

ENGINEERING INVENTIONS.

A car coupling has been patented by Mr. Edward A. Olmstead, of Buffalo, N. Y. The main objects of this invention are to relieve the car body timbers of buffing or pulling strain, and to so mount the drawbar that no actual strain will fall upon the king pin or bolt, the invention covering various novel details of construction and combinations of parts.

A frogless switch has been patented by Mr. Frank Nemacheck, of Appleton, Wis. Combined with the main line rails, an intermediate rail section and siding rail section, is an auxiliary rail connecting with either of the intermediate rail sections, an operating lever connected to a rod, and S-shaped crank connections, to dispense with the use of the ordinary form of frog.

A car coupling has been patented by Mr. Carlos J. Warren, of Jamestown, Dakota Ter. A spring-actuated bumper bar is held to slide at one side of the drawhead, a dog being pivoted upon the bar and a lift bar pivoted below the bar, with a crank arm adapted to engage the dog, with other novel features, making a coupling which can be operated without passing or standing between the cars.

MISCELLANEOUS INVENTIONS.

A combination tool has been patented by Mr. Joseph Brouse, of New Berlin, Pa. It consists of a hammer, saw, square, nail puller, and plane, all mounted on a single handle, in a novel way.

A saw file adjusting weight has been patented by Mr. William Moore, of Mooney, Ind. The invention consists in combining with a file handle a pendent weight by which the file may always be held at the same angle, thus insuring uniformity in the angles of the teeth.

A machine for winding bobbins for sewing machines has been patented by Mr. George H. Willey, of Abington, Mass. This invention covers a novel construction and combination of parts, making a machine which is simple, and easily and quickly operated for winding one bobbin at a time.

A snapper attachment for whips has been patented by Mr. William Becker, of Brooklyn, N. Y. It is designed to form a rigid and durable connection with the whip tip, and consists of a stiffening piece of tubular section of a quill, embracing the tip, a plaited covering extending over the whip tip and strengthening piece, and forming a loop.

A mechanical movement has been patented by Mr. Abraham L. Akins, of Larimer's Station, Pa. The invention covers a novel construction and combination of parts, so arranged as to be operable by hand or foot, and applicable for use in the transmission of power to almost any form of light machinery.

A measuring faucet has been patented by Mr. Ole Martinson, of Meridian, Wis. The invention covers novel combinations and constructions of parts for use in relation to a suitable supply, whereby accurate measuring is accomplished without waste, or the entrance of dirt or insects to the liquid or commodity being measured.

A coffee pot has been patented by Mr. Harry B. Cornish, of Blue Earth City, Minn. It is of that class having an inner vessel to hold the ground coffee, into which boiling water is poured and allowed to percolate through the coffee and a strainer into the main outer vessel, the invention covering novel details of construction and combinations of parts.

A rounding jack for hat brims has been patented by Mr. Michael Hild, of Philadelphia, Pa. This invention relates to a former patented invention of the same inventor, and covers a sectional rod for operating the knife stock, whereby, when the stock is drawn back nearly to the end of the jack, the rod may be contracted so as not to be in the way when using the jack.

A surgical splint has been patented by Miss Annie Callier, of Albany, N. Y. It has extensible side rails, a plate connected thereto forming rests for both legs of the patient, straps for securing the patient, and other novel features, making a simple and inexpensive apparatus, which may be quickly and easily applied.

A ticket holder has been patented by Mr. Moses H. Straus, of Columbus, Ohio. It consists preferably of a single piece of wire bent upon itself in novel form, making a device capable of ready and easy attachment to a bolt or piece of goods to retain a label, and also for attaching a ticket to articles of apparel or goods.

A wagon seat has been patented by Mr. Charles Van Horn, of Bethlehem, Pa. Springs are secured to the longitudinal center of the seat, in combination with pivoted boards provided at the center with arms linked together and to the springs, in combination with supporting irons, so that the seat will bow only a level up and down motion.

A lock for firearms has been patented by Mr. Jacob Nicely, of Enon Valley, Pa. It is a combination of two locks, the sears of which have lugs projecting inwardly and arranged in different planes, a trigger being centrally located in the stock between the locks, whereby provision is made for releasing either of the hammers or both in rapid succession.

