

U. S. Patent Office.

How to Obtain Letters Patent for NEW INVENTIONS.

Information about Caveats, Extensions, Interferences, Designs, Trade Marks; also, Foreign Patents.

For a period of nearly twenty-five years, MUNN & CO. have occupied the position of leading Solicitors of American and European Patents, and during this extended experience of nearly a quarter of a century, they have examined not less than fifty thousand alleged new inventions, and have prosecuted upward of thirty thousand applications for patents, and, in addition to this, they have made, at the Patent Office, over twenty thousand preliminary examinations into the novelty of inventions, with a careful report on the same.

The important advantages of MUNN & CO.'S Agency are, that their practice has been ten-fold greater than that of any other Agency in existence, with the additional advantage of having the assistance of the best professional skill in every department, and a Branch Office at Washington, which watches and supervises, when necessary, cases as they pass through official examination.

CONSULTATIONS AND OPINIONS FREE.

Those who have made inventions and desire a consultation are cordially invited to advise with MUNN & CO. who will be happy to see them in person at the office, or to advise them by letter. In all cases, they may expect an HONEST OPINION. For such consultations, opinion, and advice, NO CHARGE is made. A pen-and-ink sketch and a description of the invention should be sent.

TO APPLY FOR A PATENT,

A model must be furnished, not over a foot in any dimension. Send model to MUNN & CO., 37 Park Row, New York, by express, charges paid, also, a description of the improvement, and remit \$16 to cover first Government fee, and revenue and postage stamps.

The model should be neatly made, of any suitable materials, strongly fastened, without glue, and neatly painted. The name of the inventor should be engraved or painted upon it. When the invention consists of an improvement upon some other machine, a full working model of the whole machine will not be necessary. But the model must be sufficiently perfect to show with clearness the nature and operation of the improvement.

PRELIMINARY EXAMINATION

Is made into the patentability of an invention by persons search at the Patent Office, among the models of the patents pertaining to the class to which the improvement relates. For this special search and a report in writing, a fee of \$5 is charged. This search is made by a corps of examiners of long experience.

Inventors who employ us are not required to incur the cost of a preliminary examination. But it is advised in doubtful cases.

COST OF APPLICATIONS.

When the model is received, and first Government fee paid, the drawings and specification are carefully prepared and forwarded to the applicant for his signature and oath, at which time the agency fee is called for. This fee is generally not over \$25. The cases are exceptionally complex if a higher fee than \$25 is called for, and upon the return of the papers, they are filed at the Patent Office to await Official examination. If the case should be rejected for any cause, or objections made to a claim, the reasons are inquired into and communicated to the applicant, with sketches and explanations of the references; and should it appear that the reasons given are insufficient, the claims are prosecuted immediately, and the rejection set aside, and usually Without Extra Charge to the Applicant.

MUNN & CO. are determined to place within the reach of those who can afford to them their business, the best facilities and the highest professional skill and experience.

The only cases of this character, in which MUNN & CO. expect an extra fee, are those wherein appeals are taken from the decision of the Examiner after a second rejection; and MUNN & CO. wish to state very distinctly, that they have but few cases which can not be settled without the necessity of an appeal; and before an appeal is taken, in any case, the applicant is fully advised of all facts and charges, and no proceedings are had without his sanction; so that all inventors who employ MUNN & CO. know in advance what their applications and patents are to cost.

MUNN & CO. make no charge for prosecuting the rejected claims of their own clients before the Examiners and when their patents are granted, the invention is noticed editorially in the SCIENTIFIC AMERICAN.

REJECTED CASES.

MUNN & CO. give very special attention to the examination and prosecution of rejected cases filed by inventors and other attorneys. In such cases a fee of \$5 is required for special examination and report, and in case of probable success by further prosecution, and the papers are found tolerably well prepared, MUNN & CO. will take up the case and endeavor to get it through for a reasonable fee, to be agreed upon in advance of prosecution.

CAVEATS

Are desirable if an inventor is not fully prepared to apply for a Patent. Caveat affords protection, for one year, against the issue of a patent to another for the same invention. Caveat papers should be carefully prepared.

The Government fee on filing a Caveat is \$10, and MUNN & CO.'s charges for preparing the necessary papers are usually from \$10 to \$12.

REISSUES.

A patent when discovered to be defective, may be reissued by the surrender of the original patent, and the filing of amended papers. This proceeding should be taken with great care.

DESIGNS, TRADE MARKS, AND COMPOSITIONS Can be patented for a term of years, also, new medicines or medical compounds, and useful mixtures of all kinds. When the invention consists of a medicine or compound, or a new article of manufacture, or a new composition, samples of the article must be furnished, neatly put up. Also, send a full statement of the ingredients, proportions, mode of preparation, uses, and merits.

PATENTS CAN BE EXTENDED.

All patents issued prior to 1861, and now in force, may be extended for a period of seven years upon the presentation of proper testimony. The extended term of a patent is frequently of much greater value than the first term; but an application for an extension, to be successful, must be carefully prepared. MUNN & CO. have had a large experience in obtaining extensions, and are prepared to give reliable advice.

INTERFERENCES

Between pending applications before the Commissioners are managed and testimony taken; also, Assignments, Agreements, and Licenses prepared. In fact, there is no branch of the Patent Business which MUNN & CO. are not fully prepared to undertake and manage with fidelity and dispatch.

FOREIGN PATENTS.

