of

iron and chloride foundation of a pavement; 2nd. The combination of the asphalt or bitumen, carbonate of lime, oxide of iron, sand and chloride of calcium for the coating of a pavement; 3rd. The combination in a carriage pavement of a foundation and coating constructed of the materials and in the manner set forth.

### No. 6835. Improvements on Brakes for Cars, Vehicles, &c.

(Perfectionnement des freins de wagons, voitures, &c.)

Rudolph Jacobi, Puebla, Mexico, 2nd December, 1876, for 5 years.

Claim.—1st. The combination with a car axle and wheels of a series of springs that are arranged symmetrically to and thrown successively into operation by a central stop disk and interlocking hook arms of longitudinally sliding rods of the car frame. 2nd. The combination of longitudinally sliding and actuating rod or rods F having rigid hook arms E with a compound spring acted stop disk of the axle. 3rd. The combination of the hook arms E, stop plates and pins a, slotted enclosing plate b and spring acted interlocking end pins f of spring casing C. 4th. The spring casing C having symmetrical and concentric slots e with springs f and end pins f seated and guided thereon; 5th. The spring casing of a car brake connected alternately at diametrically opposite points by projecting and interlocking end pins; 6th. A safety friction wheel for car brakes, vehicles, &c., constructed of outer web sections fixed to the shaft and of an intermediate sliding and guided tire section. 7th. The combination of the fixed web sections D<sub>1</sub> D<sub>2</sub> having annular guide grooves with the revolving tire section having side flanges; 8th. The combination of the stationary web section D<sub>1</sub> having sleeve g and square extension g<sub>1</sub> with the loose tire section D<sub>2</sub>, detachable web section D<sub>2</sub> and with suitable fastening and friction devices of the axle or shaft.

### No. 6836. Improvements on a Harrow.

(Perfectionnements à un hers.)

John Johnson, Waterloo, Ont., 2nd December, 1876, for 5 years.

Claim.—1st. The peculiar shape and structure of the teeth E oblong in cross section made with the shoulders D on the transverse sides only which taper downwardly to a chisel edge and having the screw and nut fastening G; 2nd. The iron plate or band B banding the beam A, in combination with the teeth E having shoulders E.

### No. 6837. Improvements on Car Axle Boxes.

(Perfectionnements aux boîtes d'essieux de wagons.)

Owen Tomlinson, Bombay, E. I., 2nd December, 1876, for 5 years.

Claim.—1st. The combination of the enclosing box a top plate or keep and a dovetail journal bearing with the axle; 2nd. The combination of the axle and axle box having projecting bearings or cheeks with the top plate or keep journal bearing and lubricating side pads; 3rd. The combination of the axle with a longitudinal bottom pad confined by perforated side and bottom plates and applied by cushioning springs; 4th. The combination with the car axle and rear chamber of the axle box having central bottom guide tongue of a sectional and spring acted washer.

### No. 6838. Improvements on Organs.

(Perfectionnements aux orgues.)

Samuel Turney, Hamilton, Ont., 2nd December, 1876, for 5 years.

Claim.—The combination of the back or mill B with lever C, cord D and rollers E E.

### No. 6839. Improvements on Ear Mufflers.

(Perfectionnements aux oreillers.)

Herman G. Creveling, (Assignee of Butler Edgar), Espy, Pa., U. S., 2nd December, 1876, for 5 years.

Claim.—The ear muffler A A consisting of the frames A<sub>1</sub> A<sub>2</sub> provided with hinges C C and swivels D D.

### No. 6840. Improvements on Medical Compounds.

(Perfectionnements aux composés médicaux.)

William Turner, Mount Carmel, Ill., U. S., 2nd December, 1876, for 5 years.

Claim.—A tonic alterative compound composed of carlomon, caraway and coriander seeds, juniper berries, cinchona and wild cherry barks, cochineal capsaicum, bitter orange peel and gum myrrh powdered and mixed with spirits, frumenti and water and iodide potassa added with honey and syrup in about the proportions stated.

### No. 6841. Improvements in Sewing Machine Shuttlers.

(Perfectionnements aux navettes des machines à coudre.)

George H. Thomas and William J. McMurry, Bowmansville, Ont., 2nd December, 1876, for 5 years.

Claim.—1st. A skeleton of open frame shuttle of three or more bars hinged or fastened together in any suitable manner to form a cage or receptacle within which the reel may be held and operated in the usual way; 2nd. The hinged shuttle pieces B and C in combination with the reel E. 3rd. The shuttle piece C with notch e and spring bar G, in combination with the reel E.

### No. 6842. Process of Purifying and Deodorizing Petroleum and other Oils.

(Procédé pour épurer et désinfecter le pétrole et autres huiles.)

David M. Lamb, London, Ont., 4th December, 1876, (re-issue of Patent No. 631), for 5 years.

Claim.—1st. The art of purifying and deodorizing petroleum and other oils by the agency of chlorine gas, the process of generating the gas beneath the oil and while the latter is at rest, thus permitting the gas to permeate the oil and act upon the entire body. 2nd. The combined process of producing or evolving chlorine gas beneath oil which is to be purified or deodorized while the latter is at rest, then introducing water and then agitating the oil in contact with the gas and water.

**No. 6843. Improvements on Harrows.**

*(Perfectionnements aux hersees.)*

John Flight and Perry C. Lake, Oswegatchie N. Y., U. S., 12th December, 1876, for 5 years.

*Claim.*—1st A harrow composed of two detachable triangular sections A and B which are adapted to be used either singly or together and connected by the coupling I. 2nd The section coupling I, consisting of a vertical link e bolted to one of the sections, and of a recessed clamp d bolted to the other section to connect the sections together, in combination with a harrow. 3rd. A harrow composed of two detachable sections A and B, each section of which is composed of two wings C D and E F hinged together by the pin I e J and lugged bands a and b said bands a and b being bolted either outside or inside of the coupling bars G and of the drag bars H. 4th. A harrow composed of two detachable sections A and B each of which has two wings C D and E F, the teeth of which wings C D and E F being set in such a peculiar way that the row made by the teeth of the drag bars H passes in the middle of the rows made by the teeth of the coupling bars G and vice versa.

**No. 6844. Improvements on Fly Traps.**

*(Perfectionnements aux peiges a mouches.)*

James M. Harper, El Paso, Ill., U. S., 12th December, 1876, for 5 years.

*Claim.*—1st A bed piece or bed plate A provided with radial projections a in combination with nettings B and C. 2nd The combination of bed piece or bed plate A having projections a recessed at c, in combination with outer netting C having rim C' and entrance opening e.

**No. 6845. Railway Car and Locomotive Supports.**

*(Supports de trains de wagons et de locomotives de railroads.)*

Arelas Blood, Manchester, N. H., U. S., 12th December, 1876, for 5 years.

*Claim.*—1st. The improved railway carriage pivot supporter consisting of the base A provided with slot a and parallel guides b b, and of the friction rollers C C and the pivotal bearing B provided with the elongated recesses c c for reception of the said rollers: 2nd. The pivotal bearing B provided with the recesses c c having straight bearing surfaces for the rollers C C to work against.

**No. 6846. Improvements on Heating Stoves.**

*(Perfectionnements aux caloriferees.)*

Willis S. Garrison, Volga City Iowa, U. S., 12th December, 1876, for 5 years.

*Claim.*—1st. The combination of the air heating pipes B C E, air receiver D, air induction pipe G, damper g and register g. 2nd. The tapering air heating pipes C having a flange at the outer end and a bead c near the other end, in combination with the air receiver D and the body of the stove, the pipes being fitted in the body of the stove and the air receiver.

**No. 6847. Improvements on Force Pumps.**

*(Perfectionnements aux pompes foulantes.)*

William Rusk and George Rusk, Paisley, Ont., 12th December, 1876, for 5 years.

*Claim.*—1st. The cylinder A as constructed with the inlet water passage B, inlet valve chamber D and valve d, outlet port F and outlet valve f, also the inlet valve d, outlet port E, water passage C, outlet valve g and chamber G. 2nd In combination with the cylinder A the discharge pipe L, air vessel M and discharge branch N: 3rd. In combination with the cylinder A, the piston H, rod I, links R R, and crank handle K: 4th. The junction pipe O.

**No. 6848. Check Rein. (Rein surtete.)**

Henry L. Godfrey, Montreal, Que., 12th December, 1876, for 5 years.

*Claim.*—1st. The combination of the rein A secured at the ends a a to the bit and having ring B with the rein C and hook D. 2nd. The check rein A having ends a a secured to the bit carried over the horse's head and passing through a ring or rollers secured to the harness.

**No. 6849. Supplementary Flooring for Decks of Ships. (Plancher supplementaire des ponts de navires.)**

James Arless, Montreal, Que., 12th December, 1876, for 5 years.

*Claim.*—1st. The combination of the beams or sleepers b, boards c and lattens c. 2nd The boards C having recesses d in combination with space f.

**No. 6850. Mode of increasing the Motion of Wheels upon one Shaft.**

*(Mode d'augmenter le mouvement des roues sur un essieu.)*

George E. J. Hanwell, Belleville, Ont., Lemuel S. Fithian, Brooklyn, N. Y., and Richard F. M. Chase, New York U. S., 12th December, 1876, for 5 years.

*Claim.*—1st The cog wheel No 1 and master wheel or arm B made fast to shaft. 2nd. The intermediate bar A set in line with centre of shaft and slotted so as to carry cogged wheel No. 2 either vertically, horizontally or at any angle between the two: 3rd. The master wheel or arm B made fast on shaft and slotted so as to carry the cogged wheel N either vertically, horizontally or at any angle between the two. 4th The using of the reverse cogged wheel No. 3 to cause increased motion and by using different sized pinions to increase the motion as desired. 5th The cogged wheel or pinion No 5 with screw to carry fly wheel and pulley or driving gear running upon shaft in the same direction with the motion of the shaft. 6th. The combination of all the different parts shown to produce increased motion of wheels with an immense saving of friction.

**No. 6851. Glass Chandelier. (Candelabre en verre.)**

John H. Hobbs, Wheeling, Va., U. S., 12th December, 1876, for 15 years.

*Claim.*—1st In one sided glass trimmings constructed for attachment to metallic brackets or bracket arms: 2nd. The glass attachment for chandeliers consisting of a half center piece e and two or more outwardly extending glass arms d U-shaped in cross section. 3rd A glass center piece composed of the bowl-shaped pieces e e meeting edge to edge and adapted for use on a metallic stem and bracket arms: 4th A chandelier composed of metallic stems and arms pressed glass tubular trimmings on the vertical stems and U-shaped or sided glass trimmings on the bracket arms. 5th The pressed glass section e e in combination with a vertical stem a. 6th A mould for pressing glass trimmings for chandeliers having a central cavity for the pressing of the lower part of a centre piece and radial cavities for shaping the bracket trimmings, in combination with a plunger which shall shape the centre piece and also force the glass outwardly into the radial cavities. 7th The blowing mould B having cavities e e suitable for the blowing thereon of the chandelier attachment e d d.

**No. 6852. Improvements on Water Meters.**

*(Perfectionnements aux hydrometres.)*

John C. Clapp and Theodore Snell, Toronto, Ont., 12th December, 1876, for 5 years.

*Claim.*—1st The spindle chamber E of a water meter the spirally arranged tapering wings J in an opposite direction to the blades of the spindle. 2nd. The wings J or their equivalent in combination with the spiral blades I. 3rd The water groove a formed in the spindle chamber at any suitable point. 4th. The ferrule D provided with a centre plate H in combination with the inlet K. 5th The base A body piece B and cap C screwed together, in combination with the ferrule D having a centre plate H upon which is pivoted the spindle F provided with blades I revolving within the spindle chamber E. 6th The ferrule D provided with a perforated bottom O, in combination with a valve X and spring M. 7th The holes p perforated in the rim of the ferrule D in combination with the holes q in the casing L.

**No. 6853. Improvements in Hot Water Furnaces. (Perfectionnements aux caloriferes d'eau.)**

Ernest Chanteloup, Montreal, Que., 12th December, 1876, for 5 years.

*Claim.*—In combination with the hot water furnace an annular semi-cylindrical water chamber.

**No. 6854. Improvements on Waggon Brakes.**

*(Perfectionnements aux freins de wagons.)*

Thomas H. Moore, Heathcote, Ont. 12th December 1876, for 5 years.

*Claim.*—The brake bar F suspended below the bounds and hung from yielding springs H and having connection by chain L, link N and chain O with a pulley or lever J on the front end of the tongue whereby the resistance of the train in descending a hill causes an application of the brakes to the wheels.

**No. 6855. Improvements on Extension Tables. (Perfectionnements aux tables a rallonge.)**

John W. Bent, Chicago, Ill., U. S., 12th December, 1876, for 5 years.

*Claim.*—1st. The short side rails D D recessed below the bed F, in combination with auxiliary leaves S S, slides E and main frame of the table. 2nd The combination of hydraulic center frame G, slides E, recessed rails D D, auxiliary leaves S S, main leaves or bed F and main frame of the table.

**No. 6856. Improvements on Stalls for carrying Horses at Sea.**

*(Perfectionnements aux stalles pour transporter les chevaux par eau.)*

James Arless, Montreal, Que. 12th December, 1876, for 5 years.

*Claim.*—1st The combination of the posts d d with side pieces g and h hinged thereto. 2nd. The horse stall consisting of posts d d, sides g and h in combination with the shaft f having clutches at end b. 3rd. The floor consisting of parts p q.

**No. 6857. Improvements on Wash Boards.**

*(Perfectionnements aux planches a savonner.)*

Louis M. Crosby, Ashtabula, Ohio, U. S., 12th December, 1876, for 5 years.

*Claim.*—The combination of the side pieces A A having longitudinal grooves z, the lower stationary round a, the movable rounds D having teeth c, the upper stationary round ar having groove y and the board B.

**No. 6858. Improvement on Pumps.**

*(Perfectionnement aux pompes.)*

James Cochran, Jr., Cornwallis, N. S., 12th December, 1876, for 5 years.

*Claim.*—1st. The combination of laps C C and the jacking hand A. 2nd The combination of the bevelled edge B B and the laps C C.

**No. 6859. Improvements on Sleigh Bells.**

*(Perfectionnements aux grelots.)*

George W. Tucker, Waterbury Ct. U. S., 12th December 1876, for 5 years.

*Claim.*—1st. A sleigh bell made of one piece of sheet metal including the portion to which the attaching rivet is applied. 2nd A sleigh bell made of sheet metal having three or more vibrating tongues pointing towards each other with intervening slots: 3rd. The method of making sleigh bells from a cup-shaped blank by cutting out the blank with arch-shaped tongues, and bending those tongues toward each other for retaining the clapper.

**No. 6860. Improvements on Fanning Mills.***(Perfectionnements aux tarrars.)*

John Riddell, Pakenham, Ont., 12th December, 1876, for 5 years.

