

New Patent Law of 1870.

INSTRUCTIONS HOW TO OBTAIN LETTERS-PATENT FOR NEW INVENTIONS.

Information about Caveats, Extensions, Interferences, Designs, Trade-Marks, and Foreign Patents.

FOR Twenty-five years, MUNN & Co. have occupied the leading position of Solicitors of American and European Patents. During this long experience they have examined not less than Fifty Thousand Inventions, and have prosecuted upwards of THIRTY THOUSAND APPLICATIONS FOR PATENTS.

MUNN & CO.,

Ask Special Attention to their System of doing Business.

Consultation and Opinions Free.

Inventors who desire to consult with MUNN & Co. are invited to call at their office 37 PARK ROW, or to send a sketch and description of their invention, which will be examined and an opinion given or sent by mail without charge.

A SPECIAL EXAMINATION

is made into the novelty of an invention by personal examination at the Patent Office of all patented inventions bearing on the particular class. This search is made by examiners of long experience, for which a fee of \$5 is charged. A report is given in writing.

To avoid all possible misapprehension, MUNN & Co. advise generally, that inventors send models. But the Commissioner may at his discretion dispense with a model—this can be arranged beforehand.

MUNN & Co. take special care in preparation of drawings and specifications. If a case should for any cause be rejected it is investigated immediately, and the rejection if an improper one set aside.

NO EXTRA CHARGE

is made to clients for this extra service. MUNN & Co. have skillful experts in attendance to supervise cases and to press them forward when necessary.

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. A 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 charge for preparing the necessary papers is 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, & COMPOSITIONS Can be patented for a term of years, also new medicines or medicinal 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. There should also be forwarded a full statement of its ingredients, proportions, mode of preparation, uses, and merits.

CANADIANS and all other foreigners can now obtain patents upon the same terms as citizens.

EUROPEAN PATENTS.

MUNN & Co. have solicited a larger number of European Patents than any other agency. They have agents located at London, Paris, Brussels, Berlin, and other chief cities. A pamphlet containing a synopsis of the Foreign Patent Laws sent free.

MUNN & Co. could refer, if necessary, to thousands of patentees who have had the benefit of their advice and assistance, to many of the principal business men in this and other cities, and to members of Congress and prominent citizens throughout the country.

All communications are treated as confidential.

Address

MUNN & CO., No. 37 Park Row, NEW YORK.

Inventions Patented in England by Americans.

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

2,550.—CENTRIFUGAL MACHINES.—D. McC. Weston, Boston, Mass. Sept. 23, 1870.

2,741.—IMPROVEMENT APPLICABLE TO STOCKS OF MUSKETS.—R. J. Gatling, Indianapolis, Ind. October 2, 1870.

2,782.—MANUFACTURE OF SALT AND THE APPARATUS EMPLOYED THEREIN.—J. R. Buchanan, New York city. October 18, 1870.

2,786.—SPIRAL PUMPS.—T. S. Blair, Pittsburgh, Pa. October 22, 1870.

2,790.—PREPARATION OF INDIA-RUBBER AND GUTTA-PERCHA COMPOUNDS FOR COATING WOODEN AND METAL SURFACES, AND THE PRODUCTION OF HARD RUBBER.—Chapman, New York city. October 22, 1870.

2,705.—MODE OF TRAINING HOPS, THE SOCKETS FOR THE POLES OR POSTS OF SAME, AND OTHER POSTS, APPLICABLE ALSO FOR THE BORING OF WATER.—E. Dwyer, Rochester, N. Y. October 13, 1870.

2,755.—CONSTRUCTION OF ILLUMINATING AND VENTILATING ROOFS AND GRATINGS OR PLATES, PARTS OF WHICH ARE APPLICABLE TO ORDINARY FOOTWAYS AND CARRIAGE WAYS.—Theodore Hyatt, New York city. October 20, 1870.

2,765.—CONSTRUCTION OF BRIDGES.—C. S. Smith, C. H. Latrobe, and F. H. Smith, Baltimore, Md. October 20, 1870.

2,770.—IMPROVEMENT IN AND ADDITIONS TO SKATES.—A. E. Clarke, Montreal, Canada. October 21, 1870.

AUTOMATIC LUBRICATORS.—E. von Jensen, San Francisco, Cal. October 24, 1870.

2,805.—HORSESHOES.—Ebenezer Cate, Woburn, Mass. October 24, 1870.

2,862.—LOOMS FOR WEAVING.—Enoch P. Terrel, West Liberty, Ohio. Oct. 31, 1870.

