RECENTLY PATENTED INVENTIONS.

Engineering.

ROTARY SNOW PLOW. — John W. Haughawout, Omaha, Neb. This plow is mounted on the front end of a car on which is a motor connected with the main driving shaft, the latter extending through the front end of the car and being turned in either direction by the motor. The wheel on the outer end of the shaft has cone-shaped augers arranged radially, and having their front open ends partly covered by angularly arranged knives, each secured on a radial shaft in the middle of the opening of the auger. The knives are automatically reversed from the main driving shaft, as the motion of the latter is changed to rotate the wheel in either direction, whereby the snow will be cut and delivered to the augers to be discharged by centrifugal force to either side of the track.

CENTRIFUGAL FORCE PUMP.—Edward S. Nicholas and Joseph R. Turner, Greenville, Ohio. This pump is designed to raise light or heavy liquids, and to be used for filling tanks, irrigating lands, for oil pipe lines, water works, etc., being of simple and durable construction and very effective in operation. The casing has a center wall in the shape of an inverted cone, from the apex of which extends downward the suction pipe, an inverted cone-shaped spaced space being formed in which turns an inverted duplex or hollow cone, formed of two spaced concaved disks with a short neck opening into the suction pipe, the hollow cone being rotated within the casing by suitable gears from a power shaft.

METALLIC PISTON PACKING.—Nicholas Pflaum, Port Jervis, N. Y. This invention covers an improvement on a former patented invention of the same inventor. The packing consists of a series of interior blocks having angular exterior surfaces on which are fitted exterior segments, while longitudinally extending keys are fitted into the blocks and segments. The improved construction provided for by the patent is designed to prevent tangential displacement of the segments, displacement in any direction being impossible as long as the packing is in position on the piston.

Railway Appliances.

METALLIC TIE. — Ellison Saunders, Austin, Texas. The base plate of this tie has blocks cast solid therewith at its ends, stay rods or braces connecting the ends with each other, while the blocks form rests for the rails, and have inclined apertures for the reception of ordinary spikes to lock the rails thereto. By this invention no clamp plates are employed, the heads of the rods bearing against the solid outer ends of the rail seats, intergral with the body of the tie.

CATTLE CAR.—Ferdinand E. Canda, New York City. This car is divided into compartments by movable skeleton partitions of bars united by springs, the partitions being operated by endless chains secured to the lower bar, whereby when not in use they may be moved to a position beneath the roof of the car, so that the car may be used to transport cattle in one direction and freight in the other. There is no rigid connection between the bars, which are designed to cant or tilt within the grooves or runs in which the partition is mounted, and prevent the partition from moving too quickly in being lowered to position across the car.

TROLLEY GUIDE FOR ELECTRIC ROADS.—William E. Jackson, Jr., Augusta, Ga. This invention covers novel features of construction and combinations of parts for trolleys used with the overhead system of electric railways. The guide or finder is pivoted to the trolley pole below the wheel, and has curved arms of non-conducting material designed to automatically hold the trolley wheel against the wire, or cause it to come back to place on removal, when, the guide having placed the wheel in position, will automatically drop below the trolley wire, out of the way of overhead supports.

Mechanical.

WARPING MACHINE ATTACHMENT.—Charles Denn, Philadelphia, Pa. This is a cut marker and stop motion mechanism for attachment to any warper, whereby the operator will be prevented from making warps of different lengths or number of cuts by neglecting to cut the warp when the marker rings the alarm. The cut marker is carried by a change wheel shaft on which is a cam adapted for contact with a push bar carrying a propelling device engaging with a cut-defining rack connected with which is a shifting mechanism. The arrangement is such that when the limit is reached of a predetermined length of warp the machine is automatically stopped, and will remain stopped until set in motion again by the operator.

STARCH MACHINE. — John A. Ostenberg, Des Moines, Iowa. This is a continuous automatic machine for manufacturing starch, and has an endless water-tight carrier with supports carrying an endless apron to which the starch mixture is delivered, to be received by a porous apron on another carrier, in combination with a continuous starch table and a series of knives for cutting the starch into lumps. An endless carrier receives and passes the lumps through a crusting oven, and in connection with other carriers are cutters and saws, whereby the starch is fully prepared by one continuous operation, giving a more uniform product and saving time and labor.

