covers which fit tight enough to prevent evaporation of the contents. All medical authorities do not consider that this process of preserving fruit by salicylic acid is healthy.

(6918) G. K. D. says: I write to ask if you can furnish me with the approximate formula (as exact as possible) of the composition used for making the Swedish safety matches, both the composition in the head of the match and the composition of the coating on the box on which the match is struck. I refer to safety matches in general, not especially to the Swedish make, although that is a very good sample. A. 1. Dip the splints in a paste composed of chlorate of potash, 6 parts; sulphide of antimony, 2 to 3 parts; glue, weighed dry, 1 part. The paste for the rubbing surface is amorphou phosphorus, 10 parts; oxide of manganese or sulphide of antimony, 8 parts; glue, 3 to 6 parts, weighed dry. The ingredients must be thoroughly mixed and care must be taken not to mix the chlorate of potash in the dry state with the other materials; it should be mixed first with the glue dissolved in warm water. The paste for the rubbing surface may be spread with a brush or spatula on the side of the box. 2. Glue, 16 parts; chrome yellow, 2 parts; oxide of iron, 2 parts; peroxide of manganese, 24 parts; hyposulphite of lead, 8 parts; and chlorate of potash, 36 parts. Composition for the box.—Hyposulphite of lead, 260 parts; chlorate of potash, 14 parts; oxide of iron, 7 parts; powdered glass, 8 parts; finest glue, 4 parts; and amorphous phosphorus, 24 parts. Glue is dissolved in water; other ingredients, being in powder, are afterward mixed with it to the consistence of paint and applied with a brush to the surface of the box.

(6919) G. M. asks (1) whether in the manufacture of calcium, carbide for the production of acetylene gas, charcoal can be substituted for coal, in regions where wood is abundant and coal is scarce. A. Charcoal probably could be substituted for coal, but the economy of so doing, and its practicability, would have to be the subject of experiment. 2. an fuel gas be made directly from wood or charcoal, the same as from coal in circumstances as described above? If so, where can I find a description of the process? A. Yes; wood, on account of the hydrogen contained, would work better perhaps than charcoal, and certainly much more economically, as it would avoid the loss of heating constituents incidental to the manufacture of charcoal. 3. Where can I find a description of the process for the manufacture of wood pulp for paper making? A. See SUPPLEMENT, Nos. 732, 733, 734, 848, 872, 937, 951, 959, 960, and 982, for valuable data. 4. What numbers of the SCIENTIFIC AMERICAN SUPPLEMENT contain an account of the electrical exhibition recently held in New York? A. Nos. 19, 20, 21, and 22, vol. 74.

TO INVENTORS.

An experience of nearly fifty years, and the preparation of more than one hundred thousand applications for patents at home and abroad, enable us to understand the laws and practice on both continents, and to possess unequaled facilities for procuring patents everywhere. A synopsis of the patent laws of the United States and all foreign countries may be had on application, and persons contemplating the securing of patents, either at home or abroad, are invited to write to this office for prices, which are low, in accordance with the times and our extensive facilities for conducting the business. Address MUNN & CO., office SCIENTIFIC AMERICAN, 361 Broadway, New York.

INDEX OF INVENTIONS

For which Letters Patent of the United States were Granted

July 14, 1896,

AND EACH BEARING THAT DATE.