2,866.—MANUFACTURE OF ACIDS AND ALKALINE SALTS.—H. M. Baker, Williamsburgh, N. Y. October 31, 1870.

2,876.—IMPROVEMENTS APPLICABLE TO SAFES, VAULTS, AND OTHER STRUCTURES FOR CONTAINING VALUABLE PROPERTY, AND IN ALARM APPARATUS OR TELEGRAPHS CONNECTED THEREWITH.—E. Holmes, Brooklyn, N. Y., and H. C. Roome, Jersey, N. J. November 1, 1870.

2,890.—APPARATUS FOR PRODUCING AND APPLYING MOTIVE POWER.—J. M. Cavec, W. B. Barfield, and James McEwen, Franklin, Tenn. November 2, 1870.

NEW BOOKS AND PUBLICATIONS.

THE PRINCIPLES OF MECHANISM AND MACHINERY OF TRANSMISSION. Comprising the Principles of Mechanism, Wheels, and Pulleys, Strength and Proportions of Shafts, Couplings for Shafts, and Engaging and Disengaging Gear. By William Fairbairn, Esq., C.E., LL.D., F.R.S., F.G.S., Corresponding Member of the National Institute of France, and of the Royal Academy of Turin; Chevalier of the Legion of Honor, etc. Philadelphia: Henry Carey Baird, Industrial Publisher, 406 Walnut street. Price, by mail, free of postage, \$2.50.

From the imposing array of scientific honors appended to the author's name, our readers might be led to suppose that this work was written for others than practical mechanics, but no greater mistake could be made than such a supposition. Mr. Fairbairn, though eminently scientific, is one of the most practical of men, and he knows to a nicety the wants of practical men. This book is written in the plainest and most concise style, and may be read with profit by those to whom algebra and geometry are unsealed mysteries. There are a few algebraic formulæ in the book, but the larger portion is written in plain English. The work treats of a great variety of subjects included in the general classification given in the title, and ought to be in every mechanic's library.

THE ATTITUDE OF SCIENTIFIC INVESTIGATION TOWARD DIVINE REVELATION. An Essay Read before the Associate Alumni of the General Theological Seminary of the Protestant Episcopal Church at their Annual Meeting in the Chapel of the Seminary, New York, St. John Baptist's Day, June 24, A.D., 1870. By the Rev. Richard Whittingham, Rector of St. John's Church, New Haven, Conn.

This is an effort to show that the asserted antagonism of science with orthodox theology is a real one, and that so-called science is full of contradictions. Professor Huxley is made the object of direct attack, and his "Lay Sermons" are denounced as calculated to poison the minds of thousands who them. It must be conceded that in that part of his argument based upon the contradictions of science, the author makes some strong hits.

CATALOGUE OF PRACTICAL AND SCIENTIFIC BOOKS Published by Henry Carey Baird, 406 Walnut street, Philadelphia, Pa. Sent free to any address.

This catalogue comprises the most complete list of industrial publications on all subjects pertaining to the arts and manufactures, published in this country. To mechanics, engineers, and manufacturers, no matter in what department, it offers works of sterling value expressly prepared to suit their practical needs. Young mechanics seeking for guides in their various callings will do well to send for this catalogue.

A TEXT-BOOK OF ELEMENTARY CHEMISTRY, THEORETICAL AND INORGANIC. By George F. Barker, M.D., Professor of Physiological Chemistry in Yale College. 12mo, pp. 342. New Haven: Charles C. Chatfield & Co.

In nothing is the great change that has taken place in the nomenclature of chemistry and in the symbolic language of the science more conspicuously shown than in some of our recent text-books. Professor Barker has prepared a remarkably accurate book founded on the most advanced theories and doctrines of chemistry, and no teacher who desires to keep abreast of the times can afford to be without it.

THE RIGHTS OF AMERICAN PRODUCERS AND THE WRONGS OF BRITISH FREE TRADE REVENUE REFORM. By Henry Carey Baird. Philadelphia: Collins, Printer, 705 Jayne street.

This is the title of a strong argument from the trenchant pen of an able writer upon a subject in which every American citizen is interested. It is a small pamphlet, printed, we believe, for gratuitous circulation.

LAY SERMONS, ADDRESSES, AND REVIEWS. By Thomas Henry Huxley. 8vo., pp. 378. New York: D. Appleton & Co. 1870.