TYPE MOULD. — Thomas Mitchell, Brooklyn, N. Y., and John Milne, Long Island City, N. Y. In this mould a base block is cut to afford two sides for a type matrix and two swinging cope bars are formed to afford two other sides to the matrix, with a gate channel between the bars, and two die blocks removably held against the open ends of the matrix. The invention provides a simple and practical mould for producing type with letters or figures on each end.

WIRE FENCE MACHINE. — Hezekiah Miller, Brayton, Iowa. This invention provides a wire spool carrier and winder, consisting of a wheeled truck having shaft bearings at its forward end and handles at its rear end, the spool shaft having a bevel gear on one end, in which meshes a pinion on a shaft extending to a universal joint between the handles of the carrier, where there is a handle, by rotating which the spool shaft is turned. The machine can be readily moved about in winding or unwinding wire, facilitating the setting up or taking down of a fence by one man.

Agricultural.

MOWING MACHINE MECHANISM.—William F. Shuey, Swoope, Va. This is an improved cutting mechanism, wherein the cutter bar is provided with knives passing through guards and arranged in divisions, each having a number of equal sized knives, two adjacent divisions or sections being separated by a knife of a different size from those contained in the division or section. The mechanism is simple and durable, reducing the motive power required, and preventing the choking of the knives, while it is not necessary to back up for a start on heavy grass, as the knives cut alternately.

PORTABLE CORN CRIB. — Charles I. Cook and Henry M. Britton, Odebolt, Iowa. This crib has a cylindrical body formed of spaced slats connected by cables, and with an upper and lower door, with a ventilator of vertical and spaced slats secured together, an air conductor extending from the ventilator to the side of the crib, which has a cover, and an inclined rack opposite the lower door. The invention is an improvement on a former patented invention of the same inventors.

CORN CRIB AND GRANARY. — Charles I. Cook, Albert E. Cook, and Henry M. Britton, Odebolt, Iowa. This is a portable structure designed to be quickly and easily set up or taken down and removed, and adapted to safely hold the various grains. The wall of the crib is formed of flexibly connected slats, mounted on a suitable floor and having braces extending from the top of the wall to the ground and to the floor, with a suitable lining and cover. The floor is made in sections, and the whole may be rolled or folded into small compass, to be easily carried about.

CORN PLANTER. — James Kleihauer, Jr., Elk Creek, Neb. This is designed to be a light draught planter capable of checking without the use of a check line, a marker being provided in connection with the planter which may be conveniently shifted for use at either side of the machine. The frame carrying the drop slide and boxes has a hinged connection with the axle, while a driver's seat is adjustable upon the hinged connection, a rack being connected with the driver's seat, with a lever, whereby the frame may be raised and lowered, and the seat shifted, as desired. The machine is designed to be economically built and durable.

Miscellaneous.

SNAP HOOK. — William T. Morris, Paris, Ark. This is a hook specially adapted to be applied to backbands to hold the traces of plow harness, and consists of a hook depending from a loop, and having its end bent laterally and inwardly toward and under the loop. Upon the inside of the main hook bar is a plate spring, whose free end impinges upon the inner face of the outer limb of the hook.

AN IMPROVED OIL LAMP, patented by Mr. Oliver Sweeney, of New York City, provides an improved means of suspending a lamp. The upper end of the rod attached to the lamp is provided with a spherical head which is received in a concave seat in a stirrup attached to a suspending rod or tube. The reservoir of the lamp is provided with a rod working in the guide thereof, and carrying a valve at its upper end, for controlling the admission of light to the reservoir. This invention is an improvement upon the lamp for which letters patent of the United States were granted to the same inventor on May 18, 1883.

PORTABLE BUILDING.—Mr. Lorenzo D. Jones, Rocky Ford, Ga., has patented a portable building, the parts of which may be quickly assembled to produce a substantial structure without a permanent connection of the several sections comprising it. This invention consists in a novel method of arranging the flooring, side walls and partitions of the house, and in fasteners for securing the parts to each other. The sections of the walls and partitions are connected by latching clamps and corner bracket irons, which are slotted so that they may be readily removed from the studs projecting from the walls. A removable hood for windows and doors is provided, and a porch is attached to the building, which is held in place by fastenings which are easily detached.