*Claim.*—1st. The combination of the wind board F with the concave B and the fan C of a fanning mill A to regulate equally the blast of wind all over the grain. 2nd. The peculiar way of holding up the shoe D at the top being contrarily to existing methods by means of the hanger springs H with a fanning mill A to give to the shoe E a lateral and vertical vibratory motion at the top instead of at the lower part. 3rd. The combination of the shoe E of a fanning mill A, of the riddle frame J having the open frame a and the three riddles b c d, the upper riddle b being shorter than the riddles c d, and the riddle frame J being longer than the riddles c d.

**No. 6861. Improvements on Stoves.***(Perfectionnements aux poeles.)*

Grave H. Johnson and Charles G. Moulton, Erie, Pa., U. S., 12th December, 1876, for 5 years.

*Claim.*—1st. In combination with a stove or furnace, a series of fingers and operating mechanism contained wholly within the walls of the same when the said fingers are adapted to be projected into the fire pot towards a common centre; 2nd. In combination with a stove or furnace a series of fingers and operating mechanism contained wholly within the walls of the same when the said fingers are adapted to be projected into the fire pot towards a common centre and a sliding grate at the lower end of said fire pot. 3rd. In combination with a stove or furnace a revolving ring within the walls of the stove fingers pivoted to the same, and a fire pot with suitable openings to permit the passage of the fingers. 4th. The combination of the fingers F having the slots f and adapted to be projected through the openings a in the fire pot and the studs a in such openings.

**No. 6862. Improvement in Dampers.***(Perfectionnement aux registres de cheminées.)*

George E. J. Hanwell Belleville Ont. George Merrill Newburyport Mass. and Richard F. M. Chase New York, U. S., 12th December, 1876 for 5 years.

*Claim.*—1st. The combination of the plate A having its edges indented and the tapering arms B secured rigidly to the plate immediately behind the indentation. 2nd. The combination of the indented plate A, the curved tapering arms B and the pivoted plate C. 3rd. The sheet or pan E placed across the boiler at the point where the heat leaves the flues or tubes with opening or openings arranged to regulate the passage of the gases and smoke. 4th. In combination with sheet or pan E the cylinder or cylinders D.

**No. 6863. Improvements on Harvesters.***(Perfectionnements aux moissonneuses.)*

Samuel Novon jr Ingersoll Ont. 12th December 1876, for 5 years.

*Claim.*—1st. The combination with the rake arm A of the metallic elbow composed of two parts B and C, the part B constructed with the hollow journal D and the part C having the perforated lug projection F the two parts fitting together and actuated by a bolt H, said bolt also securing the cam roller on the journal D by the washer and nut L. 2nd. The combination with the rake arm A and side pieces B and C notched quadrant N eccentrically pivoted and engaging with a V projection O formed in the part C for retaining and adjusting the rake to any desired height.

**No. 6864. Fruit Dryer. (Dessicateur a fruits.)**

Charles W. Jones and Edgar A. Jones, Sturges, Meck., U. S., 12th December, 1876, for 5 years.

*Claim.*—1st. An evaporator for drying vegetable and animal substances combining one or more flues horizontal or nearly so with a set of trays or screens movable edgewise within the flue for holding the articles to be dried together, with an air forcing appliance for producing a continuous current of air edgewise of the screen. 2nd. An evaporator for drying vegetable or animal substances constructed with one or more flues or compartments, a series of trays movable edgewise along the said flue or flues and a heating furnace and a blower and connections to produce a forced current of air through the apparatus longitudinally of the flues and edgewise of the tray. 3rd. The combination with one or more drying flues of the adjustable gates at or near each end of said flues operated simultaneously by a connection for controlling or shutting off the forcible air currents. 4th. The combination of a heating furnace, a hot air chamber, one or more evaporating flues or compartments, an air forcing appliance for producing a circulation through said heating and evaporating chambers and an aperture or pipe controlled by a valve to admit a forcible current of air to the fire from the chamber or passage through which air is forced. 5th. The combination in an evaporator for drying vegetable or animal substances of two fans, one for causing a continuous forced circulation of air through the evaporator and the other for introducing fresh air into the said circulation. 6th. The combination of two fans on one shaft with a division between them one being arranged to cause a forcible current of air through the drying flues, and the other introducing fresh air into the evaporator. 7th. The combination with a drying flue of the door S constructed to open bodily for the passage of a nest or stack or trays and with spring slots x x to permit the passage of single trays. 8th. The combination with a two story evaporator of the double decked car with hinged section to adapt it to supply trays to either evaporating chamber at will or take them therefrom.

**No. 6865. Improvement on Bed Bottoms.***(Perfectionnement des fonds de lits.)*

Thomas L. Odell and Mark Nutter Iowa Falls, Iowa, U. S., 12th December, 1876, for 5 years.

*Claim.*—The slats a at spring b crossbar c and staples d**No. 6866. Improvements on Piston Packing.***(Perfectionnements aux garnitures de pistons.)*

Christopher R. James, Jersey, N. J., U. S., 12th December, 1876, for 5 years.

*Claim.*—The combination with the packing rings of the double conical expanding spring having conical inner surface and the wedge-shaped adjusting ring c.

**No. 6867. Improvements on Railway Switches.***(Perfectionnements aux aiguilles de railroads.)*

William Hodgson, Wellington Square, Ont., 12th December, 1876, for 5 years.

*Claim.*—1st. The lifting rails G G as constructed with a groove, a portion of the same being level and marked z and another portion thereof forming an inclined plane and marked w for the purpose of raising the flange of the wheels to the crown of the rail without shock or jolt, and so that the train will pass smoothly over the displaced switch. 2nd. The main switch rails A B of a safety railway switch when of a uniform length; 3rd. The combination with the lifting rails G G of the rails A B, the diamond points c et al, guide rails F F and operated by the ordinary working gear now in use for the common switch.

**No. 6868. Improvements on Safety Valves.***(Perfectionnements aux soupapes de sêreté.)*

Henry G. Ashton, Boston, Mass., U. S., 12th December, 1876, for 5 years.

*Claim.*—1st. The combination of the valve D, its bushing B and the chamber A constructed with the outlet pipe F F, in order that the steam will be collected in the chamber A, not being allowed to come in contact with the top of the valve D and will be conducted by the pipe F F, to any desired point; 2nd. The combination of the valve D, bushing B, part B, outlet pipe F F and the adjusting valve H. 3rd. In combination with the valve D and its bushing B the chamber A and the top G. 4th. In combination with a valve D an adjustable means for regulating the rise of the valve.

**No. 6869. Improvements on Explosive Compounds.***(Perfectionnements aux composés explosibles.)*

Alfred Nobel, Paris, France, 12th December, 1876, for 5 years.

*Claim.*—1st. Solidifying or thickening liquid explosive substances such as nitroglycerine, nitrate of methyle and other analogous substances by gelatinizing them. 2nd. The employment of non exploding or sluggishly exploding substances (soluble in nitroglycerine), for the purpose of modifying, as required, the sensitiveness to concussion or the tendency to rapid explosion, and also for lowering the freezing point of the above named explosive gums. 3rd. Incorporating with the said explosive gums or gelatinized compounds various other explosive mixtures with a view to lessen the cost or to reduce the explosive of the compound.

**No. 6870. Improvements on Metallic Hubs.***(Perfectionnements aux moyeux métalliques.)*

Joseph Foreman, South Cayuga, Ont. 12th December 1876, for 5 years.

*Claim.*—The flange B cast integrally with the pipe box A and collar C having a hollow sleeve D screwing on the pipe box, the flange B and collar C both having radial and tapering serrations E and projections F of corresponding size.

**No. 6871. Apparatus for Purifying Paraffine.***(Appareil a purifier la paraffine.)*

Frank Q. Barstow, Cleveland Ohio U. S. 12th December 1876, for 5 years.

*Claim.*—1st. The combination of a closed receptacle or vessel having a perforated bottom for supporting the substance to be operated upon with a pipe C for admitting the purifying element and pipe D for the admission of compressed air to the chamber above the perforated bottom. 2nd. A receptacle closed at the top and provided with a diaphragm of canvas or other suitable strainer for supporting the paraffine wax a pipe e for admitting benzine or other purifying agent, and a pipe D for the admission of compressed air to the chamber above the paraffine.

**No. 6872. Improvements on Thread Winders.***(Perfectionnements aux bobineuses.)*

William Jones Guide Bridge near Manchester Eng. (Assignee of Charles T. Powers) 12th December 1876 for 5 years.

*Claim.*—1st. The novel combination of a wire or rod k, with a thread winder arranged in combination with a guide l the thread passage round the wire or rod k and round itself the presser plate m acted upon by a spring n. 2nd. The wire or rod k and the giving tension to the thread by causing the threads to rub together. 3rd. The flat presser plate m acted upon by a spring n in combination with the wire or rod k and the arrangement of the thread.

**No. 6873. Improvements on Chain Pump Buckets.***(Perfectionnements aux seaux de pompes.)*

Theodore Hoyt (Assignee of Edwin Hoyt) Stamford C. T. U. S. 12th December, 1876, for 5 years.

*Claim.*—1st. An india rubber bucket a constructed with a central hub at having the recesser adapted to be applied to a link c having the central flange. 2nd. An india rubber bucket a constructed with a flange or rim a having curved or convex surface at uniting and forming a thin edge a. 3rd. An india rubber bucket a constructed with a hub at and a flange or rim a having a groove at and curved or convex surfaces at. 4th. An india rubber bucket a constructed with a central hub at having the recess at and provided with projections at adapted to be received within recesses on a link and a flange at provided with a V shaped recess b. 5th. A link c provided with eyes or loops at and a central flange c formed with recesses c in its periphery.

**No. 6874. Improvements on Railroad Locomotives.***(Perfectionnements aux locomotives de railroads.)*

Henry G. Ashton Boston Mass. U. S., 12th December, 1876, for 5 years.

*Claim.*—The combination of the safety valve and feed water tank in order that the steam which escapes through the valve shall be conducted into the feed water.

**No. 6875. Process and Machine for Facilitating Combustion in Furnaces of Boilers.**

(*Procédé et machine pour faciliter la combustion dans les fournaux des chaudières.*)

James D. Mulreman, Merrion, Ont. 12th December, 1876 for 5 years

*Claim*—1st The process of forcing steam from the boiler or engine against the grate for the purpose of preventing the overheating of the bars of the grate and of facilitating the combustion of the coal, 2nd The pipe *c* and perforated pipe *c* and *d*.

**No. 6876. Improvements in Heating and Cooking Stoves.**

(*Perfectionnements aux poêles de chauffage et de cuisine.*)

John Van B. Carter and James Dwyer, Detroit, Mich., U. S., 12th December, 1876, (re-issue of Patent No. 1969), for 5 years.

*Claim*—1st. The reservoir *M* provided with the plates *h* and the combination sleeve *N* provided with the air ducts *j* arranged within the cylinder of a base burning stove with relation to a draft register *r* or equivalent device; and The hopper *o* provided with the supporting studs *l* for supporting it above the magazine *M* 2nd The rotating and tilting grate *P* when provided with the jointed arms *n m*, the latter with the cavity in its end, 3rd The spider *Q Q* for supporting the grate, 5th The plate *R* provided with the studs *p p* in combination with the grate arm and the slot *q* of the ash box bottom forms the base flue, 7th The prolongations *B B* of the side walls of the ash box and the flanges *d d* of the section *E*, and an oven or a plain back plate which in combination with the fire pot form the back flue; 8th. In combination with a coal burning reversible flue heating stove an oven attachment on the rear thereof adapted to be heated in the passage of the products of combustion between the combustion chamber and the base of the stove, 9th. In combination with a coal burning reversible flue heating stove an oven attachment on the rear thereof adapted to be heated in the passage of the products of combustion between the base of the stove and the exit pipe, 10th. In combination with a coal burning reversible heating stove an oven attachment located immediately in the rear of the fire pot and ash pit with its base resting upon the base of the stove while its upper surface is upon a plane or nearly so with the top of the fire pot, 11th. In combination with a coal burning reversible flue heating stove a double walled oven attachment resting upon the base of the stove and on the rear side thereof adapted to be heated by the products of combustion in their passage to and from the base, 12th. The doubled walled oven *F* provided with the partition *F* projecting into and closing the back flue of a base heating stove to compel the heated currents to pass around the oven before finding an exit at the smoke pipe, 13th. The construction and arrangement of the base plate *A*, ash box *B*, fire pot *C*, annular sections *D E G G*, *K*, cover *L*, magazine *M*, combustion sleeve *N*, plates *h*, air ducts *j*, register *k*, hopper *o*, flue *H*, damper *J* and smoke pipe *I*, 14th. The combination with the sleeve *N* of the adjustable finger plate *N*, 15th. The sectional ash drawer front *D*.

**No. 6877. Machine for Turning the Point of Nails.** (*Machins a tourner la pointe des clous.*)

Daniel Herald, Gore's Landing, Ont., 12th December, 1876, (extension of Patent No. 1252), for 5 years.

*Claim*—1st. The frame as constructed and applied for modeling the boat to be built so as to turn the points of nails in driving and clinch them, 2nd. Constructing the frame in sections and plating the exterior of the model with metal.

**No. 6878. Improvements on Whiffletree Trace Fastenings.**

(*Perfectionnements aux pommeaux de jallonniers.*)

Callender I. Calvert, Philadelphia, Pa., U. S., 15th December, 1876, for 5 years.

*Claim*—The provision to a whiffletree *A* of a crank loop *C* pivoted thereto by a pin *D* and receiving the trace *E* for confining it when looped on the button *B*.

**No. 6879. Process for Liming, Bating and Tanning Skins.**

(*Procédé de plannage, trempage et tannage des peaux.*)

Magnus Soderberg, Lund, Sweden, and Mathew Armstrong, Jersey City, N. J., U. S., 18th December, 1876, for 5 years.

*Claim*—Liming in a mixture of water, chloride of soda and gas ammoniaic and afterwards bating them in a mixture of water sulphur (dissolved with sodium water) and salpêtre and finally tanning them first, in a mixture of bark liquor dissolved gambier and sulphate of zinc, alcohol and acetic acid, and completing the tanning in a mixture of bark liquor, dissolved gambier, salt, gas ammoniaic and shumac.

**No. 6880. Process and Apparatus for Tempering Glass.**

(*Procédé et appareil pour tremper le verre.*)

François B. A. Royer de la Bastie, Villette, France, 18th December, 1876, (re-issue of Patent No. 4267), for 15 years.

*Claim*—The process of tempering glass consisting in the subjection of the hot glass to a bath, the temperature of which is above the boiling point of water.

**No. 6881. Process and Apparatus for Tempering Glass.**

(*Procédé et appareil pour tremper le verre.*)

François B. A. Royer de la Bastie, Villette, France, 18th December, 1876, (re issue of Patent No. 4267), for 15 years.

