

THE ATLANTIC CABLE.

A correspondence has just been published by F. N. Gisborne, in relation to the origin of the Atlantic Cable, the conception of which, he states, was his, as well as a great part of the labor required before capitalists would even take the matter into consideration.

It is announced that a submarine cable is to be laid next year, connecting the coast of France with this country. It is in the hands of Mr. Erlanger, the celebrated banker, and Mr. Reuter, who enjoys considerable notoriety for his sensation telegrams.

PLANCHETTE.

We have received a large number of readable communications, claiming to explain the mysteries of Planchette—fair examples of which have already appeared in our columns. The whole discussion, thus far, is chiefly speculative, always tending to religious and spiritualistic notions.

We fail to discover any substantial benefit to be gained from a continued discussion of this subject. We therefore drop it until some more reasonable explanation is put forth. We never did believe very much in the operations of ghosts and spirits, therefore it is hard for us to conclude that the little three-legged stool, provided with a pencil, and called "Planchette," has anything whatever to do with spirits. It is simply an amusing plaything.

OFFICIAL REPORT OF PATENTS AND CLAIMS

Issued by the United States Patent Office.

FOR THE WEEK ENDING JULY 28, 1868.

Reported Officially for the Scientific American.

PATENTS ARE GRANTED FOR SEVENTEEN YEARS, the following being a schedule of fees:—

Table with 2 columns: Fee description and Amount. Includes items like 'On filing each caveat', 'On filing each application for a patent', 'On application for extension of patent', etc.

In addition to which there are some small revenue-stamp taxes. Residents of Canada and Nova Scotia pay \$500 on application.

Pamphlets containing the Patent Laws and full particulars of the mode of applying for Letters Patent, specifying the model required, and much other information useful to inventors, may be had gratis by addressing MUNN & CO., Publishers of the Scientific American, New York.

80,264.—NEEDLE FOR KNITTING MACHINES.—Ransom Allen, Salem, Mich. I claim the movable shank, b, attached to the body of a knitting machine needle, and operated substantially as and for the purpose herein described.

80,265.—STEAM GENERATOR.—Jonathan Amory, West Roxbury, Mass. I claim, 1st, The combination of the heating curve and its pipe or pipes for receiving air, with the fire box of the boiler, arranged and operated substantially as described.

80,266.—SHUTTER AND WINDOW FASTENING.—Wm. L. Barnes, Irvington, N. Y. Antedated July 11, 1868. I claim the bolt, F, constructed as described, and secured to the inner side of the sash, A, arranged in relation with the blind, B, and staple, C, the blind being held closed when the sash is raised, and locked by the bolt, F, passing through the staple above the sash, A, when the sash is lowered, which movement also locks the sash, as herein shown and described.

80,267.—MANUFACTURE OF CARRIAGE SHAFT COUPLINGS.—Henry M. Beecher (assignor to H. D. Smith & Co.), Plainville, Conn. I claim the above described process or method of making the shaft connection blank, the same consisting in forming it with the head part, A, and the shank, B, and subsequently cutting it through on the lines, e, e, and finally beading the portions, f, f, around into right or nearly right angles with the shank part, B.

80,268.—APPARATUS FOR CARBURIZING GAS AND AIR.—Alonzo T. Boon and Albert D. Perry, Galesburg, Ill. We claim the emery receptacle, F, when combined and arranged with float h, screw rod, H, valve, m, pipe, N, and pipe, a, substantially in the manner and for the purpose as herein shown and described.

80,269.—TUCK CREASER FOR SEWING MACHINES.—Edward Bostock, Albany, N. Y. I claim, 1st, A tuck creasing device constructed substantially as described, in combination with the plate, A, and gage plate, D, both constructed and arranged substantially as described, and the plate, D, serving to confine A to the bed plate, as set forth.

80,270.—TUCK CREASER FOR SEWING MACHINES.—Edward Bostock, Albany, N. Y. I claim, 1st, The combination with the tuck creasing devices, of a sliding wedge, eccentric, or a slide and fixed inclined plane, on the base plate, substantially as and for the purposes shown and described.

80,271.—CAR COUPLING.—C. T. Burchardt, New York City. I claim, 1st, The car coupling composed of the hook, E, bearing piece, H, links G, and the spring frame, B, when connected with the main spring, C, all substantially as herein described and for the purposes specified.

80,272.—HARVESTING.—H. K. Burnett, Poughkeepsie, N. Y. I claim, 1st, The cams, D, D, rotated by the gears, B, C, in combination with the arm, U, roller, E, and jointed pitman, G, connecting the arm, U, to the cutter bar, h, substantially as set forth.

80,273.—BOOT SOLING MACHINE.—Thomas Cabourg, Paris, France. I claim, 1st, The construction and use of the pulley, A, on which is wound the wire to be tapped, substantially as herein described.

80,274.—FISHING SEINE.—John Collins, Ecorse, Mich. Antedated July 18, 1868. I claim the application of the braces marked A, A, as above, to a seine or net, substantially as and for the purposes herein described.

80,275.—COAL STOVE.—John Cooper, Dublin, assignor to himself and Bennett F. De Witt, Indianapolis, Ind. I claim the addition, D, separated from the fire chamber by the partition, G, and subdivided into compartments, H, J, by the partition, I, as set forth, and, in combination therewith, the induction pipe, E, education pipe, F, and chamber, L, arranged substantially as set forth.

80,276.—MACHINE FOR UNLOADING RAILROAD CARS.—John Doble, Chicago, Ill. I claim, 1st, The swinging frame of a car unloading machine, provided with head plates, B, B, having convex surfaces presented to the sides of pulleys, C, C, which are perforated and otherwise constructed substantially as described.

80,277.—HOP HOOK.—Elon Deuio, Baldwinville, and Elon C. Deuio, New Hartford, N. Y. We claim, 1st, The hop cultivator formed of the hoe or hook, combined with the knife, substantially as and for the purposes specified.

80,278.—STOPS FOR FORE-AND-AFT SAILS.—Jacob Edson Boston, Mass. I claim the arrangement and combination of the saddle, D, with the springs, H, H, the rods, A, and the sliders, F, F, connected with the ring, E. Also the arrangement and combination of the arched and annular links, G, G, b, and the arms, a, a', with the ring, E, and the sliders, F, and springs, H, applied to the rod or bar, A, extending between them and from abutments, B, B, as set forth.

80,279.—FURNACE FOR TREATING ORES.—Samuel H. Folsom, Winchester, Mass. I claim a series of two or more revolving tables placed within a furnace, A, and operating substantially as described, for the purpose herein set forth.

80,280.—STOVE AND FURNACE GRATE.—Bartholomew Gommenging, and Chas. W. Trotter, Rochester, N. Y. We claim, 1st, The grate, a, when constructed and operated in the manner and for the purpose specified.

80,281.—LAMP BURNER.—Richard Gorsline, Rochester, N. Y. I claim the combination of the open frame, D, and transparent bottom plate, G, when arranged in connection with the removable cone, H, and fixed rim, C, the whole as herein set forth.

80,282.—LAMP CHIMNEY.—John Gracie, Pittsburg, and Robt. H. Boyd, Hunkon Station, Pa. We claim, 1st, Providing a lamp chimney with an elliptical flange, substantially as herein described.

80,283.—MACHINE FOR PRODUCING A RECIPROCATING MOTION IN ENITTING MACHINES, ETC.—Sevitus Haslam, Jr., New Britain, Conn. assignor to himself and John B. Talcott. I claim, 1st, The combination with the shaft, b, of the sleeve, d, carrying the clutch and wheels, f, f, and the collar, k, and collar, i, on the shaft, and clutch, m, or its equivalent, substantially as described.

80,284.—CIGAR.—Frederick L. Hilbright, Newark, N. J., assignor to himself and Chas. E. Woodman, Boston, Mass. I claim the combination and arrangement of the foraminous ferrule or cap with a cigar, the same being substantially as explained and represented.

80,285.—ADDRESS PRINTING MACHINE.—Henri Julien, Ottawa, Canada. I claim, 1st, The combination with the vertically sliding press, A, of the rack, B, pinion, C, shaft, D, spring, p, and the mechanism for operating the shaft, D, substantially as and for the purpose described.

80,286.—MACHINES FOR DRESSING STONES.—Francis L. King, Worcester, Mass. I claim, 1st, The peculiar construction of the self-adjusting frame, with its shaft, gears, grooved racks, and set screw, B, when constructed and operated substantially as and for the purpose specified.

80,287.—FRUIT PICKER.—John A. Knight, Durham, Me. I claim the fruit gatherer as described, combining the removable head, a, c, or teeth, c, handle or pole, a', jointed conductor, i, attached as described to the pole, and having the peculiarly formed chucks, p, as and for the purposes specified.

80,288.—TABLES, BENCHES, ETC.—David S. Leavitt, Grand Rapids, Mich. I claim the combination of the dovetail fastening, B, hinged levers, C, wedges or pins, and rods, when applied and used in the manner and for the purposes shown and described.

80,289.—CAR BRAKE.—Samuel M. Lee, New London, Iowa. I claim, in combination with an independent piston, d, the arrangement of a forked bar, b, with the tender, and a single bar, c, with the car, for operating said bar, c, at either end, substantially as and for the purpose described.

80,290.—TEETH FOR GEAR WHEELS.—John Letskus, Allegheny City, Pa., assignor to himself and Richard Brown, Youngstown, Ohio. I claim curved gear teeth for wheels and pinions, the upper and lower edges of which are arcs of curves of equal radii, having their centers in the right line, constructed substantially as and for the purpose hereinbefore described.

80,291.—ROSE ENGINE LATHE.—Thomas Lippiatt, New York City. Antedated July 11, 1868. I claim, 1st, The arrangement of the swinging frame, H, carrying a tracing pin, or an equivalent device, for tracing a die or pattern, J, mandrel, K, and engraving tool, d, operating substantially as herein specified.

80,292.—TABLES, BENCHES, ETC.—David S. Leavitt, Grand Rapids, Mich. I claim the combination of the dovetail fastening, B, hinged levers, C, wedges or pins, and rods, when applied and used in the manner and for the purposes shown and described.

80,293.—CAR BRAKE.—Samuel M. Lee, New London, Iowa. I claim, in combination with an independent piston, d, the arrangement of a forked bar, b, with the tender, and a single bar, c, with the car, for operating said bar, c, at either end, substantially as and for the purpose described.

80,294.—TEETH FOR GEAR WHEELS.—John Letskus, Allegheny City, Pa., assignor to himself and Richard Brown, Youngstown, Ohio. I claim curved gear teeth for wheels and pinions, the upper and lower edges of which are arcs of curves of equal radii, having their centers in the right line, constructed substantially as and for the purpose hereinbefore described.

80,295.—ROSE ENGINE LATHE.—Thomas Lippiatt, New York City. Antedated July 11, 1868. I claim, 1st, The arrangement of the swinging frame, H, carrying a tracing pin, or an equivalent device, for tracing a die or pattern, J, mandrel, K, and engraving tool, d, operating substantially as herein specified.

80,296.—TABLES, BENCHES, ETC.—David S. Leavitt, Grand Rapids, Mich. I claim the combination of the dovetail fastening, B, hinged levers, C, wedges or pins, and rods, when applied and used in the manner and for the purposes shown and described.

80,297.—CAR BRAKE.—Samuel M. Lee, New London, Iowa. I claim, in combination with an independent piston, d, the arrangement of a forked bar, b, with the tender, and a single bar, c, with the car, for operating said bar, c, at either end, substantially as and for the purpose described.

80,298.—TEETH FOR GEAR WHEELS.—John Letskus, Allegheny City, Pa., assignor to himself and Richard Brown, Youngstown, Ohio. I claim curved gear teeth for wheels and pinions, the upper and lower edges of which are arcs of curves of equal radii, having their centers in the right line, constructed substantially as and for the purpose hereinbefore described.

80,299.—ROSE ENGINE LATHE.—Thomas Lippiatt, New York City. Antedated July 11, 1868. I claim, 1st, The arrangement of the swinging frame, H, carrying a tracing pin, or an equivalent device, for tracing a die or pattern, J, mandrel, K, and engraving tool, d, operating substantially as herein specified.

80,300.—TABLES, BENCHES, ETC.—David S. Leavitt, Grand Rapids, Mich. I claim the combination of the dovetail fastening, B, hinged levers, C, wedges or pins, and rods, when applied and used in the manner and for the purposes shown and described.

80,301.—CAR BRAKE.—Samuel M. Lee, New London, Iowa. I claim, in combination with an independent piston, d, the arrangement of a forked bar, b, with the tender, and a single bar, c, with the car, for operating said bar, c, at either end, substantially as and for the purpose described.

80,302.—TEETH FOR GEAR WHEELS.—John Letskus, Allegheny City, Pa., assignor to himself and Richard Brown, Youngstown, Ohio. I claim curved gear teeth for wheels and pinions, the upper and lower edges of which are arcs of curves of equal radii, having their centers in the right line, constructed substantially as and for the purpose hereinbefore described.

80,303.—ROSE ENGINE LATHE.—Thomas Lippiatt, New York City. Antedated July 11, 1868. I claim, 1st, The arrangement of the swinging frame, H, carrying a tracing pin, or an equivalent device, for tracing a die or pattern, J, mandrel, K, and engraving tool, d, operating substantially as herein specified.

80,304.—TABLES, BENCHES, ETC.—David S. Leavitt, Grand Rapids, Mich. I claim the combination of the dovetail fastening, B, hinged levers, C, wedges or pins, and rods, when applied and used in the manner and for the purposes shown and described.

80,305.—CAR BRAKE.—Samuel M. Lee, New London, Iowa. I claim, in combination with an independent piston, d, the arrangement of a forked bar, b, with the tender, and a single bar, c, with the car, for operating said bar, c, at either end, substantially as and for the purpose described.

80,306.—TEETH FOR GEAR WHEELS.—John Letskus, Allegheny City, Pa., assignor to himself and Richard Brown, Youngstown, Ohio. I claim curved gear teeth for wheels and pinions, the upper and lower edges of which are arcs of curves of equal radii, having their centers in the right line, constructed substantially as and for the purpose hereinbefore described.