American inventors should bear in mind that five Patents—American, English, French, Belgian, and Prussian—will secure an inventor exclusive monopoly to his discovery among ONE HUNDRED AND THIRTY MILLIONS of the most intelligent people in the world. The facilities of business and steam communication are such, that patents can be obtained abroad by our citizens almost as easily as at home. MUNN & CO. have prepared and taken a larger number of European Patents than any other American Agency. They have Agents of great experience in London, Paris, Berlin, and other Capitals.

A Pamphlet, containing a synopsis of the Foreign Patent Laws, sent free. Address MUNN & CO., 37 Park Row, New York.

Official List of Patents.

Issued by the United States Patent Office.

FOR THE WEEK ENDING May 10, 1870.

Reported Officially for the Scientific American

SCHEDULE OF PATENT OFFICE FEES

Table with 2 columns: Description of fee and Amount. Includes fees for filing applications, appeals, extensions, and grants.

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 views.

For information, as to price of drawings, in each case, may be had by addressing MUNN & CO., Patent Solicitors, No. 37 Park Row, New York

- 102,748.—ELECTRO DEPOSITION OF NICKEL.—Isaac Adams, Jr., Boston, Mass.
102,749.—VAPOR BURNER.—John W. Baker, Columbus, Ohio.
102,750.—EARTH-CHAMBER VESSELS.—G. G. Baldwin, Milford, Conn.
102,751.—STOVEPIPE ATTACHMENT.—O. B. Bartlett and G. E. Bartlett, Lewiston, Me.
102,752.—PRUNING AND HEDGE SHEARS.—E. K. Bigelow (assignor to himself and Peter Comstock), Litchfield, Mich.
102,753.—ADJUSTABLE WATCH KEY.—J. S. Birch, New York city.
102,754.—CRIMPING ATTACHMENT TO PAPER MACHINE.—W. H. Bieasdale, Chagrin Falls, Ohio.
102,755.—BANDAGING AND BOXING CHEESE.—Joel Blood, Watertown, N. Y.
102,756.—COLLAR FOR ATTACHING COW BELLS.—T. H. Body, Kibbourn City, Wis.
102,757.—STREAM HEATING APPARATUS.—E. M. Bosley, Baltimore, Md.
102,758.—CHURN DASHER.—Francis Bosom (assignor to himself and W. A. Wright), Jonesville, Mich.
102,759.—MOP WRINGER.—Charles Bradway, Maquoketa, Iowa.
102,760.—BLEACHING, TANNING, AND COLORING SPONGES.—Frederick Brann and A. T. Schmidt, Pittsburgh, Pa.
102,761.—BIRD TRAP.—Silas M. Brooks, Memphis, Tenn.
102,762.—BUCKBOARD SPRING.—Thomas H. Brown, Chicago, Ill.
102,763.—HOISTING APPARATUS.—William H. Brown, New York city.
102,764.—HULLING MACHINE.—G. A. Buchholz, Regent's Park, London, England.
102,765.—CULINARY BOILER.—Isaac S. Bunnell, Carbondale, Pa.
102,766.—PENCIL SHARPENER.—Hubert Burgess, Oakland, Cal.
102,767.—HEATING STOVE.—Micajah Currier Burleigh, Somersworth, N. H.
102,768.—ROTARY PUMP.—Richard Bush, Brooklyn, N. Y.
102,769.—SOFA BEDSTEAD.—James C. Butler, Albany, N. Y.
102,770.—WRENCH.—Benjamin F. Buxton, West Randolph, Vt.
102,771.—FALL LEAF TABLE.—Walter Caldwell, Bryan, Ohio.
102,772.—SPOOL OR BOBBIN.—Alexander Carmichel (assignor to himself, J. P. Stillman, Ames Stillman, Albert Stillman, and Thomas V. Stillman), Westerly, R. I.
102,773.—FAUCET.—Isaac Carey, Morristown, N. J.
102,774.—DISTILLING TURPENTINE.—David Cashwell, Wilmington, N. C.
102,775.—BAR FOR HORSESHOE BLANK.—Ebenezer Cate, Watertown, Mass.
102,776.—HARVESTER.—Charles Clapp (assignor to Erastus C. Gregg and Chauncey P. Gregg), Trumansburg, N. Y. Antedated Nov. 10, 1869.
102,777.—HEATING STOVE.—F. G. Cochran, St. Louis, Mo.
102,778.—POKE.—Alvan E. Crutenden, Canaseraga, N. Y.
102,779.—FRICTION-ROLLER BEARING.—C. M. Daboll, New London, Conn.
102,780.—BOLT FOR SAFES, ETC.—G. L. Damon, Portland, Me.
102,781.—CHILL FOR CASTING TOOTHED GEAR.—R. T. Davis, Canton, Ohio.
102,782.—REVOLVING FIRE-ARM.—C. F. De Dartein and J. E. De Dartein, Strasbourg, France.
102,783.—GATE.—Benjamin F. Dickey, Marshall township, Mich.
102,784.—GAS GENERATOR.—Ellis Doty, Janesville, Wis., assignor for one half his right to Thor Judd.
102,785.—FIRE TONGS.—Samuel Douglass, Kalamazoo, Mich.
102,786.—METHOD OF MAKING TURNED SEWED SHOES.—William Duchemin, Boston, Mass., assignor to G. B. Bigelow, trustee.
102,787.—TENSION DEVICE FOR THREAD IN SEWING MACHINE.—G. L. Du Laney, Mechanicsburg, Pa.
102,788.—MEDICAL COMPOUND.—C. J. Eames, New York city.
102,789.—PLOW.—A. F. Eppes, Stony Creek, Va.
102,790.—RAZOR STROP.—William D. Evans, Philadelphia, Pa.
102,791.—WEIGHING-SCALE.—Thaddeus Fairbanks, St. Johnsbury, Vt.
102,792.—WASHING MACHINE.—John [Farmer, Rockport, Ohio.
102,793.—BOLT FOR SAFES.—John Farrel, New York city.
102,794.—BRICK MACHINE.—Charles W. Ferguson, Jackson, Tenn.
102,795.—NEEDLE-SETTERS FOR SEWING MACHINES.—J. W. Field, Marysville, Ohio.
102,796.—MANUFACTURE OF STEEL.—William Fields, Wilmington, Del.
102,797.—MANUFACTURE OF IRON.—Wm. Fields, Wilmington, Del.
102,798.—MANUFACTURE OF ARTIFICIAL FLOWERS.—O. E. Fillion, Paris, France.
102,799.—DUCK-CALL.—Elam Fisher, Detroit, Mich.
102,800.—TAG FASTENER.—Henry Fisher (assignor to himself and W. H. Williams, Canton, Ohio.
102,801.—GANG PLOW.—P. H. Flansburgh, Haywards, Cal.
102,802.—BENCH PIN.—Henry Gabelmann, Fort Scott, Kansas.
102,803.—COMB CLEANER.—Charles Edward Gibbs, Boston, Mass.
102,804.—STANCHION FOR CATTLE.—W. C. Gifford, Jamestown, N. Y.
102,805.—DEVICE FOR HANGING PICTURE FRAMES, ETC.—J. N. Gillespie, Waltham, Mass.
102,806.—REFINING AND AGEING LIQUORS.—S. H. Gilman, Galveston, Texas.
102,807.—MATCH BOX.—John H. Goodfellow and Martin Russell, Jr., Troy, N. Y.
102,808.—FREDING MECHANISM FOR SEWING MACHINES.—James E. Gowen, Stoneham, assignor to himself and C. H. Wetherell, Boston, Mass.
102,809.—BUREAU.—G. S. Graf, Pittsburgh, Pa.
102,810.—PADLOCK.—H. F. Haack, New York city.
102,811.—POTATO DIGGER.—John Hall, Jr., and Owen Flanigan, Temperanceville, Pa. Antedated December 20, 1869.
102,812.—POTATO DIGGER.—John Hall, Jr., Temperanceville, Pa.
102,813.—AGITATOR WHEEL FOR POTATO DIGGER.—John Hall, Jr., Temperanceville, Pa.

