

PATENTS.

American and European.

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ADVERTISEMENT. 108 FULTON ST., NEW YORK, February 18, 1871.

MESSRS. MUNN & CO., EDS. SCIENTIFIC AMERICAN:

Gentlemen:—In your issue of the 18th inst., we note your able editorial remarks on "Kerosene Burner." You, and the public generally, are familiar with Pratt's Astral Oil, which for some years we have endeavored to make known. To fully acquaint the public of the existence of any article of this kind is a question of time. We have endeavored to inform all consumers of oil that a good and safe light can be had, but not, as the projectors of such fluid as your article refers to, say, at a lower price than ordinary good oil. It is not reasonable to expect any manufacturer can exercise the care necessary to secure perfect safety and perfect uniformity in every package of goods, and together make a first-class article, and sell it at retail for less than the standard value at wholesale. "Thorough work costs more, but is cheapest in the long run."

Benzine, naphtha, and the lighter properties of petroleum, are very cheap. They give a good light, and burn very freely, but are like a candle placed on a powder keg—the moment the flame strikes the fluid, it is ablaze; or, if the gas escapes, an explosion occurs. Standard refined petroleum, or kerosene, of a fire test of 110°, under the name of a fancy oil or burning fluid, while safer than benzine, is only relatively so; there still remain many of the lighter vapors; to remove them entirely is to reduce in volume, and, as a result, render the balance more costly. To insure prime selling quality with safety, but still cheap, is just what Pratt's Astral Oil aims at. We cannot better reply to your article than by giving an extract from our annual circular view:

"In making the annual review of our business in Astral Oil, we ask your attention to the following: It has grown steadily in public favor; the business has increased largely, and in every case, so far as known, the oil has been satisfactory to dealers, and entirely so to consumers; and the trade gives every promise of large increase. The oil has been kept up to the same standard of purity, and the same excellent qualities that it had on its conception and introduction; and, from the first package sent out to this time, we have not seen a sample that was not right; neither has there been an accident of any kind, nor has a fire occurred in any way from the burning, storing, or handling of Pratt's Astral Oil. From the large circle of trade, and great variety of consumers, it is not strange that we should have an occasional complaint. They have been few in number; we do not think they will average one to every five thousand consumers. Whenever we have heard of such, we have immediately sent for samples, but in no instance has a sample come to us from such complaint, in which the oil (in a well-trimmed lamp) did not burn free and give as fine a light as possible. A bad lamp or burner, a clogged wick, or we go right to the point, and get the free flow of the oil to the flame, or the light turned too low, will tend to produce imperfect combustion, and, as a result, a poor light. PRATT'S ASTRAL OIL—we say it with full confidence—is not only safe, but will burn freely, and give a light equal to, if not better than any illuminating oil ever made, and while burning in a well-trimmed lamp, is almost entirely without odor. We ask consumers or dealers to frankly state any and every cause of complaint, and we assure them that, so far as we know, no fault has existed in the oil in the past, and will not in the future. This we warrant, and we are always ready, at any reasonable expense, to prove it. The many hundreds of thousands of gallons we have sold in the past, is witness to the truth of these statements. ADULTERATION.—By tracing the few complaints received, we have discovered in some cases that unprincipled dealers have taken advantage of the high reputation our oil has acquired, to give consumers an entirely different article, under the name of Astral Oil. This drawback, we are aware, is incident to the sale of every good article. We take every precaution in our power to protect consumers, and ask our friends to aid us. We may say in this connection, that we are fully aware that nothing will so surely defeat our aims, as to destroy the business, and render useless the labor and expense to which we have been. We again caution the public to be on their guard against dealers selling other oils or fluids under this name, or under names similar in sound. PRATT'S ASTRAL OIL, or ASTRAL OIL, is our patented trademark, and we shall prosecute, to the farthest extent of the law, all infringers. The following appears on our circular: "Caution.—Unprincipled dealers are selling inferior and dangerous oils for Astral. Be sure you get the genuine Astral Oil. See that the seals of the cans have not been tampered with. Buy only of responsible dealers. For information that will lead to the conviction of any parties adulterating our Astral Oil, we again, for the purpose, we offer a reward of \$100.00. The Fire Insurance Companies of New York, recognizing the merits of the oil, recommend its use over that of any other; and scientific men, and thousands of consumers throughout the country, endorse its claims. The American Institute, at its Fair held in 1869, awarded to us, for the Astral Oil, the first premium and diploma, "for the safest and best oil." At its Fair of 1870, we again took the first premium and diploma, "for the safest and best oil for general use," over all competitors. The trials in the latter instance were very exhaustive, and were conducted by the Chemical Committee, consisting of Professors C. F. Chandler and J. G. Pohle, and Dr. A. G. Kelley, with results as stated. There is no occasion that danger and loss of life should attend the enjoyment of the Astral Oil, when used as directed, and in a well-trimmed lamp. For further particulars apply to Oil House of CHAS. PRATT, (Established 1870), Manufacturers, Packers, and Dealers in Strictly Pure Oils, No. 108 Fulton St., New York. P. O. Box 3050.

Official List of Patents.

ISSUED BY THE U. S. PATENT OFFICE.

FOR THE WEEK ENDING FEB. 21, 1871.

