ENGINEERING INVENTIONS.

A snow plow has been patented by Mr. Thomas Y. Woolford, of Augusta, West Va. This invention covers an improvement in that class of plows having a revolving wheel in front, with periphera cutters or scrapers that dig into the snow and remove it to either side, being mounted on a truck or car and propelled by a locomotive.

MISCELLANEOUS INVENTIONS.

A washing machine has been patented by Mr. Albert M. Wilson, of Greenleaf, Kansas. This invention covers a novel construction and combination of parts in a machine designed to work easily and quickly cleanse the clothes, while being simple, inexpensive, and durable.

A dish washer has been patented by Mr. William D. Miller, of Florence, Mass. It consists of a bundle of connected links or rings of wire attached to a suitable rigid handle, whereby the washer may be conveniently and effectively used without putting the

A nut lock has been patented by Dr. Aaron C. Vaughan, of Shane's Crossing, Ohio. It consists of a relatively thin spring nut having both the body of the nut and its thread curved, by bending the nut after threading, to clamp the bolt by its own elasticity just outside of the regular nut.

A folding fire blower has been patented by Mr. James M. McMeen, of Danville, Ill. It is made of two series of plates pivoted to a central strip, and connected at their outer ends to side strips carrying fasteners for engaging the jambs of the fireplace, the device being readily folded to occupy but little space.

A hat stretcher has been patented by Mr. Gustav E. Schellman, of New York City. Combined with an oval shaped divided main band, and a screw for adjusting its sections in or out, are independently adjustable outer curved wings to conform to the exterior of the sections, to make a hat conform to special or peculiar shapes of the head.

A leader for scarf neck bands has been patented by Mr. Michael D. Levy, of New York City. It is for attachment to the free end of the band of the scarf, for drawing the extremity of the band through accomplishing the work with economy of time and the scarf, and consists of a long narrow body, flattened labor. at one end and with hooks at the other end, with keepers for the points of the hooks.

Atrousers stretcher has been patented by Mr. George H. Coursen, of Baltimore, Md. Combined with a rectangular frame and a cross bar fitted to slide on its side pieces, are a stationary and a sliding clamp, with other novel features, designed to make a stretcher that is easily manipulated, inexpensive, and that will be all in one piece.

A tricycle has been patented by Mr Patrick Gallagher, of New York City. It has a front guide wheel and rear driving wheels mounted on a light and strong iron framework, with a suitable seat, the machine being propelled by a crank handle mounted in arms pivoted to uprights on the frame and secured in position by adjusting bolts.

A guide for sewing machines has been patented by Mary E. Hunter, of Osborn, Ohio. This invention covers a novel construction of gauge plate, es pecially adapted for use in sewing straw braid, and which may be applied to any sewing machine, whereby the braid may be held easily to place, so it can be rapidly and accurately stitched.

A washing machine has been patented hy Alois Mueller, of Neillsville, Wis. It is a wash boiler and washing machine combined in one, the invention covering various novelfeatures of construction and combinations of parts designed to make a machine very easy upon the clothes treated, while strong, simple, and convenient,

The manufacture of fibers of wood for spinning purposes forms the subject of a patent issued to Mr. Alexander Mitscherlich, of Freiberg, Baden, Germany. The wood is first boiled in a chemical solution, as sulphurous acid or bisulphite, the fibers then dried and softened in water, and afterward subjected to | right or left hand faucet. repeated mechanical pinchings.

A detachable fire pan for stoves has heen patented by Gertrude N. Howe, of New York City. It is adapted to be set in the top openings of stoves, ranges, etc., for building a fire only beneath the vessel to be heated, and thus avoiding the necessity of heating the whole stove, being of very simple and economical construction, and designed to be very convenient in

A foot rest for stools has been patented by Mr. Gustave La Barbe, of Roseland, Ill. It consists of a pair of clamps, an adjustable ear for varying the inclination of the foot rest support, and an arm hinged hotenha car adented receive the hoard f ing the support for the feet, which may be attached in any desired position, let down when not in use, or folded up out of the way.

A life buoy has been patented by Mr. Philip Hichborn, of the U. S. Navy, Washington, D. C. It is a float with torch attached, having a chamber for combustibles, and a breakable or detachable seal which normally closes the mouth of the chamber water tight, being held suspended at the side or stern of a essel, to be instantly released and allowed to fall into the water when required for use.

A pump has been patented by Mr. Hiram J. Wells, of Nashville, Tenn. The cylinder has an air-valved outlet at its lower end, the cover having a valved tube or cylinder at its upper end, and the plunger having a tubular rod with a series of air inlets at its upper end and a valve at its lower end, the design being to purify and remove extraneous substances from the water as it is being pumped.

A door or other mat has been patented by Mr. Alanson Cary, of New York City. It cousists the invention being an improvement of a series of connected corrugated parallel flexible tented invention of the same inventor.

strips set edgewise, with their convex portions facing the concave portions of the adjacent strips, making a mat designed to be largely self-cleaning, and presenting a scraper-like rubbing surface for removing mud and dirt from boots or shoes.

A gate has been patented by Mr. Urbian L. Shaw, of Westfield, Ind. It consists of a series of vertical strips or slats to which diagonal and parallel bars are pivoted in such manner that the gate may be opened by folding the parts up at one side, the construction being simple, while the gate will not be easily clogged by snow or ice, and cannot be readily raised by animals.

A wall heating system has been patented by Mr. John D. Parker, of Fort Riley, Kansas, A series of flues is formed in the walls, communicating with a furnace in the lower part of the building, so that the heat of the furnace may be communicated to the walls and thence through the building, there being grates in the apartments to regulate the temperature by supplying the remainder of the heat necessary

A mustard package has been patented by Mr. William P. Crary, of Brooklyn, N. Y. It is preferably made of glass, with a lid fitted upon it, combined with a sheet of lead and a sheet of paper placed between the lead and the contents of the package, the package being sealed at the edge of the lid by a strip of paper or other material secured by an adhesive substance both to the lid and the body of the package.

An apparatus for stopping and starting vehicles has been patented by Messrs. John J. Hooker of Tideswell, Stockport, Derby County, and Herman Lescher and Robert G. Schwarz, of London, England. It consists of a spring barrel sliding on one of the wheel axles, with friction clutch and other gear, whereby power may be stored on descending hills and in stopping, and given out to the axle for propelling the car in starting.

A wire fence building apparatus has been patented by Messrs. John A. Hooton and Gilbert L. Wiard, of Clifton, Neb. This invention is designed to provide an inexpensive spool rack and connected tension devices by which the wires may be held and fed in pairs to the twisting device, and maintained at uniform tension to assure proper weaving in of the pickets,

An apparatus for casting traps has een patented by Mr. William M. Smeaton, of Camden Town, Middlesex County, England. It has a sectional core consisting of two movable sections at approximately right angles to each other, two hinged sections carried by one of the movable sections, while there are loose sections on the latter, with other novel features, for casting a complete trap for water closets, etc., in one piece, without seam or joint.

A well digging apparatus has been patented by Mr. William Lowman, of Marionville, Pa. This invention covers an improvement on a former patented invention of the same inventor, in apparatus for digging wells for water, oil, or gas, which may be quickly set up and taken down, is easily folded and carried by a single wagon, and in which the leverage is such that one man can operate the drill to sink wells with advantage and facility.

A process for reducing ores has been pa tented by Messrs. Theodore Michaut, Pierre Connoy, and Frank J. Wiest, of Boulder City, Col. It consists in mixing the pulverized ores with a pulverized compound of stated proportions of feldspar, carbonate of lime, silica, carbonate of potassa, etc., and then subjecting the mixed mass to heat, the process being especially designed for desulphurizing auriferous pyrites and other sulphurous ores.

A right and left hand stop and waste faucet has been patented by Mr. William Briggs, of Brooklyn, N.Y. The faucet casing has two sets of pin-receiving apertures at right angles to each other in one end, surrounding the key bore, the key extending through such bore and having transverse projections on its projecting end, with other novel features, providing a means whereby one device may be made to serve as a

A machine for puncturing sheet metal has been patented by Messrs. George F. Waelde and Herman G. Cerv. of Brooklyn. N. Y. Combined with a table and reciprocating frame having a series of longitudinal slotted tool-carrying bars, are clamps sliding on the bars, and other novel features, making a simple and durable apparatus, especially adapted for puncturing the members of mouldings in sheets of iron or other

A horse power has been patented by Mr. Allen Sampson, of Victoria, Texas. The machine has a tilting carriage, a lever fulcrumed on its frame being connected to the machinery to be driven, while weight boxes are held to the lever and travel on the carriage during its tilting movement, with mechanism for rocking the lever and thereby tilting the carriage making a machine by or from which a cotton gin, grist mill, sawmill, etc., may be run.

A lamp wick has been patented by Mr Adolfo S. Yanez, of Havana, Cuba. The wick tube has a supplemental open-ended mouth piece, to form longitudinally extending spaces between the tube and mouth piece, with spacing projections, and a granular filling is used on the top of the wick in the spaces, with other novel features, designed to produce a flame which will not easily become ragged or irregular from protracted burning, while the wick can be easily cared for.

A paper box has been patented by Messrs. John F. Diemer, of Elizabeth, N. J., and Paul E. Gonon, of New York City. It has a metallic bottom plate with side bends, metallic strips on its sides a locking plate, and other novel features, making a box for filing folded papers, documents, etc., of which the parts can be conveniently shipped in folded condition the invention being an improvement on a former pa-

A doubling winding machine has been patented by Mr. Alphonse Ryo, of Roubsix, Nord, France. Its construction is such that, by the oscillation of a vertically swinging frame or bracket, the axis of the varn guides is raised and they are arrested at the same level by an adjustable stop bar, to throw their eyes well forward within reach of the attendant, to render easy the piecing up of the yarn, the invention also covering various novel features of constructionand the arrangement of parts.

A machine for cutting key seats has been patented by Mr. George Benson, of Durham, England. It is for cutting key seats in wheels or pulleys, and is a reciprocating cutter in a frame having a slotted bed plate with adjustable clamps, and other novel features, being adapted to hold the saw or cutter to its work and automatically relieve it in its up stroke, to accurately adjust for the depth of cut, and provide for holdingwheels of different thickness and diameter.

A regenerative gas furnace has been patented by Mr. Gottfried Pietzka, of Witkowitz, Moravia, Austria-Hungary. It is designed for rever beratory furnaces used for smelting pig metal, reheating. puddling, etc., the gas generators being at one end of the furnace and the regenerators having reversing valves and being connected with the ends of the furnace, the waste gases being passed through the regenerators, after which air is passed through them in connection with the gases from the generators.

SCIENTIFIC AMERICAN

BUILDING EDITION.

SEPTEMBER NUMBER.-(No. 35.)

TABLE OF CONTENTS.

- 1. Elegant plate, in colors, of a dwelling lately erected on Jersey City Heights, N. J., with floor plans, sheet of details, etc. Cost, fourteen thousand
- 2. Elegant plate, in colors, of a comfortable dwelling, costing nineteen hundred and fifty dollars. Floor plans and details.
- 3. Perspective view and floor plans of a beautiful residence at Rochelle Park, near New York. Our engraving was made from a photograph taken specially for the Scientific American Build-
- Perspective and floor plans of the residence of I. C. Goodridge, Esq., at Rochester, N. Y.
- 5. A Queeu Anne cottage lately erected in Rochelle Park, near New York. Perspective and floor plans. Cost, five thousand six hundred dollars, complete.
- 6. A beautiful seaside cottage, at Bath Beach, Long Island. Floor plans and perspective. Cost, about two thousand five hundred dollars.
- A modern cottage for eighteen hundred dollars, lately built, at Asbury Park, N. J. Perspective and floor plans.
- 8. A beautiful house in the colonial style, lately erected, in Rochelle Park, New Rochelle, N. Y. Perspective view and floor plans. Cost, ten thou sand dollars, complete.
- Engraving showing perspective, with accompanying plans, of a six room cottage, lately erected on Hancock Avenue, Bridgeport, Conn., at a cost of sixteen hundred dollars.
- 10. A one thousand dollar cottage, built at Bridgeport, Conn. Perspective and plans
- 11. A cottage for two thousand eight hundred dollars built at Bridgeport, Conn. Plans and perspective.
- A basement cottage, lately built, at Bath Beach, Long Island, at a cost of two thousand three hundred dollars, complete. Floor plans and perspective.
- 13. Page of engraving showing various residences and
- Photographicillustration showing a cottage for two thousand five hundred dollars, built at Bridgeport, Conn. Perspective and floor plans.
- A residence at Nangis. Plans and perspective.
- A beautiful double house for four thousand five hundred dollars, lately erected in Bridgeport, Conn. Perspective view and floor plans.
- 17. Miscellaneous contents: Ancient use of bronze,-An experiment in optics.--Planting ornamental trees. -Disinfection of sewers.—The rose jar.—Effect of time on slaked lime.-How to build a barn, with plans. — Interior finish. — Seamless eaves troughs with mitered corners (illustrated).—The oscillation of high chimneys.-Imitative and conventional ornament.-A model Boston kitchen.-Weeds. - Artistic furniture (illustrated). - Improved ventilating fans (illustrated).-Bent glass for circular fronts and towers.—Stains for coloring and tinting mortar.-Roof painting.-The Florida steam and hot water heaters (illustrated).-A venerable larch.

The Scientific American Architects and Builders Edition is issued monthly. \$2.50 a year. Single copies, 25 cents. Forty large quarto pages, equal to about two hundred ordinary book pages; forming, practically, a large and splendid MAGAZINE OF ARCHITEC-TURE, richly adorned with elegant plates in colors and with fine engravings, illustrating the most interesting examples of Modern Architectural Construction and allied subjects.

The Fullness, Richness, Cheapness, and Convenience of this work have won for it the LARGEST CIRCULATION of any Architectural publication in the world. Sold by all newsdealers.

> MUNN & CO. PUBLISHERS. 361 Broadway, New York.

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.

Pattern letters and figures to place on patterns for castings. (H. W.) Knight & Son, Seneca Falls, N. Y.

All books, app., etc., cheap. School of Electricity, N.Y.

Wanted-Upright blowing engine, cyld. 24" to 30" dia., to give 30 lb. press. Address, with details, G. S. W., P. O. box 773, New York.

Belting.-A good lot of second hand belting for sale cheap. Samuel Roberts, 369 Pearl St., New York.

Mechanical drawing, calculations, etc., taught by correspondence. I. Donald Boyer, Dayton, Ohio.

A System of Easy Lettering. By J. H. Cromwell. 26 plates. Price, 50 cents. E. & F. N. Spon, 12 Cortlandt St., New York.

Steam Launches, -New catalogue (free) by Chas. P. Willard & Co., 236 Randolph St., Chicago.

Iron Planer, Lathe, Drill, and other machine tools of odern design. New Haven Mfg. Co., New Haven, Conn Pratt & Letchworth, Buffalo, N. Y.,

solicit correspondence relative to manufacturing specialties requiring malleable gray iron, brass, or steel cast-

Wanted-Party to pay all expenses for foreign patents on "Improved Grapnel Tongues." Will share profits equally. Address T. J. S. Davis, Davis' Wharf,

For the latest improved diamond prospecting drills, address the M. C. Bullock Mfg. Co., Chicago, Ill.

Party traveling South wants new and fast-selling patented articles to introduce. W.C. Power, Union Springs,

Nickel Plating.-Manufacturers of pure nickel and odes, pure nickel salts, polishing compositions, etc. \$100 "Lattle Wonder." A perfect Electro Plating Machine.

Agents of the new Dip Lacquer Kristaline. Complete outfit for plating, etc. Hanson, Van Winkle & Co., New ark, N. J., and 92 and 94 Liberty St., New York.

Perforated metals of all kinds for all purposes. Robert Aitchison Perforated Metal Co., Chicago, Ill.

The Railroad Gazette, handsomely illustrated, published weekly, at 73 Broadway, New York, Specimen pies free. Send for catalogue of railroad books.

The Knowles Steam Pump Works, 113 Federal 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.