80,307.—ROSE ENGINE LATHE.—Thomas Lippiatt, New York City. Antedated July 11, 1868. I claim, 1st, The arrangement of the swinging frame, H, carrying a tracing pin, or an equivalent device, for tracing a die or pattern, J, mandrel, K, and engraving tool, d, operating substantially as herein specified.

80,308.—TABLES, BENCHES, ETC.—David S. Leavitt, Grand Rapids, Mich. I claim the combination of the dovetail fastening, B, hinged levers, C, wedges or pins, and rods, when applied and used in the manner and for the purposes shown and described.

80,309.—CAR BRAKE.—Samuel M. Lee, New London, Iowa. I claim, in combination with an independent piston, d, the arrangement of a forked bar, b, with the tender, and a single bar, c, with the car, for operating said bar, c, at either end, substantially as and for the purpose described.

4th, Providing a still for hydrocarbons with a valve, which will act from an internal or external pressure, substantially as herein described and for the purposes set forth.

80,295.—BOLT.—Benjamin F. Lotridge, New York City. I claim, in combination with the slotted case, B, the bolt, C, toggle piece, G, set screw, H, and spring, D, when the same shall be constructed and operated substantially as described for the purposes specified.

80,296.—FRUIT JAR.—W. W. Lyman, West Meriden, Conn. I claim, 1st, The combination of the flange cap, f, elevations, g, yoke and pin, h, with the gasket and seat, e, d, substantially as and for the purpose described.

80,297.—BUTTER DISH.—William W. Lyman (assignor to Meriden Britannia Company), West Meriden, Conn. I claim the right and left hand screw actuating fulcrum, in combination with the cover, a', and body, a, constructed and operated substantially as and for the purpose described.

80,298.—MACHINERY FOR MAKING PAPER BAGS.—George H. Mallory, New York City. I claim, 1st, The clamp, formed of the bar, L, the shaft, K, with its lags, t, when combined with the supporting bars, u, substantially as set forth.

80,299.—MANUFACTURE OF ARTICLES OF SOFT RUBBER.—George W. Martin, (assignor to himself and J. W. Haskins) Boston, Mass. I claim an elastic screw thread, substantially as described.

80,300.—CANE SEAT.—George W. Martin (assignor to himself and J. W. Haskins), Boston, Mass. I claim a movable cane seat, having sunken bearings, g, as specified, and so constructed as to be reversible, and present each side to the front, substantially as and for the purpose described.

80,301.—PORTABLE ROOFS FOR HAY STACKS, ETC.—Thaddeus Munson, Canandaigua, N. Y. I claim the combination with the sections, A, A', connected by hooks, a, at 22, of the bracing cleats, c, c, at the top, and the cords, g, g, at the bottom, passing loosely through the rings, d, d, and attached to the bars, f, f, and stays, h, the whole arranged as described, and operating in the manner and for the purpose set forth.

80,302.—LAMP.—Person Noyes, Lowell, Mass. Antedated July 11, 1868. I claim the use or application of a cap or stopple, a, to the top end of the wick tube of a lamp which has an outer jacket, sleeve, or other similar or analogous device, when said cap or stopple is constructed and arranged to operate substantially as and for the purpose set forth.

80,303.—CULINARY APPARATUS.—William W. S. Orbeton, Bradford, Mass. I claim the improved brazier as connected with the main air supply openings, a, a, etc., the auxiliary inducts, B, B, etc., and the ejection openings, e, e, and arranged and combined together substantially in the manner and so as to operate as set forth.

80,304.—MACHINE FOR MAKING KNITTING MACHINE NEEDLE SHANKS.—Jesse S. Perkins, Lake Village, N. H. I claim the combination of the friction jaws, d, e, or the equivalent thereof, and the dies and cutters, f, g, n, o, p, arranged and provided with mechanism substantially as described, for operating them in the manner and for the purpose as specified.

80,305.—HANGING FOR GATES.—Peter Rasar and D. J. Mayes, Ithaca, N. Y. We claim the rollers, d, d', plate, c, and yoke, k, of a self-closing gate, when arranged in relation to each other and the rest of the gate, substantially as and for the purpose specified.

80,306.—SMUT MILL.—Richard Redfield and James H. Redfield, Salem, Ind. We claim, 1st, The arrangement of the horizontal fan, J', blast spout, B, B', branch spout, B', partition, S', vibrating trough, C, g, and horizontal spirally slotted case, E, y, and horizontal beater, F, J', substantially as and for the purpose specified.

80,307.—MEASURING FAUCET.—Thaddeus S. Reeve, Chicago, Ill. I claim a measuring faucet, consisting of screw, A, stop, B, gate, D, cylinder, E, piston, F, and gage, H, arranged substantially as described.

80,308.—HORSE POWER.—M. A. Richardson, Sherman, N. Y. I claim, 1st, The friction brake, D, and nut, d, applied to the operating part of a horse power, substantially as and for the purpose set forth.

80,309.—PEAT MACHINE.—Marvin S. Roberts, Racine, Wis. Antedated July 14, 1868. I claim, 1st, The digging apparatus, D, consisting of box, E, plunger, F, and endless chain, G, with buckets, H, H, combined and operating as described, and the whole secured to the boat, A, and provided with continuous automatic movement along the semi-circular curve, A', by means substantially as described, or other equivalent means.

80,310.—THRILL COUPLING.—Clark Robinson, Fox Lake, Wis. I claim the socket, D, D, in combination with the pivot, K, having a notch, M, the strap, A, and stop, E, substantially as set forth and shown.

80,311.—SAD IRON HOLDER.—G. H. Roth, Boston, Mass. I claim the guard, as made with the lateral passages, e, e, arranged in it, and with latches, D, D, to embrace the parts, d, d, of the handle, and cover the passages, e, e.

80,312.—BED BOTTOM.—Isaac N. Sheets, West Jefferson, Ohio. I claim the combination of the coiled springs, G, the tension rubber springs, N, and the clung levers, I, substantially as set forth.

80,313.—BOILER FLUE PLUG.—William M. Sinclair, Baltimore, Md. I claim the flanged tubular plug, C, constructed with a longitudinal slot or slots, f, between the lugs, e, at its inner end, and a circumferential slot or slots, g, at about its end with the end of the slots, f, for use in combination with the wedge or wedges, d, substantially as and for the purpose set forth.

80,314.—PLOW.—Daniel Smith, Cedar Falls, Iowa. I claim, 1st, A mold board for plows, which is made entirely of glass, substantially as described.

80,315.—CULINARY APPARATUS.—Volney M. Thomas, Brandon, Vt. I claim the arrangement and combination of the steam chamber, A, conducting pipe, D, and grate, G, when constructed and operated substantially as and for the purposes herein set forth.

80,316.—CLOTHES DRIER.—L. B. Waterman, Chicago, Ill. I claim a detachable clothes drier consisting of the hinged bands, A, having the bars, B, pivoted thereto, and arranged to be secured to a stove pipe by means of the brace or pawl, b, and the ratchet, or its equivalent of rubber, as herein described.

80,317.—COFFEE MILL.—Edwin Watrous, Mystic River, Conn. I claim, 1st, The grinding mill, in which the flange or attaching device is placed at an inclination to the axis of the mill, for the purposes and substantially as set forth.

80,318.—FOUNDATION FOR FENCES.—Thomas W. Welch and George B. Starbird, Mechanicsburg, Pa. We claim the part, A, A, the parts, B, B, the parts, C, C, the octagonal or

round top, DD, the notched cross bar, E. The conical or pyramidal parts, F, F F, etc., and the bolts and burr, H, H, all combined and operating in the manner and for the purpose herein set forth.

80,319.—PAD FOR HORSES' HOOF.—Joseph L. Wetherell, Attleboro, Mass.
I claim my improved elastic heel cushion, as made with the two flanges, a, arranged and combined with its body, and for use, substantially as specified.

80,320.—RAILWAY CHAIR.—William Wickersham, Boston, Mass.
I claim, 1st, In railway-rail chairs, the wedge, c, in combination with the spring, 1, and the chair, operating substantially in the manner and for the purpose set forth.
2d, The wedge, d, in combination with the wedge, e, and the chair, substantially in the manner and for the purpose set forth.

80,321.—METHOD OF SUPPORTING CHILLS IN CASTING.—William H. Wiley, Fredonia, N. Y.
I claim the pedestals, C, C', constructed and manipulated with the flask and pattern, and supporting the chill iron, D, substantially as and for the purpose set forth.

80,322.—OTTOMAN LOUNGE.—George H. C. Williams, Chicago, Ill.
I claim the ottoman lounge, consisting of the main body, A, extension section, A', hinged to the end board, J, and provided with foot piece, F', and head board, B, and the springs, H, and receptacle, H', when combined, constructed, arranged, and operating as herein shown and described.

80,323.—CAR WHEEL.—William Wilmington, Toledo, Ohio.
I claim the within-described cast iron car wheel, the said wheel being produced by the use of two quantities of iron, and by substantially the process herein described.

80,324.—CANE AND TELESCOPE COMBINED.—George W. Wilson (assignor to John W. Little), Concord, N. H.
I claim a cane with the telescope and opera glass, either or both, combined and adjusted substantially as described.

80,325.—PENDANTS FOR SHEETS ON FORE-AND-AFT SAILS.—Nelson Woodbury (assignor to William Woodbury), Chelsea, Mass.
I claim the combination of a spring, a pendant, and an eye through which the pendant passes, or their equivalents, all substantially as and for the purpose specified.

80,326.—CASH OPENER.—F. S. Wyman, Chicago, Ill.
I claim the knife, C, rigidly attached to the adjustable plate, F, of a "circular cash opener," and constructed to operate substantially as herein set forth.

80,327.—CENTERING LATHE.—Benjamin F. Bee, Harwich, Mass. (assignor to the New York Tap and Die Company, New York city).
I claim the centering lathe, H, provided respectively with the jaws, M, L, in connection with the top plate, K, connected with the treadle, N, and the springs, d, d', all arranged and applied to a centering lathe to operate in the manner substantially as and for the purpose set forth.

80,328.—INDICATOR FOR STEAM GENERATOR.—Robert Berryman, Philadelphia, Pa.
I claim the arrangement of the vessel, A, spindle, C, guide, g, valve, d, adjustable float, F, whistle, B, lever, E, weight, D, safety valve, G, weighted lever, H, and whistle, I, as herein described, for the purpose specified.

80,329.—COFFEE ROASTER.—Friedrich Max Bode, Vienna, Austria, assignor to C. B. Mueller, Hanover, Prussia.
I claim, 1st, Arranging the mouth of the shell, A, so that it projects through the jacket, B, as described, so that the contents of the shell may be easily inspected during operation, without requiring the removal of the apparatus from the stove.
2d, A revolving coffee roaster which turns on an inclined axis, substantially as herein shown and described.
3d, The cover, D, of the revolving spherical vessel, A, when so arranged that it serves at once as a cover and as a clutch for connecting the said vessel with its shaft, and, as specified, respectively with the jaws, M, L, in connection with the top plate, K, connected with the treadle, N, and the springs, d, d', all arranged and applied to a centering lathe to operate in the manner substantially as and for the purpose set forth.

80,330.—WINDOW SCRUBBER.—B. F. Burgess, Jr., Boston, Mass.
I claim a window wiper, constructed substantially as described, that is, by the combination of the supporting frame, B, and the rotating frame, C, arranged substantially as shown, whereby the cloth is attached to the frame, and operated as and for the purposes described.

80,331.—TRACK CLEANER FOR RAILROADS.—John Callaghan (assignor to himself and Job Newby), St. Louis, Mo.
I claim the track cleaner, constructed as described, consisting of the curved hinged beam, A, bearing upon its arms, a, a', the scraper, G, with roller, J, and the brush, S, said beam extending upward in a forward direction, through the slot of plate, D, having the spring catch, I, and pivoted between the plates, H, secured to the under side of the track frame, B, all arranged and operating as described, for the purpose specified.

80,332.—LOCK FOR SECURING RAILROAD SWITCHES.—John V. Chamberlain, Cincinnati, assignor to himself, S. D. Patterson, and John V. Chamberlain, Delhi, Ohio.
I claim a switch lock, composed of the bolt, D, slide, E, and the cam, F, all arranged within a suitable case, A, attached to the switch-bar, B, substantially as herein shown and described.

80,333.—OIL CUP.—Sylvester Charney, Portage City, Wis.
I claim the valve, D, having a triangular stem (as shown in fig. 3), the regulating screw, E, valve, F, spring, g, and cage, B, when arranged in an oil-cup, substantially as described, for the purpose set forth.

80,334.—TABLE CUTLERY.—William Clayton, Bristol, Conn.
I claim securing the bolster of a knife or fork to the handle and shank of the same by means of a metal block, D, which is cast through a slot, b, and around the bolster and scales, or handle, substantially as herein shown and described.

80,335.—CHEESE VAT.—Paschal Colvin, Peconica, Ill.
I claim, 1st, The semi-circular cheese vat, composed of the shells, I and J, having the bearings, c, f, g, and spout, Q, substantially as shown and described, and for the purposes set forth.
2d, The cutting-frame, B, composed of longitudinal and transverse cutters, a, a', and b, b', respectively, or their equivalent, and the shaft, A, and crank, R, in combination with a semi-circular cheese vat, substantially as shown and described, and for the purpose set forth.
3d, The stirring-frame, constructed as described, of the curved paddles, N, attached to the shaft, A, from opposite sides, and each provided, near their inner ends, with cross-bars, C, whose points of intersection furnish bearings for the pivots of the weighted angular pendulum, D, as herein shown and described.
4th, The circulating pipe, i, i', substantially as shown and described, in combination with the semi-circular cheese vat and stirrer, D, all substantially as shown and described, and for the purpose set forth.
5th, The shaft, F, bearing eccentric wheels, q, q', in combination with a cheese vat, substantially as shown and described, and for the purpose set forth.