AN IMPROVED WASTE AND WATER PIPE VALVE, and connection for wash basins, etc., has been patented by Mr. James R. Whiting, of New York City. This device is intended to prevent the escape of sewer gas into buildings through the waste pipe. In this invention, the waste pipe and water or main supply pipes are provided with gate valves having racks on their stems, and a rock shaft is provided with gears meshing with the racks of the valve stems, the whole being operated by a vertical shaft and gears. The construction is such as to cause the water supply pipe and waste pipe to open and close simultaneously, so that the siphoning of the trap will be avoided, and the escape of sewer gas into the room will be prevented.

BASIN FIXTURE. — Herman Pietsch, Flatbush, N. Y. This invention relates more particularly to stationary wash basins and similar conveniences. The bowl is made with an exterior outlet valve and valve casing constructed to also form an escape for the overflow when the overflow apertures in the bowl are stopped; an overflow trap is also formed in the valve casing, including a removable strainer-like catch box for foreign substrnces passing through the main outlet of the basin.

TACK DRIVER. — Michael G. Mains, Oberlin, Ohio. This is a device for use in laying carpets, and by means of which one may drive the tacks and lay the carpet while standing in an upright position. It also provides means for feeding the tacks so that they will not be spilled upon the carpet, and the separate tacks will not have to be handled. The device has a case with a raceway for the tacks, spring-pressed parallel inclined arms mounted on the lower portion of the case and extending beneath the raceway, while a plunger is held to move in a slideway. The device, in an inclined position, is also adapted for use as a carpet stretcher.

HANDLE AND BRUSH. — Thomas Russell, Fort Douglas, Utah Ter. This is a combination device, the handle being adapted for canes, umbrellas, etc., and the brush suitable for use on clothes and hats and similar articles. The handle is hollow, and has a screw-threaded portion by which it is attached to the cane or other article, while the brush body fits within the central portion of the handle and is held in place by means of screws.

REMEDIAL COSMETIC. — Patrick Rion, Chicago, Ill. This is a composition of milk, ammonia, and other ingredients, for the treatment or toning and freshening of the human skin. It contains nothing deleterious, and does not check or obstruct prespiration.

NUT LOCK. — Aaron C. Vaughan, Shane's Crossing, Ohio. The novel feature of this nut lock consists of a locking washer formed of a metal bar bent into annular form, its ends being provided with recesses, the extremities being beveled and projecting normally in opposite directions from the plane of the body of the washer, whereby the latter is rendered elastic under compression.

VISE.—Charles Wies, Faulkton, South Dakota. This is an attachment for vises to enable tapered bodies to be clamped therein, and consists of two parts, one of which laps at its ends and is detachably secured to one of the jaws of the vise, and the other part is centrally pivoted to the fixed part, so as to rock. The meeting faces of the two parts are beveled from their centers to their ends.

MILK COOLER.—John F. Banks, Bluffton, Texas. This invention consists of a water receptacle adapted to be inserted into a milk bucket or can, about which latter is loosely held a cloth jacket, the upper edge of the jacket being slitted at intervals to form a series of wicks which are dipped into the contents of the water receptacle. The water is carried by capillary attraction exteriorly of the milk receptacle and cools its contents.

NOTE.—Copies of any of the above patents will be furnished by Munn & Co., for 25 cents each. Please send name of the patentee, title of invention, and date of this paper.

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 next issue.

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.
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.

(2983) W. C. H. asks (1) what should be the chemical composition of a wax that is highly conductive of electricity, yet, when exposed to a dynamo current of high intensity, or to atmospheric electricity, such as lightning, that would melt under above named circumstances? A. We can only suggest a mixture of metallic bronze powder or plumbago with paraffin. 2. What is the cheapest and most effective battery motor for experimental work? A. Simple motors are described in our SUPPLEMENT, Nos. 641, 783 and 767.

(2984) Ceylonese asks what sign painters use to stick gold leaf, silver leaf, and tin foil on glass. A. Take as much insinglass as will lie on a quarter dollar; place in a cup, which half fill with boiling water, stir. Fill the cup with alcohol, and strain through a silk handkerchief. Apply to the surface; when sticky attach the leaf or foil. When dry, rub up with cotton, resize, and regild if necessary. When dry, resize three or four times. Paint the backs of the letters with coach black.