Link Belting and Wheels. Link Belt M. Co., Chicago. Presses & Dies. Ferracute Mach. Co., Bridgeton, N. J.

The Holly Manufacturing Co., of Lockport, N. Y., will send their pamphlet, describing water works machinery, and containing reports of tests, on application.

Lockwood's Dictionary of Terms used in the practice of Mechanical Engineering, embracing those current in the drawing office, pattern shop, foundry, fitting, turning, smith's and boiler shop, etc., comprising over 6,000 definitions. Edited by a foreman patternmaker. 1888. Price. \$3.00. For sale by Munn & Co., 361 Broadway, New York.

Duplex Steam Pumps. Volker & Felthousen Co., Buffalo, N. Y.

Self-clinching & Wilson's hook in one fastener. Talcott's combination patent belt hooks. Providence, R. I. Catalogue of Books on Civil, Mechanical, and Electrical Engineering, Arts, Trades, and Manufactures, 118 pages, free. E. & F. N. Spon, 12 Cortlandt St., New York. Pedestal tenoner. All kinds woodworking machinery.

C. B. Rogers & Co., Norwich, Conn. Patents Bought & Sold. H.W. Booth & Co., Detroit, Mich. C. E. Billings' Patent Surface Gauge. Drop Forgings.

Billings & Spencer Co., Hartford, Conn. The Improved Hydraulic Jacks, Punches, and Tube

Expanders. R. Dudgeon, 24 Columbia St., New York. Safety Elevators, steam and belt power; quick and smooth. The D. Frisbie Co., 112 Liberty St., New York.

Tight and Slack Barrel Machinery a specialty. John Greenwood & Co., Rochester, N.Y. See illus. adv., p. 28. Rotary veneer basket and fruit package machinery.

I. E. Merritt Co., Lockport, N. Y. Ax handle and spoke lathes. Railwaycutting off saw machines. Rollstone Machine Co., Fitchburg, Mass.

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



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. Inquirles 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

Winerals sent for examination should be distinctly marked or labeled.

(1) G. W. C. asks: 1. When a filter is used between steam pumps and boilers, why is it generally put between the heater and the boiler instead of between pumps and heater? A. The filter is put between heater and boiler to catch the precipitated particles of line salts set loose from solution by heat. In heaters colding a large body of water quiet, these particles of lime settle at the bottom or are lodged on plates or other materials placed in the

heater for that purpose. 2. What is the chemical reaction that causes the pulp of an apple to become reddish when cut open and exposed to the air? A. All fruit and vegetables, when cut, expose the juice and air at the instant of cutting. 3. What is "setting one's majority of cements, such as sealing wax, are unaffected teeth on edge"? A. This is a nervous condition caused by the contact of bitter or sour substances with the nerve tracks of the tongue and gums.

- (2) B. G. W. asks: What substance afford little or no real nutriment to plants. would be best to use to fill in the decayed p art of a large tree to prevent rain from soaking in? A. Use any hydraulic cement and sand, equal parts, with a coat of tar
- (3) J. F. B. asks: A good receipt for polishing iron in tumbling barrels. A. Much care is required in assorting iron for tumble polish, to avoid wearing away corners and edges of small pieces by contact with heavy work. For smoothing and clearing of scale, use sharp sand in the tumbler, enough to cover the castings or pieces, and coarse or fine to suit the work. A second tumbler should be used for polishing if the work warrants it. Use in this scraps of leather or skivings, coarse sawdust, chips from a planing maplumbago for various styles of polish or for different kinds of goods. It requires a few trials to find the right material for your requirement.
- (4) G. G. -There is not enough difference in the cost of high or low pressure steam heating, where you require high pressure for power, to be worth the attention necessary for arranging and managing two steam systems in the same house. Calling 12 square [feet heating] surface in your boiler equal to one horse power, you will need 120 square feet radiating surface in ordinary rooms, which will heat 12,000 cubic feet of space, or in this proportion for various sized rooms.
- (5) J. M.—There is no material for springs as good or durable as steel. Hard brass is the next best that is reasonably cheap. You can buy the hard rolled brass in sheets or strips through the brass trade. German silver hard rolled makes a fair spring, but expensive. See Scientific American Supplement, No. 20, "How to Make Spiral Springs."
- (6) H. J. K. asks: What power would an eight foot overshot water wheel afford, supplied to the rafters with twine. This can be done by boring from a spring that runs one gallon per minute? A. soo | holes through the bark and lapping the courses to of a horse power.
- (7) W. E. C. asks the proper temperature for the withdrawal of engraving tools from an oil tempering bath. The tools are intended for cutting silver, gold, German silver, etc. They come hard and have to be drawn. A. Such tools should be hardened by immersion in water or oil from a cherry red heat. The drawing of the temper in an oil bath is not reliable unless you insert a thermometer that has a scale running up to 500° Fah. You will require a temperature of about 450° for gravers. A far better way is to brighten the end of the graver on a water stone and heat in a spirit lamp until it turns a light brown color. Even this is not always an indication of hardness or heat, and the kind of cooling bath.
- (8) G. J. D. asks the best formula or process for coppering iron. A. Try 3 oz. sulphate copper and 1 oz. sulphuric acid to 11/2 gallons clear water. The articles must be made perfectly clean by pickling in muriatic acid 1 part, water 3 parts, scrubbing bright or tumbling in sand. Dip in the copper bath for few seconds only, moving the articles about and rinse in hot water with a little sal soda and dry auickly in sawdust. The cleaner the articles are made the brighter the copper coating will be. Too long immersion makes the copper dull.
- (9) C. C. J.—Native hematites, limonite, and magnetite iron ores are used in Pennsylvania in the manufacture of iron and steel. Other ores, the magnetites of New Jersey and Northern New York, the specular ore of Wisconsin, and the Spanish hema-tites are also largely used as mixtures for special grades of iron and steel. We cannot say from your description what the value of your ore would be. An analysis from fair average samples would indicate its use and value, but partially. We advise you to make fair sample lots, and submit to the steel works of Eastern Pennsylvania for trial.
- (10) S. R. T. asks the approximate heating value, and the relative bulk, of a ton each of No. 2. Whether a soft iron sphere around the magnet good soft bituminous coal, anthracite coal, and coke, or a soft iron plate or hemisphere between the magne for use in cook stoves, hot air furnaces, and grates. A. and its armature, will answer? A. You merely replace Both anthracite and bituminous coal vary in heating the armature by the sphere. The armature will be less value, owing to varying amount of ash, so that a attracted, and the sphere will be strongly held in place special comparison can only be made with coals of similar amounts of combustible to the pound. The best coals of either kind are nearly alike for given weights. The bituminous coals from different mines vary so much, and the method of firing is so variable, that the results of experimental tests do not agree, as the heated mixture be safely prepared in a small way for instance trials on the Baltimore & Chio Railroad | A. The reactions would involve ordinary combustion determined the evaporative effect of one ton Cumberland as equal to 1.25 tons anthracite. Other experiments make bituminous coal 13 per cent more effective than coke for equal weights. The average of a long series of experiments on U.S. naval vessels makes anthracite 41 per cent more effective than bituminous. For domestic purposes, as cooking and heating, the cleanliness, durability, and convenience of an anthracite fire set it far ahead of any other coals or coke.
- (11) J. T.—The steam engine receives steam at 212° up to 400°, and discharges it from the exhaust or through the condenser at 100° to 180° F. This difference is the loss of heat you speak of. A pound of steam at 100 lb. pressure will expand to about seven times its volume in doing work. Its volume is 691 cubic inches. A pound of water always gives a pound
- (12) T. D. McC. asks: 1. Why is it give a very severe shock when broken, or to make a

spark visible in broad daylight, will only just move the lever of a 20 ohm sounder which can be worked satisfactorily on one cell gravity battery? A. The shock is due to extra current developed on breaking a pulp to the oxidizing effect of the air. In some kinds | circuit which contains coils of wire. It is much more of fruit (sweet apples for instance) the saccharine intense than the original current on the line. 2. What matter commences to combine with the oxygen of the cement is unaffected by solution of blue vitriol? A. The

- (13) J. L. P. asks: Would the slack from a coal mine be good as a fertilizer? A. It might be of use on a clay soil, but would act mechanically, and
- (14) A. L. R. asks: Is there any rule for estimating the expansion of coal gas for each ad each degree Fahrenheit rise in temperature, the gas expands 717 part of its volume at 32°; as an approximation allow f of one per cent for a degree.
- (15) J. C. M. asks: 1. Is there any metal known to science that has more affinity for gold and silver than quicksilver? A. At ordinary temperatures mercury is the only available metal for gold extraction. 2. Is there any way of increasing its affinity for the precious metals, more than it is when bought out of the stores? If so, what are they, and how are they pro chine, etc., with charcoal, pulverized pumice, rouge or to amalgamate better with "rusty" gold.
 - (16) H. D. Q. writes: 1. Am just completing the 8 light dynamo described in your paper and would be obliged to you if you will kindly give me ad vice on the following questions: 1. Are lamps to be a low or high resistance, and of what resistance? A. The resistance of the lamps is 50 ohms. 2. What size wire should be used to conduct the current from dynamo to lights 500 feet distant and return? A. No. 10 copper wire. 3. The manner in which the machine is would and connected is called what? Series, parallel, or what? A. Series. 4. How are lamps to be connected? Is the inclosed sketch correct? A. In parallel, not in series, as you have shown them.
 - (17) J. M. E. asks how to construct a wigwam. A. The height and size should correspond with your want of accommodation. A rustic frame work, using small trees and hoop poles for framing would be appropriate for a large or small wigwam. The rough side of the bark should be outside, all over To make a knockdown wigwam, the framing; should be lashed together with ropes or twine, and the bark tied cover the tying.
 - (18) R. H. S. asks a method of etching onsteel that will leave the etching a gold bronze. A The gilt inscriptions on cutlery are put on after the biting in, and before the etching wax is removed, by battery attachment in a gold solution. A superficial gilt lettering may be produced by printing the background of the design with gums that resist ether, and then dip ping the article in an ether solution of gold, or dropping a small quantity of ether solution on the brigh part with a camel's hair brush.
- (19) E. A. G. asks if there is anything with which leather can be treated or soaked so it will toughness, as there is a great difference in the harden- not absorb or allow kerosene to pass through or pene ing process, due to quality of the steel, its hardening trate it, as he desires to treat leather so as to use it as a valve against leakage from kerosene or gasoline. A Use any soft leather that is entirely free from grease or oil. Saturate at a heat of about 150° with a mixture of 1 part by weight of good glue to 10 parts glycerine, th glue to be soaked in warm water until it swells and is soft like jelly, when the excess of water is poured of and the glycerine added, bringing the whole to a boil. Then cool it to 150°, and soak the leather thoroughly Hang up until cold and cut the valves.
 - (20) C. M. D. asks if there is anything with which he can treat the inside of a new wood cis tern, that will penetrate the wood and act as a pre servative and at the same time not affect the water. A Apply melted paraffine with a paint brush to the dry wood; moisture will prevent penetration.
 - (21) E. A. H. writes: The basement walls of my house have a coating of tar on the inside What mixture of paint can I use that will dry thor oughly on the tar? Can I mix anything with cement that will cause it to adhere to the tar? A. A solution of shellac in alcohol may be used, and applied like paint over tar that is to be painted. Its high expens prevents the application of this on a large scale. Ce ment cannot be made to adhere,
 - (22) J. B. asks (1) whether it be possi ble to make a complete or partial magnetic screen. A
 - (23) D. E. F. M. asks: What would be the chemical reaction, in burning of the solidified ne troleum referred to in Scientific American Septem ber 1, page 131, col. 2? In what sort of a paratus coulc of the hydrogen and carbon of the petroleum, and would be retarded by the solidified condition of the mixture A glue pot would answer for experimenting with it It should be heated with great care, best in the open air. If over a flame, a large pan of water should be kep directly under the flame. If over a range, it should be heated in a large pan of water.

TO INVENTORS.

An experience of forty years, and the preparation of more than one hundred thousand applications for pa tents at home and abroad enable us to understand the laws and practice on both continents, and to possess un equaled facilities for procuring patents everywhere. A synopsis of the patent laws of the United States and al foreign countries may be had on application, and person contemplating the securing of patents, either at home o abroad, are invited to write to this office for prices which are low, in accordance with the times and our ex tensive facilities for conducting the business that a main line telegraph current, strong enough to MUNN & CO.: office Scientific American, 361 Broad way, New York.

INDEX OF INVENTIONS | Electric machine regulator, dynam

For which Letters Patent of the United States were Granted

September 4, 1888,

AND EACH BEARING THAT DATE.