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

Acid, amidoalkylsalicylic, G. A. Welter 563,993
Advertising device and cigar cutter, combined, H. F. Nehr 563,875
Aging beer, wine, etc., process of an apparatus for, F. C. Wiedring 564,130
Air compressor, L. W. Noyes 563,794
Alarm. See Bicycle alarm. Fire and burglar alarm.
Animal trap, T. H. Cottrell 563,748
Annunciator system for buildings, J. M. Arthur 563,724
Armor plates or the like, apparatus for manufacturing, V. E. L. Demunge 564,053
Autographic register, W. L. Eary 563,849
Bag holder, W. H. Boyd 564,143
Ball throwing device, E. Rudolph 563,807
Bearing, Thomas & Twyman 564,123
Bearing for axles, ball, T. H. Holman 563,858
Bearing, roller, R. Scharfe 563,943
Bearing, roller, G. C. Twyman 564,127
Bed bottom, spring, R. S. Sample 563,042
Bell, alarm, J. Boyd 563,837
Bell, bicycle, C. V. Zinn 563,834
Berth, folding, P. Fraser 563,852
Beveling machine attachment, V. Royle 563,896
Bicycle, R. Grilli 563,938
Bicycle, aerial, H. B. Nickerson 563,793
Bicycle alarm, W. M. Brevard et al. 563,838
Bicycle attachment, R. Grilli 563,967
Bicycle crank, A. A. Unruh 563,821
Bicycle crank shaft, L., Sr., & C. O. Barnes 563,729
Bicycle frame, L., Sr., & C. O. Barnes 563,728
Bicycle handle bar, V. E. Rumbarger 564,108
Bicycle lock, Thomas & Forbes 563,991
Bicycle or velocipede pedal, W. Grotbe 563,959
Bicycle stand, movable, H. N. Timms 563,819
Bicycle support, D. W. Albright 564,134
Bicycle support, R. Holmes 563,927
Bicycle supporting post, R. F. W. Beardsley 564,142
Bicycles, etc., brake for, W. J. Fitzgerald 563,759
Blind slats, journal for window, T. B. Ashford 564,137
Block. See Tackle block.
Blow testing apparatus, coin controlled, Field & Warner 563,919
Boat, R. S. Peabody 563,796
Boiler. See Domestic boiler. Steam boiler.
Boiler cleaning apparatus, Teetor & Kemp 563,893
Boiler water front, G. Tetley 563,990
Book, memorandum, Gallager & Langbein 563,762
Boot cleaning machine, H. Southey 564,115
Bottle cap, F. W. Coleman 564,146
Bottle cooler, L. P. Bacband 563,726
Bottle, mucilage, F. A. Gilnes .... [illegible]054
Bottle stopper, S. Lacavalerie 563,974
Bottle wrapper, J. J. Hinde 563,962
Box. See Packing and shipping box. Pill box. Toilet box.
Brake. See Car brake. Fluid pressure brake. Track brake. Vehicle brake.
Bridge, bascule or tilting, E. S. Shaw 564,164
Burial casket pedestal, Blackford & Holdsworth 563,907
Burner. See Hydrocarbon burner.
Button, cuff, C. Holman 563,768
Buttoner, band, F. S. McKenney 563,791
Calcimine size, F. Briesemeister 563,999
Can. See Milk can.
Can, C. T. Draper 564,060
Can capping machine, J. Baker 564,042
Can cooling machinery, H. Schaake 564,163
Can opener, L. W. Merriam 563,936, 563,937
Cane juice, apparatus for fumigating, J. A. Fay 564,063
Car brake, electric, W. V. Ash 563,725
Car brake, tramway, J. B. Payne 563,795
Car coupling, A. H. Bezzo 563,735
Car coupling, G. B. Quarrier 564,160
Car door, J. W. Parker 564,157
Car fender, C. K. Colby 564,006
Car fender, O. B. Finn 563,951
Car safety guard, street, C. M. Pratt 564,027
Car unloading apparatus, railway, J. McBride et al. 563,939
Carbureter, J. S. Porter 563,799
Card clothing to bars of flats, fastener for securing, J. Deiss 564,052
Card, information, H. P. Stamford 564,117
Carding engine bend, Tweedale & Smalley 564,125
Cargo trimmer, A. H. Hawgood 564,150
Cash register, F. Clifton 563,743
Cereals, process of and apparatus for hulling and cooking, K. Hopkins 563,860
Chain, drive, C. W. Schwartz, Jr. 564,030
Chain link, detachable, J. M. Dodge 564,057
Chair. See Folding chair.