(2985) T. J. S. writes: There is a process by which plating with gold is done direct from the anode without the chloride of gold in the solution. How can it be done? A. Use a bath of cyanide of potassium solution. This will dissolve the gold, which will next be deposited on the cathode.

(2986) G. B. asks for a receipt for silvering hollow glass balls. A. Lead and tin, of each 2 ounces, bismuth 2 ounces, mercury 4 ounces. Melt together in order given. Have the globe perfectly clean and dry. Warm it, melt the amalgam and pour it in, and roll it about until the glass is coated. Too high a heat in use will spoil them.

(2987) T. W. H. writes: I have trouble in mixing the articles to make heel ball. Will you inform me as to the proper way? A. The following is a typical formula: Hard suet and beeswax, of each 4 ounces, powdered gum arabic, sugar candy and Venice turpentine, of each 1 ounce, ivory black and lamp black, of each 2 ounces. The solid ingredients must be in finest powder. Melt wax, turpentine and suet together, add the gum arabic, sugar candy and black, and stir thoroughly.

(2988) R. N. A.—A solution of potash or lye is used to soften prints, by means of which, and heavy pressure, they are transferred to boxwood and

then re-engraved by hand. In order to make a printing block without re-engraving as above, the photo process must be employed.

(2989) C. M. S. asks (1) how the so-called torpedoes which are used on the fourth of July are made. A. By placing a little fulminating powder and a quantity of fine gravel together and wrapping in paper. 2. How to obtain the nickel from a five cent piece? A. Dissolve in nitric acid, expel excess of acid by boiling, precipitate the copper with iron wire, filter, and precipitate the nickel with zinc.

(2990) A. C. asks for the best known method of cleaning fine wall papers and frescoes. A. In many cases they are uncleanable. Bread crumb is about the safest application. Much depends on the nature of the surface. Some walls can be washed with soap and water.

(2991) H. C. R. asks: How to make modeling clay. A. Knead dry clay with glycerine instead of water, work thoroughly with the hands, moisten work at intervals of two or three days, keep covered with an old piece of rubber cloth to prevent evaporation of moisture.

(2992) W. writes: 1. Please give directions for making soda water on a small scale in a chemical laboratory. A. Soda bicarbonate 360 grains, tartaric acid 300 grains. Divide each into twelve parts and wrap in paper separately, one in blue, the other in white paper. In use dissolve separately in two half tumblers of water, mix and drink. 2. What kind of starch is used in the manufacture of baking powder? A. Potato starch is recommended for the purpose. 3. Please explain duplex and quadruplex telegraphy. A. We refer you to our SUPPLEMENT, Nos. 346, 172, 579, 457, 461. 4. Has the Keely motor been entirely given up, as a thing of no value? A. We never believed in it, but cannot answer for others.

(2993) A. C. R. asks: 1. Is there anything that will take the gloss off from clothes and yet not injure the fabric? A. Proper treatment with a hot iron (tailor's goose) will do something, but there is no really effectual treatment. 2. How to make pictures transparent with oil before painting. A. Use castor oil; remove with alcohol when through. 3. Will an induction coil if made long be any stronger than a short one with same quantity of wire? A. No. It will project the lines of force farther out from the core, but will be weaker on the whole than a short one.

(2994) C. E. B. asks: 1. How to dye or stain light-colored leather? A. Take 2 parts iron filings and 1 part bruised gall nuts, boil in 66 parts sharp vinegar. Boil until liquid is reduced about one-half, strain, and apply to the leather. 2. For a paste blacking. A. Mix one part ivory black, ½ part molasses, ⅛ part olive oil, then add ½ part sulphuric acid and ⅛ part hydrochloric acid.

(2995) L. F. D.—By making a patented article in parts you do not avoid a patent. You cannot use a patented article unless you obtain the consent of the owner of the patent.

Replies to Enquiries.

The following replies relate to enquiries recently published in SCIENTIFIC AMERICAN, and to the number therein given:

(2938) In answer to query 2938, in which C. E. E. asked how to improve the brilliancy of a kerosene light, I would say "use a small jet of nitrous oxide thrown into the flame." There is a young man here using it with gas very successfully for a stereopticon. This gas, as well as oxygen, may be had at the dental depots. J. H. C.

Harvard University, Dental Department.

