# ENGINEERING INVENTIONS.

A rail joint has been patented by Mr. Edward A. Temple, of Chariton, Iowa. This invention covers a novel construction, designed to prevent the battering of the end of the rail, and to do away with the ordinary form of bolt and nut, using instead a key or wedge of wood or metal, or a combination of both.

A smoke consuming furnace has been patented by Mr. John L. Peslin, of Appleton, Wis. Its construction is such that the main fires, having been once started, are fed by partially coked coal, the smoke and gas generated during the process of partial coking being delivered beneath and forced to pass through the main fire of the furnace.

A car coupling has been patented by Mr. Joseph T. Hammick, of Rhinebeck, N.Y. The mouth of the drawhead is made very flaring, and has a rib just in front of the pin hole to guide the end of an entering link, with other novel features, intended to facilitate the automatic coupling of cars, the invention being an improvement on a former patented invention.

A stop block has been patented by Messrs. John P. and Joseph Goodman, of Plymouth, Pa. It is so made that the forward wheels of the car will be checked, without rocking or twisting of the axle, and so the stop blocks proper may be turned down to a position to constitute a portion or section of the tread of the rail in connection with which they are arranged.

#### AGRICULTURAL INVENTIONS.

A cultivator attachment has been patented by Mr. George W. Campbell, of Alamo, Ind. This invention relates to a construction wherein the shovels are adjustably connected to a leveler, and may be adjusted to any angle desired, to throw the earth to or from the crop being cultivated, and to make a deep or shallow furrow.

A corn harvester has been patented by Mr. Sylvester E. Ferguson, of Eureka Springs, Ark Combined with a frame and platform is an elevator and its driving mechanism, with receiving box, all so constructed as to remove the ears of corn from the stalks and deposit them in the receiving box as the machine is drawn along the rows of corn, the stalks being left in the field.

### MISCELLANEOUS INVENTIONS.

A harness pad machine has been patented by Mr. John W. Jones, of Glasco, Kan. It is a press intended to take the stretch entirely out of the leather before stuffing, to make a perfect shaped pad without wrinkles, while being readily adjustable for different styles and sizes of pads.

A music leaf turner has been patented by Mr. Thomas H. Garland, of Chicago, Ill. Combined with a rack, spindle, and series of swinging arms is a spring, and various other novel features, whereby the leaves of sheet music may be conveniently turned by a performer, or turned backward, as desired.

A velocipede has been patented by Mr. Charles W. Hamshaw, of Blue Springs, Mo. This invention covers a construction applicable to hand or foot power vehicles or to small boats, and combines with hand propelling mechanism means whereby the steering device may be controlled without the rider releasing his grasp upon the handles of the propelling mechanism.

An adjustable scaffold has been patented by Mr. Samuel Tucker, of Pleasanton, Kan. It is a construction for the use of carpenters, masons, etc., "so designed as to be easily adjustable as to height as the work progresses, by means of a windlass located upon the scaffold within reach of the mechanic, while the device is durable and not expensive.

A handle for cutlery and other articles has been patented by Mr. Joseph H. La Fave, of Miller's Falls, Mass. It is composed of a hollow metal shell and an outside covering of porcelain, the shell having a reduced inner end to receive a bolster over it, and one or more exterior flanges for support of the porcelain and engagement of it with the shell.

A mechanical telephone has been patented by Mr. Bloomfield L. Kenyon, of Lee Center, N. Y. Combined with a box holding rods, bars being secured to the rods and a diaphragm held by the bars, a wire is passed through an aperture in the diaphragm, and through a loop formed on the end of the wire a piece of wood is passed, which is held against the front of the diaphragm.

A floor cleaning machine has been patented by Mr. John F. Cameron, of New York city. It. is adapted to be rolled along the floor, carrying water and operating scrubbing brushes, and so constructed that both the scrubbing brushes and a series of wipers will adjust themselves automatically to the floor, whether it be even or not, and an easy reciprocating motion is communicated from the drive wheel to the brushes.

A gate has been patented by Mr. Nelson D. Combs, of Hawthorne, Iowa. It is a combined A clergyman, after years of suffering from that loath some friction rollers being journaled in transverse apertures in the uprights, with other novel features, making a gate not liable get out of order, and one that is light and easily handled.

A shot cartridge has been patented by Mr. William E. Boyd, of Selma, Ala. In this cartridge the individual shot are connected together by wire, twine, a chain, or other suitable means, to limit the spread of shot or bullets after they leave the gun, the wire or twine, etc., being wound around the body of any light substance, such as as cork, pith, or paper, that will allow of easy detachment.

A buckle has been patented by Mr. Samuel J. Scovil, of Jamaica, N. Y. It is designed for put in place without stitching, and consists of a hollow frame and two right angled jaws or levers oppositely pivoted therein, the inner portions of the jaws being adapted to grasp the straps entered, one at each end of

A fence wire stretcher has been patented by Messrs. Clifton R. and Marshal E. Summers, of Stanberry, Mo. It is a simple and easily handled device, which can be conveniently attached to a fence post of any shape, to powerfully clamp and stretch barbed or plain wires or ribbons, and hold it tightly up to the faces of the posts until permanently fixed by staples or otherwise.

A candle burner has been patented by Mr. Hubert Bové, of New York city. It is preferably made of sheet metal, of a hollow conical shape, so made as to rest at a shield upon the top of the candle, and prevent the sweating or running of the melted wax, sperm, or grease down the side of the candle, the shield itself descending by gravity with the burning of the candle.

A cutter head has been patented by Mr. William A. Woodroffe, of Mechum's River, Va. The cutter head has combined with it one or more oscillating or shifting cutters, intended to give better clearance for wood shapers having a rotary motion and capable of cutting in opposite directions of rotation, including solid friezing and edging cutters and those for making mouldings and other ornamental work.

# 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 appearin next issue.

Engines and boilers, 1/2 to 4 H. P. Washburn Engine Co., Medina, O.

Wanted-Parties with capital to secure patents in this and foreign countries on a very sensitive and reliable Engine Governor, Address Geo. S. Agee, Burnham (Mill).

For Sale—The machinery, tools, plating apparatus, and raw material of a manufacturing establishment, now working on orders in brass and other metals. Very low rent, including steam power. Address Manufacturer, P. O. box 285, New Brunswick, N. J.

Inventors of Buttons and Button Machinery, address Geo. E. Weaver, Providence, R. I.

Concrete Apparatus, etc. Ernest Ransome, S. F., Cal.

The Knowles Steam Pump Works, 44 Washington which the imitation can be detected. St., Boston, and 93 Liberty St., New York, have just issued a new catalogue, in which are many new and improved forms of Pumping Machinery of the single and duplex, steam and power type. This catalogue will be mailed free of charge on application.

Presses & Dies. Ferracute Mach. Co., Bridgeton, N. J. Machinery for Light Manufacturing on hand and built to order. E. E. Garvin & Co., 139 Center St., N. Y.

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With 19 plates, 227 engravings, and 600 pages. \$2.50. Sent on receipt of the price by Munn & Co., 361 Broadway,

Guild & Garrison's Steam Pump Works, Brooklyn, N. Y. Pumps for liquids, air, and gases. New catalogue now ready.

Nickel Plating.—Sole manufacturers cast nickel anodes, pure nickel salts, polishing compositions, etc. \$100 "Lattle Wonder." A perfect Electro Plating Machine. Sole manufacturers of the new Dip Lacquer Kristaline. Complete outfit for plating, etc. Hanson, Van Winkle & Co., Newark, N. J., and 92 and 94 Liberty St., New York.

Iron Planer, Lathe, Drill, and other machine tools of modern design. New Haven Mfg. Co., New Haven, Conn.

Haswell's Engineer's Pocket-Book. By Charles H. Haswell, Civil, Marine, and Mechanical Engineer. Giving Tables, Rules, and Formulas pertaining to Mechanics, Mathematics, and Physics, Architecture, Masonry, Steam Vessels, Mills, Limes, Mortars, Cements, etc. 300 pages, leather, pocket-book form, \$4.00. For sale by Munn & Co., 361 Broadway, New York.

Wrinkles and Recipes. Compiled from the Scienti FIC AMERICAN. A collection of practical suggestions, processes, and directions, for the Mechanic, Engineer, Farmer, and Housekeeper. With a Color Tempering Scale, and numerous wood engravings. Revised by 14 of. Thurston and Vander Weyde, and Engineers Buel and Rose. 12mo, cloth, \$2.00. For sale by Munn & Co., 361 Broadway, New York.

Cutting-off Saw and Gaining Machine, and Wood Working Machinery. C. B. Rogers & Co., Norwich, Conn. Iron and Steel Wire, Wire Rope, Wire Rope Tramways. Trenton Iron Company, Trenton, N. J.

