

- 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 Steamboats. A Contribution to the Early History of the Railway 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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