- 101,814.—POTATO DIGGER.—John Hall, Jr., Temperanceville Pa.
102,815.—GRAIN BINDER.—W. D. Harrah, Ira M. Gifford, and F. T. Johnston, Davenport, Iowa.
102,816.—ROLLING MACHINE.—J. B. Hastings, Ironton, Ohio, and G. Hastings, Jr., Wheeling, W. Va.
102,817.—ADJUSTABLE SHUTTER HOLDER.—C. N. Herr, Lampeter Pa.
102,818.—HAND CORN PLANTER.—Henry Hickman, Omaha Nebraska.
102,819.—APPARATUS FOR DISTILLING HYDROCARBON OILS.—S. A. Hill and C. F. Thumm, Oil City, assignors to themselves and O. P. Scalle, Pittsburgh, Pa.
102,820.—COMBINED LATCH AND LOCK.—Friedrich Hoppe, Stuttgart, Germany, assignor to Theodor Hahn. Antedated April 28, 1870.
102,821.—CUE-CUTTING MACHINE.—Joseph Huber (assignor to himself and Solomon Brunswick, St. Louis, Mo.
102,822.—CHURCH ORGAN.—Wm. Jackson (assignor to himself and H. C. Wilkins), Albany, N. Y.
102,823.—LIFE PRESERVER.—Lyman Jacobs, Albion, Mich.
102,824.—ACID AND WATER-PROOF COMPOSITION FOR COAT OF CLOTH, ETC.—H. W. Johas, New York city.
102,825.—SUBSOIL ATTACHMENT FOR PLOWS.—Ross Johnson, Lawrence, Kansas.
102,826.—DRAWER FOR FURNITURE.—G. F. Joyce, Boston, Mass.
102,827.—SASH SUPPORTER.—G. F. Joyce, Boston, Mass.
102,828.—MATCH SAFE.—A. D. Judd, New Haven, Conn.
102,829.—BORING BIT.—Daniel Kelley, Muskegon, Mich.
102,830.—MOSQUITO BAR.—Simon Kemper, Berger, Mo.
102,831.—CLOTHES DRYER.—Hiland H. Kendrick, Fulton N. Y.
102,832.—APPARATUS FOR OBTAINING TANNING EXTRACTS.—Simon H. Kennedy (assignor to himself and F. G. Macomber), New York city.
102,833.—MANUFACTURE OF MEDICATED MALT LIQUORS.—H. H. Kessler, Detroit, Mich.
102,834.—FENCE.—Edward Kirk, Sharon, Pa.
102,835.—HARVESTER.—Jacob Kline, Mechanicsburg, assignor to himself and George Winters, Harrisburg, Pa.
102,836.—HEALING PLASTER.—William Kramer, New York city.
102,837.—VEGETABLE CUTTER.—H. P. Lauer and M. C. Reichard, Pottsville, Pa.
102,838.—BRIDLE BIT.—William P. Letchworth, Buffalo, N. Y.
102,839.—PLATFORM FOR HARVESTERS.—Christopher Lidren (assignor to himself and R. Jackson), La Fayette, Ind.
102,840.—RAILWAY CAR BRAKE.—Almerin H. Lighthall, Albany, N. Y.
102,841.—CULTIVATOR.—Truman Mabbett, Sr., Vineland, N. J.
102,842.—PLANING MACHINE.—George H. Mansfield, Concord, N. H.
102,843.—TRACE BUCKLE.—T. C. Martin and J. Offineer (assignors to T. C. Martin, John Taylor, and Daniel Geiselman), Perrysville, Pa.
102,844.—TWEER OF BLAST FURNACE.—T. W. McCune, Pittsburgh, Pa.
102,845.—LADDER.—W. H. McHench, Cobleskill, N. Y.
102,846.—PAVEMENT.—Abram B. McKeon, Rutherford Park, N. J.
102,847.—HEAD BLOCK FOR SAW MILLS.—Cornelius Meiners Indianapolis, Ind.
102,848.—SELF-PACKING BUSH FOR SPINDLES.—Carl Miller Sandoval, Ill.
102,849.—APPARATUS FOR CORRUGATING METAL.—Jas. Montgomery, New York city.
102,850.—TOOL FOR MAKING SLIDES FOR EXTENSION TABLES.—S. J. Moore and G. A. Buckman, Odensburg, N. Y.
102,851.—MECHANISM FOR STRIPPING THE TOP FLATS OF CARDING MACHINES.—Ferdinand Morf, Wetzikon, Switzerland.
102,852.—TRUSS.—Peter Mueller, Middle Lancaster, Pa.
102,853.—WHEEL FOR VEHICLE.—Ira F. Munson, Washington, D. C.
102,854.—APPARATUS FOR CLEANING AND PREPARING RAGS FOR MANUFACTURE OF PAPER.—W. E. Newton, London, England.
