Business and Personal.

The charge for insertion under this head is One Dollar a line for each insertion; about eight words to a line. Advertisements must be received at publication office as early as Thursday morning to appear in the following week's issue.

Marine Iron Works. Chicago. Catalogue free.

"U. S." Metal Polish. Indianapolis. Samples free.

Yankee Notions. Waterbury Button Co., Waterb'y, Ct.

Handle & Spoke Mchy. Ober Lathe Co., Chagrin Falls, O.

Improved Bicycle Machinery of every description. The Garvin Machine Co., Spring and Varick Sts., N. Y.

Concrete Houses — cheaper than brick, superior to stone. "Ransome," 757 Monadnock Block, Chicago.

Foreign Worrall Clutch Patents for sale outright or on royalty. Great success in United States. Address American Twist Drill Co., Laconia, N. H., U. S. A.

The celebrated "Hornsby-Akroyd" Patent Safety Oil Engine is built by the De La Vergne Refrigerating Machine Company. Foot of East 138th Street, New York.

The best book for electricians and beginners in electricity is "Experimental Science," by Geo. M. Hopkins. By mail, $4. Munn & Co., publishers, 361 Broadway, N. Y.

☞ Send for new and complete catalogue of Scientific and other Books for sale by Munn & Co., 361 Broadway, New York. Free on application.

Notes & Queries

HINTS TO CORRESPONDENTS.

Names and Address must accompany all letters or no attention will be paid thereto. This is for our information and not for publication.

References to former articles or answers should give date of paper and page or number of question.

Inquiries not answered in reasonable time should be repeated; correspondents will bear in mind that some answers require not a little research, and, though we endeavor to reply to all either by letter or in this department, each must take his turn.

Buyers wishing to purchase any article not advertised in our columns will be furnished with addresses of houses manufacturing or carrying the same.

Special Written Information on matters of personal rather than general interest cannot be expected without remuneration.

Scientific American Supplements referred to may be had at the office. Price 10 cents each.

Books referred to promptly supplied on receipt of price.

Minerals sent for examination should be distinctly marked or labeled.

(7125) W. H. asks: Can hard rubber plates be used as well on a Wimshurst machine as glass? A. The trouble with hard rubber plates is their liability to warp. Otherwise they would answer admirably. 2. As a Wimshurst machine is more efficient, why do you always see Holtz machines advertised for X rays work? A. The Holtz machines seem more adapted for long sparks. The Wimshurst principle is usually employed on smaller machines.

(7126) C. writes: I wish to cement a glass cover to an iron cistern to contain mercury. Can you, through the columns of your valued journal, inform me how to prepare a cement adapted to this purpose which will likewise be vacuum tight and impervious to heat? A. Try silicate of soda. Your best plan is to attach it by a regular screw and flange attachment, packing it with asbestos board or some equivalent.

INDEX OF INVENTIONS

For which Letters Patent of the United States were Granted

MARCH 2, 1897,

AND EACH BEARING THAT DATE.

[See note at end of list about copies of these patents.]