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

an Annuciator, magnetic, W. Humans. Axle, wagon, Heiz & Cornad. Balling cord or yarn, machine for, S. Brown. Barrel blanks, cutter head for cutting or tri ming gores of, J. W. Philp. Batteries, switch mechanism for electric, C. Ongley. Battery, See Galvanic battery. Battery, See Galvanic battery. Battery, See Galvanic battery. Bearing, safe lock, Stapleton & Carmody. Bed, folding, P. L. Shepardson. Bed, lelectric, M. G. Crane. Bed, lelectric, M. G. Crane. Bell, electric, M. G. Crane. Bell, electronagnetic, W. Humans. Betch, See Gas retort bench. Bench, See Gas retort bench. Bench, See Gas retort bench. Bolic, See Torpedo boat. Bolic, See Torpedo boat. Bolic, See Flour bolt. Bolt See Flour bolt. Bolt See Flour bolt. Bolt out of the See Flour bolt. Bolt out of the See See Flour bolt. Boot of Shee, J. E. Crosby. Boot tree, G. H. Clark. Bottle stopper fastening, Gemunden & Gartner Book holder, I. S. Hollidge. Bottle stopper fastening, Gemunden & Gartner Book Holder, I. S. Hollidge. Brick cleaning machine, J. H. Williams. Brick setting, W. V. Ceell. Brick cleaning machine, J. H. Smith. Brick etting, W. V. Ceell. Brick etting, W. V. Ceell. Bricke stelling, W. C. Ceell. Bridge gate, Safety, Coddington & Fopp Buckle, suspender, C. A. Mann Buildings from without, apparatus for the inspection of the See Hydrocarbon burner. Lamp burner. Button, J. U. Adams Button fasteners, implement for removing, H. Ginther. Carcoupling, J. Garlson. Car coupling, J. Garlson. Car card, Cas and parcel carrier. Sheaf crier. Carl, road, J. W. Combe. Cardia, See Hydrocarbon burner. Lamp burner. Card Congling, J. T. Wilson. Car card, Cas and parcel carrier. Sheaf crier. Carl, road, J. W. Combe. Cardia, See Shoc clasp. Cander See Shoc clasp. Cander See Robe clasp. Cander See Shoc clasp. Cander See Shoc clasp. Convertible chair, J. Nichols. Copying press. T. B. Boyd. Conk extractor, L. M. Devore. Cork extractor, L. M.				
an Annuciator, magnetic, W. Humans. Axle, wagon, Heiz & Cornad. Balling cord or yarn, machine for, S. Brown. Barrel blanks, cutter head for cutting or tri ming gores of, J. W. Philp. Batteries, switch mechanism for electric, C. Ongley. Battery, See Galvanic battery. Battery, See Galvanic battery. Battery, See Galvanic battery. Bearing, safe lock, Stapleton & Carmody. Bed, folding, P. L. Shepardson. Bed, lelectric, M. G. Crane. Bed, lelectric, M. G. Crane. Bell, electric, M. G. Crane. Bell, electronagnetic, W. Humans. Betch, See Gas retort bench. Bench, See Gas retort bench. Bench, See Gas retort bench. Bolic, See Torpedo boat. Bolic, See Torpedo boat. Bolic, See Flour bolt. Bolt See Flour bolt. Bolt See Flour bolt. Bolt out of the See Flour bolt. Bolt out of the See See Flour bolt. Boot of Shee, J. E. Crosby. Boot tree, G. H. Clark. Bottle stopper fastening, Gemunden & Gartner Book holder, I. S. Hollidge. Bottle stopper fastening, Gemunden & Gartner Book Holder, I. S. Hollidge. Brick cleaning machine, J. H. Williams. Brick setting, W. V. Ceell. Brick cleaning machine, J. H. Smith. Brick etting, W. V. Ceell. Brick etting, W. V. Ceell. Bricke stelling, W. C. Ceell. Bridge gate, Safety, Coddington & Fopp Buckle, suspender, C. A. Mann Buildings from without, apparatus for the inspection of the See Hydrocarbon burner. Lamp burner. Button, J. U. Adams Button fasteners, implement for removing, H. Ginther. Carcoupling, J. Garlson. Car coupling, J. Garlson. Car card, Cas and parcel carrier. Sheaf crier. Carl, road, J. W. Combe. Cardia, See Hydrocarbon burner. Lamp burner. Card Congling, J. T. Wilson. Car card, Cas and parcel carrier. Sheaf crier. Carl, road, J. W. Combe. Cardia, See Shoc clasp. Cander See Shoc clasp. Cander See Robe clasp. Cander See Shoc clasp. Cander See Shoc clasp. Convertible chair, J. Nichols. Copying press. T. B. Boyd. Conk extractor, L. M. Devore. Cork extractor, L. M.		Annunciator, electric, Crockett & Allen		Exc
Balling cord or yarn, machine for, S. Brown. Barrel Blarte, S. dutter, bead for cutting or tri ming gores of, J. W. Philp. Bartel singte, L. Miller. Batteries, switch mechanism for electric, C. Onglepe. Battery Blates, manufacture of secondary, J. Elinger. Battery Blates, manufacture of secondary, J. Elinger. Bearing, safe lock, Stapleton & Carmody. Bed, folding, P. L. Shepardson. Bed, electro-magnetic, W. Humans. Bell, electro-magnetic, W. Humans. Bell, electro-magnetic, W. Humans. Bell, electric, M. G. Cranet. Bell, electro-magnetic, W. Humans. Bell, state of the state bear of the state of t	լ	Annunciator, magnetic, W. Humans	388,876	•
ming gores sf. J. W. Phillp	.	Baling cord or yarn, machine for, S. Brown	389,054	Ext
Barterie Blier, L. Miller. Battery switch mechanism for electric, C. Ongley. Battery plates, manufacture of secondary, J. Ellinger. Beatery plates, manufacture of secondary, J. Ellinger. Bed, folding, G. A. Nelson. Bell, electric, M. G. Crane. Bell, electric, M. G. Crane. Bell, electro-magnetic, W. Humans Belt, sprocket, J. B. St. Louis. Bench. See Gas retor bench. Bicycles, shoe attachment for, H. M. Carter. Boat. See Torpedo boat. Boiler. See Hot water boiler. Steam boil wash boiler. Boiler. See Hour boil. Book boiler, I. S. Hollidge. Boot or shee, J. E. Crosby. Boot tree, G. H. Clark. Bottle stopper fastening, Gemunden & Gartner Box. See Musical box. Brick for transportation to market, preparing C. Anderson. Brick for transportation to market, preparing C. Anderson. Brick elening machine, J. H. Williams. Brick for transportation to market, preparing C. Anderson. Bridge parts, die for upsetting, F. H. Smith. Bridge gate, I. R. Karstens. Bridge parts, die for upsetting, F. H. Smith. Bridge gate, I. R. Karstens. Bridge gate, I. R. Karstens. Bridge gate, safety, Coddington & Popp. Buoyl. life, F. Hiebborn. Burner. See Hydrocarbon burner. Lamp burn oil burner. Button fasteners, implement for removing, H. Ginther. Button fasteners, implement for removing, H. Ginther. Button fasteners, implement for removing, H. Ginther. Carled and the folder, G. C. Masson-Chevallier. Car coupling, J. Garlson. Car coupling, J. Gralson. Car seat, reversible, W. Sutton. Car seat, reversible, W. Sutton. Car seat, swell and parcel carrier. Sheaf crief. Cardy, Carlon, J. W. Coombe. Carlon, J. W. Coombe. Carlon, J. W. Coombe. Carlon, J. W. Coombe. Carlon, J. W. Coom	- 1	Barrel blanks, cutter head for cutting or trim- ming gores of, J. W. Philp	389,006	Fat Fas
Battery, See Galvanic battery. Battery plates, manufacture of secondary, J. Ellinger Beatring, safe lock, Stapleton & Carmody. Bed, folding, G. A. Nelson. Bed, folding, G. A. Nelson. Bed, folding, G. A. Nelson. Bed, solding, G. A. Nelson. Bell, electric, M. G. Crane. Bell, electric, M. G. Crane. Bell, electronagnetic, W. Humans. Belt, sprocket, J. B. St. Louis. Bench. See Gas retort bench. Bicycles, Shoe attachment for, H. M. Carter. Boat. See Torpedo boat. Boiler. See Hot water boiler. Steam boil wash boiler. Bottle stopper fastening, Gemunden & Gartner Book holder, I. S. Hollidge. Boot or shee, J. E. Crosby. Bott estopper fastening, Gemunden & Gartner Book holder, I. S. Hollidge. Boot or See Musical box. Box fastener, C. & B. H. Morgan. Brick eleaning machine, J. H. Williams. Brick for transportation to market, preparing C. Anderson. Brick setting, W. V. Ceell. Bridge parts, die for upsetting, F. H. Smith. Bridge parts, life, R. Karstens. Bridge rate, safety, Coddington & Fopp Buckle. suspender, C. A. Mann Buildings from without, apparatus for the inspition of, E. A. Trapp. Buoy, life, P. Hichborn. Burner. See Hydrocarbon burner. Lamp burn of burner. Button, J. U. Adams Button fasteners, implement for removing, H. Ginther. Cart coupling, J. Garlson. Car coupling, J. Garlson. Car coupling, J. Goettel. Carc coupling, J. Goettel. Carc coupling, J. Goettel. Carc day, J. W. Coombe. Case. See Clock case. Spool case. Cash and parcel carrier, electrical, G. F. Green. Cash and parcel carrier, electrical, G. F. Green. Cash craft, See Convertible chair. Cheek, Fee Cash and parcel carrier. Sheaf crier. Cart, road, J. W. Coombe. Case. See Clock case. Spool case. Cash and parcel carrier, electrical, G. F. Green. Cash craft, See Convertible chair. Cheek, Green, A. Hall Carrier, See Cash and parcel carrier. Sheaf crier. Cart, road, J. W. Coombe. Case. See Clock case. Spool case. Cash and parcel carrier, electrical, G. F. Green. Cash craft, See Convertible chair. Cheek, Tes	- 1	Barrel filler, L. Miller	388,899	Fee
Battery, See Galvance battere of secondary, J. Ellinger. Battery, Jates, manufacture of secondary, J. Ellingers. Bearing, safe lock, Stapleton & Carmody. Bed, folding, P. L. Shepardson. Bed, folding, P. L. Shepardson. Bell, electric, M. G. Crane. Bell, electromagnetic, W. Humans. Belt, sprocket, J. B. St. Louis. Bench. See Gas retort bench. Bicycle, T. O'Brien. Bicycle, T. O'Brien. Bicycle, Shoe attachment for, H. M. Carter. Boat. See Torpedo boat. Boiler. See Hot water boiler. Steam boile Wash boiler. Boiler. See Hot water boiler. Steam boile Wash boiler. Boiler. See How water boiler. Steam boile wash boiler. Boot or shee, J. E. Crosby. Boot tree, G. H. Clark. Bottle stopper fastening, Gemunden & Gartner Boot or shee, J. E. Crosby. Boot tree, G. H. Clark. Bottle stopper fastening, Gemunden & Gartner Bottle stopper fastening, Gemunden & Gartn	ij	Ongley		Fer
Ellinger. Bearling, safe lock. Stapleton & Carmody. Bed. folding, P. L. Shepardson. Bed. folding, P. L. Shepardson. Bedl, electric, M. G. Crane. Bell, electric, M. G. Crane. Bell, electro-magnetic, W. Humans. Belt, sprocket, J. B. St. Louis. Belt, sprocket, J. B. St. Louis. Bench. See Gas retort bench. Beyele, T. O'Brien. Bott. See Torped boat. Boiler. See Hot water boiler. Steam boil Wash boiler. Boiler. See Hot water boiler. Steam boil Wash boiler. Boiler. See Flour boit. Boile. See Musical box. Boot free, G. H. Clark. Bottle stopper fastening, Gemunden & Gartner Box. See Musical box. Bor fastener, C. & E. H. Morgan. Brick celaning machine, J. H. Williams. Brick celaning machine, J. H. Williams. Brick estring, W. V. Ceeil. Bridge bars, die for upsetting, F. H. Smith. Bridge gate, Safety, Coddington & Popp Buoy, life, P. Hichborn. Burner. See Hydrocarbon burner. Lamp burn oll burner. Button J. U. Adams Buldings from without, apparatus for the insp tion of, E. A. Trapp. Buoy, life, P. Hichborn. Burner. See Hydrocarbon burner. Lamp burn oll burner. Button fasteners, implement for removing, H. Ginther. Button fasteners, implement for removing, H. Ginther. Button J. U. Adams Bridge gard roils, dampening device for, J. M. Sh. tle. Care coupling, J. Goettel. Care coupling, J. Goettel. Care coupling, J. Goettel. Car coupling, J. Goettel. Car coupling, J. Goettel. Car car, treversible, W. Sutton. Car seat, supplemental. J. H. Young. Cars, ventilating rallway, J. J. Knight. Cardia, machines, feed guide for, S. Bates. Cardia, machines, feed guide for, S. Bates. Cardia, Case for holding playing, G. W. Mintzer. Carpet stretcher, G. A. Hall Caricon, J. Nichols. Convertible chair, J. Nichols. Colock, See Dry closet. Cutt-off or water service supply pipes, au	- 1			Fen Fen
Bed. folding, P. L. Shepardson Bed., folding, P. L. Shepardson Bed., folding, P. L. Shepardson Bed., lelectro-magnetic, W. Humans Bell, sprocket, J. B. S. Louis. Bother See Gas retort bench. Bicycles, shoe attachment for, H. M. Carter. Both See Torped boat. Boiler. See Hot water boiler. Steam boil wash boiler. Both See Flour boilt. Both Cutter, G. B. De Arment. Book holder, I. S. Hollidge. Boot or shee, J. E. Crosby. Boot ree, G. H. Clark. Bottle stopper fastening, Gemunden & Gartner Box. See Musical box. Brick cleaning machine, J. H. Williams. Brick cleaning machine, J. H. Williams. Brick setting, W. V. Cecil Bridge bars, die for upsetting, F. H. Smith. Bridge gate, 11 R. Karstens. Bridge gate, safety, Coddington & Popp. Buoy, life, P. Hichborn. Burner. See Hydrocarbon burner. Lamp burn oli burner. Button J. U. Adams. Button fasteners, implement for removing, H. Ginther. Button J. U. Adams. Button fasteners, implement for removing, H. Ginther. Button J. U. Adams. Button fasteners, implement for removing, H. Ginther. Care coupling, J. Carlson. Car caughing, J. Carlson. Car caughing, J. Goettel. Card, case, G. E. Ribault. Card, case, G. E. Ribault. Card, case, G. Robert. Card, code, J. W. Coombe. Case, See Clock case. Cash and parcel carrier, electrical, G. F. Green. Cash register and indicator, T. Carney. Card, case, G. Robert. Card, code, J. W. Coombe. Case, See Clock case. Cash and parcel carrier, electrical, G. F. Green. Cash register. Card, case, G. B. Tilany. Clook of an error, G. Robert. Cord, C. Robert.		Ellinger	388,960	Fen
Bell, electro; M. G. Crane. Bell, electro; M. G. Se. Louis. Bell, sprocket, J. B. S. Louis. Bench. See Gas retort bench. Bicycles, T. O'Brien. Boller. See Hot water boiler. Steam boile wash boiler. Boller. See Hot water boiler. Steam boile wash boiler. Boller. See Hot water boiler. Steam boile wash boiler. Boller. See Flour bott. Bolt see Flour bott. Bott electric, B. De Arment. Bott See Flour bott. Bottle stopper fastening, Gemunden & Gartner Book. Bot fastener, C. & E. H. Morgan. Brick setting, W. V. Ceell. Brick cleaning machine, J. H. Williams. Brick setting, W. V. Ceell. Bridge bars, die for upsetting, F. H. Smith. Bridge bars, die for upsetting, F. H. Smith. Bridge gate, safety, Coddington & Popp Buoy, life, P. Hiehborn. Button, J. U. Adams. Button fasteners, implement for removing, H. Ginther. Button, J. U. Adams. Button fasteners, implement for removing, H. Ginther. Button asteners, implement for removing, H. Ginther. Car coupling, J. Garlson. Car car, strawpersteller. Car coupling, J. Garlson. Car car, strawpersteller. Car coupling, J. Garlson. Car car, strawpersteller. Car car, drawhead for railway, J. J. Knight. Cars, drawhead for railway, J. J. Knight. Cardon, G. C. Mann. Cardet, G. C. Mann. Cardet, G. C. Mann. Cardet, G. C. Mann.				Filt Fire
Belt, sprocket, J. B. S. Louis. Belt, sprocket, J. B. S. Louis. Belt, sprocket, J. B. S. Louis. Beyele, T. O' Brien. Bicycles, shoe attachment for, H. M. Carter Boller. See Hot water boiler. Steam boile Wash boiler. Both. See Flour bolt. Bolt cutter. G. B. De Arment. Both See Flour bolt. Both of See Flour bolt. Both see Flour bolt. Both of See Flour bolt. Both See Flour bolt. Both of See Hold of See Flour bolt. Brick seating, W. V. Ceell. Brick seating, W. V. Ceell. Bridge bars, die for upsetting, F. H. Smith. Bridge bars, die for upsett		Bed, folding, P. L. Shepardson	389,018	Fire
Bench. See Gas retort bench. Bicycle, T. O'Brien. Bicycle, Shoe attachment for, H. M. Carter Boller. See Hot water boiler. Steam boile Wash boiler. Bolt. See Flour bolt. Bolt cutter. G. B. De Arment. Both. See Flour bolt. Both countries, J. E. Crosby Boot tree, G. H. Clark Bottle stopper fastening, Gemunden & Gartner Box. See Musical box. Bor fastener, C. & E. H. Morgan. Brick cleaning machine, J. H. Williams. Brick cleaning machine, J. H. Williams. Brick cleaning machine, J. H. Williams. Brick gatt, St. Crosby Bridge pars, die for upsetting, F. H. Smith. Bridge gatt, H. R. Karstens. Bridge gatt, H. R. Karstens. Bridge gatt, Goddington & Popp Buoy, life, P. Hichborn. Button, J. U. Adams Button Insteners, implement for removing, H Ginther. Button J. U. Adams Button hasteners, implement for removing, H Ginther. Calcular rolls, dampening device for, J. M. Sh tle. Camera, G. Eastman Candle holder, G. C. Masson-Chevallier. Car coupling, J. Bound. Car coupling, J. Bound. Car coupling, J. T. Wilson. Car seat, supplemental. J. H. Young. Car, swentilating railway, A. B. Harris. Cardis, case for holding playing, G. W. Mintzer, Cardis, machines, feed guide for, S. Bates. Cash and parcel carrier, electrical, G. F. Green Cash register and indicator, T. Carney Casting traps, apparatus for W. M. Smeaton. Carler, Took, J. W. Coombe. Case. See Clock case. Spool case. Cash register and indicator, T. Carney Casting traps, apparatus for W. M. Smeaton. Cement, rubber, H. A. Clark Chair. See Convertible chair. Check receiver, R. Mills. Cortic, J. Schiele. Cortoset, L. Schiele. Cortoset, J. Schiele.		Bell, electro-magnetic, W. Humans	389,080	Fire Fish