*Claim*—A new manufacture possessing the substantial properties consisting of glass subjected while in a highly heated state to a temperature above the boiling point of water.

**No. 6882. Process and Apparatus for Tempering Glass.**

(*Procédé et appareil pour tremper le verre.*)

François B. A. Royer de la Bastie, Villette, France, 18th December 1876 (re issue of Patent No. 4267), for 15 years

*Claim*—1st In combination with the oven for heating and the bath for plunging communicating with each other, the rocking table *e* 2nd In combination with the heating oven and plunging bath the tables *e* and *19*, 3rd In combination with the heating oven and plunging bath the rocking table *e* and the receiver *g*.

**No. 6883. Manufacture of Barrel Staves.**

(*Fabrication des douves de barils.*)

Heman S. Smith Brooklyn, N. Y., U. S., 21st December, 1876 for 5 years.

*Claim*—A stave for barrels and casks that is made by machinery from the surface of a log.

**No. 6884. Improvements on Churn Dashers.**

(*Perfectionnements aux bats à beurre.*)

Rodney M. Case Auburn, N. Y. U. S., 21st December 1876 for 15 years

*Claim*—1st The perforated head *B* and wooden rods *C* passed through the dasher and fastened by the tacks *a* 2nd In combination with the solid perforated head *B* and rods *C* the screws *b* inserted in the head.

**No. 6885. Art of Ventilating Railroad Cars.**

(*Art d'aérer les voitures de caillottes.*)

Richard P. Cooke, Brockville, Ont. 21st December, 1876 for 5 years

*Claim*—The continuous air duct running from the fore part of the engine to the end of the train having openings for admitting the pure air into the cars.

**No. 6886. Improvements on Wood Screws, &c.** (*Perfectionnements aux vis de bois, &c.*)

Thomas J. Sloan, New York, U. S. 21st December 1876 for 5 years

*Claim*—1st. The wood screw having its head constructed with the conical recess *G* traversed by the groove *a* and nearly or quite concentric with the axis of the screw 2nd The combination of the die *G*, in which to upset the end of the blank or form the head of an ordinary screw, and the punch *n* with a central conical tool *r* for producing a conical hole in the centre of the screw head, 3rd The movable head constructed with the die *m* and punch *n* in combination with the die *G* for holding the blank, 4th The sliding shaft *A* carrying the die *m*, punch *n* and tool *r* and driving shaft *C* carrying the cam *e*, *f*, in combination with the die *G* for holding the blanks, 5th In a machine for recessing the heads of screw blanks the combination of a feeding mechanism holding jaws and drill, 6th The combination of a shaving cutter with a feeding mechanism holding jaws and drill, 7th In a machine for recessing the heads of screw blanks the drill constructed and arranged to have a longitudinal movement irrespective of its normal feed, in combination with the fingers *D* of the blank feeding mechanism and the jaws *B* whereby the said drill is made to serve the double purpose of forcing the blank through the fingers to the jaws and recessing the head of the blank when the said blank is held by the jaws.

**No. 6887. Machine for Grinding Harvester Knives.**

(*Machin a aiguiser les coupeurs des moissonneuses.*)

Charles B. George and Gerard Dunning, (assignees of Homer S. Stevens), Wankegan, Ill., U. S., 21st Decemb r, 1876, for 5 years.

*Claim*—1st. The grinder *E* and shaft *m* in combination with the pivoted yoke *G* and suitable operating mechanism for moving the upper end of the yoke backwards and forwards 2nd. The grinder *E*, shaft *F* and pivoted yoke *G* in combination with the wheels *d* and *e* and rod *g*, 3rd. The pivoted yoke *G*, post *f* and rod *g*, in combination with the wheel *e* having holes at different distances from the centre to regulate the travel of the yoke and stone, 4th The post *f* and rod *g* in combination with the arm *h* for locking the yoke *G* and preventing its forward and backward movements, 5th. The combination of the grinder *E*, shaft *F*, pivoted yoke *G* and trough *G* provided with bars or supports *a* with a suitable supporting frame, 6th. The jointed sickle holder consisting of the parts *J K L*, 7th. The frame or holder *K* provided with rests *u w v* in combination with the lever *L*, set screws and projection *re* for holding the sickle in place, 8th. The frame or holder *K* having rests *u w v* in combination with the head *J* and pivoted thereto for the purpose of enabling the operator to turn the sickle from one side of the grinder to the other, 9th. In a sickle holder the combination of the hinged head *J* provided with the projection *k* and the pivoted part *h* provided with the lock *n p*, 10th. In a sickle grinder the slotted bar *H* in combination with a suitable supporting frame *A A* for the purpose of admitting of a vertical adjustment of the sickle, 11th. In a machine for grinding the sections of a sickle a sickle holder consisting of the parts *J K L* in combination with a grinder *E*, shaft *F* and pivoted yoke *G*.

**No. 6888. Improvements on Machines for Cutting Fibrous and other Materials.**

(*Perfectionnements aux machines à couper les substances ligneuses et autres.*)

Edward M. Jewett, (assignee of James Sangster), Buffalo, N. Y., U. S., 21st December, 1876, for 5 years.

*Claim*—1st The combination of the revolving disk *A*, cutters *D*, rods *E*, provided with arms *H H* and *I* with the slotted piece *J*, rod *K* and thumb screw *L*, 2nd The combination of the disk *A*, cutters *D*, rod *E*, provided with arms *H H* and *I* or their equivalents with the slotted piece *J*, rod *K*, thumb screw *L*, and parts *M N P*; 3rd. The disk *A* and adjustable cutters *D* provided with a central piece *J* having suitable connections for moving the

cutters in combination with a rod K and thumb screw L, for the purpose of adjusting the cutters so as to regulate the thickness of the cut while the machine is in motion.

**No. 6889. Apparatus for Generating Carbonic Acid Gas.**

(Appareil a produire le gaz d'acide carbonique.)

Pascal P. Pratt, (assignee of Adoll Kuyser). Buffalo, N. Y. U. S., 21st December, 1876, for 5 years.

Claim.—1st The combination with the vessel A B and acid receptacle C of the weighted valve *ef* arranged so as to render the action of the valve automatic; 2nd The combination with the vessel A B, acid reservoir C and valve and stem *e* of the spring *g* and weight or weights *fa*; 3rd. The combination in an automatic carbonic acid gas generator of the generating vessel A B, acid receptacle C and tube *n* forming a gas chamber through which the acid is conducted directly to the alkali on the bottom of the generating vessel; 4th. The combination with the generating vessel A B, acid receptacle C of the perforated diaphragm *a* and tube *m* opening into the space between the diaphragm and the bottom of the vessel A; 5th The combination with the moveable rod *f* and stationary guide *e* of the flexible tube *h* secured to the same for forming a gas tight joint between the parts, while permitting the rod to be easily moved; 6th. The combination with the moveable rod *f* and glands H H of the flexible tube *h*, packing ring *h* and collar *h*; 7th. A carbonic acid gas generator composed of the vessel A B, acid receptacle C, perforated diaphragm *n*, tube *n*, valve *e* and stem *f* and spring *g*; 8th. The combination with the generating vessel A B of the acid vessel C, valve and stem *e* *f*, weighted lever R and moveable piston S.

**No. 6890. Apparatus for Grinding Colors and Triturating Medicines.**

(Appareil a broyer les couleurs et triturer les medicaments.)

Joseph J. Lancaster, London, Ont., 21st December, 1876, for 5 years.

Claim.—The bevel wheel A, pinion B, crank C, disk E, rod J, cup H and band L in combination with pestle G and mortar M.

**No. 6891. Improvements in the Manufacture of Plaster of Paris.**

(Perfectionnements dans la fabrication du plâtre fin.)

John M. Reid, Montreal, Que., 21st December, 1876, for 5 years.

Claim.—1st. The method of calcining gypsum by a progressive or continuous operation at a definite regulated degree of heat while the gypsum is agitated and moved progressively from the point of supply to that of delivery; 2nd. The revolving calcining cylinder or retort with supply hopper and feed screw at one end, and receiving bin and delivery screw at the other, in combination with the fire flue or heating chamber and indicating thermometer.

**No. 6892. Improvements on Machines for Renovating Feathers.**

(Perfectionnements aux machines a rafraichir la plume.)

Nathaniel H. Shaw, Bedford, Que., 21st December, 1876, for 5 years.

Claim.—1st The cylinder *a* provided with steam spaces *d* and corrugations *p* forming connections with the spaces *d*; 2nd. The cylinder *a* having spaces *d*, corrugations *p* and perforated spaces *q*; 3rd. The cylinder *a* in combination with the shaft *h*.

**No. 6893. Railway Track Cleaner.**

(Chasse-pierre de voie de fer.)

Augustus Day, Detroit, Mich., U. S., 21st December, 1876, for 5 years.

Claim.—1st. In combination with the scraper of a track cleaning machine the scraper *A* provided with lip *a* and projection *a*; 2nd. In combination with the scraper *A* and shoe *B* the leader *C* and brace *D*; 3rd. The adjustable brackets *E*; 4th. The shell *I*, wheel *K* and pipe *L*; 5th. The eye and clamp *G* provided with slot *n* and spring key *p*; 6th. The barrel *M* made in two parts and recessed; 7th. The standard *F* in combination with the shaft *X* and crank *R*, when the latter is provided with the gravity latch *S*; 8th. The combination of the eye and clamp *G* with the chain *H* rods *l*, chain *h*, block *k* and scrapers *A*; 9th. The combination and arrangement of the herein before described and lettered parts.

**No. 6894. Improvements on Boot and Shoe Pegs.**

(Perfectionnements aux chevilles de chaussures.)

Treat F. Prosser, Chicago, Ill., U. S., 21st December, 1876 for 5 years.

Claim.—1st. Wire having a honey-combed or cellulated surface; 2nd. Honey-combed or cellulated wire, the cells of which are arranged in parallel (whether straight or spiral) longitudinal rows divided by continuous longitudinal ribs and connecting transverse ribs.

**No. 6895. Improvements on Spring Bedstead Bottoms.**

(Perfectionnements aux fonds de couchettes a ressorts.)

David B. Channel and Richard Kincaid, Sherbrooke, Que., 21st December, 1876, for 5 years.

Claim.—The combination of the slats *A* with the straps or links *S*, beams or frame *B* and hooked rods *C* with the buttons *G*, also the springs *F* and spring slats *H*.

**No. 6896. Improvements on Tack Machine Feeders.**

(Perfectionnements aux alimentateurs de machines a brochettes.)

William H. Rittenhouse and Charles P. Weaver, Norristown, Pa., U. S., 21st December, 1876, for 5 years.

Claim.—1st. The pin *L*, spring *W*, ring *S* and collar *V* combined with the nipper head *T*, revolving barrel *A* and weighted cord *U*; 2nd. The pin *R* having incline *X* in combination with spring *W* and ledge *Y*; 3rd. The ratchet ring *E*, belt *F*, oscillating shaft *G*, wheels *H* *I* and crank shaft *J* coupled to the tender lever and combined with the revolving barrel.

**No. 6897. Improvements on a Machine for the Manufacture of Envelopes.**

(Perfectionnements a une machine pour la fabrication des enveloppes.)

Horace J. Wickham, Hartford, Ct., U. S., 21st December, 1876, for 5 years.

Claim.—1st The combination in a machine for making envelopes of mechanism to get a and pick up and mechanism to fold envelope blanks with mechanism arranged between the gumming and folding mechanism, to stamp or print the face of the blanks prior to folding and with an intermittingly acting feed to take the blank lifted by the gummers and carry it to the stamping dies, and when stamped to carry it to the folding mechanism; 2nd. The hollow post in combination with rod *U* and spring separator adapted to bear against the upper portion and edge of the blank; 3rd. The envelope blank sustaining bed and hollow posts in combination with separators arranged to move up and down within the posts; 4th. The envelope blank bed and base posts and separators in combination with front posts and spring separators to keep the uppermost blank pressed against the back posts to be acted upon by the gummer; 5th. The gum box and its roller *h*, and the gummers arranged at each side thereof in combination with the independently acting gumming rollers adapted to move simultaneously in opposite directions from the gum box roller over the gummers; 6th. The combination of the gum box and its collar with the scraper and its adjusting screws and antiposed pieces where by the scraper can be moved away from the roller and be replaced without disturbing the screws; 7th. The gum box roller and its journals in combination with the sleeves *z* and *z*; 8th. The gum box *h* and its supporting chamber *q* and roller *h* and scraper, in combination with the bearings *h* extended across the gum box and constructed to form a passage way for the circulation of the gum; 9th. The seal and back flap gummers and independently actuated gumming rollers in combination with the side flap gummer and its lever 143 and stop 147 to regulate the quantity of gum discharged; 10th. The combination with the feeding and envelope blank supporting devices of the cords and a tension device to keep the cords taut and hold the blanks down; 11th. The combination of the support for the blank and the die and cords 67 with the cord lifter; 12th. The combination with the carrier that receives the folded envelopes of a reciprocating jaw or picker and device to open and close it to seize and draw the folded envelopes laterally from the machine; 13th. The combination with the reciprocating jaw or picker to draw the envelope from the carrier and plate 97 and its supporting rod 95 of a ratchet wheel and indicator 99 to move the plate 97 and project an envelope beyond the envelope next in advance of it.

**No. 6898. Improvements on the Manufacture of Barrel Hoops.**

(Perfectionnements dans la fabrication des cercles de barils.)

Herman S. Smith, Brooklyn, N. Y., U. S., 21st December, 1876, for 10 years.

Claim.—A hoop made from the surface of a log by shaving it into one continuous sheet of lumber and then cutting this lumber into strips for hoops and dressing bevelling and chamfering the same by said suitable machinery.

**No. 6899. Improvements on Heating and Cooking Stoves.**

(Perfectionnements aux poeles de chauffage et de cuisson.)

John Van B. Carter and James Dwyer, Detroit, Mich., U. S., 12th December, 1876, (extension of Patent No. 6276), for 5 years.

**No. 6900. Improvements on Floating Mills.**

(Perfectionnements aux moulins flottants.)

Pierre Mayrand, p. re, (Canada), Que., 20th December, 1876, for 10 years.