Adjustable seat, H. B. Hiteshew 578,291
Agricultural implement, G. W. Dycus 577,946
Air brake hose coupling, E. W. Shortridge 578,168
Air heater, R. Crawford 578,085
Air heater and surface condenser, combined, J. A. Wade 577,894
Alarm. See Burglar alarm. Time alarm.
Alloy of iron, R. A. Hadfield 577,851
Animal trap, J. M. Kellogg 578,244
Annealing and apparatus therefor, method of, H. Wood 578,281
Annealing apparatus, C. P. Turner 578,170
Auger, hollow, H. A. Carlson 578,209
Automatic switch, T. B. Griffin 577,952
Axle box, vehicle, T. J. Hale 578,235
Bag holder, C. J. Cain 578,091
Bag holder, L. C. Palmer 578,261
Bags, etc., folding mechanism for, B. F. Brown 578,133
Basket, D. J. Gooch 578,037
Bath tub, E. M. Reinhardt 578,264
Battery cell, combination, H. A. C. Anderson 578,131
Bearing, ball, G. T. Warwick 578,049
Bearing surfaces, apparatus for truing and burnishing metallic, W. H. Whittemore 577,973
Bedstead, O. S. Foster 578,007
Bell, R. H. Mayland 578,253
Bell, bicycle, H. S. Pullman 578,262
Bell, bicycle, L. A. Sanford 578,268
Belt stretching machine, T. Murdock 577,873
Bicycle, A. L. Adams 578,130
Bicycle, P. L. Girardet, Fils 578,011
Bicycle, J. Harrison 578,013
Bicycle, D. di B. Savorgnan 578,269
Bicycle, G. R. F. von Stegmann 577,990
Bicycle, I. F. Wales 577,895
Bicycle brake, F. J. Coombs 578,286
Bicycle crank and pedal mechanism, J. C. Anderson 578,183
Bicycle driving gear, Gag & McDonald 578,260
Bicycle guiding stem, B. Arnold 578,186
Bicycle lock, C. Warman 578,125
Bicycle parcel carrier, F. W. Wentworth 578,128
Bicycle rest and repair stand, G. E. Bierbach 577,910
Bicycle saddle, B. S. Seaman 578,120
Bicycle shafts, device for removing cranks from, L. B. Hanna 577,853
Bicycle shoulder rest, G. O. Rogers 578,027
Bicycle stand and mud guard, F. S. Foley 577,979
Bicycle support, T. Jefferson 578,241
Bicycle support, C. C. La Riviere 578,041
Bicycle support, C. H. Thurston 577,993
Billiard cushion, S. de Gaetano 578,009
Blower, F. Eisenbeis 578,096
Bluing and starching compound for laundry use, C. A. Taney 577,969
Boat, H. A. House 578,239
Boiler. See Steam boiler.
Boiler, F. T. Stevens 578,300
Boiler and condenser plant for heating feed water, F. Skvara 578,031
Bolt or spike extractor, J. Humphreys 577,959
Book, stock, P. M. Wolsieffer 577,998
Bottle, H. Ahlrichs 577,939
Bottle, C. H. Parsons 577,966
Bottle, mucilage, C. S. Kellogg 578,039
Bottle, mucilage, F. van Gerpen 578,123
Bottle, non-refillable, H. Juckett 578,015
Bottle, non-refillable, C. A. Lord 577,963
Bottle, etc., protective, A. M. Gillam 578,010
Bottle, siphon, G. Corbion, Jr. 578,094
Bottle stopper, G. Dussau 577,844
Box, H. Wedekindt, Jr. 577,972
Bracket. See Lamp bracket. Shelf bracket.
Brake. See Bicycle brake. Cycle brake. Wagon brake.
Brake beam, L. R. Pomeroy 577,929
Brake beam strut, H. B. Rehischung 577,883
Brick kiln, T. L. Myers 577,928
Brick or tile cutting machine, Ludlam & McKittrick 577,810
Bucket elevator, J. M. Dodge 578,221
Buckle, belt, M. T. Goldsmith 577,850
Buffer, W. B. Keighley 577,860
Bulkhead doors, apparatus for automatically closing, A. von der Ropp 578,028
Bullet proof fabric, C. Zeglen 577,999, 578,000
Bung, C. A. Gildmeyer 578,232
Burglar alarm, A. S. Wester 577,903
Burner. See Gas burner. Hydrocarbon burner. Lamp burner. Vapor burner.
Cabinet, store, Bastin & Shaner 577,941
Cane and torch, combined, O. F. Packard 577,879
Car coupling, J. J. Gaylord 577,849
Car coupling, C. H. W. Relyea 577,988
Car coupling, Wells & Lovett 577,902
Car door, L. Jacobs 577,860
Car draught gear, freight, A. Lipschutz 578,109
Car fender, C. A. Hatch 577,954
Car fender, A. H. Jelly 577,859
Car fender, P. Jones .... 578,104 to 578,106
Car fender, J. E. Treat 578,279
Car lighting, electrical, M. Moskowitz 577,872
Car ventilator, stock, A. C. Mather 577,871
Card clothing, apparatus for attaching fillets to flats of, K. Goldschmidt 577,918
Carpet or door strip, S. W. Wilt 578,129
Case. See Show case.
Case for books, etc., C. A. Tucker 577,890
Cash register, H. W. Libbey 578,295
Cask, T. C. Hooman 577,857
Cattle gate, A. M. Barcus 577,831
Chart, teaching, L. Snyder 577,886
Cheese press, D. A. Sprague 577,933
Chemical apparatus, G. Craig 578,003