The Messrs. Appletons have reprinted on very poor paper and in inferior style, the famous lectures delivered before popular audiences in England by Professor Huxley. Few books of greater importance have appeared within a long period. The topics discussed relate to the origin of life, scientific education, and the most advanced theories of the new school of thinkers in England. However slow many readers may be to accept the reasoning of the writer, every one must be swift to acknowledge that the subject is handled in faultless language and the most captivating style.

THE AMERICAN JOURNAL OF ARTS AND SCIENCE. New Haven, Conn.: B. Silliman and James B. Dana.

The November issue contains a number of very exhaustive scientific articles. Examination of the Bessemer Flame," by Prof. J. M. Silliman; "Electrical Conductivities," by Alfred M. Mayer; "Northern Drift of the Pacific Slope," by Robert Brown; "Influence of Temperature on the Electricity of Certain Metals," "Willet on the Georgia Meteoric Stone," and "Hovey on Hallstorm of June, 1870," are leading and able papers.

We are in receipt of THE WORKSHOP, for September, a German publication devoted to progress of the useful arts, and republished in English, and also in German, French, and Italian, by E. Steiger, 22 and 24 Frankfort street, New York. As usual it contains a large number of original and beautiful designs, adapted to the wants of manufacturers in various departments where ornamental designs are requisite. It contains also an interesting essay on Chandeliers, illustrated with many engravings, and other minor articles of practical interest.

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.—PAINT FOR STEAM PIPES.—What paint can I use for steam pipes that will give them a brilliant red, vermilion, or white, and not discolor by heat?—J. MCB.

2.—COLORLESS DRYER.—How can I make a colorless dryer to be used in fine, delicate colored paints, for drying quickly, so they will not scale and crack when dry? The dryer should be of the consistency of good linseed oil, and dry paints in five to six hours.—C. R. P.

3.—BOILER CAPACITY.—I am running an engine (common slide valve), size, 12 inches by 18 inches, cylinder; 150 revolutions per minute; boiler pressure, 70 pounds; steam pipe, short and well covered; taking steam

from a locomotive boiler containing 300 square feet heating surface; boiler well covered by a thick jacket, and a 1/2 inch blower pipe, besides the exhaust, running into the smoke stack. Fuel, wood; feed water, hot. I cannot make steam fast enough to keep my pressure up to 70 pounds. I want more boiler power, and am offered two cylinder boilers 30 inches in diameter and 40 feet long, and I am told they will supply me with sufficient steam. Query: Will two cylinder boilers 30 inches in diameter and 40 feet long make sufficient steam, with wood for fuel, to run an engine (common slide valve), with 12 by 18 cylinder, 150 revolutions per minute, requiring 70 pounds steam to do the work?—W. V. B.

4.—HEATING SURFACE OF TUBES.—In counting the heating surface of tubular boilers, is it most proper to calculate the internal or external circumference of the tubes? I should like to know the opinion of your correspondents in regard to this.—W. V. B.

5.—TO KEEP POLISHED BRASS FROM TARNISHING.—I should like information on the best methods of keeping polished brass from tarnishing. What have the readers of the SCIENTIFIC AMERICAN found best for this purpose?—O. F.

6.—SOLDERING STEEL.—I wish a recipe for a flux that may be used to solder steel, and will not cause polished metal to rust.—H. W. M.

7.—CEMENT.—What is the best cement for laying stone in cold weather where it is exposed to the action of frost and water?—B. F.

8.—TO PURIFY BLACK OIL.—How can I purify oil that has been used on shafting, so as to fit it for re-use on the same?—A. C.

Answers to Correspondents.

CORRESPONDENTS who expect to receive answers to their letters must, in all cases, sign their names. We have a right to know those who seek information from us; besides, as sometimes happens, we may prefer to address correspondents by mail.

SPECIAL NOTE.—This column is designed for the general interest and instruction of our readers, not for gratuitous replies to questions of a purely business or personal nature. We will publish such inquiries, however, when paid for as advertisements at \$1.00 a line, under the head of "Business and Personal." All reference to back numbers should be by volume and page.

SCATTERING SHOT GUN.—J. C. T., of Texas, has a shot gun which scatters too much, for which he seeks a remedy. Being well posted in gun matters, I can give him some ideas. The only remedy known to gunsmiths is by choke-boring, that is, boring from the breech of the gun, and so as to have a gradual taper towards the muzzle. This method of boring greatly improves the shooting qualities of the gun, as the charge concentrates at the muzzle. I have bored some guns so much for this purpose, that the diameter of the bore at the breech was one eighth of an inch larger than at the muzzle, before they would shoot well. All of the pigeon-shooting clubs have their guns bored in this manner. Large shot are more apt to scatter than fine, but this depends on the bore of the gun. A large-bored gun does not shoot fine shot so well as medium. A small-bored gun throws fine shot with greater force than a large-bored one. As a general thing, a small-bored gun is not adapted to large shot, as it does not chamber them well. The length of gun also depends on the size of bore—28 or 30 inches for a gun of from 10 to 14 gauge; 30 to 34, of guns from 8 to 10; 26 to 28, guns of 15 to 18 gauge.—C. W. L., of Mass.