Claim.—1st. A mill or a floating boat mill *A* divided into five parts, namely, the three water tight compartments *a b c* to receive the ballasting and the two decks *d e*, in combination with the posts, cross-pieces, jack posts &c., to receive the machinery; 2nd. An axle wheel *C* provided with six axes *D* more or less set in motion by means of the belt *A*, the small pulley *B* and the large pulley *L*, which latter is hung on the main shaft *F* set in motion by the driving pulley *C*, its belt *D* and snail pulley *E*, in combination with the crank *B* worked by any motive power; 3rd. The ship carrier *J* set in motion by the pulleys *L* and *G* and the belt *H* in combination with the axle wheel *C* to clear away the chips and to keep the place free; 4th. The combination of the feed pressure rollers *V* the pressure rollers *W* the shaft *I* having the rollers *U* and *Y* on the shaft *I* of one of which *U* is hung the horizontal cog wheel *S* meshing with the pinion *Q* hung on the shaft *F*, the pinion *Q* set in motion by the belt *N*, the small pulley *O* and the large pulley *K* hung on the main shaft *F* with the axle wheel *C* for the purpose of feeding the log to the axes *D*; 5th. The saw *H* worked by the pinion *Q* parallel to the crank wheel *F* set in motion by the belt *L* and the pulley *E*; and *h* the large pulley *h* being revolved by the belt wheels *K* and *T*, which are meshed together by the shaft *M*, in combination with the fly wheel *F* and the mill *X* to saw the ends of the lengths of the floating timber; 6th. In combination with a mill *A* to make floating timber and with the saw *H*, the saw guide *J* stretched by means of the hand lever *K* and its arm *l*; 7th. The table *N*, the pinions *Q* *R*, the crank wheels *S* and *T*, in combination with the two pairs of saw dogs *Z* to saw the ends of the floats or to saw the length of the floats as required.

**No. 6901. Improvements in Slippers.**

(Perfectionnements dans les pantoufles.)

Jean L. Pelletier, Montreal, Que., 28th December 1876, for 5 years

Résumé.—1o. La semelle *A* en morceaux de cuir fendu, collés, pressés et roulés, et recouverte de sa doublure *B*; 2o. La semelle *A* faite en carton cuir, en carton ordinaire ou goudronné de même qu'en toute autre matière ou de choix, mais recouverte de sa doublure *B* faite en drap feutré ou non feutré; 3o. L'emploi de la semelle *A* et de sa doublure *B* pour toutes les chaussures d'appartement.

Claim.—1st. The sole *A* made of pieces of split leather glued pressed and rolled, and covered by the doubling *B*; 2nd. The sole *A* made of leather board, or of tanned paste board, as well as of common or selected felt but covered by its doubling *B*, made of felted or unfelted cloth; 3rd. The use of the sole *A* and its doubling *B* for all kinds of house shoes.



**No. 6902. Roofing Composition.***(Composé à toiture.)*

Joseph Cérat, Montreal. Que., 28th December, 1876, for 5 years.

*Résumé.*—Le mélange de la poussière de pierre à chaux, ciment de Portland, plâtre de Paris, avec du goudron dissout, mélangés chauds.*Claim.*—The mixture of lime stone dust, Portland cement, plaster of Paris, with liquid coal tar, mixed warm.**No. 6903. Horse Nail Finishing Machine.***(Machine à finir le clou à cheval.)*

Patrick Dunn and Thomas Harris, Côte St. Paul, Que., 28th December, 1876, for 5 years.

*Claim.*—1st. The combination of the lever D provided with roll E, reel protracting yoke B, connecting rod H and crank shaft G having cams F F'; 2nd. The guide piece K having automatic action in combination with the lever D having roll E; 3rd. The fixed bed or anvil piece having recess at one side in combination with the movable guide piece forming the opposite side of the recess for receiving the nail.**No. 6904. Improvements in Movable Fences.***(Perfectionnements aux clôtures portatives.)*

Theobald Rohlfich, Sebringville, Ont., 28th December, 1876, for 7 years.

*Claim.*—1st. The triangular trusses or frames A notched at the apex and notched centrally at the base to receive the over lapping upper and lower rails of the panels; 2nd. The notches in the under edges of the top rails at each end thereof at b to match the notches at the apex of the trusses.**No. 6905. Improvements on Wood Screws, &c.,***(Perfectionnements aux vis à bois, &c.)*

Thomas J. Sloan, New York, U. S., 28th December, 1876, for 5 years.

*Claim.*—1st. A wood screw constructed with the groove a having at its center c the depth of the neck of the common wood screw and deepened with sloping surfaces to and through the sides of the head; 2nd. In a organized machine for making slope nicked screws, a blank holding spindle having an intermittent revolving movement around its own axes, in combination with a nicking saw W arranged to automatically move to and from the blank holding end b of the said spindle A alternately with semi-rotations of the latter; 3rd. The improved machine comprising the double spindles A A revolvable around a common axis, a mechanism for giving each of the said spindles alternately a half revolution around its own axes, and a nicking saw adapted to approach and recede from each spindle successively after each successive semi revolution of the same, the whole combined and arranged for operation in connection with a suitable apparatus for feeding the blanks to the holding jaws of the spindles; 4th. The vibrating spring toothed sector K in combination with the pinions C of the double revolving spindles A A; 5th. In an organized machine for making slope nicked screws, the combination with a blank holder fixed as concerns rotation on its own axis, of a nicking tool or cutter constructed and arranged to cut the sloped nick of the head of the blank directly across from one side to the other without turning the blank; 6th. The angularly notched screw driver constructed with the bevelled corners a c; 7th. In an organized machine for making slope nicked screws, the combination with a blank holder fixed as concerns rotation on its own axis of nicking tool or cutter constructed and arranged to cut the sloped nick of the head of the blank or screw directly across from one side to the other without axially turning the blank.**No. 6906. Automatic Lighter for Gas Burners, &c.,***(Allumeur automatique de bec à gaz, &c.)*

Henry B. Stockwell and Albert R. Weiss, Brooklyn, N. Y., U. S., 28th December, 1876, for 5 years.

*Claim.*—1st. In an automatic lighter for gas burners, cigar lighters and anvil articles composed of a fulminate ribbon, a slide piece hammer and anvil arranged and operated so as to feed the fulminate ribbon to the anvil and to the gas burner or tinder cord simultaneously with the raising and dropping of the spring hammer for igniting the gas or lighting the cord; 2nd. In automatic lighters for gas burners a slide piece operated by the gas cock and constructed to feed the fulminate ribbon to the anvil simultaneously with the raising and dropping of the spring hammer; 3rd. The slide piece provided with bent and recessed in combination with the corresponding bent spring hammer for raising and dropping the same by the forward motion of the slide piece; 4th. The combination with the recessed bottom disk of magazine turned by the gas cock with the projecting lug of the slide piece for moving the same in forward and backward direction; 5th. The combination of the guide piece having guard flange at the side adjoining the socket with the arm of the pivoted cover for guiding ribbon and slide piece; 6th. In automatic gas lighters the burner socket magazine and guide cast in one piece; 7th. The combination of the socket by an insulating sleeve of non-conducting material with the burner.**No. 6907. Improvements in Bed Lounges.***(Perfectionnements aux canapés.)*

David J. Powers, Chicago, Ill., U. S., 28th December, 1876, for 5 years.

*Claim.*—1st. The combination with the frame F and cross rails B B supporting the bed bottom L, of the braces E E; 2nd. The combination with the back rail A, cross rails B B, and frame F, of the elastic wire fabric bed bottom L; 3rd. The cushion M hinged to the frame F or otherwise attached thereto so as to allow it to drop away from the fabric L when unfolded and to rest upon or above the fabric when folded; 4th. The combination with the rail N of the front piece O hinged to the said rail; 5th. The hinged head J arranged to rest upon the cushion or lounge frame when folded and to turn back from off the cushion or frame when unfolded; 6th. A folding bed lounge or sofa frame in which the cross rails B B and G G are braced from the back so as to prevent the said end rails from being drawn towards each other by the tension of the fabric.**No. 6908. Manufacture of Articles from Vulcanised Rubber.***(Fabrication d'objets en caoutchouc vulcanisé.)*

Hiram P. Dunbar and Thomas C. Lothrop, Boston, Mass., U. S., 28th December, 1876, for 5 years.

*Claim.*—1st. The improved process for the manufacture of rubber products that is the uniting with a base or foundation of cheap material and facing or series of designs of finer material susceptible of receiving colors and incorporated with the foundation; 2nd. The improved rubber product being a floor cloth composed of a body of cheap material and a series of parallel strips in colors or neutral tints composed of a finer quality of rubber compound.**No. 6909. Improvements in Boiler Feeders.***(Perfectionnements aux alimentateurs des chaudières.)*

Francis A. Pratt, Hartford, Ct., U. S., 28th December, 1876, for 5 years.

*Claim.*—1st. The combination of the plate O with its slots Q and R, and the lever L with its rolling weight N with the lever J of the float F, for the purpose of operating the valve V at the proper time; 2nd. The combination of a valve V for alternately opening and closing the steam pipe U and which opens an exhaust port B communicating with the chamber A when the main pipe U is closed with an alternately filling and discharging chamber A.**No. 6910. Improvements on Packages for Butter.***(Perfectionnements dans l'emballage du beurre.)*

Henry P. Adams, Cleveland, Ohio, U. S., 28th December, 1876, for 5 years.

*Claim.*—A butter package constructed of casing A with metallic lining C terminating in the flange c in combination with the lid B, clamps E e and interposed paste board packing.**No. 6911. Manufacture of Glass Bowls, &c.***(Fabrication des coupes de verre, &c.)*

George L. Fessenden, Soudwich, Mass., U. S., 28th December, 1876, for 5 years.

*Claim.*—Blowing the bowl in a mould and next annealing such bowl and when cool cutting or cracking off the cap or superfluous part, and finally submitting the rest (whether with or without a foot) to heat by means so as to fuse the upper edge and round it and fire polish it, and also fire polish the inner and outer surfaces of the article in a glass bowl or article of glass having a bowl made by the process.**No. 6912. Improvements on Buggies and Sleighs.***(Perfectionnements aux voitures à roues et aux traîneaux.)*

Joseph Maunder, Little Britain, Ont., 28th December, 1876, for 5 years.

*Claim.*—1st. The guard irons; 2nd. The slide irons; 3rd. The combination of the guard irons and slide irons to the seat by means of which it is slid forward or back and folded.**No. 6913. Improvements on Pumps.***(Perfectionnements aux pompes.)*

William S. Laney, Lithopolis, Ohio, U. S., 28th December, 1876, for 5 years.

*Claim.*—A pair of cylinders a formed in a single casting or forming A and provided with removable perforated seats a<sub>1</sub>, valves a<sub>2</sub> and pistons or plungers C C, and an external force pump L having removable perforated seats a<sub>3</sub>, valves a<sub>4</sub>, pistons e and a resilient piston rod k, the plungers C C and piston l being operated by a revolving crank axle F.**No. 6914. Improvements on Gang Ploughs.***(Perfectionnements aux charrues à soies multiples.)*

William Ross, Mount Forrest, Ont., 28th December, 1876, for 5 years.

*Claim.*—1st. The beam B constructed of angle iron and the plough standards I and bolted horizontally and vertically to the beam; 2nd. The combination of the double pawls N and ratchet wheel O with the front crank axle C for adjusting the front wheel to the depth of furrow; 3rd. The stops a and b.**No. 6915. Improvements on Filters.***(Perfectionnements aux filtres.)*

Bradhurst Schieffelin, Atlanticville, N. J., U. S., 28th December, 1876, for 5 years.

*Claim.*—1st. In combination with any hermetically closed vessel containing filtering substances and having induction and ejection pipes, a trough arranged within the vessel so as to break the continuous surface both vertically and horizontally and wholly or partially filled with the filtering substances; 2nd. In combination with any vessel containing filtering substance provided with projecting tubes corresponding to apertures therein the diaphragm F; 3rd. In combination with any filtering apparatus the hermetically closed vessel N containing filtering substance placed so as to receive the liquid before it enters the main filtering vessel or chamber; 4th. The combination of the vessel A, pipes B and C, trough D, vessel E and diaphragm F; 5th. The combination of the vessel A with inlet and outlet pipes cylinder E and diaphragm G; 6th. The vessel E provided with outlet and inlet pipes and cover and having an outwardly projecting ring about it so as to form trough D; 7th. The diaphragms F in combination with a vessel containing filtering material within the body of which the liquid is discharged to be purified.**No. 6916. Improvements on Saw-Horses.***(Perfectionnements aux chevauxets.)*

Lucius H. Goff, Richford, Vt., U. S., 28th December, 1876, for 5 years.

*Claim.*—The combination of the legs c with side pieces f and cross bar g; 2nd. The side pieces f having curved surfaces h with or without spikes i or their equivalents; 3rd. The bar a having ends b forming a pivot for the side pieces c d and f, in combination with said side pieces c d and f and cross bar g whereby the same may fold up flat.