Clamp. See Floor clamp. Violin string clamp.
Clevis, safety, B. O. Clark 578,211
Club, gymnastic, R. R. Gibson 578,230
Clutch, Osswald & Vieillard 578,023
Clutch and brake, coil, W. H. Lindsay 577,961
Coffin, J. D. Turbeville 578,302
Commutator brush, Kester & Atherton 578,016
Condenser, F. J. Weiss (reissue) 11,591
Condenser, F. J. Weiss 577,996
Conveyer, J. A. Werner 578,177
Core and making same, M. H. Fletcher 578,089
Corset, M. Schacht 578,045
Corset fastener, C. H. Merrill 578,254
Coupling. See Air brake hose coupling. Car coupling. Hose coupling. Pump rod coupling. Thill coupling.
Cultivator, W. A. & S. Whitesel 577,937
Current meter, C. A. Barron 578,001
Currycomb, L. E. Elving 578,223
Curtain holding device, G. H. Davis 577,841, 577,842
Cuspidor, J. L. Harris 578,012
Cutoff, Nuckols & Ramsey 577,987
Cutter. See Potato cutter.
Cyanids, making, H. Y. Castner 577,837
Cycle brake, C. W. Hudson 577,858
Cycle handle bar, H. A. Wood 578,189
Cyclometer, W. W. Dudley 578,288
Cyclometer tappet or actuating device, E. Hart 578,148
Danger signal, Gerden & Weir 577,949
Dental mallet, J. E. Stanton 577,887
Diaper fastener and supporter, L. G. Scully 578,272
Diaphragm, porous, H. Blumenberg, Jr. 578,073
Disher and mould, C. M. Beatty 578,195
Display device, T. J. Cheney 578,285
Display rack, W. F. Gray 577,951
Door check, J. F. Lash 578,084
Door check, liquid, W. Gilfillan 577,917
Dredge crane, W. Clifford 578,092
Drum, E. Boulanger 578,198
Dust remover, J. J. Harvey 577,854
Dye, blue, A. Cohenzl 578,093
Educational cabinet, D. K. Thomas 577,888
Egg beater, A. W. Davis 577,945
Electric automatic systems, testing apparatus for, C. Burgher 578,077
Electric circuit, J. S. Stone 578,275
Electric circuits, apparatus for regulating and modifying, G. F. C. Adam 578,182
Electric machine and electric motor, dynamo, C. P. Turner 578,280
Electric motor, H. A. Stock 578,069
Electric switch, Doty & MacKnight 578,139
Electrode, A. E. Woolf 578,070
Electrolytical apparatus, C. P. Turner 578,171
Elevator. See Bucket elevator.
Elevator platform, A. E. Pelham 578,156
Elevator valve, hydraulic, W. H. Hultgren 577,958
Engine. See Explosive engine. Gas engine. Gravity engine. Oil, gas or like engine. Rotary engine.
Engine cylinders, apparatus for conveying heat to, A. Marichal 577,986
Engineer's or surveyor's instrument, C. L. Berger 578,052
Envelope, C. A. Snow 578,299
Eraser, W. A. Barr 578,190
Eraser, A. C. Ekholm 578,289
Explosive engine, J. Walrath 577,898
Extractor. See Bolt or spike extractor. Lemon juice extractor.
Fabric. See Bullet proof fabric. Pile fabric.
Faucet, filtering, J. Chase 578,263
Feed water heater, boiler, J. Lethes 577,925
Fence machine, E. C. Mathews 578,252
Fence machine, wire, M. Cahill 578,284
Fence stay, wire, G. H. Brown 578,076
Fence wire, D. C. Smith 578,032
Fences, automatic tension device for wire, C. B. McDamel 578,086
Fender. See Car fender.
Fifth wheel, J. D. Dort 577,978
Fifth wheel, C. Nielson 578,022
Filter, E. Wolford 578,179
Filter and cooler, water, A. Major 577,965
Fireman's mask, A. Miller 577,926
Fireplace, F. E. Humphreys 578,240
Fish scaler and cleaner, A. H. Pascoe 578,043
Fishing apparatus, J. W. Layne 578,248
Fishing apparatus, L. J. Mell 578,085
Floor clamp, L. Bunnell 577,975
Flower pot or dish handle, W. C. Krick 578,152
Flue stopper, W. G. Rau 577,882
Flushing apparatus, D. S. Wallace 577,899
Fly trap, D. L. Hays 577,855
Fodder shredder, W. Gutenkunst 578,234
Fodder shredder, L. Holland-Letz 578,250
Folding seat, J. Heartt agen 577,955
Fountain. See Soda water fountain.
Fruit-grader, S. McGarvin 578067
Fumigator, C. F. Lauber 577,867
Furnace. See Ore reducing furnace. Smoke consuming furnace.
Furnace for burning coal dust, G. Unger 577,995
Gas burner, S. Bernheim 578,071
Gas engine, L. H. Nash 578,112
Gas generator, acetylene, H. F. Fuller 578,055
Gas governor, C. A. Switzer 577,992
Gas lighting apparatus, T. Rowan 577,884
Gas regulator for Welsbach burners, O. R. Cline 578,212
Gate. See Cattle gate. Sliding gate.
Gate, J. A. Anthony 577,940
Gate, A. J. Kinnaird 578,245
Gate, J. D. Thompson 578,277
Generator. See Gas generator.
Glass tank and blowing furnace, E. Gebbe 578,058
Glove, E. B. Whitney 577,938
