

CLOCK CASE.—Elias Ingraham, of Hartford, Conn.—Letters Patent No. 139, dated Dec. 3, 1861.

SEATS FOR PUBLIC BUILDINGS.—Aaron H. Allen, of Boston, Mass.—Letters Patent No. 12,017, dated Dec. 5, 1854; reissue No. 21, dated Jan. 15, 1861.

GRAIN AND GRASS HARVESTER.—Cyrenus Wheeler, Jr., of Auburn, N. Y.—Letters Patent No. 12,044, dated Dec. 5, 1854; reissue No. 875, dated January 3, 1860.

HARVESTER.—Cyrenus Wheeler, Jr., of Auburn, N. Y.—Letters Patent No. 12,044, dated Dec. 5, 1854; reissue No. 876, dated January 3, 1860; reissue No. 2,610, dated May 14, 1867.

GRAIN AND GRASS HARVESTER.—Cyrenus Wheeler, Jr., of Auburn, N. Y.—Letters Patent No. 12,044, dated Dec. 5, 1854; reissue No. 877, dated Jan. 3, 1860.

GRAIN AND GRASS HARVESTER.—Cyrenus Wheeler, Jr., of Auburn, N. Y.—Letters Patent No. 12,044, dated Dec. 5, 1854; reissue No. 878, dated January 3, 1860.

GRAIN AND GRASS HARVESTER.—Cyrenus Wheeler, Jr., of Auburn, N. Y.—Letters Patent No. 12,044, dated Dec. 5, 1854; reissue No. 879, dated January 3, 1860.

GRAIN AND GRASS HARVESTER.—Cyrenus Wheeler, Jr., of Auburn, N. Y.—Letters Patent No. 12,044, dated Dec. 5, 1854; reissue No. 881, dated January 3, 1860.

THRUSTLES FOR SPINNING COTTON.—Charles Danforth, of Paterson, N. J.—Letters Patent No. 12,055, dated December 12, 1854.

HANGING CARRIAGE BODIES.—B. F. Brown, of Dorchester, Mass.—Letters Patent No. 12,051, dated December 12, 1854.

MACHINES FOR SCRAPING METALS.—Jeremiah Stever, of Bristol, Conn.—Letters Patent No. 12,076, dated December 12, 1854.

PROCESSES FOR TREATING THE MOTHER-WATER OF SALINES.—Phillipine S. Brackenridge, of Natrona, Pa., administrator of Edward Schieren, deceased.—Letters Patent No. 12,077, dated December 12, 1854.

RATTAN MACHINE.—Sylvanus Sawyer, of Fitchburg, Mass.—Letters Patent 12,073, dated December 12, 1854.

MAKING NUTS.—Martin P. M. Cassidy, of Nemaha county, Kansas, administrator of Isaac H. Steer, deceased.—Letters Patent No. 13,118, dated June 19, 1855; antedated December 19, 1854.

MACHINE FOR SPLITTING RATTANS INTO STRIPS.—Sylvanus Sawyer, of Fitchburg, Mass.—Letters Patent No. 12,141, dated January 2, 1855.

MACHINERY FOR CUTTING RATTAN, ETC.—An act for the relief of Sylvanus Sawyer, of Fitchburg, Mass.—Letters Patent No. 8,173, dated June 24, 1851.

SAWING MACHINE.—Lysander Wright, of Newark, N. J.—Letters Patent No. 12,176, dated January 2, 1855.

this extended experience of nearly a quarter of a century, they have examined not less than fifty thousand alleged new inventions, and have prosecuted upward of thirty thousand applications for patents, and, in addition to this, they have made at the Patent Office over twenty thousand Preliminary Examinations into the novelty of inventions, with a careful report on the same.

This wide experience has not been confined to any single class of inventions, but has embraced the whole range of classification, such as Steam and Air Engines, Sewing Machines, Looms and Spinning Machinery, Textile Manufactures, Agriculture and Agricultural Implements, Builders' Hardware, Carriages, Carriages, Chemical Processes, Civil Engineering, Brick Making, Compositing, Felting and Hat Making, Fine Arts, Fire-arms, Glass Manufacture, Grinding Mills, Harvesters, Household Furniture, Hydraulics and Pneumatics, Illumination, Leather Manufactures, Mechanical Engineering, Metallurgy, Metal Working, Navigation, Paper Making, Philosophical Instruments, Presses, Printing and Stationery, Railroads and Cars, Sports, Games, and Toys, Stone Working, Surgical Apparatus, Wearing Apparel, Wood Working.