## Lists of Patents issued up to 22nd January, 1877, but not yet Officially published in the Patent Office Record.

- No. 6917 C. McWilliams and L. C. Barney, Montreal, Que., "Smoke Consuming Device," 28th December, 1876.
- No. 6918 L. Côté, Montreal, Que., "Peg Cutting Machine," 28th December, 1876.
- No. 6919 J. O. Bourret, Montreal, Que., and E. A. Bourret, St. Armand, Que., "Peg Cutting Machine," 28th December, 1876.
- No. 6920 G. S. Clover, Bay City, Mich., U. S. A. (Administrator of H. H. Clover), J. H. Strehli, Cincinnati, and J. Kieran, Cincinnati, Ohio, U. S. A., "Hydrant," 28th December, 1876.
- No. 6921 T. F. Hennick and D. C. Schneider, Reading, Pa., U. S. A., "Hot Air Furnaces," 28th December, 1876.
- No. 6922 J. K. Lake and B. McDevitt, Chicago, Ill., U. S. A., "Truss Fastening," 28th December, 1876.
- No. 6923 J. Wertheim, Frankfort, Germany, "Atmospheric Gas Engine," 4th January, 1877.
- No. 6924 T. W. Brooks, New York, U. S. A., (Trustee for the Ethna Manufacturing Co.; Assignee of W. Bohannan), Brooklyn, N. Y., U. S. A., "Seal, Lock and Seal," 4th January, 1877.
- No. 6925 J. L. Reed and W. L. Peters, Brooklyn, N. Y., U. S. A., (Assignees of J. H. Peuhl, Reading, Pa., U. S. A.), "Bearing for Upright Shafting," 4th January, 1877.
- No. 6926 J. Findlay and G. A. Burns, Toronto, Ont., "Safety Jack," 4th January, 1877.
- No. 6927 S. A. Griswold, New York, U. S. A., "Corset," 4th January, 1877.
- No. 6928 H. M. Wilcox and E. G. Stiles, Chicago, Ill., U. S. A., "Wood Planing Machine," 4th January, 1877.
- No. 6929 A. H. Shipman and J. T. Binder, Rochester, N. Y., U. S. A., "Scroll Sawing Machine," 4th January, 1877.
- No. 6930 J. Curzon, Darien, Ct., U. S. A., "Lamp Burner," 4th January, 1877.
- No. 6931 L. B. Lyons and S. M. Lyons, Chillicothe, Ohio, U. S. A., "Car Truck," 4th January, 1877.
- No. 6932 J. H. Kunkel, Catoctin Furnaces, Md., U. S. A., "Process for eliminating Phosphorus from Iron," 9th January, 1877.
- No. 6933 H. Soper, Port Hope, Ont., "Hoof Ointment," 9th January, 1877.
- No. 6934 G. S. de Bonald, Berthier (en haut), Que., "Chair," 9th January, 1877.
- No. 6935 S. J. Angus, (Assignee of J. Angus), Ottawa, Ont., "Shirt," 9th January, 1877.
- No. 6936 B. T. Richardson, Cincinnati, Ohio, U. S. A., "Axle and Wheel," 9th January, 1877.
- No. 6937 C. M. Johnson, New York, U. S. A., "Combination Pen and Pencil Case," 9th January, 1877.
- No. 6938 J. J. Bate, Brooklyn, N. Y., U. S. A., "System of Ventilation, Refrigeration, &c.," 9th January, 1877.
- No. 6939 J. Herald, Hamilton, Ont., "Improved Piano Fortes," 9th January, 1877.
- No. 6940 W. Corris, Rochester, N. Y., U. S. A., "Improved Banded Wood Hub," 9th January, 1877.
- No. 6941 J. D. Dresser, Brantford, Ont., "Corn Broom," 9th January, 1877.
- No. 6942 A. Walker and C. N. Armstrong, Montreal, Que., "Steam Pan," 9th January, 1877.
- No. 6943 W. D. Westman, Toronto, Ont., "Mechanical Movement for first and intermediate Drivers," 9th January, 1877.
- No. 6944 W. Abbott, Espy, Pa., U. S. A., "Ear Muller," 9th January, 1877.
- No. 6945 H. Carter, Aylmer, Ont., "Clothes Scourer," 9th January, 1877.
- No. 6946 R. G. Fraser, Halifax, Nova Scotia, "Cement," 9th January, 1877.
- No. 6947 W. McGuire, Exbridge, Ont., "Dumb Stove or Heater," 9th January, 1877.
- No. 6948 J. Pfeifer, Pittsburgh, Pa., U. S. A., "Household Utensils," 9th January, 1877.
- No. 6949 S. Parker, Altoona, Blair Co., Pa., U. S. A., "Hoop Shaving Machine," 9th January, 1877.
- No. 6950 E. Leverich, New York, U. S. A., "Dust-Guard for Railway Carriages," 9th January, 1877.
- No. 6951 T. Brack, Philadelphia, Pa., U. S. A., "Water Filter," 9th January, 1877.
- No. 6952 J. W. Reid, Hamilton, Ont., "Seed Drill," 9th January, 1877.
- No. 6953 The Hon. E. Leonard, London, Ont., "Steam Engine," 9th January, 1877.
- No. 6954 M. Brown, Collingwood, Ont., "Gate and Door Spring and Holder," 9th January, 1877.
- No. 6955 A. Wilson, Hamilton, Ont., (Assignee of A. Kay, of the same place), "Sewing Machine," 12th January, 1877.
- No. 6956 J. Brown and J. Freeman, both of Harmony, N. S., "Spinning Wheel," 12th January, 1877.
- No. 6957 J. R. Reid and J. N. Cooper, both of Elmira, N. Y., U. S. A., (Assignee of G. N. Palmer, of the same place), "Stoves," 12th January, 1877.
- No. 6958 T. C. Ireland, Lachine, Que., (Assignee of W. A. Leggo, Montreal, Que.), "Skate," 12th January, 1877.
- No. 6959 C. Inward and C. G. Skiff, both of Riceville, Iowa, U. S. A., "Stove Pipe Thimbles," 12th January, 1877.
- No. 6960 S. B. Marshall, Trenton, N. J., U. S. A., (Assignee of W. I. Foster, of the same place), "Combination Toy," 12th January, 1877.
- No. 6961 C. Brewster, Montreal, Que., (Assignee of C. G. C. Simpson of the same place), "Skates," 12th January, 1877.
- No. 6962 S. Drake, Montreal, Que., (Assignee of H. A. Sharp, Hopewell, N. B.), "Oil Cabinet," (Extension of No. 1239), 16th January, 1877.
- No. 6963 H. R. Ives, Montreal, Que., "Improvements on the Art of Burning Soft Coal and Consuming Smoke with Apparatus used therefor," (extension of Patent No. 1239), 16th January, 1877.
- No. 6964 C. E. Haynes, Hamilton, Ont., "Washing Machines," 19th January, 1877.
- No. 6965 J. Edmund, Kincaid, Ont., "Adjustable Gate Post," 19th January, 1877.
- No. 6966 D. S. Whittenhall and A. H. Miller, Chicago, Ill., U. S. A., "Railway Cross-Ties," 19th January, 1877.
- No. 6967 J. Foley, Montreal, Que., "Liquid Filters," 19th January, 1877.
- No. 6968 H. Labrecque, Montreal, Que., "Washing Machines," 19th January, 1877.
- No. 6969 J. B. Root, New York, U. S. A., "Machine for making Metal Tubes," 19th January, 1877.
- No. 6970 J. B. Root, New York, U. S. A., "Machine for making Spirally Formed Pipes or Tubes," 19th January, 1877.
- No. 6971 J. B. Oakeshire, Kingston, Ont., "Stamp Extractor," 19th January, 1877.
- No. 6972 A. H. Lucas, St. Louis, Mo., U. S. A., "Egg Box," 19th January, 1877.
- No. 6973 D. Condon and E. C. Seely, Port Medway, N. S., "Deck Light," 19th January, 1877.
- No. 6974 C. E. Rice, Dunmore, Pa., U. S. A., "Spring Brace for Vehicle," 19th January, 1877.
- No. 6975 A. McDonald, Belmont, Mass., U. S. A., (assignee of J. Hartnoll Mason, N. H., U. S. A.), "Stone Dressing Hammer," 19th January, 1877.
- No. 6976 W. J. Lane, Millbrook, N. Y., U. S. A., and W. H. Field, Port Chester, N. Y., U. S. A., "Horse Hay Rake," 19th January, 1877.
- No. 6977 R. S. Lavenore, Port Henry, N. Y., U. S. A., "Baggage Check," 19th January, 1877.
- No. 6978 J. Hawk, North Acacia Valley Tannery, N. S., and H. Colford, Halifax, N. S., "Park Arrestor Heater and Soot Gatherer," 19th January, 1877.
- No. 6979 L. H. Barney, Springfield, Mass., U. S. A., "Skate Fastening," 19th January, 1877.
- No. 6980 J. Baker, Kingston, Ont., "Water Sprinkler," 19th January, 1877.
- No. 6981 S. E. Thomas, New York, U. S. A., "Improvements on Clocks or Time Pieces," 22nd January, 1877.
- No. 6982 G. Shelton, Normal, Ill., U. S. A., "Fence Post," 22nd January, 1877.
- No. 6983 J. B. Root, New York, U. S. A., "Improved Spiral Pipe," 22nd January, 1877.
- No. 6984 H. M. Jarvis, Peabody, Mass., U. S. A., "Gas Consuming and Smoke Preventing Furnace," 22nd January, 1877.
- No. 6985 J. Brooks, Dover, N. H., U. S. A., "Coal Ash Sifter," 22nd January, 1877.
- No. 6986 S. S. Newton, Binghamton, N. Y., U. S. A., "Bottle Stopper," 22nd January, 1877.
- No. 6987 T. F. Phillips, Barre Center, N. Y., U. S. A., "Hot Cord Fastener," 22nd January, 1877.
- No. 6988 P. W. Davis, Trith Street Solo, Eng., "Apparatus for Raising Sunken Ships, Vessels and other Commodities," 22nd January, 1877.
- No. 6989 T. Barnes, Harwick, Ont., "Lumber Mill," 22nd January, 1877.
- No. 6990 J. McCloskey, New York, U. S. A., "Sewing Machine," 22nd January, 1877.
- No. 6991 J. J. Bate, Brooklyn, N. Y., U. S. A., "Refrigerator," 22nd January, 1877.
- No. 6992 W. P. Clifford, Elmwood, Ill., U. S. A., "Grain Separator and Scourer," 22nd January, 1877.
- No. 6993 M. P. McElkinney, Montreal, Que., "Blotting Ruler," 22nd January, 1877.
- No. 6994 T. W. Pierce, Rodman, N. Y., U. S. A., "Milk Pan and Cooler," 22nd January, 1877.
- No. 6995 J. J. Golden, Toronto, Ont., "Switch Shutter," 22nd January, 1877.
- No. 6996 P. Timban, Barton, Ont., "Sleigh Knee," 22nd January, 1877.
- No. 6997 J. G. Walber, Kilbourn, Wis., U. S. A., "Car Mover," 22nd January, 1877.
- No. 6998 J. N. Tarbox, Hamilton, Ont., "Machine for making Metal Screw Rings," 22nd January, 1877.
- No. 6999 A. Quimby, Salem, Mass., U. S. A., "Railway Switch," 22nd January, 1877.
- No. 7000 J. A. Smith, North-East, Pa., U. S. A., "Organ," 22nd January, 1877.
- No. 7001 H. W. Searle, Hamilton, Ont., "Snow Shovel," 22nd January, 1877.
- No. 7002 T. M. Lechner, Waynesburg, Ohio, U. S. A., and J. A. Jeffrey, Columbus, Ohio, U. S. A., "Mining Machine," 22nd January, 1877.
- No. 7003 R. E. Stephens, Owen Sound, Ont., "Gate," 22nd January, 1877.
- No. 7004 W. S. Babcock, Plainfield, Ct., U. S. A., "Plow and Cultivator Handle," 22nd January, 1877.
- No. 7005 B. J. Lamotho, New York, U. S. A., "Metallic Frame for Railway Cars," 22nd January, 1877.
- No. 7006 A. L. Fish, Cedarville, N. Y., U. S. A., "Milk and Truck Wagon," 22nd January, 1877.
- No. 7007 A. A. Winsor, Boston, Mass., U. S. A., "Carriage," 22nd January, 1877.
- No. 7008 R. C. Carter, Kingston, Ont., "Envelope or Bag," 22nd January, 1877.
- No. 7009 C. W. Reed, Chagong Falls, Ohio, U. S. A., "Steam Boiler," 22nd January, 1877.
- No. 7010 R. Soper and S. W. McTaggart, London, Ont., "Gas Governor," 22nd January, 1877.



INDEX OF INVENTIONS.

Acid, pyroligneous, H. M. Pierce..... 6804  
 Axle box, car, O. Tomlinson..... 6837  
 Barrel hoops, H. S. Smith..... 6898  
     " staves, "..... 6883  
 Battery, gravity, M. W. Parrish..... 6811  
 Bed bottom, T. L. Odell et al..... 6865  
     " " W. W. Bartlett..... 6787  
     " lounges, D. J. Power..... 6907  
 Bedstead, spring, D. B. Chamell et al..... 6895  
 Bell, sleigh, G. W. Tucker..... 6859  
 Billiard cues, H. Platts et al..... 6797  
 Boiler feeders, F. A. Pratt..... 6909  
 Boot and shoe pegs, T. T. Prosser..... 6894  
 Boots and shoes, pegs in, J. & E. Popham..... 6798  
 Bottle nozzle, E. B. Regna..... 6803  
 Brake, R. Jacobi..... 6835  
     " waggon, T. H. Moore..... 6854  
 Brick machine, C. N. Fisher..... 6807  
 Bruises, cure of, N. Mercier..... 6823  
 Buggies and sleighs, J. Maunder..... 6912  
 Butter packages, H. P. Adams..... 6793  
 Cans, meat, G. Brougham..... 6837  
 Car axle box, O. Tomlinson..... 6835  
     " brake, R. Jacobi..... 6835  
 Cars, ventilating, R. P. Cooke..... 6885  
 Chandeller, glass, J. H. Hobbs..... 6851  
 Churn dasher, R. M. Case..... 6881  
 Colors, grinding, J. J. Lancaster..... 6890  
 Corset, J. S. Guthrie..... 6817  
 Cure of cuts, &c., N. Mercier..... 6823  
 Damper, G. E. J. Hanwell et al..... 6842  
 Door fastening, J. G. Phillips..... 6830  
     " hinge, W. Gillfillan et al..... 6824  
 Drill, grain, J. S. Bogle..... 6808  
 Dryer, fruit, C. W. & E. A. Jones..... 6861  
 Ear muffler, H. G. Creveling..... 6839  
 Envelope machine, H. J. Wickham..... 6897  
 Escapement, R. Barclay..... 6816  
 Explosive compound, A. Nobel..... 6869  
 Fanning mill, J. P. & G. Cairns..... 6806  
     " " J. Riddell..... 6860  
 Fastening, trace, C. I. Calvert..... 6878  
 Feather renovating, N. H. Shaw..... 6892  
 Fence, wire, T. S. Seabury..... 6822  
 Fences, movable, T. Rohfrich..... 6904  
 Fibrous material cutting, E. M. Jewett..... 6858  
 Filters, B. Schieffelin..... 6915  
 Furnace, combustion in, J. D. Mulreman..... 6875  
     " water, E. Chanteloup..... 6853  
 Glass bowls, &c., G. L. Fessenden..... 6911  
     " chandeller, J. H. Hobbs..... 6851  
     " tempering, F. B. A. Royer de la Bastie..... 6880 6881  
 Gas burner lighter, H. B. Stockwell et al..... 6906  
     " generating, P. P. Pratt..... 6889  
     " pipe, A. O'Neill..... 6800  
 Gases, heating, T. Whitwell..... 6796  
 Gun, toy, S. G. Stryker..... 6828  
 Harrow, J. Flight et al..... 6813  
     " " J. Johnson..... 6836  
 Harvester, S. Noxon, jr..... 6863  
     " knives grinding, H. S. Stevens..... 6857  
 Hinge, door, W. Gillfillan et al..... 6824  
 Hoe, spring, J. S. Bogle..... 6808  
 Horse nail, P. Dunn et al..... 6903  
     " stall, J. Arless..... 6836  
 Hydrocarbon, treating substances with, W. Adamson..... 6815  
 Iron refining, W. T. Lake..... 6805  
 Knives, polishing, M. Colé..... 6813  
 Lamp shade holder, C. Vottl..... 6810  
 Lamps, A. French..... 6791  
 Lath, spool, W. R. Landfear..... 6758  
 Locomotive, railroad, H. G. Ashton..... 6874  
 Medical compound, W. Turner..... 6819  
 Medicine triturating, J. J. Lancaster..... 6890  
 Meter, water, J. C. Clapp et al..... 6852  
 Mill, floating, P. Mayrand, sr..... 6900  
 Nail, horse, P. Dunn et al..... 6903  
     " " shoe, J. M. Laughlin..... 6801  
     " point turning, D. Herald..... 6877  
 Oil deodorizing, D. M. Lamb..... 6842  
 Organ, S. Turney..... 6858  
 Packing, piston, C. R. James..... 6866  
 Paraffine purifying, F. Q. Barstow..... 6871  
 Pavement, street, A. Pelletier..... 6821  
 Petroleum deodorizing, D. M. Lamb..... 6812