Glove lacings, string ball for, W. F. Foster 578,228
Gold and silver from ores, extracting, J. F. Webb 578,089
Governor, A. O. Haney 578,238
Grapple, W. Coulter 578,215
Gravity engine, rotating, H. L. Lightner 578,062
Guitar, etc., C. Prince 577,930
Gun barrel with blued or browned bore, J. Singer 578,030
Hand grip, W. M. Morse 578,021
Handle. See Flower pot or dish handle. Pneumatic tool handle.
Harness and saddle, E. Vogtsberger 578,173
Harness oil dressing, C. E. House 578,060
Harrow, A. W. & F. D. England 578,224
Harrow or cultivator, disk, A. & D. Bramer 578,202
Harvester, prune, A. B. Enns 578,290
Heat regulator, W. J. Robinson 578,026
Heater. See Air heater. Feed water heater.
Heating utensil, J. H. Walker 577,896
Hinge, carriage door, E. L. Hoffmann 577,983
Hoist, air, C. Weatherson 577,901
Holdback, vehicle thill, L. M. Mays 578,018
Hook. See Painter's pot hook.
Horse detacher, J. F. Turner 577,935
Horseshoe, E. Krantz 577,866
Hose coupling, J. Kerns 578,150
Hub, G. Millen 578,255
Hub, wagon, Howard & Roland 578,083
Hydrocarbon burner, A. J. Blackford (reissue) 11,592
Igniting device, A. Czarnikow 578,004
Inhaler, A. Henderson 577,956
Ink well, S. G. Baldwin 578,189
Jug, A. J. Weeks 578,176
Key, J. J. Murphy 577,927
Key locking wrench, J. M. Pflieger 577,880
Kiln. See Brick kiln.
Kitchen cabinet, W. H. Haire 577,919
Knitting machine, J. L. Eck 578,005
Lacer and lacing, shoe, W. W. Munsell 578,068
Ladder, fire, M. A. Walker 577,897
Lamp, A. H. J. Schulke 577,989
Lamp, alternating current arc, E. R. Knowles 577,864
Lamp attachment, M. W. Beaton 577,943
Lamp, bicycle, D. R. Reynolds 577,867
Lamp bracket, W. C. Homan 578,014
Lamp burner, W. Bourke 578,080
Lamp burner, J. Collinge 578,036
Lamp burner, F. V. Davis 577,840
Lamp burner attachment, M. A. Velkenrath 577,893
Lamp, convertible signal, C. H. Dressel 578,079
Lamp, electric, M. M. Kohn 578,107
Lamp, electric arc, A. Guendel 578,233
Lamp lighter, time, C. H. Bigby 578,282
Lantern holder, F. T. Williams 577,974
Lantern, signal, H. K. Ruby 578,267
Lash rounding machine, F. & H. C. Stamin 578,047
Laundry polish, J. F. Gilmore 578,057
Leather washing machine, McKenzie & Shaw 578,257
Lemon juice extractor, C. B. Carter 577,976
Leveling rod, C. F. Wilson 577,905
Limb, artificial, Donaldson & Kespohl 578,222
Linotype machine trimming attachment, H. F. Meistrell 578,065
Liquid distributing machine, automatic, Riegel & Lundy 578,025
Liquid seal trap, C. Perkes 578,024
Locations of distant objects, device for determining, W. C. Rafferty 578,117
Lock. See Bicycle lock. Nut lock.
Lock, J. J. Link 577,962
Log carrier, R. E. L. & A. J. Baggs 578,218
Loom brake mechanism, J. T. Meats 578,155
Loom for carpet weaving, hand, C. W. Evilsizor 578,225
Loom harness shifter and adjuster, J. D. Ulrich 577,894
Loom jacquard mechanism, A. R. Patten 578,068
Loom letoff mechanism, J. A. Gilfillan 577,981
Loom shuttle, W. Todd 577,934
Lubricator, J. C. Bauer 578,193
Lumber driers, steam feed pipe for platen, F. W. Mallett 578,110
Malt turning and stirring machine, J. F. Dornfeld 578,053
Mangle, R. Lentzkow 578,017
Matrix, L. C. Timreth 578,278
Measure, tape, Brown & De Long 578,205
Metal, toughening or strengthening, R. S. Lovelace 577,869
Metallic vessel bottom, T. D. Brown 577,944
Milk skimming device, J. B. Newkirk 578,259
Minerals, metals, etc., apparatus for washing and separating, P. Bunau-Varilla 578,206
Mitten or like fabric, I. W. Lamb 578,153
Mop wringer, Struble & Ireland 577,968
Mortises for hinges in doors and door jambs, machine for cutting, T. H. Lewis 577,868
Motor. See Current motor. Electric motor.
Mowing machine, J. P. Ritchie 578,087
Muffler, exhaust, R. B. Hain 577,852
Music boxes, star wheel standard for, G. A. Brachhausen 577,835
Musical instrument, W. P. Kistler 578,040
Musical instrument, mechanical, E. Welte 578,127
Musical instruments, note plate for mechanical, Cuendet & Bernard 577,839
Nail machine, W. B. Bennett 577,909
Nut lock, J. H. Bauser 578,194
Nut lock, W. J. Bridges 578,203
Nut lock, E. W. Lynch 578,063
Nut lock, Strauss & Klahn 578,276
Oil, gas or like engine, W. Rowbotham 578,266
Oil press box and plate, A. Fredrickson 578,229
Ordnance, breechloading, D. Vickers 578,172