A device for weighing and sacking grain has been patented by Mr. Charles E. Cole, of Somerville, N. J. The invention covers a novel construction and combination of parts, affording means whereby the grain is automatically weighed and sacked on passing from the thrashing machine, the grain being delivered continuously without interfering with the weighing.

An indicator for non-transparent receptacles containing liquids has been patented by Mr. Frank H. Palmer, of Long Island City, N. Y. Combined with a reservoir is a tube secured to the top and extending inwardly, a transparent cover being secured

to the top of the tube, and a float adapted to slide freely in the tube, the float being seen only when the receptacle is nearly full.

A washing machine has been patented by Mr. Marvin Newton, of Girard, Pa. A rocking rack or open bottom is journaled in a tub, a rocking presser being journaled above the rocking bottom and made hollow at the under side, and having air holes and valves closing them, to induce suction, whereby the washing of clothes may be accomplished thoroughly and quickly.

A washing machine has been patented by Mr. Jeremiah Biddison, of Moscow, Idaho Ter. Combined with a tub having a reciprocable pounder is a frame with a mortise in one of its cross bars centrally mounted upon the heads of the pounder and adapted to be reciprocated between the sides and over the ends of the tub, with over novel features, making a machine of simple construction and very efficient in operation.

A brick kiln has been patented by Mr. Jacob Buhner, of Constance, Baden, Germany. It is provided with a series of chambers, gas generators and gasometers, and with air and gas conduits, arranged in a novel way, whereby one portion of the kiln may be isolated from other parts, and two chambers may be fired at once, securing a larger production of brick, tile, terra cotta, etc.

SCIENTIFIC AMERICAN BUILDING EDITION.

FEBRUARY NUMBER.

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NEW BOOKS AND PUBLICATIONS.

THE ENGINEER'S CATECHISM, A PRACTICAL TREATISE FOR THE USE OF THOSE IN CHARGE OF STEAM PLANTS. By George L. Fowler. New York: American Railway Publishing Company. 1888. Pp. 183. Price 50 cents.

This work is intended as a book of instruction for engineers in charge of steam plants, as to the most approved methods to be employed in the prosecution of their duties. It is in the form of question and answer, and will prove a useful little work for regular engineers as well as for those preparing for examination. Its low price should assure it a large sale.

Notes & Queries

HINTS TO CORRESPONDENTS.

Names and Address must accompany all letters, or no attention will be paid thereto. This is for our information, and not for publication.

References to former articles or answers should give date of paper and page, or number of question. Inquiries not answered in reasonable time should be repeated; correspondents will bear in mind that some answers require not a little research, and, though we endeavor to reply to all, either by letter or in this department, each must take his turn.

Special Written Information on matters of personal rather than general interest cannot be expected without remuneration.

Scientific American Supplements referred to may be had at the office. Price 10 cents each.

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Minerals sent for examination should be distinctly marked or labeled.

(1) G. W. S. asks: 1. What material can I use to make a small model engine, that is easier cast than cast iron, and will work equally as well in the lathe and in the engine? Of what material, and in what way, can I make a small air tight valve, that will hold without leaking a cold air pressure of 10 to 15 pounds? A. For model engine and air tight valve use brass or type metal. The valve may be given a metal seat perforated with a number of small holes and closed by an India rubber flap. 2. What is the simplest chemical I can use that will be affected by light passing through a negative placed over it? Don't want a perfect image, or any shading or half tints. A. For chemical affected by light, you may use chloride or bromide of silver, or a solution of gelatine containing 10 per cent of bichromate of potash dissolved in it. 3. What is the best form of condenser now in use in connection with the steam engine for producing a vacuum in the cylinder? A. The surface condenser is the general type of condenser now adopted. 4. Was the device for cooking with the heat of an ordinary oil lamp, where the food was placed in an air tight vessel surrounded by water kept hot by the lamp, a practical arrangement, or mere supposition? An account of it was published some time since by Mr. Atkinson, I believe. A. The device for cooking was considered practical by its originator. 5. What material can I use to cast small articles, that is somewhat stronger than Babbitt and will bear being drilled and tapped? A. For small castings use brass or bronze for good work, and type metal where easy fusibility is an object.