Reported Officially for the Scientific American.

Table with 2 columns: Description of patent and Fee. Includes items like 'On each caveat', 'On filing each application for a patent', 'On issuing each original patent', etc.

For Copy of Claim of any Patent issued within 30 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 sheets. Full information, as to price of drawings, in each case, may be had by addressing MUNN & CO., Patent Solicitors, 37 Park Row, New York.

- 111,896.—MACHINE FOR CUTTING AND MITERING PRINTERS' RULES.—Frank H. Aiken, Franklin, N. H.
111,897.—GOVERNOR-VALVE CONNECTION.—John F. Allen, Harlem, N. Y.
111,898.—FISH HOOK.—Levi Arnold, Belchertown, Mass.
111,899.—MACHINE FOR CUTTING SCREWS.—James S. Atkinson, Ormsby borough, Pa.
111,900.—MACHINE FOR CUTTING LEATHER.—H. Z. Baker, Pawtucket, R. I.
111,901.—CURRIER'S TOOL.—James T. Barnstead, Peabody, Mass.
111,902.—TAP FOR OIL CANS.—Jabez A. Bostwick, New York City.
111,903.—SPRING CARRIAGE CUSHION.—T. S. Burnett, Syracuse, N. Y.
111,904.—WOOD PAVEMENT.—William Bushnell, Elizabeth, N. J.
111,905.—WIRE STRETCHER.—Albert Byington, Rochelle, Ill.
111,906.—WASHING MACHINE.—Wm. H. Carman and R. P. McCollum, Philadelphia, Pa.
111,907.—CHURN.—Franklin B. Chapman, Salisbury, Mo.
111,908.—VALVE FOR WATER ENGINES.—Abraham Coates, Watertown, and George W. Lascell, Syracuse, N. Y.
111,909.—WASHING MACHINE.—John Court, Memphis, Tenn.
111,910.—TREATING BLOOD FOR THE MANUFACTURE OF FERTILIZERS AND AMMONIACAL SALTS.—John J. Craven, Jersey City, N. J.
111,911.—PLOW.—Francis Cremer Elmwood, Ill.