Ore reducing furnace, E. A. F. Schultze 578,271
Ore separator, E. P. McDonald 577,874
Oyster or clam rake, W. H. Watts 578,175
Pail, oyster, J. W. Knight 577,863
Paint, H. L. Bates 577,832
Painter's pot hook and putty knife, A. L. Higgins 577,856
Paper cutting machine, H. I. Koegel 577,985
Pen, fountain, W. I. Ferris 578,054
Pen, fountain, G. A. Spies 577,932
Penholder for writing roundhand, P. Neumann 577,875
Pessary, N. E. Charlton 578,210
Photographic lens, H. H. Turner 577,891
Photography, screen shutter for color, F. J. Harrison 578,147
Piano mandolin attachment, A. H. Stuart 578,048
Picks, etc., making, W. R. Jenkins 578,242
Picture frame, J. A. Bower 578,200
Pile fabric, woven, W. Brimfield 577,836
Pile, sheet, E. R. Beardsley 577,942
Pipe cleaning device, J. Fierz 578,142
Piping or tubing for drawing off beer, Fort & Hoey 578,144
Planetarium, A. Laing 578,108
Planter and fertilizer distributer, combined, J. H. Bailey 578,188
Planter, corn, Brown & Michael 578,074, 578,075
Planter, corn, N. V. Moore 578,256
Pliers cutting attachment, A. H. Hesterhagen 578,038
Plow, M. M. Wroten 578,181
Plow, corn or cotton turn, H. Wanzer 578,174
Plow, ditching, C. L. Flora 577,947
Plowshare blanks, die for cutting out, Sawyer & Hendricks 578,119
Pneumatic dispatch system, Hamlin & Hunter 578,237
Pneumatic tool handle, W. M. Morse 578,020
Potato cutter, seed, Eddy & Carlton 577,846
Pottery machine, J. F. & G. C. Burson 578,207
Precious metals from slimes, etc., process of and apparatus for extracting, White & Simpson 578,178
Press. See Cheese press. Printing press.
Printing press, A. Gaines 577,848
Printing press punching attachment, W. C. Dillingham 578,219
Pump balancing apparatus, E. E. Clark 578,002
Pump, oil measuring, A. H. Herron 577,957
Pump rod coupling, J. & J. Amstutz, Jr. 577,830
Pump, rotary, J. S. Attenhofer 578,132
Pump, rotary, E. J. Verrue 577,936
Punch, center, I. Beck 578,196
Purse, coin, B. Keith 578,243
Rack. See Display rack.
Radiating attachment, stovepipe, J. H. Hoover 578,102
Rail bond, electric, B. J. Jones 578,304
Railway, electric, S. G. Brosius et al. 577,912
Railway, electric, C. Skinner 577,885
Railway signal, W. P. Hall 578,236
Railway signals, switches, etc., compensating device for, J. W. & J. R. Jones 578,293
Railway spike, J. K. Knudson 578,151
Rake. See Oyster or clam rake.
Reamer, expansible, B. D. Whitney 577,904
Recording apparatus, W. L. Bundy 578,283
Recording instrument, message, B. J. Noyes 578,113
Refrigerating machine expansion regulator, Sharpneck & Knox 578,297
Register. See Cash register. Telephone call register.
Regulator. See Gas regulator. Heat regulator. Speed regulator.
Rein holder, F. W. Cain 578,208
Rolling mill rolls, tool for cutting irregular grooves in, J. G. Walter 578,088
Rotary engine, S. S. Blevins 578,197
Ruler and time computing device, M. Isaacs 578,149
Ruling machine, C. Stoll 578,199
Saddle, H. Briggs 578,204
Saddle pad, W. Vogler 578,124
Sail rig, self reefing sprit, L. A. Kimball 577,923
Sandpapering and buffing machine, T. E. Keavy 578,214
Saw, hand, C. H. Weston 578,050
Saw, portable drag, J. Birrell 577,072
Sawmill gage roll, H. J. Thomas 577,889
Scale, J. C. Dixon 578,220
Seat. See Adjustable seat. Folding seat.
Separator. See Ore separator. Steam separator.
Sewing machine, Dial & Dimond 578,136, 578,137
Sewing machine, L. Onderdonk 577,878
Sewing machine feeding mechanism, L. Onderdonk 577,877
Sewing machine loop taker, Dial & Dimond 578,138
Sewing machine thread feeding device, G. Frame 578,097
Shaft loop, H. A. Bereley 577,833
Sharpener, knife or shears, I. J. Ide et al. 577,922
Sharpening tool, P. W. Strong 577,991
Shears, E. A. Sanders 578,118
Shelf bracket, sheet metal, T. Corscaden 577,977
Shoe or boot flexible support, H. J. Doughty 577,843
Shoe turning machine, G. H. Gifford 578,231
Show case, knockdown, F. E. Mistret 578,019
Sign, sheet metal, W. Pathie 578,044
Signal. See Danger signal. Railway signal.
Signaling apparatus, electric, B. J. Noyes 578,114, 578,115
Singletrees or doubletrees, lap link for, J. C. Finnell 578,226
Skate, J. E. Martin 578,064
Skate, roller, Gibbs & Wright 578,081, 578,082
Sliding gate, J. Allen 577,998
Smoke consumer, W. E. Elbers 577,915