DRILLING SMALL HOLES IN BRASS PLATE.—G. F. may perform the nice job he has undertaken, in the following manner: Fasten the piece to be drilled to a face plate that runs perfectly true, so that the center of the proposed hole is exactly in the center line of the lathe. First run through on the center a twist drill, smaller than the desired hole. Then make from Stubbs wire, the size of the hole desired, a half round drill, and having bored out the hole with a small boring tool or graver just so the half-round drill will enter, feed through on the center, and the drill will go through perfectly straight, and make a perfect hole.—T. G. C., of Vt.

BULLET MOLDS.—The hollow hemispheres J. B. C. inquires about, are made with reamers, called by gunsmiths cherries, which can be bought of any gun-furnishing establishment. Fit both parts of the mold and rivet them; then drill a hole in them as large as the shank of the cherry. Put in the cherry, and hold the molds in the vise; tighten as fast as you ream, and use plenty of oil, and while finishing keep the cherry very clean.

DRILLING SMALL HOLES IN BRASS PLATE.—G. F. should lay out the holes to be drilled in the brass plate as accurate as possible, and mark deep with a center punch (which should be turned). Send for a Morse twist drill, the proper size, as short as possible, and go through the work. Have the drill run perfectly true and rapid, feed slow, and he will do a good job.—H. W., of N. Y.

FEED ROLLS ON DOUBLE BEATER SCUTCHER.—"Workman's" feed rolls are not near enough to the knives of the beater. If distant over one fourth of an inch, the tendency is to clog, which, of course causes the cotton to be unevenly distributed.—C. M., of Mass.

TURNING ZINC SHAFTS.—In answer to G. D. B., I would say that zinc shafts can be turned in a lathe. I have turned 3/8 and 1/2 inch with a very fine diamond-point tool. Set the tool as high as it will cut nicely.—O. F., of Pa.

H. L. C., of Mich.—Bodies are classed with reference to their power to let heat pass through them without becoming heated themselves, and the reverse, as "diathermanous" and "athermanous;" the former term being applied to those which allow heat to pass freely without becoming heated themselves, and the latter term to bodies of the opposite character. A beam of solar light and heat in passing through water imparts a portion of its heat to the water, as ascertained not only by the increase of temperature in the water, but in the diminished heat of the beam after its passage. Therefore water is not a diathermanous body. You will find this subject fully treated in "Silliman's Physics."

N. L., B., of Ill.—This correspondent with others is puzzled to see what supports the atmosphere, if it is not wholly supported by the earth. The subject has no practical importance, and we do not wish to burden our columns with a protracted discussion of it.

W. McL., of N. Y.—With reference to the use of the Brazilian pebble, we have never heard from any reliable source that it was injurious to the eye. Oculists have recommended it, but it may be that some new facts have been brought to light. You had better consult with Dr. Agnew, or some other well known oculist.

B. C., of N. H.—Steam boilers vary in evaporative capacity from say five to ten pounds of water to a pound of coal. It is a good boiler that will evaporate eight pounds of water per pound of coal. The actual horse power developed by the evaporation depends upon the engine which consumes the steam. It is a first-class engine that will run on three pounds of coal per horse power per hour with a good boiler, though still greater economy with the very best engines is attained.

H. W., of N. Y.—Have you not mistaken the drift of L. V.'s query? It is not a straight cylinder he wishes to bore, but a bent cylinder, a segment of a hollow cylindrical ring, part of a circular hollow ring, we suppose.

J. R. T., of Cuba.—We do not know how many of Fowler's steam plows have been introduced into this country. There may be two or three but they are not much used here.

J. M., of Canada.—We do not think you can get an electro-magnetic machine such as you want in this country.

T. W. T., of —.—The theory of an all permeating, all pervading ether, supposes this substance to be so highly attenuated as to show no sensible ponderability, that it possesses a higher degree of elasticity

than any known substance, that it permeates the molecular spaces of all bodies, solid, liquid or gaseous, and fills the interplanetary regions.