Beycle, T. O'Brien Bicycles, shoe attachment for, H. M. Carter Both See Torpedo boat. Boat. See Torpedo boat. Boat. See Flour bolt. Both See, J. E. Crosby. Boot tree, G. H. Clark. Bottle stopper fastening, Gemunden & Gartner Box. See Musical box. Brick feaning machine, J. H. Williams. Brick cleaning machine, J. H. Williams. Brick setting, W. V. Cecil Bridge bars, die for upsetting, F. H. Smith. Bridge gate, II. R. Karstens. Bridge past, G. A. Mann. Button fasteners, implement for removing, H. Ginther. Button, J. U. Adams Button fasteners, implement for removing, H. Ginther. Button, J. U. Adams. Button fasteners, implement for removing, H. Ginther. Car coupling, J. Gottle. Car car, G. Eastman Candle holder, G. C. Masson-Chevallier. Car car, G. Eastman Candle holder, G. C. Masson-Chevallier. Car car, G. Eastman Candle holder, G. C. Masson-Chevallier. Car car, G. Eastman Card coupling, J. Gottle. Car, Card, Car, G. C. Masson-Chevallier. Car, Gray, G. C. Masson-Chevallier. Car, G. C. Masson-Chevallier. Card coupling, J. Gottle. Car, G. C. Masson-Chevallier. Card, G. C. Masson-Chevallier. Card, G. C. Masson-Chevallier. Card, G. C. Masson-Chevallier. Card, G. C		Belt, sprocket, J. B. St. Louis	389,173	Fla
Boiler. See Hot water boiler. Steam boil Wash boiler. Boile. See Flour bolt. Bolt See Flour bolt. Bolt caref. G. B. De Arment Book holder, I. S. Hollidge. Boot or Shee, J. E. Crosby Boot tree, G. H. Clark Bottle stopper fastening, Gemunden & Gartner Brick settling, W. V. Ceeil Bridge bars, die for upsetting, F. H. Smith Bridge gate, Safety, Coddington & Popp Buoy, Iffe, F. Hichborn Burlers See Hydrocarbon burner. Lamp burn Oil burner. Button fasteners, implement for removing, H Ginther. Button fasteners, implement for removing, H Gart cacupling, J. Carlson Car coupling, J. Goettel. Car coupling, J. Gound. Car coupling, J. Gound. Car coupling, J. Gound. Car coupling, J. Gound. Car cat, stay benefits of the fastening of the stopper s		Bicycle, T. O'Brien		Flo
Boller. See Hot water boiler. Steam boil Wash boiler. Bolt. See Flour bolt. Bolt solt. See Flour bolt. Bolt solt of Shee, J. B. Crosby. Boot row, J. B. Crosby. Boot ree, G. H. Clark. Bottle stopper fastening, Gemunden & Gartner Box. See Musical box. Brick cleaning machine, J. H. Williams. Brick selting, W. V. Cecil. Brick for transportation to market, preparing. C. An derson. Brick selting, W. V. Cecil. Bridge bars, die for upsetting, F. H. Smith. Bridge part, H. R. Karstens. Bridge part, H. R. Karstens. Bridge part, H. R. Karstens. Bridge rate, safety, Coddington & Popp Buckle. suspender, C. A. Mann. Button fasteners, implement for removing, H. Button, J. U. Adams. Button fasteners, implement for removing, H. Button hole stitching machine, Reed & Beale. Calendar rolls, dampening device for, J. M. Sh. Car coupling, J. Goettel. Car coupling, J. Grading machines, feed guide for, S. Bates. Cards, case for holding playing, G. W. Mintzer. Carding machines, feed guide for, S. Bates. Cards, case for holding playing, G. W. Mintzer, G. Cards, case for holding playing, G. W. Mintzer, G. Cards, case for holding playing, G. W. Mintzer, G. Cards, case for holding playing, G. W. Mintzer, G. Cards, case for holding playing, G. W. Mintzer, G. Cards, case for holding playing, G. W. Mintzer, G. Cards, case for holding playing, G. W. Mintzer, G. Cards, case for holding playing, G. W. Mintzer, G. Cards, case for holding playing, G. W. Mintzer, G. Cards, case for holding playing, G. W. Mintzer, G. Cards, case for holding playing, G. W. Mintzer, G. Cards, Cards, Cash and parcel carrier, electrical, G. F. Green cash resister and indicator, T. Carney. Cash and parcel carrier, electrical, G. F. Green cash resister and indicator, T. Carney. Cash and parcel carrier, electrical, G. Cords, C. Cords, C. Cords,	- 1		388,949	Flu Flu
Bolt. See Flour bolt. Bolt enter. G. B. De Arment. Book holder, I. S. Hollidge. Book to sibee, J. B. Crosby. Boot tree, G. H. Clark. Bottle stopper fastening, Gemunden & Gartner Box. See Musical box. Brick cleaning machine, J. H. Williams. Brick selting, W. V. Cecil. Brick selting, W. V. Cecil. Bridge part, elie for upsetting, F. H. Smith. Bridge part, H. R. Karstens. Bridge part, H. R. Karstens. Bridge part, H. R. Karstens. Bridge gate, safety, Coddington & Popp. Buckle, Suspender, C. A. Mann. Bulton See Hydrocarbon burner. Lamp burn. Oil burner. Button, J. U. Adams. Button fasteners, implement for removing, H. Ginther. Button fasteners, implement, R. Red & Beale. Calendar rolls, dampening device for, J. M. Sh. tie. Camera, G. Eastman. Can coupling, J. Bound. Car coupling, J. Bound. Car coupling, J. Goettel. Car coupling, J. Goettel. Car coupling, J. Goettel. Car coupling, J. Goettel. Car car, trevrsible, W. Sutton. Car seat, supplemental. J. H. Young. Cars, ventilating railway, J. J. Knight. Carf, case for holding playing, G. W. Mintzer. Carding machines, feed guide for, S. Bates. Carda, case for holding playing, G. W. Mintzer. Carding machines, feed guide for, S. Bates. Cash and parcel carrier, electrical, G. F. Green. Cash rexister and indicator, T. Carney. Case. See Clock case. Spool case. Cash and parcel carrier, electrical, G. F. Green. Cash rexister and indicator, T. Carney. Case. See Clock case. Cash and parcel carrier. Sheaf crier. Cart, road, J. W. Coombe. Case. See Clock case. Cash and parcel carrier. Sheaf crier. Cast, road, J. W. Coombe. Case. See Clock case. Cash and parcel carrier. Sheaf crier. Check receiver, R. Mills. Chuck, drill, G. W. McIntyre. Cigar box catch, H. W. Heffener. Clasp. See Shoe clasp. Coord, Corne, T. L. Pharris. Cultivator, J. W. Can. Cultivator, J. W. Chon. Derk, Corne, J. J. Chillier. Doro and window	- 1			For
Book holder, I. S. Hollidge. Book holder, I. S. Hollidge. Boot of shee, J. E. Crosby Boot tree, G. H. Clark. Bottle stopper fastening, Gemunden & Gartner Box. See Musical box. Brick cleaning machine, J. H. Williams. Brick stener, C. & E. H. Morgan. Brick setting, W. V. Cecil. Bridge bars, die for upsetting, F. H. Smith. Bridge gate, II. R. Karstens. Bridge gate, See H. C. A. Mann. Buildings from without, apparatus for the insp. tion of, E. A. Trapp. Burner. See Hydrocarbon burner. Lamp burn. Oil burner. Button J. U. Adams. Button fasteners, implement for removing, H. Ginther. Button J. U. Adams. Buttonhole stitching machine, Reed & Beale. Calendar rolls, dampening device for, J. M. Sh. tie. Carcoupling, J. Garlson. Car coupling, J. Goettel. Car coupling, J. T. Wilson. Car seat, reversible, W. Sutton. Car seat, sapplemental. J. H. Young. Car coupling, J. Goettel. Car coupling, J. Carlson. Carles, J. W. Coombe. Case. See Clock case. Spool case. Cash and parcel carrier, electrical, G. F. Green Case. See Clock case. Spool case. Cash and parcel carrier, spectric, G. C. Green Case. See Clock case. Spool case. Cash resister and indicato	- 1	Bolt. See Flour bolt.		Fre
Boot or shee, J. E. Crosby Boot tree, G. H. Clark Bottle stopper fastening, Gemunden & Gartner Box See Musical box. Bor fastener, C. & E. H. Morgan Brick cleaning machine, J. H. Williams. Brick cort transportation to market, preparing C. Anderson. Brick settling, W. V. Cecil Bridge bars, die for upsetting, F. H. Smith Bridge gate, H. R. Karstens. Bridge gate, 1I. R. Karstens. Bridge gate, safety, Coddington & Popp Buokle, suspender, C. A. Mann Buildings from without, apparatus for the insp tion of, E. A. Trapp. Buoy, life, P. Hichborn. Burner. See Hydrocarbon burner. Lamp burn Oil burner. Button J. U. Adams. Button fasteners, implement for removing, H Ginther. Button J. U. Adams. Button fasteners, implement for removing, H Ginther. Carc oupling, J. Carlson. Car cacuping, J. Bound. Card coupling, J. Garlson. Car coupling, J. Garlson. Car coupling, J. Garlson. Car cacuping, J. Bound. Car coupling, J. Garlson. Car car, strawhead for railway, A. B. Harris. Car car, strawhead for railway, A. B. Harris. Cardis, case for holding playing, G. W. Mintzer. Carpet stretcher, G. A. Hall Carrier. See Cash and parcel carrier. Sheaf c rier. Cart, road, J. W. Coombe. Cast, See Clock case. Cash and parcel carrier, electrical, G. F. Green Cash resister and indicator, T. Carney Casting traps, apparatus for W. M. Smeaton. Cenent, rubber, H. A. Clark Chair. See Convertible chair. Check receiver, R. Mills. Chair, See Shoe clasp. Clasp. See Shoe clasp. Clanp See Wire rope clamp. Clasp. See Shoe clasp. Clanp See Wire rope clamp. Clasp. See Shoe clasp. Clock case, alarm, D. B. Tidauy. Clock crase, alarm, D. B. Tidauy. Clock crase, alarm, D. B. Tidauy. Clock crase, alarm, D. B. Tidauy. Clock or faucet. E. A. Newman. Cultivator, J. W. Clark Cultivator, J. W. Clark Cultivator, J. W. Clark Cultivator, J. W. Shop. Cork extractor, L. M. Devore. Cork extractor, L. M. Devore. Cork extractor, L. M. Devore. Cul	- 1			Gal
Box See Musical box. Box fastener, C. & E. H. Morgan. Brick cleaning machine, J. H. Williams. Brick cort ransportation to market, preparing C. Anderson. Bridge gate, sife for upsetting, F. H. Smith. Bridge gate, safety, Coddington & Popp Buckle, suspender, C. A. Mann. Buildings from without, apparatus for the insp tion of, E. A. Trapp Buy, life, F. Hichborn. Burner. See Hydrocarbon burner. Lamp burn Oil burner. Button fasteners, implement for removing, H Ginther. Button fasteners, implement for removing, H Ginther. Car coupling, J. Carlson. Car coupling, J. Goettel. Car coupling, J. Bound. Car coupling, J. Bound. Car car seat, supplemental. J. H. Young. Cars, drawhead for railway. J. J. Knight. Car seat, supplemental. J. H. Young. Cars, drawhead for railway. J. Knight. Cars case for holding playing, G. W. Mintzer. Carl, road. J. W. Coombe. Case. See Clock case. Spool case. Cash register and indicator, T. Carney Case. See Clock case. Spool case. Cash register and indicator, T. Carney Case. See Clock case. Spool case. Cash register and indicator, T. Carney Case. See Clock case. Spool case. Cash register and indicator, T. Carney Case. See Clock case. Spool case. Cash register and indicator, T. Carney Case. See Clock case. Spool case. Cash register and indicator, T. Carney Case. See Clock case. Spool case. Cash register and indicator, T. Carney Case. See Clock case. Spool case. Cash register and indicator, T. Carney Case. See Clock case. Spool case. Cash register and indicator, T. Carney Case. See Clock case. Spool case. Cash register and indicator, T. Carney Case. See Clock case. Spool case. Cash register and indicator, T. Carney Case. See Clock case. Spool case. Cash register and indicator, T. Carney Case. See Clock case. Spool case. Cash register and indicator, T. Carney Case. See Clock case. Spool case. Cash register and indicator, T. Carney Case. See Clock case. Spool case. Cash register and indicator, T. Carney Case. See Clock case. Spool case. Cash register	- 1	Boot or shee, J. E. Crosby	388.838	Gas Gas
Box See Musical box. Brick cleaning machine, J. H. Williams	İ	Rottle stopper fustoping Gemunden & Cartner	388.831 388.854	Gas
grick cleaning machine, J.H. Williams. grick for transportation to market, preparing C. Anderson. Bride setting, W. V. Cecil. Bridge bars, die for upsetting, F. H. Smith. Bridge gate, II. R. Karstens. Bridge gate, Safety, Coddington & Popp Guckle, suspender, C. A. Mann. Buildings from without, apparatus for the insp tion of, E. A. Trapp. Buor, life, F. Hichborn. Burner. See Hydrocarbon burner. Lamp burn Oil burner. Button, J. U. Adams Button fasteners, implement for removing, H Ginther. Button fasteners, implement for removing, H Ginther. Calendar rolls, dampening device for, J. M. Sh tle. Camera, G. Eastman Candle holder, G. C. Masson-Chevallier Car coupling, J. Bound. Car coupling, J. Goettel. Car coupling, E. G. Ribault. Car car, drawhead for railway, A. B. Harris. Carding machines, feed guide for, S. Bates. Cards, case for holding playing, G. W. Mintzer. Cart, road, J. W. Coombe Case. See Clock case. Spool case. Cash and parcel carrier, electrical, G. F. Green Cash register and indicator, T. Carney Casting traps, apparatus for, W. M. Smeaton. Chuck, drill, G. W. McIntyre. Clamp. See Wire rope clamp. Clamp. See Shoe clasp. Claner. See Flue cleaner. Clock case, alarm, D. B. Tidany. Clock case, alarm, D. B. Tidany. Clock convertible chair. Corneuttible chair, J. Nichols. Corneuts of the winding machine, J. O. Shaw. Corneuts of the winding machine, J.	1	Box. See Musical box.		Gas
Brick setting, W. V. Cecil Bridge bars, die for upsetting, F. H. Smith Bridge gate, II. R. Karstens Bridge gate, Safety, Coddington & Popp Buckle, suspender, C. A. Mann Buildings from without, apparatus for the insp tion of, E. A. Trapp Buoy, life, F. Hichborn Burner. See Hydrocarbon burner. Lamp burn Oil burner. Button, J. U. Adams Button fasteners, implement for removing, H Ginther. Button fasteners, implement for removing, H Ginther. Button fasteners, implement for removing, H Ginther. Camera, G. Eastman Candle holder, G. C. Masson-Chevallier. Car coupling, J. Bound. Car coupling, J. Goettel. Car coupling, J. Goettel. Car coupling, E. G. Ribault. Car car, drawhead for railway, J. J. Knight. Cars, case for holding playing, G. W. Mintzer. Cart, road, J. W. Coombe Case. See Clock case. Spool case. Cash and parcel carrier, electrical, G. F. Green Cash register and indicator, T. Carney Casting traps, apparatus for. W. M. Smeaton. Cement. rubber, H. A. Clark. Chair. See Convertible chair. Chuck, drill, G. W. McIntyre. Cigar box catch, H. W. Heffener. Canding See Shoe clasp. Clasp. See Shoe clasp. Clamp. See Wire rope clamp. Clasp. See Shoe clasp. Clamp. See Wire rope clamp. Clasp. See Shoe clasp. Clapp. See Shoe clasp. Clanp. See Shoe clasp. Clock case, alarm, D. B. Tidany. Clock case, cand of the way of the convertible chair. Cork extractor, L. M. Devore. Cord extractor, L. M.		Brick cleaning machine, J. H. Williams	388,939	Gas
Bridge bars, die for upsetting, F. H. Smith Bridge gate, II. R. Karstens Bridge gate, S. A. Trapp Buckle suspender, C. A. Mann Butldings from without, apparatus for the inspition of, E. A. Trapp Butlon, J. C. A. Trapp Button, J. U. Adams Button fasteners, implement for removing, H. Ginther Button fasteners, implement for removing, H. Ginther Calendar rolls, dampening device for, J. M. Sh. tle Care coupling, J. Carlson Car care outling, J. Goettel Car coupling, J. Goettel Car coupling, J. T. Wilson Car seat, reversible, W. Sutton Car seat, reversible, W. Sutton Car seat, supplemental. J. H. Young Cars, drawhead for railway. J. J. Knight Cars, drawhead for railway. J. Knight Cars, drawhead for railway. J. J. Knight Cards, case for holding playing, G. W. Mintzer. Cards, case for holding playing, G. W. Mintzer. Cards, case for holding playing, G. W. Mintzer. Carl, road. J. W. Coombe Case. See Clock case. Spool case. Cash and parcel carrier, electrical, G. F. Green Called Gase. See Clock case Called Gase. See Clock case Claup. See Wire rope clamp Clasp. See Shoe clasp. Clock		Brick for transportation to market, preparing, J.		Gas
gridge bars, die for upsetting, F. H. Smith Bridge gate, 11. R. Karstens Bridge gate, 11. R. Karstens Bridge gate, 11. R. Karstens Bridge gate, safety, Coddington & Popp Buckle, suspender, C. A. Mann Bution of, E. A. Trapp Bution of, E. A. Trapp Button, J. U. Adams Button fasteners, implement for removing, H. Ginther Care depart rolls, dampening device for, J. M. Sh. tle Car coupling, J. Carlson Car coupling, J. Carlson Car coupling, J. Bound Car coupling, J. Bound Car coupling, J. Wilson Car seat, supplemental. J. H. Young Cars, drawhead for railway, A. B. Harris Carding machines, feed guide for, S. Bates Carding machines, feed guide for, S. Bates Carding machines, feed guide for, S. Bates Card, road, J. W. Coombe Case es Clock case. Spool case. Cash and parcel carrier, electrical, G. F. Green Case cash register and indicator, T. Carney Casting traps, apparatus for w. M. Smeaton Cement, rubber, H. A. Clark		Brick setting, W. V. Cecil	388,827	Gas