Smoke consuming furnace, self feeding, C. Groll 578,146
Snap switch, double pole reversing, H. A. Gorn 577,950
Soda water apparatus, L. W. Puffer 577,881
Soda water fountain, R. M. & R. M. Green, Jr. 578,098
Soldering iron, brazier, etc., combined, P. V. Berghe 577,971
Sorting table, E. F. B. Bourne 578,199
Sounding board, J. C. Livingston 578,154
Speaking tube attachment, E. C. Hess 578,101
Speed regulator, centrifugal, L. H. Nash 578,111
Spinning machine, W. E. Allen 578,051
Spinning mule, S. Jackson 578,061
Spooler guide, H. Lawrence 578,247
Spooling machine, Draper & Rhoades 578,140
Stage, self supporting, H. Cummings 578,217
Steam boiler, G. Engel 577,916
Steam separator, H. H. Bates 578,192
Steaming apparatus, fabric, C. J. Gadd 578,008
Steering apparatus, ship's, C. H. Richardson 577,931
Stone sawing machine, J. Peckover 578,116
Stool, extensible and adjustable music, A. J. Gautrau 578,056
Stopper. See Bottle stopper. Flue stopper.
Stove, cooking, J. H. Fizer 578,143
Street cleaner, Tilton & Bunnell 577,970
Switch. See Automatic switch. Electric switch. Snap switch.
Table. See Sorting table.
Table and checker board, combined, F. Horovitz 577,984
Tank. See Glass tank.
Tank, R. E. L. Rice 578,265
Telegraphy, R. H. Weiny 578,126
Telephone and annunciator system, combined, J. R. Strong 578,122
Telephone apparatus, table, L. M. Ericsson 578,006
Telephone call device, automatic, E. P. Boland 577,911
Telephone call register, Heckard & Ogden 577,920
Thill coupling, E. T. Martin 578,306
Thill support, G. L. & R. Bowman 578,201
Ticket holder, roll, J. L. Kirk 577,862
Time alarm, J. G. Hallas 578,059
Tire, bicycle, J. A. Burton 578,134
Tire, bicycle, Fogarty & Krueger 578,227
Tire, bicycle, E. Nelson 578,258
Tire, pneumatic, Bartlett & Murbach 578,191
Tongue support, G. W. Fletcher 577,847
Tool, Ford & Mahler 577,948
Tool, combination, M. D. Letteer 578,249
Toy card, N. M. Russell 578,029
Train controlling device, C. A. Shea 578,298
Trap. See Animal trap. Fly trap. Liquid seal trap.
Trolley catcher, T. Holahan 577,921
Trolley pole controller, L. M. Halsey 577,853
Truck, car, H. Baines 578,305
Truck, car, C. C. Moore 578,042
Trucks, center bearing bolster attachment for car, E. Cliff 578,135
Truss, H. V. Appley 578,184
Tub. See Bath tub.
Tubes, machinery for manufacturing seamless steel, R. Wootten 577,907
Tubing, plant for coating and drying, M. M. Nicholls 577,876
Twine tension device, C. Hanson 578,099
Type distributing machine, P. F. Cox 578,216
Typewriting and adding machine, J. C. Wolfe 578,303
Typewriting machine, F. W. Hillard 577,982
Typewriting machine, C. Spiro 578,121
Valve, Starrett & Welsh 578,274
Valve, gate, H. N. Libbey 577,924
Valve gear, Cochrane & Cameron 578,213
Valve, safety, C. M. Sheldrake 578,046
Vaper burner, H. Gefrerer 577,980
Vaper burner, B. S. Koll 578,246
Vaporizer for petroleum engines, O. Bomborn 578,034
Vehicle, A. Schubert 578,270
Vehicle heet, D. R. Cowan 577,838
Vehicle wheel, C. E. Bulkley 578,035
Ventilator. See Car ventilator.
Violin string clamp, J. B. Mahoney 577,864
Vise, A. Eckert 577,845
Vitascope, T. Armat 578,185
Wagon body, W. H. Boettcher 577,834
Wagon brake, automatic, E. S. Chatfield 578,078
Wagon, dumping, I. B. Chrissinger 577,913
Wagon jack, J. J. Adgate 578,033
Wagon running gear, J. Vaughan 577,892
Waistband, detachable, J. E. Leavitt 578,294
Washboard, J. H. Reimers 578,157
Washboard, J. T. Sargent 578,167
Washboard, Sargent & Reimers 578,296
Washbowl, F. Jones 578,103
Water closet, D. S. Wallace 577,900
Watering device, stock, R. G. Fay 578,141
Weaner, calf, G. Cooley 577,914
Weather strip, J. L. Smith 578,273
Weighing machine, F. H. Richards .... 578,158 to 578,166
Wheel. See Fifth wheel. Vehicle wheel.
Wheel rim, W. A. Johnson 578,292
Wick lifting device, C. Maschmeyer 578,251
Winding and slitting machine, C. Koegel 577,865
Windmill, Curtis & Peterson 578,287
Window cleaner's safety device, J. F. Girtler 578,145
Window frame, Arnold & Lichtenberger 578,187
Wire fastener, W. G. Hay 578,100
Wire knitting machine, E. Wohlgemuth 577,906
Wire stretching and tying device, T. W. Kirby 577,861
Wood grinding apparatus, E. F. Millard (reissue) 11,590
Wringer. See Mop wringer.