Chair attachment, F. Berkemeyer 564,044
Chimney cowl, D. Scott 563,890
Chuck, F. W. Siegel 563,813
Churning apparatus, mechanism for operating, C. E. Perkins 564,158
Circuit controlling device, J. H. Clark 563,743
Clamp. See Wire confining clamp.
Cleaner. See Dish cleaner. Street cleaner.
Clock, electrical programme, A. J. Reams 563,883
Cloth cutting machine, F. H. Caldwell 563,741
Clutch, friction, I. E. Storey 563,989
Coal handling apparatus, J. M. Dodge 564,058
Coating metal by electrolysis, H. Alexander 563,723
Cock, waste, I. N. Glauber 564,014
Coffee, method of an apparatus for drying, A. F. Ramos 563,801
Coke drawing, cleaning, sprinkling and loading machine, combined, J. A. Montgomery 563,781
Collar, horse, R. G. Lehman 564,089
Collars and cuffs, machine for folding and pressing, A. D. Fenwick 563,950
Concentrator, W. H. Rockfellow 563,805
Concentrator and amalgamator, J. B. Rossman 563,806
Cooler. See Bottle cooler.
Corn holder, J. Huxtable 563,771
Corn husker, G. C. Janney 563,861
Corset, M. F. Linquist 564,020
Coupling. See Car coupling. Hose coupling. Thill coupling.
Crusher mill, J. Walker 564,039
Curling iron, A. Morley .... 563,783 to 563,785
Curtain, flexible, T. R. Bunn 563,738
Curtain holder, C. J. Swanstrom 564,121
Cutter. See Flue cutter. Meat cutter.
Cycle driving mechanism, I. E. Koblmeyer 563,971
Cycle or velocipede, P. H. Pritchett 564,099
Damper, Dugan & Batley 564,061
Dental engines, electric generator attachment for, C. L. Woolley 563,995
Dental suction plates, making, J. O. Scott 563,809
Die. See Screw cutting die.
Dish cleaner, J. E. Durand 563,914
Disinfecting apparatus, F. W. Weiss 563,825
Display frame, L. T. Snow 564,034
Display stand, illuminating, A. F. Baumer 563,732
Domestic boiler, G. C. Twyman 564,128
Door or shutter, Mathewson & Grier 563,779
Door or window fastening, L. Grossmann 563,855
Drawing table, Laughlin & Hough 563,931
Dredger, G. H. Nichols 563,876
Educational appliance, W. E. Munson 563,872
Egg tester, J. L. Ritter 563,804
Electric automatic brake, aero, C. Luyers 563,934
Electric heater, C. H. Minchew 563,780
Electric light for cold storage rooms, D. B. & R. H. Hawes 563,960
Electric machine, dynamo, W. Cooper 563,911
Electric machine, dynamo, A. L. Parcelle 563,940
Electric resistances, instrument for measurement of, S. Evershed 563,917
Electrical apparatus, protective appliance for, A. de Khotinsky 564,084
Electrolytes, method of and apparatus for regulating temperature of, Kroseberg & Straub 563,972
Elevators, base chamber or seat for hydraulic, G. H. Evans 564,062
Engine. See Rotary engine. Rotary steam engine. Steam engine.
Envelop, M. Donnelly 563,847
Excavating, etc., bucket or grapple for, G. M. Urie 564,038
Excavator, J. J. Prendergast 563,941
Eyelets, device for assembling, A. C. Estabrook 563,757
Eyes, instrument for determining errors of refraction in, A. Clarke 564,145
Fabric cutting machine, Palmer & Mercer 564,026
Faucet for liquids under pressure, regulator, S. C. Freels 563,962
Fence machine, wire, A. Brown 563,737
Fertilizers, means for distributing, H. H. Gridley 563,921
File, bill, J. M. Butcher 564,172
File for holding sales slips, Grady & Robson 563,966
Fire alarm system, automatic, J. Young 563,832
Fire and burglar alarm, J. T. Peet 563,881
Fire extinguisher, D. Farrell, Jr. 564,010
Fire extinguisher, automatic, C. E. Buell 563,910
Fire pail, chemical, C. R. Macomber 563,977
Fishing reel, E. C. vom Hofe 563,964
Flour packers, auger for, W. J. Hobbs 563,963
Flue cutter, P. Dixon 564,056
Flue expanders, machine for operating, J. A. Barbydt 564,139
