

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**. In addition to this they have made, at the Patent Office, **Twenty-Five Thousand Special Examinations** into the novelty of various Inventions. The important advantage of MUNN & Co.'s American and European Patent Agency is that the practice has been tenfold greater than that of any other agency in existence, with the additional advantages of having the aid of the highest professional skill in every department and a Branch Office at Washington, that watches and supervises cases when necessary, as they pass through Official Examination.

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 the 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 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. 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.

NEW BOOKS AND PUBLICATIONS.

A TREATISE ON THE THEORY AND PRACTICE OF LEVELING. Showing its Application to purposes of Railway Engineering and the Construction of Roads, etc. By Frederick W. Simms, F.G.S., M. Instit. C. E., Civil Engineer. Fifth Edition. Revised and Corrected, with the Addition of Mr. Law's Practical Examples for Setting out Railway Curves. With Three Lithographic Plates and several Woodcuts. New York: D. Van Nostrand, Publisher, No. 23 Murray street and 27 Warren street.

This being a new edition of a well-known valuable work it would be unnecessary here as well as impossible in our limited space to give it an extended review. It is enough to say to those who are not acquainted with the merits of the work, that it is one of the best treatises on the subject of leveling extant. The addition of the practical examples mentioned in the title will prove a great help to students, and even to those who have passed the student stage and have become engaged in the actual practice of engineer-

ing. The book is printed in fine bold type, is well bound, and presents a handsome appearance.

THE PHRENOLOGICAL JOURNAL AND PACKARD'S MONTHLY. A Repository of Science, Literature, and General Intelligence. Embellished with numerous Portraits from Life, and other Engravings. Vol. L., Old Series; Vol. I., New Series, January to June, 1870. S. R. Wells, Editor and Publisher, No. 389 Broadway, New York.

Mr. Wells will please accept our thanks for a handsomely bound volume of this popular publication.

THE TECHNOLOGIST, for December, contains a fine table of contents. It closes the volume of this well-conducted and interesting monthly. It is issued by the Industrial Publication Company, 176 Broadway, New York, at the low price of \$2.00 per annum.

WE are in receipt, by the courtesy of the Hon. Horace Capron, U. S. Commissioner of Agriculture, of his Report for the year 1869. It is a voluminous and instructive document. Mr. Capron will please accept our thanks.

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, \$1.00 a year. Advertisements 17c. a line. "507 Mechanical Movements."—A Book needed by every Mechanic, Inventor, Engineer, Draftsman, and Student. This is by far the largest illustrated table of Mechanical Movements ever published. Price \$1. By mail \$1.12. Address Theo. Tusch, 37 Park Row, New York.

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

A Situation Wanted to travel for some Agricultural or Hardware house, or to introduce a patented article. References given. Wm. Knowles, Rockville, Ind.

Situation Wanted by a Practical Draftsman. Best references given. C. Collins, 33 Nassau st., Newark N. J.

Grindstone Shafts, by J. E. Mitchell, Philadelphia, Pa.

Nova Scotia Grindstones, by J. E. Mitchell, Philadelphia, Pa.

"How to use Grindstones," by J. E. Mitchell, Philadelphia, Pa.

At the Cincinnati Industrial Exposition, Oct., 1870, the judges say: "The Union Stone Company exhibit Emery Wheels and Grinding Stones which are composed of materials not affected by water, and that do not glaze in doing ordinary work, and do not produce a disagreeable smell when doing hard work. We consider them the best article of the kind on exhibition."

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

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.

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

Peteler Portable R.R. Co., contractors, graders. See adv'tment.

Dickinson's Patent Shaped Diamond Carbon Points and Adjustable Holder for dressing emery wheels, grindstones, etc. See Scientific American, July 24 and Nov. 20, 1869. 64 Nassau st., New York.

E. Howard & Co., 15 Maiden Lane, New York, and 114 Tremont st., Boston, make the best Stem-winding Watch in the country. Ask for it at all the dealers.

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

The best place to get Working Models and parts is at T. B. Jeffery's, 160 South Water st., Chicago.

Scale.—Allen's Patent will remove scale from steam boilers, and not injure the iron. Send for Circulars. Josiah J. Allen, Philadelphia.

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

Patent Elliptic-gear Pumps 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 Pumps and Lever Pumps. American Saw Co., New York.

Steel Stamp Alphabets, Figures, and Names. E. H. Payn, Burlington, Vt.

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.

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. Friedrichs, 587 Broadway, New York.

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

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-ton propellers, 60-Horse Locomotive Boiler, nearly new, for sale by Wm. D. Andrews & Bro., 414 Water st., N. Y. 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 machinery, see advertisement of Andrews' Patents in another column.

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

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

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 Bliss & Williams, successor to May & Bliss, 118, 120, and 122 Plymouth st., Brooklyn, N. Y. Send for catalogue.

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 93 Liberty st., 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

By the Circular Pamphlet

which the New York Advertising Agents, Messrs. Geo. P. Rowell & Co. issue for the use of Advertisers, much information is conveyed about all the best advertising mediums.

Back Numbers, Volumes, and Entire Sets of the SCIENTIFIC AMERICAN are for sale at low prices, by Theo. Tusch, 37 Park Row, New York.