DESIGNS.

Bedsteads, solid spindle for, W. Hess 26,716
Belt washer, F. K. Wagner 26,712
Box, C. A. Morningstar 26,704
Bracket, E. Bersbach 26,700
Carpet, W. L. Jacobs 26,721
Carpet button, stair, D. Walker 26,710
Carpet button, stair, R. H. Warren 26,711
Clasp, W. A. Johnston 26,708
Crumb scraper, L. Wojidkow 26,699
Crumb tray, L. Wojidkow 26,698
Eyeglass lens, P. C. Claflin 26,687
Frying pan cover, C. Eagle 26,706
Furniture pedestal, G. A. Bobrick 26,715
Glass, plate, W. Lender 26,718
Lock case, W. H. Taylor 26,709
Match safe, N. Altmyer 26,703
Phonograph frame, G. Bettini 26,701
Picture frame moulding, etc., C. Bosworth 26,702
Puzzle box, J. L. Hansen 26,705
Rug, A. Petzold 26,719, 26,720
Safe, sleeping car, I. Freed 26,714
Spoons, etc., handle for, A. Miller 26,696
Tampon carrier, etc., U. Harder 26,707
Tile, roof, C. Keiser 26,717
Truck bolster, car, E. F. Goltra 26,713

TRADE MARKS.