102,855.—FUNNEL.—P. H. Niles, Boston, Mass.
102,856.—ELECTRO MAGNET.—H. M. Paine, Newark, N. J., assignor to himself and M. S. Frost, New York city.
102,857.—SELF-DISCHARGING PULVERIZING BARREL.—A. B. Paul, San Francisco, Cal.
102,858.—LANTERN.—Samuel Peters, Crescent, N. Y.
102,859.—FARM GATE.—Howard Piper, Haskins, Ohio.
102,860.—PLOW.—S. W. Pope, Louisville, Ky.
102,861.—SPOKE FOR WAGON WHEELS.—Robert Potts and Nathaniel Ogden, Chatham, N. Y.
102,862.—BRICK MOLD AND BOTTOM BOARD.—A. T. Putnam, Detroit, Mich.
102,863.—WHIP.—A. C. Rand, Westfield, Mass.
102,864.—ALARM TILL.—Eden Reed (assignor to himself and L. L. Warren), St. Louis, Mo.
102,865.—SCRUBBING BRUSH AND MOP WRINGER.—Edwin Rees (assignor to himself and Lewis Scull), Stoddartsville, Pa.
102,866.—HEATING DRUM.—Jesse Reynolds, Philadelphia, Pa.
102,867.—CONNECTION OF SPRINGS FOR BED BOTTOMS, SEATS, ETC.—Chas. Rich, Foughkeepsie, N. Y.
102,868.—BLEACHING STRAW GOODS.—A. M. Rosbrugh, Pannora, Iowa.
102,869.—PRESERVING AND HARDENING STONE, BRICK, ETC.—E. J. Salisbury (assignor to himself and George A. Brush), San Francisco, Cal.
102,870.—APPARATUS FOR SAVING GOLD.—Chas. Schofield Kernville, Cal.
102,871.—RIVETING HAMMER.—H. A. Seymour and W. H. Nettleton, Bristol, Conn.
102,872.—WINDOW SCREEN.—George Shatswell, Waukegan, Ill.
102,873.—FASTENING FOR RAILROAD RAILS.—George Shatswell (assignor to himself and E. M. Haines), Waukegan, Ill.
102,874.—STALL FOR FEEDING ANIMALS.—S. H. Shaw, Attica, N. Y.
102,875.—FLAX PULLER.—Jas. Smith, Troy, N. Y.
102,876.—AXLE NUT.—E. A. Stanley (assignor to himself and O. A. Palmer), Brewer, Me.
102,877.—COVER FOR CHAMBER VESSEL.—Wm. Stockton, New York city.
102,878.—BATHING APPARATUS.—William Tell Street, Frankfurt, Pa.
102,879.—BAILING PRESS.—B. F. Stroud, Marshall, Texas.
102,880.—STOVE GRATE.—Levi Stuck, Bryan, Ohio.
102,881.—FILTER.—Taylor P. Thompson (assignor to himself and L. R. Bradbury), Charlestown, Mass.
102,882.—LEVELLING AND GRADING INSTRUMENT.—H. E. Towle, New York city.
102,883.—LIQUOR METER.—S. C. Treat, Tabor, Iowa, assignor to himself and C. P. Treat, Oberlin, Ohio.
102,884.—WOODEN-BLOCK PAVEMENT.—Alexandre Trenau may, Neuilly-sur-Seine, near Paris, France.
102,885.—IMPLEMENT FOR MEASURING BOARDS.—Melzer Tuells, Penn Yan, N. Y.
102,886.—APPARATUS FOR ASSORTING POTATOES, ETC.—J. F. English, Webster, N. Y.
102,887.—METALLIC CHURN DASHER.—Orrin Urdike, Grass Lake, Mich.
102,888.—PEGGING JACK.—Charles Varney, East Brookfield, Mass.
102,889.—HAMES BUCKLE.—David Vogt, Trenton, Mich.
102,890.—HARVESTER DROPPER.—Aaron Ward (assignor to himself and Jesse Hiatt), Dublin, Ind.
102,891.—HOE.—Edward Warren, Ceresco, Mich.
102,892.—LAMP CHIMNEY.—S. W. Warren, Boston, Mass., assignor to himself and G. B. Parrott.
102,893.—MACHINE FOR VARNISHING PENCILS, ETC.—Albin Warth, Stapleton, and Philipp Hufeland, and Geo. Braun, New York city assignors to Eberhard Faber, New York city.
102,894.—MOLD FOR MAKING RUBBER PENCIL TIPS.—Wm. Weicker, Blackstone, Mass.
102,895.—LANTERN.—Wm. Westlake, Chicago, Ill.
102,896.—LANTERN.—Wm. Westlake, Chicago, Ill.
102,897.—LAMP BURNER.—H. J. White, Boston, Mass.