(2939) Making alkaline water palatable.—In your answer to inquiry of J. B. G., No. 2939, of April 4, in regard to what will make alkali water drinkable, allow me to state that the same power that produced the alkali fields, which causes alkali water, also produced the cactus covering the plains. If J. B. G. will place water in a barrel, tub, or pail, and throw into said water said cactus, he will find it a safe, harmless, and healthy drink, as I know by practical experience in Colorado and Wyoming; or condensed, plenty of cactus in alkali water kills or saves colic.—C. E. BEEBE.

INDEX OF INVENTIONS

For which Letters Patent of the United States were Granted

April 21, 1891,

AND EACH BEARING THAT DATE.

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

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Air and water, device for tempering, W. H. Murray 450,945
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Armor plate and manufacturing the same, H. A. Brustlein 450,713
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Harrow, C. La Dow 450,964
Hat brims, apparatus for heating, J. Moores 450,889
Hat trimming machine, Barnum & Oakley 450,986
Hay rack, Petro & Darnell 450,977
Heeling machine, H. C. Hart 450,755
Hides, removing lime from, W. Dieterle 450,930
Hitching weight, I. Motter 450,633
Holder. See Bag holder. Candle holder. Paper holder. Pen holder. Photographic roll paper holder. Pillow sham holder Rein holder.
Hominy mill attachment, H. Y. Batson 450,606
Hook. See Snap hook.
Hopple, H. Twist 450,650
Horseshoe, Jutson & Poupard 450,622
Hose pipe, self-closing, B. F. Perkins 450,679
Incandescents, tinting, C. Dellwik 450,960
Incandescents, treating, C. Dellwik 450,961
Indicator. See Engine indicator.
Indicator and advertising device, combined, E. C. Smith 450,897
Injector, O. L. Hallbeck 450,885, 450,935
Insole, Snellenberg & Booth 450,920
Insulator, T. Creighton 450,708
Invalid chair, M. A. Darrow 450,835
Jar. See Preserve jar.
Joint. See Tramway rail joint.
Journal box, J. T. Smith 451,007
Kiln. See Brick kiln.
Knife. See Gauge knife.
Lamp, C. & J. Landis 450,867
Lamp, gas, D. R. Gardner 450,931
Lamp, pocket, A. D. Coste 450,948
Lamp shade, C. F. Monroe 450,729
Lamp socket, incandescent, G. H. Alton 450,605
Lamps, ceiling rosette for incandescent, D. J. Cartwright 450,991
Lamps, wall socket for incandescent electric, P. Lange 450,628
Lantern, dissolving view magic, F. McClintock 450,815
Latch, J. A. Giese 450,669
Latch, N. & D. B. Johnson 450,939
Latch, gate, G. A. Guynemer 450,768
Lock, F. J. Biggs 450,765
Lock, T. Lincoln 450,745
Lock, J. Von Szecsy 450,778
Locomotive engine, compound, G. S. Strong 450,751
Locomotor, electric, G. Westinghouse, Jr 450,652
Loom picker, J. P. Thompson 450,851, 450,852
Marine governor, C. Stensland 450,777
Mechanical movement, J. Morningstar 450,914
Metal turning tool, G. Stroner 450,733
Milk and butter cooling device, Hall & Farrow 450,864
Mill. See Fanning mill. Grinding mill.
Moulders's flask, F. Baugh 450,802
Moulder's flask clamp, A. C. Allbee 450,820
Moulding machine, C. L. Goehring 450,788
Moulding machine, F. H. Van Houton 450,789
Motor. See Electric motor. Fluid motor. Spring motor.
Nail or spike, S. S. Deemer 450,861
Necktie fastener, H. A. Berger 450,881
Neckties, device for retaining, A. T. Tompkins 450,699
Numbering machine, T. J. A. MacDonald 450,783
Ordnance battery, S. P. Hatfield 451,004
Ore crusher, W. L. Morris 450,890
Ore washer, Hull & Anderson 450,756
Packing, J. T. Smith 451,008
Paintings, reproducing oil, L. Mayar 450,702
Pan. See Dust pan.
Paper bags, apparatus for making, W. H. Patterson 450,710
Paper holder and cutter, roll, F. Krieckhaus 450,943
Paper holder and cutter, roll, Pickles & Hinchman, Jr 450,916
Paper holder and cutter, roll, G. Rein 450,918
Pen holder, P. D. Horton 451,005
Perforator cushion, check, E. O. Abbott 450,691
Phonograph recorder, T. A. Edison 450,740
Photographic mount, waterproof and sensitized, H. Kuhn 450,963
Photographic roll paper holder, G. Jones 450,794
Piano action, upright, G. M. Guild 450,694
Picker. See Loom picker.