(2) R. C. asks: 1. How to make say a half gallon of the solution for nickel plating as described on page 10 of the present volume of the SCIENTIFIC AMERICAN? A. For slightly over a half gallon solution, use nickel sulphate one-fifth pound, ammonium tartrate one-seventh pound, tannic acid one one-thousandth pound, water one-half gallon. 2. Would four cells of Grenet battery with zincs 2 inches by 2 inches and six electric light carbons each be large enough for plating small articles? A. Yes; connect in series, zinc to carbon. 3. What solution would I need for dipping the articles to be plated in, to make the plating adhere? A. The articles must be scoured with ground pumice, whiting, or similar material and water, then dipped in warm potash solution, again scoured, and immediately before insertion in the bath dip into an acid solution or cyanide of potash solution. For

potash solution use a half pound to a gallon; for acid solution use sulphuric acid 4 pounds, nitric acid 2 pounds, water 4 pints; for cyanide of potash solution use 1/4 pound cyanide of potassium to 1 gallon of water. You should not attempt to work at it without having a good manual on the subject, such as Watt's "Electro-Deposition of Metals," which we can send you by mail for \$3.50.

(3) G. J. P. asks: 1. What acids and in what proportion will etch type metal? A. Take nitric acid 1 part, water 5 parts. Mix. 2. How is the colored lacquering done, such as used on the inside of small glass balls and toys, for Christmas tree decoration, etc.? It is of all colors and remarkably brilliant. A. The cheaper colored balls contain a quickly drying colored varnish or paint put into the ball and distributed by turning the globe about. 3. Where to get fatty ink spoken of in your paper, and used for drawings in etching zinc plates? A. The manufacturers of fine printing inks will furnish such an ink.

(4) A. P. S. writes: I read that if steel is immersed in carbonate of potash for a few minutes it will not rust for years, even if exposed to a damp atmosphere. Could it be applied to gun barrels or locks, without in jury to the same, and would subsequent oiling affect the result? A. The carbonate of potash only neutralizes any acid that may be upon the surface of steel or iron, and while it remains as a film, neutralizes the oxidizing properties of moist air in contact. Oiling with neutral oil (free from acid, preferably linseed) will further protect the surface. Any wiping of the articles or handling the surfaces covered by the carbonate destroys its protecting properties. It will serve but little good on a gun barrel that is handled. Frequent oiling and wiping is recommended.

(5) A. C. R. writes: I have some rattan baby carriages that have become soiled. I wish to stain them cherry color. How can I do it? A. For cherry stain, take of rain water 3 quarts, annatto 4 ounces; boil in a copper kettle until the annatto is dissolved, then put in a piece of potash the size of a walnut, keep it on the fire about half an hour longer, and it is ready to bottle for use. 2. I have a lot of kerosene lamp burners that have become black and soiled. What is the cheapest way to make them look bright? A. Use oxalic acid and whiting mixed and applied wet, with brush, and brushed again when dry with soft plate brush to polish.

(6) H. & W. ask: We have connected with our planing mills a dry kiln for lumber, which we dry with hot air. After this hot air has passed through the lumber, we convey it into the shop for heating purposes. Do you consider this manner of heating shops healthy, especially after the hot air has passed through a kind of green pine? A. We should think it was healthy.

(7) R. W. asks: Granted a vessel weighs 10 tons, i.e., displaces 10 tons of water, is it not possible to float that vessel in much less than 10 tons of water in a lock or shell? Will her water line not remain the same? Is it not theoretically correct that the Great Eastern may be floated in a pail of water? A. Yes, to all the queries.

(8) G. J. H. asks: A good receipt for blacking the inside of a photograph camera and bellows. A. The proper black for inside optical work is made with shellac varnish. Mix lamp black with pure alcohol to the required thinness, and add a few drops only of shellac varnish, just enough to make the lamp-black stick without being shiny. Make a little trial on paper, as you are adding the shellac, to get the exact proportion. 2. My camera is made of Spanish cedar. Please give me a receipt for polishing same. A. Oil the box with boiled linseed oil and dry, and finish with French polish. We can send for 25 cents French Polisher's Manual on staining and polishing of wood.