Ploughs, gang, W. Ross..... 6914  
 Pipe joints, A. O'Neill..... 6791  
     " metallic, D. A. Ritchie..... 6826  
 Pipes, water and gas, A. O'Neill..... 6800  
 Printer of Paris, J. M. Reid..... 6891  
 Power transmitting, J. E. Waterous..... 6833  
 Printing machine, G. Blair..... 6832  
 Privy vaults, emptying, J. Bradley..... 6818  
 Pump, J. Cochran, jr..... 6858  
     " bucket, T. Hoyt..... 6873  
     " force, W. & G. Rusk..... 6847  
 Pumps, W. S. Laney..... 6913  
 Pounding machine, A. W. Comstock..... 6820  
 Railroad cars, R. P. Cook..... 6885  
     " locomotive, H. G. Ashton..... 6874  
     " rail joint, C. F. Arnold..... 6790  
 Railway car, &c., A. Blood..... 6845  
     " switch, W. Hodgson..... 6867  
     " track cleaner, A. Day..... 6893  
 Rein, check, H. L. Godfray..... 6848  
 Roofing composition, J. Cérat..... 6902  
 Rubber, vulcanised, H. P. Dunbar et al..... 6908  
 Saw horses, L. H. Goff..... 6916  
 Scaffold, window, H. C. Traphagen..... 6827  
 Screen holder, W. R. Smith..... 6789  
 Screw, wood, T. J. Sloan..... 6856  
 Sewing machine, W. H. Thomas et al..... 6841  
 Sewer traps, emptying, J. Bradley..... 6818  
 Shearing machine, A. W. Comstock..... 6820  
 Ships' flooring, J. Arless..... 6819  
 Sleigh bell, G. W. Tucker..... 6859  
 Sleighs and buggies, J. Maunder..... 6912  
 Slippers, J. L. Pelletier..... 6901  
 Spring bed, W. W. Bartlett..... 6787  
     " door, W. Gillfillan et al..... 6824  
     " elliptic, J. S. Pesseger et al..... 6795  
     " vehicle, G. H. Spencer..... 6802  
 Stall, horse, J. Arless..... 6856  
 Steam engine, S. Warrick et al..... 6829  
 Stereotyping machine, G. Blair..... 6832  
 Stone, artificial, S. McCammon..... 6799  
 Stove, heating, J. Dwyer..... 6811  
     " " &c., J. Van B. Carter et al..... 6876  
     " " W. S. Garrison..... 6846  
     " pipe elbow, F. & A. Hoeltge..... 6786  
     " G. H. Johnson et al..... 6861  
     " W. H. Landon..... 6825  
 Table, extension, J. W. Bent..... 6855  
 Tack machine, W. H. Rittenhouse et al..... 6896  
 Tanning skins, M. Soderberg et al..... 6870  
 Thread winder, W. Jones..... 6872  
 Tire upsetter, J. G. Mole..... 6821  
 Toy gun, S. G. Stryker..... 6828  
 Trace fastening, C. I. Calvert..... 6878  
 Trap, fly, J. M. Harper..... 6844  
 Track, hand, H. R. Ferris..... 6809  
 Valve, safety, H. G. Ashton..... 6868  
 Vehicle brake, R. Jacobi..... 6835  
     " spring, G. H. Spencer..... 6802  
 Waggon, dumping, S. Bachand..... 6831  
 Wash board, L. M. Crosby..... 6857  
     " boiler, E. M. Mallett et al..... 6812  
 Washing machine, J. Maw..... 6785  
     " " potato, A. Steel..... 6810  
 Water meter, J. C. Clapp et al..... 6852  
     " pipes, A. O'Neill..... 6800  
 Window scaffold, H. C. Traphagen..... 6827  
 Wire indenting, T. T. Prosser..... 6792  
 Wheel hub, J. Foreman..... 6870  
 Wheels, motion of, G. E. J. Hanwell et al..... 6850

INDEX OF PATENTEES.

Adam, H. P., butter packages..... 6910  
 Adamson, W., treating substances..... 6815  
 Arless, J., ship's flooring..... 6849  
     " horse stall..... 6856  
 Armstrong, M., et al., tanning skins..... 6879  
 Arnold, C. R., door fastenings..... 6830  
 Arnold, C. F., rail joint..... 6790  
 Ashton, H. G., safety valve..... 6868  
     " railroad locomotive..... 6874  
 Bachand, S., dumping waggon..... 6831  
 Barclay, R., escapements..... 6816



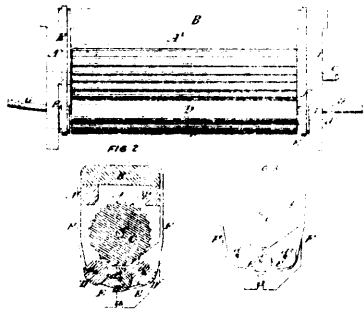
# THE CANADIAN PATENT OFFICE RECORD.

## ILLUSTRATIONS.

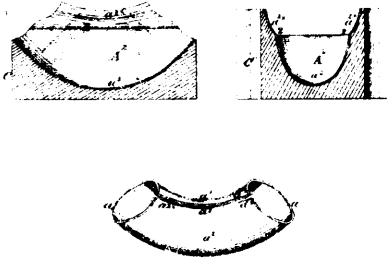
Vol. V.

JANUARY, 1877.

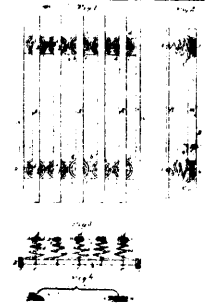
No. I.



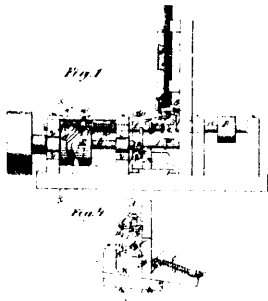
6785 Maw's Improvements in Washing Machines.



6786 Huelte's Process and Appliance for Making Stove-pipe and other Elbows.



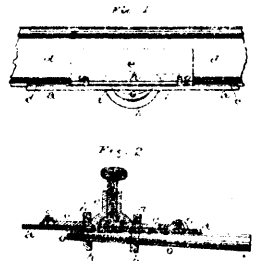
6787 Bartlett's Spring Bed Bottom.



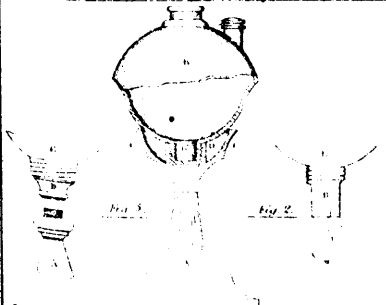
6788 Landfeer's Lathe for Turning Spools.



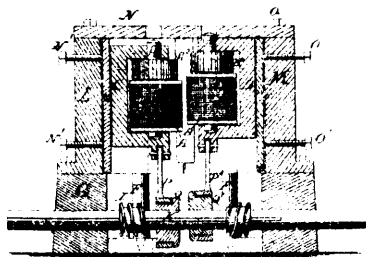
6789 Blodget's Screen Holder.



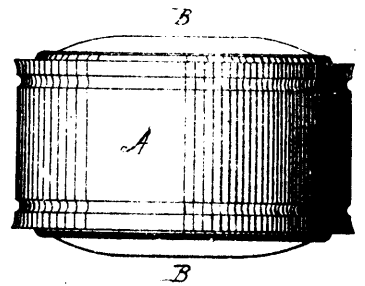
6790 Arnould's Railroad Rail Joint.



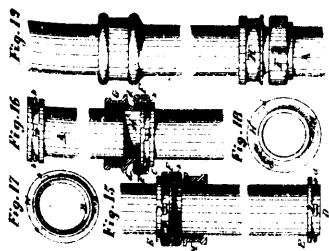
6791 French's Improvements in Lamps and other Glass Vessels.



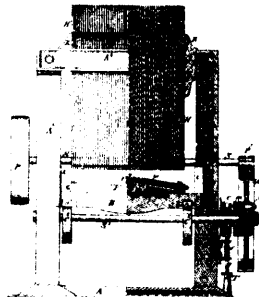
6792 Prosser's Machine for Indenting the Surface of Wire.



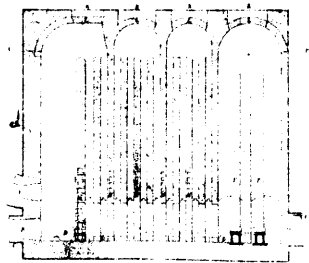
6793 Brougham's Improvements on Meat Cans.



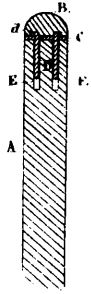
6794 O'Neill's Improvements on Pipe Joints.



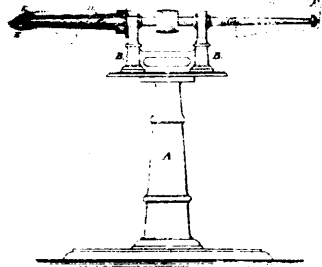
6795 Passenger & Pesinger's Elliptic Spring Fitting Machine.



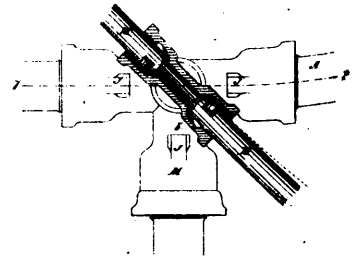
6796 Whitwell's Apparatus for Heating Air and Gases.



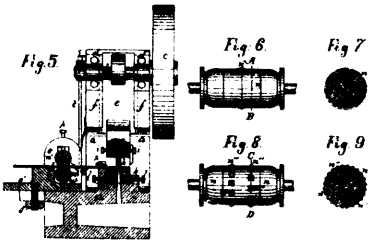
6797 Platts & Taylor's Improvements on Billiard Cues and Tips.



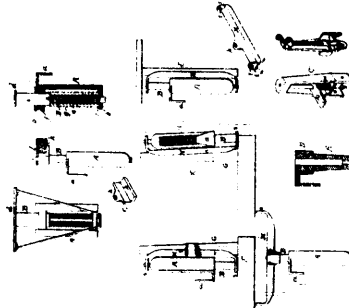
6798 Popham's Machine for Breaking the Pegs in Boots and Shoes.



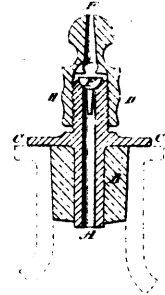
6800 O'Neill's Mode of Constructing and Laying Water and Gas Pipes.



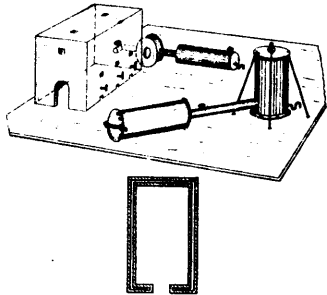
6801 Laughlin's Horse Shoe Nail Machine.



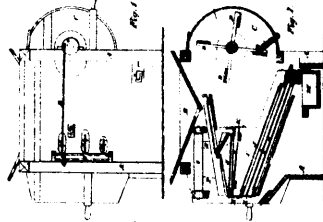
6802 Spencer's Spring Attachment for Vehicles.



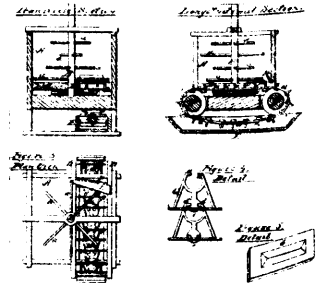
6803 Requa's Valved Nozzle for Bottle Stoppers.



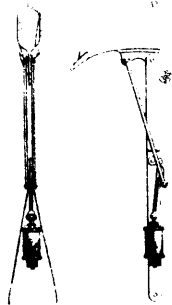
6804 Pierce's Process for obtaining Pyroligneous Acid.



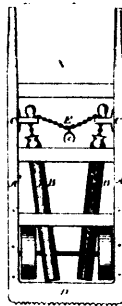
6806 Cairns' Improvements on Fanning Mills.



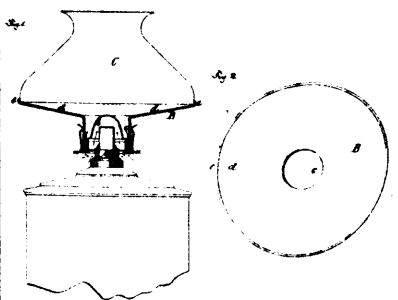
6807 Fisher's Improvements on Brick Machines.



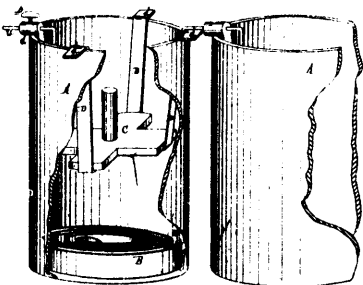
6808 Bogle's Improvements on Spring Hoes, or Teeth for Grain Drills.



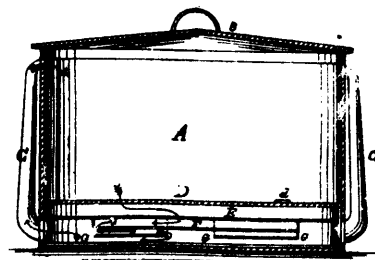
6809 Ferris' Improvements on Hand Trucks.



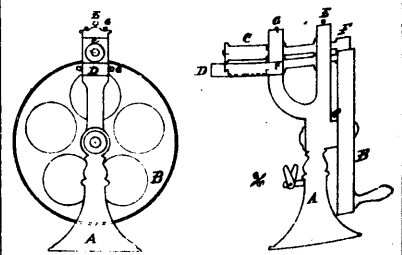
6810 Votti's Improvements on Lamp Shade-holders.



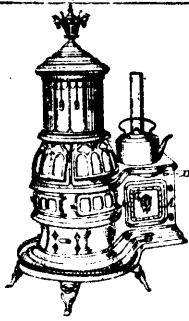
6811 Parrish's Improvements on Gravity Batteries.



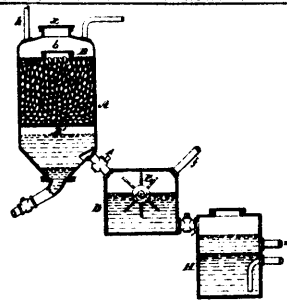
6812 Mallet & Stuart's Improvements on Steam Wash Boilers.



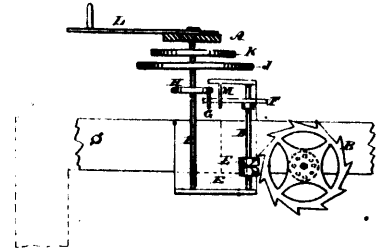
6813 Cote's Machine for Polishing Knives.