Send for catalogue of Scientific Books for sale by Munn & Co., 361 Broadway, N. Y. Free on application. See Burnham's turbine ad. to mill owners next week.

Pat. Geared Scroll Chucks, with 3 pinions, sold at same ides, chiefly of iron. prices as common chucks by Cushman Chuck Co., Hartford, Conn.

The Improved Hydraulic Jacks, Punches, and Tube Expanders. R. Dudgeon, 24 Columbia St., New York. Friction Clutch Pulleys. D. Frisbie & Co., N.Y. city.

Tight and Slack Barrel Machinery a specialty. John Greenwood & Co., Rochester, N.Y. See illus. adv., p.28. Catarrh Cured.

sliding and swinging gate, with vertical ends, horizon- disease, catarrh, and vainly trying every known remedy, tal rods, central bar, and strands of barbed wire, anti-friction rollers being journaled in transverse apertures saved him from death. Any sufferer from this dreadful disease sending a self-addressed stamped envelope to Dr. Lawrence, 212 East 9th St., New York, will receive the recipe free of charge.

> Lick Telescope and all smaller sizes built, by Warner & Swasey, Cleveland, Ohio.

> Billings' Drop Forged Steel C Clamps. Drop Forgings, all kinds. Billings & Spencer Co., Hartford, Conn. Poverty and Distress.

That poverty which produces the greatest distress is not of the purse, but of the blood. Deprived of its richness, it becomes scant and watery, a condition termed anemia in medical writings. Given this condition and scrofulous swellings and sores, general and nervous debility, loss of flesh and appetite, weak lungs, throat disease a cheap, practical, and convenient buckle, which can be spitting of blood, and consumption are among the common results. If you are a sufferer from thin, poor blood employ Dr. Pierce's "Golden Medical Discovery," which enriches the blood and cures these grave affections. Is more nutritive than cod liver oil, and is harmless in any condition of the system, yet powerful to cure. By drug-



HINTS TO CORRESPONDENTS.

Books referred to promptly supplied on receipt of

Minerals sent for examination should be distinctly marked or labeled.

(1) A. W. asks: By what means may I remove the paint that have accumulated on the floor of a room that was used as a sales room of paints for several years? A. The best method is to lay on a thick coating or plaster of fresh slaked lime mixed with soda; next day, wash it off with water.
(2) E. B. writes: I have a fine banjo,

but the neck of it, which is black walnut, is not polished, Will you please tell me how to polish the same, also how to stain the face of it to imitate ebony? A. Use the following to stain the wood: Dissolve 4 ounces of shellac with 2 ounces borax in 1/2 gallon of water. Boil until a perfect solution is obtained. Then add 16 ounce of glycerine, after which add sufficient aniline black soluble in water and apply. To polish: Dissolve by heat so much beeswax in spirits of turpentine that the mixture, when cold, shall be about as thick as honey. Apply with a clean flannel cloth.

(3) F. H. P. writes: 1. New wine was accidentally put in a very old barrel and tastes of decayed wood. How can said taste be removed? A. A little coarsely powdered charcoal or boneblack, in either case with dust sifted out, shaken up with the wine will remove any disagreeable odor. 2. How to detect imitation from genuine meerschaum? A. We know of no means, except its general appearance, by

(4) B. F. H. asks: 1. What are the constituents of and proportions used in nitroglycerine? A. See "Manufacture of Nitroglycerine," in Scientific American Supplement, No. 243. 2. What is the method pursued in making gun cotton? A. See "Manufacture of Gun Cotton," SCIENTIFIC AMERICAN SUP-PLEMENT, No. 320. 3. Is nitrate of silver procured by dissolving silver in nitric acid, precipitating with sodium chloride and evaporating or drying the precipitate? A. No; this will produce chloride of silver. The proper method is by dissolving silver in nitric acid, evaporating to crystallization, and dissolving the crystals thus obtained in water. 4. How to make a silver plating solution to plate brass, copper, or replate old silver plated articles? A. See "Electro-Metallurgy," in Scientific American Supplement, No. 310.

(5) Z. R. B. desires a few hints on permanently staining in different colors a polished white marble mantel piece. A. Marble may be stained or dyed of various colors by applying the solutions mentioned below to the stone, made sufficiently hot so that the liquid will just simmer on the surface. Blue, tincture of litmus; brown, tincture of logwood; crimson, a solution of alkanet root in oil of turpentine; green. tincture of sap green; red, tincture of dragon's blood or cochineal; yellow, tincture of gamboge or turmeric. Success in the application of the colors requires considble experience

(6) F. McF. asks: 1. Of what is the fluid in storm glasses composed? A. The ordinary barometric solution consists of: Camphor 21/2 drachms, alcohol 11 drachms, water 9 drachms, saltpeter 38 grains, sal ammoniac 38 grains. Dissolve the camphor in the the alcohol, the salts in the water, and mix the solutions together. 2. What is a planchette, how is it made, and what is its use? A. It is an instrument made of wood, in the form of a heart, resting on slight supports, one terminating in a pencil point. Under certain favorable conditions, it was claimed that when this was placed on a sheet of writing paper, and the finger tips rested upon it, messages from the spirit world were conveyed by writing on the paper. 3. What is the cause of different colors of slate rock? A. These are caused by different colored mineral ox-

(7) W. A. F. asks: 1. What added ingredient will render ruling inks copyable? A. Add sugar or glycerine. 2. What will remove stains of ruling inks from the skin and clothes without injury to either? A. See the list of ink erasers in SCIENTIFIC AMERICAN SUPPLEMENT, No. 157; also for Removing Stains, in Scientific American Supplement, No. 158

(8) J. E. J. W. writes: I made a "Norremberg doubler, according to directions given in SCIENTIFIC AMERICAN of July 17, page 38, except that I used 10 plates of common glass instead of the microscope cover glasses. The double proved to be a failure. What is the cause? A. The obvious trouble is that you substituted 10 pieces of window glass for 20 of cover glass. The doubler has been made in accordance with the description and has worked perfectly. You must not attempt to vary the construction without anticipating varying' results. 2. How should a swimmer catch a drowning person, in order to swim to the best advantage? A. He may take the drowning person on his back with his head, over his shoulder. 3. How should a drowning person catch a swimmer, in order to allow him (the swimmer) the free use of his limbs? A. The approved method is for the drowning person to keep behind the swimmer, with a hand on each hip of the latter.

(9) F. I. P. asks: If a party has a dy- Cigar box, D. E. Powers.... namo for electroplating purposes, can the same dynamo be used for electric lamps, without injury to the 

## TO INVENTORS

An experience of forty 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 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