(9) R. writes: A bets B that four 1 inch pipes will radiate more heat than one 4 inch pipe. Who wins? A. A wins, according to arrangement of pipes.

(10) T. H. asks: How is emery made to adhere to leather? Is common glue used, or is there a waterproof cement used? A. Use the strongest glue, rather thick; brush on the leather even, and sprinkle the emery over; press it down with a block or mallet. When finished and dry, the surplus will fall off.

(11) J. F. N. asks how to coat small iron articles with black enamel or varnish such as is used on small buckles, etc. A. String the articles on fine wire, and dip in thin japan varnish. Bake in an oven or box heated to 260°, steam heat is safest. Care should be had that the vapor from the varnish does not come in contact with fire.

(12) A. B. asks: Is there any way of treating soft rubber so that grease will not affect it? A. There is not.

(13) E. H. desires the process of preserving natural flowers by the wax solution process. A. Dip the flowers in melted paraffine, withdrawing them quickly. The liquid should only be just hot enough to maintain fluidity, and the flowers should be dipped one at a time, held by the stalks, and moved about for an instant to get rid of air bubbles. Fresh cut flowers, free from moisture, make excellent specimens in this way.

(14) S. R. B. asks how to tan a swan's skin without injuring the down. A. Thoroughly impregnate the fibrous part with a mixture composed of 4 parts alum and 1 part pepper and saltpeter. See "The Taxidermist's Manual," which we can send you, post paid, for \$1.25.

(15) E. H. asks a good receipt for making ink for use on stamp pads. A. Use an ink consisting of aniline violet 1/4 ounce dissolved in 15 ounces alcohol and 15 ounces glycerine added. If you prefer other aniline colors, they can be used instead.

(16) J. J. C. asks how to silver-plate a door plate and bell, by using a powder or liquid. A. Mix 1 part chloride of silver with 3 parts pearl ash, 1 1/2 parts common salt, and 1 part whiting, and rub the

mixture on the surface of brass or copper, previously well cleaned, by means of soft leather or a cork moistened with water and dipped into the powder. When properly silvered, the metal should be well washed in hot water, slightly alkalinized, and then wiped dry.

(17) J. E. P. asks: How are lead bullets polished? A. By being revolved in a cask containing black lead or plumbago.

(18) C. M. R. asks: What will restore the appearance of red brick walls, and make them look fresh and new? A. Use a red wash made by melting 1 ounce glue in a gallon of water; while hot, put in a piece of alum the size of an egg, 1/2 pound Venetian red, and 1 pound Spanish brown. Try a little on the bricks, let it dry, and if too dark, put in more water; if too light, add more red and brown. 2. Can diamond dyes be dissolved in anything so as to be used to paint lantern slides? A. Dissolve in alcohol. Lantern slides are painted with very thin colors, and generally not with aniline paints.

(19) J. A. V. desires (1) a good receipt to prevent water from having a disagreeable taste. A. Mix it with charcoal and filter; this will render it both colorless and odorless. 2. How to make collars stiff and glossy. A. Pour a pint of boiling water upon two ounces of gum arabic, cover it, and let it stand all night. Use a tablespoonful of this to a pint of starch.

(20) D. R. writes: We have plenty of theories as regards the sources of heat, but no one tells us satisfactorily whence the cold comes from, or accounts for the intensity of cold. A. Cold is the absence of heat, or the elimination of the vibrations that cause heat. Heat vibrations are supposed to have their limit at 459° below zero.

(21) H. H. S. asks: How can I give a high glaze to an oil painting? A. Use the following varnish: Take of mastic 6 ounces, pure turpentine 1/2 ounce, camphor 2 drachms, spirits of turpentine 1 1/2 ounces. Add first the camphor to the turpentine; the mixture is made in a water bath. When the solution is effected, add the mastic and the spirits of turpentine near the end of the operation; filter through a cotton cloth.

(22) A. K. asks what washing compounds (powders), such as "pearline," "soapine," etc., are composed of, and how compounded. A. The exact composition can only be ascertained by analysis, but their detergent qualities are due to pearl ash, soda ash, and similar alkaline compounds.

