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The paper that meets the eye of manufacturers throughout the United States—Boston Bulletin, \$4 00 a year. Advertisements 7c. a line.

A Book of Simple Rules and Formulæ, for the Solution of all Problems in the Application of Steam. By J. M. Derby, Professor at the Ecole Centrale, Brussels. By mail, \$1. A. W. Macdonald, 29 Beekman st., New York.

\$3.—The Celebrated Craig Microscope and two mounted Entomological objects sent prepaid for \$3. This is an instrument of great power, magnifying 10,000 times, and is the cheapest microscope extant. Over 60,000 sold during the past five years. Theo. Tusch, 37 Park Row, N. Y.

Capital wanted to manufacture licensed shuttle Sewing Machines. Address "Inventor," care of S. M. Pettengill & Co, 37 Park Row, N. Y.

A Chemist, Analytical and Manufacturing, of many years' experience in the largest chemical factories in Germany and in this country, wants an engagement. Best references given. P. O. Box 172, Hoboken, N. J.

Cotton Wadding Machinery.—To Manufacturers.—Wanted, a first-class set of Sizing Machinery, with latest improvements. Address Ross & Walker, Box 773, New York.

Wanted.—A new or second-hand Band or Scroll Saw Machine, to split or re-saw boards, from 6 to 12 inches wide. Address, with prices, F. K. Smith, Bennington, Vt.

Wanted.—Partner to take an interest in an established Foundry, Engine and Machine Shop, in the West. Prefer practical mechanic to take charge. Address S. L. McHenry, 355 Liberty st., Pittsburgh, Pa.

E. P. Peacock, Manufacturer of Cutting Dies, Press Work, Patent Articles in Metals, etc. 55 Franklin st., Chicago.

Grindstones made by Machinery. J. E. Mitchell, Philadelphia.

Grindstones ready for use. J. E. Mitchell, Philadelphia.

Steel Castings, of the best quality, made from patterns, at Union Steel and Iron Works, Rhinebeck, N. Y.

Wanted.—Second-hand Index Milling Machine, in good order. A. N. Darling, Brooklyn Watch Case Factory, 42 State st.

Ashcroft's Low Water Detector. \$15; former price, \$30. Thousands in use. E. H. Ashcroft, sole proprietor of the patent, Boston, Mass. See how cheap Thomas sells Lathes and Drills, in another column.

House Planning.—Geo. J. Colby, Waterbury, Vt., offers information of value to all in planning a House. Send him your address.

Japanese Paper-ware Spitoons, Wash Basins, Bowls, Pails, Milk Pans, Slop Jars, Compoide Pails, Trays. Perfectly water-proof. Will not break or rust. Send for circulars. Jennings Brothers, 332 Pearl st., N. Y.

Conklin's Detachable Rubber Lip, for bowls, etc., works like a charm. For Rights, address O. P. Conklin, Worcester, Mass., or A. Daul, Philadelphia, Pa.

For the best Self-regulating Windmill in the world, to pump water for residences, farms, city buildings, drainage, and irrigation, address Con. Windmill Co., 5 College Place, New York.

Belting that is Belting.—Always send for the Best Philadelphia Oak-Tanned, to C. W. Arny, Manufacturer, 301 Cherry st., Phil'a.

For Fruit-Can Tools, Presses, Dies for all Metals, apply to Bliss & Williams, successor to May & Bliss, 118, 120, and 122 Plymouth st., Brooklyn, N. Y. Send for catalogue.

For Solid Wrought-iron Beams, etc., see advertisement. Address Union Iron Mills, Pittsburgh, Pa., for lithograph, etc.

For mining, wrecking, pumping, drainage, and irrigating machinery, see advertisement of Andrews' Patents in another column.

Keuffel & Esser 116 Fulton st., N. Y., the best place to get 1st-class Drawing Materials, Swiss Instruments, and Rubber Triangles and Curves

Cold Rolled-Shafting, piston rods, pump rods, Collins pat. double compression couplings, manufactured by Jones & Laughlins, Pittsburgh, Pa.