- 111,912.—MANDREL FOR GAGING AND CUTTING SOLDER WIRE.—Lewis Cutting, San Francisco, Cal., assignor to himself and Francis Cutting.
111,913.—VEGETABLE CRUSHER.—Reuben Daniels, Woodstock, Vt.
111,914.—BASE-BURNING STOVE.—Edward Mortimer Deey, New York City.
111,915.—FASTENING END BOARDS IN WAGONS.—George W. Diller (assignor to himself and George B. Woodbury), O. Iell, Ill.
111,916.—CONDENSER AND FEED-WATER HEATER FOR STEAM ENGINES.—Joseph Dilworth, and John C. Hodgins, Toronto, Canada.
111,917.—FANNING MACHINE.—E. P. Doremus, Washington La. Antedated February 11, 1871.
111,918.—LUBRICATOR FOR WHEELS, PULLEYS, AND JOURNALS.—Edwin Douden (assignor to himself and Chas. Broome), Lykens Pa.
111,919.—REFLECTOR.—F. P. Doyle (assignor to himself and John Cooke), New York City.
111,920.—CRUET STAND.—Josiah W. Ells, Pittsburgh, Pa.
111,921.—MACHINE FOR FORMING ARTIFICIAL STONE.—J. S. Elliott (assignor to the Union Stone Company), Boston, Mass.
111,922.—MACHINE FOR MOLDING TWEEDS.—Samuel English (assignor to himself and James Ostrander), Troy, N. Y.
111,923.—PRESS FOR HAY, COTTON, ETC.—C. D. Findlay and D. D. Craig, Macon, Ga.
111,924.—HORSE-HOLDER ATTACHMENT TO CARRIAGES.—G. W. Goodwyn, Petersburg, Va.
111,925.—CULTIVATOR PLOW.—William Gowen, Bartlett Tenn.
111,926.—EARTH CLOSET.—Edmund Griffith, Wilmington Del.
111,927.—MILLING TOOL.—Levi Griswold, Branford, Conn.
111,928.—CARRIAGE.—Chauncey Holmes Guard, Toronto Canada.
111,929.—FIREPLACE.—Joseph Hackett, Louisville, Ky.
111,930.—MAKING CYDER.—George B. Hamlin, Willimantic Conn.
111,931.—PATTERN FOR CASTING GROOVED ROLLERS.—John Herald, Unadilla, N. Y.
111,932.—COW MILKER.—Elisha A. Hewitt, Groton, Conn.
111,933.—SELF-ADJUSTING CAR TRUCK.—Edward Hipkins, Burford township, Canada.
111,934.—CAR TRUCK.—Edward Hipkins, Burford township, Canada.
111,935.—HAT-SIZING MACHINE.—J. H. Hopkins (assignor to himself and William Carrollton), Newark, N. J.
111,936.—FLY TRAP.—Peter D. Horton and Ezra T. Bryan Marengo township, Mich.
111,937.—STEAM ENGINE.—John Houpt, Springtown, Pa.
111,938.—ROOFING TILE.—Charles Howard, Warren, Ohio.
111,939.—SNOW-SHOVEL TIP.—Eber Hubbard, Seneca Falls, N. Y.
111,940.—EXCAVATING MACHINE.—Joseph M. Hughes and Andrew J. Mapes, Independence, Mo.
111,941.—MACHINE FOR STRAIGHTENING BOLTS.—Charles E. Hunter, Hinsdale, N. H.
111,942.—LIFTING JACK.—Benjamin F. Johnson, Glasgow Mo.
111,943.—LOCK-STOP COCK.—J. Evans Jones, Tidoute, Pa.
111,944.—DRAFT DEVICE FOR THREE HORSES.—Owen W. Jones, Columbus, Wis.
111,945.—COMPOUND FOR PLATING AND POLISHING.—M. J. A. Keane, New York City.
111,946.—SASH HOLDER.—W. H. King, Newark, N. J., and Jared Rowland, Williamsburgh, N. Y., assignors to W. H. King.
111,947.—SECURING STEEL OR IRON PINS IN WOOD.—Richard Kitson, Lowell, Mass.
111,948.—PASSENGER REGISTER FOR CARS.—John Kurz Philadelphia, Pa.
111,949.—HORSE POWER.—Daniel L. Lamont, Boston, Ga.
111,950.—REFRIGERATOR.—John H. Lester, Niantic, Conn.
111,951.—BASE-BURNING STOVE.—D. G. Littlefield, Albany, N. Y.
111,952.—METHOD OF ATTACHING HANDLES TO SCRAPERS.—Edward C. Locke, Providence, R. I.
111,953.—SAW-TOOTH SWAB.—John Lough, Buckingham, Canada.
111,954.—BEAM COMPASS.—Josiah Lyman, Lenox, Mass.
111,955.—BATHING BRUSH.—Joseph Marshall, Brooklyn, N. Y. Antedated February 17, 1871.
111,956.—MILLSTONE.—John W. Masury, Brooklyn, N. Y.
111,957.—LEATHER-PUNCHING MACHINE.—John Matheis Ottowa, Ill.
111,958.—WASHING MACHINE.—Erwin W. Maxson, Scranton Pa.
111,959.—BURGLAR ALARM.—John McDowell, Washington, Pa.
111,960.—LAMP BURNER.—William C. McGill, Cincinnati Ohio.
111,961.—PUMP.—Charles L. Merrill, Watertown, N. Y.
111,962.—INDIA-RUBBER SHOE.—Christopher Meyer, New York City, and John Evans, New Brunswick, N. J.
111,963.—COOKING-STOVE ATTACHMENT.—Nathan S. Minniss Oil City, Pa.
111,964.—ANTI-RATTLING WASHER.—Benjamin Morton, Fertiltity, Pa.
111,965.—PLOW.—James Oliver, South Bend, Ind.
111,966.—DEVICE FOR GRINDING THE FLAT FACE OF VALVE SEATS.—Samuel J. Peet and Daniel Sawyer, Boston, Mass., assignors to Samuel J. Peet. Antedated Feb. 11, 1871.
111,967.—CURTAIN FIXTURE.—Phineas W. Phillips (assignor James F. Army), Salem, Mass.
111,968.—FELTED FABRIC.—James Ezra Pollard, Franklin City, Mass.
111,969.—MINIATURE WAR GAME.—Casimiro Portillo, New York City.
111,970.—LARD AND BUTTER BOX.—William Pratt, New York City.
111,971.—FIREPLACE GRATE.—William Pulsfort, Louisville Ky.
111,972.—CAR COUPLING.—Samuel H. Reed and George A. Reed, Fredericktown, Ohio.
111,973.—MACHINE FOR BRONZING.—Israel L. G. Rice, Cambridge, Mass.
111,974.—SPRING BED-BOTTOM, SEAT, ETC.—Charles Rich, Poughkeepsie, N. Y.
111,975.—PLOW.—Alexander Rickard, Schoharie, N. Y.
111,976.—PRIVY.—Frank Riedel, San Francisco, Cal.
111,977.—IMPLEMENT FOR SLITTING AND LOOPING RAGS FOR CARPETS.—Daniel A. Russell, Winham, Ohio.
111,978.—SHIRT.—Adolphe Salmon (assignor to Cahm & Salmon), New York City.
111,979.—CORN PLANTER.—Joseph Schott, Peoria, Ill. Antedated Feb. 6, 1871.
111,980.—REVOLVING SHOWCASE.—William J. Scott, Albany N. Y.
111,981.—HOSE RING.—George Sewell, Brooklyn, N. Y.
111,982.—STEAM ENGINE.—Joel Sharp and Joseph W. Thompson, Salem, Ohio.
111,983.—PUMP.—George F. Shaw and Henry F. Shaw, West Roxbury, Mass.
111,984.—NON-CONDUCTING MATERIAL FOR COVERING STEAM BOILERS, ETC.—Benjamin F. Smith (assignor of one half his right to G. L. Laughland), New Orleans, La.
111,985.—RAILWAY CAR COUPLING.—Marcus B. Smith, Mattoon, Ill.
111,986.—HEEL FOR BOOTS AND SHOES.—Homer S. Smythe Darlington, Wis.
111,987.—HARVESTER.—George H. Spaulding, Rockford, Ill.
111,988.—CONSTRUCTION OF CYLINDER FOR CARDING AND OTHER MACHINES.—Joseph M. Stone North Andover, Mass.
111,989.—CRADLE FOR CHILDREN.—William J. Stowell, Baltimore, Md. Antedated Feb. 20, 1871.
111,990.—COMBINED AUGER AND REAMER.—Owen W. Townsend (assignor to himself and George O. Townsend), Fond du Lac, Wis.
111,991.—SPINNING WHEEL.—Franz Voegtli, Montgomery City, Mo.
111,992.—SEEDER.—Teunis Vreeland, Oneida, Ill. Antedated Feb. 11, 1871.
111,993.—BAILING PRESS.—Edwin R. Wallace, Jonesville, S. C.
111,994.—BREECH-LOADING FIREARMS.—William G. Ward, Edgewater, N. Y.
111,995.—SASH HOLDER.—Wm. M. Warren, Watertown, Conn.