- 102,898.—MACHINE BAND.—Samuel J. Whitton, Coleraine, Mass.
- 102,899.—SPRING CLAMP FOR GLASS BLOWERS.—T. Wightman, Pittsburgh, Pa.
- 102,900.—BLIND, SCREEN, AND SHUTTER.—B. J. Williams, Philadelphia, Pa.
- 102,901.—CRUTCH.—P. R. Wimer, Trenton, N. J.
- 102,902.—WIRE AND STONE FENCE COMBINED.—H. C. Wire, Wilmington, Ohio.
- 102,903.—BRICK MACHINE.—Robert Wolff, New York city, assignor to himself and Bernard Silverman, Brooklyn, N. Y.
- 102,904.—STANCHION FOR SECURING CATTLE.—E. S. Alford, Harmony, N. Y.
- 102,905.—BUGGY GEARING.—John B. Augur, Poughkeepsie, N. Y. Antedated Jan. 13, 1870.
- 102,906.—MANUFACTURE OF SOAP.—H. M. Baker, Washington, D. C.
- 102,907.—MACHINE FOR CUTTING, STAMPING, AND PACKING SOAP.—Lurandus Beach and Lurandus L. Beach, Jr., Lawrence, Mass.
- 102,908.—RAILWAY CAR WHEEL.—C. K. Bradford, Lynnfield, Mass. Antedated April 29, 1870.
- 102,909.—WATER WHEEL.—Truman Bristol Cheshire, assignor to himself and Charles Monson, New Haven, Conn.
- 102,910.—FERTILIZER DISTRIBUTER, CORN AND COTTON-SEED PLANTER.—E. M. Brooks, Woodbury, Ga.
- 102,911.—COMPOSITION FOR VARNISH, ETC.—Henry Browning, No. 77 Salmon Lane, Limehouse, England. Patented in England, June 1, 1869.
- 102,912.—MANUFACTURE OF IRON AND STEEL.—J. P. Budd, Ystalyfera, near Swansea, Wales. Patented in England, March 8, 1869.
- 102,913.—FRUIT JAR.—John L. Mason, New York city.
- 102,914.—DROPPING PLATFORM FOR HARVESTERS.—E. P. Cady, Trenton, Wis.
- 102,915.—INDELIBLE WRITING FLUID OR INK.—J. M. Caldwell and G. W. Caldwell, Burlington, N. J.
- 102,916.—MACHINE FOR STRAIGHTENING BARS OF METAL.—Ethan K. Cheney (assignor to himself and Naylor & Company), Boston, Mass.
- 102,917.—BEEHIVE.—Wm. Courtney, Richview, Ill.
- 102,918.—PAPER FILE.—E. J. Crane, La Porte, Ind.
- 102,919.—VISE.—Edwin Crawley and T. L. Baylies, Richmond, Ind.
- 102,920.—MACHINE FOR THE MANUFACTURE OF WOODEN TRAYS.—C. H. Dana, West Lebanon, N. H.
- 102,921.—SAWING MACHINE.—Marcus E. Dean, Foxborough, Mass.
- 102,922.—COMPOSITION FOR COATING WOOD, METAL, ETC.—P. S. Devlan, Jersey City, N. J. Antedated May 4, 1870.
- 102,923.—PACKING CASE FOR SAWS.—Henry Disston, Philadelphia, Pa.
- 102,924.—MACHINE FOR PUNCHING METAL.—Ellis Doty, Janesville, Wis.
- 102,925.—COOKING RANGE.—B. Wells Dunklee, Boston, Mass.
- 102,926.—LAMP EXTINGUISHER.—Wm. C. Ebert, Hannibal, Mo.
- 102,927.—CHILDREN'S CARRIAGE.—Roscoe G. Elder, New York city.
- 102,928.—WASHING MACHINE.—Daniel Elicker, Mulberry, Pa.
- 102,929.—BRICK MACHINE.—Titus S. Emery, Philadelphia, Pa.
- 102,930.—STOVE LEG.—Elijah Evans, Sparta, Ohio.
- 102,931.—MACHINE FOR FOLDING OR WINDING AND MEASURING CORDS, ETC.—C. P. Farmer, Philadelphia, Pa.
- 102,932.—BRUSH WHEEL.—Philip Felker, Providence, R. I.
- 102,933.—CASTING LUGS IN STOVE PLATES.—J. M. Fife, Beaver Falls, Pa.
- 102,934.—FORK FOR PEACH PARER.—D. H. Goodell, Antrim, N. H.
- 102,935.—HOLD-BACK FOR VEHICLES.—Wm. H. Groesbeck, Saratoga Springs, N. Y.
- 102,936.—BROOM.—Wm. S. Hancock, Chicago, Ill.
- 102,937.—SCAFFOLD SUPPORTER.—David B. Hay, Dayton, Ohio.
- 102,938.—BAKING PAN.—Allen Heminway and W. A. Daggett (assignor to Allen Heminway and Caleb H. Bennett), Lanais township, N. J.
- 102,939.—WATER WHEEL.—Wm. H. Hubbard, New Haven, Conn.
- 102,940.—DOUBLE AND SINGLE-TREE FASTENING FOR CARRIAGES.—Joseph Ingels, Milton, Ind.
- 102,941.—SCHOOL DESK AND SEAT.—Joseph Ingels, Milton, Ind.
- 102,942.—MACHINE FOR LINING AND DRYING PASTEBOARD.—G. L. Jaeger, New York city.
- 102,943.—BREAD MACHINE.—L. P. Jenks (assignor to himself and Aaron Kingsbury), Boston, Mass.
- 102,944.—SHEARS AND SCISSORS.—C. C. Johnson, Springfield, Vt.
- 102,945.—COAT AND HAT HOOK.—Morton Judd, New Haven, Conn. and H. L. Judd, Brooklyn, N. Y.
- 102,946.—SHOE.—Ferdinand Kilsheimer, Cincinnati, Ohio.
- 102,947.—COUNTER SEAT.—Daniel H. Krauser, Pottsville, Pa.
- 102,948.—HYDRAULIC ENGINE.—A. D. Laws, Bridgeport, Conn.
- 102,949.—MACHINE FOR CUTTING, STAMPING, AND PACKING SOAP.—Charles Lehmann, Hartford, Conn.
- 102,950.—MACHINE FOR ENGRAVING AND CHASING ARTICLES OF METAL.—Thomas Lippitt, Orange, N. J.
- 102,951.—APPARATUS FOR PRESERVING FRUIT.—William W. Lyman, Meriden, Conn.
- 102,952.—FRUIT CAN.—Stimmel Lutz, Philadelphia, Pa.
- 102,953.—HARNESS SADDLE.—C. K. Marshall, New Orleans, La.
- 102,954.—MODE OF OPERATING SHUTTERS FOR HATCHWAYS.—J. H. McKernan, Indianapolis, Ind.
- 102,955.—WATER ELEVATOR AND CARRIER.—Archibald A. McPheters and R. P. McPheters, Arbor Hill, Va.
- 102,956.—HOT AIR FURNACE.—Geo. H. Miller, Leavenworth, Kansas.
- 102,957.—UNIVERSAL SQUARE.—D. M. Moore (assignor to E. G. Lamborn), Windsor, Vt.
- 102,958.—MATERIAL FOR PACKING JOURNALS AND BEARINGS.—Eliza D. Murfey, New York city.
- 102,959.—CLOD FENDER AND CULTIVATOR COMBINED.—B. F. Neely, Daleville, Ind.
- 102,960.—RE-WORKING BESSEMER STEEL.—Charles Motier, New York, Pa.