Machinery for two 500-ton propellers, 60-Horse Locomotive Boiler, nearly new, for sale by Wm. D. Andrews & Bro., 414 Water st., N. Y.

Manufacturers and Patentees.—Agencies for the Pacific Coast wanted by Nathan Joseph & Co., 619 Washington st., San Francisco, who are already acting for several firms in the United States and Europe, to whom they can give references.

To Cure a Cough, Cold, or Sore Throat, use Brown's Bronchial Troches.

Taft's Portable Hot Air, Vapor and Shower Bathing Apparatus Address Portable Bath Co., Sag Harbor, N. Y. (Send for Circular.)

Glynn's Anti-Incrustator for Steam Boilers—The only reliable preventive. No foaming, and does not attack metals of boilers. Price 25 cents per lb. C. D. Fredricks, 587 Broadway, New York.

The Merriman Bolt Cutter—the best made. Send for circulars. H. B. Brown & Co., Fair Haven, Conn.

Building Felt (no tar) for inside and out. C. J. Fay, Camden, N. J.

Patent Elliptic-gear Punches and Shears.—The greatest economy of power, space, and labor. Can be seen in operation at our factory, in Trenton, N. J. Address American Saw Co., 1 Ferry st., New York.

Hand Screw Punches and Lever Punches. American Saw Co., New York.

Crampton's Imperial Laundry Soap, washes in hard or salt water, removes paint, tar, and grease spots, and, containing a large percentage of vegetable oil, is as agreeable as Castile soap for washing hands. "Grocers keep it." Office 94 Front st., New York.

Peck's Patent Drop Press. Milo Peck & Co., New Haven, Ct

Diamond Carbon, of all sizes and shapes, furnished for drilling rock, sawing and turning stone, conglomerates, or other hard substances, also Glazier's Diamonds, by John Dickinson, 64 Nassau st., New York.

Self-testing Steam Gage—Will tell you if it is tampered with, or out of order. The only reliable gage. Send for circular. E. H. Ashcroft, Boston, Mass.

English and American Cotton Machinery and Yarns, Beam Warps and Machine Tools. Thos. Pray, Jr., 57 Weybosset st., Providence, R. I.

"Edson's Recording Steam Gage and Alarm," 91 Liberty st., New York. Illustrated in SCIENTIFIC AMERICAN, January 14, 1871.

Improved Foot Lathes. Many a reader of this paper has one of them. Selling in all parts of the country, Canada, Europe, etc. Catalogue free. N. H. Baldwin, Laconia, N. H.

Thomson Road Steamers save 50 per cent over horses D. D. Williamson, 32 Broadway, New York.

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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 \$4 00 a year

For small, soft, Gray Iron Castings, Japanned, Tinned, or Bronzed, address Enterprise Manufacturing Company, Philadelphia.

Queries.

[We present herewith a series of inquiries embracing a variety of topics of greater or less general interest. The questions are simple, it is true, but we prefer to elicit practical answers from our readers, and hope to be able to make this column of inquiries and answers a popular and useful feature of the paper.]

1.—REMOVING INCRUSTATION BY THE USE OF POTATOES.—A correspondent says that potatoes are a good solvent for mud and scale in steam boilers, but gives no data for use. I would like to know in what quantity? and how long after putting in before the boiler should be blown off, etc.?—H. A. H.

2.—REMOVING CHIMNEY STAINS.—How can I remove the stain and smell of creosote, caused by the condensed empyreumatic oil which has trickled down and soaked into the plaster wall below the stove-pipe hole in a chimney?

3.—JAPANNING CAST IRON.—How can I japan cast iron so that it will have the color of russet leather?

4.—PAPER PERCUSSION CAPS.—How are paper percussion caps made, and what is the fulminating material used therein?—F. F. F.