substances, and consists in a combination with the screw and nut for working the follower, of anti-friction balls for reducing the friction. It also consists in a combination with the nut and nut holder of anti-friction balls under an arrangement calculated to relieve the friction of the end thrust.

HEELS FOR BOOTS AND SHOES.—Homer S. Smythe, Darlington, Wis.—This invention relates to improvements in the construction and arrangement of heels for boots and shoes, and consists in making the heels in two parts, one of leather permanently attached, and the other of india rubber or other substance, which may be molded and attaching it by means of a screw bolt passing through a metallic plate or block formed in the detachable part, and screwing into a metal plate bedded in the other part.

METHOD OF ORNAMENTS GOLD, SILVER, OR PLATED WARE.—H. G. Reed, Taunton, Mass.—This invention is an improved process, whereby gold, silver, and plated ware can be beautifully ornamented with chased, engraved, or etched designs, without the use of pitch, or the necessity of finishing or burnishing the articles afterwards, and so rapidly and perfectly that work can, by this process, be done in a superior manner for less than one twentieth its cost by the old methods.

MACHINE FOR CUTTING LEATHER.—H. Z. Baker, Pawtucket, R. I.—This invention has for its object the cutting of leather into strips for belting and other purposes, and it consists in a machine in which a pair of parallel rolls is employed, one having a circumferential cutting flange or knife fitting in a circumferential groove in the other.

HORSE HOLDER ATTACHMENT TO CARRIAGES.—G. W. Goodwin, Petersburg, Va.—This invention has for its object to prevent horses from running away with carriages, and consists in the arrangement of a lever, in connection with the carriage wheel and with the reins, whereby it is caused to draw the reins backward when the carriage moves forward.

GATE-OPERATING APPARATUS.—Patrick O'Neill, Murfreesboro, Tenn.—This invention relates to improvements in gate-operating apparatus, and it consists in the application, to the hinged end of the gate, of a projecting arm and friction roller, and in the combination therewith, of a pair of plates hinged together, and connected by chains with an operating lever and cords, all so arranged that on approaching the gate from either side, and pulling the cord, the gate may be raised, unlocked, and swung open by one of the plates acting under the roller, and taking the weight off the hinges upon its oblique side; then, on pulling the same rope again, the other plate similarly acting on the roller, will cause the gate to shut again.

MILL STONE.—J. W. Masury, Brooklyn, N. Y.—This invention relates to improvements in the construction and dress of millstones for grinding paint and other wet substances, which improvements are also applicable to stones for grinding plaster, grain, or other substances.

PLATING AND POLISHING COMPOUND.—M. J. A. Keane, New York City.—This invention relates to a new compound for plating or polishing articles of soft metals, such as spoons, forks, and the like, and consists in a compound made of silver, chemically pure, or chloride of gold, cyanide of potassium, and prepared chalk, or any coloring substance of a similar nature, to hold the other ingredients in a semi-fluid state.

BOLT STRAIGHTENING APPARATUS.—C. E. Hunter, Hinsdale, N. H.—This invention relates to improvements in apparatus to be used in straightening bolts, and it consists in a combination of a shank-holding attachment and clamping and holding devices therefor, with a metal block or "saw," so called, preferably of iron, having grooves of different sizes in or across the face, corresponding in form and size to the heads of the bolts to be straightened, with which the said shank-holding attachment is so arranged that the shank of the bolt may be placed in it, and the head in the groove in the block, and so supported that the bolt may be readily straightened at the juncture of the shank with the head, or the head and shank brought into the same axial line by blows of a hammer delivered on the shank or head.

EXCAVATING MACHINE.—J. M. Hughes and A. J. Mahez, Independence, Mo.—This invention relates to improvements in excavating machines, and consists in a pair of rotary diggers or spaders of peculiar construction located in a vertically adjustable frame, under the fore wheels of a truck, and operated by gearing connected with the said wheels in a manner to spade up the surface of the earth, and throw it upwards and backwards upon a suspended tray or receiver, on which it may be carried away to be discharged by tilting the several boards of the bottom of said tray, which are paneled and provided with tilting apparatus for the purpose.