For which Letters Patent of the United States were Granted

September 7, 1886,

#### AND EACH BEARING THAT DATE.

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

ı		
l	Advertising box. R. P. Beatty	348,611
l	Alarm. See Burglar alarm. Amperemeter, E. Weston	245 649
l	Animal trap, A. A. Taubeneck	348,703
	Anti-friction roller and wheel, G. W. Warner	
:	Ax polls, dies for making, H. M. Loomer	
i	Axle box, car, C. G. Susemihl	
l	Axle lubricator. Simon & Contant	348.729
ĺ	Back band hook, J. B. Moore	
	Bale ties, machine for making, D. I. Eckerson	
,	Baling press, A. S. Robinson	
i	Bar cutter, A. Gargrave	
ł	Barrels, apparatus for forming and drying, I.	
ļ	Hogeland  Barrels, apparatus for heating and drying, J. M.	
ļ	Chambers	
ļ	Bath. See Vapor bath.	
ì	Battery. See Galvanic battery.	
	Bed, wardrobe folding, J. T. Strahan	
İ	Bedstead, invalid, C. H. Horner Beehive, W. Syester	
•	Belts, bands, etc., connection for, S. Wales	
	Bit. See Bridle bit.	,
	Block. See Stop block.	
	Blue compound, resorcin, H. M. Baker	<b>348,816</b>
	Board. See Switch board. Boiler. See Locomotive boiler.	
	Boiler, F. J. Korte	348.918
	Boiler stand, bath, R. A. Regester	
	Bolt. See Spring bolt.	
,	Bolt machine, G. J. Murdock (r)	
•	Book holder, J. H. Paradis	
ı	S. F. Stevens	
į	Boot heels, rotary cap for, G. N. Thurzo	
İ	Boot or shoe heel, E. S. Hay	348,847
1	Boot or shoe tree, A. D. Tyler	
1	Boots or shoes, machine for shaping counter	
1	stiffeners for, J. C. Hearan	848,903
:	Box. See Advertising box. Axle box. Candy box. Cigar box. Paper box. Spice and dredg-	
	ing box.	
	Box cover, show, H. W. Baumann	318,713
l	Bracket. See Shingling bracket.	
i	Brake. See Car brake. Tricycle brake. Wagon	
•	brake.  Brick and tile kiln, J. I. Knapp et al	348.916
i	Brick from dry material, machine for making,	
i		
	Swanson & Linton	848.888
	Bridle bit, J. A. Fairbanks	
i	Broom corn sizing machine, J. S. Lake	3*8,011
	Albee	348,878
	Albee	<b>34</b> 8,878
	Albee	348,878 348,842 348,796
	Albee Brush, E. Hambujer Buckle, J. Spruce Burglar alarm, A. & A. Iske	848,878 848,842 348,796 348,675
	Albee Brush, E. Hambujer Buckle, J. Spruce Burglar alarm, A. & A. Iske Burglar alarm, H. D. Saul.	848,878 848,842 348,796 348,675 848,781
	Albee Brush, E. Hambujer Buckle, J. Spruce Burglar alarm, A. & A. Iske Burglar alarm, H. D. Saul. Butter shipper, H. Haak	348,842 348,796 348,675 348,781 348,557
	Albee Brush, E. Hambujer Buckle, J. Spruce Burglar alarm, A. & A. Iske Burglar alarm, H. D. Saul.	348,878 348,842 348,796 348,675 348,781 348,557 348,658
i	Albee Brush, E. Hambujer Buckle, J. Spruce Burglar alarm, A. & A. Iske Burglar alarm, H. D. Saul. Butter shipper, H. Haak Button, F. E. Child. Button, S. J. Swayze Camera. See Photographic camera.	348,878 348,842 348,796 348,675 348,781 348,557 348,658
· .	Albee Brush, E. Hambujer Buckle, J. Spruce Burglar alarm, A. & A. Iske Burglar alarm, H. D. Saul. Butter shipper. H. Haak Button, F. E. Child. Button, S. J. Swayze Camera. See Photographic camera. Can. See Measuring can. Sheet metal can.	848,878 848,842 348,796 348,675 848,781 348,557 348,658 848,934
· .	Albee Brush, E. Hambujer Buckle, J. Spruce Burglar alarm, A. & A. Iske Burglar alarm, H. D. Saul Butter shipper, H. Haak Button, F. E. Child Button, S. J. Swayze Camera. See Photographic camera. Can. See Measuring can. Sheet metal can. Candy box L. F. Haehnlen.	348,878 348,842 348,796 348,675 348,781 348,557 348,658 348,934
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!!!	Albee Brush, E. Hambujer Buckle, J. Spruce Burglar alarm, A. & A. Iske. Burglar alarm, H. D. Saul. Butter shipper, H. Haak. Button, F. E. Child. Button, S. J. Swayze Camera. See Photographic camera. Can. See Measuring can. Sheet metal can. Candy box, L. F. Haehnlen. Car brake. electro magnetic, H. S. Park. Car coupling, T. J. Bruce. Car coupling, J. T. Hammick. Car coupling, P. O. Hipp. Car coupling, Kilmer & Crandell. Car coupling, Shafer & Strasin. Car coupling, Shafer & Strasin. Car coupling link, F. W. Parsons. Car door, N. P. Rogers. Car lock freight. C. J. Bedford.	348,678 348,678 348,678 348,678 348,678 348,558 348,934 348,671 348,636 348,739 348,559 348,742 348,559 348,747 348,688 348,739 348,559 348,747 348,688 348,739 348,559 348,747 348,688 348,739 348,575 348,688 348,748 348,575
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!!!	Albee Brush, E. Hambujer Buckle, J. Spruce Burglar alarm, A. & A. Iske. Burglar alarm, H. D. Saul. Butter shipper, H. Haak. Button, F. E. Child. Button, S. J. Swayze Camera. See Photographic camera. Can. See Measuring can. Sheet metal can. Candy box, L. F. Haehnlen. Car brake. electro magnetic, H. S. Park. Car coupling, T. J. Bruce. Car coupling, J. T. Hammick. Car coupling, P. O. Hipp. Car coupling, Kilmer & Crandell. Car coupling, Shafer & Strasin. Car coupling, Shafer & Strasin. Car coupling link, F. W. Parsons. Car door, N. P. Rogers. Car lock freight. C. J. Bedford.	348,675 348,786 348,675 348,781 348,675 348,585 348,583 348,583 348,782 348,782 348,783 348,783 348,783 348,785 348,785 348,785 348,785 348,785 348,785 348,671 348,603 348,715
!!!	Albee Bush, E. Hambujer Buckle, J. Spruce Burglar alarm, A. & A. Iske Burglar alarm, H. D. Saul. Butter shipper. H. Haak Button, F. E. Child. Button, S. J. Swayze Camera. See Photographic camera. Can. See Measuring can. Sheet metal can. Candy box, L. F. Haehnlen. Car brake. electro magnetic, H. S. Park. Car coupling, T. J. Bruce. Car coupling, J. T. Hammick. Car coupling, P. O. Hipp. Car coupling, J. McCree. Car coupling, Kilmer & Crandell. Car coupling, Shafer & Strasin. Car door, N. P. Rogers. Car illumination, electric rallway, E. J. Wessels. Car lock, freight, G. J. Bedford. Car propelling mechanism, endless cable, Noble, Jr., & Branham. Car starter, R. O. Gercke. Car, stock, G. D. Burton.	348,678 348,675 348,675 348,675 348,675 348,685 348,934 348,671 348,696 348,720 348,739 348,636 348,739 348,657 348,656 348,739 348,557 348,694 348,671 348,673 348,673 348,673 348,686
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Cigar bundling machine, F. T. Karsch. 348,745 Clamp. See Meat clamp.

Clasp. See Suspender class. Clasp for supporting articles, S. Wales.....

