

STIRRUP MACHINE.—Dempsey Forest, Mottomosa, Texas.—This invention comprises a clamping vise with pins of peculiar construction and adaptation for bending the thin wood plates or sheets around a lever former which is used by the operator to bend the blanks down into the forming recesses of the jaws, and hold them until the said jaws are clamped together, and the blanks reduced to the finished form and secured to the blocks by which the suspending straps are connected.

GROOVING MACHINE.—W. G. Raoul, Independence, La.—This invention consists in an improved adjustable rotary cutter, and the arrangement of the same with a vertically and horizontally adjustable feeding table and clamping devices for holding the work to be operated on.

CAMERA SCREEN.—F. Peabody, Louisville, Ky.—This invention relates to a new and improved arrangement of screens for cameras, and consists of a circular screen made of black cloth or other suitable substance stretched on a wire, and placed on the inside of the camera box just above the inner end of the tube, and on hinges to swing up and expose the plate to the object to be taken, or down to cover the inner end of the tube.

STEP SUPPORTS FOR MILL SPINDLES.—John Russell, Prairie, Mo.—This invention relates to improvements in the adjusting devices for the steps of mill spindles, and consists in the arrangement of the steps in the top of a vertically adjustable tube or other sliding support, provided with vertical guides and working through guide plates to insure the vertical position and to prevent rattling, the said support being mounted on a rod rising up from the bridge tree and jointed to it, so that the joint may compensate for the curve described by it due to the one end of the bridge tree being fixed and the other swinging around the said fixed point and tree step may be raised in a right line.

ELECTRIC CLOCK.—Kennedy Electric Clock Co., New York city.—These improvements have for their object the simplification of the clock, the reduction of the cost of manufacture, and the improvement of the time-keeping qualities. The clock train consists of a single wheel, and a single magnet only is employed to operate the pendulum. The friction of the parts is reduced to a minimum.

ELECTRIC CLOCK.—Elisha Wilson, New York city.—In this invention the pendulum is acted upon by an electro-magnet, which is so arranged that it cannot retard the pendulum. The pendulum is provided with a permanent magnet, which swings within an open electric coil, arranged on one side; and the circuit breaker is so placed that the electric current does not operate upon the magnet of the pendulum, until just as the latter has begun to fall on its return sweep. It is believed that this improvement will contribute essentially to the accuracy of the clock, and also prove to be economical.

CAR FARE-BOX.—W. G. Raoul, Independence, La.—This invention relates to a new and useful improvement in boxes for receiving passengers' fares on cars of street railroads, omnibuses, and other vehicles for transporting passengers.

PENCIL SHARPENER.—Jacob McClure, Nashua, N. H.—This invention relates to new and useful improvements in sharpeners for lead pencils, and consists in making the sharpener in the skeleton form, or as an open hollow cone, either square, diamond-shaped, or triangular, as may be desired, and also in the arrangement of projections or shoulders to guide the knife, and in an aperture or relief opening for the lead point of the pencil at or near the point of the sharpener.

HORSE HAY FORK.—Simeon Clark, Howard, N. Y.—This invention relates to new mechanism for operating the oscillating toes of horse hay forks.

BOOTS AND SHOES.—Samuel Babbitt, Brazil, Ind.—The object of this invention is to so construct boots and shoes that the same will be at once water-tight and warm, and that the soles will be strengthened and not apt to wear at or near the soles. The invention consists chiefly in interposing a piece of flannel or other fabric between two layers of leather which constitute the upper of the boot or shoe, and also in attaching to the main sole convex sole on which the foot may rock.

MORTISE PIECE FOR LOCKS.—Wm. Weisner, Elizabethtown, New Mexico.—This invention relates to improvements in mortise pieces for mortise locks or sliding bolts, and consists in the combination with the said mortise pieces as commonly used, of plates arranged in the mortises to close the same when the bolt is withdrawn, to present a more ornamental appearance, and to prevent the mortises from filling up with collections of dust and other matters.

STRAW CUTTER.—G. S. Garth, Mill Hall, Pa.—This invention relates to improvements in straw cutters, having for its object to provide an arrangement of the support of the fulcrum of the cutter lever, better adapted for holding the cutter firmly up to the steel or metal plate against which it cuts, and also for withstanding the wear; and the combination with the same of a friction or regulating plate, and thumb screw, for holding the cutter firmly up to its position, but in such a manner as not to cause too much pressure of the knife against the fixed bed or cutter.

WATER ELEVATING APPARATUS.—J. L. Garlington, Snapping Shoals, Ga.—This invention relates to improvements in apparatus for raising water from wells in buckets, by cords working over pulleys, and consists in the application to the cord between one end made fast to any support, and the pulley over which it works for raising the said bucket, of a weight or a friction pulley, arranged to run on the bight of the said cord down in the well or a chamber therein to elevate the bucket; and in the application to the weight of a cord, winding drum, and crank shaft for raising it, whereby the weight will raise the bucket in moving half the distance the bucket moves; consequently requiring only half the turning of the crank that would be required, if applied directly to the bucket.

RAMMER FOR PACKING TOBACCO.—John R. Sutton, Brooklyn, N. Y.—This invention relates to improvements in the small rammers used by tobacco packers for packing the fine tobacco into the small papers in which it is packed for retail purposes, and it consists in the application to the end of the rammer which acts on the tobacco, of a projection resembling in form, to some extent, the bowl of a pipe; also, in the application to the rammer, and for action in conjunction therewith, of a sliding pin or punch, for forcing down into the tobacco to make a hole for the stem of a pipe in such relation to the recess formed by the said projection, that when the rammer is withdrawn and before the paper is withdrawn, a smoking pipe can be conveniently packed in the paper with the tobacco.