5.—SAWS AND SAW STEEL.—Is saw steel welded up after rolling, or is it welded up in large pieces and afterwards rolled? Are hand-saw blades cut from sheets, heel and point alternately? and what is the reason that such saws are often thicker at the point than at the heel?—A. R. S.

6.—RESTORING THE COLOR TO GOLD AFTER SOLDERING.—How is the color of gold restored after hard soldering?—R. K.

7.—SHOE BLACKING.—I wish a good recipe for a varnish or blacking for boots and shoes.—W. H. P.

Recent American and Foreign Patents.

Under this heading we shall publish weekly notes of some of the more prominent home and foreign patents.

CORN DROPPER.—J. H. Gross, Niantic, Ill.—This invention relates to improvements in corn dropping and check marking machines, and consists in the application to a pair of runners of a pair of star wheels, a dropping slide, and a check marking device, whereby the star wheels derive the rotary motion by the points coming in contact with the ground as the runners are drawn along and actuate the dropping slide and the marker, the whole arrangement being very simple, cheap, and efficient.

MILL-STONE BALANCE.—John Walch, Galena, Ill.—This invention relates to improvements in balancing apparatus for mill stones, and consists in a frame made in two parts, having lugs for attachment to the upper and lower edges of the hoop of the mill stone, and clamping bolts, connecting them together and clamping them on the hoop; on which frames are arranged a pair of weights to be adjusted to or from the plane of the point of suspension of the stone. Three of these frames are to be attached to the hoop, and adjusted.

GATES.—L. W. Sebley, Ames, Iowa.—This invention relates to improvements in gates, and consists in an improved arrangement of means for opening and closing the gate by the action of the wheels of a vehicle coming in contact with levers at the side of the gate.

PUMP.—G. H. Laub, West Lebanon, Ind.—This invention relates to an improved manner of attaching metal barrels, for the valves to work in, to wooden pipes, for detaching and removing the barrels when required for cleaning or repairs.

BARK MILL.—G. E. Palen and F. P. Avery, Tunkhannock, Pa.—The object of this invention is to improve the machines for grinding bark in such manner that they can be adjusted to any extent, readily repaired, and perfect in their operation.

GANG PLOW.—J. R. McConnell, Marengo, Iowa.—This invention has for its object to furnish an improved gang plow, which shall be so constructed and arranged that it may be conveniently adjusted to work at any desired depth, or to cut a narrower or wider furrow, as may be desired.

TREATMENT OF FRUIT TREES.—William J. Everett, Mahony City, Pa.—This invention relates to a new and useful improvement in the treatment of fruit and other trees, for preserving them from the ravages of worms, grubs, and insects.

BEE HIVE.—David H. Swartz, Lancaster, Ohio.—This invention has for its object to furnish an improved bee hive, which shall be so constructed as to protect the bees from moths and ants, and which shall at the same time be simple in construction, and will enable the bees to be conveniently controlled.

MILL-STONE DRIVER.—John J. Tomlinson, Bazeman City, Montana.—This invention relates to a new and useful improvement in drivers for mill stones, by means of which the running stone adjusts itself to the bed-stone, and to the resistance when the latter is out of level, or when the spindle is out of "tram," or varies from a line perpendicular with the face of the bed.

TRAY HOLDER.—Obed Fahnestock, Indianapolis, Ind.—This invention relates to a new and improved holder for trays, by which to carry them on one arm; and it consists in a plate provided with handles for supporting and carrying it on the arm, on which plate suitable holding devices are placed at the top to hold the tray.

BELT TIGHTENER.—G. W. Runk, Franklin, La.—This invention relates to a new apparatus for clamping belts while the same are on the pulleys, and for stretching the same so that they may be tightened.

WATER COOLER.—Abel Putnam, Jr., Saratoga Springs, N. Y.—This invention relates to a water cooler having two separate compartments, one to contain water and the other ice, the annular water space being exterior to the ice compartment, and each chamber having an opening of its own.

CAST-IRON BARREL.—Abel Putnam, Jr., Saratoga Springs, N. Y.—This invention consists of a cast-iron barrel, provided with a porcelain lining, and one solid and one detachable head.