I. F. H., of Md.—Solder for fruit cans is made of half tin and half lead. It is the common tin solder.

C. H. C., of Ill.—A mortise made in green wood will become smaller as the wood shrinks in drying.

S. P., of Wis.—We shall drop the subject of "Balancing Cylinders" for the present.

G. W. P., of L. I.—Your idea is not new. Fell's railroad over the Alps has a center rail with two friction wheels that grip its sides.

J. S., of N. Y.—In the absence of skill on your part, printed directions can be of no value. You had better go to a good watchmaker.

Sensible Holiday Presents.

No present can be more acceptable to a wife, mother, sister, or lady friend, than a DOTY WASHING MACHINE, price \$14, and a UNIVERSAL WRINGER, \$9, which are warranted to give entire satisfaction.

The American Newspaper Directory,

Published by Geo. P. Rowell & Co., Advertising Agents, No. 40 Park Row, New York, contains a full and complete statement of all facts about newspapers which an advertiser desires to know.

Business and Personal

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

The paper that meets the eye of manufacturers throughout the United States—Boston Bulletin, \$4 00 a year. Advertisements 17c. a line.

"507 Mechanical Movements." This Illustrated Book, now in its 6th edition, embraces all departments of Mechanics, and is invaluable for reference and study.

Full information given of some valuable public land—just reached by railroad. A good investment, sure to double in value.

Self-Closing Telegraph Key, Frey Patent. Liberal terms to Agents. A. Hiling, 213 Churchst., New York city.

For Sale—Lathe. Second-hand Engine Lathe, back-gearred, screw-cutting; swings 25 1/2 inches; 9 ft. 9 in. between centers.

Index Milling Machine, \$100. Thomas & Co., Worcester, Mass.

Fine Pedesped Skating without ice. Order a pair with 16 inch wheels, \$16, or 17 inch \$17, at the works, C. O. D. T. L. Luders, Olney, Ill.

For Sale—A part or the entire right of my Weaning Bit, for the weaning of colts, calves, etc. Pat. June 21, 1870. Address Isaac L. Baker, Prairie City, Kansas.

Machinery Wanted.—Two Screw Presses and Paper Cutting Machine, second hand. Address, with terms, Wm. Pratt & Co., 93 Liberty st.

Soap Stone Packing, all sizes, in lots to suit. Greene, Tweed & Co., 10 Park Place, Manufacturers' Agents.

Walrus Leather, for Polishing Steel and Plated Ware. Greene, Tweed & Co., 10 Park Place, New York.

Baxter's Portable Steam Engine. For descriptive Pamphlet address Russell & Speer, 10 Park Place, New York.

Millers.—An experienced, practical miller wants a situation. Address W. J. Groves, 814 Washington avenue, St. Louis, Mo.

News for every Machinist, Apprentice Machinist, Gunsmith, and Blacksmith in the United States. Address, with stamp, Mechanical Association, Box 418, Marshall, Mich.

Dickinson's Patent Shaped Diamond Carbon Points and Adjustable Holder for dressing emery wheels, grindstones, etc. See Scientific American, July 21 and Nov. 20, 1869. 61 Nassau st., New York.

Peck's Patent Drop Press. For circulars address the sole manufacturers, Milo, Peck & Co., New Haven, Ct.

Patent Elliptic-geared 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.

For Sale—The entire Right of the best Adjustable Wrench. Price \$5,000. J. F. Ronan, at Chickering's Factory, Boston, Mass.

Corn-shuck Collars.—C. H. Leffler, of Montgomery, Ala., wants a machine that will receive the Corn Shucks and plait them into a collar.

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.

Scientific American—Back Vols. and Nos. for sale. Volumes bound, \$3. Nos. 10c. each. Address Theo. Tusch, 37 Park Row, New York.

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

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

The Merriman Bolt Cutter—the best made. Send for circulars. Brown and Barnes, Fair Haven, Conn.

Pictures for the Drawing Room.—Prang's "Lake George," "West Point," "Joy of Autumn," "Prairie Flowers," Just issued. Sold in all Art Stores. "Three Tom Boys," "Bethoven," large and small.

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.

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

Lighting Gas in Streets, Factories, etc., with Bartlett's Patent Torch saves great expense, all risks, etc. It is being adopted everywhere. Address J. W. Bartlett, 569, Broadway, New York.

Japanese Paper-ware Spittoons, Wash Basins, Bowls, Pails, Milk Pans, Slop Jars, Chamber Pails, Trays. Perfectly water-proof. Will not break or rust. Send for circulars. Jennings Brothers, 352 Pearl st., N. Y.