DRAWING FRAME.—Charles Wall, New York city, and John Stewart, Brooklyn, N. Y.—This invention relates to improvements in drawing frames, for dressing manila, hemp, and other similar substances, and consists in the combination with the endless chain combs and condensing apparatus such as commonly used for dressing the laps, and reducing the same to slivers, of a series of revolving combs working on an endless carrying apron, and dressing the hemp and delivering it in laps or bats to the said endless chain, in a way to serve as a substitute for the lap machines now used for dressing the hemp previously to being fed to the same endless chain, the said chain being arranged to move at a greater surface speed than the revolving combs, whereby it draws the hemp through the teeth of the revolving combs, and its own teeth are caused to move faster than the hemp, and a thorough and efficient combing action is produced on the same, producing better results than can be effected in the present way; and the same is accomplished in one machine and more economically, requiring only one feeding operation, and less attendance.

PRINTERS' CHAIR.—Amasa J. Finch, New York city.—This invention has for its object to furnish an improved chair for printers' use, which shall be so constructed as to allow the sitter to have as free a movement in every direction as when standing.

ORNAMENTING AND COLORING PLASTER OF PARIS AND OTHER CEMENTS.—Gustave Schlueter, Brooklyn, N. Y.—The object of this improvement is to harden plaster of Paris, and also impart ornamental colors to it. The colors are mixed with the plaster in the form of dry powders; gum arabic, or other adhesive substance, also in the form of powder, is likewise added. When water is mixed with the plaster thus prepared, it sets in the usual manner, takes on the desired color, and becomes hard and smooth, capable of receiving a fine polish.

ELASTIC LANYARD.—J. E. Jones, Waretown, N. J.—This invention has for its object to furnish an improvement in lanyards, by means of which the lanyards may be prevented from breaking when exposed to a sudden strain, which, coming suddenly upon tugs or ropes is liable to break them at a time when they are most needed to support the rigging of the vessel.

FEED CUTTER.—Wm. H. Rosser and James Stiver, Mill Hall, Pa.—This invention relates to a new and useful improvement in machines for cutting hay and straw, and other articles designed for feed.

DEVICE FOR CONNECTING HORSES TO VEHICLES.—Alexander Shaler, New York city.—This invention has for its object to furnish an improved device for connecting horses quickly and securely to the shafts of vehicles in such a way as not to require tugs or traces, and in such a way that the horse may be instantly detached from the vehicle should he become frightened or fall.

LUBRICATOR.—Royall S. Hildreth, South Adams, Mass.—The object of this invention is to furnish a simple and cheap means for oiling or lubricating journals in all situations, and consists in the use of a spring within the oil cup in connection with an oiling wire, so arranged that the wire shall be at all times pressed against the journal in whatever position the oil cup may be placed.

LAMP EXTINGUISHER, ETC.—S. C. Catlin, Cleveland, Ohio, and A. Corbin, Ellenville, N. Y.—This invention relates to a new and useful improvement in a device for extinguishing lamps and trimming the wick, and consists in a sliding sleeve, the top end of which is a circle to serve as a guide in trimming the wick with scissors, and in a hinged extinguisher which serves as a self-trimmer.

BUTTON FOR GLOVES, ETC.—John A. Spooner and John Ellerby, Brooklyn, N. Y.—This invention relates to a new self-fastening button, which is to be applied to gloves and other articles of wearing apparel, without the use of thread, and without injury to the fabric to which it is secured.

WASHING MACHINE.—Linton Wharton, Richland, Iowa.—This invention relates to improvements in washing machines, and consists in an improved arrangement of means for working a reciprocating rubbing board over a stationary board placed in a suitable box or tub.

CHURN POWER.—Theodore C. VanWyck and Wm. Kent, Poughkeepsie, N. Y.—This invention relates to improvements in powers for driving churns, sewing machines, lathes, and other light machines, and consists in the combination with a weighted drum, or it may be a clock spring device and suitable multiplying gear, of a regulating apparatus of peculiar construction.

WATER ELEVATOR.—W. G. Hamilton, Milton, Wis.—This invention relates to improvements in water elevating apparatus, whereby it is designed to simplify and improve the apparatus, patented March 2, 1869, No. 87,468, and it consists in an arrangement of the lifting spout, which receives the water from the buckets, so that it will be restored after the buckets pass by it by gravitation, thereby dispensing with all restoring apparatus.

MOLD FOR MAKING COMBINED IRON AND STEEL INGOTS.—Patrick Doyle, Newark, N. J.—This invention relates to improvements in molds for making ingots of iron and steel, in a manner to dispose the one metal on one or more sides of the other and secure a perfect union of the two, and it consists in a vertical mold of four, or other number, of plane sides, one or more of which may be detachable, and clamped to the other by strong bands, in which a strong thick plate of metal is arranged to fit near one side, from top to bottom, snugly, to occupy a part of the space when the metal of which the greater part of the ingot is to be composed is poured in, and to remain until the same has solidified sufficiently to retain its position, when it is withdrawn, having a space for the other metal, which, being poured in unites perfectly with the first and forms the required composition ingot.

BRICK MACHINE.—H. D. Thorp and J. G. Lehr, Harlan, Ind.—This invention relates to improvements in brick machines, and consists in an improved arrangement of devices for discharging the molds after being filled from under the machine; also an improved arrangement of movable and stationary kilns in the mud mill above the paddles for facilitating the grinding and mixing; and also, an improved adjusting arrangement for raising or lowering the mold supporting table.

Official List of Patents.

Issued by the United States Patent Office.

FOR THE WEEK ENDING FEB. 1, 1870.

Reported Officially for the Scientific American.

SCHEDULE OF PATENT OFFICE FEES: On each caveat... \$10; On filing each application for a Patent (seventeen years)... \$15; On issuing each original Patent... \$20; On appeal to Commissioner of Patents... \$20; On application for Reissue... \$30; On application for Extension of Patent... \$50; On granting the Extension... \$50; On filing a Disclaimer... \$10; On an application for Design (three and a half years)... \$10; On an application for Design (seven years)... \$15; On an application for Design (fourteen years)... \$30; In addition to which there are some small revenue stamp taxes. Residents of Canada and Nova Scotia pay \$50 on application.