Flue stop, R. C. Skinner 564,031
Fluid pressure brake, J. M. Hurst 563,770
Flushing tank, W. McShane 564,156
Folding chair, T. A. Switz 563,816
Frog, wrecking, C. K. Marshall 564,093
Fuel, feeding pulverized, E. C. Smith 563,987
Fuel pulverizing machine, E. C. Smith 564,033
Furnaces, slice bar for boiler or other level grate, J. W. Wetmore 563,947
Gage. See Shingle gage. Water gage. Wheel gage.
Game apparatus, H. M. Holland 563,767
Gas apparatus, L. Stevens 563,831
Gas generator, L. & L. Stevens, Jr. 563,892
Gas generator, acetylene, J. H. Morley 563,980, 563,981
Gas generators, fire condition indicator for, H. K. Morrison 563,786
Gas regulator, J. S. Connelly 564,047
Gate. See Wire gate.
Gate, W. Heaton 564,071
Gate, J. Simpson 564,113
Generator. See Gas generator. Steam generator.
Governor stop motion, Lindgren & Whatley 563,862
Grate, F. G. Saylor 563,986
Grinding mill, D. L. Sprague 563,988
Grubber, brush, C. E. Alvord 564,135
Gun, automatic machine, Benet & Mercie 564,043
Hand rake, S. B. Guernsey 563,923
Harness strap hook, J. C. Fendler 563,851
Harrow, J. McCormack 564,096
Harrow, disk, S. W. Woodlan 564,133
Harvester, W. R. Baker 563,727
Hay carrier attachment, W. Louden 564,092
Headlight for street cars, electric, A. C. Thompson 564,036
Headlight, locomotive, E. L. Hall 564,068
Heater. See Electric heater. Steam water heater. Water heater.
Heater, W. P. Anderson 563,902
Heating apparatus, C. J. Ridgway 563,984
Heating apparatus, automatic regulator for, J. B. Webster 563,945
Heating apparatus, steam, G. A. Barnard 563,904
Hinge, roller bearing, Dicke & Gaertner 564,055
Hog scalding and suspending apparatus, D. W. Inman 563,965
Hominy or hulled cereals, process of and apparatus for producing, K. Hopkins 563,859
Hook. See Harness strap hook. Whiffletree hook.
Horse power, J. W. Storey 564,119
Hose coupling, E. F. Wallace 563,898
Hub, wheel, L., Sr., and C. O. Barnes 563,730
Hydrocarbon burner, Dr. F. McKinney 564,024
Hydrocarbon burner, E. G. Mummery 563,788
Ice shaver and scoop, A. Geering 563,763
Incubator, G. W. Hagey 564,175
Indicator. See Speed and direction indicator. Time indicator.
Inkstand and pen rack, combined, H. Moyer 563,787
Insulating conduit, armored, R. T. Elwell 564,174
Ironing board, adjustable, C. J. Cramer 563,844
Knitting machine, circular, H. E. Harbaugh 564,176
Knitting stockings, F. E. Busiel 563,739, 563,740
Lace fastener, shoe, H. Zahl 563,833
Lamp and lamp stove, W. Porter 564,098
Lamp burner, Kepler & Bashore 563,930
Lamp, central draft, Johnson & Jones 564,017
Lamp, electric arc, J. C. Knight 563,773
Lamp extinguisher, W. J. Gagnon 563,953
Lamp globe, Blondel & Psaroudaki 563,836
Lamp stand, electric, W. J. Gridley 563,922
Lamps, wick adjuster for central draught, N. Johnson 564,018
Lantern, magic, Hastings & Russell 564,177
Lasting machine, C. H. Kelley 564,152
Lead bullion, desilverizing, W. H. Howard 563,769
Lenses, device for determining optical axes and centers of, H. Cole 563,745
Life preserver, D. Coplin 563,747
Lifter. See Pan lifter.
Linotype machine, O. Mergenthaler 563,865
Linotype machine, C. Muehleisen 563,868
Liquid sprinkling device, Mamaux & Kelly 564,021
Liquids, etc., means for lifting and transferring, A. G. Paul 563,878
Lock. See Bicycle lock. Master key pin lock. Pipe lock. Seal lock. Window lock.
Lock, H. D. Hinckley 563,925
Lock, B. Moser 563,867
Lock tumbler, H. D. Hinckley 563,926
Locking device, I. B. Rapaport 563,882
Locomotive signaling device, automatic, H. M. Baker 564,138
Loom temple, M. J. Armstead 564,136
Loom temple, E. S. & W. I. Stimpson 564,166