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 100 a line, under the head of "Business and Personal."

All reference to back numbers must be by volume and page.

FILTERING WATER.—Your correspondent can make a cheap and good filter in his cistern by simply partitioning off one corner with one course in thickness of soft-burnt bricks, leaving a space inside of about 18x36 inches at the top of the cistern, making a close-fitting cover, through which to insert the pipe from the pump. The water will filter through the partition just about as fast as it comes into the outside cistern. F. A. H.

CLEANING FIRE-ENGINE BOILERS.—I think the trouble with H. C.'s Cole steam fire-engine boiler would disappear by the attachment and use of a surface blow-off. I find it so not only with such engines, but locomotives.—T. L. V. D., of Neb.

QUARTER TWIST BELT.—If it would not be too presumptuous in a young mechanic, I will give to J. F. K., and others if they wish it, a rule for putting on a quarter twist belt to make it stretch alike on both edges, and do their work well, no matter what the width of the belt. The belt is to be put on in the usual way, and the ends brought together ready for lacing. Then turn one piece the opposite side (or inside) out, and lace. The belt will run, it will be found, first one side out, and then the other, and will draw alike on both sides.—W. H. K., of N. Y.

QUARTER TWIST BELT.—If Mr. J. F. K. will put up a short shaft parallel with, and running at the same speed as his driving shaft, with driving pulley the same size as the one in the driving shaft for quarter twist belt, and two pulleys on his driven shaft, and use two five-inch belts, he will find it much better than one wide belt.—W. S., of N. Y.

T. M. H., of Pa.—In the system of levers described in your query, if the power be constantly applied in a tangential line to the arc described, by the ends of the levers, the leverage will be the same on each lever; but if it be applied in the direction of either the chord or sine of the same arc the leverage will be greater on the longer lever. In estimating the power of levers, the direction in which the moving force is applied must never be disregarded.

T. H. R., of Kansas.—The holes broken out of the bottom of your lamp chimney admit air, which mixing with vapor from the oil used in your lamp forms an explosive compound, which, when sufficiently heated, makes the slight explosion described, and extinguishes the light.

C. H. R., of N. Y.—The electric light produced by the use of carbon points in connection with a galvanic battery is continuous. The flashes or sparks generated by friction in electric machines may also be made to succeed each other with such rapidity as to produce the effect of a continuous light, though, of course, only a succession of flashes in reality.

T. H. D., of —.—All other things being equal, the longer the hose of a fire engine, the less will be the volume discharged, the less will be the velocity of discharge, and, as a matter of course, the less will be the throw. The diminution is wholly attributable to friction.

E. F. D., of Conn.—Very many recipes for black ink have been published in the SCIENTIFIC AMERICAN. You say you have found none that suits, but give no requirements, except that it shall be jet black at first, and always remain so. Arnold's Japan ink comes as near this requirement as any we know. We do not think the powder mentioned in our description of a new printer's ink, could be used to make a writing ink.

S. L. G. T., of N. H.—If we understand your query, the pipe nearest the ground would exact the least power for the supply of water to your city, for the two reasons, that being shorter it would have less friction, and the height to which the water would be raised would also be less.

J. W. M., of N. Y.—There is no substance known that, placed between the poles of a magnet and its armature, will intercept the attracting power of the magnet.

W. H., of Wis.—The lubricating oil, called "West Virginia Black Oil," contains, we believe, some volatile hydrocarbons, which justify the discrimination made against it by the underwriters.

H. S. S., of Minn.—Rubber is not melted in the process of making overshoes as now conducted. The information you seek is hard to obtain, as the manufacturers refuse to disclose their processes.

S. A. R. and G. W. McK., of Ohio.—So far as we know, there has been no recent contest between English and American mowers and reapers.

H. E. S., of Kansas.—We know of no preparation that will remove hair from the human body without injury to the skin.

G. E. S., of Wis.—You should apply to some extensive dealer in paper hangings. Your query is not of sufficient general interest for publication.

A. L., of Texas.—Colored men have taken out patents, but as yet they, as a race, have not developed large inventive genius.

G. L. E., of Mass.—The tonnage of the Great Eastern is 27,000.

Recent American and Foreign Patents.

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

COTTON-SEED PLANTER AND GUANO DISTRIBUTER.—Henry L. Tillery Halifax, N. C.—This invention relates to divers improvements in a machine intended for distributing guano in a drill, and then for planting cotton or other seed in the same drill, said improvements consisting of corrugated wings on the drum that sits within the seed box, and of an arrangement of an A-shaped scraper, whereby the same may be made to cut furrows of greater or less depth; and of sundry other arrangements of said scraper and other devices.

"TARGET GAME."—John C. Schooley, New York city.—This invention relates to a target through which is made a dozen, more or less, of holes, each hole being marked with a certain number; and in combination with the target a ball connected therewith by an elastic cord, the object of the game being to send the ball through one of the holes in the target by the recoil of the cord after it has been stretched.

EXTENSION PLOWSHARE.—George W. Thorp, Columbus, Kansas.—This invention has for its object to furnish an improved plow, which shall be so constructed and arranged that the share may be extended as it becomes worn and held securely in place when adjusted.