Pillow sham holder, W. L. Peevers 450,817
Pills and other similar articles, machine for sorting, Hubbard & Gibbins 450,987
Pipe. See Hose pipe.
Pipe wrench, T. Newman 450,676, 450,972
Plant setter and seed planter, combined, J. W. McKay 450,946
Plow, rotary, Drader & McKay 450,714
Pneumatic tube and motor, S. Benson 450,858
Polishing machine, C. S. Leonard 450,709
Pot. See Tea or coffee pot.
Power. See Churn power.
Power transmitting device, E. H. Johnson 450,743
Precious or other stones, machine for hollowing, Sulzer & Schmidt 450,644
Preserve jar, Martyn & Lednum 450,827
Press. See Baling press. Bookbinder's press. Brick press.
Pressure brake, fluid, J. W. Bowers 450,610
Propelling and steering vessels, apparatus for, M. O. Parker 450,677
Protector. See Watch protector.
Puller. See Staple puller.
Pump spring, compensating, W. L. Black 450,657
Punch, check, L. M. Mills 450,913
Puzzle, J. M. Wheeler 450,653
Rack. See Hay rack.
Railway, Taylor & Sherman 450,686
Railway and toboggan slide, sinuous pleasure, H. Bormann 450,609
Railway block signal, electric, J. D. Taylor 450 646
Railway, electric, F. S. Culver 450,613
Railway, elevated, J. N. Valley (r) 11,158
Railway, gate crossing for overhead lines, E. Thomson 450,687
Railway, pleasure, H. Bormann 450,658
Railway signaling apparatus, J. D. Taylor 450,645
Railway, sinuous pleasure, H. Bormann 450,660
Railway system, pneumatic, G. L. Du Laney 450,700
Railway tie, metallic, T. R. Dunning 450,739
Railway tracks, combined tie bar and slide plate for, A. A. Strom 450,983
Railway trolley or traveler, electric, S. H. Short 450,683
Railways, construction of, G. Truesdell 450,984
Railways, power transmitting device for electric, E. H. Johnson 450,744
Rails, roll for utilizing old, H. Harris 451,002
Reamer, B. B. Allen 450,879
Reaping machine, M. S. Cody 450,860
Recorder. See Phonograph recorder. Time recorder.
Refrigerating apparatus, car, W. S. Parker 450,976
Refrigerating composition, R. R. Graf 450,862
Register. See Cash register. Fare register.
Regulator. See Electric current regulator.
Regulator, E. A. Alsdurf 450,719
Rein holder, G. H. Davis 450,994
Retort charging apparatus, L. Van Vestrant 450,688
Rivet and button attaching machine, Platt & White 450,828
Rock drilling machinery, R. & W. C. Stephens 450,921
Rolling mill feed table, J. Morgan 450,868
Rotary engine, J. Schwarzmann 450,874
Rubber boot, E. A. Saunders 450,698
Rule for logarithmic calculations, slide, R. C. Smith 450,640
Rule, parallel, A. A. Huning 450,619
Saddle, C. Bernhard 450,779
Safe, burglar-proof, P. Wilhelm 450,956
Sash balance, R. M. Gardner 450,667
Satchel and lunch bag, combined, D. L. Brown 450,988
Saw blank, C. T. Evans 450,856
Saw guide, band, Plumridge, Jr., & Jackson 450,171
Screen. See Window screen.
Scriber, W. Potter 450,892
Seat. See Car seat.
Seeding machine, grain, R. Galloway 450,787
Separator. See Teeth separator.
Sewer manhole, F. Walker 450,878
Sewing and edging machine, J. C. Goodwin 450,793
Sewing machine ruffling attachment, E. J. Toof, 450,647 to 450,649
Shears, M. L. Tolbert 450,877
Sheets of material, mechanism for separating, A. Weidenbusch 450,854
Sheller. See Corn sheller.
Shingle machine, J. L. Dickinson 450,996
Shingle sawing machine, J. L. Dickinson 450,995
Show table, toilet stand, and bureau, combined extension, M. Rosenbaum 450,873
Signal. See Railway block signal.
Sink, cast iron, G. H. Shattuck 450,895
Smoke bell hanger, C. Q. Standard 450,799
Snap hook, C. H. Smith 450,818
Spike, B. Junquera 450,811
Spinning spindle support, C. A. Chappell 450,992
Spring. See Pump spring. Vehicle spring. Watch case spring.
Spring motor, J. A. Adams 450,953
Spring testing device, A. B. Calkins 450,989
Stand. See Wash stand.
Staple puller, J. A. Truman 450,922
Steam boiler, R. D. Kassing 450,940
Steam engine, M. B. Dodge 450,780
Steam engine, oscillating, W. A. Graham 450,984
Stitching and barring machine, buttonhole, Reed & Dahl 450,844, 450,950
Stitching machines, mechanism for operating buttonhole, C. A. Dahl 450,841
Stocking, G. A. White 450,654, 450,655
Stone, composition of matter for artificial, T. W. Blakey 450,987