Luting or cement, W. S. Welch 563,826
Mail bag catcher, W. T. Stuart 564,120
Mail crane and hanger, Barr & Naylor 564,140
Mail receiving and collecting box, D. di B. Savorgnan 564,109
Mash apparatus, fore, O. Meinshausen 563,978
Master key pin lock, H. B. Sargent 564,029
Match, R. F. Cooke 563,746
Measuring device, T. P. Farmer 563,850
Measuring machine, H. P. Wolf 564,132
Meat curing apparatus, E. R. Down 564,059
Meat cutter, T. Williams, Jr. 563,899
Metal planers and shapers, mechanism for adjusting length of stroke in, M. Flather 564,064
Metal tube, S. H. Leavenworth 563,932
Milk can, J. M. Williams 564,040
Milk or cream, preserving, E. P. Hals 564,069
Milk receiver, C. M. Wilkins 564,131
Milker, cow, Twyman & Thomas 564,126
Mill. See Crusher mill. Grinding mill. Ore mill. Rolling mill.
Mining machine, J. E. Lee et al. 563,776
Motor. See Spring motor.
Mowing machine, J. F. Steward 563,815
Musical instrument, mechanical, Puttmann & Claus 563,800
Naphtha from oil, process of and apparatus for separating, G. F. Metzger 563,866
Nonconducting covering, A. Lantzke 563,775
Ore mill, Behrend & Weller 563,733
Oven, automatic bake, C. W. Hitchner 564,074
Oven, steam bake, A. Spangler 564,116
Ovens, heat deflector and equalizer for, E. H. Huenefeld 563,928
Oxybenzylic alcohol, obtaining, L. Lederer 563,975
Packing and shipping box, J. T. Ferres 563,918
Pan lifter, A. Erbor 563,756
Paper doll and dress for same, M. T. Jones 564,078
Paper making machines, stuff regulator for, Stoble & Cunningham 564,035
Pencil sharpener, F. J. W. Fischer 564,149
Perforating machine, J. J. Reifgraber 564,100
Photographic film holder, G. Eastman 563,915
Photographic printing apparatus, W. Friese-Greene 563,853
Photographic printing frame, H. Sack 563,888
Pianoforte stringing device, G. B. Kelly 564,082
Picture, transformation, S. Loyd 563,778
Pill box, pocket, A. F. Richardson 564,103
Pipe lock, sheet metal, W. C. Cronemeyer 564,147
Pitcher shield, Curtis & Schneider 563,912
Pleasure wheel, J. Thannheimer 563,894
Plow attachment, B. L. Wyatt 564,170
Plow, combination, J. R. Dean 563,752
Plow, rotary, B. W. Kyle 563,973
Plowshares, handle clamp for holding, C. Nerud 564,097
Pocket register, E. L. Gibson 563,854
Post, J. H. Chance 563,842
Powder folding device, C. Dickinson 563,949
Powder magazine, safety giant, Lincicum & Lewis 563,933
Power. See Horse power.
Power transformer, J. E. Goodhue 563,955
Press. See Printing press.
Printing device, hand, C. M. Fowler 564,066
Printing machine sheet delivery apparatus, R. W. Jamieson 563,967
Priuting press, J. E. Doyle 563,754
Printing press, plate, Everson & Good 563,758
Puller. See Staple puller.
Pulp, machine for moulding hollow ware from, M. L. Deering 563,753
Pump, W. P. Keeler 564,080
Pump, M. R. Turner et al. 563,992
Pump rod turning mechanism, J. J. Brasill 563,736
Pumps, apparatus for operating oil well, Sharpe & Argue 563,812
Puzzle, R. J. Murphy 564,022
Puzzle, C. J. Nesbitt, Jr. 563,792
Puzzle, F. O. Rich 564,161
Railway, elevated, W. W. Thomas 563,818
Railway signal, C. Hansel 563,924
Railway switch, J. M. Perkins 564,159
Railway switch, L. Wieland 563,828
Railway switch, overhead, F. Schraudner 564,110
Railway system, electric, De Witt & Elliott 564,054
Rake. See Hand rake.
Refrigerator, J. J. Schneider 563,889
Refrigerator, D. L. Stage 564,165
Register. See Autographic register. Cash register. Pocket register. Triplicating register.
Register, F. H. Richards 563,884
Ring and traveler clearer, E. Tweedale et al. 564,124
Roadbeds, apparatus for cutting or grooving, M. J. McQuade 563,874