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Clothes drier, Belton & Drake	Hydraulic press, J. H. McGowan
Coloring matter or dyestufffrom gallicacid, manufacture of yellow, R. Bohn	
Conduit systems, testing station for, J. F. Munsie         348,572           Cooking apparatus, C. Becker         348,821	Jack. See Lifting jack. Joint. See Pipe joint. Rail joint.
Copper tubes, manufacture of, W. H. Brown 348,718 Cores, machine for covering wire and other, J. C.	Knife grinder, automatic, C. J. Le Roy
Belk	Lamp, electric arc, L. G. Bronson
Cotton gin, J. M. Gardner       348,900         Coupling.       See Car coupling.         Cover, Jar, P. K. Reeves       348,588	Lamp hanger, electric, C. C. Haskins
Crushing machine, R. McCully         348,757, 348,758           Cultivator, M. Sattley         348.695	Lamps, switch socket for incandescent, Wightman & Lemp
Cultivator attachment, G. W. Campbell       348,721         Cultivator, wheel, J. McGee       348,760         Cup. See Umbrella drip cup.	
Curtain fixture, Schmidt & Thuma	Latch, gate, G. B. Howland
Cyclometer, Lakin & Emerson, Jr	Lifter. See Pie lifter.  Lifting Jack, J. Baker
Derrick, G. & F. Driver       348,726         Desk, reporter's, I. H. Weiner       348,706         Dies, forming, S. Crump       348,549	Sash lock.
Dining table, C. A. Grillwitzer         348.667           Ditching machine, W. Emslie         348,624	Locomotive boiler, J. E. Wootten         348.945           Loom stop motion, J. Megson         348.76
Draught attachment for vehicles, J. Clements 348,545 Drier. See Clothes drier. Grain drier. Drier, H. P. McDonald	Lubricator. See Axle lubricator.     Lumber stacker. W. T. Smith
Drum. heating, W. C. Lindsey	Malt liquors, service apparatus for, J. P. Gruber       348,668         Match, C. T. Mackley       348,673         Match holder, Putnam & Kirschbaum       348,688
Electric arc light, F. Thone	Measure, tape, E. H. Wheeler
Electric lighting system, E. Weston 348.649 Electric machines, armature for dynamo, A. Bos-	Measuring can, Lewis & Irish
sard	Mechanical movement for operating gate bars, switches, signals, and the like, M. B. Mills 348,856 Medicating bed quilts, composition for, C. M. Kim-
Elevator, W. Stevens       348.597         Elevators, automatic stop for, O. Pupikofer       348,687         Elliptic spring, J. O. Altick       348,710	ball
Embroidering machine, J. Irish	Metals, apparatus for utilizing the expansive and contractive power of, F. E. Hainley
gine. Fabric. See Knitted fabric. Fabric turfing implement, N. W. Crandall 348,724	Meter. See Ampere meter.  Middlings purifier, W. H. Likins
Fabrics or yarns, apparatus for steaming, J. Coch-         rane, Jr	Mould. See Ingot mould.  Mop washing and wringing machine, E. W. Allen. 348,603  Mortar or composition for coating walls, M. Tur-
Faucet, W. W. Jackson       348,914         Faucet for shipping cans, etc., J. Marshall       348,756         Feeder, boiler, N. Curtis       348,892       348,893	ley
Felt and other materials, machine for cutting, J. W. Millet348.763	Nail, wire. T. J. Sloan       348,589         Nursery folding chair, F. B. Wilson       348,939
Fence machine, C. E. Miller         348,570           Fence machine, wire, W. J. Raymond         348,775           Fence making machine, J. W. Hubler         348,742	
Fence post, Walk & Foster	Oiler for loose pulleys, E. A. Kuhns         348,919           Opera chair, D. W. Garinger         348,552           Ordnance, making, W. H. Brown         348,719
Filter, P. J. Tracy	Oreseparator, magnetic, C. Q. Payne.         348,771           Oversleeve, H. W. Converse.         348,618           Padlock, W. J. Richards.         348,864
O. Straube	Paint mixing machine, C. Ross, Jr
Fire escape, F. E. Davis       348,895         Flower beds, etc., ornamental border for, G.W.       8ttickland       348,598	bined, F. A. Humphrey
Flushing device, J. W. McArdell       348,682         Folding table, Geseen & Tyler       348,733         Forgings, die for making rolled, G. F. Simonds       348,790	Paper, etc., die for cutting, S. Crump
Fork. See Hay fork. Hay elevating fork. Furnace. See Smoke consuming furnace.	Petroleum. apparatus for burning, A. J. Stevens. 348,700 Photographic camera, E. B. Barker 348,712
Furnace, R. F. Brown	Piano damper, E. Keller et al.       348,676         Piano, upright, F. Imhorst       848,629         Pie lifter, E. 'f. Bradbury       348,717
Galvanic battery, W. C. Goldner       348,901         Garden implement, W. J. Rankins       248,774         Garment supporter, S. Wales       848,873	Pigeon hole case, H. D. Pursell
Gas, apparatus for the purification of, Delaney & Simpkin	Pipe wrench, J. Leib
Gas heater, 1, Spielmann       348,641         Gasometer, O. Intze.       348,913	
Gate. See Railway gate. Gate, W. J. Wilson	Post. See h'ence post. Press. See Baling press. Hydraulic press. Printers' leads, machine for shaving, H. F. Well-
Glass bottles, machine for finishing the mouths of, C. E. Thomas	man
Neale & Elliott       348,760         Glove, E. V. Whitaker       348,806, 348,807         Gloves, etc., fastener for, E. A. Wilson       348,604	Pump, R. Bean       348,881         Pump system, electric air, A. B. Worth       348,606
Grafting machine, D. B. Speer         348,592           Grain drier, R. Weisebrock         348,650	Rack. See Stove rack. Radiator, steam heating, W.W.Carman 348,615 Rafters, instrument for obtaining lengths and
Grain cleaning and scouring machine, M. Crawford	bevels of, H. Conlee       348,723         Rail joint, E. A. Temple       348.704         Rail, safety guard, H. Gilleas       348,734
Grinding disk for mills, G. & A. Raymond       348,637         Grinding mill, H. A. Adams       348,607         Grinding mill, G. & A. Raymond       348,585	Railway, pleasure cable, L. A. Thompson 348,798
Guano distributer, C. W. Nicholson	Railway rail chair, H. H. C. Sintzenich.       348.699         Railway switch, J. W. Adams       348,608
Gun case, L. Keller	Railway tie and fastening for rails, metallic, H.  L. De Zeng
Hame fastener, D. B. Baker       348,711         Hammer, pneumatic, Frederick & Trump       348,837         Hammer, pneumatic, E. N. Trump       348,870	of, construction of, H. P. Adams
Harrow, J. M. Childs	Railways, safety bar for, F. S. Guerber
Harvester, corn, C. J. Hartley       348,627         Hats, machinery for felting, planking, sizing, etc.,       848,825	barger
Hay elevating fork, W. Louden	Refrigeration, method of and means for, Chase & Smith
Hay fork, horse, E. McChristian	Refrigerator, Weitz & Klassert
Hay rake, horse, G. E. Robison	
Heating apparatus, E. F. Ward       348.602         Heating apparatus, steam, C. W. Rugg       348,982         Heel natting machine, F. F. Raymond, 2d       346,689	Roller. See Anti-friction roller.  Roller mill, H. J. Gilbert
Hoist, pendulum, J. Sattes	Roofing, D. Harger
Holder. See Book holder. Lamp holder. Match holder. Pillow sham holder. Rook. See Book band hook. Safety hook.	Roofing machine, J. Henning.         348,558           Rosette lock, Z. T. Furbish.         348,899           Rotary steam engine, W. K. Austin.         348,879
Hoop cutting machine, E. Powell       348,552         Horses, ankle boot for, H. H. Barn       348,614         Horseshoe, T. Penhorwood       349,661	Rubber belting, apparatus for manufacturing vulcanized, M. C. Clark
	Rubber step or carpet, F. A. Sawyer

ydraulic press, J. H. McGowan	Sand and gravel separator, S. Friend	48,666
ngot mould, J. Sabold	Sash lock, P. Seiler 3	48,696
ron. See Carriage seat corner iron. ack. See Lifting jack. oint. See Pipe joint. Rail joint.	Saw, drag, E. H. Griswold	<b>48,74</b> 9
ilin. See Brick and tile kiln.  inife grinder, automatic, C. J. Le Roy	Screw and drill tool, O. L. Neai	48.765
Initted fabric, E. E. Sibley	Seat. See Window seat.	
amp, electric arc, L. G. Bronson.       348,542         amp, electric arc, G. Pfannkuche.       348,927         amp hanger, electric, C. C. Haskins.       348.845	Secondary batteries or accumulators, manufacture of, Farbaky & Schenek	48,625
amp holder, incandescent, E. Weston	separator.	48,830
amps, switch socket for incandescent, Wight- man & Lemp		
antern, signal, G. C. Dressel		48,576
atch, D. M. Murray	Sheet metal grooving machine, power, C. R. Peas-	
atch, night, W. R. Briggs	lee	48,788
ifting jack, J. Baker		48.750
ock. See Car lock. Nut lock. Rosette lock. Sash lock.	Shovel blade, detachable, Z. H. Smith	48,794
ocomotive boiler, W. Dawson	Smoke consuming furnace, J. L. Peslin 3	<b>48,86</b> 3
oom stop motion, J. Megson	Spice and dredging box, L. Lemos 3	<b>48,752</b>
tall pouch, L. B. Lathrop	Spoke fitting machine, Mueller & Marx 3	48.922
(atch, C. T. Mackley       348,679         (atch holder, Putnam & Kirschbaum       348,688		
leasure, tape, E. H. Wheeler	Stairway, spiral, W. Horrocks	48,762
store service, J. P. Gruber         348,669           leasuring can, Lewis & Irish         348,564           least clear bloom, W. S. & W. L. Donker         348,264	Steam boiler attachment, C. G. Comegys	<b>48,5</b> 63
[eat clamp, W., Sr., & W. I. Parks, Jr	Steam generator, G. G. M. Hardingham	<b>4</b> 8,58 <b>3</b>
dedicating bed quilts, composition for, C. M. Kimball	Stove, C. P. White	48,808
(edicine, kidney diseases, remedy for, N. C. & A.         T. McCutcheon	Street sweeper, A. J. Reynolds	48,823
(etals, apparatus for utilizing the expansive and contractive power of, F. E. Hainley		
iddlings purifier, W. H. Likins	Suspender clasp, Shenfield & Gellman	
ould. See Ingot mould. op washing and wringing machine, E. W. Allen. 348,609	Swivel for watch chains, A. Abrahams	
ortar or composition for coating walls, M. Tur- ley	table. Folding table. Telephone, mechanical, W. H. Eastman	
(osquito screen attachment for hammocks. P. N.         Nelmes	Telephone switch, W. C. Turnbull	
ursery folding chair, F. B. Wilson       348,939         ut lock, J. W. McHugh       348,569	Tongue support, O. B. Pickett. 3. Tool, combination, I. J. Mandeville. 3.	48,580
il to extract paraffine, etc., apparatus for cooling, N. M. Henderson	Toy gun, J. G. Newbury	48,786
iler for loose pulleys, E. A. Kuhns	Tramway system, electric, M. H. Smith	48.792
reseparator, magnetic, C. Q. Payne. 348,771 versleeve, H. W. Converse. 348,618	Tricycle brake, H. J. Curtis	
adlock, W. J. Richards	Tricycles, clutch for. D. H. Rice	18.691
anel gauge, measuring rod, and trammel, com- bined, F. A. Humphrey348,67.1	Truck, car, M. G. Hubbard	18,836
aper box, S. Crump       348,547         aper box, H. S. Munson       348.924         aper, etc., die for cutting, S. Crump       348,548	Umbrella, M. M. Ray	8,600
assengerelevator, C. H. Read, Jr	Valve, F. E. & F. E. Small	8.590
etroleum. apparatus for burning, A. J. Stevens. 348,700 hotographic camera, E. B. Barker 348,712	ing. N. C. Bassett 34	
iano damper, E. Keller <i>et al.</i>	Vapor bath, C. A. Munro 34	8 <b>,923</b>
igeon hole case, H. D. Pursell. 348,930 illow sham holder, W. W. Ames 348.812	Vapor generator, J. A. Beardsley	18,772
ipe joint, E. Grueninger	Vehicle, side spring, J. R. Northrup	18,926
lanter, I. B. Walker	Velocipede, C. E. Courtney	8,692
low, C. Anderson       348,652         lows, plant shield for, J. H. Witt       348,941         ost. See k'ence post.	Velocipede wheel, N. M. Wilson	8,593
ress. See Baling press. Hydraulic press. rinters' leads, machine for shaving, H. F. Well-	Vise, M. Crawford	8.8 <b>2</b> 8
man		18,846
uller. See Cork puller. ump, Ř. Bean	Wall paper exhibiting device, C. J. Mitchell 34 Washing machine, W. V. Burgess	8,535
ack. See Stove rack. adiator, steam heating, W. W. Carman 348,615	Watch crowns, manufacture of, A. C. Dalzell	IS <b>,62</b> 0
afters, instrument for obtaining lengths and bevels of, H. Conlee	Water elevator, W. W. Thaxton	8,601 8,813
ail joint, E. A. Temple	Wells, tube clamp for oil, J. Holly	8,907
ailway gate, E. G. Williams	Window seat and bedstead, combined, M. Breth- erton	8,653
ailway rail chair, H. H. C. Sintzenich	erton	8,655
ailway tie and fastening for rails, metallic, H.  L. De Zeng348,550	Bretherton	18,943
ailway tracks and the constituent parts there- of, construction of, H. P. Adams	Wire straightener and cutter, O. Collins	
D. Dougherty	Yarn winding machine, W. D. Huse	
ake. See Hay rake. eapers and mowers, finger bar for, J. L. High-	Yoke center, neck, Sterner & Hawes	18.867
barger	DESIGNS.	
Smith         348,824           efrigerator, M. S. Millard         348,855	Coffin handlearm, O. McCarthy 1	
efrigerator, Weitz & Klassert	Cultivator shovel, wing, P. G. Johnson	
efrigerator car, C. Haffcke	hardware, ornamentation of builders', J. Loca-   ner	
eservoir, fluid, O. Intze	Rosette, A. R. Fuller	16,887 16,891
oller mill, H. J. Gilbert	Statuary, group of, J. Rogers 1	16,8 <b>54</b>
oofing, D. Harger       348.844         oofing machine, J. Henning       348,558		
osette lock. Z. T. Furbish	Beer, lager, J. Wassmer 1	