80,336.—CLOTHES WRINGER.—Philipp Cramer, Providence, R. I.
I claim, 1st, The combination of the frames, A, D, rollers, B, C, E, and F, and rods, c, c' with each other, all made and operating substantially as herein shown and described, for the purposes specified.
2d, The elastic scraper, J, to clear the surface of the roller, O, when arranged in combination with the wringer, as set forth.

80,337.—LEVEL.—William P. Cutter, Chelsea, Mass.
I claim the level, constructed as described, of the two flanged rings, B, inserted in the stock, A, from opposite sides, and each provided, near their inner ends, with cross-bars, C, whose points of intersection furnish bearings for the pivots of the weighted angular pendulum, D, as herein shown and described.

80,338.—SAWING MACHINE.—Henry A. Daniels, Thomaston, Conn.
I claim hanging the shaft, C, by which the saw-frame, E, is oscillated in the slide, B, to which said saw-frame is pivoted, as herein described, for the purpose specified.

80,339.—DUMPING CAR.—Phylander Daniels, Jackson, Mich.
I claim a car dumping bed, provided with means for actuating it, substantially as and for the purpose described.

80,340.—APPARATUS FOR CLARIFYING SUGAR JUICE.—William Dill, Houma, La.
I claim, 1st, The combination with the curb, A, of the rotating strainer, G, when constructed substantially as and for the purpose described.
2d, The combination with the strainer, G, of the vanes, K, substantially as and for the purpose described.
3d, The rotary strainer, G, constructed and arranged substantially as and for the purpose described.
4th, The combination of the strainer, F, with the curb, A, and rotary strainer, G, substantially as and for the purpose described.

80,341.—PALE EAR.—George E. Eastman, Washington Mills, N. Y.
I claim a pale ear, constructed substantially as and for the purposes herein shown and described.

80,342.—EVAPORATOR.—N. Evinger, Terre Haute, Ind.
I claim, 1st, The furnace, A, constructed in three parts, a1, a2, a3, and arranged substantially as herein shown and described, and for the purpose set forth.
2d, The combination of the three pans or boilers, C, H, and I, constructed as described, with each other and with the parts a2, a3, of the furnace, A, substantially as herein shown and described, and for the purpose set forth.
3d, The straining-device, constructed as described, of the sliding gate, G, carrying the semi-conical strainer, F, enclosed by the semi-tubular cover, F', all arranged in relation with the furnace, A, and side of the pan, C, as herein described, for the purpose specified.
4th, The combination of the furnace, F, with the parts a2 and a3 of the furnace, A, and with the pans, H, I, substantially as herein shown and described, and for the purposes set forth.
5th, The hand-hook, K, constructed substantially as herein shown and described, when used in connection with the pans, H, I, as and for the purpose set forth.

80,343.—CLASP FOR HOOP SKIRT.—Louis Fellheimer, New York city.
I claim, 1st, Fastening the steel, A, to the eyelet, C, bearing the tape, B, by passing the same through holes bored transversely through each side of the eyelet, and then crumpling down the inner ends of said eyelet upon the steel, as herein shown and described.
2d, Forming holes transversely through the sides of the eyelet, C, for the passage of the steel, A, whereby said steel is secured to the eyelet inside the tape B, and for the purpose specified.

80,344.—DEVICE FOR HOLDING TOOLS AGAINST GRINDSTONES.—Edwin Fernald, Turner, Me.
I claim the vertically adjustable jointed bar, H, bearing the wheel, J, in combination with the guide, G, and horizontally-traveling shoe, F, as herein described, for the purpose specified.

80,345.—SEWING MACHINE.—Stephen French, Orange, Mass.
I claim the arrangement of the cams, H, J, upon shaft, E, the pivoted lever, I, having wings, h, the shuttle, G, the spring, K, the having lug, i, an adjustable stop, m, all constructed to operate in the manner and for the purposes substantially as herein set forth and shown, for the purposes specified.

80,346.—SCAFFOLDING.—J. W. Glover, William B. Orner, and B. E. Orner, Martinsville, Ind.
We claim the employment of ratchet-shores, saddles, and levers, as a device or devices for raising the frames of houses, all substantially as shown and described.

80,347.—NUTMEG GRATER.—E. A. Goodes (assignor to himself, E. L. Miller, and W. H. Morford), Philadelphia, Pa.
I claim the grater, consisting of the grating-cylinder, B, provided with crank-handle, E, and plunger, a, having rod, c, and the plunger, C, G, with its handle, D, all constructed and arranged within the case, A, to operate as herein shown and described, for the purpose specified.

80,348.—MACHINE FOR BENDING SHEET METAL.—Joseph M. Grove and Henry Hedrick, Anderson, Ind.
We claim the combination, with the rollers of a bending machine, of the cam, i, substantially as and for the purpose described.

80,349.—HAND PUNCH.—J. D. Higgins, Greenville, Conn.
I claim the detached tubular punch, G, in combination with the guide-box, F, formed upon the jaw, D, the slotted spring, H, and operating-jaw, C, all arranged and operating as described, for the purpose specified.

80,350.—TANNERS' HOOK.—James Hoffman, Belvidere, N. J.
I claim, 1st, pivoting a lever-hook, C, to the shank of a tanners' hook, D, substantially as herein shown and described, and for the purpose set forth.
2d, The combination of the lever-hook, C, connecting rod, D, sliding ring, E, sliding rod, G, and the sliding ring, G, and the coiled spring, H, with each other and with the hook, B, and handle, A, substantially as herein shown and described, and for the purpose set forth.

80,351.—BOLT CUTTER.—Henry Howe, Oneonta, N. Y.
I claim the combination of the slotted plate, B, cam, D, spring-catch, b, and projecting arm, c, all made and operating substantially as herein shown and described.

80,352.—PAPER CAP.—M. G. Imbach, and I. Weidenman, Hartford, Conn.
We claim, as a new article of manufacture, a paper cap, having its crown formed by cutting from a rectangular sheet of paper a series of gores, or triangles, leaving them united at their bases, and having their vertices united at a common point, C, the said crown being secured to the band, D, as herein described, for the purpose specified.

80,353.—OINTMENT FOR HORSES, CATTLE, ETC.—Richard Jonas, New York city.
I claim an ointment composed of the above mentioned ingredients, in about the proportions named and for the purposes set forth.

80,354.—MACHINE FOR FLATTENING AND BENDING CHAIN LINKS.—Peter Kendrick, Trenton, N. J.
I claim, 1st, The arrangement of the plungers, J, J', rolls, M, M', guides, K, K', l', cross bars, H, H', connecting rods, O, G, shafts, C, D, eccentricity, P, F, crank, N, dies, Q, S, and guide, R, with relation to the bed, A, substantially as herein shown and described, for the purposes specified.
2d, The combination of the grooved dies, Q, S, arranged as described, with the bending mechanism, all substantially as set forth.

80,355.—NURSERY CUP.—J. F. Leslie and Edwin A. Tibbets, Woburn, Mass.
We claim the nursery cup, when its cover, B, is provided with the stays, E, and ring, whereby it is adapted to be reversed to support said cup and form a heater, as herein shown and described.

80,356.—SUBSOIL ATTACHMENT FOR PLOWS.—J. C. Leonard and J. J. Goobar, Clinton, Mo.
We claim the subsoil plow, A, constructed substantially as described, in combination with the sod or other plow, C, all as set forth.

80,357.—BRANCH CEMENT PIPE.—Enoch Lockhart and Frank Roberts, Louisville, Ky., and Henry Knight, Brooklyn, N. Y.
We claim, 1st, The cores, D and C, the collars, G and J, the core pin, E, with the key, F, arranged substantially as described, for the purposes set forth.
2d, The key, F, in combination with the cores, C, D, as herein described, for the purpose specified.

80,358.—MOLD FOR BUILDING-BLOCKS.—Thomas J. Lowry, Conneautville, Pa.
I claim the construction and arrangement of the improved mold for building blocks, operated as herein described.

80,359.—WATER WHEEL.—La Fayette Lyons, Bennington, Vt.
I claim a water wheel having a cylindrical or conical core, A, provided with the curved buckets, K, and arranged in a curb, D, provided with the supply and discharge passages, K, G and H, substantially as and for the purpose described.

80,360.—CARRIAGE CLIP.—Thomas McCreary (assignor to himself, Geo. M. Sullivan, and John McCreary), Matteawan, N. Y.
I claim, 1st, A carriage clip in which the pivot, C, is swiveled in the shaft, at the end of the spring, D, and the spring, E, is attached to the shaft, and fastened by means of a spring catch, E, or its equivalent.
2d, The strap, D, when rigidly secured to the pivot pin, C, of a carriage clip, for holding the spring catch, E, and for preventing the pin from turning, as set forth.
3d, A carriage thill coupling consisting of the clip, A, shaft, B, pin C, strap, D, and catch, E, all made and operating substantially as herein shown and described.

80,361.—SMUT MACHINE.—E. McLane, Young America, Ill.
I claim the passage, f, in the blast spout, H, provided with the valve, g, when arranged in relation with the spout, G, and fan, B, to operate substantially as and for the purpose set forth.

80,362.—CORN SHELLER.—Amzi C. Mills, Oaktown, Ind.
I claim an improved corn sheller formed by the combination of the curved slats or knives with the frame or conductor, A, substantially as herein shown and described, and for the purpose set forth.

80,363.—MACHINE FOR DRESSING SLATE FRAMES.—Wm. F. Mosser, Allentown, Pa.
I claim, 1st, The sliding frames, Y, which carry the cutter shafts, M', and cutters, W, in combination with the revolving table, L, when constructed and operating substantially as herein shown and described and for the purposes set forth.
2d, The arms, S', operated by the cam, U', through the arm, V', to spread the cutter frames, Y, as herein described, for the purpose specified.
3d, Holding the cutters, up to their work by means of the bar, F', acting upon the strap, A', that drives them, arranged substantially as herein shown and described.
4th, The presser or holder, Q, constructed and operating substantially as herein shown and described, in combination with the revolving table, L, as and for the purpose set forth.
5th, The angular pivoted stop, I', in combination with the angular pusher, J', substantially as described, for the purpose specified.
6th, The pushers, E and J', operated as described, adapted to move the slats to the cutters, W and Q', respectively, substantially as herein shown and described.

80,364.—FENCE POST DRIVER.—Isaac J. Parker, Buffalo Grove, Iowa.
I claim, 1st, The hammer shaft, D, in combination with the sliding bar, F, and the windlass, I, the former being connected to the latter by a rope, H, passing over a pulley, a, and all arranged to operate in the manner substantially as and for the purpose set forth.
2d, The fixed and adjustable rollers, J, J', in combination with the hammer shaft, D, and the bar, F, substantially as and for the purpose specified.

80,365.—AUGER HANDLE.—H. D. Pennoyer, Athens, N. Y.
I claim the auger top constructed as described, of the parts, a, b, secured together by the bolt, c, and provided respectively with the concentric spring pawls, d, and ratchet teeth, i, the upper part, a, having the loop, j, and the screw catch, B, and the lower part, c, receiving the loop, j, and the auger, all arranged and operating as described, for the purpose specified.

80,366.—BOOTS AND SHOES.—William Smith, Whitehall, Bridgewater, Pa.
I claim, 1st, The application to the soles of boots and shoes of strips, B, of wood, metal, or other suitable material, having beveled sides, and fitted in grooves in the sole, the grooves having dovetail sides, to correspond to the sides of the strips.
2d, Cutting transversely the inner surfaces of said strips, B, in order to render them flexible, substantially as shown and described.

80,367.—EXTENSION LADDER.—John A. Smith, Lacon, Ill.
I claim the extension ladder constructed as described, of the three sections, A, B, C, sliding in grooves, one within the other, and provided with the adjusting screws, E, F, and the adjustable braces, G, composed of the rods, g1, g2, g3, all arranged as described, for the purpose specified.

80,368.—CEMENT FOR ROOFING, ETC.—Harrison S. Snow and Edgar J. Hunkins, Macon, Mo.
We claim a fire and water proof cement composed of the ingredients and in the manner and proportions substantially as herein described.

80,369.—DOOR LOCK.—John G. Spather, Sandusky, Ohio.
I claim the sliding plates, F, F', when arranged on the inner side of the covering plate of a lock case, and when forced together by means of springs, e, e', substantially as described, so as to close the key hole, as set forth.

80,370.—LIQUID MEASURE.—Ward Sprague, Sandy Creek, N. Y.
I claim the liquid measure constructed with the walls, a, a', and fluid chamber, c, all constructed as and for the purpose described.

80,371.—RUFFLING ATTACHMENT FOR SEWING MACHINES.—A. Steward, Plano, Ill.
I claim in combination with the presser-foot and the ruffling attachment, the guide, A, having the lips, tongue, and friction points substantially as described.

80,372.—GRAIN REGISTER.—Barnett Taylor, Forestville, Minn.
I claim, 1st, The hinged top, B, or its equivalent, in combination with a shaft D, pointer, a, ratchet teeth, Q, and spring, M, and one or more pawls, all substantially as shown and described and for the purpose set forth.
2d, The hinged top, B, or its equivalent, in combination with the sliding upright, M, with one or more pawls or their equivalent, the screw shaft, D, and nut, E, all substantially as and for the purpose shown and described.
3d, The closed box having a hinged top, B, the vibrating of which actuates the interior registering machine of the said box, by means of a sliding upright, M, as described, and for the purpose of registering the weight of the grain by the weight of the same, all as set forth.
4th, The plate, L, clapper, Z, lever, Y, toothed wheel, C, and sliding upright and ratchet wheel, all substantially as shown and described, in combination with the yielding top, B, all as and for the purpose set forth.
5th, The graduated circle, U, and scale, b, substantially as shown and described, in combination with the pointers, a, and c, screw shaft, D, and nut, E, all as and for the purpose set forth.
6th, Sliding upright, M, spring, J, and hinged top, B, of a closed box containing any registering mechanism, all substantially as shown and described and for the purpose set forth.
7th, The screw shaft, D, nut, E, pointer, c, scale, b, pointer, a, on the said

shaft, and graduated circle, U, all constructed and operated substantially as shown and described and for the purpose set forth.