MUNN & Co. deem it safe to say that nearly one-third of the whole number of applications made for patents during the past fifteen years has passed through their Agency.

CONSULTATIONS AND OPINIONS FREE.

Those who have made inventions and desire to consult with us are cordially invited to do so. We shall be happy to see them in person, at our office, or to advise them by letter. In all cases they may expect from us an honest opinion. For such consultation, opinion, and advice, we make no charge. A pen-and-ink sketch and a description of the invention should be sent. Write plainly, do not use pencil or pale ink.

If a SPECIAL SEARCH at the Patent Office is required, which embraces a personal examination of all patented inventions and a report in writing, a fee of \$5 is charged. This examination is only advised in doubtful cases.

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

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

THE GREAT ADVANTAGES

OF MUNN & CO.'S AGENCY are that their practice has been ten-fold greater than any other Agency in existence, with the additional advantage of having the assistance of the best professional skill in every department, and a Branch Office at Washington, which watches and supervises all their cases as they pass through official examination. If a case is rejected for any cause, or objections made to a claim, the reasons are inquired into and communicated to the applicant, with sketches and explanations of the references; and should it appear that the reasons given are in-

sufficient, the claims are prosecuted immediately and the rejection set aside and usually

WITHOUT EXTRA CHARGE.

MUNN & Co. are determined to place within the reach of those who confide to them their business the highest professional skill and experience.

Caveats are desirable if an inventor is not fully prepared to apply for 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.

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

Designs, Trade Marks, and Compositions can be patented for a term of years; also new medicines or medical compounds, and useful mixtures of all kinds.

When the invention consists of a medicine or compound, or a new article of manufacture, or a new composition, samples of the article must be furnished, neatly put up. Also, send us a full statement of the ingredients, proportions, mode of preparation, uses, and merits.

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

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

EUROPEAN PATENTS.

American inventors should bear in mind that, as a general rule, any invention that is valuable to the patentee in this country is worth equally as much in England and some other foreign countries. Five Patents—American, English, French, Belgian and Prussian—will secure an inventor exclusive monopoly to his discovery among ONE HUNDRED AND THIRTY MILLIONS of the most intelligent people in the world. The facilities of business and steam communication are such that patents can be obtained abroad by our citizens almost as easily as at home. MUNN & Co. have prepared and taken a larger number of European patents than any other American Agency. They have Agents of great experience in London, Paris, Berlin, and other cities.

For instructions concerning Foreign Patents, Reissues, Interferences, Hints on Selling Patents, Rules and Proceedings at the Patent Office, the Patent Laws, etc., see our Instruction Book. Sent free by mail on application. Those who receive more than one copy thereof will oblige by presenting it to their friends.

Address all communications to
MUNN & CO.,
No. 37 Park Row, New York City.
Office in Washington, corner of F and 7th streets.

PATENT OFFICES,
American and European,
OF
MUNN & CO.,
No. 37 Park Row, New York.

For a period of nearly twenty-five years MUNN & Co. have occupied the position of leading Solicitors of American and European Patents, and during

Advertisements.

The value of the SCIENTIFIC AMERICAN as an advertising medium cannot be over-estimated. Its circulation is ten times greater than that of any similar journal now published. It goes into all the States and Territories, and is read in all the principal libraries and reading-rooms of the world. We invite the attention of those who wish to make their business known to the annexed rates. A business man wants something more than to see his advertisement in a printed newspaper. He wants circulation. If it is worth 25 cents per line to advertise in a paper of three thousand circulation, it is worth \$250 per line to advertise in one of thirty thousand.

RATES OF ADVERTISING.

Back Page.....\$1.00 a line.
Inside Page.....75 cents a line.
Engravings may head advertisements at the same rate per line, by measurement, as the letter-press.

A NEW 6-FOOT ENGINE LATHE, ALL complete, for sale cheap by HUTCHINSON & LAURENCE, 8 Dey st.

FOUR-SPINDLE Drill Press for sale cheap. Address or see EVAN THOMAS, 25 Park Row, N. Y.

STAMMERING cured by BATES' APPLI-ANCES. For descriptive pamphlet address SIMPSON & CO., Box 5076, N. Y.