Stopper. See Bottle stopper.
Stove, gas, Goldstein & Block 450,933
Stovepipe fitting tool, E. D. Fisher 450,910
Stovepipes, soot removing device for, L. Eilbracht 450,784
Stoves, detachable heating drum for, E. T. McCabe 450,635
Strap. See Box strap.
Stringed instruments, tuning mechanism for, F. G. Faxon 450,808
Swinging gate, T. J. Sausaman 450,749
Swinging gate, adjustable balanced, E. Green 450,724
Switch. See Electric switch. Tramway switch.
Table. See Drawing or cutting table. Rolling mill feed table. Show table.
Tank. See Flush tank.
Tanning material, W. Dieterle 450,998
Tea or coffee pot, W. G. Gibson 450 932
Teeth separator, J. W. Ivory 450,825
Telegraph, printing, S. R. Linville 450,631
Telegraph, printing, Linville & Hettmansperger 450,630
Temperature of air, device for regulating the, W. H. Murray 450,869
Tension device, Kirby & McKain 450,837
Thermostat, J. C. Sims 450,896
Thill coupling, A. J. Ritter 450,919
Ticket holding case, W. F. Beck 450,925
Tie. See Railway tie.
Time recorder, workman's, J. C. English 450,617
Tin or terne plates, machine for cleaning, I. Davies 450,929
Tire for vehicle wheels, rubber, A. H. Overman 450,816
Tire, vehicle wheel, P. W. Tillinghast 450,952
Toe weight for horses, H. E. Long 450,826
Tongue for earth scrapers, S. E. Licklider 450,912
Tool handles, device for securing, I. L. Landis 450,944
Tool holding and operating device, pneumatic, F. J. Laun 450,782
Torpedo, electrically propelled and steered, W. S. Sims 450,875
Toy money box, J. H. Bowen 450,833
Tramway rail joint, A. H. De Camp 450,614
Tramway switch, C. A. Beach 450,607
Trousers support, G. A. Hicks 450,809
Truck, car, J. H. Bickford 450,608
Truck, car, P. M. Kling 450,941
Truck, car, J. Krehbiel 450,627
Truck, car, Lamb & Van Dyke 450,813
Tube. See Pneumatic tube.
Tubing, multiple braided, H. W. Struss 450,685
Tug, shaft, J. Payne 450,711
Type and type therefor, detachable holder for rubber-faced, J. J. Finke 450,665
Typewriting machine, W. J. Barron 450,880
Typewriting machine, W. C. Hardie 450,701
Typewriting machine, J. B. Secor 450,775
Typewriting machine, G. W. N. Yost 450,805, 450,806
Valve controller, automatic electric, F. E. Chatard 450,927
Valve controller, electric, C. B. Reardon 450,872
Valve for steam heating systems, E. E. Gold 450,767
Valve mechanism, steam engine, E. K. Hill 450,866
Vehicle spring, W. T. Sample 450,704
Vehicle, two-wheeled, W. B. Stover 450,643
Vehicles, electrical propulsion of, E. H. Johnson. 450,742
Velocipede, W. Blakely 450,907
Velocipede, C. A. Dies 450,937
Velocipede, Lloyd & Priest 450,888
Velocipedes, package carrier for, C. H. Lamson 450,673
Vending machine, fluid, W. R. Pope 450,843
Wagon, dumping, J. Blum 450,822
Warping machine, W. J. Lutton 450 728
Wash boiler, C. Schisseur 450,945
Wash stand, stationary, L. E. Bathrick 450,801
Washer. See Ore washer.
Washing and dyeing apparatus, D. Halsey, Jr 450,865
Washing machine, H. S. Daubenspeck 450,721
Washing machine, C. C. Henderson 450,725
Washing machine, M. Lumley 450,727
Washing machine, I. C. Montfort 450,675
Washing machine, Smith & Swain 450,979
Washing machine, C. R. Wood 450,718
Washing machines, means for operating, A. Gagne 450,786
Watch case, J. E. Searing 450,637
Watch case spring, J. E. Searing 450,638
Watch protector, A. Epple 450,842
Watches, electro-magnetic apparatus for operating stop, F. A. Matthews 450,966
Weft pile fabrics apparatus employed in cutting, O. Drey 450,672
Welding machine, metal, H. E. Fowler 450,666
Wheel. See Car wheel. Fifth wheel.
Wheel and rail brake mechanism, combined, J. Stephenson 450,849
Wheel brake, J. Stephenson 450,850
Whiffletree, L. S. Flatau (r) 11,157
Windmill, A. J. Corcoran 450,736
Window, G. Wicks 450,752
Window screen, B. H. Dodd 450,792
Window, ventilating, H. Harrison 451,003
Wire nails and machine for making the same, H. Campbell 450,990
Wire rolling machine, L. Goddu 451,001
Wire stretcher, T. Kennedy 450,625
Wire twisting tool, E. G. Hoffmann 450,671
Wrench. See Pipe wrench.
Wrench, B. F. Bennett 450,707
Wrench, D. R. Porter 450,981
Wrench, D. E. Van Horn 450,651
Yoke, animal, J. N. Montgomery 450,758