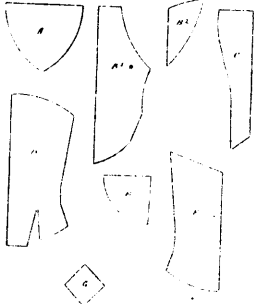
6814 Dwyer's Improvement in Heating Stoves.



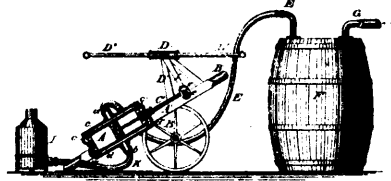
6815 Adamson's Process of Treating Substances with Hydrocarbon.



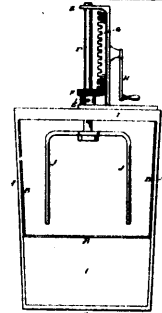
6816 Barclay's Improvements on Escapements.



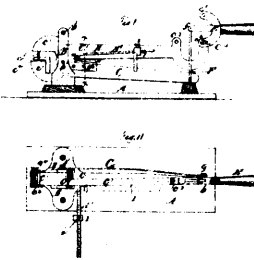
6817 Guthrie's Improvements on Corsets.



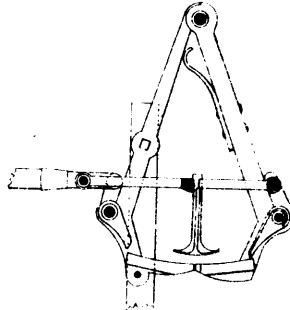
6818 Bradley's Apparatus for Emptying Privy Vaults, Sewer Traps, &c.



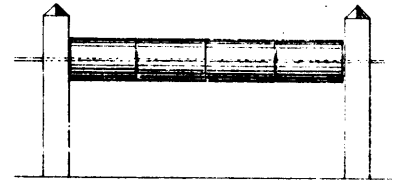
6819 Steele's Potato Washing Machine.



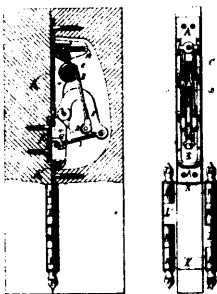
6820 Comstock's Combined Punching and Shearing Machine.



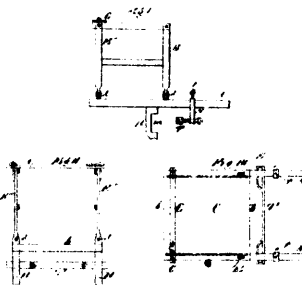
6821 Mole's Improvements in Tire Upsetters.



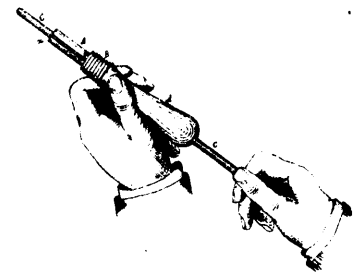
6822 Seabury's Improvements in Wire Fences



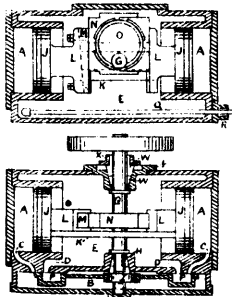
6824 Gilfillan's Combined Door Spring and Hinge.



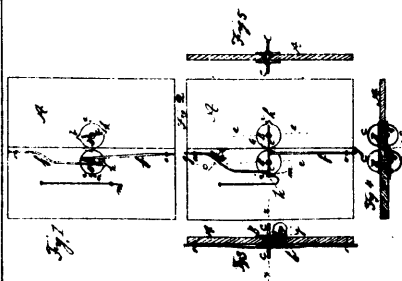
6827 Traphagen's Improvements in Window Scaffolds.



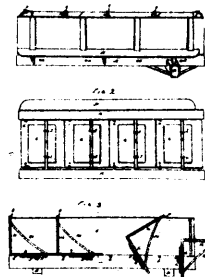
6828 Stryker's Improvements in Toy Guns.



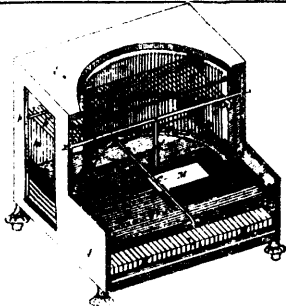
6829 Warrick & Seymour's Improvements on Steam Engines.



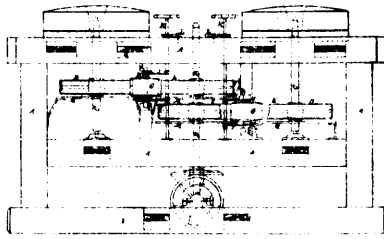
6830 Phillips' Improvements on Door Fastenings.



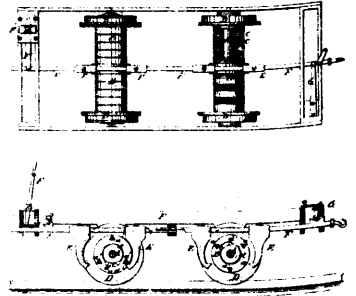
6831 Bachand's Improvements on Dumping Waggons.



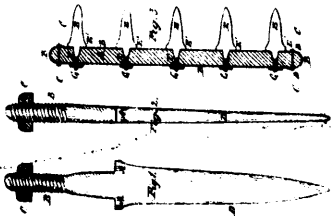
6832 Blair's Improvement on a Machine for Printing or Stereotyping.



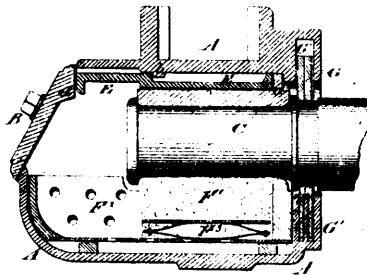
6833 Waterous' Method of Transmitting Power.



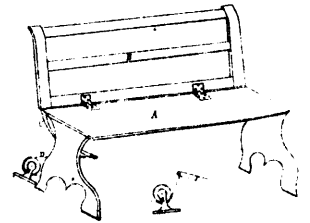
6835 Jacobi's Improvement on Brake for Cars, Vehicles, &c.



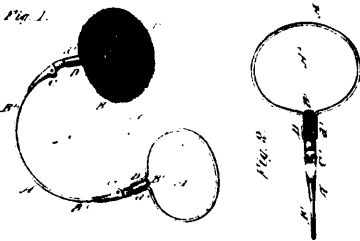
6836 Johnson's Improvements on a Harrow.



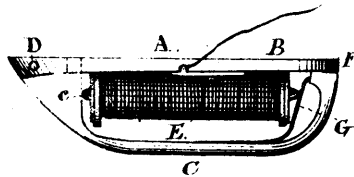
6837 Tomlinson's Improvements on Car Axle Boxes.



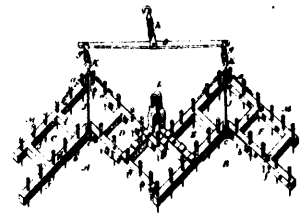
6838 Turney's Improvements on Organs.



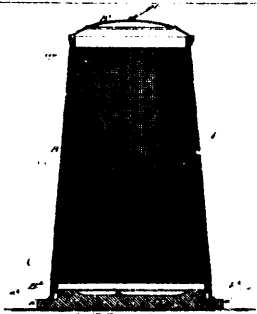
6839 Edgar's Improvements on Ear Mufflers.



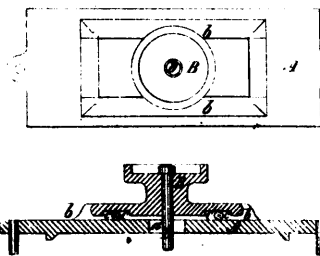
6841 Thoms & McMurty's Improvements on Sewing Machine Shuttles.



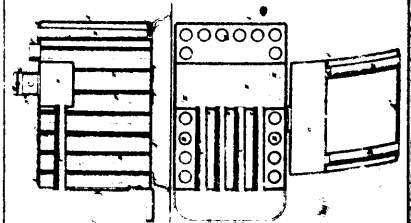
6843 Flight & Lake's Improvements on Harrows.



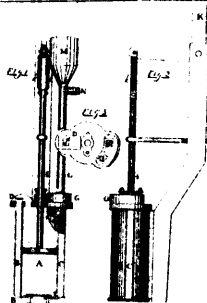
6844 Harper's Improvements on Fly-traps.



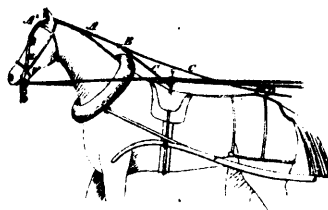
6845 Blood's Railway Car and Locomotive Supports.



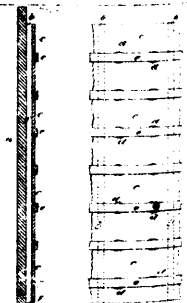
6846 Garrison's Improvements on Heating Stoves.



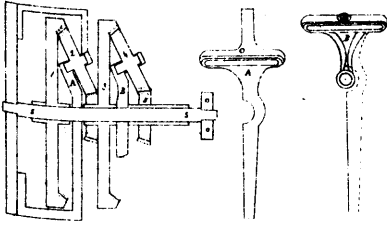
6847 Rusk's Improvements on Force Pumps.



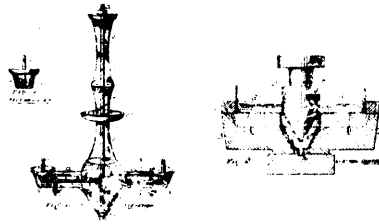
6848 Godfray's Check Rein.



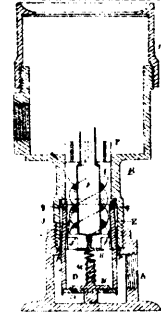
6849 Arless' Supplementary Flooring for Decks of Ships.



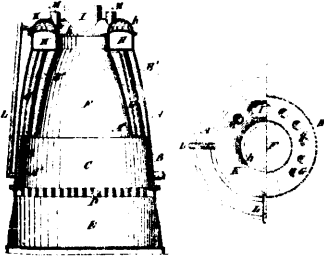
6850 Hanwell, Fithian & Chase's Mode of Increasing the Motion of Wheels upon one Shaft.



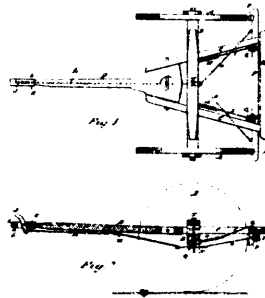
6851 Hobbs' Glass Chandelier.



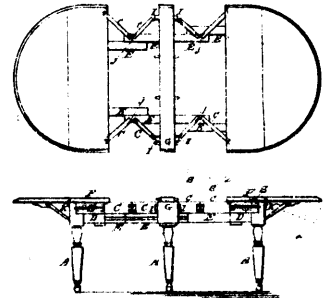
6852 Clapp & Snell's Improvements on Water Meters.



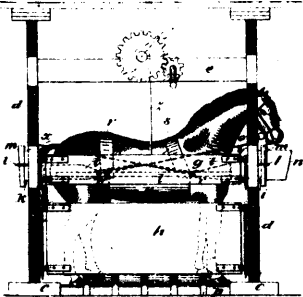
6853 Chanteloup's Improvements in Hot Water Furnaces.



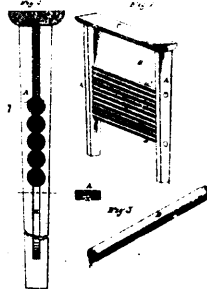
6854 Moore's Improvements on Waggon Brakes.



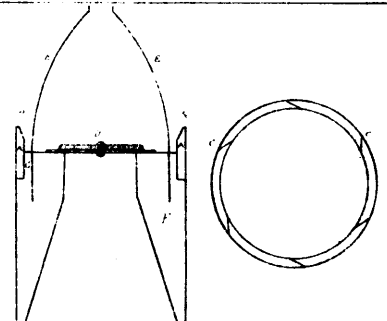
6855 Bent's Improvements on Extension Tables.



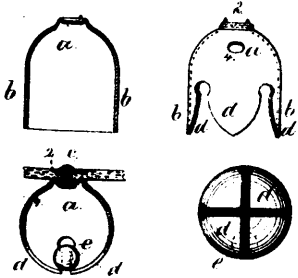
6856 Arless' Improvements on Stalls for Carrying Horses at Sea.



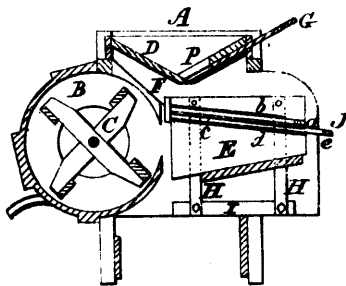
6857 Crosby's Improvements on Wash-boards.



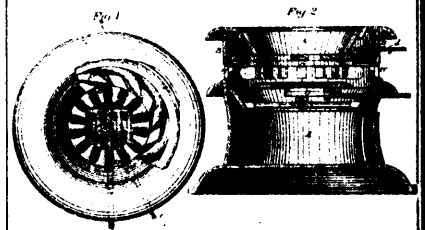
6858 Cochran's Improvement on Pumps.



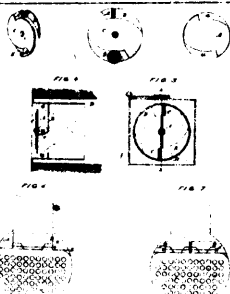
6859 Tucker's Improvements on Sleigh Bells.



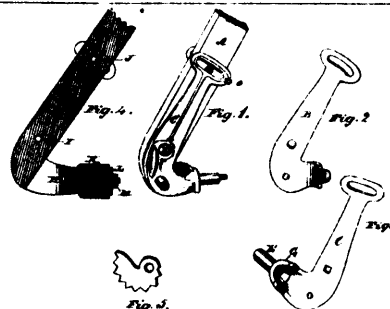
6860 Riddell's Improvements on Fanning Mills.



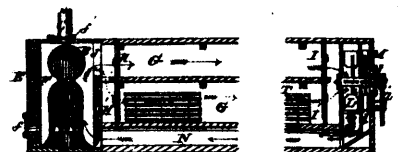
6861 Johnson & Moulton's Improvements on Stoves.



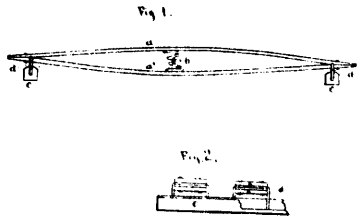
6862 Hanwell, Merrill & Chase's Improvement in Dampers.