A very Valuable Patent for sale, the merits of which will be appreciated at sight. Apply to or address Jewell & Ehlen, 93 Liberty st., N. Y.

Improved Foot Lathes. Many a reader of this paper has one of them. Catalogue free. N. H. Baldwin, Laconia, N. H.

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

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

Parties in need of small Gray Iron Castings please address Enterprise Manufacturing Co., Philadelphia.

Best Boiler-tube Cleaner.—A. H. & M. Morse, Franklin, Mass.

The Best Hand Shears and Punches for metal work, as well as the latest improved lathes and other machinists' tools, from entirely new patterns, are manufactured by L. W. Pond, Worcester, Mass. Office 98 Liberty st., New York.

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

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.

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

Incrustations prevented by Winans' Boiler Powder, 11 Wall st., New York, 15 years in use. Beware of frauds.

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. Fredericks, 537 Broadway, New York.

To Ascertain where there will be a demand for new machinery or manufacturers' supplies read Boston Commercial Bulletin's Manufacturing News of the United States. Terms \$4 00 a year.

Recent American and Foreign Patents.

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

CAST-IRON PLOW.—John K. Odell and William S. Little, Deckertown, N. J. This invention has for its object to improve the construction of cast-iron plows, so as to make them simpler in construction, stronger and better in operation, and more convenient in manufacture than when made in the ordinary manner.

COMBINED HAND SEED-DRILL AND CULTIVATOR.—Samuel D. Lucas, Wintercock, Va.—This invention has for its object to furnish a simple and convenient hand machine, which shall be so constructed that it may be readily adjusted for planting various kinds of seeds, that require to be planted in drills or rows, and for cultivating the plants when required.

SHIFTING SHOVEL PLOW.—Adam Snyder, Packard, Ohio.—This invention has for its object to furnish an improved shovel plow, which shall be so constructed that the shovel may be set square with the line of draft, or inclined to one or the other side, as may be desired.

SCRUBBING BRUSH.—Ralph Rockwell and Z. B. Custer, Petroleum Center, Pa.—This invention relates to the manner of securing the bristle stock of a scrubbing brush to the base board bearing the rubber strip that operates as a dryer, and in the manner of pivoting the handle to said base board, whereby the stock is prevented from lateral movement or displacement, and the handle may be inclined in either direction, to enable the operator to work the brush with either the rubber or dryer in front.

BOILER FOR PREPARING PAPER PULP.—Lorenzo Dean, Fort Edward, N. Y.—This invention has for its object to improve the construction of the boilers ordinarily used for reducing paper stock, so as to make them more convenient and effective in operation, and enabling the stock, when reduced, to be washed and bleached without removing it from the boiler in which it has been reduced.

SAWING MACHINE.—Daniel Heller, Milton Center, Ohio.—This invention has for its object to furnish an improved machine for operating a "cross cut" or other wood saw, which shall be simple in construction and effective in operation, enabling one man to do more work than two with the ordinary saw, and with greater ease.

PREPARING STRAW, ETC., FOR THE MANUFACTURE OF PAPER.—Lorenzo Dean, Fort Edward, N. Y.—This invention has for its object to furnish an improvement in preparing straw and other fibrous material for the manufacture of paper, by means of which the labor and expense will be greatly diminished, and the material, when reduced, will produce a much better stock.

SETTING TIRES ON WHEELS.—A. O. Wheeler, St. Augustine, Ill.—This invention relates to a new and useful improvement in mode of setting or tightening and loosening the tires of carriage or other wheels, and consists in increasing the diameter of the wheel or expanding the felly by means of a tapering screw, operating in a divided nut.

LUBRICATOR.—Samuel S. Vollum and William H. Green, New York city.—This invention relates to a new and useful improvement in a device for conveying oil or other lubricating material to the arms of carriage axles, or to journals, boxes, or bearings.

BEVELING THE EDGES OF CIRCULAR PLATES OF METAL.—William H. Singer, Pittsburgh, Pa.—This invention is an improvement for which a patent was issued to the same party Nov. 30th, 1869, and consists in providing a mechanism for holding the circular blank on which a beveled edge is to be produced, without enlarging the central hole through which the stepped vertical holding pin passes, and whereby the whole of that part of the blank to be beveled is introduced between the rolls at once.

PACKING BOX FOR ROTARY STEAM CYLINDERS.—S. Deacon and J. Russell, Lawrence, Mass.—This invention relates to a new packing box for revolving steam cylinders, and consists in the arrangement of a nut that serves to clamp the packing between two cones, and which, instead of working on a screw thread is moved longitudinally by contact with a fixed cam.