For copy of Claim of any Patent issued within 20 years... \$1; A sketch from the model or drawing, relating to such portion of a machine as the Claim covers, from... \$1; The full Specification of any patent issued since Nov. 20, 1866, at which time the Patent Office commenced printing them... \$1.25; Official Copies of Drawings of any patent issued since 1836, we can supply at a reasonable cost, the price depending upon the amount of labor involved and the number of views. Full information, as to price of drawings, in each case, may be had by addressing MUNN & CO. Patent Solicitors, No. 37 Park Row, New York.

- 99,277.—ROOFING COMPOSITION.—Thos. R. Abbott, Lowell, Mass.
99,278.—MODE OF ATTACHING HORSES TO VEHICLES.—J. K. Andrews, East Lampeter township, Pa.
99,279.—RAILWAY RAIL CHAIR.—Richard Anthony, Pittston, assignor to himself and Thomas Williams, Luzerne county, Pa. Antedated Jan. 19, 1870.
99,280.—POWDER KEG.—L. Austin and J. E. Hall, Cleveland, Ohio.
99,281.—BOOT AND SHOE.—S. Babbitt (assignor to himself and G. W. Orr), Brazil, Ind.
99,282.—SUN SHADE FOR HORSES.—E. T. Balch, Philadelphia, Pa. Antedated Jan. 20, 1870.
99,283.—SEWING MACHINE.—William Black, Hagerstown, Ind.
99,284.—TRUNK.—Thomas Bond, East Brookfield, Mass., assignor to Daniel J. Clark, W. F. Degette, and S. M. Burr, Columbus, Ohio.
99,285.—GAS METER.—Thomas Brattan, Birkenhead, Eng., assignor to A. H. Dixon.
99,286.—SEED PLANTER.—George W. Brown, Galesburg, Ill.
99,287.—ROLLER JAW TEMPLE FOR LOOM.—W. H. Burns, Grafton, assignor to J. Luther, Worcester, Mass.
99,288.—FENCE POST.—M. K. Butterfield, Eddyville, N. Y.
99,289.—LAMP EXTINGUISHER.—S. C. Catlin, Cleveland, Ohio, and A. Corbin, Ellenville, N. Y.
99,290.—ENVELOPE MACHINE.—Henry W. Chamberlin, New York city.
99,291.—APPARATUS FOR EXTINGUISHING FIRES.—Isaac H. Clark, Boston, Mass. Antedated Jan. 20, 1870.
99,292.—HORSE HAY FORK.—Simeon Clark, Howard, N. Y.
99,293.—ANIMAL TRAP.—W. J. Clarkson, Gourdin's Depot, North-Eastern Railroad, S. C.
99,294.—FERTILIZER.—John Commins, Charleston, S. C.
99,295.—BALING PRESS.—P. K. Dederick, Greenbush, N. Y. Antedated Aug. 1, 1869.
99,296.—BALING PRESS.—P. K. Dederick, Albany, N. Y.
99,297.—BALING PRESS.—P. K. Dederick, Albany, N. Y.
99,298.—CHAIN OR BAND.—John H. Doerr, Philadelphia, Pa.
99,299.—MOLD FOR MAKING COMBINED INGOTS OF STEEL AND IRON.—Patrick Doyle, Newark, N. J.