VEGETABLE CRUSHERS.—Reuben Daniels, Woodstock, Vermont.—This invention relates to improvements in machines for crushing vegetables, apples and other like substances, by passing them between two crushing rollers, and it consists in an arrangement with a scroll hopper applied to the upper and larger roller in such a way, that the apples or other articles are forced, by the action of the roller, from the mouth, through a gradually decreasing space, in which they are flattened preparatory to entering between the rollers of a copper or other metal covering, non-corrosive in cider or vegetable acids, for maintaining a smooth surface, which is necessary to the success of the flattening operation, which is promoted if the surface is rough, owing to the apples sticking thereto.

FISH-HOOK AND LINE HOLDER.—Levi Arnold, Belchertown, Mass.—This invention consists in a metallic connection between the hook and the line, made in one or more pieces, and in fastening the hook and the line, or either of them, to the ends thereof by means of one or more rings sliding on said connection.

FANNING MACHINE.—E. P. Doremus, Washington, La.—This invention relates to a new mechanism for moving fans by means of clock work, and consists in the use of double-jointed levers, which are combined with the escapement wheel of the works to impart oscillating motion to a connecting link and the fan. The invention will be very convenient for working fans in parlors and work-rooms, but can also be used as an appendix to machinery of all kinds.

NEW BOOKS AND PUBLICATIONS.

PRINCIPLES OF MECHANISM.—Designed for the Use of Students in the Universities, and for Engineering Students generally. By Robert Willis, M.A., F.R.S., Jacksonian Professor of Natural Philosophy in the University of Cambridge, Hon. Fellow of the Institution of Civil Engineers, etc., etc. Second Edition. London: Longmans, Green & Co. New York: John Wiley & Son, 15 Astor Place. Price \$5.50.

This is a work the scope of which is so well set forth in its title that we need not dwell upon it in this notice. Those who read it must bring to its perusal a sound knowledge of elementary mathematics. To those possessing such knowledge, the method pursued is one calculated to lead the mind, by easy gradations, into a thorough knowledge of the principles of mechanism. We would not be understood to find fault with the mathematical character of the treatise. A thorough knowledge of mechanics cannot be obtained without mathematics, and it is a pity that such works as this cannot be made more widely useful by more thorough and general mathematical training. The work is a large octavo, well printed and bound, but, we are sorry to say, it lacks an index, an omission which is poorly supplied by its table of contents.

Inventions Patented in England by Americans.

[Compiled from the Commissioners of Patents' Journal.]

APPLICATIONS FOR LETTERS PATENT.

- 251.—SEWING MACHINE.—W. A. Mack, Norwalk, Ohio, and James Blake, Scranton, Pa. January 31, 1871.
61.—VAPOR ENGINE.—J. A. H. Ellis, Springfield, Vt. January 31, 1871.
262.—FILING AND SHARPENING SAWS.—Wm. Tucker and Prince Snell, Fiskdale, Mass. January 31, 1871.
293.—MACHINE FOR CUTTING CLOTH AND OTHER MATERIALS.—A. Warth, of Stapleton, and W. F. Jobbins, New York City, both in N. Y.
294.—ELECTRIC MOTOR FOR RAILWAY CARRIAGES.—Solomon Jones, of New Orleans, La., William H. Smith, Raudolph, Ala., and J. H. Weaver, New Orleans, La. February 2, 1871.
295.—MATTRESS AND LIFE PRESERVER COMBINED.—J. W. Wotton, New York City. February 3, 1871.