Rolling mill for rolling seamless annular bodies, H. Ehrhardt 564,009
Rotary engine, C. A. & O. W. Hult 563,929
Rotary steam engine, F. Steinkoenig 563,814
Ruler, antiblotting, J. F. Beard 564,141
Safe, A. G. Burton 564,002
Sash holder, O. D. Reisinger 563,983
Saw sharpening and gumming machine, W. A. & T. B. Hulme 564,077
Sawing machine attachment, A. Steveley 564,118
Scales, count indicator for live stock, E. B. Jackson 563,772
Scraper and leveler, combined, G. N. Folsom 563,760
Screen. See Window screen.
Screw blanks, cutting-off die for machines for making, C. D. Rogers 563,885
Screw cutting die, L. S. Scott 563,810
Screws, etc., machine for making, G. E. Witherell 563,994
Seal, Z. D. Gray 564,067
Seal lock, Edgar & Sebring 563,916
Seal lock, B. S. Robertson 564,105
Sewage or water, apparatus for purifying, J. H. Curtis 564,049
Sewing machine, F. A. Mills 563,903
Sewing machine, E. F. Mower 563,871
Sewing machine shuttle, S. W. Wardwell, Jr. 563,824
Shackle bar for drawing drift bolts, Thayer & Michael 564,122
Shade rollers, extensible tip for, W. B. Shaw 564,111
Shears, W. Richard 564,102
Sheet metal edging machine, G. W. Peters 563,798
Shelf construction, L. Coburn 564,005
Shingling gage, F. L. Pelley 563,830
Shoe polishing cabinet, B. J. Smith 564,032
Shoe, welt, A. Reed 563,903
Shovel. See Steam shovel.
Sign and reflector therefor, revoluble, H. F. Schwartz 563,808
Signal. See Railway signal.
Skirt, divided, G. Graner 563,764
Sofa, folding, C. A. Metcalfe 564,154
Sole rounding machine, J. A. Crosbie 564,148
Soles, rounding out machine for boot or shoe, A. C. Winn 564,169
Speed and direction indicator, G. A. Tower 564,168
Speed governor, marine engine, O. Jones 564,079
Spinning ring travelers, cleaner for, G. W. Knight 564,087
Spokes, tool for tightening, J. Jacoby 564,151
Spool cabinet, W. H. H. Knight 564,153
Spooling machines, bunch arresting yarn guide for, F. W. Easton 563,755
Sprayer, G. F. Wilbrabam 563,829
Spring motor, R. I. Brown 563,909
Springs, machine for coiling angular, A. A. Amber 563,835
Stamping and canceling machine, letter, F. Baldwin 563,996
Stand. See Display stand. Lamp stand.
Staple, E. Denis 563,913
Staple puller, A. Martinson 564,094
Staple implement, Keyes & Lee 563,970
Steam boiler, J. Richardsen 564,104
Steam boiler, C. W. Townsend 564,037
Steam engine, M. C. Bullock 564,000, 564,001
Steam engine, C. F. Littlejohn 564,090
Steam generator, D. H. McCarty 564,023
Steam shovel, ditching machine and dredge, O. Hetlesaeter 563,857
Steam water heater, exhaust, J. S. Calkins 563,840
Stocking retainer, A. J. Heys 563,961
Stone sawing machine, H. Kelley 564,081
Stool, camp, L. G. Wade 564,129
Stop motion, W. S. Hamm 564,015
Stopper. See Bottle stopper.
Stove oil burning attachment, P. Vanborn 563,897
Stove, vapor, F. G. Palmer 563,982
Strainer, G. R. Meloney 563,864
Straw harpoon, J. A. McGreevey 563,790
Street cleaner, R. W. Furnas 564,013
Street sweeper, H. Mueller, Jr. 563,869, 563,870
Stuffing box gland, separable, Reece & Primm 563,628
Sucker rod wrench, C. L. Dunham 563,848
Surveyor's monument, R. J. Northam 564,025
Suspenderends, hook and eye for, J. T. Barrow 563,731
Suspension wheel, A. E. Morey 563,782
Switch. See Railway switch.
Table. See Drawing table.
Tack, E. Kempshall 563,969
Tackle block, J. Fraser 564,012
Tail fastener, W. T. Merriman 563,979
Tank. See Flushing tank.
Tanning hides, C. Knees 564,086
Tanning hides, J. C. Rogers 564,106
Telegraphy, printing, J. J. Reifgraber 564,101
Telephone exchange apparatus, J. J. Carty 564,173
Telephone system, W. R. Patterson 563,877
