



on a railroad. If the barrel is placed on the track too far to the right, that part of the barrel where it touches the right rail is larger than the part where it touches the left rail, which causes the right hand end to roll faster than the left hand: and if it should roll too far over to the left, the same thing will take place on that side. And so it is constantly adjusting itself on the track, with no cause for either end to slip, even in turning a curve. Just so with the car wheels (which are conically shaped from the flange outward), provided a proper amount of lateral play is allowed by laying the track a little wider than the flanges on the wheels would indicate.

T. P. H. asks: How do dentists harden and polish their vulcanized rubber plates?—A. R. asks: What will give a white porcelain finish, with glassy surface, to wood? It must be impervious to dampness.—S. Bros. ask: Is there a successful way of treating the material for pianoforte soundboards in order to increase the volume and duration of sound?

COMMUNICATIONS RECEIVED.

The Editor of the SCIENTIFIC AMERICAN acknowledges, with much pleasure, the receipt of original papers and contributions upon the following subjects:

- On the Earth's Motion. By J. A. B.
On Light, Space, and Matter. By A. S.
On Spiritualism. By J. W. M.
On a Measure of Value. By B. M.
On the Bible and Progressive Thought. By P. F. P.
On Cotton and Wool. By A. R. L.
Also inquires and answers from the following:
G. H.—D. L.—W. B.—T. J. L.—R. & B.—J. T. C.—E. C.—L. O.—A. J. W.—C. S.—W. S.—J. D. H.

HINTS TO CORRESPONDENTS.

Correspondents whose inquiries fail to appear should repeat them. If not then published, they may conclude that, for good reasons, the Editor declines them. The address of the writer should always be given.

Inquiries relating to patents, or to the patentability of inventions, assignments, etc., will not be published here. All such questions, when initials only are given, are thrown into the waste basket, as it would fill half of our paper to print them all; but we generally take pleasure in answering briefly by mail, if the writer's address is given.

Hundreds of inquiries analogous to the following are sent: "Who buys ores of antimony? Who makes spiral springs? Who makes electric engines? Who makes flexible shafting?" All such personal inquiries are printed, as will be observed, in the column of "Business and Personal," which is specially set apart for that purpose, subject to the charge mentioned at the head of that column. Almost any desired information can in this way be expeditiously obtained.

[OFFICIAL.]

INDEX OF INVENTIONS FOR WHICH

Letters Patent of the United States were Granted in the Week Ending

October 24, 1876,

AND EACH BEARING THAT DATE.

[Those marked (r) are reissued patents.]

A complete copy of any patent in the annexed list, including both the specifications and drawings, will be furnished from this office for one dollar. In ordering please state the number and date of the patent desired, and remit to Munn & Co., 37 Park Row, New York city.

Table listing inventions such as Air compressor, Anti-friction bearing, Ash sifter, Awning, Backlash preventing, Baker's oven, Bale tie, Baling manure, Baling press, Barbed fence wire, Barrel cover, Bath car, Bee hive, Bee hive, Blacking brush, Boat-detaching apparatus, Bolt cutter, Book, shawl, or parcel handle, Books, forming and inserting staples in, Boot shanks, cutting, Boot nail machines, Boot stiffeners, Bottle stopper, Bottle stopper, Box for artificial flowers, Brick machine, Brick mold, Brush, Holmes & Lawrence, Burglar alarm, Burglar and fire alarm, Butter package, Can opener, Candle holder, Canister, Car coupling, Car coupling, Car coupling, Car coupling, Carbonic acid generator, Carpet cleaner, Carriage washing apparatus, Carriage wheel felly, Cheese press and hoop, Chimney cap, Chimney cap, Churn, E. T. Slayton, Cigar holder, Iguette machine, Fruit closer, Signal, J. I. Conklin, Jr., Clatern, J. Kennon.