IMPROVED LATHE DOG—Carries from 1/4 to 1-in. sent by mail for \$1.35. Address AMERICAN TWIST DRILL CO., Woonsocket, R. I. 5 cow 1f

THIRTY Years' Experience and all modern improvements in Brick Machines, Machinery and Castings of all kinds. Send for Circulars to PEEKSKILL MANUFACTURING CO., Peekskill, N. Y. Postoffice box 111.

WYATT'S Great Cure for CONSUMPTION and Intermittent Disorders; stops expectoration, gives appetite, expels impure matter, cleanses the system, restores the patient, or no charge. Sample by mail free. Address SAYRE & CO., Broadway & Fulton st., N. Y.

HAVE Hand Saw Mill of your own.—Agents wanted in every town in U. S. Many established, doing well. Sift Thirteen Feet one minute, Six Hundred Feet per Hour. Rip Tenons, Rabbit, do. Tapered Work. W. H. HOAG, Manufacturer 214 Pearl st., N. Y., Box 4245.

LABORATORY of Industrial Chemistry, Directed by Prof. H. Dussauce, Chemist. Advice and Consultations on Chemistry Applied to Arts and Manufactures, Metallurgy, etc. Plans of Factories, Drawings of Apparatus, Analyses and Commercial Assays. Address New Lebanon, N. Y.

30,000 ACRES WESTERN and SOUTHERN LANDS and Improved Farms. 40c. to \$1000 per acre. E. G. SHEPPARD, (P. O. Box 4083), 2 Bowling Green, New York.

AGENTS, FARMERS, GARDENERS, and FRUIT GROWERS.—Send for particulars of "Best's Improved Fruit Tree and Vine Invigorator and Insect Destroyer." Samples to test will be forwarded to any part of the United States, and perfect satisfaction guaranteed. Good Agents are wanted in every County in the United States. Address J. A. HEALIN, 63 Second st., Baltimore, Md.

A GOOD CHANCE TO MAKE MONEY.—The subscriber is the inventor of a Household Implement in constant and general demand, proved, by repeated trials, to be far superior to any in use. Cheap, Efficient, Easily Managed, and also Elegant in Form. He desires to patent it in the United States, and will, in return for the amount necessary for the purpose, assign a portion of his interest to a proper party making the required advance. Address W. C. ERSKINE, Eugenia, Co. Grey, C. W.

WANTED! WANTED! AGENTS of either sex, in every town and village, for the largest ONE DOLLAR SALE in the country. The smallest article sold can be exchanged for a Silver-plated Five-bottled Revolving Castor, or your choice of 300 articles upon exchange list. Commissions to Agents larger than ever. Send for Circular. S. C. THOMPSON & CO., 136 Federal st., Boston, Mass.

DECALCOMANIE, \$1's worth or over, mailed. Catalogues free. W. Atkinson & Co., 1270 Bd'way, N. Y.

FOR STEAM ENGINES, BOILERS, IRON and Wood-working Machinery, Engines, and Machine supply, address HUTCHINSON & LAURENCE, 8 Dey st.

HOWARD'S SECTIONAL BOILER—Illustrated in Scientific American, January 23, 1869. For full information address AUSTIN & GERMAIN, 37 Park Row, New York.

PASSAIC MACHINE WORKS, NEWARK, N. J. Manufactures first class Steam Engines with Hornig's patent valve arrangement controlled by the Governor. WAITS, CAMPBELL, & CO., Proprietors.

EARLY ROSE POTATO, AMERICAN AND Foreign Spring Wheat, Oats, Barley, Corn, Clover Seeds, Grass Seed, Hogs, Fowls, Best Fodder Cutter. Send for the EXPERIMENTAL FARM JOURNAL, only 20 cts. Address GEO. A. DEITZ, Chambersburg, Pa.

J. G. WILLIAMS' PATENTS FOR IMPROVEMENTS in Puddling Iron, No. 62,795. Dated March 24th, 1867. For licenses under, or the purchase of this patent or any portion of it, apply by letter to the patentee, St. Stephen's Crescent, Middlesex, England.

TWO ENTIRE AND VERY VALUABLE PATENTS for sale low. The combined Pocket Match Box, Igniter and Receptacle for Cigars. And the improved Match for Lighting Cigars, Pipes, etc., in wet or windy weather. Model, Particulars, etc., to be seen at A. J. SPIELDOCH, 660 Myrtle Ave., Brooklyn.

PATENT COMBINED POCKET KNIFE, Penholder, and Pen. Sample with prices sent by mail on receipt of 60 cents. Address L. F. Standish, Springfield, Mass.