80,373.—BACK-BAND HOOK.—Charles Wack (assignor to himself and Charles Miller and A. Steinbach), Evansville, Ind.
I claim, as a new article of manufacture, the back band hook, constructed as described, of the plate, B, cast or formed with the hook, A, whose upper portion is bent in at e, f, said plate being adapted for riveting to the strap, C, as herein shown and described for the purpose specified.

80,374.—HAT HOLDER.—Zera Waters, Bloomington, Ill.
I claim, 1st, A rod, B, b, having any suitable lock-joint, substantially as described, in combination with the hat rest, A, a, all as and for the purpose set forth.
2d, The lock mechanism, substantially as described, in combination with a rod, B, b, and rest, A, a, all as and for the purpose set forth.

80,375.—RIBBON ROLL CLIP.—Marcus Brown Westhead, Manchester, England.
I claim the flanged clip or slide substantially as herein set forth, for the purpose of putting up tape or ribbon rolls.

80,376.—GIB AND SELF-OILER.—Cyrus B. White, Port Richmond, N. Y.
I claim, 1st, The partition plate, e, in the cap, C, for the purpose of separating the oil from the roll, D, and preventing the former being discharged from the cup under the reciprocating motion of the cross-head and gib.
2d, In combination with the above, the roller slide, f, arranged in grooves g, h, the sides of the compartment, d, substantially as described and set forth.
3d, The combination of the roller, D, wick, e, and the cup, C, divided into two compartments by the partition plate, e, substantially as and for the purpose specified.

80,377.—CARRIAGE.—Job Whitehead, Ames Station, Iowa.
I claim the combination of the springs, I, shafts, H, ratchets, L, pawls, M, pulleys, K, with the cross-piece, F, and framing, and with the pulleys, O, and axles, B, when constructed and arranged substantially as and for the purpose specified.

80,378.—CRAYON HOLDER.—Rufus Wright, New York city, assignor to himself and T. B. Chadwick, New Haven, Conn.
I claim a new article of manufacture, a crayon holder having its split ends made angular, and provided with screw threads at opposite angles for the reception of the screw nuts, C, as herein shown and described.

80,379.—DOOR MAT.—William Young, Jr. (assignor to himself and Charles Lowell), Franklin, Mass.
I claim an improved article of manufacture, a door mat, having two uncut wiping surfaces, composed of the rope, C, wound spirally around the longitudinal wooden bars, A, and rounded bars, D, secured to the top and bottom of said bars, A, all clamped together by the transverse rods and nuts as herein shown and described.

80,380.—CAR WHEEL.—Anson Atwood, New York city.
I claim, 1st, The construction of the exterior part of the car wheel with the ordinary chilled rim, or the rim with a part of the plate attached, having the outer or inner edge with unnecessary and projections formed by eccentric curves, as and for the purpose before described.
2d, The exterior and interior parts of the wheel, in combination, constructed and fitted to one another in either of the modes above specified forming the entire wheel, with the manner of putting the two parts together, and keeping them in place while in use, as and for the purpose before described.

80,381.—CLEANING COTTON WASTE.—Ilaydn M. Baker, Harlem, N. Y.
I claim the use of coal-tar benzole or coal-tar naphtha, or mixtures of said and their equivalents, for removing oils from cotton waste, (or other fiber used for similar purposes) and also the separation and recovery of the oils and solvents by distillation.

80,382.—MACHINE FOR MAKING WOODEN TRAYS.—Henry Barber, Greenfield, Mass.
I claim, 1st, The carriage, J, mounted upon the free rotating shaft, G, in combination with the guide-plates, H, H', and guide pin, I, or the equivalent of these parts, to give the said carriage a combined rotary and rectilinear movement, substantially as and for the purpose described.
2d, In combination with the carriage, J, constructed and operated substantially as described, the concentric saws, C, C', fixed upon a single vibrating head block, D, and placed, the one directly under the other, so that the bolt may move to the saws in a curved line, without causing the saws to bump each other.
3d, In combination with the free shaft, G, guide plates, H, H', and guide pin, I, or their equivalents, the wheel, L, provided with the pins, c, c', and the lever, M, and the combination of the slides, O, controlled by the lever, M.
4th, The presser bar, K, provided with the spring, L, and treadle, k', and arranged and employed, in combination with the rake, E, and swinging frame, G, substantially as and for the purpose set forth.

80,383.—HORSE RAKE.—William H. Barton, Omeys, Ill.
I claim, 1st, In combination with the main sled or vehicle, A, and revolving rake, B, the supplemental rake, C, fixed upon a single vibrating head block, D, and placed, the one directly under the other, so that the bolt may move to the saws in a curved line, without causing the saws to bump each other.
2d, The sawing frame, F, I, G, arranged and employed substantially as and for the purpose described.
3d, The combination with the supplemental runners, D, and rake, E, of the straps, I, pulleys, H, H', rock shaft, F, and treadle, k', substantially as and for the purpose specified.
4th, The presser bar, K, provided with the spring, L, and treadle, k', and arranged and employed, in combination with the rake, E, and swinging frame, G, substantially as and for the purpose set forth.

80,384.—DRIVING WHEEL FOR LOCOMOTIVES.—John Birkenhead, Canton, Mass.
I claim the arrangement and combination of traction spurs with the tread and the flange of the driving wheel of a locomotive engine, to be used on the rails of a railway, the whole being substantially as and for the purpose set forth.

80,385.—OPERATING SHUTTLE-BOX IN LOOM.—Jas. Brierly Worcester, assignor to himself and James Brierly, Milbury, Mass.
I claim, 1st, The combination of the cast-iron lever, P, having a pendant, R, with the tripping arm, S, and its operative mechanism, substantially as described.
2d, The combination of the cast-iron and raising apparatus, consisting of the lifters, slides, carrier, and their connections, as described, whereby I can change the boxes at will, on one or both ends of the loom substantially as set forth.
3d, The combination of a sliding spring-catch, L, pendant, R, and notched box-rod, K, substantially as set forth.
4th, The combination of the cast-iron lever, P, having a pendant, R, with the tripping arm, S, and its operative mechanism, substantially as described.
5th, The combination of the cast-iron and raising apparatus, consisting of the lifters, slides, carrier, and their connections, as described, whereby I can change the boxes at will, on one or both ends of the loom substantially as set forth.

80,386.—DRILL HOLDER.—Charles Burleigh, Fitchburg, Mass.
I claim a drill holding chuck, constructed with a transverse plug crossing the socket hole for the drill butt, having a portion of the transverse plug, corresponding with the perimeter of the socket hole, removed and having a screw nut, or equivalent means, for giving endwise movement to the plug, all substantially as and for the purpose set forth.

80,387.—DRILLING MACHINE CARRIAGE.—Charles Burleigh, Fitchburg, Mass.
I claim the arrangement of one or of a series of horizontal drill machine bars or holders, substantially as described, so that any of the bars or holders and especially the lower one or the lower series may be elevated to allow the passage of the carriage to the breast when the track rails only are cleared from debris, and to allow passage of a car through the carriage and under the lower bar or bars up to the breast.
Also, a drill machine carriage so constructed that a car may run up through the carriage, substantially as set forth.

80,388.—TRUCK.—Oscar F. Burton, Jersey City, N. J.
I claim, 1st, The combination herein described for cramping the truck of the bar, k, levers, i, and vertical shafts, h, the latter being arranged to freely turn in the truck frame, or opposite sides or ends thereof, and carrying lateral projections, forming axles or shafts to the wheels of the truck, substantially as shown and described.
2d, The combination with adjacent or separate trucks, of an extension perch, formed of metallic tubes fitted together in a telescopic manner essentially as and for the purpose or purposes herein set forth.

80,389.—WHIP SOCKET.—Charles Christian, Sheboygan, Wis.
I claim a whip holder, constructed with the socket, B, in connection with the springs, D, substantially as and for the purpose described.

80,390.—DOOR HOLDER.—John K. Clark, Mount Pleasant, Iowa, assignor to himself, Charles B. Clark, and Henry R. Clark, Buffalo, N. Y.
I claim the pivoted arm, A, provided with roller, b, in combination with the india-rubber spring, d, and stop attachment, E, the whole constructed, arranged, and operating as shown and described.

80,391.—FERRY BRIDGE.—James A. Clark, New York city.
I claim the method of lowering the guard on the bridge, by means of the chain, f, that draws it and fastens the boat to the bridge, substantially as and for the purposes set forth.

80,392.—BLIND SLAT TENONING MACHINE.—Mil'n W. Clark, Worcester, Mass., assignor to R. Ball and Company.
I claim, 1st, The combination of the cutter head, disks, and mechanism for imparting to them a rotary motion, of the cutter heads and their shafts, mounted eccentrically in said disks, together with mechanism for revolving the cutter heads in the manner described, so that the said cutter heads shall not only have a rotary movement upon their own axes, but shall also revolve around the axes of their supporting disks, as and for the purposes set forth.
2d, The combination with the disks, G', and shafts, G, imparting motion to the eccentric cutter heads, and running loose in said disks, of the bearing support, 2, and annular disk-supports, F, substantially as and for the purposes set forth.
3d, The combination, with the disks, G', and cutter head shafts, of the adjustable quill bearings for supporting said shafts, substantially as and for the purposes set forth.
4th, The combination, with one of the annular disk supports, F, and gear, E', of clasp or guide piece, b, mounted loosely upon the hub of said gear, substantially as and for the purposes set forth.
5th, The combination with one of the gears, J, and the shipper or slide, of a hooked spring, constructed and operating in connection with the said gear and shipper in the manner set forth.

80,393.—RAILROAD CAR STOVE.—M. J. Clark, New Richmond, Ohio.
I claim, 1st, A railroad car stove, composed of upper and lower bases, J and C, connected by feeders, F and B, substantially as described.
2d, The cap, A, and feeders, B, combined and arranged as herein shown and described.
3d, The door and pan-lock, consisting of a bolt and screw-key, substantially as described.
4th, The feeder door, I, and screw fastener, E, as specified.

80,394.—STUBBLE CUTTER.—Isaiah B. Conklin, Baltimore, Md.
I claim, 1st, Curved or inclined cutting swords, T, arranged and applied to the frame of a carriage, and adapted for cutting corn stubble, substantially as described.

80,395.—BEE-HIVE.—Samuel Cuplin, Iowa Falls, Iowa.
I claim, 1st, Providing the hive with an adjustable inclined bottom, C, when constructed as and for the purpose set forth.
2d, The dish or pan, d, furnished with the float, H, in combination with the

unn-shaped device, f, when arranged in connection with a bee-hive, substantially as and for the purpose set forth.

3d, The employment of one or more sliding frames, j, constructed substantially as described.

80,396.—STEAM HEATER.—John Davis, Wilkesbarre, Pa.
I claim the combination and arrangement of the pipes, B and D, embedded in the cast iron sides of the fire box, the pipes, C, forming the grate, the connecting pipes, B', and C', feed pipe, A, boiler, I, and communicating pipes, A', and E, all connected and operating substantially as described, for the purposes specified.

80,397.—WASH BOILER.—D. A. Danforth, (assignor to himself and Isaac Ayers) Ekhart, Ind.
I claim the inner boiler, B, having its bottom slotted, and provided with flange, E, arranged to fit within and operate in connection with the boiler, A, substantially as and for the purpose set forth.