- 111,996.—PRESSED NUT BLANK.—Frank Washburne, Brooklyn, N. Y., assignor to Steele & Johnson Button Company, Waterbury, Conn.
- 111,997.—PISTON PACKING.—George Wells, Providence, R. I.
- 111,998.—HOOP SKIRTS.—James O. West, New York city.
- 111,999.—WASHING MACHINE.—Lawrence White, Orford, Iowa.
- 112,000.—FAUCET.—William Crosby Wise and John Ashman, Chelsea, Mass.
- 112,001.—CONDENSING DOUBLE-END LOCOMOTIVE ENGINE.—Joseph P. Woodbury, West Roxbury, Mass. Antedated Feb. 6, 1871.
- 112,002.—SLIDE VALVE.—John C. Woodhead, Pittsburgh, Pa. Antedated Feb. 18, 1871.
- 112,003.—REFINING IRON, REDUCING ORES, ETC.—John F. Allen, Tremont, N. Y.
- 112,004.—TOWEL HOLDER.—Henry Alsop, Elkhart City, Ill.
- 112,005.—PAPER BAG MACHINE.—Peter Edward Armstrong, Philadelphia, Pa.
- 112,006.—CORN PLANTER.—James M. Aitchison, Omar, N. Y.
- 112,007.—BUCK SAW FRAME.—John Gulick Baker (assignor to Henry Disten), Philadelphia, Pa.
- 112,008.—HAND CAR.—William T. Beekman, Petersburg, Ill.
- 112,009.—WINDOW WASHER.—Charles Edward Bell, Greenfield, Ohio.
- 112,010.—PORTABLE WATER CLOSET.—Peter Bergqvist, Austin, Minn.
- 112,011.—SEAL LOCK.—Wilson Bohannon, Brooklyn, N. Y.
- 112,012.—MACHINE FOR CLEANING GARDEN WALKS.—Peter Boice, Chatham Village, N. Y.
- 112,013.—DETACHABLE MAGAZINE FOR COOKING STOVES AND RANGES.—Lewis Bridge (assignor to David Stuart and Richard Peterson), Philadelphia, Pa.
- 112,014.—MOP HOLDER.—John Brizee, Alvarado, Cal.
- 112,015.—VALVE GEAR FOR DIRECT-ACTING ENGINES.—Adam S. Cameron, New York city.
- 112,016.—SEWING MACHINE FEEDING MECHANISM.—Mary P. Carpenter, San Francisco, Cal.
- 112,017.—SIGNAL BOX FOR FIRE-ALARM TELEGRAPH.—Stephen Chester, New York city. Antedated Feb. 13, 1871.
- 112,018.—PUMP.—Nathan T. Coffin, Knightstown, Ind.
- 112,019.—BLINDER FOR SEWING MACHINES.—Jacob L. Coles, Newark, N. J.
- 112,020.—LUBRICATOR FOR STEAM ENGINE.—Henry C. De Land, Syracuse, N. Y.
- 112,021.—IMPLEMENT FOR DRIVING SPOKES INTO HUBS OR WHEELS.—Wesley Edwards, Indianapolis, assignor to himself, John Holway, Crawfordville, and John E. Sailer, Indianapolis, Ind.
- 112,022.—FRUIT DRYER.—B. F. Ellis, Dayton, Ohio.
- 112,023.—MOSQUITO NET.—J. J. A. Ergenzinger, Atlanta, Ga.
- 112,024.—PATTERN FOR APPLYING MEASUREMENTS AND LAYING OUT GARMENTS.—Sarah C. Ewing, Indianapolis, Ind.
- 112,025.—FLOATING WATER ELEVATING WHEEL.—Chas. F. Fisher (assignor to himself, Lewis Moses, Bernard Moses, Gustave Moses, and William Bege), New Orleans, La.
- 112,026.—APPARATUS FOR CARBURETING AND GENERATING GAS.—F. A. Fisher, Westfield township, N. J.
- 112,027.—KNITTING MACHINE.—G. W. Folts, Boston, Mass., and J. L. Branson, Chicago, Ill.
- 112,028.—WATER WHEEL.—Charles James Fox, Charlotte, N. C.
- 112,029.—LUBRICATOR.—S. F. Gates, Cambridge, assignor to the Lowell Oil-Cup Co., Lowell, Mass.
- 112,030.—HAY TEDDER.—Luke Hale, Hollis, N. H.
- 112,031.—LOUNGE AND BED.—John C. Hall (assignor to himself and Allen C. Richards), Cincinnati, Ohio.
- 112,032.—OIL CLOTH PRINTING MACHINERY.—William H. Halsey, Philadelphia, Pa.
- 112,033.—HOLDER FOR NEEDLES IN SEWING MACHINES.—H. J. Hancock, New York city.
- 112,034.—ROAD BED.—N. B. Heafer, Bloomington, Ill.
- 112,035.—FAUCET.—W. H. Heiges, Newark, N. J.
- 112,036.—TRIP HAMMER.—Benjamin Hershey, Erie, Pa.
- 112,037.—SPRING FOR VEHICLES.—Benjamin Hershey and Richard Dudley, Erie, Pa.
- 112,038.—SCHOOL DESK AND SEAT.—C. J. Higgins, Indianapolis, Ind.
- 112,039.—PLOW COLTER.—Ephraim C. Hodge, Oneonta, N. Y.
- 112,040.—FOLDING CHAIR.—Francis March Holmes, Boston, Mass.
- 112,041.—FOLDING CHAIR.—Francis March Holmes, Boston, Mass.
- 112,042.—WINDOW SASH LOCK.—B. Hotchkiss, New Haven, Conn.
- 112,043.—HYDROSTATIC SCALES.—Orvis D. Hudson, Waupun, Wis.
- 112,044.—BASE-BURNING STOVE.—George C. Hunt, Chicago, Ill.
- 112,045.—MANUFACTURE OF PAPER AND LEATHER BOARD.—C. B. Hutchins, Ann Arbor, Mich.
- 112,046.—MANUFACTURE OF FLOUR.—Elias S. Hutchinson, Baltimore, Md.
- 112,047.—VALVE.—John Johnson, Brooklyn, N. Y.
- 112,048.—HALTER BUCKLE AND RING.—L. E. Jones and T. M. Barber, Syracuse, N. Y.