- 99,300.—ELECTRO-MAGNETIC MACHINE.—A. E. Dupas, New Orleans, La.
99,301.—MEAT AND VEGETABLE CHOPPER.—S. F. Emerson, Seville, Ohio.
99,302.—PRINTERS' CHAIR.—M. J. Finch, New York city, assignor to Margaret A. C. Finch, Shellsburg, Wis.
99,303.—MACHINE FOR BENDING STIRRUPS.—Dempsey Forest, Mottomosa, Texas.
99,304.—THATCH ROOF.—Lionel Foster, Burlington, Iowa.
99,305.—JOIST PROTECTOR.—H. Galmann and Charles Ruhe, Buchanan, Pa.
99,306.—COLORING MARBLE.—Smith Gardner, New York city, assignor to the International Marble Coloring Company, New York city.
99,307.—APPARATUS FOR RAISING WATER.—J. L. Garlington, Snapping Shoals, Ga.
99,308.—STRAW CUTTER.—G. S. Garth, Mill Hall, Pa. Antedated Dec. 1, 1869.
99,309.—PUNCH AND DIE FOR PUNCHING TUBES.—John Gibbs, Brooklyn, E. D., N. Y., assignor to himself and Calvin H. Carter, Waterbury, Conn.
99,310.—THRASHING MACHINE.—E. W. Griffin, Pepperell, assignor to himself and F. S. Brown, Cambridge, Mass.
99,311.—STUMP EXTRACTOR.—Albert Gummer, Omro, Wis. Antedated Jan. 29, 1870.
99,312.—CHURN.—Floyd Hamblin, Madrid Springs, N. Y.
99,313.—WATER ELEVATOR.—W. G. Hamilton, Milton, Wis.
99,314.—STREET LAMP.—J. F. Harly, Kipton Station, Ohio.
99,315.—LOCK NUT.—G. G. Heermance, Claverack, N. Y.
99,316.—CULINARY STEAMER.—J. H. Heritage, Wilmington, Del.
99,317.—BIT STOCK.—Royall S. Hildreth, South Adams, Mass.
99,318.—RAILWAY CAR REPLACER.—Horace H. Holmes, Elmira, N. Y., assignor to himself, J. D. Dale, Ira S. Beers, and J. H. Dale.
99,319.—HORSE HAY RAKE.—Charles Howard, West Hurley, N. Y.
99,320.—ELASTIC LANYARD.—J. E. Jones, Waretown, N. J.
99,321.—ELECTRIC CLOCK.—Samuel A. Kennedy, Atleborough, Pa., assignor to the Kennedy Electric Clock Co., New York city.
99,322.—BLOWING APPARATUS FOR ORGANS, ETC.—M. James Kerigan, Boston, Mass. Antedated Oct. 21, 1869.
99,323.—MACHINE FOR MOVING BOATS ON CANALS.—Wm. R. King, Washington, D. C.
99,324.—COMPOSITION FOR THE MANUFACTURE OF WATER, GAS, AND DRAIN PIPES.—W. P. Kirkland, San Francisco, Cal.
99,325.—SASH HOLDER.—D. R. Kline, Allentown, Pa.
99,326.—COMPUTING ARRANGEMENT FOR WEIGHING SCALES.—H. D. Lathrop and Albert Gay, Bedford, Ohio.
99,327.—BLIND SLAT MACHINE.—F. Leclere (assignor to M. Eames), Watertown, N. Y.
99,328.—STALK CUTTER.—Joel Lee, Galesburg, Ill.
99,329.—ROLLING MILL FOR ROLLING GROOVED METAL ARCHES.—W. S. Levake, Cleveland, Ohio.
99,330.—BOLT FOR DOORS.—Jacob Levy, New York city.
99,331.—HORSE HAY RAKE.—William H. Long, Eddyville, Iowa.
99,332.—COMPOSITION FOR PAINT.—Robert Love, New York city.
99,333.—VALVE AND PISTON PACKING.—Joseph Marks, Boston, Mass.
99,334.—TAG ATTACHMENT.—T. P. Marston (assignor to himself and N. M. Phillips), New York city.
99,335.—PENCIL SHARPENER.—Jacob McClure (assignor to C. D. Copp and E. J. Copp), Nashua, N. H.
99,336.—PAPER-FOLDING MACHINE.—William Mendham, Philadelphia, Pa. Antedated Jan. 15, 1870.
99,337.—EGG BEATER.—Nathaniel C. Miller, Stroudsburg, Pa.
99,338.—PAINT BRUSH.—G. G. Morris (assignor to himself and W. W. Eastham), Boston, Mass.
99,339.—ILLUMINATOR FOR STOVES, ETC.—Benjamin Nott, Albany, N. Y.