80,398.—APPARATUS FOR COLLECTING AND SEPARATING MINERAL AND METALLIC SUBSTANCES.—William T. Duvall (assignor to the Duvall Patent Pump, Dredging, and Gold-washing Company), Georgetown, D. C.
I claim, 1st, The arrangement of the separating chambers, m, in such manner that the flow is caused to pass through the body of the mercury to create and is spread or deflected by the perforated plate, r, essentially as shown and described.
2d, The application of artificial currents of air or water for the purpose of raising or removing solid matter, in the manner, and by means substantially as herein set forth.
3d, A suction pipe of a pump, so applied as to be capable of vertical, oscillating, vibrating, or rotary motion, substantially as and for the purposes specified.
4th, The elongated foot piece of the suction pipe, substantially as represented in figs. 6 and 7, for operation as set forth.
5th, The wheel, B, constructed with one or more curved vanes, a, attached to the disk, e, when said vanes are made tapering from the periphery of the disk and vanishing or nearly so at its axis, as described.
6th, The projection of the vanes, a, in semi-circular or other form, beyond the periphery of the disk, substantially as described for the purpose specified.
80,399.—LOW WATER INDICATOR.—Theodore G. Eiswald, Providence, R. I.
I claim the arrangement of the horizontal pipe, B, vertical whistle and fusible plug tube, C, plug valve, E, chambered screw cap, G, and the valve, H, with its stem, I, and handle K, as herein shown and described.
80,400.—LOW WATER INDICATOR.—Theodore G. Eiswald, Providence, R. I.
I claim the arrangement of the horizontal pipes, A, vertical pipes, C, branch pipe, M, stopcock, m, cap, c, having fusible plugs, a, valve, v, having the loose face plate, I, vertical stem, T, and hand wheel, W, substantially as shown and described.
80,401.—APPARATUS FOR SEALING FRUIT CANS.—T. M. Ferguson, Rainsborough, Ohio.
I claim the press blocks, D, thumb screws, E, and frame, A, when used for producing a vacuum in fruit cans, as and for the purpose described.
80,402.—APPARATUS FOR ELECTRO PLATING.—William Coates (assignor to himself and George W. Homan) New Haven, Conn.
I claim, as a new article of manufacture, the instrument, consisting of the zinc socket, with its sponge or brush, G, and connecting wire, D, with or without the holder, E, so as to operate in the manner substantially as specified.
80,403.—GOVERNOR.—J. E. Gillespie (assignor to himself and George S. Lincoln & Co.), Hartford, Conn.
I claim, 1st, The clutch, F, with its arm, F', in combination with the lever, G, and stand, D, substantially as specified for the purpose set forth.
2d, The shaft, I, and sliding portion of clutch, E, in combination with the arm, G, clutch, F, and lever, G, substantially as set forth.
3d, Shaft, I, with its crank, J, in combination with the fixed gear or toothed circle, C', disk, H, lever, G, and revolving fulcrum, F', substantially as specified, for the purpose set forth.
4th, The screw, K, and the worm pinion, in combination with the gear, S, and shield disk, H, a, substantially as specified, for the purpose set forth.
80,404.—GAS MACHINE.—David M. Graham, Evansville, Ind.
I claim, 1st, The construction of the rarefier, I, with an air tight condenser, L, in combination with the air pipe, M, substantially in the manner and for the purpose herein described.
2d, The construction of the cylinder, A, with the concave rim, B, substantially as and for the purposes described.
3d, The rarefier, I, condenser, L, air pipes, M N N and T, gas pipe, O, aerometer cylinder, E, with valve, a, and pulleys, U, U, cylinder, C, with movable cap, D, oil chamber cylinder, F, with opening, G, provided with valves, and gasometer cylinder, K, all combined and operating in the one cylinder, A, substantially in the manner and for the purpose as described.
4th, The combination and arrangement of the heaters, Q, R, substantially in the manner and for the purpose as herein described.
80,405.—GANG PLOW.—Smith Graham, Fennimore, Wis.
I claim the hinged frame beams, g, g', bar, i, lever, k, link, j, and metal strip, or bar, s, all combined and arranged substantially as and for the purpose described.
80,406.—DRILL HOLDER.—William Hall, Jr., North Adams, Mass.
I claim the drill holder, made substantially as described, not only with a longitudinal shank bore, and with a slot extending about the length of the bore, but with the face of the slot parallel with the surfaces of the holder on which the heads and ends of the bits, B, are to be seated.
80,407.—HOSE COUPLING.—L. W. Hanson and Samuel Bush, Springfield, Mass.
We claim, 1st, The combination and arrangement of the two parts, A and B having pin, F, a notch, H, on one side, and cam lock, K, and notch, L, on the other, substantially as shown and described.
2d, In combination with the above, the rubber packing, C, arranged in and held by the groove, M, substantially as shown.
80,408.—SOAP CUP.—Joseph G. Harrison, New York city.
I claim a new article of manufacture, consisting of the cast metal soap cup, A, constructed with a hollow curved side, B, a hook or hooks, D, and ribs, d, substantially as shown and described.
80,409.—WATER METER.—Abraham Heaton (assignor to himself and Hradsky & Goodsell), Bridgeport, Conn.
I claim the arrangement of the two pistons or series of pistons, each piston or series of pistons upon its independent rod, and operating in its respective cylinders and the said cylinders connected by passages in the manner described, and provided with inlet and outlet connections so that the pistons operate in their respective cylinders, substantially in the manner herein set forth.
80,410.—SLATE FRAME.—Robert Heneage (assignor to Breed & Co.), Buffalo, N. Y.
I claim the rubber mats, D, provided with catches, b, b, and nipples, c, c, in combination with the ronnning corners, e, e, of the slate frame, having the notches, a, a, the whole arranged as described, and operating in the manner and for the purpose specified.
80,411.—RAILROAD CAR VENTILATOR.—M. T. Hitchcock, Springfield, Mass.
I claim, 1st, The T-shaped exhaust tube, having inclined ends, and valves, a, b, attached thereto, for the purpose of adjusting the action of the ventilator to the direction of the motion of the car, and enclosed within the shell, C, which is rigidly attached to the car, in such a manner as to form an air passage between the exhaust tube and shell, the whole constructed, arranged and operating substantially as set forth.
2d, An exhausting ventilator, rigidly attached to the bottom of a railway car, and so arranged as to exhaust equally well, whether said car moves in one direction or the other, substantially as set forth, and to discharge the air from the car directly beneath the same as specified.
80,412.—HAY SPREADER.—De Lancy Kennedy, New York city.
I claim, 1st, An adjustable journal box, B, in combination with the fork of a hay tedder, whereby the said fork may be set to operate nearer to or further from the ground, substantially as herein described.
2d, The buttons, D, D, in combination with the extended and bent portions of the tines, C, C, substantially as and for the purpose herein set forth.
80,413.—HYDROCARBON BURNER.—Samuel P. Legg, Springfield, Mass.
I claim, 1st, A fire box for burning liquid fuel in a steam boiler, having the bottom plate, above the bottom of the boiler, for the purpose specified, and air flues, F, F, closed by valves, and so arranged that the draft is entirely supplied through the air flues, in combination with the reservoir, K, and supply pipe, P, having a contracted nozzle, o', and so inserted in the fire box as to prevent heating the liquid fuel until it leaves the pipe, P, the whole arranged and operating substantially as described.
2d, The combination and arrangement of perforated conductor, I, perforated funnel, J, and the pipe, P, having a contracted opening, o', applied to the fire box of a steam boiler, substantially as described.
80,414.—OPENING AND CLOSING SHUTTERS.—Carl Lehnert (assignor to Joseph M. Wellner & Co.), Boston, Mass.
I claim, 1st, The combination of a flat cam surface and catch or projection, c, on the cam segment, with the spur, B, or the segment gear, H, for holding the blind or shutter open or closed, substantially as described and specified.
2d, The wedge, e, and adjusting devices, in combination with the segments H, I, and cam surfaces thereon, substantially as described and specified.
80,415.—CARD RACK.—Mitchel Lepp, Albany, N. Y.
I claim the steadying slat, a, in combination with the holding slat, b, and the rack frame, c, c', and e, constructed substantially as set forth, for the purpose herein described.
80,416.—COOKING STOVE.—J. W. Lowrey, Dayton, Ohio.
I claim the inner chamber, A, to be inserted into the stove as shown, together with its regulating valves and slide, M, N, and O, and an adjustable end piece, P, and Q, substantially as and for the purposes herein specified and described.
80,417.—RAILROAD RAIL.—Robert M. Marchant, Wellington, New Zealand.
I claim, in the construction of railways, the arrangement of the rails, A, with a contiguous substructure, B or H, either with or without the wooden foundation, D, or iron plates, I, the whole secured or bolted together, in the manner and for the purpose herein shown and described.
80,418.—PUMP.—George Marshall, Brooklyn, N. Y.
I claim the combination of the water ways, F, F', on one and the same side of the pump, suction pipe, C, valves, E, G, and valve chambers, H, J, with their lifts or doors, L, L', arranged substantially as described, loose clamping bars M, M', and the wedges, I, I', essentially as specified.
80,419.—CAR BRAKE.—S. McCambridge, Philadelphia, Pa.
I claim, 1st, The combination of the shafts, G, M, and N, cox wheels, Q and Q', cones, S, S', and pulleys, P, and pulleys, O, and O', with the shaft, B, of the engine, and the wheel, V, and the driving strap, U, when the several parts are constructed, arranged, and operated in relation to each other substantially in the manner and for the purpose set forth.
2d, The combination and arrangement of the lever, W, connecting rod, n, tightening strap, U, and wheel, V, with the chain shaft, G, for holding the

chain, F, tight, when the machine, H, is thrown out of gear with the engine, substantially in the manner described.
3d, The combination and arrangement of the spring seated slide, J, with the last truck, E, and chain, F, substantially as and for the purpose set forth.
80,420.—CAR BRAKE.—Samuel McCambridge and Edward G. Martin, Philadelphia, Pa.
We claim the arrangement of the continuous chain, C, and its described connecting rods, when the same is fastened at one end to the front car or truck, and operates in combination with a fixed brake or pulley, on the rear truck, through a rod or chain connecting directly with the actuating devices on the engine, all as and for the purpose set forth.
80,421.—PROPELLER.—Christian Gotthold Meinhardt, Altoona, Pa.
I claim, 1st, The propellers, consisting of the ring, j, rim, F, valve, H, bars, i, i', on the piston rod, r, guide braces, g, g', g', substantially as and for the purposes set forth.
2d, Reversing the steamboat, by means of overturning the valve, H, in the manner and substantially as described.
80,422.—ATTACHING BELLS TO THEIR YOKES.—George R. Menely, West Troy, N. Y.
I claim, 1st, The center bolt, which holds the clapper to the cap plate, which runs through the bell and supports it in various positions in the yoke by means of a toothed or indented wedge attached to the center bolt, in combination with an adjustable clutch attached to the cap plate, substantially as herein set forth.
80,423.—SNOW GATE.—A. D. Murray, Henderson, Pa.
I claim, 1st, The friction rollers, H, H', substantially as and for the purpose described.
2d, The combination and arrangement of the lever, K, bar, I, diagonal brace, D, with bores, m, and pin, n, substantially as and for the purpose set forth.
3d, The construction and arrangement of the battens, C' and E, substantially in the manner and for the purpose specified.
4th, The short staks, P, with notch, p, for holding the gate when closed.
80,424.—FASTENING FOR SHIRT COLLARS.—Charles E. Palmer, Newburyport, Mass.
I claim the pivoted button, B, in combination with the shank, a, fixed disk, A, thereon, and detachable head C, all constructed and arranged as shown and described.
80,425.—VELOCIPEDE.—Harvey A. Reynolds, Brooklyn, N. Y.
I claim the lever, m, with the rods, n, n', connected respectively, above and below the fulcrum, in combination with the wheels, d, d, and axle, e, to which their ends of the rods, n, n', are connected on opposite sides of the king bolt, i, so as to steer the velocipede by the movement of one lever, as set forth.
80,426.—CAR COUPLING.—Levi Scett and Paul Trimmer, Burgettstown, Pa.
We claim the pivoted lever, F, latch, J, spring, M, and pivoted arm, K, in combination with the perpendicular rod, G, coupling key, D, and connecting rod, L, when arranged and operated as herein described, for the purpose set forth.
80,427.—SULKY PLOW.—Benjamin Slusser, Sidney, Ohio.
I claim, 1st, The combination of the lever, L, having the shoulder, n, with the crank, c, having the projection, m, and supporting the standard to which the plow is attached, when the several parts are connected and arranged so as to operate together, substantially in the manner and for the purpose specified.
2d, The combination of the crank, c, standards, g, g', seat, g, rod, H, and hinged post, I, substantially as and for the purpose described.
3d, Supporting the plow upon two standards, E, F, bent in the form and attached to the rear side of the plow, in the manner described.
80,428.—MORTISING CHISEL.—Josiah M. Smith, Warren, N. J.
I claim a tenoning chisel, constructed to operate in the manner as herein set forth.
80,429.—FIRE KINDLER.—Verlin G. Tansey (assignor to himself and James W. Simpson), Indianapolis, Ind.
I claim the burner, A, enlarged tube, e, filled with the packing, E, and furnished with the deflecting plate, l, and supplied with oil from the fountain, B, by the tube, g, substantially as shown, in combination with the air ducts, D, M, through which air is supplied to the burner, when the draft opening is closed by the plate, C, all arranged and operating substantially as set forth.
80,430.—BUTTON BOOT.—E. P. Taylor, New Bedford, Mass.
I claim a button boot, in which the whole upper and leg front, a, and flap, f, are made in one piece, crimped to the proper form, substantially as shown and described.
80,431.—STEAM GENERATOR.—William R. Taylor and James F. Slot, Brooklyn, E. D., N. Y.
We claim making a vertical tubular steam boiler, substantially as described, and the annular tank or saze, substantially as herein described, arranged therein in relation to each other as set forth.
80,432.—SCISSORS AND SHEARS.—Augustus Thayer, Albany, N. Y.
I claim, 1st, The clipping shears, o' o', or, c, c, or their equivalents, placed forward or back of the pivot, p, or in the outer edges of the blades to one side, in combination with the blades, A, A', and the said notches placed as to give a sliding cut, as and for the purpose set forth and described.
2d, The holding notches, e, e, in one or more sets, placed in the bevels of the blades, as and for the purposes set forth and described.
80,433.—CONSTRUCTING BACK PADS TO HARNESS.—John Umbach, Kankakee, Ill.
I claim the use and application of the molting cup in the filling and stitching the cushion or under part of the back pad to harness.
80,434.—REIN HOLDER.—J. W. Wadsworth, Durham, Conn.
I claim the construction and arrangement of the springs, B, C, upon the bar A, and dash board, so as to be a part of the same, and operate in the manner set forth.
80,435.—WASHER.—John A. Way (assignor to The Darrow Manufacturing Company), Bristol, Conn.
I claim, a new article of manufacture, an axle washer, made of raw hide substantially as describe.
80,436.—THERMOSTAT.—Charles A. Wilson, Cincinnati, O.
I claim the adjusting and stop valve screw, H, located on the opposite side of the thermostat plates to the valve seat, E, as described, and for the purpose specified.
80,437.—SMOKE STACK FOR LOCOMOTIVES.—Jearum Atkins, Washington, D. C.
I claim, 1st, The combination of the annular exhaust nozzle, or its equivalent, and the annular tank or saze, substantially as herein described.
2d, The arrangement of the annular smoke passage, and the annular deflecting plate, F, substantially as set forth.
3d, In combination with the annular passage, G, and annular deflector, P, the central receptacle, H, substantially as and for the purposes set forth.
80,438.—METHOD OF REMOVING CARBON FROM GAS-RETORTS.—John A. Basset and Oliver C. Smith, Salem, Mass.
We claim, 1st, The apparatus shown and set forth, having the various parts constructed and operating substantially as specified, and used for the purpose described.
2d, The use of an air-forcing apparatus, with a retort lid, having an opening for the purpose of admitting air to the interior of the retort.
3d, The combination of the pipe, H, and retort lid, G, with the air-forcing apparatus, F, when used for the purpose specified.
4th, The combination of the flexible steam tube, E, with the main, C, and blower, F, for the purpose set forth.
80,439.—FARM GATE.—George W. Blackwell, Lebanon, Ind.
I claim the action of the gate in opening and shutting the wheels, B, B, and supported between the upright posts, P, P', on the wheels, C, and also on the latch, as shown in fig. 5, the catch being sustained by K, and forced into the catch on post by the spring, y.
80,440.—EGG-BEATER.—Lewis T. Blake, New Haven, Conn.
I claim the combination of the case or vessel, A, with the beating blade, B, and the double crank, c, d, when the whole is constructed, arranged, and fitted for use substantially as herein described and set forth.
80,441.—SHEET-METAL LINING FOR BATH-TUBS.—Charles Albert Bessie, Philadelphia, Pa.
I claim a bath-tub lining, made of sheets of hard metal, such as copper or zinc, consisting of the parts, B, C, C, when the same are constructed and arranged as described.
80,442.—HORSE HAY-FORK.—George W. Bowlsby, Monroe, Mich.
I claim, 1st, The projecting posts, i, secured at an angle to the tines, a, a, at their pivot, c, in combination therewith, and with the toggle-lever, e, substantially as and for the purpose described.
2d, The combination and arrangement of the swinging tines, a, enlarged as described at c, bail, e, toggle, e, clevis, j, extended bolts, k, guards, m, supporting bar, n, and projecting posts, i, substantially as described for the purpose specified.
80,443.—MACHINE FOR CUTTING AND ASSORTING BROOM-CORNS.—Miles D. Bradley, Ballston Spa, N. Y.
I claim, 1st, The perpendicular drum, A, the different-sized rollers, e, e, e, etc., and belts, n, n, n, etc., whether the said belts be flat or round, all constructed and operating together substantially as shown and described, and for the purpose set forth.
2d, The cutters, v, v, v, shaft, E, pinion, J, and toothed rim, L, whether the said rim be toothed externally or internally, and drum, A, all constructed and operating together substantially as shown and described, and for the purpose set forth.
3d, The chutes, K, K, etc., in combination with the drum, A, rollers, e, e, e, etc., and belts, n, n, n, etc., all substantially as and for the purpose shown and described.
4th, The adjustable step-bearing, h, in combination with the drum, A, rollers, e, e, e, etc., belts, n, n, n, etc., all substantially as shown and described, and for the purpose set forth.
5th, The bevel-gearing r, u, and pulley, G, substantially as shown and described, in combination with the drum, A, and its belts and rollers, s, all as and for the purpose set forth.
6th, An adjustable step-bearing, k, in combination with the shaft, E, cutter-wheel, D, drum, A, and its rollers and belts, all substantially as shown and described, and for the purpose set forth.
80,444.—PRINTING-PRESS.—William Braidwood, N. Y. city.
I claim, 1st, The levers, c, hung in relation of the platen, operated as described, in combination with the rods, f, g, crank pins, d, and roller-carriage, B, substantially as and for the purpose set forth.
2d, The slits, l, in the connection-rods, i, provided with bearings, m, springs, n, and adjusting screws, o, to operate in combination with the platen D, of a printing-press, in the manner and for the purpose described.
3d, The spring-arm, in combination with the bell crank lever, u, v, and card drop, p', substantially as and for the purpose set forth.
80,445.—ELEVATOR.—Philipp Brand, Springfield, Ill.
I claim this combination of the jointed framework, B, platform, C, pipes, D, and steadying-arms, F, as herein set forth and for the purposes described.