Telephone system, A. Graham 563,920
Telephone transmitter, H. A. Martin 563,935
Thermostat, L. G. Woolley 563,831
Thill coupling, W. L. De Grace 563,846
Thill coupling, G. A. Fowler 564,011
Thill retainer, J. Barr 563,905
Ticket stamping and supplying apparatus, coin controlled, C. Berzdorf 563,734
Till and recorder, combined cash, W. T. Blaine 564,045
Time indicator and register, Helfenstein & Holmes 564,072
Tire, bicycle, H. A. Veazie 563,822
Tire, elastic steel, B. Frohlich 563,761
Tire tightener, F. M. Cromer 564,007
Tire, pneumatic, T. B. Sloper 564,114
Tire, wheel, H. A. Veazie 563,823
Tires, device for inflating pneumatic, F. A. Buescher 563,839
Tires to wheels, machine for securing, W. M. Hamilton 563,856
Toilet box, M. S. Rowland 563,985
Tongs operating apparatus, H. Aiken 564,041
Toy, J. L. Kendall 564,085
Toy, mechanical, W. L. Urquhart 563,895
Toy puzzle, A. H. Jones 563,968
Trace carrier, F. P. McElfresh 563,873
Track brake, H. Austin 563,887
Track construction and fittings, T. Clifton 563,744
Track sander, pneumatic, F. M. Dean 563,751
Transformer, rotary, E. Thomson 563,895
Trap. See Animal trap.
Trestle, adjustable, J. C. Crist 564,048
Trimming, millinery, S. Symons 563,817
Triplicating register, W. T. Blaine 564,046
Trolley finder, H. H. Blanchard 563,998
Trolley track, L. Coburn 564,004
Trolley wheel, W. C. Cottrell 563,749
Trunk cabinet, Cavanaugh & Lusberg 563,841
Tube. See Metal tube.
Tube machine, metal, G. W. Peters 563,797
Typesetting machine, S. H. & P. E. Hodgkin 564,076
Typesetting or composing machine, S. H. & P. E. Hodgkin 564,075
Umbrella case, G. K. Lloyd 563,863
Valve, A. M. Clark 563,742
Valve, H. E. Wells 563,946
Valve, automatic, A. G. Paul 563,879, 563,880
Valve, automatic stop, J. S. Dodge 564,008
Valve device, compound engine, E. F. C. Davis 564,050
Valve, engine, C. A. Wheeler 563,827
Valve, hydraulic pressure regulating, E. O. Thompson 564,167
Valve operating device, E. F. C. Davis 564,051
Valve operating mechanism, engine, Sheff & Riggs 564,112
Valve, quick action triple, W. Hirst 563,766, 564,073
Valve, safety gas, C. O. Jackson 563,966
Valve, signaling safety, J. J. Roy 564,107
Vehicle brake, O. M. Kirlin 564,019
Vehicle rim, J. A. Woodworth 563,901
Vehicle running gear, E. J. Laban 564,088
Velocipede, F. S. Buckingham 564,171
Velocipede, F. T. Millet 564,155
Vending machine, coin actuated, J. P. Beretta 563,906
Vending machine, coin controlled, C. E. McDowell 563,789
Vessels, apparatus for raising sunken, C. Cummings 563,750
Vessels, etc., automatic means for closing leaks in marine, H. Bricard 564,144
Violin bow, J. D. Loppentien 564,091
Washing machine, L. L. Chase 564,003
Washtub, W. B. Bolton 563,908
Watch, stem winding and setting, G. A. & J. E. Lockwood 563,777
Water gage, C. B. Mather 563,095
Water heater, M. J. Lordier 563,976
Water purifying apparatus, R. T. Scowden 563,811
Weather vanes, ornamental indicator for, A. J. Munson 563,936
Weighing apparatus, V. Ratcliff 563,802
Welding machine, seam, M. Baumann 563,997
Wheel. See Pleasure wheel. Suspension wheel. Trolley wheel.
Wheel gage, adjustable, E. A. Thiem 563,944
Wheel rim, T. Kondtz 563,774
Whiffletree hook, M. L. Hayward 564,016
Windmill attachment, M. M. Kingman 564,085
Window, F. C. von Heydebrand und der Lasa 563,765
Window lock, V. Tolf 563,820
Window screen, J. A. Crocker 563,918
Wire confining clamp, reeled, C. R. Hartmann 564,070
Wire gate, G. Roth 564,162
Wire stretcher, W. C. Cross 563,845
Wire stretcher, D. H. Folk 564,065
Wire stretcher, G. G. Witham 563,900
Wrench. See Sucker rod wrench.