Bridge gate, safety, Coddington & Popp Buckle, suspender, C. A. Mann. Buildings from without, apparatus for the insp tion of, E. A. Trapp. Buoy, life, P. Hichborn Burner. See Hydrocarbon burner. Lamp burn Oil burner. Button, J. U. Adams Button fasteners, implement for removing, H Ginther. Buttonhole stitching machine, Reed & Beale. Calendar rolls, dampening device for, J. M. Sh tle Care coupling, J. Carlson Car coupling, J. Carlson Car coupling, J. Carlson Car coupling, J. Bound. Car coupling, J. Coettel Car coupling, J. Goettel Car coupling, J. Goettel Car coupling, J. T. Wilson Car seat, supplemental. J. H. Young. Cars, as eat, reversible, W. Sutton. Car seat, supplemental. J. H. Young. Cars, arawhead for railway, J. J. Knight. Cars. ventilating railway, A. B. Harris. Carding machines, feed guide for, S. Bates. Cards, case for holding playing, G. W. Mintzer. Cart, road, J. W. Coombe. Case. See Clock case. Spool case. Cash and parcel carrier, electrical, G. F. Green Case. See Clock case. Spool case. Cash and parcel carrier, electrical, G. F. Green Case. See Clock case. Spool case. Cash register and indicator, T. Carney Casting traps, apparatus for, W. M. Smeaton. Cement, rubber, H. A. Clark Chair. See Convertible chair; Check receiver, R. Mills Chuck, drill. G. W. McIntyre. Clasp. See Shoe clasp. Cleaner. See Flue cleaner. Sink cleaner. Clock case, alarm, D. B. Tidany. Closet. See Dry closet. Cock or faucet. E. A. Newman Clock case, alarm, D. B. Tidany. Closet. See Dry closet. Cock or faucet. E. A. Newman Colors, production of new azo. H. Wolff. Cork extractor. Linsley & Curtis. Corrier, J. Nichols. Copying press. T. B. Boyd. Cork extractor. Linsley & Curtis. Corrier, J. Schiele. Correct, W. Young. Coupling. See Car coupling. Cranberry gathering machine, J. O. Shaw. Cultivator, J. W. Clark Culti				Gas Gas
buildings from without, apparatus for the inspection of, E. A. Trapp Buton, I.E., P. Hichborn Burner. See Hydrocarbon burner. Lamp burn Oil burner. Button, J. U. Adams Button fasteners, implement for removing, H Ginther. Buttonhole stitching machine, Reed & Beale. Calendar rolls, dampening device for, J. M. Sh tle. Camera, G. Eastman Candle holder, G. C. Masson-Chevallier. Car coupling, J. Goettel. Car coupling, J. Goettel. Car coupling, J. Gottel. Car coupling, J. T. Wilson. Car car, drawhead for rallway, J. J. Knight. Cars, drawhead for rallway, J. Harris. Carding machines, feed guide for, S. Bates. Carding machines, feed guide for, S. Bates. Cash and parcel carrier, electrical, G. F. Green Cash register and indicator, T. Carney Closek See Dry closet. Closek See Dry closet. Closek See Pry closet. Closek See Dry closet. Cork of faucet, E. A. Newman Clock of faucet, E. A. Newman Closet, J. W. Carney Closet, J. W. Carney Corney in the fact of the f		Bridge gate, safety, Coddington & Popp	388,833	Gat
Burner. See Hydrocarbon burner. Lamp burn Oil burner. Button, J. U. Adams Button, J. U. Adams Button fasteners, implement for removing, H Ginther. Calendar rolls, dampening device for, J. M. Sh tle Camera, G. Eastman Candle holder, G. C. Masson-Chevallier Car coupling, J. Garlson Car coupling, J. Bound Car coupling, J. Bound Car coupling, J. Goettel Car coupling, J. Goettel Car care, J. Wilson Car seat, supplemental. J. H. Young Cars, drawhead for railway, J. J. Knight Cars, ventilating railway, A. B. Harris Carding machines, feed guide for, S. Bates Cards, case for holding playing, G. W. Mintzer, Carding machines, feed guide for, S. Bates Cards, case Conductor, T. Carney Case, See Clock case. Spool case. Cash and parcel carrier, electrical, G. F. Green Case. See Clock case. Spool case. Cash and parcel carrier, electrical, G. F. Green Case. See Clock case. Spool case. Cash and parcel carrier, electrical, G. F. Green Case. See Clock case. Spool case. Cash register and indicator, T. Carney Case, See Clock case. Spool case. Cash register and indicator, T. Carney Case, See Clock case. Spool case. Cash register and indicator, T. Carney Case, See Clock case. Spool case. Cash register and indicator, T. Carney Case, See Clock case. Spool case. Cash register and indicator, T. Carney Case, See Clock case. Spool case. Cash register and indicator, T. Carney Case, See Clock case. Spool case. Cash register and indicator, T. Carney Case, See Clock case. Spool case. Cash register and indicator, T. Carney Case, See Clock case. Spool case. Cash register and indicator, T. Carney Case, See Clock case, Spool case. Cash register and indicator, T. Carney Case, See Clock case. Cash register and indicator, T. Carney Case, See Clock case. Cash register and indicator, T. Carney Case, See Clock case. Cash register and indicator, T. Carney Case, See Clock case. Cash register and indicator, T. Carney Case, See Clock case. Case Coverting the see Case Coupling. Case, T. Casting the see Case Coupling. Case, See Case Coupling. Case, See Case Co		Buildings from without, apparatus for the inspec-	•	Gat
Burrer. See Hydrocarbon burner. Lamp burn Oil burner. Button, J. U. Adams Button fasteners, implement for removing, H Ginther. Buttonhole stitching machine, Reed & Beale. Calendar rolls, dampening device for, J. M. Sh tle Care coupling, J. Carlson Car coupling, J. Carlson Car coupling, J. Carlson Car coupling, J. Goettel. Car coupling, J. Goettel. Car coupling, J. Goettel. Car coupling, J. T. Wilson Car seat, reversible, W. Sutton Cars, drawhead for rallway. J. J. Knight. Cars, drawhead for rallway. J. J. Carlson, draw, dr		tion of, E. A. Trapp Buoy, life, P. Hichborn	388,934 388,971	Ger
Button, J. U. Adams Button fasteners, implement for removing, H Ginther. Buttonhole stitching machine, Reed & Beale. Calendar rolls, dampening device for, J. M. Sh tle. Camera, G. Eastman Carde holder, G. C. Masson-Chevallier. Car coupling, J. Carlson. Car coupling, J. Goettel. Car coupling, J. Goettel. Car coupling, B. G. Ribault. Car coupling, J. T. Wilson. Car seat, reversible, W. Sutton. Car seat, reversible, W. Sutton. Cars, drawhead for railway, A. B. Harris. Carding machines, feed guide for, S. Bates. Cards, case for holding playing, G. W. Mintzer. Carpt. Carpt. See Cash and parcel carrier. Sheaf or rier. Cart. Card. J. W. Coombe. Case. See Clock case. Spool case. Cash and parcel carrier, electrical, G. F. Green Cash register and indicator. T. Carnery. Casting traps, apparatus for. W. M. Smeaton. Cement, rubber, H. A. Clark. Chuck, drill. G. W. McIntyre. Ciagr box catch, H. W. Heffener. Clamp. See Wire rope clamp. Clasp. See Shoe clasp. Clasp. See Shoe clasp. Claener. See Flue cleaner. Sink cleaner. Clock case, alarm, D. B. Tidany. Closet. See Dry closet. Cock or faucet. E. A. Newman. Colors, production of new azo. H. Wolff. Corying press. T. B. Boyd. Cork extractor. Linsley & Curtis. Corying press. T. B. Boyd. Cork extractor. Linsley & Curtis. Corset, W. Young. Cotton scraper, chopper, and cultivator, J. McCandless. Cotton scraper, chopper, and cultivator, J. McCandless. Cottivator and plow, J. A. Elliott. Cultivator, J. W. & N. P. Lehr. Cultivator, orn, H. L. Pharris. Cultivator, orn, H. L. Pharris. Cultivator, J. W. & N. P. Lehr. Cultivator, J. W. & N. P. Lehr. Cultivator and plow, J. A. Elliott. Cultivator and plow, J. A. Elliott. Cutter. See Bolt cutter. Envelope cutter. M. cutter. See Bolt cutter. Envelope		Burner. See Hydrocarbon burner. Lamp burner.		Goo
Button fasteners, implement for removing, H Ginther. Buttonhole stitching machine, Reed & Beale. Calendar rolls, dampening device for, J. M. Sh tle. Camera, G. Eastman Car coupling, J. Carlson. Car coupling, J. Goettel. Car coupling, J. Goettel. Car coupling, J. Goettel. Car coupling, J. Goettel. Car coupling, J. T. Wilson. Car seat, reversible, W. Sutton. Car seat, reversible, W. S. Seaton. Case See Clock case. Spool case. Cash real stretcher, G. A. Hall Carrier. See Card stand parcel carrier. Sheaf or rier. Clasp. See Shoe clasp. Clasp. See Shoe clasp. Clasp. See Shoe clasp. Clasp. See Shoe clasp. Cleaner. See Flue cleaner. Sink cleaner. Clock case, alarm, D. B. Tidany. Closet. See Dry closet. Cook of fancet. E. A. Newman. Colors, production of new azo. H. Wolff. Cook case, alarm, D. B. Tidany. Closet. See Dry closet. Cock of fancet. E. A. Newman. Colors, production of new azo. H. Wolff. Cork extractor. Linsley & Curtis. Cork cartactor, L. M. Devore. Cork extractor. Linsley & Curtis. Cork cartactor, L. W. Devore. Cork cartactor, L. W. Devore. Cork cartactor, L. W. Devo		Button, J. U. Adams		Gra
discription of the content of the co	- 1	Button fasteners, implement for removing, H. S.		Gra
tle. Camera, G. Eastman Candle holder, G. C. Masson-Chevallier. Car coupling, J. Goettel. Car coupling, J. Goettel. Car coupling, J. Goettel. Car coupling, E. G. Ribault. Car coupling, E. G. Ribault. Car coupling, J. T. Wilson. Car seat, reversible, W. Sutton. Car seat, supplemental. J. H. Young. Cars, drawhead for railway. J. J. Knight Cars, drawhead for railway. J. J. Knight Cars, drawhead for railway. J. J. Knight Carding machines, feed guide for, S. Bates. Carding machines, feed guide for, S. Bates. Cards, case for holding playing, G. W. Mintzer. Cart, road, J. W. Coombe Case. See Clock case. Spool case. Cash and parcel carrier, electrical, G. F. Green Cash register and indicator. T. Carnery Casting traps, apparatus for, W. M. Smeaton Cement, rubber, H. A. Clark Chair. See Convertible chair. Check receiver, R. Mills. Chuck, drill. G. W. McIntyre Cigar box catch, H. W. Heffener Clamp. See Wire rope clamp. Clasp. See Shoe clasp. Cleaner. See Flue cleaner. Sink cleaner. Clock case, alarm, D. B. "Idany Closet. See Dry closet. Cork extractor, L. M. Devore Cork extractor, J. Linsley & Curtis Cork extractor, L. Linsley & Curtis Cork correctible chair, J. Nichols Cork extractor, L. Linsley & Curtis Cork correctible chair, J. Nichols Cork correctible chair, J. Nichols Cork extractor, L. Linsley & Curtis Cork correctible chair, J. Nichols Cork correctible chair. Cork casting transparent chairs Cork	- 1	Buttonhole stitching machine, Reed & Beale	389,010	Gri
Camera, G. Eastman Candle holder, G. C. Masson-Chevallier. Car coupling, J. Carlson Car coupling, J. Goettel Car coupling, J. Goettel Car coupling, J. Goettel Car coupling, J. T. Wilson Car seat, reversible, W. Sutton Car seat, reversible, W. Sutton Car seat, supplemental. J. H. Young. Cars, drawhead for railway, J. J. Knight. Cars, drawhead for railway, A. B. Harris. Cards, case for holding playing, G. W. Mintzer. Cards, case for holding playing, G. W. Mintzer. Carter. See Cash and parcel carrier. Sheaf of rier. Cart, road, J. W. Coombe. Case. See Clock case. Spool case. Cash and parcel carrier, electrical, G. F. Green Cash. See Clock case. Spool case. Cash and parcel carrier, electrical, G. F. Green Cash. Cast of the comparatus for W. M. Smeaton. Cement, rubber, H. A. Clark. Chair. See Convertible chair. Check receiver, R. Mills. Chuck, drill. G. W. McIntyre. Clamp. See Wire rope clamp. Clasp. See Shoe clasp. Closet. See Dry closet. Clock of faucet. E. A. Newman. Colors, production of new azo. H. Wolff. Convertible chair, J. Nichols. Copying press. T. B. Boyd. Corks extractor. Linsley & Curtis. Corkscrew, W. N. Barrett. Corneuting machine, G. H. Fetzer. Corset, L. Schiele. Corset, W. Young. Cotton scraper, chopper, and cultivator, J. McCandless. Coulling. See Car coupling. Cranberry gathering machine, J. O. Shaw. Crimping machine. H. Donovan. Cultivator, J. W. & N. P. Lehr. Cultivator, J. W. & N. P. Lehr. Cultivator, J. W. Clark. Cultivator, wheel, E. P. Lynch. Curtain hanger, Dorrinaton & Fay. Cut-off for water service supply pipes, automather thermo electric. E. A. Newman. Cutter. See Bolt cutter. Envelope cutter. Metallication of the mather. Door of other math. A. Cary. Doublinz winding machine, A. Ryo. Draw bars, making. J. T. Wilson. Dorro and window screen frames. F. Hipolito. Door and window screen frames. E. Hipolito. Door and window screen frames. E. Hipolito. Door and window screen frames. E. Dionomather. Door of other math. A. Cary. Doublinz winding machine, A. Ryo. Draw bars, making. J. T. Wilson.	- 1			Gri Gri
Car coupling, J. Garlson Car coupling, J. Goettel Car coupling, J. Goettel Car coupling, J. Goettel Car coupling, J. T. Wilson Car seat, reversible, W. Sutton Car seat, supplemental. J. H. Young Cars, drawhead for railway, J. J. Knight Cars, ventilating railway, A. B. Harris, Cards, case for holding playing, G. W. Mintzer, Carpet stretcher, G. A. Hall Carrier. See Cash and parcel carrier. Sheaf of rier. Cart, road, J. W. Coombe Case, See Clock case. Spool case. Cash and parcel carrier, electrical, G. F. Green Cash register and inducator, T. Carney Casting traps, apparatus for, W. M. Smeaton. Cement, rubber, H. A. Clark Chair. See Convertible chair. Check receiver, R. Mills. Chuck, drill, G. W. McIntyre. Clasp. See Shoe clasp. Cleaner. See Flue cleaner. Clock case, alarm, D. B. Tidany. Closet. See Dry closet. Cock of faucet, E. A. Newman Colors, production of new azo, H. Wolff. Corpying press. T. B. Boyd. Cork extractor, Linsley & Curtis. Corpying press. T. B. Boyd. Cork extractor, L. M. Devore. Cork extractor, L. M. Devore. Corset, W. Young. Cotton scraper, chopper, and cultivator, J. McCandless Coupling. See Car coupling. Cranberry gathering machine, J. O. Shaw. Crimping machine. H. Donovan Cultivator, J. W. & N. P. Lehr Cultivator, J. W. & N. P. Lehr Cultivator, J. W. Clark Cultivator, J. W. Clark Cultivator, J. W. & N. P. Lehr Cultivator, orn, H. L. Pharris. Cultivator, wheel, E. P. Lynch. Curtain hanger, Dorrinaton & Fay. Cut-off for water service supply pipes, automathermo electric. E. A. Newman Cutter. See Bolt cutter. Envelope cutter. Metallic cultivator, J. W. & N. P. Lehr Cultivator, wheel, E. P. Lynch. Curtain hanger, Dorrinaton & Fay. Cut-off for water service supply pipes, automathermo electric. E. A. Newman Cutter. See Bolt cutter. Envelope cutter. Metallic cultivator, A. J. Williford. Degr. See Potato digger. Disk washer, W. D. Miller. Doro or other mat, A. Cary. Doublinz winding machine, A. Ryo. Draught apparatus vehicle, C. Dreher. Draw bars, making, J. T. Wilson. Driell Seigner See Caston digge		Camera, G. Eastman	388,850	Gri
Car coupling, J. Goettel. Car coupling, E. G. Ribault. Car coupling, E. G. Ribault. Car seat, reversible, W. Sutton. Car seat, supplemental. J. H. Young. Cars, drawhead for railway, A. B. Harris. Carding machines, feed guide for, S. Bates. Cards, case for holding playing, G. W. Mintzer. Cart, road, J. W. Coombe. Case. See Clock case. Spool case. Cash and parcel carrier, electrical, G. F. Green Cash register and inducator, T. Carney. Casting traps, apparatus for. W. M. Smeaton. Cement, rubber, H. A. Clark. Chair. See Convertible chair. Check, drill. G. W. McIntyre. Clamp. See Wire rope clamp. Clasp. See Shoe clasp. Cleaner. See Flue cleaner. Clock case, alarm, D. B. Tillany. Closet. See Dry closet. Cock or faucet. E. A. Newman. Colors, production of new azo. H. Wolff. Convertible chair, J. Nichols. Copying press. T. B. Boyd. Cork extractor, L. M. Devore. Cork extractor, Limsley & Curtis. Cork extractor, Limsley & Curtis. Corset, W. Young. Cotton scraper, chopper, and cultivator, J. McCandless. Coupling. See Car coupling. Cranberry gathering machine, J. O. Shaw. Crimping machine, H. Donovan. Cultivator, J. W. & N. P. Lehr. Cultivator, J. W. & N. P. Jehr. Cultivator, wheel, E. P. Lynch. Cutter. See Bolt cutter. Envelope cutter. Medical cutter. See Bolt cutter. Tart cutter. Dampers, ratchet for stove, D. W. Roland. Derrick, O. Crosby. Desk, reading, A. J. Williford. Digger. See Potato digger. Dish washer, W. D. Miller. Door or other mat, A. Cary. Doubling winding machine, A. Ryo. Draught apparatus vehicle, C. Dreher. Driver. See Grain drier. Driver. See Grain drier. Driver. See Grain drier. Driver. See Grain drier. Driver		Car coupling, J. Carlson		· Ha · Ha