- 112,049.—STEAM GENERATOR.—James L. Judge, Milwaukee, Wis.
- 112,050.—TUCK MARKER FOR SEWING MACHINES.—James F. Kellogg, North Bridgewater, Mass.
- 112,051.—LATHE.—James Kievlan (assignor to himself and William Wisdom), Chicago, Ill.
- 112,052.—DUMPING CAR.—S. D. King, Middletown, N. Y.
- 112,053.—FOLDING BEDSTEAD.—Kasimir Krenkel, New York city.
- 112,054.—CASTING SOLDER WIRE.—Eduard M. Lang, Portland, Me.
- 112,055.—DUMB WAITER.—Tolbert Lanston, Washington, D. C.
- 112,056.—BOOT.—J. S. Lewis, Baltimore, Md.
- 112,057.—MODE OF LASTING SHOES.—W. H. Lovejoy, Lowell, assignor to himself and Christopher Robinson, Lynn, Mass.
- 112,058.—ENGINE GOVERNOR.—John D. Lynde, Philadelphia, Pa.
- 112,059.—QUARTZ MILL.—David D. Mallory, Mystic Bridge, Conn.
- 112,060.—AIR PUMP.—Robert Mudge Marchant, London, England.
- 112,061.—HARNES SADDLE TREE.—J. H. Martin, Columbus, Ohio.
- 112,062.—CARPENTERS' PLANE.—William Miller (assignor to himself and C. E. Woodman), Boston, Mass.
- 112,063.—AUGER BIT.—John C. Mills (assignor to himself and Richard Leake), Rochester, N. Y.
- 112,064.—FENCE.—John Morton, Thornville Mills, Mich.
- 112,065.—TOBACCO, HAY AND COTTON PRESS.—L. H. Moss, Brownsville, Ky.
- 112,066.—ROTARY STEAM ENGINE.—Joseph C. Mossholder, Lebanon, Oregon.
- 112,067.—CURTAIN.—Robert Nenninger and Friedrich Brauer, Newark, N. J.
- 112,068.—MANUFACTURE OF SILICON STEEL.—C. M. Nes, York, Pa.
- 112,069.—APPARATUS FOR STEAMING OIL WELLS.—William Nevins, Titusville, Pa.
- 112,070.—BOTTLE CORK.—W. H. Newton (assignor to himself and S. W. Francis), Newport, R. I.
- 112,071.—CLOD CRUSHER.—J. B. Okey (assignor to himself and F. A. Lehr), Indianapolis, Ind.
- 112,072.—CLOTHES DRYER.—Elios L. Parker, Painesville, Ohio.
- 112,073.—HARNES PAD.—M. W. Pond, Elyria, Ohio.
- 112,074.—CLOTHES WRINGING HOOK.—J. H. Pratt (assignor to himself and B. F. Larrabee), Lynn, Mass.
- 112,075.—PASTEBOARD BOX.—William Pratt, New York city.
- 112,076.—DOOR LOCK.—J. M. Quimby, Westbrook, and A. S. Dyer, Cape Elizabeth, Me.
- 112,077.—MODE OF MANUFACTURING GOLD, SILVER OR PLATED WARE.—Henry G. Reed (assignor to Reed & Barton), Taunton, Mass.
- 112,078.—SIFTING SHOVEL.—T. F. Rooney, Chicago, Ill.
- 112,079.—COMBINED GANG PLOW AND CULTIVATOR.—Orestes Sampson, Petersburg, Ill. Antedated Feb. 20, 1871.
- 112,080.—GRINDING MILL.—George Selsor, Philadelphia, Pa.
- 112,081.—HOT-AIR FURNACE.—S. B. Sexton, Baltimore, Md.
- 112,082.—FRUIT CAN.—J. S. Shaneman and J. S. Hoon, Beaver Falls, Pa.
- 112,083.—KITCHEN TABLE.—John Shaw, Whitby, Canada.
- 112,084.—MANUFACTURE OF METAL TUBES AND COLUMNS.—F. H. Smith, Baltimore, Maryland.
- 112,085.—SPRING BED BOTTOM.—Howard Smith, Groveton, N. H., and James Potter, Portland, Me.
- 112,086.—DEVICE FOR SEPARATING EYELETS.—S. N. Smith and S. W. Young (assignors to Union Eyelet Company), Providence, R. I.
- 112,087.—GRAIN-CLEANING MACHINE.—Jay Sternberg, Webster City, Iowa.
- 112,088.—PRODUCING GAS FROM SOLID CARBON.—Levi Stephens, Washington, D. C.
- 112,089.—ATTACHMENT FOR RANGES AND STOVES.—David Stuart (assignor to Stuart, Peterson & Co.), Philadelphia, Pa.
- 112,090.—CHEESE VAT.—E. H. Stuart and W. A. Stuart, Cedarville, N. Y.
- 112,091.—LIQUID METER.—W. G. Stuart, Chicopee, Mass.
- 112,092.—MEAT TENDERER.—L. B. Tarbox, Colliersville, N. Y. Antedated Feb. 16, 1871.
- 112,093.—GRAIN DRILL.—J. H. Thomas and P. P. Mast, Springfield, Ohio.
- 112,094.—HANDLE FOR CROSS-CUT SAW.—E. W. Tilton, Oshkosh, Wis.
- 112,095.—COTTON PRESS.—Gabriel Utley, Chapel Hill, N. C.
- 112,096.—WHIFFLETREE HOOK.—Amos Verbeck, Sterling, Ill.
- 112,097.—PROPORTIONAL SCALES FOR THE CONSTRUCTION OF TOOTHED GEAR.—John Walker, Philadelphia, Pa.
- 112,098.—WHIFFLETREE.—Joseph Ward, Honeyoe Falls, N. Y.
- 112,099.—WHEELS FOR VEHICLES.—James Weathers, Greensburg, Ind.
- 112,100.—WATER WHEEL.—W. N. Whipple, Niles, N. Y.
- 112,101.—WRENCH.—Rollin White, Lowell, Mass.
- 112,102.—DUST PAN.—Henry Whittemore, Orangetown, N. Y.
- 112,103.—DRIVING MECHANISM FOR ROVING, SLUBBING, AND OTHER MACHINES.—Alfred Wilcock, Richard Robinson, and Frederick Wilcock, Rochdale, Great Britain.