EVERY MAN HIS OWN PRINTER. With one of our presses, and the material accompanying it, every man can do his own printing, thus saving much time and expense. Circulars containing full information about these Presses, prices, recommendations, etc., mailed free on application. Specimen books of types, cuts, borders, etc., etc., 10 cents. DAVID WATSON, Ag't Adams Press Co., 26 Courtlandt st., New York.

THE MOST DURABLE AND RELIABLE Grate Bar now in use. Send for circular. HUTCHINSON & LAURENCE, 8 Dey st.

\$1.00 THE HOUSEHOLD Especially devoted to the interests of the American Housewife. Containing practical hints and suggestions for the Veranda, the Drawing Room, the Dressing Room, the Library, the Conservatory, the Nursery, the Dispensary, the Kitchen, and the Parlor. Only \$1 per year. Nov. and Dec. Nos. FREE to new subscribers. Specimen copies FREE. Agents wanted. GEO. R. CROWELL, Publisher, Brattleboro, Vt.

W. W. TUPPER & CO.'S PAT. GRATES. Make More Steam, with Less Fuel, do not warp, and are Cheaper than other Grates. Send for circular. W. W. TUPPER & CO., 206 West st., New York.

A MUSICAL BOX FOR ONE DOLLAR.—The French Great Sensation; novelty, cheapness, durability; in highly polished case, metallic tongues, brilliant in tone, of the best construction, with the most recent improvements, new keyless pattern. EIGHT SELECT AIRS. Eminent adapted for the drawing room table. Guaranteed of the best workmanship and performance. No. 1 812z, 8 Airs, \$1; No. 2, 16 Airs, \$2; No. 3, 24 Airs, \$3. All sent FREE by mail on receipt of the amount. Address PAUL & PAUL, No. 4 New Chambers st., New York. All parties who can conveniently send Postoffice orders are requested to do so.

\$10 A DAY for All. Stencil Tool, samples free. Address A. J. FULLAM, Springfield, Vt.

Brick Machine.

LAFLEUR'S NEW IRON CLAD HAS MORE ADVANTAGES combined in one machine than any other ever invented. It makes common brick of very superior quality. By a slight change, press brick are made without pressing. With Lafleur's Patent Mold, beautiful stock brick are made. This machine was awarded first premium at the N. Y. State Fair, 1865, 1867, 1868. For descriptive circular address J. A. LAFLEUR & CO., 517 eow Albion, Orleans county, N. Y.

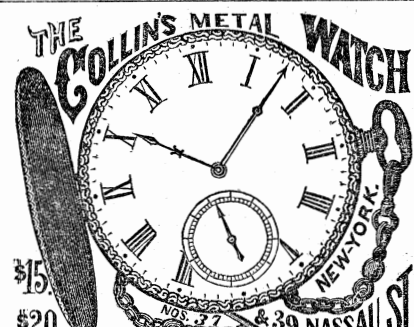
STEAM AND WATER GAGES, STEAM Whistles, Gage Cocks, and Engineers' Supplies. JOHN ASHCROFT, 50 John St., New York.

LATHE CHUCKS—HORTON'S PATENT—from 4 to 36 inches. Also for car wheels. Address E. HORTON & SON, Windsor Locks, Conn. 19 13"tf

ASHCROFT'S LOW-WATER DETECTOR will insure your Boiler against explosion. JOHN ASHCROFT, 50 John st., New York. 3 tf

Leather Belting, Card Clothing, and Hose Factory. J. H. Haskell, Baltimore. 1 22

THE COLLINS METAL WATCH



\$15 \$20.

OUR SUPERIOR OROIDE WATCHES having recently been imitated, and worthless watches sold in New York, Boston, Chicago, and other cities, represent as our Watches, we hereby caution the public against them, and give notice that we are in no way responsible for these bogus concerns, and only those purchasing directly from us can secure a genuine Watch of our manufacture. We have recently greatly improved our Oroide in appearance and durability; and, to protect the public from imposition hereafter, have named it the "COLLINS METAL," and we give notice that any one making use of this name will be prosecuted to the extent of the law.