Beer, Acme Brewing Company 29,636
Bicycles, Schovering, Daly & Gales 29,644
Boring tools, wood and steel, H. H. Mayhew Company 29,643
Candy, J. A. McClurg & Sons 29,635
Condiments, Papola Company 29,633
Cotton and mixed fabrics, twilled, Otis Company 29,622
Cotton goods, especially sheetings and drillings, Tata & Company 29,625
Fruits, such as oranges, lemons, and grape fruit, citrus, W. B. Wall 29,634
Game apparatus, parlor, Parker Brothers 29,612
Gin, Firm of P. Hoppe 29,641
Gin and other spirituous liquors, National Distilling Company 29,640
Goring, Chadbourne & Moore 29,621, 29,622
Locks, latches, and keys, Yale & Towne Manufacturing Company 29,642
Lye, W. H. Priesmeyer 29,631
Medicine for the eyes, L. Varesio 29,626
Metal, antifriction, R. B. Wilson 29,619
Mouth wash and tooth powder, H. Ievers 29,628
Mowers and trimmers, lawn, Pastime Lawn Mower Company 29,645
Needles, T. Harper 29,615
Oats, rolled, American Cereal Company 29,632
Optic glasses and instruments, A. Levy 29,616
Packing, gaskets, and rubber compound, Peerless Rubber Manufacturing Company 29,620
Papers, writing, Mittmeague Paper Company 29,613
Pens, E. Kempshall 29,614
Remedies, hair and scalp, L. P. Elliott 29,627
Rubber or elastic heels for boots and shoes, D. A. McDonald 29,618
Sheetings, drills, and ducks, Stark Mills 29,623
Shoes, C. Kallman 29,617
Soda and silicate of soda not used in connection with compounds for scalding raw wool, caustic, Joseph Crosfield & Sons 29,630
Toilet articles and preparations, Lazell, Dalley & Company 29,629
Tonics and remedies for alcoholism and other nervous diseases, G. L. Weed et al. 29,646
Whisky, John Osborn's Sons & Company 29,638
Whisky, E. Walters 29,639
Wine, port, S. Streit & Company 29,637

A printed copy of the specification and drawing of any patent in the foregoing list, or any patent in print issued since 1863, will be furnished from this office for 10 cents. In ordering please state the name and number of the patent desired, and remit to Munn & Co., 361 Broadway, New York. Special rates will be given where a large number of copies are desired at one time.

Canadian patents may now be obtained by the inventors for any of the inventions named in the foregoing list, provided they are simple, at a cost of $40 each. If complicated the cost will be a little more. For full instructions address Munn & Co., 361 Broadway, New York. Other foreign patents may also be obtained.

© 1897 SCIENTIFIC AMERICAN, INC