HOUSEHOLD IMPLEMENT.—E. H. Schmults and Jacob Baker, New York city.—This invention relates to a new instrument which can be used for picking and breaking ice, opening all kinds of bottles, and lifting kettles, stove plates, etc.

GATE.—W. G. Franklin, Shelbina, Mo.—This invention has for its object to furnish an improved gate, which shall be so constructed and arranged, that, when opened, its forward end may swing up from the ground, to pass over snow or other obstructions, and which shall be simple in construction and inexpensive in manufacture.

PORTABLE ESCRIBOIR.—W. G. Mitchell, Holliston, Mass.—This invention has for its object to furnish a simple, convenient, and inexpensive escrivoir, which shall be so constructed and arranged that, when opened up for use, it may serve as a smooth and firm writing table, and when closed for transportation, may be folded up into small compass, and at the same time serve as a receptacle for paper, pens, inkstand, stamp box, etc.

NEW BOOKS AND PUBLICATIONS.

THE PHOTOGRAPHER'S FRIEND. An Illustrated Quarterly Magazine, devoted to the Photographic Art. Published at 103 West Baltimore Street, Baltimore, Md. G. O. Brown, Editor.

We have received the first number of this magazine, and find in it a great deal of matter, of value to persons interested in photography. Under the caption of "The Great Quartette," are given the formulas and methods of working of four of the most distinguished photographers of this country Messrs. Sarony, Kurtz, Gurney, and Fredricks. This is certainly information worth having, and it is greatly to the credit of the gentlemen named that they have been willing to give the trade the benefit of their large experience. Accompanying the first number is a fine photograph of Mrs. Scott Siddons, by Sarony, which, in the management of drapery and control of light, could not easily be excelled. Photography under such treatment ceases to be a trade, and is elevated to the dignity of an art. No one but a first-class artist which could produce such a picture. There is a little over-exposure in the editorial management of the journal that needs toning down in the printing, but all this will improve with time and experience.

THE KIDNEY.

This pamphlet of 44 pages treats practically of the structure, functions and diseases of the kidney, Bright's disease, and the urine, its constituents chemical tests for the various diseases, their symptoms, and treatment, adapted to popular comprehension. By Edward H. Dixon, M. D. J. S. Redfield, Publisher, No. 140 Fulton street. Price, 25 cents.

Official List of Patents.

ISSUED BY THE U. S. PATENT OFFICE.

FOR THE WEEK ENDING JAN. 24, 1871.

Reported Officially for the Scientific American.

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Full information, as to price of drawings, in each case, may be had by addressing

MUNN & CO., Patent Solicitors, 37 Park Row, New York.