Safety hook, E. H. Smith:	
Sand and gravel separator, S. Friend	
Sash lock, P. Seiler	348,696
Saw, drag, E. H. Griswold Scissors, H. R. Kimbler	
Scraper, drag, F. W. Hubbard	342,740
Screw and drill tool, O. L. Neai	348.765
Sout Son Window sout	
Seal, E. J. Brooks.	348,884
Secondary batteries or accumulators, manufac- ture of, Farbaky & Schenek	
Separator. See Ore separator. Sand and gravel	
separator. Sewer gas trap, F. E. Cudell348,829.	848 830
Sewing machine bobbin winder, W. H. Reynolds	348,638
Sewing machine buttonhole attachment, W. Schott	949 640
Shaving apparatus, A. Partridge	
Sheet metal can, W. S. Dyer	
Sheet metal grooving machine, power, C. R. Peas- lee	<b>34</b> 8. <b>5</b> 77
Shell and making the same, G. F. Simonds	348,788
Shell, armor piercing, G. F. Simonds	
Shoe fastening, Everding & Olszewski	348.727
Shovel blade, detachable, Z. H. Smith	
Skirt facing, dress, S. M. & H. Moschcowitz	348,859
Smoke consuming furnace, J. I. Peslin	
Spice and dredging box, L. Lemos	348,752
Spindle bearing, G. H. Allen	348.651
Spoke fitting machine, Mueller & Marx Spout, sap, C. C. Post	
Spring. See Elliptic spring.	
Spring bolt, G. Crouch	348.662
Starching washed goods, E. A. E. Meyer	348,762
Steam boiler attachment, C. G. Comegys Steam engine, C. A. Jacobs	<b>34</b> 8.546 <b>34</b> 8.563
Steam generator, G. G. M. Hardingham	348.672
Stereotype plate and block, E. E. Pratt Stop block, J. P. & J. Goodman	
Stove, C. P. White	348,808
Stove rack and shelf, combination, A. J. Coats	348,889
Street sweeper, A. J. Reynolds	348,778   348,823
Sugar, etc., arch for boiling sap, E. Willis	
Supporter. See Garment supporter. Suspender clasp, Shenfleld & Gellman	348 607
Switch. See Railway switch. Telephone switch.	
Switch board, multiple, T. J. Perrin348,578, Swivel for watch chains, A. Abrahams	348,579 348,811
Table. See Corpse supporting table. Dining	010,011
table. Folding table.	248 896
Telephone, mechanical, W. H. Eastman Telephone switch, W. C. Turnbull	348.896 348,936
Telephone, mechanical, W. H. Eastman Telephone switch, W. C. Turnbull l'obacco, machine for manufacturing plug, J. L.	
Telephone, mechanical, W. H. Eastman Telephone switch, W. C. Turnbull  l'obacco, machine for manufacturing plug, J. L. Colhapp  Tongue support, O. B. Pickett	348,617 348,580
Telephone, mechanical, W. H. Eastman Telephone switch, W. C. Turnbull l'obacco, machine for manufacturing plug, J. L. Colhapp Tongue support, O. B. Pickett Tool, combination, I. J. Mandeville	348,617 348,580 848,565
Telephone, mechanical, W. H. Eastman	348,617 348,580 348,565 348,960
Telephone, mechanical, W. H. Eastman Telephone switch, W. C. Turnbull  l'obacco, machine for manufacturing plug, J. L. Colhapp  Tongue support, O. B. Pickett  Tool, combination, I. J. Mandeville  Toy gun, J. G. Newbury  Traction wheel, Sheer & Dillemuth  Tramway system, electric, M. H. Smith	348,617 348,580 348,565 348,960 348,786
Telephone, mechanical, W. H. Eastman  Telephone switch, W. C. Turnbull  Tobacco, machine for manufacturing plug, J. I. Colhapp	348,617 348,580 348,565 348,960 348,786
Telephone, mechanical, W. H. Eastman Telephone switch, W. C. Turnbull  l'obacco, machine for manufacturing plug, J. L. Colhapp  Tongue support, O. B. Pickett  Pool, combination, I. J. Mandeville Troy gun, J. G. Newbury  Traction wheel, Sheer & Dillemuth  Tramway system, electric, M. H. Smith  Trap. See Animal trap. Sewer gas trap.  Tree. See Boot or shoe tree.  Tricycle brake, H. J. Curtis	348,617 348,580 348,565 348,960 348,786 348,792
Telephone, mechanical, W. H. Eastman.  Telephone switch, W. C. Turnbull.  Tobacco, machine for manufacturing plug, J. I.  Colhapp  Tongue support, O. B. Pickett.  Tool, combination, I. J. Mandeville.  Toy gun, J. G. Newbury.  Traction wheel, Sheer & Dillemuth.  Tramway system, electric, M. H. Smith.  Trap. See Animal trap. Sewer gas trap.  Tree. See Boot or shoe tree.  Tricycle brake, H. J. Curtis.  Pricygles, clutch for, J. M. Marlin.	348,617 348,580 348,565 348,786 348,786 348,792 348,891 348,891
Telephone, mechanical, W. H. Eastman	348,617 348,580 348,565 348,786 348,792 348,891 348,891 348,891 348,835
Telephone, mechanical, W. H. Eastman Telephone switch, W. C. Turnbull  l'obacco, machine for manufacturing plug, J. L. Colhapp  Tongue support, O. B. Pickett  Tool, combination, I. J. Mandeville  Troy gun, J. G. Newbury  Traction wheel, Sheer & Dillemuth  Tramway system, electric, M. H. Smith  Trap. See Animal trap. Sewer gas trap.  Tree. See Boot or shoe tree.  Tricycle brake, H. J. Curtis  Tricycles, clutch for, J. M. Marlin  Tricycles, clutch for, D. H. Rice  Trousers stretcher, D. B. Falk  Pruck, car, M. G. Hubbard	348,617 348,580 348,565 348,786 348,792 348,792 348,680 348,691 348,680 348,691 348,835 348,741
Telephone, mechanical, W. H. Eastman  Telephone switch, W. C. Turnbull  Tobacco, machine for manufacturing plug, J. I.  Colhapp  Tongue support, O. B. Pickett  Tool, combination, I. J. Mandeville  Toy gun, J. G. Newbury.  Traction wheel, Sheer & Dillemuth  Tramway system, electric, M. H. Smith  Trap. See Animal trap. Sewer gas trap.  Tree. See Boot or shoe tree.  Tricycle brake, H. J. Curtis  Tricycles, clutch for, J. M. Marlin  Tricycles, clutch for, D. H. Rice  Frousers stretcher, D. B. Falk  Truck, car, M. G. Hubbard  Type, apparatus for setting, C. G. Fischer  Umbrella, M. M. Ray	348,617 348,580 348,565 348,766 348,792 348,792 348,691 348,691 348,691 348,691 348,683 348,741 348,336 348,584
Telephone, mechanical, W. H. Eastman  Telephone switch, W. C. Turnbull.  I'obacco, machine for manufacturing plug, J. I. Colhapp  Tongue support, O. B. Pickett.  Tool, combination, I. J. Mandeville  Toy gun, J. G. Newbury.  Traction wheel, Sheer & Dillemuth  Tramway system, electric, M. H. Smith.  Irap. See Animal trap. Sewer gas trap.  Tree. See Boot or shoe tree.  Tricycle brake, H. J. Curtis  Tricycles, clutch for, J. M. Marlin  Tricycles, clutch for. D. H. Rice  Frousers stretcher, D. B. Falk  Fruck, car, M. G. Hubbard  Lype, apparatus for setting, C. G. Fischer  Umbrella, M. M. Ray  Umbrella drip cup, D. F. Taber	348,617 348,580 348,565 348,766 348,792 348,792 348,691 348,691 348,691 348,691 348,691 348,691 348,691 348,691 348,691