(23) C. asks (1) the best and quickest way of making vinegar in quantity. A. See process described in SCIENTIFIC AMERICAN SUPPLEMENT, No. 313. 2. The best way to make acetic acid without distillation. A. The simple oxidation of alcohol produces acetic acid. Treat alcohol in the same way as you would cider, to produce vinegar. In fact, vinegar is only an impure acetic acid.

(24) F. J. S. asks: What will keep tents from mildewing in warm weather? A. Use a mixture of solutions of alum and sugar of lead.

(25) J. N. G. desires a cure for bunions. A. An inflamed bunion should be poulticed, and larger shoes worn. Iodine 12 grains, lard or spermaceti ointment 1/2 ounce, make a capital ointment for bunions. It should be rubbed on gently two or three times a day.

(26) F. T. asks: What will take oil stains and rust stains out of marble? A. Apply common clay saturated with benzine. If the grease has remained long enough, it will have become acidulated, and may injure the polish, but the stain will be removed.

TO INVENTORS.

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

INDEX OF INVENTIONS

For which Letters Patent of the United States were Granted

February 7, 1888,

AND EACH BEARING THAT DATE.

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

Table listing inventions with names and page numbers, including Advertising cabinet, Air compressor regulator, Alarm, Amalgamator, Anchor, Animal trap, Animals, Anti-rattler and shaft support, Atomizer, Axle box, Ball bat, Bar, Bathing purposes, Battery, Bed bottom, Bed bottom, spring, Bed, spring, C. C. Ferry, Bell, electric, W. F. Stocker, Belting for driving machinery, Blowpipe, apparatus, Bobbin winder, automatic, C. Bell, Boiler, Boilers, tanks, etc., coupling for, J. J. Whiter, Boot or shoe, B. F. Whitney, Boot or shoe upper and preparing it for lasting, C. A. Keith, Box, See Axle box, Journal box, Paper box, Box for furs, W. Flynn, Brake, See Car brake, Brandingjacks, etc., machine for, F. W. A. Boldt, Branding implement, continuous heating, M. Potter, Brick kiln, J. Buhner, Bridle winker attachment, E. B. Knapp, Brush, dusting, J. Stewart, Buckle, A. P. Waddell, Buckle, suspender, Loeb & Haak, Buggy top, W. Davis, Buildings, system of warming and ventilating, G. B. Morrison, Burner, See Gas burner, Gas lighting burner, Vapor burner, Burnishing machine, B. F. Patch, Bustle, A. Taylor, Bustle, A. W. Thomas, Button, Blum, Jr., & Phillips, Button, W. J. Leckie, Jr., Button, H. T. Sperry, Cable grip, J. F. West, Can, See Gasoline can, Oil can, Sheet metal can, Can capping machine, C. A. Burt, Carburetor, M. A. Foster, Car coupling, C. S. Edwards, Car coupling, J. McMullen, Car coupling, E. A. Olmstead, Car coupling, F. M. Rariden, Car coupling, C. J. Warren, Car brake, A. Reese, Car doors, grain, J. Jensen, Car, dumping, F. Cote, Car, electric motor, W. H. Knight, Car, passenger, W. D. Mann, Carriage wheel, Treat & Parmelee, Carriages, canopy holder for