- 111,102.—CHARGER FOR SHOT POUCHES.—Thomas W. Allen, Waterbury, Conn.
111,103.—CHILDREN'S CARRIAGE.—Rodney C. Britton, Springfield, Vt.
111,104.—BAGGAGE TRUCK.—William Hammond Brown, Bangor, Me.
111,105.—AUTOMATIC LUBRICATING CUP.—James A. Bryan and William Stainfield, Kent, Ohio.
111,106.—PRUNING SHEARS.—John Calder, Macedon, N. Y.
111,107.—BEE HIVE.—Albert Claypool, Weston, Ohio.
111,108.—PARLOR BEDSTEAD.—Francis E. Coffin, Boston, Mass.
111,109.—SLEIGH BRAKE.—Eustace J. Cooper, Mineral Point, Wis.
111,110.—STEAM LUBRICATOR.—Daniel Currie, Belleville, Ill.
111,111.—TYPE-CASTING MACHINE.—William Wallace Dunn, San Francisco, Cal.
111,112.—GOVERNOR FOR ELECTRO MOTORS.—Thomas A. Edison, Newark, N. J., assignor to himself, Elisha W. Andrews, George B. Field, and Marshall Lefferts, New York city.
111,113.—MACHINE FOR CUTTING PAPER COLLARS.—Alfred L. Elliot, Boston, assignor to himself and Edwin A. Eaton, Winchester, Mass.
111,114.—FLUX FOR WELDING STEEL OF HIGH AND LOW GRADES.—John Farrell, New York city.
111,115.—TRUSS.—Alexander Folleau, San Francisco, Cal. Antedated January 13, 1871.
111,116.—STEAM-BOILER FEEDER.—Lucus Foote, North Fairfield, Ohio.
111,117.—BURIAL CASE.—Patrick H. Griffin, Albany, N. Y. Antedated January 7, 1871.
111,118.—THILL COUPLING.—Collins W. Griffith, Cincinnati, Ohio, assignor to himself and Charles H. Mackintosh, Strathroy, Canada.
111,119.—BACK-PAD PRESS.—Edwin W. Harlow, Hastings Mich.
111,120.—PUMP.—Patrick Harvey, Chicago, Ill.
111,121.—EVAPORATOR.—Richard Hawley, Jr., Detroit, Mich.
111,122.—FEED-TROUGH GUARD.—Edwin Hovenden, Bushnell, Ill.
111,123.—RAILWAY-CAR COUPLING.—Lewis Huddle and Jacob K. Huddle, Tiffin, Ohio.
111,124.—GATE.—Robert Henry Hudgin, Fairfield, Canada.
111,125.—HARROW AND CULTIVATOR.—James F. Jaquess, Commerce, Miss.
111,126.—ASH SCREEN.—Edward C. Jenkins, Jr., Worcester, Mass.
111,127.—CAR SPRING.—James Leland, Springfield, Mass.
111,128.—METHOD OF SECURING JOINTS OF FRAMES, ETC.—Charles F. Linscott (assignor to Edward S. Torrey and Joseph Torrey) New York city.
111,129.—SEWING MACHINE.—T. A. Macaulay, New York city.
111,130.—GATHERING ATTACHMENT FOR SEWING MACHINES.—William A. Mack, Newark, Ohio.
111,131.—SAWING MACHINE.—James D. Matthews, Niles, Mich.
111,132.—GRAIN DRILL.—Daniel E. McSherry, Dayton, Ohio.
111,133.—COMPOUND FOR PRESERVING DRAIN TILES, BRICKS, ETC.—Edward Milner, Marquette, Mich., assignor to Charles H. Mackintosh, Strathroy, Canada.
111,134.—METER.—Charles Moore (assignor to José F. DeNavarro), New York city.
111,135.—CHAIR CLAMP FOR RAILWAY RAILS.—Wm. Morehouse, Buffalo, N. Y.
111,136.—MACHINE FOR UPSETTING IRON.—Martin L. Munger and Corodon D. W. Gibson, Grand Blanc, Mich.
111,137.—BOOT STRETCHER.—Isaac M. Myers, San Francisco, Cal.
111,138.—HAY RACK.—Franz Louis Nagler, Irving Township, Mich.
111,139.—CORN SHELLER.—Franklin Nelson (assignor to himself and Joseph Masett), Wyandotte, Mich.
111,140.—CLAMP FOR CARRIAGE SEATS.—Henry J. Northrup, Lansingburg, N. Y.
111,141.—MACHINE FOR PRESSING FABRICS.—George H. Nussey and William B. Leachman, Leeds, England.
111,142.—OBTAINING Madder EXTRACTS.—Alfred Paraf (assignor to Edward S. Renwick, trustee), New York city. Antedated December 29, 1870.
111,143.—WATER METER.—Webster Park, Norwich, Conn.
111,144.—ANCHOR.—Gurney C. Pattison, Baltimore, Md.
111,145.—ANCHOR.—Gurney C. Pattison, Baltimore, Md.
111,146.—TUBE EXTRACTOR.—Isaac S. Peters, Marshall, Mich.
111,147.—MACHINE FOR GRINDING HAND SAWS.—Edwin S. Piper, Rochester, N. Y.