99,340.—HARVESTER RAKE.—Aaron Palmer and Charles W. Palmer, Brockport, N. Y.
99,341.—TABLE FORK.—James Patterson, San Francisco, Cal. Antedated Jan. 29, 1870.
99,342.—SELF-ACTING MULE FOR SPINNING.—Seth D. Paul, Woonsocket, R. I.
99,343.—CAMERA SCREEN.—F. Peabody, Louisville, Ky.
99,344.—LOCK.—N. Petre, New York city.
99,345.—RAILWAY CHAIR AND FISH-JOINT.—D. C. Pierce, Chicago, Ill. Antedated Jan. 24, 1870.
99,346.—RAILWAY FROG.—D. C. Pierce, Clayton, N. Y. Antedated Jan. 31, 1870.
99,347.—LADIES' SAFETY BELT.—Mary G. Porter, Charles-town, Mass.
99,348.—MACHINE FOR POLISHING MARBLE.—Edwin Price and E. B. Price, Norwalk, Conn.
99,349.—FRUIT-PRESERVING HOUSE.—Jesse Prior, Adrian, Mich.
99,350.—GROOVING MACHINE.—W. G. Raoul, Independence, La.
99,351.—FARE-BOX FOR RAILROAD CARS.—W. G. Raoul, Independence, La.
99,352.—FEED CUTTER.—Wm. H. Rosser and James Stiver, Mill Hall, Pa.
99,353.—STEP-SUPPORT FOR MILL-SPINDLES.—John Russell, Prairie, Mo.
99,354.—RAILWAY CAR JOURNAL LUBRICATOR.—Thos. Sayles, Chicago, Ill.
99,355.—COMPOSITION FOR MOLDING FROM PLASTER OF PARIS.—Gustave Schlueter, Brooklyn, N. Y.
99,356.—GEAR CUTTING MACHINE.—Wm. Sellers, Philadelphia, Pa.
99,357.—DEVICE FOR CONNECTING HORSES TO VEHICLES.—Alexander Shaler, New York city.
99,358.—FIRE-ALARM SIGNAL-BOX.—G. W. Shawk, Cleveland, Ohio, assignor to the Cleveland Fire-Alarm Company.
99,359.—APPARATUS FOR SINKING PNEUMATIC PILES.—T. E. Sickels, Kennett's Square, Pa.
99,360.—APPARATUS FOR SINKING PNEUMATIC PILES.—F. E. Sickels, Chicago, Ill.
99,361.—COTTON SEED PLANTER.—Bryan Smith, Falkland, N. C.
99,362.—GAFF-BLOCK FOR VESSELS.—C. D. Smith, Bridgeport, Conn. Antedated Jan. 20, 1870.
99,363.—WIND-WHEEL.—E. S. Smith, Macomb, Ill.
99,364.—CLOTHES WRINGER.—A. H. Spencer, Providence, R. I.
99,365.—BUTTON.—J. A. Spooner and John Ellerby, Brooklyn, N. Y.
99,366.—THRASHING MACHINE AND SEPARATOR.—Abraham Staffer and Peter Staffer, Salt Creek, Ind. Antedated Jan. 29, 1870.
99,367.—MANUFACTURE OF IRON.—David Stewart, Kittanning (assignor to himself and S. M. Kier), Pittsburg, Pa.
99,368.—MANUFACTURE OF IRON.—David Stewart, Kittanning (assignor to himself and S. M. Kier), Pittsburg, Pa.
99,369.—RAILWAY WATER ELEVATOR.—Arthur A. Stivender, Ocala, Fla.
99,370.—RAMMER FOR PACKING TOBACCO.—John R. Sutton, Brooklyn, N. Y.
99,371.—BRICK MACHINE.—H. D. Thorp and J. G. Lehr, Harlan, Ind.
99,372.—MACHINE FOR PACKING TOBACCO.—J. H. Trowbridge, New Haven, Conn.
99,373.—DRIVEN WELL.—Isaac Trump, San Francisco, Cal.
99,374.—WATER-WHEEL.—B. W. Tuttle, Galena, Ill.
99,375.—BASE BURNING STOVE.—H. B. Van Benthuyzen, Lock Haven, Pa.
99,376.—REGULATOR FOR MACHINERY.—T. C. Van Wyck and Wm. Kent, Poughkeepsie, N. Y.
99,377.—SUBSOIL PLOW.—Wm. Watkins, Joliet, Ill.
99,378.—SPARK ARRESTER.—Edward Waud, Eugene City, Oregon.
99,379.—GANG PLOW.—Samuel Welch, Beipassi, Oregon.
99,380.—SHIELD FOR SEWING MACHINES.—Mary W. Welty, New York city.
99,381.—LIGHTNING ROD.—J. D. West, New York city.
99,382.—RAILROAD SIGNAL-BOX.—E. B. Westfall (assignor to himself and Frank Thomas), Williamsport, Pa.
99,383.—WASHING MACHINE.—Linton Wharton, Richland, Iowa.