children's, P. Gendron, Cart, road, P. Fiege, Cash register and indicator, T. Carney, Caster, J. P. Reed, Chain, drive, W. D. Ewart, Chain, drive, F. H. C. Mey, Chain links, machine for coupling, N. B. Fassett, Chair, See Tray chair, Chair, A. Bunn, Chimney top, W. W. Wright, Chopper, See Cotton chopper, Chuck, lathe, E. P. Baviile, Churn cover, A. B. Cosby, Chute, stock loading, J. C. Ferguson, Cigar tip cutter and match box, combined, O. P. Elterich, Cigarette machines, printing attachment for, J. A. Bonsack, Clamp, W. C. Stickler, Clasp, J. Jenkinson, Clasps, machine for making metallic, Girard & Rigault, Clock striking mechanism, L. Halvorsen, Clothes wringer, W. M. Brinkerhoff, Coal hods, manufacturing, E. Barrath, Coffee pot, H. B. Cornish, Coffeeroaster, O. Walden, Coffin fastener, E. Sinning, Coin holder, C. J. Luce, Compensator, Beard & Aukamp, Jr., Condensing and cooling purposes, apparatus for, E. Thelsen, Cooler, See Milk cooler, Cooking utensil, G. H. Eymmer, Coop, folding, W. E. Tate, Copper, electrolyzing, E. S. Hayden, Copying, letters and documents, N. C. Stiles, Cornet tremolo, C. Meister, Cotton chopper, L. R. Corder, Cotton chopper, J. B. King, Counter stiffener machine, L. B. Russell, Coupling, See Car coupling, Thill coupling, Cranberry cleaning and separating machine, H. Chadwick, Crusher, See Ore crusher, Cup, See Medicine cup, Oil cup, Cutter, See Cigar tip cutter, Pipe cutter, Damper regulator, G. A. Goodenough, Damper regulator, J. H. Weitmeyer, Derrick, W. Bentley, Derrick, portable, P. Rabbitt, Die, See Screw cutting die, Drills, fertilizer feed for, T. R. Crane, Dust collector, O. M. Morse, Dyeing or scouring machine, C. L. Klander, Eaves trough hanger, J. P. Abbott, Eaves trough hanger, H. Russell, Egg preserver, A. F. Temple, Elevator, See Hay or grain elevator, Elevator, C. G. Otis, Elevator alarm, A. Oakley, Elevator safety appliance, A. Stigler, Electric circuit closer, W. F. Stocker, Electric machines, armature for dynamo, R. H. Mather, Electrical distribution system of, J. W. Howell, Embroidering machine, R. T. Smith, Embroidering machines, automatic stitch adjusting mechanism for, R. T. Smith, End gate, J. M. King, Engine, See Gas engine, Steam engine, Extractor, See Nail extractor, Fan, rotary, P. Murray, Jr., Farm gate, I. Burkholder, Feed water purifier, O. H. Jewell, Fence, R. B. Eubank, Jr., Fence, A. Lott, Fence, wire, J. King, Filter and purifier, water, O. H. Jewell, Fire alarm, J. W. See, Firearm lock, J. Nicely, Firearm, magazine, W. H. Elliot, Fire work, J. J. Detwiler, Floor, inlaid, C. Moberg, Flouring mill alarm, A. J. Buie, Fluid motor, W. J. & E. Thomas, Frame, See Picture frame, Frostless switch, F. Nemaehack, Furnace, See Hot air furnace, Gas, apparatus for the manufacture of, T. B. Stillman, Gas burner, P. Menges, Gas burner, incandescent, J. S. Sellon, Gas burner, regenerative, W. S. Mead (r), Gas engine, E. Korting, Gas lighter, electric, J. Finek, Gas lighting burner, electric, L. S. White,