DESIGNS.

Badge, J. F. Shipp 25,767
Belt pin, B. Rice 25,770
Brush handle, bicycle, F. G. Neubert 25,775
Button, G. A. Schlechter 25,768
Cabinet, folding, E. H. Grant 25,783
Corkscrew collar, E. Walker 25,776
Cyclometer casing, F. Hart 25,773
Feed cutter knife, I. B. Smith 25,777
Gas lights, gallery for incandescent, W. E. Barrows 25,780
Hoisting machinery cross head, F. A. Bates 25,778
Mat, H. Stubner 25,787
Necktie holder, P. Hennessy 25,771
Oven, bake, E. H. Huenefeld 25,782
Pipe mouthpiece, M. Mayer 25,772
Refrigerator display case, H. J. Vouwie 25,784
Shelf bracket, T. Corscaden 25,785
Shutter bowing clasp, window, W. H. Bothwell 25,781
Silversmith's stock or ornament, P. Mubr 25,769
Tire valve cap, G. H. F. Schrader 25,774
Turning machine roller, M. Ross 25,779
Water pillow, A. A. Stoll 25,786

TRADE MARKS.

Bandages, suspenseory, E. G. Rawson 28,586
Bicycles, Dueber Watch Case Manufacturing Company 28,611
Bicycles, Martin & Gibson Manufacturing Company 28,612
Bicycles, B. F. Raynor, Jr. 28,613
Bicycles and other velocipedes and parts thereof, Remington Arms Company 28,610
Carpet sweepers, Bissell Carpet Sweeper Company 28,616
Cement, imported, F. W. Douglas 28,598
Cigars, E. Seidenberg, Stiefel & Company 28,588
Cigars, C. Upman 28,589
Clay building and paving material, burnt, Raritan Hollow and Porous Brick Company 28,597
Cotton flannels, Marshall Field & Company 28,581
Cotton goods, Marshall Field & Company 28,576
Cycle parts and accessories, Anglo-American Cycle Fittings Company 28,609
Dry goods, certain named, Marshall Field & Company 28,577, 28,579, 28,580
Enamel and house paints, varnishes and japans, McLennan-French Paint Company 28,600
Fancy goods and notions, certain named, Marshall Field & Company 28,578
Farm implements, T. Cascaden, Jr. 28,614
Flour, J. B. Camors & Company 28,594
Flour, wheat, Christiansen & Henderson 28,595
Garment supporters, C. D. Shain 28,585
Guano, soluble sea island, R. W. L. Rasin 28,602
Guano, superphosphates and fertilizing compositions, R. W. L. Rasin 28,603
Gum, chewing, D. Norris 28,590
Lap robes, Rippowam Woolen Manufacturing Company 28,587
Linens, Regenbart & Raymann 28,582
Meat, coloring and preservative of, B. Helier 28,596
Meat extract, Liebig's Extract of Meat Company, 28,591 to 28,593
Oils, lubricating, F. A. Schnorr 28,599
Pills, J. Hughes 28,606, 28,607
Powders for the feet, A. S. Olmsted 28,605
Preparations for preventing and overcoming odors from perspiration, S. C. Noble 28,604
Pumps and engines, Geo. F. Blake Manufacturing Company 28,615
Remedies for rheumatism and gout, B. T. Jacobs 28,608
Shirtings and sheetings, Wamsutta Mills 28,583
Waists for women and children, T. B. Fitzpatrick 28,584
Wood fillers, primers and paints, Bridgeport Wood Finishing Company 28,601

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.

© 1896 SCIENTIFIC AMERICAN, INC.