Telephone, mechanical, W. H. Eastman  Telephone switch, W. C. Turnbull  Tobacco, machine for manufacturing plug, J. I.  Colhapp  Tongue support, O. B. Pickett  Tool, combination, I. J. Mandeville  Toy gun, J. G. Newbury  Traction wheel, Sheer & Dillemuth  Trams ysstem, electric, M. H. Smith  Trap. See Animal trap. Sewer gas trap.  Tree. See Boot or shoe tree.  Tricycle brake, H. J. Curtis  Tricycles, clutch for, J. M. Marlin  Tricycles, clutch for, D. H. Rice  Trousers stretcher, D. B. Falk  Truck, car, M. G. Hubbard  Type, apparatus for setting, C. G. Fischer  Umbrella, M. M. Ray  Jpholstering roll, G. W. & D. A. Moore, Jr  Valve, F. E. & F. E. Small	348,617 348,580 348,565 348,960 348,786 348,792 348,891 348,680 348,681 348,683 348,6741 348,836 348,634 348,634 348,634 348,634 348,634
Telephone, mechanical, W. H. Eastman  Telephone switch, W. C. Turnbull.  Tobacco, machine for manufacturing plug, J. I.  Colhapp  Tongue support, O. B. Pickett  Tool, combination, I. J. Mandeville  Toy gun, J. G. Newbury.  Traction wheel, Sheer & Dillemuth  Trams see Animal trap. Sewer gas trap.  Tree. See Boot or shoe tree.  Tricycle brake, H. J. Curtis  Tricycles, clutch for, J. M. Marlin  Tricycles, clutch for, D. H. Rice  Frousers stretcher, D. B. Falk  Frousers stretcher, D. B. Falk  Truck, car, M. G. Hubbard  Type, apparatus for setting, C. G. Fischer  Umbrella, M. M. Ray  Jumbrella drip cup, D. F. Taber  Jupholstering roll, G. W. & D. A. Moore, Jr  Valve, F. E. & F. E. Small  Valve, cistern overflow, J. Demarest	348,617 348,580 348,565 348,960 348,786 348,792 348,891 348,680 348,681 348,683 348,6741 348,836 348,634 348,634 348,634 348,634 348,634
Telephone, mechanical, W. H. Eastman  Telephone switch, W. C. Turnbull.  Tobacco, machine for manufacturing plug, J. I.  Colhapp  Tongue support, O. B. Pickett  Tool, combination, I. J. Mandeville  Toy gun, J. G. Newbury.  Traction wheel, Sheer & Dillemuth  Trams see Animal trap. Sewer gas trap.  Tree. See Boot or shoe tree.  Tricycle brake, H. J. Curtis  Tricycles, clutch for, J. M. Marlin  Tricycles, clutch for, D. H. Rice  Frousers stretcher, D. B. Falk  Frousers stretcher, D. B. Falk  Truck, car, M. G. Hubbard  Type, apparatus for setting, C. G. Fischer  Umbrella, M. M. Ray  Jumbrella drip cup, D. F. Taber  Jupholstering roll, G. W. & D. A. Moore, Jr  Valve, F. E. & F. E. Small  Valve, cistern overflow, J. Demarest	348,617 348,580 348,565 348,786 348,792 348,891 348,891 348,835 348,741 348,836 348,594 348,630 348,634 348,636 348,636 348,636
Telephone, mechanical, W. H. Eastman  Telephone switch, W. C. Turnbull  Tobacco, machine for manufacturing plug, J. I.  Colhapp  Tongue support, O. B. Pickett  Tool, combination, I. J. Mandeville  Toy gun, J. G. Newbury  Traction wheel, Sheer & Dillemuth  Tramway system, electric, M. H. Smith  Trap. See Animal trap. Sewer gas trap.  Tree. See Boot or shoe tree.  Tricycle brake, H. J. Curtis  Tricycles, clutch for, J. M. Marlin  Tricycles, clutch for, D. H. Rice  Frousers stretcher, D. B. Falk  Truck, car, M. G. Hubbard  Type, apparatus for setting, C. G. Fischer  Umbrella, M. M. Ray  Umbrella drip cup, D. F. Taber  Upholstering roll, G. W. & D. A. Moore, Jr  Valve, F. E. & F. E. Small  Valve, cistern overflow, J. Demarest  Valve for hydraulic elevators, automatic regulating, N. C. Bassett  Valve, slide, Z. T. Reno	348,617 348,580 348,565 348,786 348,786 348,789 348,891 348,680 348,691 348,681 348,683 348,741 348,836 348,604 348,604 348,603 348,663
Telephone, mechanical, W. H. Eastman.  Telephone switch, W. C. Turnbull.  Tobacco, machine for manufacturing plug, J. I.  Colhapp  Tongue support, O. B. Pickett.  Tool, combination, I. J. Mandeville  Toy gun, J. G. Newbury.  Traction wheel, Sheer & Dillemuth.  Tramway system, electric, M. H. Smith.  Trap. See Animal trap. Sewer gas trap.  Tree. See Boot or shoe tree.  Tricycle brake, H. J. Curtis  Tricycles, clutch for, J. M. Marlin.  Tricycles, clutch for, D. H. Rice.  Truck, car, M. G. Hubbard.  Type, apparatus for setting, C. G. Fischer  Umbrella M. M. Ray.  Umbrella drip cup, D. F. Taber.  Upholstering roll, G. W. & D. A. Moore, Jr.  Valve, F. E. & F. E. Small.  Valve, cistern overflow, J. Demarest  Valve for hydraulic elevators, automatic regulating, N. C. Bassett	348,617 348,569 348,565 348,960 348,766 348,792 348,891 348,859 348,859 348,853 348,853 348,853 348,663 348,663 348,663 348,663 348,663
Telephone, mechanical, W. H. Eastman  Telephone switch, W. C. Turnbull.  Tobacco, machine for manufacturing plug, J. I.  Colhapp  Tongue support, O. B. Pickett  Tool, combination, I. J. Mandeville  Toy gun, J. G. Newbury.  Traction wheel, Sheer & Dillemuth  Trams see Animal trap. Sewer gas trap.  Trap. See Animal trap. Sewer gas trap.  Tree. See Boot or shoe tree.  Tricycle brake, H. J. Curtis.  Tricycles, clutch for, J. M. Marlin.  Tricycles, clutch for, D. H. Rice  Trousers stretcher, D. B. Falk.  Truck, car, M. G. Hubbard.  Type, apparatus for setting, C. G. Fischer  Umbrella, M. M. Ray.  Umbrella drip cup, D. F. Taber.  Upholstering roll, G. W. & D. A. Moore, Jr.  Valve, F. E. & F. E. Small.  Valve, cistern overflow, J. Demarest  Valve for hydraulic elevators, automatic regulating, N. C. Bassett  Valve, slide, Z. T. Reno.  Vapor generator, J. A. Beardsley	348,617 348,565 348,766 348,796 348,792 348,891 348,891 348,891 348,835 348,741 348,835 348,741 348,634 348,634 348,634 348,634 348,630 348,630 348,630 348,630 348,630 348,630 348,630 348,630 348,630 348,630 348,630 348,630 348,777 348,923 348,777 348,923 348,777
Telephone, mechanical, W. H. Eastman.  Telephone switch, W. C. Turnbull.  Tobacco, machine for manufacturing plug, J. L.  Colhapp  Tongue support, O. B. Pickett.  Tool, combination, I. J. Mandeville.  Toy gun, J. G. Newbury.  Traction wheel, Sheer & Dillemuth.  Tramway system. electric, M. H. Smith.  Trap. See Animal trap. Sewer gas trap.  Tree. See Boot or shoe tree.  Tricycle brake, H. J. Curtis.  Pricycles, clutch for, J. M. Marlin.  Tricycles, clutch for, D. H. Rice.  Prousers stretcher, D. B. Falk.  Pruck, car, M. G. Hubbard.  Fype, apparatus for setting, C. G. Fischer.  Umbrella, M. M. Ray.  Umbrella, M. M. Ray.  Umbrella, M. M. Ray.  Upholstering roll, G. W. & D. A. Moore, Jr.  Valve, istern overflow, J. Demarest.  Valve, distern overflow, J. Demarest.  Valve for hydraulic elevators, automatic regulating, N. C. Bassett	348,617 348,569 348,565 348,760 348,786 348,792 348,891 348,689 348,691 348,835 348,741 348,336 348,534 348,600 548,634 348,634 348,600 348,634 348,600