Table listing inventions with names and page numbers, including Gas, manufacturing water, F. C. Kniess, Gas, manufacturing water, T. B. Stillman, Gasoline can, W. W. Hutchins, Gate, See, End gate, Farm gate, Molasses gate, Glass shingle, E. Walsh, Jr., Grain binder, W. M. Platt, Hame fastener, J. H. D. Everett, Hammers or other tools, device for carrying chipping, J. T. Billson, Handle, See Tool handle, Hanger, [See Eaves trough hanger, Harness, trotting, J. H. Whitaker, Harvester, G. W. Shuman, Harvester and husker, corn, C. F. Smith, Harvester reel, M. A. Clapp, Hay or grain elevator, E. D. Mead, Hay press, D. J. & I. W. Hyeman, Heel nailing and trimming machine, F. F. Raymond, Hoisting apparatus, M. S. Ragsdale, Holder, See Coin holder, Line holder, Spool holder, Stocking and skirt holder, Yardstick holder, Hook, See Snap hook, Horse cover, automatic, G. C. Hale, Hot air furnace, E. Kanaley, Hydraulic motor, C. G. Otis, Ice creeper, W. Sage, Incandescent devices, compound for making, C. A. Von Welsbach, Indicator, See Station indicator, Steam engine indicator, Inhaler, J. McGearry, Iron, pile for the manufacture of sheets of, R. A. Carter, Jar fastener, W. Heston, Jar fastening, preserve, T. G. Otterson, Journal box, anti-friction, T. Tripp, Ladder, step, J. Hill, Lamp, electric arc, Higgins & James, Lamps, apparatus for extinguishing the lights of car, H. M. Young, Last block fastener, H. S. Reynolds, Latch, gate, C. E. Anzell, Lathe head stock lock, C. H. Weston (r), Lathe, wood turning, L. L. Hill, Leaf turner, L. Maas, Leather dressing machine, G. V. Anderson, Level, plumb, Looker & Newlove, Level, plumb, C. Marshall, Level, plumb, Wentworth & Traver, Line holder, J. V. Beavers, Liquids, indicator for non-transparent receptacles containing, F. H. Palmer, Lock, See Firearm lock, Lathe head stock lock, Nut lock, Locomotive ash pan, P. J. Brown, Log rolling device, J. T. Kline, Loom, H. Eastwood, Loom, let-off mechanism, S. Watson, Loom, reedle, J. N. Stearns, Lubricator, G. W. Amos, Magnetic separator, T. A. Edison, Mashing machine, M. Gottfried, Mast, hollow, J. W. Mansfield, Mat, See Metal bar mat, Metallic mat, Measuring vessel, J. O. Boggs, Meat, preserving, J. D. Reed, Mechanical movement, A. L. Akins, Mechanical movement, electro, R. H. Mather, Mechanical movements, electrical apparatus for effecting, R. T. Smith, Medicine cup and stopper, J. B. v. Furstenwarther, Metal bar mat, W. C. Spelman, Metallic mat or floor covering, W. O. Bement, Metallic wheel, J. W. Savene, Meter, See Water meter, Milk cooler, J. T. & T. C. Hays, Mill, See Saw mill, Mining cages, landing catch for, J. L. Mitchell, Molasses gate, Gerard & Webb, Motor, See Fluid motor, Hydraulic motor, Mower, lawn, E. Kelly, Mowers and reapers, cutter and cutter bar for, Morton & Brown, Music stand, folding, J. H. Macke, Jr., Nail, See Screw nail, Shoe nail, Nail extractor, G. W. Lane, Nails, die for cutting and pointing wire, H. A. Stone, Nut lock, W. H. Haws, Nut lock, G. Heffner, Oil can, E. W. Rider, Oil cup, McNaughton & Bardeley, Oils, refining vegetable, G. W. Scollay, Ore crusher, C. Kaestner, Package comprising fragile articles, Shaw & McCulloch, Packet folding machine, De Freest & Wynkoop, Packing case fastening, N. Beckwith, Jr., Packing, piston, H. L. St. James, Pan, See Locomotive ash pan, Pans, body wire and handle for dish, J. B. Melloy, Paper box, T. F. W. Schmidt, Paper tubes, machine for making, R. A. Sentman, Paper weight and pen, pencil, or cigar holder, combined, G. L. Tuller, Photographic accessory, J. C. Gomber, Photographic cameras, shutter mechanism for, M. Flamman, Photographic printing in fatty inks, C. Raymond, Picture frame, F. W. Lowe, Pipe cutter, G. G. Thompson, Pipe expander, H. Wojan, Pipe wrench, J. Clark, Pipes and similar materials, apparatus for treating, H. G. Beatley, Pitman connection, M. N. & E. P. Lynn, Plane, bench, J. H. Shaw, Plow, Shelbourne & Sublett, Plow, C. M. Thompson, Plow beam, E. A. Wilcox, Pocketbooks, etc., elastic band for, J. S. Ebert, Pole socket and neck yoke, J. M. Kettlewood, Pot, See Coffee pot, Press, See Hay press, Printing machine, cylinder, J. T. King, Protector, See Tree protector, Pulleys to shafts, means for securing, L. M. Batty, Pump and aerating device, beer, D. Dunn, Quoin, G. E. Jones, Rail, detector, C. R. & H. Johnson, Railway, electric, W. I. Ludlow, Railway grip, cable, D. S. Mackey, Railway grip, cable, J. H. Robertson, Railway signal, T. S. Nicholson, Railway switch, E. Gordon, Railway time signal, J. F. K. O'Connor, Reel, See Harvester reel,