Table listing inventions such as Clasp for holding garments, Clevis, Clock case, Clothes dryer, Clothes pin, Clothes wringer, Coal gas, making, Coal oil stove, Cork extractor, Corn planter, Corn planter, Corn popper, Corn sheller, Cornicene gutter, Cotton bale tie, Cotton opener, Cotton opener and drier, Cracker machine, Cream of tartar, Croquet mallet, Curtain fixture, Curtain fixture, Cutter bar for harvesters, Desk, J. Adrianson, Die for making hoes, Door lock, Double force pump, Draft equalizer, Dredging machine, Egg beater, Egg carrier, Electric log, Electric railway signal, Electric magnet, Elevator bucket, Escapement, Extension table slide, Farm gate, Farm gate, Feather renovator, Feed regulator, Fence, R. L. Garrett, Fence rails to posts, Fence strip, Fire escape, Fire escape, Flower trellis, Floor protector for stoves, Foot rest, Foot warmer, Fruit dryer and steamer, Furnaces, feeding, Furnaces, supplying blast to, Furniture, strengthening legs of, Gagelathe, Garden rake, Gas bag pressure for, Gas-enriching apparatus, Gas meter, Gate, J. M. McEntire, Gate latch, Glass tablet, ornamented, Grain binder, Grain separator, Graphoscope, Grocer's sample case, Gun sight, Hand planter, Hand sled, Harness clasp, Harness saddle, Harrow, A. W. Davis, Harvester, C. W. Levalley, Harvester, Petersen & Thorson, Harvester, J. Werner, Jr., Heating drum, Heating stove, Heating stove, Heating stove, Hog-singeing apparatus, Horse power, Horse rake, Horseshoe machine, Hose connection, fire engine, Hot air furnace, Hydraulic cement, Hydraulic jack, Incubator, Inhaler, Iron and steel direct, making, Iron fence, Ironing apparatus, Lamp, R. W. Park, Lamp pendant, Lamp ring, Lasting girth for boots, Lath, Life-preserving suit, Lifting jack, Lime kiln, and gas generator, Liquid filtering apparatus, Lock for doors, Lock for satchels, Locomotive, Lozenge machine, Measuring rule, Meat can, Middlings separator, Middlings separator, Millstone dress, Mustacheguard, Nose ring for swine, Organ reed, Organ reed board, Paper barrel machine, Pencil and eraser holder, Permutation lock, Photographs, mounting, Picker check, Pipe wrench, Piston for deep wells, Planing machine, Plow, M. D. Dozier, Plow, E. G. Whiting, Plug tobacco, C. Siedler, Pneumatic switch lock, Pneumatic switch signal, Pocket brook fastener, Printing press, Printing wheel, Projectile, Pump, L. B. Hotchkiss, Pump, W. Wing, Quartz crusher, Quartz mill, Range, A. Richmond, Ratchet wrench, Reed organ action, Rein holder, Riding and walking cultivator, Rock-drilling machine, Rolling blanks for oil well sockets, Rolling toy, Rotary blotter, Rotary churn, Saddle for spinning top rolls, Sash balance, Sash holder, Sash holder, School desk, Seeding machine, Sewing machine, Sewing machine feed, Sewing machine shuttle, Shade for the eyes, Shade holder, Ship's windlass, Shoe fastening, Shoe, wooden soled, Shutter, sheet metal, Skeins and warps, printing, Sled brake, Sleigh bell, Slop trap, Spice box, Spindle for spinning frames, Spirits, treating and aging, Spring bed bottom, Spring bed bottom, Station indicator, Steam cooking kettle, Steam engine governor, Stirrup, Stone-dressing machine, Stove pipe joint, Stove pipe shelf, Street sweeper, Surgical clamp, Swing, Swivel hook or pin, safety, Tack strip and machine, Tappet for stamp rods, Tethering device, Thermometer, Threshing machine, Tobacco pipe, Tobacco sucker destroyer, Tool holder, Toy thumatrope, Trace buckles, Treadle, Trimming, Turbine water wheel, Vehicle axle, Vehicle wheel, Ventilator, Ventilator, Ventilator, Ventilator and roof protector, Ventilator for flues, Wagon brake, Wagon dash, Warming machine, Washing machine, Washing machine, Water closet, Water heater, Weather strip, Wheel plow, Windmill, Windmill, Windmill, Wood-molding machine, Wrench and pipe cutter, Writing implement, Yarn bobbin winder.