REISSUES.

- 4,266.—PAPER-FOLDING MACHINE.—Cyrus Chambers, Jr., Philadelphia, Pa.—Patent No. 15,342, dated October 7, 1856; reissue No. 4,079, dated July 26, 1870.
- 4,267.—PIPE AND FIXTURE FOR WELLS.—J. H. Duck and E. K. Whitcomb, Elgin; said Whitcomb assigns his interest to J. T. Whipple, Chicago, Ill.—Patent No. 58,721, dated October 9, 1866.
- 4,268.—SEAT FOR SCHOOL DESKS.—G. W. Hildreth, Lockport, N. Y.—Patent No. 55,238, dated June 5, 1866.
- 4,269.—DIVISION A.—HOISTING APPARATUS.—Otis Brothers & Co., Yonkers, N. Y., assignees of E. G. Otis, deceased.—Patent No. 124, dated Jan. 15, 1861.
- 4,270.—DIVISION B.—HOISTING APPARATUS.—Otis Brothers & Co., Yonkers, N. Y., assignees of E. G. Otis, deceased.—Patent No. 124, dated Jan. 15, 1861.
- 4,271.—DIVISION C.—HOISTING APPARATUS.—Otis Brothers & Co., Yonkers, N. Y., assignees of E. G. Otis, deceased.—Patent No. 124, dated Jan. 15, 1861.
- 4,272.—BARREL.—H. G. Porter, Grand Rapids, Mich.—Patent No. 102,432, dated April 26, 1870.
- 4,273.—HOISTING MACHINE.—H. J. Reedy, Cincinnati, Ohio. Patent No. 78,829, dated June 9, 1868.
- 4,274.—ELECTRO-MAGNETIC GATE-OPENING APPARATUS.—William Robinson, Jr., New York, N. Y.—Patent No. 105,494, dated July 19, 1870; antedated July 9, 1870.
- 4,275.—BED LOUNGE.—James Seymour, administrator, W. H. Coolidge and Charles Stinson, Leavenworth, Kansas, assignors to W. H. Colley, deceased.—Patent No. 103,201, dated May 21, 1870.
- 4,276.—SAW FRAME.—The Bissell & Moore Manufacturing Co., New York city, assignee of Daniel Moore and Edwin Moore.—Patent No. 94,500, dated Sept. 7, 1869.

DESIGNS.

- 4,664.—POCKET-BOOK TIP.—J. C. Arms, Northampton, Mass.
- 4,665.—HAND STAMP FRAME.—J. P. Barnes, Rochester, N. Y.
- 4,666.—RAILROAD STATION INDICATOR.—F. F. Bibber, South Boston, Mass.
- 4,667.—SPOON.—Elise De Busson, Yonkers, N. Y.
- 4,668.—CLOTHES-LINE REEL IRON.—Daniel Densmore, Red Wing, Minn.
- 4,669.—STUCCO CENTER PIECE.—James John, Chicago, Ill.
- 4,670.—SHAWL.—Martin Landenberger, Philadelphia, Pa.
- 4,671 and 4,672.—CARPET PATTERN.—C. S. Lilley (assignor to Lowell Manufacturing Co.), Lowell, Mass. Two patents.
- 4,673.—TYPE.—Andrew Little, New York city.
- 4,674.—OIL-CLOTH PATTERN.—James Paterson, Elizabeth assignor to R. H. Reeve and B. C. Reeve, Camden, N. J.
- 4,675.—PARK SEAT.—E. O. Schwagerl (assignor to himself and Shickle, Harrison & Co.), St. Louis, Mo.

TRADE-MARKS.

- 169.—FERTILIZER.—George Bourne, Baltimore, Md.
- 170.—HATS, CAPS, AND STRAW GOODS.—Dunlap & Co., New York city.
- 171.—COTTON BALE BAND AND TIE.—J. J. McComb, Liverpool, England.
- 172.—CORDS, FRINGES, RIBBONS, ETC.—Silbermann, Heine mann & Co., New York city.
- 173.—PAINT.—J. L. Smith & Co., New York city.
- 174.—MEDICINE.—G. H. York & Co., Cambridge, Mass.

EXTENSIONS.

- ACCELERATING FIRE ARMS.—A. S. Lyman, of New York city.—Letters Patent No. 16,568, dated Feb. 3, 1857.
- METHOD OF JOINING BOXES, ETC.—James Stimpson, of Baldwinville, Mass.—Letters Patent No. 16,557, dated Feb. 3, 1857.
- ABDOMINAL SUPPORTER.—J. M. Milligan, of New Albany, Ind.—Letters Patent No. 16,602, dated Feb. 10, 1857; reissue No. 433, dated Sept. 15, 1857.
- MACHINE FOR CUTTING TENONS ON BLIND SLATS.—S. C. Ellis, of Jersey City, N. J.—Letters Patent No. 16,514, dated Feb. 3, 1857.

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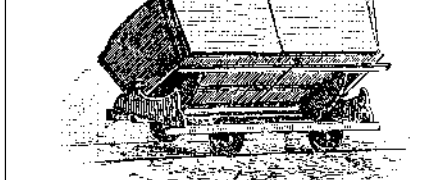
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