99,384.—FIRE-PLACE GRATE.—Wm. E. Whitehurst, Norfolk, Va. Antedated Jan. 20, 1870.
99,385.—CLOTHES-LINE CLAMP.—Geo. W. Wilbar, Taunton, Mass.
99,386.—ELECTRIC CLOCK.—Elisha Wilson, New York city.
99,387.—COMPOUND FOR BATING AND RAISING HIDES.—G. W. Adler (assignor to himself and George Bochius), Philadelphia, Pa.
99,388.—WAGON-TONGUE SUPPORT.—Isaac Albright, Jr., and J. Y. Bloomingdale, New Salem, N. Y.
99,389.—TOY PROPELLER.—A. M. Allen, New York city.
99,390.—PRUNING KNIFE.—Henry Alter, Lakeport, Cal.
99,391.—WOOD PAVEMENT.—W. W. Ballard, Elmira, N. Y.
99,392.—TOOL FOR TONGUEING AND GROOVING.—Edward F. Bengler (assignor to himself and G. S. Post), Williamsport, Pa.
99,393.—BILLIARD CUSHION.—John Berlien, Chicago, Ill.
99,394.—APPARATUS FOR CENTERING SHANKS OR EYES IN BUTTONS.—W. H. Blake (assignor to himself and C. M. Mitchell, Waterbury, Conn.
99,395.—PRINTING PRESS.—T. W. Bracher, New York city.
99,396.—HYDRANT.—T. C. Bride, Quincy, Ill.
99,397.—HARVESTER RAKE.—Cyrus Buckwalter, Davenport, Iowa.
99,398.—MITER-BOX.—John Bullard, Hyde Park, Vt.
99,399.—FIRE ESCAPE.—Wm. Burditt and G. H. Burditt, Boston, Mass.
99,400.—LOCK SPINDLE FOR SAFES.—A. G. Burton, Rochester, N. Y.
99,401.—PRINTING TELEGRAPH.—E. A. Callahan, Brooklyn, N. Y.
99,402.—MACHINE FOR FORMING SHEET METAL TUBING.—Mortimer M. Camp (assignor to himself, D. Goffe Phipps, and E. I. Foote), New Haven, Conn.
99,403.—SUBMERGED PUMP.—Perrin H. Cardwell, Knoxville, Tenn. Antedated January 27, 1870.
99,404.—APPARATUS FOR BINDING GRAIN.—George W. Chandler, Mason, N. H., assignor to himself, Henry I. Whitney, same place, and Albert A. Whitney, Battle Creek, Mich.
99,405.—CARRIAGE HUB.—John P. Chandler, Wilton, Me. Antedated January 23, 1870.
99,406.—METHOD OF AERIAL TRANSIT.—Robert A. Chesebrough, New York city. Antedated January 24, 1870.
99,407.—OIL CAN.—P. C. Clark, Philadelphia, Pa.
99,408.—APPARATUS FOR ADMINISTERING MEDICATED VAPOURS.—J. C. Cook, New Haven, Conn.
99,409.—MACHINE FOR PLANING IRON.—Alfred B. Couch, Worcester, Mass.
99,410.—SOLDERING MACHINE.—E. T. Covell, Brooklyn, N. Y.
99,411.—MACHINE FOR JOINTING BARREL STAVES.—Harry A. Crossley, Cleveland, Ohio, assignor to himself and Ada D. Crossley.
99,412.—WATERPROOF STOCKING.—Frederick Curtis, Boston, Mass.
99,413.—SPRING BOLT AND CLIP.—John Deeble, Plantsville, Conn.
99,414.—ELECTRO-MAGNETIC MACHINE FOR MEDICAL PURPOSES.—Luis Drescher, New York city.
99,415.—FURNACE FOR MELTING AND REFINING IRON AND OTHER METALS.—Adolph Faber Du Faur, New York city.
99,416.—CLASP FOR TRUNKS, ETC.—Theodore R. Dunham, Newark, N. J.
99,417.—MILK BOX.—C. W. Eastwood, New York city.
99,418.—ADJUSTMENT OF WHEELS ON THE AXLES OF RAILWAY CARS.—Richard Eaton, Eaton Lodge, England.
99,419.—COOKING STOVE.—George M. Eckert, St. Louis, Mo.
99,420.—HANDLE FOR CHILDREN'S CARRIAGES.—R. G. Elder, New York city.
99,421.—FOUR-WHEEL PROPELLER.—R. G. Elder, New York city.
99,422.—JOURNAL BOX.—Seth C. Ellis, Jersey City, N. J.
99,423.—VALVE OF ROTARY ENGINE.—Walter Fitzgerald, Boston, Mass.
99,424.—RAILWAY CAR BRAKE.—Wm. G. Foster, Apalachin, N. Y.
99,425.—CIRCULAR KNITTING MACHINE.—William Franz and William Pope, Crestline, Ohio.
99,426.—CIRCULAR KNITTING MACHINE.—William Franz and William Pope, Crestline, Ohio.
99,427.—MANUFACTURE OF FLOUR.—William Freudenau, St. Louis, Mo.
99,428.—ATTACHING THE MAIN SPRING OF WATCHES.—Charles D. P. Gibson, Boston, Mass.
99,429.—VENTILATOR.—Robert A. Goodyear, Binghamton, N. Y.
99,430.—SPRING MOTOR.—Richard Grimm, New York city.
99,431.—LEATHER SAMMIE.—D. C. Guttridge (assignor to himself and R. A. Dunc, Pittsburgh, Pa.
99,432.—SHEATHING BOARD FOR BUILDINGS.—W. E. Hale, Chicago, Ill. Antedated August 1, 1869.
99,433.—ELEVATOR.—Melancthon Hartford, Boston, Mass.
99,434.—FLY NET FOR HORSES.—Jacob M. Harman, Orangeville, Pa.
99,435.—SUPPORTING COLUMN FOR ELEVATED RAILWAYS.—Charles T. Harvey, Tarrytown, N. Y.
99,436.—COOKING STOVE.—Levi Hermance, Lansingburg, N. Y.
99,437.—CHAMBER PAIL.—George A. Higgins, New York city.
99,438.—COFFEEPOT.—George Hotte, New York city.
99,439.—HARVESTER GEARING FOR CHANGING SPEED.—Moses G. Hubbard, Syracuse, N. Y.
99,440.—SCHOOL DESK.—A. J. Hull (assignor to Novelty Iron Works Manufacturing Company), Sterling, Ill.
99,441.—CHAIR BOTTOM.—Platt C. Ingersoll, Green Point, N. Y.
99,442.—LANTERN.—John H. Irwin, Philadelphia, Pa.
99,443.—LAMP BURNER.—John H. Irwin, Philadelphia, Pa.
99,444.—HARVESTER DROPPER.—Cyreneus D. Jeffries, Wooster, Ohio.
99,445.—ROCKING CHAIR.—Olaus Jensen, Christiania, Norway. Antedated January 24, 1870.
99,446.—DOVETAILING MACHINE.—Dedrick Jordan, Charlestown, Mass., assignor to A. S. & J. Gear & Co., New Haven, Conn.
99,447.—SADDLE TREE.—Israel Landis, St. Joseph, Mo.
99,448.—SPRING HOLDER FOR WAGON SEATS.—James A. LeForgee, Decatur, Ill.
99,449.—HAY FORK.—James E. Lobdell and Leroy H. Smith, Center Lisle, N. Y.
99,450.—WASHING MACHINE.—Peter Lockie, Rochester, N. Y.
99,451.—HARVESTER.—Wm. R. Low and Augustus Adams, Sandwich, Ill.
99,452.—FERTILIZER, OR FISH GUANO.—Orazio Lugo, Baltimore, Md.
99,453.—HINGE FOR SHOW CASES.—John McAdams, Brooklyn, N. Y.
99,454.—COMBINED FAUCET, MEASURE, AND FUNNEL.—Thos. McMahon, Williamsburgh, N. Y.
99,455.—EXTENSION BEDSTEAD.—Frederick Menzer, San Francisco, Cal.
99,456.—METALLURGIC FURNACE.—James Montgomery, Sing Sing, N. Y.
99,457.—HORSE HAY RAKE.—John Morgan and Wm. Cline, Jun., Clayton, Ind. Antedated January 24, 1870.
99,458.—HAT-SHAPING MACHINE.—Jean Prosper Marlot, Paris, France.
99,459.—STOVEPIPE JOINT.—H. B. Morrison, Le Roy, N. Y.
99,460.—DEVICE FOR HOLDING TOGETHER THE DIFFERENT PARTS OF BUREAUS AND OTHER ARTICLES OF FURNITURE.—D. A. Mulane and J. O. L. Murray, New Orleans, La.
99,461.—LIGHTNING ROD.—David Munson, Indianapolis, Ind. Antedated Jan. 26, 1870.
99,462.—PHOTOGRAPHIC PRINTING FRAME.—Peter Murphy (assignor to E. and H. T. Anthony & Co.), New York city.
99,463.—CORN HARVESTER.—William Murray, Alexandria, Va.
99,464.—MEDICAL COMPOUND FOR CURE OF DROPSY.—Jasper Newton and Ira Barfield, Richland parish, La.
99,465.—THRILL COUPLING.—Fred Norris, Freedom Plains, N. Y.
99,466.—BOOT AND SHOE SHAVE.—Sumner Packard, Grafton, Mass.