- 102,961.—BOOT AND SHOE HEEL.—G. E. Newcomb, Bucksport, Me.
- 102,962.—NOODLE MACHINE.—Dominick Obergfell, Wheeling, West Va.
- 102,963.—COTTON PRESS.—William Pendleton and Henry M. Boardman, Augusta, Ga.
- 102,964.—PRESSURE BLOWER.—Joseph Perrault, Troy, N. Y.
- 102,965.—FEED WATER HEATER.—William Phelan, Peoria, Ill.
- 102,966.—CARPENTERS' PLANE.—Zephaniah Phillips, Dixon, Ill.
- 102,967.—VENTILATOR REGISTER.—Hugh M. Phinney, Cambridge, Mass.
- 102,968.—MACHINE FOR DRESSING MILLSTONES.—William Pickens and Peter Dalrymple, Chicago, Ill.
- 102,969.—MANUFACTURE OF SUGAR.—Juan Poey, Havana, Island of Cuba.
- 102,970.—VALVE FOR HOUSE BOILERS.—John C. Rhodes, Brooklyn, N. Y.
- 102,971.—ROLLER SKATE.—Hiram Robbins (assignor to himself and William K. Morris, Cincinnati, Ohio).
- 102,972.—WASHING MACHINE.—Job Robinson, Lawrence, Kansas.
- 102,973.—OIL CUP.—James Ross, North Cambridge, Mass.
- 102,974.—FUNNEL.—Carl Ruf, New York city.
- 102,975.—FENDING MACHINE.—John J. H. Sercombe, New London, Wis.
- 102,976.—WATER METER.—Gerard Sickels, Boston, Mass.
- 102,977.—TABLE AND COUNTER.—Sigmund Simonson, Bridgeport, Conn.
- 102,978.—LOCOMOTIVE AND TENDER COUPLING.—Thomas D. Simpson, Mount Vernon, Ohio.
- 102,979.—GARDEN RAKE.—Luther Sisson, North Easton, Mass.
- 102,980.—MEDICAL COMPOUND.—Geo. H. Smith (assignor to himself and Stephen Gay), New Orleans, La.
- 102,981.—WASHING SOAP.—John C. Smith, Berville, Pa.
- 102,982.—HAT CHECK.—John E. Smith, Waterbury, Conn.
- 102,983.—MEDICATED SOAP.—Thomas Franklin Smith, New York city.
- 102,984.—SHOT CARTRIDGE.—C. E. Sneider (assignor for one half his right to Josias Pennington, Jr.), Baltimore, Md.
- 102,985.—VAGINAL SYRINGE.—Wm. B. Snyder (assignor to himself, J. E. Dewhurst, and Robert Hubbard), Bridgeport, Conn.
- 102,986.—APPARATUS AND PROCESS FOR REFRIGERATING, PRESERVING, AND VENTILATING.—D. E. Somes, Washington, D. C.
- 102,987.—FOUNDERY FLASK CLAMP.—C. C. Stewart, Oneonta, N. Y.
- 102,988.—TOY HOOP.—Cebra L. Taylor, Norwich, Conn.
- 102,989.—WARP STAND FOR LOOM.—P. D. Tift, Eagleville, Ohio. Antedated May 3, 1870.
- 102,990.—SHIRT.—Henry Wallace, New York city.
- 102,991.—WOODEN STREET PAVEMENT.—C. G. Waterbury, New York city.
- 102,992.—THERMOSTAT FIRE ALARM.—William B. Watkins, Jersey City, N. J.
- 102,993.—CULTIVATOR.—N. G. Webber, East Springfield, Pa.
- 102,994.—IMPLEMENT FOR TURNING THE EDGE OF A SHOEMAKER'S BUZZING KNIFE.—B. B. Webster, East Haverhill, Mass.
- 102,995.—LAMP FOR HALLS, GARDENS, ETC.—Adelbert W. Wehrhan, Columbia, S. C.
- 102,996.—HEAD BLOCK OF SAW MILLS.—Winslow Wellington, Hillsborough, N. H., assignor to Benjamin Wellington, Buffalo, N. Y.
- 102,997.—FEED APPARATUS FOR GRINDING MILLS, ETC.—J. D. Whelpley and J. J. Storer, Boston, Mass.
- 102,998.—WHEEL HUB.—C. P. Whitman, Charlemont, Mass.
- 102,999.—GOOSE NECK FOR HANGING CARRIAGE SPRINGS.—Stephen M. Wier, New Haven, Conn.
- 103,000.—BARREL.—Henderson Willard, Grand Rapids, Mich.
- 103,001.—METHOD OF FORMING CYLINDER.—Henderson Willard (assignor for one half his right to W. S. Crippen), Grand Rapids, Mich.
- 103,002.—FLOUR BOLTING REEL.—A. L. Williams (assignor to himself and J. H. Bell), Ohio, Ind.
- 103,003.—FLOURING MILL.—Uriah Bowman, Craig's Mills, Va.
- 103,004.—SEAT FOR HARNESS SADDLES.—Peter Burns, Syracuse, N. Y.