80,446.—LAMP FOR DESTROYING INSECTS IN TREES.—F. Markham Briggs, Livonia, Mich.
I claim the construction of a lamp, A, provided with any suitable pan, O, and arranged to be heated by means of brick-tubes, D, substantially operating as and for the purposes herein described.
80,447.—WATER-ELEVATOR.—G. H. Bristol, Romeo, Ill.
I claim the combination of the lever, L, its pawl, d, wheel, F, spool, E, shaft, D, ball, J, and the bucket and curb, when all arc constructed, arranged, and used as specified.
80,448.—TYPE-MACHINE.—David Bruce, Brooklyn, N. Y.
I claim, 1st, In combination with the right-angled lever, E, the plug, D, substantially as described, and for the purposes hereinbefore set forth.
2d, The sliding adjusting plate, H, and taps, M, in combination with the right-angled lever, E, substantially as described, and for the purpose hereinbefore set forth.
3d, In combination with the said sliding adjusting-plate, the bifurcated cam, Q, substantially as hereinbefore described, and for the purposes set forth.
4th, The combination of the movable jaw, N, with the inclined gutter, B, substantially as hereinbefore described, and for the purposes set forth.
5th, The combination of the compound spring, S, with the inclined gutter, B, for the purposes hereinbefore set forth, and made and operating substantially as described.
6th, The combination of the spring or trip-hammer, X, with the inclined gutter and right-angled lever, substantially as hereinbefore described.
80,449.—SPRING-PUNCH.—Marti V. Bryant, North Plains, Mich.
I claim the square lug, G, when used in connection with the frame, A, bifurcations, B, B, punch, C, pin, D, spring, E, and die, F, substantially as and for the purpose specified.
80,450.—TRACK CLEARER FOR RAILROAD.—S. G. Cabell, Quincy, Ill., assignor to himself and Peter T. Abell, Atchison, Kas.
I claim the arrangement of the steam box, A, and the pipe, B, with the two way cocks, c, and rod, L, constructed substantially as and for the purpose herein set forth.
80,451.—ASH BIN.—Willard W. Chase, Springfield, assignor to himself and Solomon W. Abbott, Sanapec, N. H.
I claim in combination for receiving refuse for ash-bins, and other purposes, as an article of manufacture, constructed and operating substantially as above set forth.
80,452.—TELEGRAPH INSTRUMENT.—Paul Antoine Marie Chauvassaignes and Jacques Paul Lambrigt, Paris, France.
We claim, 1st, The combination of the devices herein described for effecting the notation and automatic transmission of telegraphic messages, the same being constructed and arranged to operate in the manner and for the purposes set forth.
2d, An insulating-ink, composed of the ingredients herein named, taken in the proportions substantially as specified.
3d, A decomposable liquid, made of the ingredients herein named, taken in the proportions substantially as specified.
80,453.—BRUSH-HOLDER.—Charles B. Clark, Buffalo, N. Y.
I claim connecting the thumb-nut, E, with the movable jaw, H, by means of the flange, G, and slot, K, together with the mortise, L, in the screw-shank F, for the purpose specified.
80,454.—BUCKLE.—John G. Clifton, Northfield, Ind.
I claim the arrangement of the loops of the frame of the buckle at one end, and at the center thereof, between the bars, b, b, and d, e, in combination with the tongues, i, j, acting upon the opposite sides of the frame in the manner and for the purpose specified.
80,455.—FURTEFACE.—William B. Coates, Philadelphia, Pa.
I claim, 1st, The combination of the vibrating-rim, H, with its flange, K, and the bed-plate, J, with its flange, L, and apertures, M, the shaker, F, with its arm, G, and knob, as herein described, and for the purposes set forth.
2d, The construction of the body of the stove, when combined with the cylinder, E, shoulder, Y, and ribbed top, B, as herein described.
3d, In combination with the foregoing, the sifter, O, with funnel-shaped top, N, grate, P, spout, q, and receptacle, K, when constructed and operating as herein described, and for the purpose set forth.
80,456.—NUTMEG-GRATER.—J. L. Coles, and D. H. Coles, New York city.
We claim, 1st, A box, A, containing a revolving carrier, D, having a series of carriers, with spring followers, which press the articles to be grated against the stationary grating-surface, E, which is combined with a receiver F, all as shown and described.
2d, The combination, with the cylindrical box, A, of a series of carriers, at angles to each other, so as to leave supplementary chambers, n, substantially as and for the purpose described.
80,457.—LUBRICATING DEVICE.—Frank Colligon, Buffalo, N. Y.
I claim the combination of the transparent indicator, E, with the lubricating cap, D, substantially as and for the purpose described.
80,458.—POTATO-BUG CLEANER.—Joseph Corbeil, Lind, Wis.
I claim the machine for cleaning vines or vegetables of bugs or insects, consisting of a suitable frame mounted on wheels, and having the central receptacle, C, and the two side revolving fans or beaters, D, all constructed and arranged to operate substantially as described.
80,459.—AGEING AND PURIFYING SPIRITS.—James M. Crafts, Boston, Mass.
I claim the forcing of whiskey or a distilled liquor through air, or a gas charged with ozone or antozone, or the forcing of air or gas charged with ozone or antozone through whiskey or a distilled liquor, or the agitating together of whiskey or other distilled liquor, and air or gas charged with ozone or antozone.
Also, in connection therewith, the employment, as explained, of oak shavings, or other coloring equivalent material, from which an extract is to be obtained.
Also, the treating of air by electricity, so as to ozonize such air, and subsequently passing such air in contact with or through whiskey or an alcoholic liquor, the same being as and for the purpose or purposes substantially as specified.
Also, for the improvement of the liquor, confining it in a close vessel, and subjecting it while therein to the action of the heat; and
Also, the combination of the same, and the application of ozone or antozone to the liquor, by means substantially as specified.
80,460.—MANUFACTURE OF FILES AND RASPS.—Frederick C. Curie, Lancaster, Pa.
I claim, 1st, Converting files and rasps, either cast, or made from wrought or malleable iron, into steel, by the process substantially as herein described.
2d, The new article of manufacture, namely, files and rasps, made by the process substantially as herein described.
80,461.—STEAM SAFETY-VALVE.—Owen R. Davis, Lewiston, Pa.
I claim, 1st, The passage, i, communicating with the chamber, O, in combination with the piston head, D, piston-rod, E, and valve, F, whereby to allow the steam to force said valve downward, and relieve the boiler of any undue pressure of steam that may accumulate in it, substantially as herein set forth.
2d, The arrangement of the piston-head, D, piston-rod, B, valve, F, and case or frame, G, whereby to prevent tampering with the valve when once arranged for the pressure required, substantially as herein set forth.
3d, The arrangement of the chamber, O, passage, i, valve-rod, G, valve, v, vent, k, and weight, C, substantially as set forth.
80,462.—CORSET.—Thomas B. DeForest, Birmingham, Conn.
I claim, 1st, A corset, formed from a felted material, substantially as herein described.
2d, In combination with a corset, constructed as above, the body-stay or band, A, substantially as set forth.
3d, The arrangement of the stays, B, B, upon the surface of the corset, either inside or outside, without the formation of pockets in the body of the corset, substantially as set forth.
80,463.—ELECTRO-MAGNETIC ENGINE.—Alexander John B. De Morat, Philadelphia, Pa.
I claim the combining and arranging of a series of magnets, with magnets or armatures, revolving, or other motion, which are made to pass from a sphere of equilibrium into a sphere of attraction, thereby obtaining a motive power by the motion produced, resulting from the power of attraction, when one or more permanent or electro-magnets are placed angularly against curves or plain surfaces of any metal possessing magnetic properties, and in this motion at the same time to bring back the system into a neutral limit or sphere of equilibrium, and in that state to arrest and carry it beyond the limits of attraction (without the necessity of breaking circuit), then afterwards released for a subsequent action, as herein set forth and described, or any other, substantially the same, which will produce these intended effects.
80,464.—METHOD OF FORMING LAMP TUBES.—T. B. Doolittle (assignor to Bridgeport Brass Company), Bridgeport, Conn.
I claim shaping or transforming the stock by means of wedging-mandrels forced longitudinally, in opposite directions, into the tube, to spread it laterally, and shape it, substantially as described.
80,465.—PACKING FOR CAR-AXLES AND BOXES.—Samuel R. Dummer, New York city.
I claim, 1st, The V-shaped lining, G, bearing against the grooved packing ring, C, and supporting the partly yielding and non-yielding encircling lining, J, K, substantially as herein represented and described.
2d, The combination of the grooved sectional packing, C, D, E, the V-shaped lining, G, the encircling lining, J, and its yielding connection, K, substantially as and for the purpose described.
80,466.—FRUIT FRAME.—S. F. Emerson, Seville, Ohio.
I claim, 1st, The covering or bag, F, and tube, I, in combination with the adjustable arms, E, substantially as and for the purpose set forth.
2d, The standard, A, head, C, in combination with the arms, D, E, dogs, G, and cords, E, substantially as and for the purpose set forth.
80,467.—MACHINE FOR TURNING IRREGULAR FORMS.—Harison Flint, and George P. Smith, Danbury, Conn.
We claim, 1st, The swinging arm, k, carrying the cutter and pattern guide, arranged relatively to the reciprocating carriage, B, carrying the spindles, C, C', on which the pattern and the block to be turned are secured, as described.
2d, The link, w, and set-screw, x, for securing the pattern-guide, L, to the arm, K, and for adjustment purposes, when operating substantially as described, for the purpose specified.
80,468.—HOP-POLE CLEANER.—Henry Fornbrook, Watertown, Wis.
I claim a hop-pole cleaner, rosset, and trimmer, constructed in the manner and for the purpose substantially as herein specified.
80,469.—ADJUSTABLE FILTER FOR FAUCET.—Henry G. Fuhrmann, Brooklyn, E. D., N. Y.
I claim a straining attachment to faucets, consisting of an elastictube, A, and conical spout, B, containing a strainer, C, as a new article of manufacture.

80,470.—BRICK MACHINE.—R. M. Gano, and R. S. Miller, Pittsburg, Pa.
We claim the combination of the follower, D, d, lever, I, connected to the rock shaft, n, and the levers, u and L, connected by the rod, w, with the lever, H, and links, v, constructed and arranged to operate substantially as and for the purpose set forth.

80,471.—LUBRICATING COMPOUND.—E. F. Gerdon, and C. W. Schindler, Albany, N. Y.
We claim a lubricating compound, made of the ingredients above specified, and mixed together in about the proportion and substantially in the manner set forth.

80,472.—FRUIT-JAR.—Thomas Gibson, Rochester, N. Y.
I claim the cover, C, with its groove, b, and the detachable clamps, B, in combination with the flange, a, and packing-ring, c, all acting conjointly, as herein shown, and for the purpose described.

80,473.—HANGING LEAVES TROUGH.—H. M. Gilbert, and F. Elberson, Ada, Ohio.
We claim the combination of the fixed bracket, B, with the adjustable clamp, C, and brace, D, when arranged and operating substantially as described.

80,474.—VALVE.—Adam Good, Jr., and Simon Strouse, Titusville, Pa.
We claim the valve, D, provided with inclined or stopping recesses, I, in combination with sleeve, E, seat, C, and chambers, A, all arranged to operate substantially as described.