99,467.—TOOTH FOR GRAIN DRILLS.—Chas. E. Patric, Macedon, N. Y.
99,468.—MANUFACTURE OF SOAP.—H. A. Pease, Hartford, Conn. Antedated Jan. 21, 1870.
99,469.—GRAIN FAN.—Isaac Pennington, Tiffin, Ohio.
99,470.—COMPOUND TOOL.—A. S. Perham (assignor to himself, Alonzo Bell, and Amos Hadley), Washington, D. C.
99,471.—RAILWAY CATTLE CAR.—Charles F. Pike, Providence, R. I., assignor to Henry C. Mahurin and Charles Smead, Boston, Mass.
99,472.—SELF-FEEDING WOOD AND COAL COOKING STOVE.—J. F. Pond, Cleveland, Ohio.
99,473.—SPRING-HEADED SCREW BOLT.—D. R. Pratt, New York city.
99,474.—OILCLOTH CUTTER.—Jonas Rauch, Selin's Grove, Pa.
99,475.—RAILWAY CAR SPRING.—F. W. Rhineland, New York city.
99,476.—CLAMP FOR FORMING HORSESHOE CALKS.—Jeremiah Rhoads, Niles, Mich.
99,477.—FLOORING SET.—T. M. Richardson, Stockton, Me.
99,478.—SHOULDER BRACE.—S. S. Ritter, Philadelphia, Pa.
99,479.—DECORATIVE SLAB FORMED FROM PLASTIC MATERIALS.—Edwin Robbins, Somers Town, England. Patented in England, Jan. 6, 1869.
99,480.—KNIFE-CLEANING MACHINE.—Thomas Roberts, Lynn, Mass. Antedated Jan. 24, 1870.
99,481.—SEWING MACHINE FOR MAKING GLOVES.—Bruno Rudolph, Berlin, Prussia.
99,482.—LAMP.—J. F. Russell, Washington, D. C.
99,483.—WAGON JACK.—P. B. Russell, Malone, N. Y.
99,484.—HASP FOR TRUNK LOCKS.—A. V. Ryder, New York city.
99,485.—METHOD OF PROTECTING THE ENDS OF VULCANIZED INDIA-RUBBER OR COMBINATION HOSE.—Junius Schenck, Brooklyn, N. Y.
99,486.—HEAD BLOCK FOR SAW MILLS.—G. Selden and O. C. Briggs, Erie, Pa., assignors to Geo. Selden.
99,487.—COMPOUND FOR COLORING AND PRESERVING THE HAIR.—Gibson Smith, Groton Junction, Mass.
99,488.—DRYER.—M. P. Smith, Baltimore, Md.
99,489.—STOVEPIPE SHELF.—Job Smythe, Willing, and C. Dexter, Independence, N. Y.
99,490.—COMBINED HEDGE TRIMMER AND STALK CUTTER.—J. G. Sprague, Lexington, Ill.
99,491.—PARLOR COOK STOVE.—David L. Stiles, Rochester, N. Y.
99,492.—SCAFFOLD.—Henry Swineford, Milford, N. Y.
99,493.—TUNNELING RIVERS.—William Sykes, Sheffield, England.
99,494.—TWINE CUTTER.—George C. Taft, Worcester, Mass. Antedated Jan. 21, 1870.
99,495.—MACHINE FOR DRILLING METALS.—G. C. Taft (assignor to T. H. Dodge), Worcester, Mass.
99,496.—DYE FOR COLORING WOOL.—G. W. Talbot, Providence, R. I.
99,497.—PAINT FOR SHIPS' BOTTOMS.—T. D. Teal, Philadelphia, Pa. Antedated Jan. 24, 1870.
99,498.—SEED SOWER.—J. H. Thomas, Springfield, Ohio.
99,499.—COTTON PLANTER.—T. T. Thorne and G. T. Thorne, Whitaker's Station, N. C.
99,500.—MANUFACTURE OF OILS FROM PETROLEUM.—Charles Toppan, Wakefield, Mass.
99,501.—CORN HARVESTER.—J. H. L. Tuck, Ottawa, Ill.
99,502.—MILK TEMPERING AND COOLING APPARATUS.—I. B. Tuttle, Conewango, N. Y.
99,503.—DRAWING FRAME FOR FLAX, HEMP, ETC.—C. Wall, New York, and John Stewart, Brooklyn, N. Y.
99,504.—BRECH-LOADING FIRE-ARM.—W. G. Ward, Edgewater, N. Y.
99,505.—REVOLVING FIRE-ARM.—Rollin White, Lowell, Mass.
99,506.—RAKE FOR HARVESTERS.—W. N. Whiteley, Springfield, Ohio.
99,507.—SHINGLE MACHINE.—Dunham Wilkes, Nineveh, Ind.
99,508.—SWIVEL SHACKLE.—W. Williams (assignor to himself and D. Harrington), Vallejo, Cal.
99,509.—CAR BRAKE AND STARTER.—J. W. Wilson, New York city.
99,510.—PADDLE WHEEL.—Adam Wingard, San Francisco, Cal.
99,511.—SELF-ACTING MULES FOR SPINNING.—Ed. Wright, Worcester, Mass.
99,512.—BROOM FOR STABLES, ETC.—Thomas Wright (assignor to J. A. Holmes), New York city.
99,513.—STONE-CUTTING MACHINE.—Hugh Young, Middletown, Conn., and J. L. Young, New York city.
99,514.—TOOL FOR CUTTING STONE, ETC.—Hugh Young, Middletown, Conn., and J. L. Young, New York city.
99,515.—RAILWAY BRAKE SHOE.—E. H. Zitzman (assignor to A. A. Freeman), Philadelphia, Pa.
99,516.—MOLDBOARD FOR PLOWS.—F. E. Sessions and S. A. Knox, Worcester, Mass.
99,517.—BOOTJACK.—Chas. Brown, Charlottesville, Va.
99,103.—ROLLER FOR FLUTING MACHINES.—H. G. Pearson, New York city. Patented Dec. 21, 1869.