REISSUES.

- 3,963.—RAILWAY AXLE BOX.—J. B. Fletcher, St. Albans, Vt., assignee of C. B. Boynton.—Patent No. 70,733 dated November 12, 1867.
- 3,964.—MANUFACTURE OF INKSTAND.—T. S. Hudson, East Cambridge, Mass.—Patent No. 94,113, dated August 24, 1869.
- 3,965.—BASE BURNING STOVE.—Geo. G. Hunt, Quincy, Ill.—Patent No. 38,828, dated June 9, 1863.
- 3,966.—DEVICE FOR FLANGING FLUE-HOLE OF BOILER HEADS.—Edward Regan, Indianapolis, Ind.—Patent No. 99,707, dated February 8, 1870.
- 3,967.—GRATE FOR FURNACES.—E. S. Renwick, Millburn, N. J.—Patent No. 81,409, dated August 18, 1868.
- 3,968.—STOVE FOR BURNING STUMPS.—Henderson Willard, Grand Rapids, Mich.—Patent No. 98,501, dated February 15, 1870; antedated January 20, 1870.

DESIGNS.

- 4,011.—TRADE MARK.—Robert W. Bell, Buffalo, N. Y.
- 4,012.—TRADE MARK.—Paris Gibson and Alexander Tyler, Minneapolis, Minn.
- 4,013.—FIRE TONGS.—Sylvester S. Green, Henrietta, N. Y.
- 4,014.—CALENDAR.—Hans C. Heistad, Brooklyn, N. Y.
- 4,015.—BREAST STRAP SLIDE.—John Henderson, Albion, N. Y.
- 4,016.—DRAWER PULL.—Albert D. Judd, New Haven, Conn.
- 4,017.—HAND STAMP.—Albert L. Munson, New Haven, Conn.
- 4,018.—SHADE FOR GAS OR LAMP BURNERS.—Felix Rodgers, Philadelphia, Pa.
- 4,019.—MUFF.—John Simonet, Flatbush, N. Y.
- 4,020.—OVERHEAD WORK FOR PASSENGER ELEVATOR CARS.—Otis Tufts, Boston, Mass.
- 4,021.—LAMP FOUNT.—Henry Whitney, East Cambridge, Mass.
- 4,022.—CANDLESTICK.—Henry Whitney, East Cambridge, Mass.