Table listing inventions such as Coupling for canal boats, Cracker and lozenge machine, Cultivator, Cultivator, Curtain fixture, Curtain fixture, Curtain fixture, Dental foil, Desk, Dessert food compound, Die and punch for pick eyes, Die for forming hammers, Dies for forming pick eyes, Door sheave, Doors, sheet metal, Drawbar for railway cars, Eaves trough hanger, Egg carrier, Egg carrier, Egg carrier, Electric railway car signal, Engine for propelling street cars, Engraving machine, Expansion joint for steam pipes, Explosive compound, Extension lamp fixture, Extension trunk, Eyelets, Fastening for sleeve buttons, Feed water heater, Fertilizer distributor, Filter, Fire arms, check rest for, Fire kindler, Fluting machine, Folding carriage seat, Folding table, Foot rest, Fountain pen, Fruit can, Fruit dryer, Galvanic battery plate, Game target, Gang plow, Gas carburetor, Gas generator, Gas meter, Gate, Sowerby & Deck, Glass lamp, Grain binder, Grain drill teeth, Grain header, Grain ventilation, Halter, Hand snow plow, Harvester, Harvester, Harvester, Health lift, Heating stove, Heating stove, Heel for boots and shoes, Hoe, field and garden, Holsting and tramping, Hoops, manufacture of, Horse brush, Horse collars, making, Horseshoe, W. E. Yates, Horseshoe nail clincher, Hydrant for watering stock, Hydraulic motor, Inkstand, Iron for smoothing clothes, Ironing board, Jewelry setting, Knitting machine, Lamp, Lamp burner, Lamp collar, Lamp wick, Lasting machine for boots and shoes, Lath saw mill, Lath carrier, Lawn seat, Leather, artificial, Leather hose, Life raft, Map and chart stand, Mash tub, Meat chopper, Mechanical movement, Mechanical power, Milk can cover, Mold for casting car wheels, Mouthpiece, smoking pipe, Musical instrument, Neck yoke, Newspaper file holder, Nursing bottle, Nut lock, Odometer, Oil and gas stove, Oil burner, Oil stove, Oilier, Oil crusher, Ore-roasting furnace, Ores, washing, Oscillating valve, Overalls, Ox yoke, Pantaloon conformator, Paper box, Paper ribbon blocks, Passengerrregister and indicator, Peasary, Pipe and hose coupling, Paints, protecting, Ackley & Hungerford, Platform, wagon trestle, Plow fender, Plow haddles, Plowpoint, Plowstandard, Pocket for garments, Pressure valve, Pump cylinder and valve, Punching and swaging metals, Railroad switch, Railroad switch, Railroad tie, Railroad tracks, Retort, wood gas, Revolver, barrel for, Revolving fire arm, Road scraper, Rock drill, Rolling mill appliance, Rotary engine.

DISCLAIMERS.

8,609.—FLOW.—G. Watt, Richmond, Va.
157,425.—VEHICLE SPRING.—R. M. Stivers, N. Y. city.

DESIGNS PATENTED.

9,598.—COOKING RANGES.—A. P. Corse, Troy, N. Y.
9,594.—STOVE.—J. B. Crawford, Rochester, N. Y.
9,595 to 9,597.—EMBROIDERY.—E. Crisand, New Haven, Ct.
9,598.—HATS.—A. D. Foster, Chicago, Ill.
9,599.—BOA.—M. Freytag, Chicago, Ill.
9,600.—SHOW CARD.—J. Fuld, New York city.
9,601, 9,602.—STOVE.—J. Magee et al., Chelsea, Mass.
9,603.—FORK HANDLE.—G. Wilkinson, Providence, R. I.

FOR THE WEEK ENDING OCTOBER 31, 1876.

Table listing inventions such as Abdominal supporter, Agricultural boiler, Balanced slide valve, Bale tie, Baluster for stairways, Barbed fence wire, Base-burning heater, Bath for tempering steel, Bed bottom, Bed bottom, Bedstead fastening, Birch beer, making, Bird cage hook, Blacking box holder, Boiler feeder, Boiler tube leak stopper, Boot and shoe, Bottle and cup, Bow and arrow, Box fastener, Button, Button holes, Buttons, Can, metallic, Canister, Carbrake, Car coupling, Car coupling, Car coupling, Car frame, metal, Cartridge-loading device, Cartridge primer, Casting belt pulleys, Casting car wheels, Churn, Cigar cutter, Cloth-shearing machine, Clothes pin, Coin counter, Compound engine, Copy holder, Corn planter, Corn planter, Corset and pad, Cotton planter and distributor.