HORSE POWER.—Lorenzo P. Teed, Mechanicsburgh, Pa.—This invention has for its object to furnish an improved horse power, which shall be so constructed and arranged that it may be firmly secured in place, and securely held while at work, being secured and adjusted conveniently and quickly, and without removing it from the wagon.

COFFEE STEAMER.—Louis Hildenbrand, Michigan City, Ind.—This invention relates to an apparatus for rapidly extracting the aromatic ingredients from coffee-beans by means of steam created by the heat of a stove or other heater, with an object of utilizing the full virtue of the beans, and consequently economizing coffee and producing a beverage superior to that made by the means heretofore in use.

PROCESS OF SACCHARIFYING MASH.—Charles H. Frings, Centreton, Mo.—The object of this invention is to produce a perfect saccharifying of mash without waste of malt. For this object a small quantity of muriatic acid and phosphoric acid is added to the water used for converting the grain into mash; corn, rye, barley, wheat, or other grain being used.

MACHINE FOR POLISHING COFFEE-BEANS.—Charles C. Warren and James B. Baldy, Toledo, Ohio.—The object of this invention is to construct a machine, whereby coffee can be rapidly cleaned and polished in bags; and the invention consists in the employment of two or more rollers, of which the outer surfaces are employed for revolving the filled bags.

STREET LETTER-BOX.—Albert Potts, Philadelphia, Pa.—The object of this invention is to so construct letter-boxes which are to be applied to lamp-posts, pillars, or other similar supports, that can be readily fitted on, firmly retained, safely closed, and conveniently used. See an illustrated description of this invention in another column.

DOOR SPRING.—William H. Stafford, New York city.—This invention relates to a new spring of very simple construction for holding doors shut, and is applicable to all kinds of doors, whether they are hinged to swing to one or both sides.

MACHINE FOR POINTING NAILS.—Harry A. Wills, Vergennes, Vt.—This invention relates to a new machine for pointing the ends of nails used for horse shoes and other purposes. The invention consists in a new spiral feeding apparatus for conveying the nail blanks to the pointing mechanism. The invention consists also in a new arrangement of gaging, clamping, and pointing mechanism.

Official List of Patents.

ISSUED BY THE U. S. PATENT OFFICE.

FOR THE WEEK ENDING DEC. 6, 1870.

Reported Officially for the Scientific American.

SCHEDULE OF PATENT FEES.

Table with 2 columns: Description of patent action and Fee amount. Includes rows for 'On each caveat', 'On each Trade-Mark', 'On filing each application for a 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 views.