Telephone, mechanical, W. H. Eastman  Telephone switch, W. C. Turnbull  Tolobacco, machine for manufacturing plug, J. I.  Colhapp  Tongue support, O. B. Pickett  Tool, combination, I. J. Mandeville  Toy gun, J. G. Newbury  Traction wheel, Sheer & Dillemuth  Trams See Animal trap. Sewer gas trap.  Trap. See Animal trap. Sewer gas trap.  Tree. See Boot or shoe tree.  Tricycle brake, H. J. Curtis  Tricycles, clutch for, J. M. Marlin  Tricycles, clutch for, D. H. Rice  Truck, car, M. G. Hubbard  Type, apparatus for setting, C. G. Fischer  Umbrella M. M. Ray  Jmbrella drip cup, D. F. Taber  Jpholstering roll, G. W. & D. A. Moore, Jr  Valve, F. E. & F. E. Small  Valve, cistern overflow, J. Demarest  Valve, slide, Z. T. Reno  Vapor & Fenerator, J. A. Beardsley  Vaporizing and distilling liquids, I. H. Pearce  Vehicle, side spring, J. R. Northrup  Vehicle, itwo-wheeled, Sortor & Bennett	348,617 348,565 348,766 348,796 348,792 348,891 348,891 348,891 348,835 348,741 348,836 348,590 348,590 348,590 348,590 348,590 348,777 348,663 348,590 348,777 348,663
Telephone, mechanical, W. H. Eastman  Telephone switch, W. C. Turnbull.  Tobacco, machine for manufacturing plug, J. L.  Colhapp  Tongue support, O. B. Pickett  Tool, combination, I. J. Mandeville  Toy gun, J. G. Newbury.  Traction wheel, Sheer & Dillemuth.  Tramway system, electric, M. H. Smith.  Trap. See Animal trap. Sewer gas trap.  Tree. See Boot or shoe tree.  Tricycle brake, H. J. Curtis.  Tricycles, clutch for, J. M. Marlin.  Tricycles, clutch for, D. H. Rice.  Trousers stretcher, D. B. Falk.  Truck, car, M. G. Hubbard.  Type, apparatus for setting, C. G. Fischer  Umbrella, M. M. Ray.  Umbrella drip cup, D. F. Taber.  Upholstering roll, G. W. & D. A. Moore, Jr.  Valve, F. E. & F. E. Small.  Valve, Cistern overflow, J. Demarest  Valve, slide, Z. T. Reno.  Vapor generator, J. A. Beardsley.  Vapor generator, J. A. Beardsley.  Vahicle, side spring, J. R. Northrup.  Vehicle, side spring, J. R. Northrup.  Vehicle, side spring, J. R. Northrup.  Vehicle, side spring, J. R. Northrup.	348,617 348,569 348,565 348,760 348,786 348,792 348,891 348,681 348,683 348,691 348,584 348,693 348,564 348,564 348,564 348,564 348,560 348,777 348,603 348,777 348,603 348,777 348,923 348,772 348,642 348,777 348,642 348,777 348,642 348,777 348,642 348,777 348,642 348,777 348,642 348,777 348,642 348,777 348,642 348,775 348,642 348,775
Telephone, mechanical, W. H. Eastman.  Telephone switch, W. C. Turnbull.  Tobacco, machine for manufacturing plug, J. L.  Colhapp	348,617 348,565 348,766 348,796 348,796 348,792 348,891 348,683 348,691 348,835 348,741 348,590 348,590 348,590 348,663 348,590 348,777 348,923 348,663 348,777 348,923 348,772 348,642 348,772 348,642 348,795 348,795 348,795
Telephone, mechanical, W. H. Eastman  Telephone switch, W. C. Turnbull.  Tobacco, machine for manufacturing plug, J. L.  Colhapp  Tongue support, O. B. Pickett  Tool, combination, I. J. Mandeville  Toy gun, J. G. Newbury.  Traction wheel, Sheer & Dillemuth  Trams system, electric, M. H. Smith.  Trap. See Animal trap. Sewer gas trap.  Tree. See Boot or shoe tree.  Tricycle brake, H. J. Curtis.  Tricycles, clutch for, J. M. Marlin.  Tricycles, clutch for, D. H. Rice  Trousers stretcher, D. B. Falk.  Truck, car, M. G. Hubbard.  Type, apparatus for setting, C. G. Fischer  Umbrella, M. M. Ray.  Jmbrella drip cup, D. F. Taber.  Jpholstering roll, G. W. & D. A. Moore, Jr.  Valve, F. E. & F. E. Small.  Valve, cistern overflow, J. Demarest  Valve, slide, Z. T. Reno.  Vapor generator, J. A. Beardsley.  Vapor generator, J. A. Beardsley.  Vaporizing and distilling liquids, L. H. Pearce  Vehicle, side spring, J. R. Northrup.  Vehicle, iwo-wheeled, Sortor & Bennett  Velocipede wheel, D. H. Rice.  Velocipede wheel, N. M. Wilson.  Veneering, C. W. Spurr.	348,617 348,569 348,565 348,766 348,792 348,891 348,689 348,681 348,683 348,534 348,600 548,634 348,600 548,634 348,600 348,717 348,923 348,777 348,923 348,777 348,923 348,610 348,777 348,923 348,610 348,777 348,623 348,610 348,777 348,623 348,610 348,777 348,623 348,610 348,736 348,610 348,736 348,610 348,736 348,636
Telephone, mechanical, W. H. Eastman.  Telephone switch, W. C. Turnbull.  Tobacco, machine for manufacturing plug, J. L.  Colhapp	348,617 348,565 348,766 348,796 348,796 348,792 348,891 348,683 348,691 348,835 348,741 348,835 348,741 348,590 348,590 348,590 348,777 348,923 348,663 348,777 348,923 348,772 348,662 348,772 348,662 348,772 348,662 348,772 348,663
Telephone, mechanical, W. H. Eastman  Telephone switch, W. C. Turnbull  Tolobacco, machine for manufacturing plug, J. L.  Colhapp  Tongue support, O. B. Pickett  Tool, combination, I. J. Mandeville  Tool, combination, I. J. Mandeville  Toy gun, J. G. Newbury  Traction wheel, Sheer & Dillemuth  Trams See Animal trap. Sewer gas trap.  Trap. See Animal trap. Sewer gas trap.  Tree. See Boot or shoe tree.  Tricycle brake, H. J. Curtis  Tricycles, clutch for, J. M. Marlin  Tricycles, clutch for, D. H. Rice  Truck, car, M. G. Hubbard  Type, apparatus for setting, C. G. Fischer  Umbrella drip cup, D. F. Taber  Jpholstering roll, G. W. & D. A. Moore, Jr  Valve, F. E. & F. E. Small  Valve, cistern overflow, J. Demarest  Valve, slide, Z. T. Reno  Vapor xenerator, J. A. Beardsley  Vapor in A. Munro  Vapor in A. Beardsley  Vehicle, side spring, J. R. Northrup  Vehicle, iwo-wheeled, Sortor & Bennett  Velocipede wheel, D. H. Rice  Velocipede wheel, D. H. Rice  Velocipede wheel, N. M. Wilson  Vense, pipe and rod, J. G. Baker  348.827, Vise, M. C. Tawford	348,617 348,565 348,766 348,796 348,792 348,891 348,891 348,891 348,835 348,741 348,835 348,741 348,836 348,530 348,530 348,530 348,530 348,530 348,663 348,530 348,663