80,475.—BORING AND DRILLING-MACHINE.—John Goodin, Centralia, Ill.
I claim the arrangement of the corrugated cylinder, H, inclined toothed wheel, K, rack-bar, E, cog-wheel, O, and movable frame, F, with the standard, B, all constructed to operate as set forth.

80,476.—DAMPER.—William Hailes (assignor to J. F. Rathbone & Company), Albany, N. Y.
I claim an inclined guard, so applied to the orifices of a sliding draft apparatus, when located at or near the bottom of a fire-chamber of a stove, as to prevent the escape of ashes, etc., therefrom, substantially as described.

80,477.—HAND NAIL-DRIVER FOR BOOTS AND SHOES.—Edwin Hale, Boston, Mass.
I claim the arrangement of the tube, A, the feed-rod, B, and plunger, C, E, and H, substantially as and for the purpose described.

80,478.—MACHINE FOR MAKING BOLTS AND SPIRES.—John S. Hall, Pittsburg, Pa.
I claim, 1st, The combination of the heading ram and its lever with the grating dies, G, and the cam, D, so that the ram shall have attained great momentum before it reaches the bar, bolt, or blank in the dies, and thus form the head, substantially as described.
2d, The unobstructed space under or below the dies and feeding point, so that when the grating ram receives, after heading or upsetting of the end of a long bar or bolt, said bar or bolt may drop out of the dies, and thence be drawn out of the machine, substantially as described.

80,479.—HARVESTER.—James Harris, Janesville, Wis.
I claim, 1st, The arrangement of the shaft, C, operated by the hand lever, M, and driving mechanism, G, with the rod, G, crank, I, shaft, g, and cam-wheel, L, substantially as and for the purpose described.
2d, The combination and arrangement of the shaft, g, with the part, i, and brake, r, p, either with or without the clutch, h, whereby the vertical vibration caused by the torsion of the rod is prevented, substantially as described.
3d, The combination and arrangement of the rod, g, part, i, and arm, l, the last two forming the castor arm of the strain wheel, L, when the part, i, is attached directly to the rod, g, and made the fulcrum upon which the castor arm turns, as well as the moving lever, by means of which the cutter bar is raised or lowered, substantially as described.
4th, The combination and arrangement of the lever, M, shaft, c, cranks, d and h, rods, b and e, crank, f, shaft, g, clutch, n, part, i, and brake, r, p, substantially as and for the purpose set forth.

80,480.—WATER.—Andrew J. Harrison, Rock county, Wis., assignor to himself, W. W. Dexter, William M. Underhill, and Alonzo K. Curtis, and said Underhill assignor to Samuel C. Burnham, Jr. Antedated January 28, 1868.
I claim a bath or hoop, cut open or divided at one side, so that it may be sprung open and applied around or partially around the works or mechanism of a watch, between its upper and lower plates, substantially as described, either with or without a covering of felt.

80,481.—MACHINE FOR CROZING AND HOWELING BARRELS.—Edward Holmes and Britain Holmes, Buffalo, N. Y.
We claim the combination of the cutter head, H, supported to the swinging frame, I, with the rest, J, supported by the swinging frame, K, oscillating upon a common axle with the cutter frame, when said frames, K and I, are provided with locking mechanism by which the cutter head may be held at a definite distance from the rest, and thereby made to follow the curvature of the cask, substantially in the manner and for the purpose set forth.

80,482.—MACHINE FOR LEVELING THE STAVES IN BARRELS.—Edward Holmes and Britain Holmes, Buffalo, N. Y.
We claim the combination and arrangement of the head block, A, movable driver, B, and its operating screws, D, D', D'', D''', D''', and driving pinion, F, or their equivalents, operating substantially as herein described.

80,483.—MACHINE FOR JOINTING STAVES.—Edward Holmes and Britain Holmes, Buffalo, N. Y.
We claim, 1st, The flexible hinged ribs, k', in combination with the stationary ribs, K, constructed, arranged, and operating for the purpose and substantially as described.
2d, The elevators or feed arms, L, for the purpose substantially as set forth.
3d, The combination of the friction clutch, in, weighted lever, m, and pedal O, arranged and operating in the manner substantially as described.
4th, The combination of the horizontal rack, T, pinion or segment, S', upon the rock shaft, S, and arm, B, arranged and operating for the purpose and substantially as described.

80,484.—RANGE.—Elihu Hosford, Chicago, Ill.
I claim, 1st, The application of a current of cool air to the under side of the grate in the manner and for the purpose substantially as herein described.
2d, The oven, H, formed by enlarging the air space and providing suitable doors, in combination with the cylinder, A, combustion chamber, C, columns D, and hot air chamber, E, substantially as herein specified.

80,485.—RUBBER HEAD FOR PENCIL.—Samuel D. Hovey, Brooklyn, N. Y.
I claim the pencil and pen head or tip, composed of the pencil mark eraser, o, and the pen mark eraser, e, combined, substantially as described.

80,486.—CAR COUPLING.—Henry R. Howe, Hartwick, N. Y.
I claim the combination of the buffer, A, spring bars, O and K, bent bar, P, chain, R, tongue, N, block, E, pin, T, spring, G, link, J, pin, J, set screw, S, and lever, L, when constructed and arranged substantially as described, and for the purpose specified.

80,487.—ROTARY STEAM ENGINE.—Edwin W. Jackson, Brooklyn, N. Y.
I claim the combination of the steam chest, T, (Plate XVII), changeable steam ports XIII and XIV, main shaft plate, I, ng. A, the shifting pistons perforated completely through (Plate I), they having projections or shafts on their ends, to which the four rollers C, C', (Plate V), are attached, one on each end. Two end pieces, called governor's guides (Plates IX and X), which are placed one at each end of the pistons, thick bar, described as the bar of separation (Plate V), placed between the upper and lower steam ports, and back plate, O (Plate XII), to which the bar of separation is attached, substantially as and for the purpose set forth.

80,488.—WATER METER.—Gustav L. Jaeger, New York city.
I claim, 1st, The arrangement of mud master, b, and strainer, a, in the plug of the stop cock, D, substantially as and for the purpose described.
2d, The rods, l, and cranks, k, connecting diametrically opposite buckets of the wheel, B, which runs in the scroll, E, substantially as and for the purpose set forth.

80,489.—WAGON.—George W. Janvrin, Great Falls, N. H.
I claim, 1st, A wagon, so constructed and arranged as that the body of the same may be raised and lowered at option, by means of screws attached to and forming part of the wagon, when the said screws are acted upon by attachment to the carrying wheels, substantially as described.
2d, In combination with wagons, the wheel bevels, with their corresponding bevel wheels, when constructed and arranged substantially as shown and described.
3d, The device shown, of the shipper slides and their appended forks, in combination with the upper and lower bevel wheels, J and K, and the wheel bevels, in connection with the body of a wagon, when constructed substantially as described.
4th, The shipper bar clutches shown, when arranged in combination with the notched plates, the slipper slides, and the body of a wagon, substantially as above described.
5th, When in combination with wagons supported by more than two wheels the arrangement of two or more cross bars, U, X, and the pivoted bottom, when constructed substantially as described.

80,490.—LAMP.—Henry Kellogg, New Haven, Conn. Antedated July 14, 1868.
I claim a hat formed from pulp, having incorporated within the material of the body or brim, during the formation thereof, a wire reed, or other stiffening frame or form, substantially as described.

80,491.—HEAD BLOCK FOR SAW MILL.—Dennis Lane, Montpelier, Vt.
I claim, 1st, The grooved block, P, and the yielding grooved block, P', arranged in line in the same head-block, and successively acted upon by each of the incline bars, N, arranged parallel in the reciprocating frame, G, whereby the head block is made to advance or recede, as desired, all constructed and operating substantially as described.
2d, The sleeve, E, forming an eccentric bushing in the post W, for the pinion wheel, B, by which the pinion wheel, B, is thrown in or out of gear with the bevel wheel, A, for the purpose of advancing or retracting the carriage constructed and operating substantially as described.

80,492.—PORTABLE AND ADJUSTABLE STILL-WATER DAM.—S. Lewis (assignor to W. H. Cammeyer), Brooklyn, N. Y.
I claim, 1st, The construction and arrangement of a portable and adjustable dam, in sliding or telescopic sections, in the manner and for the purpose herein described.
2d, The combination of the self-anchors, 3, with the dam, in the manner and for the purposes herein described.
3d, The combination of the boats, supports, or floats, with the dam, as above described, and the arrangement of anchors to hold such boats in position, in the manner and for the purposes described.
4th, The combination and arrangement of windlasses, chains and boats with the dam, as above described, so that by the construction thereof a series of drills may be operated within and inclosed by the dam, in the manner and for the purposes herein described.

80,493.—CAR COUPLING.—J. A. Manning, Ashtabula, Ohio.
I claim the hooked tail, D, as constructed, arranged, and operated in combination with buffer head, B, and link, C, for the purpose and in the manner as described.

80,494.—LAMP BURNER.—Jas. Minifie, Baltimore, Md.
I claim, 1st, The combination and arrangement of the two corrugated cones C, D, and tube, e, substantially as described.
2d, The corrugated cone, D, when provided with the above described open-

ings along the summits of the ridges formed by the corrugations, substantially as and for the purpose herein set forth.

80,495.—CARPET STRETCHER.—William Minster, Washington, D. C.
I claim, 1st, The hinged jaws, E, E', pressed apart by means of a spring, and bound together by either a set screw or the headed bolt, F, and its nut, G, for the purpose of firmly holding the carpet, substantially as herein set forth.
2d, In a carpet stretcher, the jaws, E, E', constructed as described, and hinged to the box, B, which slides upon the ratchet bar, A, and operating as and for the purposes specified.

80,496.—SCREEN FOR WASH STANDS.—Richard Nelson, Cincinnati, Ohio.
I claim the back or screen for wash stands and analogous articles of furniture, provided with one or more shelves, c, substantially as herein described.

80,497.—PROPELLING APPARATUS.—Ernst Offhaus, Newark, N. J.
I claim the annular cylinder, E, connected to the water ways, A and B', and receiving the pistons, d, d', in combination with the levers, s and t, switch, r, and stops, acting in the manner and for the purposes specified.

80,498.—TAG FASTENING.—N. M. Phillips, New York city. Antedated July 18, 1868.
I claim the with-the-described hook, A, B, C, bend or loop, D, guard, E, and shifting ratchet, F, combined and arranged for joint operation relatively to the tag, G, and to the goods, M, substantially in the manner and for the purpose herein set forth.

80,499.—REFLECTOR.—Louis Portner, Chicago, Ill.
I claim the reflector, A, constructed substantially as and in the manner herein set forth and for the purpose specified.

80,500.—PARALLEL RULER.—D. J. Pratt, Albany, assignor to himself and Oliver Airey, Brockport, and Oliver Airey assignor to M. P. Cavart, Albany, N. Y.
I claim the construction of a parallel ruler by attaching to one of the limbs of a T-square ruler a gage plate for regulating the distance between the lines to be ruled, substantially in the manner set forth in the specification.

80,501.—WASHING MACHINE.—Phineas Prentiss, Chester, Mass.
I claim, in combination with the tub, with ribbed sides and dasher, with gear, the adjustable socket, arranged so that the handle may be used with comparative depression or elevation, substantially as shown.

80,502.—CULTIVATOR.—Hiram Preston, Orfordville, Wis.
I claim, 1st, The adjustable V-shaped parts, C, in combination with the rocking shaft, B, when constructed and operated substantially as described and set forth.
2d, The lever, h, provided with the springs, i, and the arm, E, in conjunction with the parts, C, and ratchet, k, for the purpose of controlling the parts, C, substantially as described.

80,503.—CULTIVATOR TEETH.—William B. Ready, Sacramento, Cal.
I claim, 1st, The groove, c, in stock, a, as a seat for an adjustable point for a cultivator tooth.
2d, The movable tongue, d, pierced with holes or slots, 1, 1, 1, forming an adjustable point of a cultivator tooth.
3d, The combination of the grooved stock or support, a, with the adjustable tongue, d, for the purposes of a cultivator tooth, substantially as above described.

80,504.—DEEP-WELL TUBE.—A. Rhoades and J. Adams, Pontiac, Mich.
We claim the arrangement of the removable rod, D, having a female screw F, to connect to the screw upon the cleaner, E, at the lower portion of the slotted tube, B, all constructed to operate substantially as specified.

80,505.—RAILROAD-CAR HEATER.—John Rice, Bloomington, Ind.
I claim the heating apparatus, A, B, constructed and arranged as described, that is, having the chamber, B, air tubes, D, in smoke tubes, F, chambers, C, C', E, G, and registers and discharge pipes, as shown, the whole being attached to and combined with a railroad car, and operating substantially in the manner described, and for the purpose set forth.

80,506.—PROCESS FOR PURIFYING BUTTER.—L. S. Robbins, New York city.
I claim the within-described process for treating or purifying butter, substantially as herein described.

80,507.—CHURN.—A. A. Ross, Horicon, N. Y.
I claim the churn dasher, E, when constructed as described, of wire and a tin screw, F, and provided with a screw in its upper end, in combination with the dash wheel, C, constructed and operating substantially as and for the purpose herein set forth.

80,508.—KEROSENE-LAMP BOILER.—W. F. Rossman, Hudson, N. Y.
I claim, 1st, The combination and arrangement of reservoir or kettle, A, tube, a, boiler, C, and aperture, d, when employed in connection with a kerosene or fluid lamp, substantially as and for the purposes described.
2d, The combination and arrangement of burner, B, and chimney, e, with boiler, C, when the latter is connected with the reservoir or kettle, A, substantially in the manner and for the purposes set forth.

80,509.—STEAM CUT-OFF VALVE.—Robert Sanderson, Cleveland, Ohio.
I claim, 1st, The arrangement of the ports or openings, D, and notches, a, in the manner as and for the purpose set forth.
2d, The pivoted lever, L, and roller, H', as arranged in combination with the roller, H, and valve, D', in the manner set forth.
3d, The cam, T', as arranged in relation to the lever, I, as specified.