Car coupling, E. G. Ribault. Car coupling, J. T. Wilson. Car seat, reversible, W. Sutton. Car seat, supplemental, J. H. Young. Cars, drawhead for railway, A. B. Harris. Carding machines, feed guide for, S. Bates. Carding trettercher, G. A. Hall Carrier. See Cash and parcel carrier. Sheaf or rier. Cart, road, J. W. Coombe. Case. See Clock case. Spool case. Cash and parcel carrier, electrical, G. F. Green Cash register and indicator, T. Carney. Casting traps, apparatus for, W. M. Smeaton. Cement, rubber, H. A. Clark. Chair. See Convertible chair. Check receiver, R. Mills. Chuck, drill. G. W. McIntyre. Clamp. See Wire rope clamp. Clasp. See Shoe clasp. Cleaner. See Flue cleaner. Clock case, alarm, D. B. Tidany. Closet. See Dry closet. Cock or faucet, E. A. Newman. Colors, production of new azo. H. Wolff. Convertible chair, J. Nichols. Copying press. T. B. Boyd. Cork extractor, L. M. Devore. Cork extractor, Linsley & Curtis. Cork extractor, Linsley & Curtis. Cork extractor, Linsley & Curtis. Cork extractor, J. W. Devore. Cork extractor, J. W. Chark. Cultivator, J. W. & N. P. Lehr. Cultivator, wheel, E. P. Lynch. Curtain hanger, Dorrington & Fay. Cutter. See Bolt cutter. Envelope cutter. M. Cultivator, Wheel, E. P. Lynch. Cutter. See Bolt cutter. Envelope cutter. M. Cultivator, Wheel, E. P. Lynch. Cutter. See Bolt cutter. Envelope cutter. M. Cultivator, Wheel, E. P. Lynch. Cutter. See Bolt cutter. Envelope cutter. M. Cultivator, Wheel, E. P. Lynch. Cutter. See Bolt cutter. Envelope cutter. M. Cultivator, Wheel, E. P. Lynch. Cutter. See Bolt cutter. Envelope cutter. M. Cultivator, Wheel, E. P. Lynch. Cutter. See Bolt cutter. Envelope cutter. Door of the mathana drien, A. Ryo.		Car coupling, J. Bound	000 050	Ha
Car seat, reversible, W. Sutton. Cars, drawhead for railway, J. J. Knight. Cars, ventilating railway, A. B. Harris. Carding machines, feed guide for, S. Bates. Carding trettercher, G. A. Hall Carrier. See Cash and parcel carrier. Sheaf or rier. Cart, road, J. W. Coombe. Case. See Clock case. Spool case. Cash and parcel carrier, electrical, G. F. Green Cash register and indicator, T. Carney. Casting traps, apparatus for. W. M. Smeaton. Cement, rubber, H. A. Clark. Chair. See Convertible chair. Check receiver, R. Mills. Chuck, drill. G. W. McIntyre. Clamp. See Wire rope clamp. Clasp. See Shoe clasp. Cleaner. See Flue cleaner. Sink cleaner. Clock case, alarm, D. B. Tidany. Closet. See Dry closet. Cock or faucet. E. A. Newman. Colors, production of new azo. H. Wolff. Convertible chair, J. Nichols. Copying press. T. B. Boyd. Cork extractor, L. M. Devore. Cork extractor, Linsley & Curtis. Cork extractor, Linsley & Curtis. Cork extractor, Linsley & Curtis. Corset, W. Young. Cotton scraper, chopper, and cultivator, J. M. Candless. Coupling. See Car coupling. Cranberry gathering machine, J. O. Shaw. Crimping machine, H. Donovan. Cultivator, J. W. & N. P. Lehr. Cultivator, J. W. & N. P. Lehr. Cultivator, J. W. & N. P. Lehr. Cultivator, wheel, E. P. Lynch. Curtain hanger, Dorrington & Fay. Cutter. See Bolt cutter. Envelope cutter. M. Cultivator, wheel, E. P. Lynch. Cutter. See Bolt cutter. Envelope cutter. M. Cutter. See Bolt cutter. Tart cutter. Dampers, ratchet for stove, D. W. Roland. Derrick, O. Crosby. Desk, reading, A. J. Williford. Digger. See Potato digger. Dish washer, W. D. Miller. Door or other mat, A. Cary. Doubling winding machine, A. Ryo. Draw bars, making, J. T. Wilson. Drier. See Grain drier. Drill grinding attachment, twist, F. Mossberg. Dry closet, E. C. Condit. Electric generators, commutator for, O. Zech. Electric generators, com	l ;	Car coupling, E. G. Ribault	389,107	на На
Cars seat, supplemental. J. H. Young. Cars, drawhead for railway, A. B. Harris. Carsd, case for holding playing, G. W. Mintzer. Carding machines, feed guide for, S. Bates Carpet stretcher, G. A. Hall Carrier. See Cash and parcel carrier. Sheaf or rier. Cash and parcel carrier, electrical, G. F. Green Cash register and indicator, T. Carney Cash ragister and indicator, T. Carney Cash rapister and indicator, T. Carney Cash rapister and indicator, T. Carney Cash register and indicator, T. Carney Cash r		car coupling, 0. 1. William	000,101	Ha
Cars. ventilating railway, A. B. Harris Carding machines, feed guide for, S. Bates Cards, case for holding playing, G. W. Mintzer, G. Cards, case for holding playing, G. W. Mintzer, G. Cards, case for holding playing, G. W. Mintzer, G. Carter. See Cash and parcel carrier. Sheaf or rier. Cart, road, J. W. Coombe		Car seat, supplemental. J. H. Young	389,041	На
Cards, case for holding playing, G. W. Mintzer. Carpet stretcher, G. A. Hall Carrier. See Cash and parcel carrier. Sheaf or rier. Cart, road, J. W. Coombe Case. See Clock case. Spool case. Cash and parcel carrier, electrical, G. F. Green Cash register and indicator, T. Carney. Casting traps, apparatus for, W. M. Smeaton Cement, rubber, H. A. Clark Chair. See Convertible chair. Check receiver, R. Mills Chuck, drill. G. W. McIntyre Clasp. See Shoe clasp. Cleaner. See Flue cleaner. Sink cleaner. Clock case, alarm, D. B. Tidiany Clock case, alarm, D. B. Tidiany Clook or faucet, E. A. Newman Coork of uncet, E. A. Newman Coork extractor, L. M. Devore Cork extractor, L. M. Devore Cork extractor, L. M. Devore Corset, I. Schiele Corset, W. Young. Coupling. See Car coupling. Cranberry gathering machine, J. O. Shaw Crimping machine, H. Donovan Cultivator, J. W. & N. P. Lehr Cultivator, See Bolt cutter. Envelope cutter. Molicy of or water service supply pipes, automather. See Bolt cutter. Envelope cutter. Molicy or other mat, A. Cary Doubling winding machine, A. Ryo Draw bars, making, J. T. Wilson Drier. See Grain drier. Drill grinding attachment, twist, F. Mossberg. Dry closet, E. C. Condit Electric generators, commutator for, O. Zech Electric machine, dynamo, A. L. Riker				Ha Ha
Carpet stretcher, G. A. Hall Carrier. See Cash and parcel carrier. Sheaf or rier. Case. See Clock case. Spool case. Cash and parcel carrier, electrical, G. F. Green Cash register and indicator, T. Carney. Casting traps, apparatus for, W. M. Smeaton Cement, rubber, H. A. Clark		Carding machines, feed guide for, S. Bates		
Cart, road, J. W. Coombe Cart, road, J. W. Coombe Cash and parcel carrier, electrical, G. F. Green Cash register and indicator, T. Carney Casting traps, apparatus for, W. M. Smeaton Casting traps, apparatus for, W. M. Smeaton Casting traps, apparatus for, W. M. Smeaton Chair. See Convertible chair. Check receiver, R. Mills Chuck, drill. G. W. McIntyre Clamp. See Wire rope clamp. Clasp. See Shoe clasp. Cleaner. See Flue cleaner. Sink cleaner. Clock case, alarm, D. B. Tidany Clook or faucet. E. A. Newman Cook or faucet. E. A. Newman Cook or faucet. E. A. Newman Cork extractor, L. M. Devore Cork extractor, L. M. Devore Cork extractor, Linsley & Curtis Corn cutting machine, G. H. Fetzer Cotton scraper, chopper, and cultivator, J. M. Candless Coupling. See Car coupling. Cranberry gathering machine, J. O. Shaw Crimping machine, H. Donovan Cultivator, J. W. & N. P. Lehr Cultivator, wheel, E. P. Lynch Cuttern See Bolt cutter. Envelope cutter. M. Cutter. See Bolt cutter. Envelope cutter. M. Door on other mat, A. Cary Down bing machine, A. Ryo Desk, reading, A. J. Williford Digger. See Potato digger Dish washer, W. D. Miller Door of ther mat, A. Cary Doubling winding machine, A. Ryo Draw bars, making, J. T. Wilson Drill grinding attachment, twist, F. Mossberg Dry closet, E. C. Condit Electric generators, commutator for, O. Zech Electric generator		Carpet stretcher, G. A. Hall	388,864	Ha Ha
Case. See Clock case. Spool case. Cash rad parcel carrier, electrical, G. F. Green Cash register and indicator, T. Carney Casting traps, apparatus for, W. M. Smeaton. Cement, rubber, H. A. Clark. Chair. See Convertible chair. Check receiver, R. Mills. Chuck, drill. G. W. McIntyre. Clamp. See Wire rope clamp. Clasp. See Shoe clasp. Cleaner. See Flue cleaner. Clock case, alarm, D. B. Tidany. Closet. See Dry closet. Cock or faucet. E. A. Newman. Colors, production of new azo. H. Wolff. Copying press. T. B. Boyd. Cork extractor, L. M. Devore. Cork extractor, Linsley & Curtis. Cork extractor. Linsley & Curtis. Corset, W. Young. Cotton scraper, chopper, and cultivator, J. M. Candless. Coupling. See Car coupling. Cranberry gathering machine, J. O. Shaw. Crimping machine. H. Donovan. Cultivator, J. W. & N. P. Lehr. Cultivator, wheel, E. P. Lynch. Cutten hanger, Dorrington & Fay. Cutter. Shell cutter. Envelope cutter. M. Cutter. See Bolt cutter. Envelope cutter. M. Cutter. Shell cutter. Envelope cutter. M. Down dwindow screen and means for secural cutter. Shell cutter. Shell cutter. Dampers. ratchet for stove, D. W. Roland. Derrick, O. Crosby. Desk, reading, A. J. Williford. Digger. See Potato digger. Dish washer, W. D. Miller. Door of ther mat, A. Cary. Doubling winding machine, A. Ryo. Draught apparatus vehicle, C. Dreher. Drill grinding attachment, twist, F. Mossberg. Dry closet, E. C. Condit. Electric generators, commutator for, O. Zech. Electric generators, commutator for, O. Zech.			•	He He
Cash and parcel carrier, electrical, G. F. Green Cash register and indicator, T. Carney Casting traps, apparatus for. W. M. Smeaton. Cement, rubber, H. A. Clark	į		388,885	He He
Casting traps, apparatus for, W. M. Smeaton. Cement, rubber, H. A. Clark		Cash and parcel carrier, electrical, G. F. Green	388,859	Ho
Chair. See Convertible chair. Check receiver, R. Mills. Chuck, drill. G. W. McIntyre. Clamp. See Wire rope clamp. Clamp. See Wire rope clamp. Clamp. See Flue cleaner. Clock case, alarm, D. B. "Lilany. Closet. See Dry closet. Cook or faucet. E. A. Newman. Colors, production of new azo. H. Wolff. Convertible chair, J. Nichols. Copying press. T. B. Boyd. Cork extractor, L. M. Devore. Cork extractor, L. M. Devore. Cork extractor, Linsley & Curtis. Corset, IV. Young. Corset, W. Young. Coupling. See Car coupling. Cranberry gathering machine, J. O. Shaw. Crimping machine, H. Donovan. Cultivator, J. W. & N. P. Lehr. Cultivator, wheel, E. P. Lynch. Cutten Shell cutter. Envelope cutter. Moreone in Cultivator. Cutter. See Bolt cutter. Envelope cutter. Moreone in Cutter. Shell cutter. Tart cutter. Dampers, ratchet for stove, D. W. Roland. Derrick, O. Crosby. Dovolling window screen and means for secural wire gauze in screen frames, E. Hipolito. Door catch. C. H. Roselius. Door or other mat, A. Cary. Doubling winding machine, A. Ryo. Draught apparatus vehicle, C. Dreher. Draw bars, making, J. T. Wilson. Drill grinding attachment, twist, F. Mossberg. Dry closet, E. C. Condit. Electric generators, commutator for, O. Zech. Electric generators, commutator for, O. Zech.		Casting traps, apparatus for. W. M. Smeaton	. 389,019	Ho Ho
Chuck, drill. G. W. McIntyre. Chuck, drill. G. W. McIntyre. Clamp. See Wire rope clamp. Clasp. See Shoe clasp. Clock case, alarm, D. B. "Lidauy. Clock of faucet, E. A. Newman. Colors, production of new azo, H. Wolff. Convertible chair, J. Nichols. Copying press. T. B. Boyd. Cork extractor, L. M. Devore. Cork extractor, L. M. Devore. Cork extractor, Linsley & Curtis. Corneutting machine, G. H. Fetzer. Corset, I. Schiele. Corset, W. Young. Coupling. See Car coupling. Coupling. See Car coupling. Coupling. See Car coupling. Cranberry gathering machine, J. O. Shaw. Crimping machine, H. Donovan. Cultivator, J. W. & N. P. Lehr. Cultivator, J. W. & N. P. Lehr. Cultivator, and plow, J. A. Elliott. Cuttivator, wheel, E. P. Lynch. Cutten See Bolt cutter. Envelope cutter. M. Cutter. See Bolt cutter. Envelope cutter. M. Externo electric, E. A. Newman. Cutter. See Bolt cutter. Envelope cutter. M. Derrick, O. Crosby. Desk, reading, A. J. Williford. Digger. See Potato digger. Dish washer, W. D. Miller. Door of other mat, A. Cary. Doubling winding machine, A. Ryo. Draught apparatus vehicle, C. Dreher. Draw bars, making, J. T. Wilson. Drill grinding attachment, twist, F. Mossberg. Dry closet, E. C. Condit. Electric generators, commutator for, O. Zech. Electric generators, commutator for, O. Zech.			, 389,056	Ho
t Cigar box catch, IL W. Heffener. Clamp. See Wire rope clamp. Clasp. See Shoe clasp. Clock case, alarm, D. B. Tidaty. Clock case, alarm, D. B. Tidaty. Clock case, alarm, D. B. Tidaty. Clock of faucet, E. A. Newman. Colors, production of new azo. H. Wolff. Correctible chair, J. Nichols. Copying press. T. B. Boyd. Cork extractor, L. M. Devore. Cork extractor, L. M. Devore. Cork extractor, Linsley & Curtis. Corn cutting machine, G. H. Fetzer. Corset, I. Schiele. Corset, W. Young. Coupling. See Car coupling. Coupling. See Car coupling. Cranberry gathering machine, J. O. Shaw. Crimping machine. H. Donovan. Cultivator, J. W. & N. P. Lehr. Cultivator, J. W. & N. P. Lehr. Cultivator, J. W. & N. P. Lehr. Cultivator, and plow, J. A. Elliott. Cuttain hanger, Dorrington & Fay. Cutt-off for water service supply pipes, automather thermo electric. E. A. Newman. Cutter. See Bolt cutter. Envelope cutter. Memory of the cutter. Dampers, ratchet for stove, D. W. Roland. Derrick, O. Crosby. Desk, reading, A. J. Williford. Digger. See Potato digger. Dish washer, W. D. Miller. Door of other mat, A. Cary. Doubling winding machine, A. Ryo. Draught apparatus vehicle, C. Dreher. Drill grinding attachment, twist, F. Mossberg. Dry closet, E. C. Condit. Electric generators, commutator for, O. Zech. Electric generators, commutator for, O. Zech. Electric generators, commutator for, O. Zech.	У	Check receiver, R. Mills		Ho Ho
Clasp. See Shoe clasp. Cleaner. See Flue cleaner. Sink cleaner. Clock case, alarm, D. B. Tidany. Closet. See Dry closet. Cock or faucet. E. A. Newman Colors, production of new azo. H. Wolff Copying press. T. B. Boyd. Cork extractor, L. M. Devore. Cork extractor, Linsley & Curtis. Cork extractor. Linsley & Curtis. Corn cutting machine, G. H. Fetzer. Corset, W. Young. Cotton scraper, chopper, and cultivator, J. M. Candless. Coupling. See Car coupling. Cramberry gathering machine, J. O. Shaw. Crimping machine. H. Donovan Cultivator, J. W. & N. P. Lehr. Cultivator, J. W. & N. P. Lehr. Cultivator, and plow, J. A. Elliott. Cuttain hanger, Dorrington & Fay. Cutter. Shell cutter. Envelope cutter. Machine, J. O. Crosby. Desk, reading, A. J. Williford. Digger. See Potato digger. Dish washer, W. D. Miller. Door and window screen and means for secure wire gauze in screen frames, E. Hipolito. Door catch. C. H. Roselius. Door or other mat, A. Cary. Doubling winding machine, A. Ryo. Draught apparatus vehicle, C. Dreher. Drill grinding attachment, twist, F. Mossberg. Dry closet, E. C. Condit. Electric generators, commutator for, O. Zech. Electric machine, dynamo, A. L. Riker.	t	('igar box catch, H. W. Heffener		110
Cleaner. See Flue cleaner. Sink cleaner. Clock case, alarm, D. B. "Lidauy. Closet. See Dry closet. Cock or faucet. E. A. Newman. Colors, production of new azo. H. Wolff Copying press. T. B. Boyd Cork extractor, L. M. Devore Cork extractor, L. M. Devore Cork extractor. Linsley & Curtis Corn cutting machine, G. H. Fetzer Corn cutting machine, G. H. Fetzer Corset, I. Schiele Corset, I. Schiele Coughing. See Car coupling. Coupling. See Car coupling. Cranberry gathering machine, J. O. Shaw Crimping machine. H. Donovan Cultivator, J. W. & N. P. Lehr Cultivator, J. W. & N. P. Lehr Cultivator, J. W. & N. P. Lehr Cultivator, and plow, J. A. Elliott Cuttender of or water service supply pipes, automate. Cutter. See Bolt cutter. Envelope cutter. Moreone lectric. E. A. Newman Cutter. See Bolt cutter. Envelope cutter. Moreone lectric. E. A. Newman Cutter. See Bolt cutter. Tart cutter. Dampers, ratchet for stove, D. W. Roland Derrick, O. Crosby Desk, reading, A. J. Williford Digger. See Potato digger. Dish washer, W. D. Miller. Door of other mat, A. Cary Doubling winding machine, A. Ryo Draw bars, making, J. T. Wilson Driver. See Grain drier. See Grain drier. Drill grinding attachment, twist, F. Mossberg. Dry closet, E. C. Condit. Electric generators, commutator for, O. Zech. Electric generators, commutator for, O. Zech. Electric generators, commutator for, O. Zech.	- 1	i i i i i i i i i i i i i i i i i i i		Ho Ho