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

- 109,793.—KNITTING MACHINE AND NEEDLES.—A. W. Allen, Indianapolis, Ind.
109,794.—CLOTH-WINDING MECHANISM FOR LOOMS.—W. A. Arnold, Rockport, Mass.
109,795.—LUBRICATOR.—C. D. Austin, Newcastle-on-Tyne, England.
109,796.—VALVE COCK.—Robert Berryman, Boston, Mass.
109,797.—CAR COUPLING.—Henry Blanchard, Jr., Boston, Mass.
109,798.—BELT FASTENER.—S. S. Bolton, Big Rapids, Mich.
109,799.—BEDSTEAD JOINT.—L. G. Bradford (assignor to himself and N. H. Morton), Plymouth, Mass.
109,800.—CURTAIN FIXTURE.—J. G. Brothwell (assignor to Turner, Seymour & Judde), Wolcottville, Conn.
109,801.—SASH LOCK.—E. L. Brown, Norwich, N. Y.
109,802.—APPARATUS FOR EVAPORATING BRINE AND OTHER LIQUIDS.—James Buchanan, Detroit, Mich.
109,803.—BRICK MACHINE.—Cyrus Chambers, Jr., Philadelphia, Pa.
109,804.—COTTON BALE TIE.—William Chambers, New Orleans, La.
109,805.—TINSMITH'S FURNACE.—Michael Conner, Plymouth, Mich.
109,806.—CIRCULAR SAW JOINTER.—E. H. Corbin, Winchester, Ind.
109,807.—STEAM GENERATOR.—L. R. Cornell, Flatbush, N. Y.
109,808.—RAILWAY RECLINING CHAIR.—J. P. Curry, New York city.
109,809.—NUT LOCK.—M. A. Cushing and O. R. Glover, Ottawa, Ill. Antedated November 26, 1870.
109,810.—WASHING MACHINE.—Henry Dickinson, Marlborough, Conn.
109,811.—REFRIGERATOR.—H. F. Eberts, Detroit, Mich., assignor to himself, D. Y. Howell, Toledo, Ohio, and T. S. Sprague, Detroit, Mich.
109,812.—CULTIVATOR.—Abraham Eshleman, Martinsville, Pa.
109,813.—BARREL SAFETY VALVE OR VENT.—B. F. Evans, Newburyport, Mass.
109,814.—HAND STAMP.—D. W. Fish, Brooklyn, N. Y.
109,815.—PERPETUAL BRICK-BURNING KILN.—William Gilbert, Detroit, Mich.
109,816.—SEWING MACHINE FOR MAKING PUFFINGS.—E. D. Gird, Syracuse, N. Y. Antedated November 25, 1870.
109,817.—WAGON TONGUE SUPPORT.—A. F. Gue, Eastmanville, Mich.
109,818.—SHUTTER FASTENER.—Theodore Hare and James Wood, Norristown, Pa.
109,819.—SNOW PLOW.—C. F. Hornbeck and W. J. Carns, Slaterville, N. Y.
109,820.—DEVICE FOR FREEZING FISH, MEATS, ETC.—D. Y. Howell, Toledo, Ohio, assignor to himself, T. S. Sprague, and H. F. Eberts, Detroit, Mich.
109,821.—BOX FOR PACKING FRUIT, PROVISIONS, ETC.—G. M. Huston, Putnam, Ohio.
109,822.—FEED CUTTER.—William Hutchins (assignor to himself and G. G. Hutchins), Paw Paw, Mich.
109,823.—HEAD REST FOR CAR SEATS.—E. M. Judd, New Haven, Conn.
109,824.—JELLY GLASS.—W. M. Kirchner, Pittsburgh, Pa.
109,825.—TOOL FOR FORMING SCREW THREADS ON GLASS JARS.—W. M. Kirchner, Pittsburgh, Pa.
109,826.—HAIR-SPRING OF WATCHES, ETC.—Calvin Kline, Brooklyn, N. Y., assignor to himself and G. E. Hart, Newark, N. J.
109,827.—POCKET BOOK.—Julius Lehman, New York city.
109,828.—SEWING MACHINE.—T. A. Macaulay, Northampton, Mass.
109,829.—STEAM BOILER.—W. B. Mack (assignor to D. B. Dufield), Detroit, Mich.
109,830.—CAR COUPLING.—Stephen Mahurin, Liberty, assignor to himself, J. W. Singleton, and W. A. Richardson, Quincy, Ill.
109,831.—SAUSAGE STUFFER.—Jacob Mickley and J. E. Hartman, Cashtown, Pa.
109,832.—WAGON BRAKE.—Jacob Mickley and J. E. Hartman, Cashtown, Pa.
109,833.—VARNISH FOR PHOTOGRAPHIC NEGATIVES.—J. W. Mergener, Sheboygan, Wis.
109,834.—DOOR LATCH.—W. T. Munger (assignor to P. & F. Corbin), New Britain, Conn.
109,835.—TREADLE FOR SEWING MACHINES.—Alfred Nielson, Brooklyn, N. Y.
109,836.—WASHING MACHINE.—L. B. Osgood, Shelby, Mich.
109,837.—CORN PLANTER.—George Paddington, Waubeck, Iowa.
109,838.—STOVE-PIPE THIMBLE.—J. D. Pierce and J. B. Smith, Milwaukee, Wis.
109,839.—GRAIN SEPARATOR.—Hiram Raymond, Tecumseh, Mich.
109,840.—WASHING MACHINE.—John G. Raymond, Rondout, N. Y.
109,841.—BURR MILL.—S. G. Rollins (assignor to Wigg, Rollins & Co.), Boston, Mass. Antedated November 26, 1870.
109,842.—CARRIAGE AXLE AND AXLE YOKE.—Samuel Rowell, Amesbury, Mass.
109,843.—WAGON BRAKE.—George W. Sanborn, Gilmanton, N. H.
109,844.—MACHINE FOR STAMPING, PRESSING, AND POINTING HORSESHOE NAILS.—Frederick Sandham, Montreal, Canada.
109,845.—LAST FOR BOOTS AND SHOES.—Samuel W. Shorey, Chicago, Ill. Antedated November 26, 1870.
109,846.—SHAFT COUPLING.—William Smeed, Rochester assignor to himself and Glen & Hall Manufacturing Company, Brighton, N. Y.