80,510.—BIT FOR BRIDLE.—Peter Schoonmaker, New Britain, Conn.
I claim, as a new article of manufacture, a japanned bridle or harness bit, having rings lined with metal, substantially as described for the purpose specified.

80,511.—MACHINE FOR PRESSING AND GROOVING SEAMS IN TIE WARE.—John Schumacher and Henry Upjohn, Ann Arbor, Mich.
We claim the gate, H, used in combination with the arm, C, as and for the purpose set forth.

80,512.—TILE MACHINE.—John Shellabarger, Shane's Crossing, Ohio.
I claim the relative arrangement of the shaft, B, sweeps, D, D', pitman, F, lever, G, and plunger, H, I, substantially as and for the purposes set forth.

80,513.—HORSE HAY FORK.—H. L. Sheperd, Osborn, O.
I claim, 1st, The combination of the side bar, A, connecting bar, F, point, C, and lever, E, when constructed and operating as and for the purposes herein set forth.
2d, The combination of the lever, E, with hook, b, and lever, G, with link, c, when constructed and operating as and for the purposes herein set forth.

80,514.—HEAD BLOCK FOR SAW MILLS.—S. R. Smith (assignor to F. P. Lane and J. T. Bodley), Cincinnati, Ohio.
I claim, 1st, A head block, containing both external and annular teeth, the pawls, M, M', and reciprocating bar, I, all constructed and operating substantially as and for the purpose described.
2d, The combination of the wheel, C, worm wheel, m, and toothed segment P, to operate the dog, R, as herein described, for the purpose specified.
3d, The plates, O, when constructed and operating in the manner substantially as described.

80,515.—BORING TOOL.—A. Steinbok, New York city.
I claim the adjustable frame, B, in combination with the auger, D, gimlets, E, and case, C, provided with cutting edges, constructed and operating substantially as described.

80,516.—FEED-WATER HEATER.—Stephen Stucky, New Albany, Ind.
I claim the drum, A, with pipe, G, perforated as described, partitions, D, F, J, I, forming chambers, C, H, E, K, with the exterior pipes, as described, and with the boilers, L, L', all constructed and arranged substantially as and for the purpose set forth.

80,517.—SUBMARINE EXPLORING.—H. S. Thayer, Boston, Mass.
I claim the boat, A, provided with an opening, B, through its hull, and over which opening is placed a darkened house, C, as and for the purpose specified.

80,518.—VENTILATING BOOTS AND SHOES.—Edwin Thomas, Philadelphia, Pa.
I claim, 1st, Ventilating boots and shoes by grooving the inner soles with grooves, A, and a narrow strip, B, containing both external and annular teeth, the pawls, M, M', and reciprocating bar, I, all constructed and operating substantially as and for the purpose set forth.
2d, The manufacture of leather for inner soles of boots and shoes with grooves of a dovetail shape, and a porous cover, for the purposes as specified.

80,519.—LAMP.—Wm. T. Totherow, Reading, Pa.
I claim, 1st, The uprights, C, C', deflectors, D, D', ring, A, rings or bands, F and G, and the arms, H, when combined and arranged as shown and described.
2d, The uprights, C, C', deflectors, D, D', ring, A, base, B, filling tube, E, wick tube, b, and the outwardly curving wing or gauge, c, when combined and arranged as shown.

80,520.—SWING MACHINE FOR BUTTONHOLES.—Kasimir Vogel (assignor to E. W. Lathrop), Chelsea, Mass.
I claim, 1st, The irregular-toothed cam or former, E, whether having an intermittent, rotary, rocking, or reciprocating movement, substantially as and for the purposes described.
2d, The several parts of the described mechanism, when constructed, combined, and operating substantially in the manner and for the purposes as described.

80,521.—GANG PLOW.—Andrew Walker, Claremont, N. H.
I claim, 1st, A stationary frame, with adjustable plow beams underneath, pivoted to the main frame at the rear end and suspended by the ratchet, E.
2d, In combination with the gear wheel, C, gear circle, D, lever, F, and spring catch, b, in combination with the ratchet, E, for the purpose of adjusting the depth of the furrow, and locking or suspending the plows at any given point, the whole arranged, constructed, and combined, and used in combination with and for the purpose set forth.

80,522.—SEED SOWER AND HARROW.—Andrew Walker, Claremont, N. H.
I claim, 1st, The ratchet lever, C, in combination with the harrow, G, the gear, z, wheel, I, the lever, K, and circular ratchet, o, with the spring stop, a, in lever, K.
2d, The valves, b, b', attached to the seed box, B, and gage rod, c, in combination with the ratchet roller, d, the whole combined, arranged, and used as and for the purpose set forth.

80,523.—GRAIN RAKE.—R. Warnock and Chas. Abbey, 2d, Ridgeville, Ohio.
We claim the rake, F, guards, H, arms, A', handles, C, and wheels, A, all constructed and combined to operate in the manner as and for the purpose set forth.

80,524.—STRAW CUTTER.—J. T. Watson and H. E. Robinson, Richmond, Ind.
We claim the combination of the box, B, the table, A, the knife, C, and the

oscillating arm, D, and spring, E, substantially as arranged and described for the purpose set forth.

80,525.—STOVE FOR RAILROAD CAR.—F. H. Whitman, Harrison, Me.
I claim, 1st, The plate, e, suspended on plates, b, b', so as automatically to close the funnel aperture, substantially as herein set forth.
2d, The self-closing grate or draft, substantially as and for the purposes herein set forth.

80,526.—APPARATUS FOR CLEANING SEWERS.—C. Williams, New York city.
I claim, 1st, The toggle arms, i, braces, j, and head, D, carrying the sheave g, combined and operating to hold the pulley, substantially as and for the purpose described.
2d, The guide piece, m, on the dog, D, to facilitate the introduction of the rope to the sheave, g, substantially as set forth.
3d, The folding scraper, c, ng. 5, constructed and arranged for clearing pipe sewers, substantially as shown and described.
4th, The automatically folding leaves, c, arranged in the bucket, C, constructed as shown and for the purpose set forth.
5th, The adjustable bail, e, in combination with the fixed bail, f, of the bucket, C, substantially as and for the purpose specified.
6th, The bucket, C, made with perforated sides, as and for the purposes set forth.
7th, The detachable guide frame, E, arranged upon the man holes of a sewer, in combination with the draft rope, B, substantially as and for the purposes described.

80,527.—CIGAR HOLDER.—Martin V. B. Young, New York city.
I claim, 1st, The wedge-shaped piercing tube, G, applied to a cigar holder, substantially as and for the purpose set forth.
2d, The combination, with the piercing tube, G, and tube, A, of the pointed stud or pin, F, substantially as set forth.

80,528.—SETTEE.—T. J. Closc, Philadelphia, Pa.
I claim, 1st, A frame of a settee with dovetail mortises and round or oval bosses, substantially in the manner and for the purpose specified.
2d, The combination of the slats, B, having holes or counter-sinks, with the bosses, c, as described, on the frame, A, and wedge-shaped keys, substantially in the manner and for the purposes set forth.

REISSUES.

66,773.—PAINT.—Dated July 16, 1867; reissue 3,051.—D. R. Averill, Newburg, Ohio.
I claim a paint, composed of the ingredients herein named, and prepared and compounded substantially in the manner specified.
Also, a liquid paint, when prepared and mixed for use, in any color, in its manufacture, and put up in packages for sale, and which may be preserved in such condition, substantially as and for the purpose specified.

63,486.—SAW.—Dated April 2, 1867; reissue 3,052.—Henry Diston (assignee of Charles Diston), Philadelphia, Pa.
I claim, 1st, A detachable saw tooth in which is combined a circular base adapted to a circular recess in the blade with a projection at the rear adapted to a shoulder on the blade, all as set forth or the purpose specified.
2d, The lips, i, on the edge of the projection, d, of a saw tooth, or on the edge of a recess in the blade, in combination with a groove and recess, m, in the projection or in the blade, substantially as specified.

71,311.—FOOT FOR TUBS, BUCKETS, ETC.—Dated Nov. 26, 1867; reissue 3,053.—J. W. Kendall, Philadelphia, Pa.
I claim a movable adjustable foot for tubs, buckets, barrels, etc., substantially for the purpose shown.

36,673.—STUMP EXTRACTOR.—Dated Oct. 14, 1862; reissue 3,054.—S. M. Longley and E. J. Genet, New York, and S. B. Smith and A. C. Getty, Hudson, N. Y., assignees, by mesne assignments, of S. W. Rogge, Fitchburg, Mass.
We claim in the above-described differential windlass, the combined use of power-multiplying toothed wheels, wrapping-connected differential drums or pulleys, and a sheave block or blocks, substantially in the manner and for the respective purposes herein set forth.

15,882.—HARVESTER.—Dated Oct. 14, 1856; reissue 3,055.—J. G. Perry, Kingston, R. I., assignee by mesne assignments of C. W. Glover, Roxbury, Conn.
I claim, 1st, So constructing and operating the vibrating sickle-driving mechanism of a harvesting machine that such mechanism shall work through the driving wheel of the machine, and
2d, The combination of the cog, e, on the driving wheel, the pinion, f, upright shaft, C, and wheel, g, with the pinion, h, of the shaft, D, arranged substantially as and for the purpose specified.
3d, The combination, with the driving wheel, of the guide box, B, bar, F, rod, H, and lever, I, in such manner that the angle of presentation of the cutter, when adjusted by the finger bar, E, may be adjusted, substantially as set forth.

37,535.—WATER ELEVATOR.—Dated Jan. 27, 1863; reissue 3,056.—Division A.—W. B. Wadsworth, Cleveland, Ohio.
I claim, 1st, The toothed wheel, open and adapted to the chain, substantially as shown and described.
2d, The said wheel, in combination with the chain c, b, f, d, d', substantially as shown and described.
3d, The titer, g, y, in combination with the flat chain, c, b, f, d, d', substantially as shown and described.
4th, The arrangement of the curved titer, g, y, and stops, h, h, substantially as shown and described.

37,535.—WATER ELEVATOR.—Dated Jan. 27, 1863; reissue 3,057.—Division B.—W. B. Wadsworth, Cleveland, Ohio.
I claim the chain, composed of links, as shown at c, b, f, d, d', the bent cross bar, c, running through to the outside of the books of the link to b, b, and then angling as shown at f, to books d, d', inside of bands, b, b, substantially as shown and described.

14,622.—CULINARY BOILER.—Dated April 8, 1856; reissue 3,058.—Edward Whiteley, Boston, Mass.
I claim the trap, G, and cap, I, or its equivalent, as arranged and applied to the vessel, B, whereby the latter may be employed either as a boiler or steamer as set forth, in combination with the vessel, B, the interior vessel, H, perforated to admit the steam, when placed within the outer receptacle, B, and entirely surrounded or inclosed thereby, substantially as and for the purpose set forth.

70,768.—HORSE POWER.—Dated Nov. 12, 1867; reissue 3,059.—W. H. Wiley, Fredonia, N. Y.
I claim, 1st, The gear table, D, rigidly connected to the draft levers, F, by the interposed spindles, E, or their equivalent, so as to form a gear frame for carrying the pinions and spur wheels, G, H, about the internal stationary cog rim, C, and also a support for the draft levers upon the stationary central spindle, C, substantially as described.
2d, The pinion spindles, E, when secured to the table, D, at varying distances from the center thereof, so that different sizes of pinions can gear with cog rims C, and spur wheels to gear with pinion, I, maybe used, as and for the purpose set forth.

DESIGNS.

3,130.—VISE.—Quimby S. Backus, Winchendon, Mass.
3,131.—IVORY TABLET.—Wm. C. Comstock, Essex, Conn.
3,132.—KNITTED FABRIC.—Thomas Dolan, Philadelphia, Pa.
3,133.—SHIRT COLLAR.—R. S. Jennings, New York city.
3,134.—SHIRT CUFF.—R. S. Jennings, New York city.
3,135.—TOY.—R. S. Jennings, New York city.
3,136.—TWINE HOLDER.—E. M. Judd and R. L. Smith, Walcottville, Conn., assignors to Twiner, Seymour & Judds.
3,137.—STOVE.—W. N. Moore, Neenah, Wis.
3,138.—CLOCK CASE.—Nicholas Muller, New York city.
3,139.—TRADE MARK.—J. M. Mumford, South Reading, Mass., assignor to himself and August F. Mason.
3,140.—DRAWER PULL.—John E. Parker, Meriden, Conn.
3,141.—BOTTLE.—M. B. Powell and C. W. Stutenroth, Naperville, Ill.
3,142.—EMBOSSED PAPER, ETC.—E. F. Price and E. A. Murphy, New Haven, Conn.

EXTENSION NOTICES.

Bartol H. Jeuks, of Bridesburg, Pa., having petitioned for the extension of a patent granted to him, the 24th day of October, 1854, for an improvement in looms, for seven years from the expiration of said patent, which takes place on the 24th day of October, 1868, it is ordered that the said petition be heard at the Patent Office on Monday, the 13th day of October next.

Stephen E. Booth, of Orange, Conn., administrator of the estate of Sheldon S. Hartshorn, deceased, having petitioned for the extension of a patent granted to the said Sheldon S. Hartshorn the 7th day of November, 1854, and reissued the 26th day of May, 1868, for an improvement in buckles, for seven years from the expiration of said patent, which takes place on the 7th day of November, 1868, it is ordered that the said petition be heard at the Patent Office on Monday, the 26th day of October next.

John C. Schooley, of Cincinnati, Ohio, having petitioned for the extension of a patent granted to him the 14th day of March, 1855, for an improvement in process of curing meats, for seven years from the expiration of said patent, which takes place on the 14th day of March, 1869, it is ordered that the said petition be heard at the Patent Office on Monday, the 28th day of December next.

Barnet L. Solomon, of New York city, executor of the estate of Mver Phineas, deceased, having petitioned for the extension of a patent granted to the said Myer Phineas the 24th day of October, 1854, for an improvement in pen holders, for seven years from the expiration of said patent, which takes place on the 24th day of October, 1868, it is ordered that the said petition be heard at the Patent Office on Monday, the 12th day of October next.