Closet. See Dry closet. Cock or faucet. E. A. Newman Colors, production of new azo. H. Wolff. Convertible chair, J. Nichols. Copying press. T. B. Boyd. Cork extractor. Linsley & Curtis. Cork extractor. Linsley & Curtis. Cork cutting machine, G. H. Fetzer. Corset, W. Young. Corset, W. Young. Corbon scraper, chopper, and cultivator, J. M. Candless. Coupling. See Car coupling. Cranberry gathering machine, J. O. Shaw. Crimping machine. H. Donovan. Cultivator, J. W. & N. P. Lehr. Cultivator and plow, J. A. Elliott. Cultivator orn, H. L. Pharris. Cultivator, wheel, E. P. Lynch. Cut-off for water service supply pipes, automather thermo electric. E. A. Newman. Cutter. See Bolt cutter. Envelope cutter. M. Cutter. See Bolt cutter. Tart cutter. Dampers, ratchet for stove, D. W. Roland. Derrick, O. Crosby. Desk, reading. A. J. Williford. Digger. See Potato digger. Dish washer, W. D. Miller. Door and window screen and means for secural wire gauze in screen frames, E. Hipolito. Door catch. C. H. Roselius. Door or other mat, A. Cary. Doubling winding machine, A. Ryo. Draw bars, making. J. T. Wilson. Drill grinding attachment, twist, F. Mossberg. Dry closet, E. C. Condit. Electric generators, commutator for, O. Zech. Electric generators, commutator for, O. Zech. Electric machine, dynamo, A. L. Riker.	- 1	Cleaner. See Flue cleaner. Sink cleaner.	900 190	Hu
Colors, production of new azo. H. Wolff. Convertible chair, J. Nichols. Copying press. T. B. Boyd. Cork extractor. L. M. Devore. Cork extractor. Linsley & Curtis. Corset, W. N. Barrett. Corset, I. Schiele Corset, W. Young. Cotton scraper, chopper, and cultivator, J. M. Candless. Coupling. See Car coupling. Cranberry gathering machine, J. O. Shaw. Crimping machine. H. Donovan. Cultivator, J. W. & N. P. Lehr. Cultivator and plow, J. A. Elliott. Cultivator, and plow, J. A. Elliott. Cultivator, wheel, E. P. Lynch. Cut-off for water service supply pipes, automather thermo electric. E. A. Newman. Cutter. See Bolt cutter. Envelope cutter. Met. Desk, reading. A. J. Williford. Digger. See Potato digger. Dish washer, W. D. Miller. Door and window screen and means for secural wire gauze in screen frames, E. Hipolito. Door catch. C. H. Roselius. Door or other mat, A. Cary. Doubling winding machine, A. Ryo. Draw bars, making. J. T. Wilson. Drill grinding attachment, twist, F. Mossberg. Dry closet, E. C. Condit. Electric generators, commutator for, O. Zech. Electric generators, commutator for, O. Zech. Electric machine, dynamo, A. L. Riker.		Closet. See Dry closet.		Hy Hy
Convertible chair, J. Nichols. Copying press. T. B. Boyd. Cork extractor, L. M. Devore. Cork extractor, Linsley & Curtis. Corset, W. N. Barrett. Corn cutting machine, G. H. Fetzer. Corset, W. Young. Cotton scraper, chopper, and cultivator, J. M. Ccandless. Coupling. See Car coupling. Cranberry gathering machine, J. O. Shaw. Crimping machine. H. Donovan. Cultivator, J. W. Clark. Cultivator, J. W. & N. P. Lehr. Cultivator and plow, J. A. Elliott. Cultivator, wheel, E. P. Lynch. Cultivator, wheel, E. P. Lynch. Cut-off for water service supply pipes, automather. Cuter. See Bolt cutter. Envelope cutter. Machine, J. O. Crosby. Desk, reading, A. J. Williford. Digger. See Potato digger. Dish washer, W. D. Miller. Door and window screen and means for secural wire gauze in screen frames, E. Hipolito. Door catch. C. H. Roselius. Door or other mat, A. Cary. Doubling winding machine, A. Ryo. Draw bars, making, J. T. Wilson. Drief. See Grain drier. See Illectric generators, commutator for, O. Zech. Electric generators, commutator for, O. Zech. Electric generators, commutator for, O. Zech. Electric machine, dynamo, A. L. Riker.		Cock or faucet, E. A. Newman		Ice
Cork extractor, L. M. Devore Cork extractor, Linsley & Curtis Corping machine, G. H. Fetzer Coupling, See Car coupling. Cultivator, J. W. & N. P. Lehr Cultivator, J. W. & N. P. Lehr Cultivator and plow, J. A. Elliott. Cultivator, wheel, E. P. Lynch Curtain hanger, Dorrington & Fay Cutter. See Bolt cutter. Envelope cutter. Macuter. Shell cutter. Tart cutter. Dampers, ratchet for stove, D. W. Roland Derrick, O. Crosby Desk, reading, A. J. Williford Digger. See Potato digger Dish washer, W. D. Miller Door and window screen and means for secur awire gauze in screen frames, E. Hipolito Door or other mat, A. Cary Doubling winding machine, A. Ryo Draught apparatus vehicle, C. Dreher Draw bars, making, J. T. Wilson Drill grinding attachment, twist, F. Mossberg Electric generators, commutator for, O. Zech Electric machine, dynamo, A. L. Riker		Convertible chair, J. Nichols	389,163	(
Cork extractor. Linsley & Curtis. Corkscrew, W. N. Barrett. Corset, I. Schiele	i-	Copying press. T. B. Boyd		Joi
Corn cutting machine, G. H. Fetzer Corset, I. Schiele	١.	Cork extractor. Linsley & Curtis	388,888 388,945	Joi
corset, V. Young Corset, W. Young Corset, W. Young Coupling. See Car coupling. Cranberry gathering machine, J. O. Shaw Crimping machine. H. Donovan Cultivator, J. W. & N. P. Lehr Cultivator and plow, J. A. Elliott Cultivator or, H. L. Pharris Cultivator, Wheel, E. P. Lynch Cuttain hanger, Dorrington & Fay. Cutter. See Bolt cutter. Envelope cutter. M cutter. See Bolt cutter. Envelope cutter. M cutter. Shell cutter. Tart cutter. Dampers, ratchet for stove, D. W. Roland. Derrick, O. Crosby. Desk, reading, A. J. Williford. Digger. See Potato digger. Dish washer, W. D. Miller. Door and window screen and means for secur wire gauze in screen frames, E. Hipolito Door atch. C. H. Roselius. Door or other mat, A. Cary. A Doubling winding machine, A. Ryo. Draw bars, making. J. T. Wilson. Drill grinding attachment, twist, F. Mossberg. Dry closet, E. C. Condit. Electric generators, commutator for, O. Zech. Electric generators, commutator for, O. Zech. Electric generators, commutator for, O. Zech.	t,	Corn cutting machine, G. H. Fetzer	. 389 ,066	
coupling. See Car coupling. Coupling. See Car coupling. Cranberry gathering machine, J. O. Shaw Crimping machine. H. Donovan Cultivator, J. W. & N. P. Lehr Cultivator and plow, J. A. Elliott Cultivator, wheel, E. P. Lynch Cutain hanger, Dorrington & Fay Cut-off for water service supply pipes, automate thermo electric. E. A. Newman Cutter. See Bolt cutter. Envelope cutter. Moreover, and the cutter. Shell cutter. Tart cutter. Dampers, ratchet for stove, D. W. Roland Desk, reading, A. J. Williford Digger. See Potato digger. Dish washer, W. D. Miller Door ond window screen and means for secural wire gauze in screen frames, E. Hipolito Door or other mat, A. Cary Doubling winding machine, A. Ryo Draw bars, making, J. T. Wilson Drill grinding attachment, twist, F. Mossberg Dry closet, E. C. Condit Electric generators, commutator for, O. Zech Electric generators, commutator for, O. Zech Electric generators, commutator for, O. Zech Electric machine, dynamo, A. L. Riker	٠.	Corset, I. Schiele	. 389,015	Ke
Coupling. See Car coupling. Cranberry gathering machine, J. O. Shaw Crimping machine. H. Donovan Cultivator, J. W. Clark Cultivator, J. W. & N. P. Lehr Cultivator and plow, J. A. Elliott Cultivator and plow, J. A. Elliott Cultivator, corn, H. L. Pharris Cultivator, wheel, E. P. Lynch Cut-off for water service supply pipes, automathermoelectric. E. A. Newman Cutter. See Bolt cutter. Envelope cutter. Machine. Cutter. Shell cutter. Tart cutter. Dampers, ratchet for stove, D. W. Roland Dersk, reading. A. J. Williford. Digger. See Potato digger. Dish washer, W. D. Miller. Door and window screen and means for secundary wire gauze in screen frames, E. Hipolito Door or other mat, A. Cary Doubling winding machine, A. Ryo Draw bars, making. J. T. Wilson Draw bars, making. J. T. Wilson Drill grinding attachment, twist, F. Mossberg. Dry closet, E. C. Condit Electric generators, commutator for, O. Zech Electric generators, commutator for, O. Zech Electric machine, dynamo, A. L. Riker	8	Cotton scraper, chopper, and cultivator, J. C		La
Cranberry gathering machine, J. O. Shaw. Crimping machine. H. Donovan Cultivator, J. W. Clark Cultivator, J. W. Clark Cultivator and plow, J. A. Elliott. Cutativator, orn, H. L. Pharris. Cultivator, wheel, E. P. Lynch. Cutain hanger, Dorrington & Fay. Cut-off for water service supply pipes, automate thermo electric. E. A. Newman. Cutter. See Bolt cutter. Envelope cutter. Moreover and process of the cutter. Tart cutter. Dampers. ratchet for stove, D. W. Roland. Derrick, O. Crosby. Desk, reading, A. J. Williford. Digger. See Potato digger. Dish washer, W. D. Miller. Door and window screen and means for secural wire gauze in screen frames, E. Hipolito. Door of other mat, A. Cary. Doubling winding machine, A. Ryo. Draught apparatus vehicle, C. Dreher. Drill grinding attachment, twist, F. Mossberg. Dry closet, E. C. Condit. Electric generators, commutator for, O. Zech. Electric generators, commutator for, O. Zech.			. ათ,980	La La
Cultivator, J. W. Clark Cultivator, J. W. & N. P. Lehr Cultivator and Dlow, J. A. Elliott Cultivator, corn, H. L. Pharris Cultivator, wheel, E. P. Lynch Cut-ain hanger, Dorrington & Fay. Cut-off for water service supply pipes, automather thermo electric. E. A. Newman Cut-off for water service supply pipes, automather see Bolt cutter. Envelope cutter. Manager, Dorrington & Fay. Cut-off for water service supply pipes, automather see Bolt cutter. The cutter. Manager of the cutter. The cutter. Manager of the cutter. The cutter of the cutter of the cutter of the cutter. The cutter of the cutter of the cutter of the cutter of the cutter. The cutter of the cutt		Cranberry gathering machine, J. O. Shaw		La La
cultivator and plow, J. A. Elliott. Cultivator, corn, H. L. Pharris. Cultivator, wheel, E. P. Lynch. Cut-off for water service supply pipes, automathermoelectric. E. A. Newman. Cutter. See Bolt cutter. Envelope cutter. Molticuter. Shell cutter. Tart cutter. Dampers. ratchet for stove, D. W. Roland. Derrick, O. Crosby. Desk, reading, A. J. Williford. Digger. See Potato digger. Dish washer, W. D. Miller. Door and window screen and means for secur wire gauze in screen frames, E. Hipolito. Door or other mat, A. Cary. A. Doublinz winding machine, A. Ryo. Drawbars, making. J. T. Wilson. Drill grinding attachment, twist, F. Mossberg. Dry closet, E. C. Condit. Electric generators, commutator for, O. Zech. Electric machine, dynamo, A. L. Riker.	1-	Cultivator, J. W. Clark	. 388,832	La
Cultivator, corn, H. L. Pharris. Cultivator, wheel, E. P. Lynch Cuttain hanger, Dorrington & Fay Cut-off for water service supply pipes, automathermoelectric. E. A. Newman Cutter. See Bolt cutter. Envelope cutter. Manual cutter. Shell cutter. Tart cutter. Dampers, ratchet for stove, D. W. Roland Desrick, O. Crosby Desk, reading, A. J. Williford Dish washer, W. D. Miller Door and window screen and means for secure wire gauze in screen frames, E. Hipolito Door or other mat, A. Cary A. Doublinz winding machine, A. Ryo Draw bars, making. J. T. Wilson Draw bars, making. J. T. Wilson Drill grinding attachment, twist, F. Mossberg Dry closet, E. C. Condit Electric generators, commutator for, O. Zech Electric machine, dynamo, A. L. Riker		Cultivator, J. W. & N. P. Lehr		La
Cutain hanger, Dorrington & Fay. Cut-off for water service supply pipes, automate thermo electric. E. A. Newman. Cutter. See Bolt cutter. Envelope cutter. Manager. Dampers, ratchet for stove, D. W. Roland. Derrick, O. Crosby. Desk, reading, A. J. Williford. Digger. Dish washer, W. D. Miller. Door and window screen and means for secure awire gauze in screen frames, E. Hipolito. Door catch. C. H. Roselius. Door or other mat, A. Cary. Draught apparatus vehicle, C. Dreher. Draw bars, making. J. T. Wilson. Drill grinding attachment, twist, F. Mossberg. Dry closet, E. C. Condit. Electric generators, commutator for, O. Zech. Electric machine, dynamo, A. L. Riker.	n	Cultivator, corn, H. L. Pharris	. 388,912	
t. thermo electric. E. A. Newman. Cutter. See Bolt cutter. Envelope cutter. Met cutter. Shell cutter. Tart cutter. Dampers, ratchet for stove, D. W. Roland Derrick, O. Crosby Desk, reading, A. J. Williford. Digger. See Potato digger. Dish washer, W. D. Miller. Door and window screen and means for secur awire gauze in screen frames, E. Hipolito. Door catch. C. H. Roselius. Door or other mat, A. Cary Doubling winding machine, A. Ryo Draught apparatus vehicle, C. Dreher. Draw bars, making, J. T. Wilson. Drill grinding attachment, twist, F. Mossberg. Dry closet, E. C. Condit. Electric generators, commutator for, O. Zech. Electric machine, dynamo, A. L. Riker.		Curtain hanger, Dorrington & Fay	. 388,846	. La
Cutter. See Bolt cutter. Envelope cutter. M cutter. Shell cutter. Tart cutter. d Dampers. ratchet for stove, D. W. Roland Derrick, O. Crosby Desk, reading, A. J. Williford. Digger. See Potato digger. Dish washer, W. D. Miller Door and window screen and means for secur wire gauze in screen frames, E. Hipolito. Door or other mat, A. Cary Doubling winding machine, A. Ryo Draught apparatus vehicle, C. Dreher. Draw bars, making. J. T. Wilson Drill grinding attachment, twist, F. Mossberg. Dry closet, E. C. Condit Electric generators, commutator for, O. Zech. Electric machine, dynamo, A. L. Riker		Cut-off for water service supply pipes, automatic thermo electric. E. A. Newman		La La
d Dampers, ratchet for stove, D. W. Roland Desk, reading, A. J. Williford Disk washer, W. D. Miller Door and window screen and means for secur wire gauze in screen frames, E. Hipolito Door or other mat, A. Cary Doubling winding machine, A. Ryo Draw bars, making. J. T. Wilson Draw bars, making. J. T. Wilson Drill grinding attachment, twist, F. Mossberg Dry closet, E. C. Condit Electric generators, commutator for, O. Zech Electric machine, dynamo, A. L. Riker		Cutter. See Bolt cutter. Envelope cutter. Mea		
Derrick, O. Crosby. Desk, reading, A. J. Williford. Digger. See Potato digger. Dish washer, W. D. Miller. Door and window screen and means for secur wire gauze in screen frames, E. Hipolito. Door octatch. C. H. Roselius. Door of other mat, A. Cary. Doubling winding machine, A. Ryo. Draw bars, making. J. T. Wilson. Draw bars, making. J. T. Wilson. Drill grinding attachment, twist, F. Mossberg. Dry closet, E. C. Condit. Electric generators, commutator for, O. Zech. Electric machine, dynamo, A. L. Riker.		Dampers, ratchet for stove, D. W. Roland		La Lif
Digger. See Potato digger. Dish washer, W. D. Miller. Door and window screen and means for secur wire gauze in screen frames, E. Hipolito. Door octch. C. H. Roselius. Door or other mat, A. Cary. A. Doublinz winding machine, A. Ryo. Draught apparatus vehicle, C. Dreher. Draw bars, making. J. T. Wilson. Dry closet, E. C. Condit. Electric generators, commutator for, O. Zech. Electric machine, dynamo, A. L. Riker.	_	Desk, reading, A. J. Williford		Lo
Door and window screen and means for secur wire gauze in screen frames, E. Hipolito Door catch. C. H. Roselius Door or other mat, A. Cary Doublinz winding machine, A. Byo Draught apparatus vehicle, C. Dreher Draw bars, making. J. T. Wilson Drill grinding attachment, twist, F. Mossberg. Dry closet, E. C. Condit Electric generators, commutator for, O. Zech. Electric machine, dynamo, A. L. Riker	.2	Digger. See Potato digger.		Ì
Door catch. C. H. Roselius		Door and window screen and means for securing	2	Lo Ma
Door or other mat, A. Cary Doublinz winding machine, A. Byo Draught apparatus vehicle, C. Dreher Draw bars, making. J. T. Wilson Drill grinding attachment, twist, F. Mossberg. Dry closet, E. C. Condit Electric generators, commutator for, O. Zech. Electric machine, dynamo, A. L. Riker		wire gauze in screen frames, E. Hipolito Door catch. C. H. Roselius		Me ⊢Me
Draught apparatus vehicle, C. Dreher	1-	Door or other mat, A. Cary	. 388.826	Me
Draw bars, making. J. T. Wilson	11	Draught apparatus vehicle, C. Dreher	. 388,847	Me Me
or lill grinding attachment, twist, F. Mossberg. Dry closet, E. C. Condit			. 389.182	Me
Electric generators, commutator for, O. Zech. Lectric machine, dynamo, A. L. Riker	8,	Drill grinding attachment, twist, F. Mossberg		Mi
Electric machine, magneto, W. Humans	38	Electric generators, commutator for, O. Zech	. 389,184	Mo
	1-	Electric machine, dynamo, A. L. Riker Electric machine, magneto, W. Humans	. 389,011 . 388,877	Mo
		•		