REISSUES.

3,818.—VARNISH.—D. R. Averill, New Centreville, N. Y. Division A.
3,814.—MANUFACTURE OF VARNISH.—D. R. Averill, New Centreville, N. Y. Division B.
3,815.—COOKING STOVE.—Esek Bussey and C. A. McLeod, Troy, N. Y., assignees of Esek Bussey.
3,816.—TREATMENT OF LEATHER.—N. C. Russell, Gloversville, N. Y.
3,817.—REFLECTOR FOR LAMPS.—W. G. Schmidlin and J. W. Driscoll, New York city.
3,818.—NEEDLE FOR SEWING MACHINES.—H. G. Suplee, San Francisco, Cal. Division A.
3,819.—NEEDLE FOR SEWING MACHINES.—H. G. Suplee, San Francisco, Cal. Division B.
3,820.—PRINTING TELEGRAPH.—The Gold and Stock Telegraph Company, New York city, assignees by mesne assignments, of T. A. Edison.

DESIGNS.

3,827.—STOOL PAN AND ITS COVER.—John Clarke, Boston, Mass.
3,828.—ORNAMENTING GLASSWARE.—J. H. Hobbs, Wheeling, W. Va.
3,829.—ORNAMENTING GLASSWARE.—William Leighton, Jr., Wheeling, W. Va.
3,830 to 3,832.—CARPET PATTERN.—Charles T. Meyer, Newark, N. J., assignor to Edward C. Sampson, New York city. Three Patents.
3,833.—SASH OR SHUTTER LIFT.—Emery Parker (assignor to The Russell & Erwin Manufacturing Company), New Britain, Conn.
3,834.—STEM FOR GLASSWARE.—Daniel C. Ripley, Birmingham, Pa.
3,835.—MEDAL OF ELIAS HOWE, JR.—Allen B. Stockwell, New York city, sole surviving administrator of the estate of Elias Howe, Jr., deceased.
3,836.—BOTTLE.—L. J. Wicks, Bridgeton, N. J., assignor to himself, Wm. Selsler, C. N. Selsler, J. A. Selsler, G. W. Turner, and J. H. Poole.

Inventions Patented in England by Americans.

[Compiled from the "Journal of the Commissioners of Patents."]
PROVISIONAL PROTECTION FOR SIX MONTHS.

3,774.—MANUFACTURE OF IRON AND STEEL.—H. Spencer and L. K. Taylor, Philadelphia, Pa. December 30, 1869.
3,780.—ELECTRO-MAGNETIC ENGINE.—L. Bastet, New York city. Dec. 31, 1869.
8.—HARNES.—J. B. Crosby, Boston, Mass. Jan 1, 1870.
16.—BALE TRES.—E. S. Lenox, New Brighton, N. Y. January 3, 1870.
17.—ELECTRO-MAGNETS, AND THE APPLICATION THEREOF FOR OBTAINING MOTIVE POWER.—H. M. Palce, Newark, N. J., and M. S. Frost, New York city. January 3, 1870.
43.—SEWING MACHINE.—Hiram Plummer, Brooklyn, N. Y. January 5, 1870.
59.—LAWN-MOWING MACHINE.—Samuel Coit, Hartford, Conn. January 7, 1870.

Business and Personal.

The Charge for Insertion under this head is One Dollar a Line. If the Notices exceed Four Lines, One Dollar and a Half per line will be charged.

The paper that meets the eye of manufacturers throughout the United States—Boston Bulletin, \$400 a year. Advertisements 17c. a line. See advertisement of Thomas' Lathes in another column.

Manufacturers of Gas Machines address, with circulars, Box 436, Central City, Col.

American Boiler Powder—A safe, sure, and cheap remedy for scale. Send for circular to Am. B. P. Co., P. O., Box 315, Pittsburgh, Pa.

Manufacturers of rock drills for testing mineral land, please send circulars and price lists to Alfred Wilkin, Toledo, Ohio.

Wanted—Horse-power for ginning cotton. Also, cotton presses. Send circulars, with prices, to O. T. Gibbs, Augusta, Ga.

Chas. Wheeler, Mt. Gilead, Ohio, desires to know where he can procure the easiest kind of crutches. He would prefer those that can be folded, so as to be placed under the seat of a car or couch, if such are made.

Freightcars, changeable gage, wanted. W. C. Welles, Glasgow, Ky

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Peck's patent drop press. Milo Peck & Co., New Haven, Ct.

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Right for Sale.—Best thing out. Self-governing action and re-action water wheel. Will vent large or small volume of water. Address Wm. E. Hill, Erie, Pa.

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Those wanting latest improved Hub and Spoke Machinery, address Kettenring, Strong & Lauster Defiance Ohio.

For tinmams' tools, presses, etc., apply to Mays & Bliss, Brooklyn, N. Y.

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Glynn's Anti-Incrustator for Steam Boiler—The only reliable preventative. No foaming, and does not attack metals of boiler. Liberal terms to Agents. C. D. Fredricks, 587 Broadway, New York.

For solid wrought-iron beams, etc., see advertisement. Address Union Iron Mills, Pittsburgh, Pa., for lithograph, etc.

Machinists, boiler makers, tanners, and workers of sheet metals read advertisement of the Parker Power Presses.

Diamond carbon, formed into wedge or other shapes for pointing and edging tools or cutters for drilling and working stone, etc. Send stamp for circular. John Dickinson, 64 Nassau st., New York.

To ascertain where there will be a demand for new machinery or manufacturers' supplies read Boston Commercial Bulletin's manufacturing news of the United States. Terms \$400 a year.

APPLICATIONS FOR EXTENSION OF PATENTS.

EXCAVATING SCOOPS.—John Taggart, of Boston, Mass., has petitioned for an extension of the above patent. Day of hearing May 4, 1870.

SAW MILL DOGS.—George W. Hill, of Olean, N. Y., has applied for an extension of the above patent. Day of hearing April 30, 1870.

BOOT TRES.—Charles T. Eames, of Milford, Mass., has petitioned for the extension of the above patent. Day of hearing May 11, 1870.

ELECTRO-MAGNETIC PRINTING TELEGRAPH.—Henry N. Baker, Binghamton, N. Y., has applied for an extension of the above patent. Day of hearing April 13, 1870.

MODE OF ATTACHING SLEIGH BELLS TO STRAPS.—Abner G. Bevin, of East Hampton, Conn., has petitioned for an extension of the above patent. Day of hearing July 6, 1870.

ODOMETERS AND COUNTING MACHINES.—J. Lloyd Martin, of Baltimore, Md., has applied for an extension of the above patent. Day of hearing June 1, 1870.