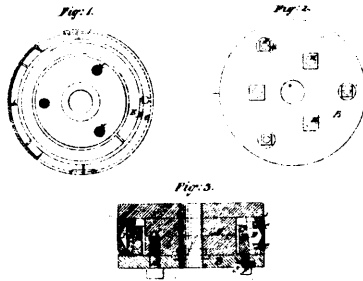
6863 Noxon's Improvements on Harvesters.



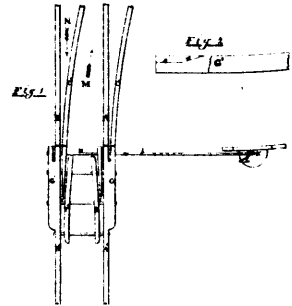
6864 Jones' Fruit Dryer.



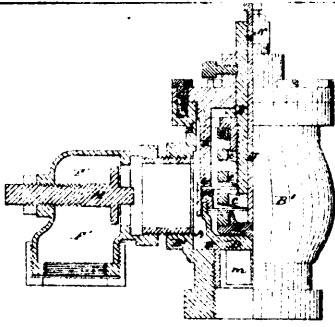
6865 Odell & Nutter's Improvements on Boiler Bottoms.



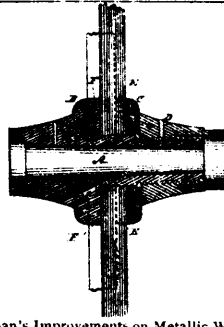
6866 James' Improvements on Piston Packing.



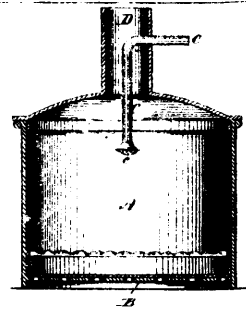
6867 Hodgson's Improvements on Railway Switches.



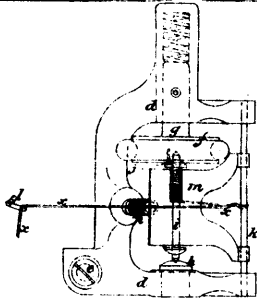
6868 Ashton's Improvements on Safety Valves.



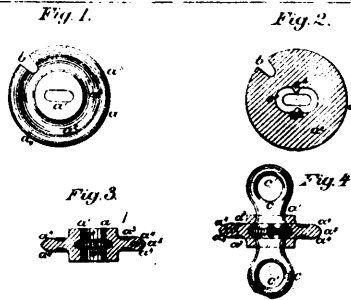
6870 Foreman's Improvements on Metallic Wheel Hubs.



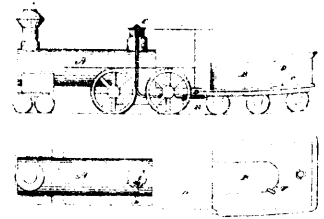
6871 Barstow's Apparatus for Purifying Paraffine.



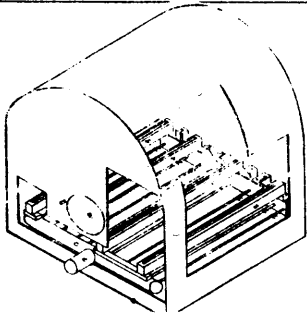
6872 Powers' Improvements on Thread Winders.



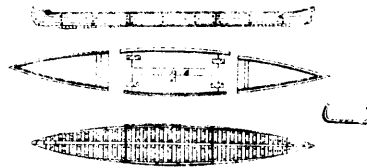
6873 Hoyt's Improvements on Chain Pump Buckets.



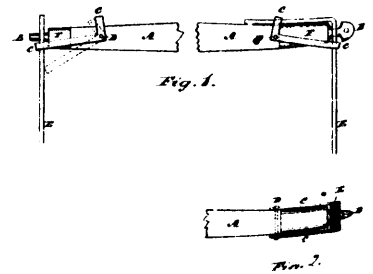
6874 Ashton's Improvements on Railroad Locomotives.



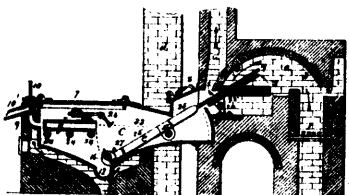
6875 Mulreman's Process and Machine for Facilitating Combustion in Furnaces of Boilers.



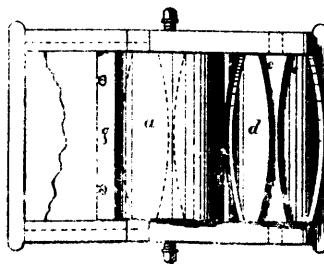
6877 Herald's Machine for Turning the Point of Nails.



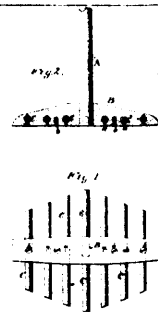
6878 Calvert's Improvements on Whiffletree Trace Fastenings.



6880 Royer de la Bastie's Process and Apparatus for Tempering Glass.



6883 Smith's Manufacture of Barrel Staves.

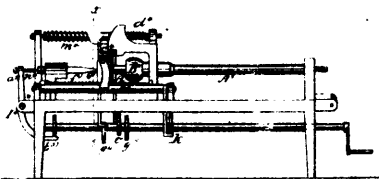


6884 Case's Improvements on Churn Dashers.

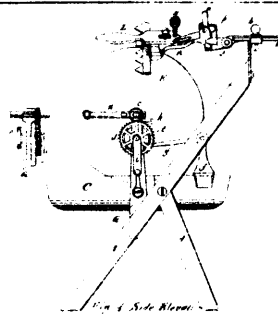




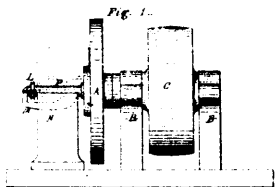
6885 Cooke's Art of Ventilating Railroad Cars.



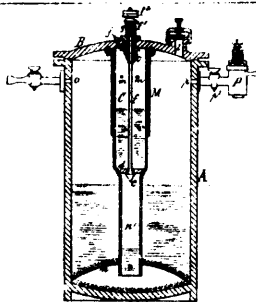
6886 Sloan's Improvements on Wood Screws, &c.



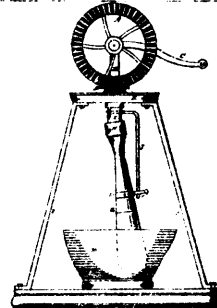
6887 Stevens' Machine for Grinding Harvester Knives.



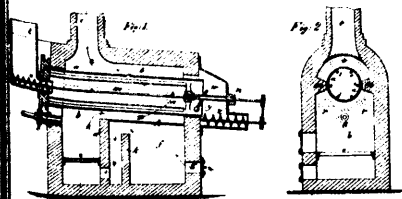
6888 Sangster's Improvements on Machine for Cutting Fibrous and other Materials.



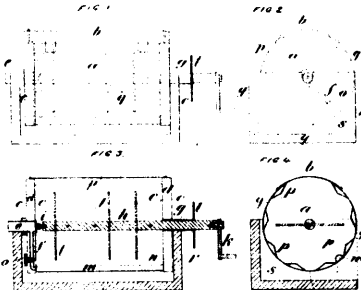
6889 Kayser's Apparatus for Generating Carbonic Acid Gas.



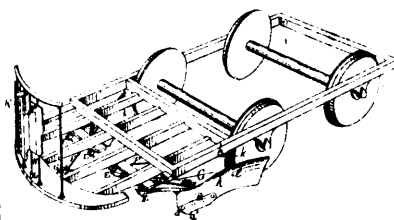
6890 Lancaster's Apparatus for Grinding Colors and Triturating Medicines.



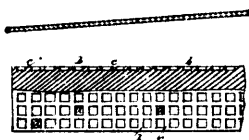
6891 Reid's Improvements in the Manufacture of Plaster of Paris.



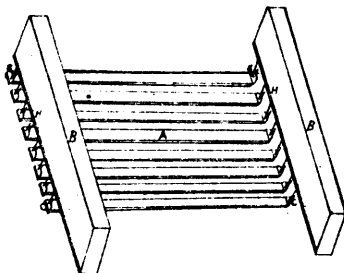
6892 Shaw's Improvements on Machine for Renovating Feathers.



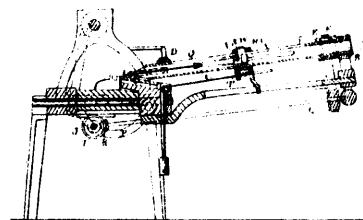
6893 Day's Railway Track Cleaner.



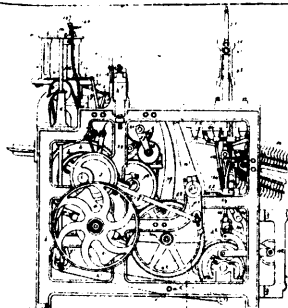
6894 Prosser's Improvements on Boot and Shoe Pegs.



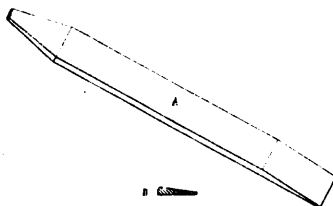
6895 Channell & Kinkead's Improvements on Spring Bedstead Bottoms.



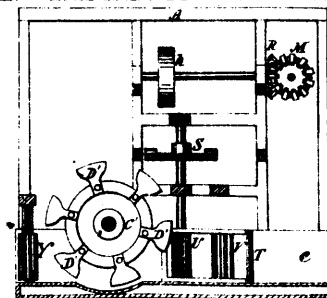
6896 Rittenhouse & Weaver's Improvements on Tack Machine Feeders.



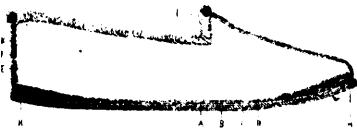
6897 Wickham's Improvements on a Machine for the Manufacture of Envelopes.



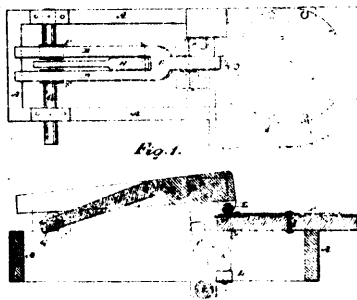
6898 Smith's Improvements on the Manufacture of Barrel Hoops.



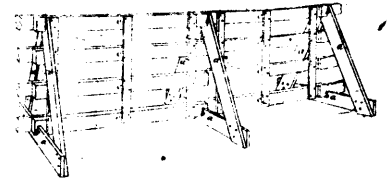
6900 Mayrand's Improvements on Floating Mills.



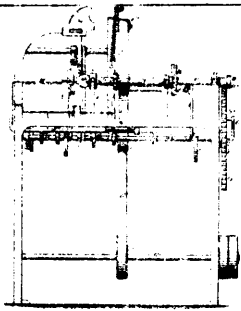
6901 Pelletier's Improvements in Slippers.



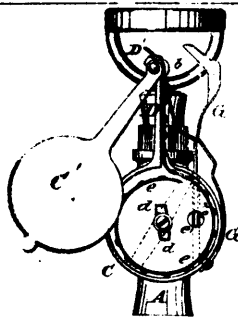
6903 Dunn & Harris' Horse Nail Finishing Machine.



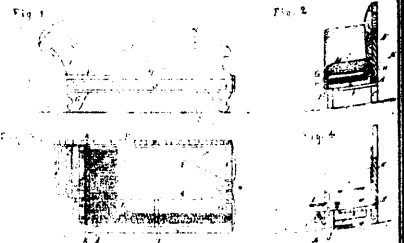
6904 Rohfrich's Improvements in Moveable Fences.



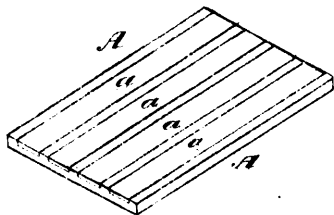
6905 Sloan's Improvements on Wood Screws, &c.



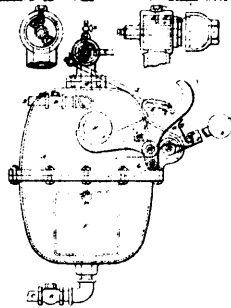
6906 Stockwell & Weis' Automatic Lighter for Gas Burners, &c.



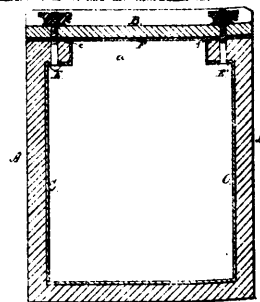
6907 Powers' Improvements on Bed Lounges.



6908 Dunbar & Lothrop's Manufacture of Articles from Vulcanised Rubber.



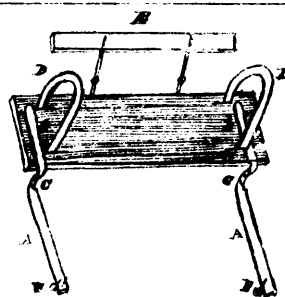
6909 Pratt's Improvements in Boiler Feeders.



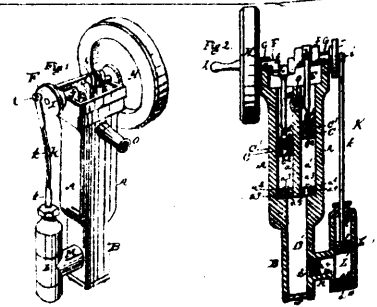
6910 Adams' Improvements on Packages for Butter.



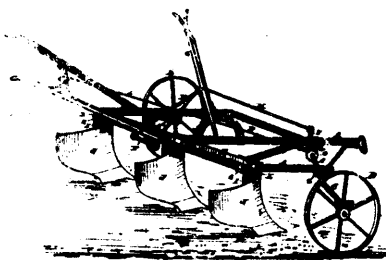
6911 Fessenden's Manufacture of Glass Bowls, &c.



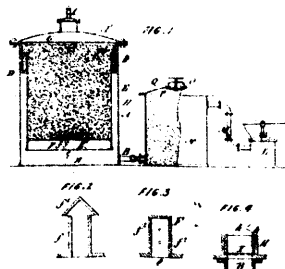
6912 Maunder's Improvements on Buggies and Sleighs.



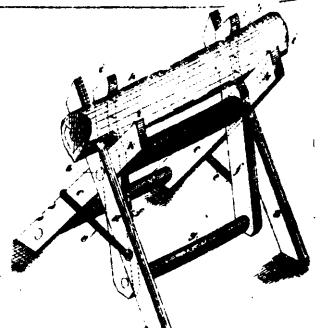
6913 Laney's Improvements on Pumps.



6914 Ross' Improvements on Gang Ploughs.



6915 Schiefelns' Improvements on Filters.



6916 Goff's Improvements on Saw-horses