ī	Electric machine regulator, dynamo, A. G. Water-	_
۶	house	389,029
	Electric machines, regulation of dynamo, A. G. Waterhouse	889 N3A
	Electric signal, H. T. Hill	
ļ	Elevator. See Water elevator. Elevator signal, J. E. Riley	888,918
!	Emery wheel dresser, C. H. Douglas	
į	Engine. See Hot air engine. Rotary engine. Engine cross head, D. P. Whitesell	388.987
١.	Engines, regulator for steam pumping, M. Greenwood	488 .860
:	Envelope and stamp moistener, J. R. Porter	.914
- 3	Envelope cutter, J. S. Holmes Evaporating and condensing liquids, apparatus	000,014
- 	for, J. J. Hayes Evaporating apparatus, W. Marr	389.160
4	Excavator, R. R. Osgood	388,910
6 !		
5 4	Expansion joint, Pratt & Wainwright	388,915
6	Fabrics, machine for uniting looped, W. Beattie Fastening device, automatic, E. Wilkinson	
9	Feed water heater, Pratt & Wainwright	88,916
1	Feed water regulator, Cook & Thoens (r) Fence, D. Boyd	10,957 388.816
	Fence building apparatus, wire, Hooton & Wiard.	888,974
0 ¦	Fence machine, J. M. Wright Fencing, making barbed, E. Jordan	389,154
9 ! 9	Filter, J. P. Gruber	389,03 6 389,03 6
8 წ	Fire escape, C. J. Clark	338.829
0	Fish line reel, C. F. Gillet	889,070
3	Flask. See Moulder's flask. Flour bolt, H. J. Gilbert	388,855
6	Flour mixing and sifting machine, C. Roehl Flue cleaner, L. Duennisch	
	Flue stopper and collar, J. I. Flanagen	388,961
	Fork. See Hay turning fork. Freight record, M. M. Kirkman	388.881
7	Furnace. See Gas furnace.	
2	Galvanic battery, A. K. EatonGarment stay, Wheeler & MacQuesten	388,936
8	Gas, apparatus for manufacturing, H. C. Rew Gas, apparatus for manufacturing water, G. S.	389,103
4	Dwight	388,849
2	Rew	
9	Gas furnace, regenerative, G. Pietzka	389,009
3 ?7	Hogan	
5	das receiv beden, in conservation in the conservation in	388,953
36 33	Gas scrubber, W. Morava	388,903
2	Gate, J. Good	
34 71	Generator. See Steam generator.	
•	Gilding, etc., adhesive powder for, M.J. Masters Goods from shelves, device for lifting, J.H.Jef-	,
2	frey	
15	Grain separator, J. L. Owens	
10	J. Gosling	388,966
21	Grinding mill, W. D. Gray	
i0 14	Grindstones, tool holder for, J. M. Dillon	888,958
8	Hanger. See Curtain hanger.	
15 56	Harrow, A. C. Downey. Harrow, spring tooth, Babcock & Baird	389,138 389,044
)7 31	Harvester, corn, R. L. Pearson	389,004
4	Steward.	
32	Harvester, self-binding, G. H. Spaulding Harvesting machine, corn, J. A. Stone	389,117
35 33	Hat bodies, coating, plaiting, and napping, G. Atherton	38 9, 1 31
13 34	Hat stretcher, G. E. Schellman	389,014
	Heater. See Feed water heater. Heating apparatus, mural, J. D. Parker	
35	Heel machine, A. J. Langelier	388,884
59	Heel nailing machine, Horne & Henderson Hoisting gear, D. L. Brown	389,052
25 19	Hoisting tackle lock, A. M. Kerr	389,155 389,049
56	Holder. See Book holder. Candleholder. Mucil-	
1	age holder. Ticket holder. Horse detacher, J. K. P. Timmons	388,931
37 58	Hose thimble for the walls of buildings, L. F. Stevens	389,025
	Hot air engine, J. L. Bair	389,045
•	Hub. vehicle, T. O'Brien	389,101
	Hydrant, A. J. Tyler	389,176 388,388
97 27	Ice cream freezer, C. Spornhauer	
63 17	cator. Station indicator. Street and station indicator.	
14	Joint. See Expansion joint. Metal joint.	
88 45	Joint for tubular framework, D. Wiggins	
66 15		388,933
30	Knife. See Planing machine knife. Table knife.	•
85	Lamp fixture, extension, E. H. Peck	389,005
14	Lantern, H. L. Jewell	
45 32	Lathe carriages, front apron for, J. R. Back	388,808
88	copying, T. Millett, Jr	388,900
53 12		
58 46	Lathes, automatic setting mechanism for spoke,	
96	Lathes, tool rest for hand, E. Rivett	389.012
JU	Lathing, machine for making sheet metal, E.	388,866
09	Lathing, metallic, B. Scarles	388,920 388,875
39	Load indicator, vehicle, J. Howard	388,874
38	lock.	
90	Loom picker staffs, loop for, Cote & Charland Mat. See Door or other mat.	389,060
70 10	Measuring tank, automatic, S. L. Baker	389,132
26	Metal joint for hangers, etc., J. B. Wallace	389,028
72 17	Metal rods, machine for reducing, H. A. Williams Metal tube, J. Callan	388,938
82	Metal tube, H. W. Hayden	388,867
95	Mill. See Grinding mill. Sawmill.	
84		
11 77	and registering the amount of, A. J. Lyon	3 89,15 9