EXTENSIONS.

- PRINTING TELEGRAPH.—H. N. Baker, Binghamton, N. Y.—Letters Patent No. 14,759, dated April 29, 1855; reissue No. 3,312, dated January 25, 1870.
- CONSTRUCTION OF ARTIFICIAL LEGS.—William Selpho, New York city.—Letters Patent No. 14,836, dated May 6, 1856.

NEW BOOKS AND PUBLICATIONS.

HAND-BOOK OF THE STEAM ENGINE.—Containing all the Rules Required for the Right Construction of Engines of every Class. With the Easy Arithmetical Solution of those Rules, constituting a Key to the Catechism of the Steam Engine. Illustrated by Sixty-seven Woodcuts and Numerous Tables and Examples. By John Bourne, C.E., author of "A Treatise on the Steam Engine," "A Treatise on the Screw Propeller," "A Catechism of the Steam Engine." New Edition. Philadelphia: J. B. Lippincott & Co. London: Longman & Co.

This edition of a well-known popular and standard work contains little that is new, yet it is none the less valuable on that account. The reasons why there could not be many additions are so well set forth in the author's instructive preface that we copy a portion as the best notice we can give of the book. Mr. Bourne says: "In this third edition of the present work, I have merely corrected some typographical and arithmetical errors, which had escaped detection in the earlier issues, and the existence of some of which has been brought to my knowledge by correspondents. Since the appearance of the first edition, there have been no improvements in the steam engine of any importance; and in the Paris Exhibition of 1867, the machinery department of which I carefully inspected, I found that although much strained and fantastic ingenuity was displayed in many of the engines exhibited, there was in point of fact nothing to be seen that could be accounted a solid and permanent improvement. For many years past, indeed, I have ceased to expect the realization of substantial improvement in the steam engine; and what I now looked forward to is its early supersession by less cumbersome and costly motors. With this conviction I have undertaken a new quarto work on 'Steam, Air, and Gas Engines,' which treats of all kinds of motive power engines, and which, reviewing all the reasonable expedients which have been proposed for obtaining motive power, discusses their comparative merits, specifies what expedients have been again and again published or long ago patented, so that they are now public property open to the adoption of any one, and points out in what direction improvement must advance to attain results superior to any that have yet been realized. To carry improvement forward, two things are necessary; 1st. That there shall be a clear conception of what it is desirable to effect; and 2d. That there shall be an accurate knowledge of what expedients are available for carrying such improvement out without being hindered at every step by the wide and ambiguous claims of pretended patentees, who in most cases have in reality invented nothing that was not notorious and obsolete long before they appeared upon the field."

COSMOLOGY. By George M'Ilvaine Ramsay, M.D. Published by William White & Co., Boston.

We do not like to be unjust, nor to censure without cause. We cannot, however, commend this work. The author has altogether too much poetry in his composition for a philosopher. That he has taken a rather large contract upon his hands the reader can judge from the following extract from on page 15: "Oh, man, buckle on thy whole mental armor, and strive to get thee back upon the chimes of time, to a period anterior to the sun's existence, to the sun's formation; to a period when there was no light, and there in deep, dark darkness and solitude, let thy non-created mind contemplate the yet uncreated, visible universe. Perchance thou mayst feel the first tiny glow of heat; or see the first flicker of light by the powers of which two primordial atoms of matter were ousted from their eternity of rest and were made to unite in one, and thus creation was begun." These last italics are our own. It will be seen that when the author "gets his whole mental armor buckled on," he hopes to know, and presumably that his readers having read his book, will know all about it—its meaning, creation, not the book. This journey "back upon the chimes of time" to behold the first two primordial atoms of matter ousted" would, doubtless, be a very pleasant trip, and perhaps profitable, but the author will excuse us for a little timidity as to the undertaking. If he could only manage to get his readers fairly mounted "upon the chimes of time" before they were fully aware of what he was going to do with them, the excursion might not be in reality so formidable as this very poetic programme makes it appear. In short, to be serious, the author's style is too grandiloquent for the gravity and character of the subject with which he deals. The book may have merit, but we fear that others will share the prejudices which such passages as the one quoted inevitably awaken.

NATHAN READ: His Invention of the Multi-Tubular Boiler, and Portable High-Pressure Engine, and Discovery of the True Mode of Applying Steam Power to Navigation and Railways. A Contribution to the Early History of the Steamboat and Locomotive Engine. By his Friend and Nephew, David Read. New York: Hurd & Houghton. Cambridge: Riverside Press.

There is little doubt that many entitled to a large share of the credit due to those who have been instrumental in the development of the application of steam to the propulsion of machinery, culminating in the steam railway, and the majestic ocean steamer of modern times, have not received their dues in this respect, and that others have been overpaid by a grateful posterity. The simple love of justice will therefore impel the candid reader to examine the present work with attention. The author has, in our opinion, made a rather strong case in favor of his uncle's claims to a share of grateful remembrance, and has, moreover, given many interesting and important particulars relating to the inventions of others. The book is a small octavo, printed and bound in a very neat and tasty style. It will be found decidedly interesting, both in the matters of fact it contains and the style in which they are presented. We publish, in another column, a biographical sketch of Mr. Nathan Read, extracted from the work.

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