Telephone, mechanical, W. H. Eastman.  Telephone switch, W. C. Turnbull.  Tolobacco, machine for manufacturing plug, J. L.  Colhapp  Tongue support, O. B. Pickett.  Tool, combination, I. J. Mandeville.  Toy gun, J. G. Newbury.  Traction wheel, Sheer & Dillemuth.  Tramway system, electric, M. H. Smith.  Trap. See Animal trap. Sewer gas trap.  Tree. See Boot or shoe tree.  Tricycle brake, H. J. Curtis.  Tricycles, clutch for, J. M. Marlin.  Tricycles, clutch for, D. H. Rice.  Trousers stretcher, D. B. Falk.  Truck, car, M. G. Hubbard.  Type, apparatus for setting, C. G. Fischer.  Umbrella M. M. Ray.  Umbrella drip cup, D. F. Taber.  Jpholstering roll, G. W. & D. A. Moore, Jr.  Valve, F. E. & F. E. Small.  Valve, cistern overflow, J. Demarest  Valve for hydraulic elevators, automatic regulating, N. C. Bassett  Valve, slide, Z. T. Reno.  Vapor path, C. A. Munro.  Vapor generator, J. A. Beardsley.  Vehicle, wo-wheeled, Sortor & Bennett  Vehicle, two-wheeled, Sortor & Bennett  Velocipede wheel, D. H. Rice.  Velocipede wheel, D. H. Rice.  Velocipede wheel, D. H. Rice.  Veneering, C. W. Spurr.  Vessel, marine, R. A. Reed  Vise, pipe and rod, J. G. Baker.  Vagon brake, J. W. A. & M. Beaird.	348,617 348,569 348,565 348,760 348,760 348,891 348,689 348,691 348,633 348,641 348,336 348,544 348,634 348,634 348,634 348,642 348,548 348,610 348,717 348,623 348,642 348,642 348,642 348,642 348,642 348,642 348,642 348,642 348,653 348,653 348,653 348,653 348,653
Telephone, mechanical, W. H. Eastman  Telephone switch, W. C. Turnbull  Tolobacco, machine for manufacturing plug, J. L.  Colhapp  Tongue support, O. B. Pickett  Tool, combination, I. J. Mandeville  Tool, combination, I. J. Mandeville  Toy gun, J. G. Newbury  Traction wheel, Sheer & Dillemuth  Trams See Animal trap. Sewer gas trap.  Trap. See Animal trap. Sewer gas trap.  Tree. See Boot or shoe tree.  Tricycle brake, H. J. Curtis  Tricycles, clutch for, J. M. Marlin  Tricycles, clutch for, D. H. Rice  Truck, car, M. G. Hubbard  Type, apparatus for setting, C. G. Fischer  Umbrella, M. M. Ray  Jmbrella drip cup, D. F. Taber  Jpholstering roll, G. W. & D. A. Moore, Jr  Valve, F. E. & F. E. Small  Valve, cistern overflow, J. Demarest  Valve, slide, Z. T. Reno  Vapor & Fenerator, J. A. Beardsley  Vaporizing and distilling liquids, L. H. Pearce  Vehicle, side spring, J. R. Northrup  Vehicle, iwo-wheeled, Sortor & Bennett  Velocipede wheel, D. H. Rice  Velocipede wheel, N. M. Wilson  Veneering, C. W. Spurr  Vessel, marine, R. A. Reed  Vise, M. C. E. Hatheway  Wagon gear, E. E. Hatheway  Wall paper exhibiting device, C. J. Mitchell  Wall paper exhibiting device, C. J. Mitchell	348,617 348,565 348,766 348,766 348,792 348,891 348,891 348,891 348,835 348,741 348,835 348,544 348,663 348,564 348,563 348,577 348,663 348,663 348,662 348,662 348,662 348,662 348,662 348,662 348,663 348,663 348,775 348,663 348,775 348,663 348,775 348,663 348,775 348,663 348,775 348,663 348,775 348,663 348,785 348,663 348,663 348,663 348,663 348,663 348,663 348,663 348,663
Telephone, mechanical, W. H. Eastman  Telephone switch, W. C. Turnbull  Tolobacco, machine for manufacturing plug, J. L.  Colhapp  Tongue support, O. B. Pickett  Tool, combination, I. J. Mandeville  Tool, combination, I. J. Mandeville  Toy gun, J. G. Newbury  Traction wheel, Sheer & Dillemuth  Trams See Animal trap. Sewer gas trap.  Trap. See Animal trap. Sewer gas trap.  Tree. See Boot or shoe tree.  Tricycle brake, H. J. Curtis  Tricycles, clutch for, J. M. Marlin  Tricycles, clutch for, D. H. Rice  Truck, car, M. G. Hubbard  Type, apparatus for setting, C. G. Fischer  Umbrella, M. M. Ray  Jmbrella drip cup, D. F. Taber  Jpholstering roll, G. W. & D. A. Moore, Jr  Valve, F. E. & F. E. Small  Valve, cistern overflow, J. Demarest  Valve, slide, Z. T. Reno  Vapor & Fenerator, J. A. Beardsley  Vaporizing and distilling liquids, L. H. Pearce  Vehicle, side spring, J. R. Northrup  Vehicle, iwo-wheeled, Sortor & Bennett  Velocipede wheel, D. H. Rice  Velocipede wheel, N. M. Wilson  Veneering, C. W. Spurr  Vessel, marine, R. A. Reed  Vise, M. C. E. Hatheway  Wagon gear, E. E. Hatheway  Wall paper exhibiting device, C. J. Mitchell  Wall paper exhibiting device, C. J. Mitchell	348,617 348,565 348,766 348,766 348,792 348,891 348,891 348,891 348,835 348,741 348,835 348,544 348,663 348,564 348,563 348,577 348,663 348,663 348,662 348,662 348,662 348,662 348,662 348,662 348,663 348,663 348,775 348,663 348,775 348,663 348,775 348,663 348,775 348,663 348,775 348,663 348,775 348,663 348,785 348,663 348,663 348,663 348,663 348,663 348,663 348,663 348,663
Telephone, mechanical, W. H. Eastman.  Telephone switch, W. C. Turnbull.  Tobacco, machine for manufacturing plug, J. L.  Colhapp	348,617 348,565 348,766 348,796 348,796 348,891 348,680 348,891 348,835 348,741 348,836 348,364 348,364 348,590 348,590 348,590 348,777 348,663 348,590 348,772 348,662 348,662 348,662 348,662 348,662 348,663
Telephone, mechanical, W. H. Eastman.  Telephone switch, W. C. Turnbull.  Tobacco, machine for manufacturing plug, J. L.  Colhapp	348,617 348,565 348,766 348,796 348,796 348,891 348,680 348,691 348,835 348,741 348,835 348,741 348,663 348,584 348,584 348,586 348,584 348,663 348,663 348,677 348,683 348,692 348,772 348,693
Telephone, mechanical, W. H. Eastman.  Telephone switch, W. C. Turnbull.  Tobacco, machine for manufacturing plug, J. L.  Colhapp	348,617 348,565 348,766 348,796 348,796 348,792 348,891 348,681 348,681 348,691 348,594 348,594 348,594 348,590 348,777 348,663 348,590 348,777 348,663 348,590 348,772 348,663 348,663 348,772 348,663 348,772 348,663 348,772 348,642 348,693 348,795 348,693
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Telephone, mechanical, W. H. Eastman. Telephone switch, W. C. Turnbull. Tobacco, machine for manufacturing plug, J. L. Colhapp	348,617 348,565 348,766 348,796 348,796 348,792 348,891 348,891 348,893 348,913 348,835 348,544 348,590 348,590 348,590 348,777 348,923 348,663 348,590 348,777 348,663 348,590 348,772 348,663 348,590 348,772 348,663 348,590 348,772 348,663 348,590 348,775 348,693 348,59
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Telephone, mechanical, W. H. Eastman.  Telephone switch, W. C. Turnbull.  Tobacco, machine for manufacturing plug, J. L.  Colhapp	348,617 348,565 348,766 348,766 348,763 348,891 348,681 348,681 348,683 348,610 348,634 348,634 348,634 348,634 348,634 348,634 348,634 348,663 348,610 348,777 348,663 348,610 348,773 348,610 348,613
Telephone, mechanical, W. H. Eastman.  Telephone switch, W. C. Turnbull.  Tobacco, machine for manufacturing plug, J. L.  Colhapp	348,617 348,565 348,766 348,792 348,891 348,891 348,891 348,835 348,741 348,835 348,741 348,636 348,630 348,630 348,630 348,630 348,630 348,630 348,630 348,630 348,630 348,630 348,642 348,642 348,642 348,643 348,643 348,643 348,643 348,643 348,643 348,643 348,643 348,643 348,643 348,643 348,643 348,643 348,643 348,643 348,645 348

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