DESIGNS.

Brush hook, J. G. Cofman 20,684
Fence post anchor, T. W. Hutchins 20,681
Lamp chimney, G. W. Blair 20,679, 20,680
Lamp post, electric, E. P. Warner 20,688
Spoon, W. B. Durgin 20,685, 20,686
Spoon, etc., E. V. Hallett 20,687
Spoon, R. W. Hess 20,682, 20,683

TRADE MARKS.

Armpit shields and hat linings, P. P. Guillaume 19,396
Cardboard, paper, and envelopes, Union Company 19,380
Cigars, S. Alvarez & Co 19,362
Cigars, Garcia & Co ..... 19,365 to 19,368
Cigars, Y. P. Garcia 19,382
Cigars, R. G. Marques Co ..... 19,372 to 19,374
Cigars, Minichino & Lafauci 19,371
Cigars, Lozano, Pendas & Co 19,397
Cigars, A. Ramirez 19,376
Cigars, C. Suarez ..... 19,377 to 19,379
Cigars, M. Valle & Co 19,381
Cotton goods, printed, Denny, Poor & Co 19,395
Dyestuffs, aniline and other tar, K. Oehler 19,375
Flour, wheat, W. E. Woodyear 19,393
Gum, chewing, F. J. Banta 19,363
Hay knives, H. Holt Company 19,390
Insecticide, Michael & Osmun 19,370
Medicines, line of proprietary, V. S. Roden & Co 19,391
Perfumery, soap, powders, cream paste, and lotions for the toilet, Lady Grey Perfumery Company 19,369
Petroleum, refined, Arkell & Douglas 19,392
Pianos and repair parts therefor, Lawrence & Son Piano Co 19,389
Puzzles, P. H. Wheeler 19,384
Remedy for chapped face and hands, W. H. Robert, Jr 19,399
Silk dress goods, American Silk Dyeing and Finishing Co 19,394
Thread, linen, Marshall & Company 19,383
Tobacco and cigars, Berriman Brothers 19,364
Toilet preparations, perfumed, Smith, Kline & French Company ..... 19,386 to 19,388
Wheat, rolled, W. A. Pettijohn 19,398
Yarns, wool, worsted, and cotton, Nonantum Company 19,385

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