This metal has all the brilliancy and durability of Gold; cannot be distinguished from it by the best judges; retains its color when worn out and is equal to gold excepting in intrinsic value. All our gentlemen's Watches are FULL-JEWELLED PATENT LEVERS; those for ladies, an Improved Escapement, better than a Lever for a small Watch; all in Hunting Cases, and fully guaranteed by special certificate. The \$15 Watches are equal in neatness, style of finish, general appearance, and for time, to a gold one costing \$150. Those of \$20 are of EXTRA fine finish, and are fully equal to a gold watch costing \$200. Chains of every style, from \$2 to \$6.

JEWELRY.—We are manufacturing all kinds of Jewelry of the Collins Metal. Pins, Earrings, Sleeve Buttons, Lockets, Studs, Finger Rings, Bracelets, Pencils, Charms, Odd Fellow and Masonic Pins, etc., all of the latest and most elegant styles, and fully equal to gold in appearance and wear.

TO CLUBS.—Where six Watches are ordered at one time, we will send one extra Watch free of charge.

Goods sent to any part of the United States by express, to be paid for on delivery. Money need not be sent with the order, as bills can be paid when goods are taken from the express office. Customers must pay all express charges. We employ no Agents; orders must, therefore, be sent directly to us. In ordering, write plainly the name, town, county, and State. Customers in the city will remember that our ONLY OFFICE is Nos. 37 and 39 Nassau street, opposite the Postoffice (up stairs), New York. C. E. COLLINS & CO.

FOR SALE—THE ENTIRE RIGHT FOR THE U. S., or State Rights of Kennedy's Patent Revolving Inkstand, Patented by Munn & Co., Dec. 15, 1868. Address J. M. KENNEDY, Vicksburg, Miss.

WOODWORTH PLANERS A SPECIALTY—From new patterns of the most approved style and workmanship. Wood-working Machinery generally. Nos. 24 and 26 Central corner Union street, Worcester Mass. Warerooms, 89 Liberty street, N. Y. 3 tf WITHERBY, RUGG & RICHARDSON.

BALL, BLACK & CO.,
Nos. 565 and 567 Broadway,

OFFER AN UNEQUALED ASSORTMENT OF
Jurgensen, Nardine, Jacot, Saitzman, Nicoud, Gerard, Frodsham, Peardon, Gording, Rugenstein, Harrison, Taylor, &c.
Also, a full line of American
WATCHES.

WROUGHT-IRON Pipe for Steam, Gas, and Water; Brass Globe Valves and Stop Cocks, Iron Fittings, etc. JOHN ASHCROFT, 50 John St., N. Y. 3 tf

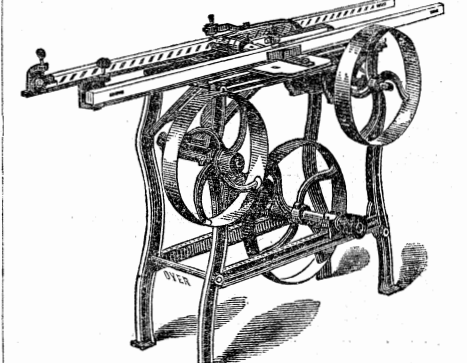
PAGE'S GREAT WATER FLAME COAL, Patented Lime Kiln will burn No. 1 finishing lime with any coal or wood, mixed or separate, in same kiln. Rights for sale by C. D. PAGE, Rochester, N. Y. 1 24"

R. A. BELDEN & CO. Manufacturers of Machinists' Tools, Iron Planers, of improved patterns and designs, Crank Planers and Shaping Machines, Engine Lathes, Screw Machines, Milling Machines, and Gun Machinery. Also, Special Machinery, Improved Nut and Bolt Machinery, Trip Hammers Models, Dies, etc., etc. 208 Orange st., New Haven, Conn. 22tf

BOILER FELTING SAVES TWENTY-five per cent of Fuel. JOHN ASHCROFT, 50 John st., New York. 8 tf

STEAM HAMMERS, TURN-TABLES, and Foundry Cranes. Address GREENLEAF & CO., Indianapolis, Ind. 14tf

PATENT MACHINE FOR BORING AND MORTISING BLIND STILES.



The foregoing cut is a representation of a machine for making the mortises for stationary shades, and boring holes for rolling shades in the stiles of window blinds. It is entirely automatic in its operations, and either bores the round hole for the reception of the pivots of turning slats or mortises the recesses for the reception of the ends of those slats designed to be permanently fixed at a certain angle. The latter are made, on this machine, by means similar to those used in boring a simple round hole, the tool being a reciprocating or traversing burr or bit, which can be used on hard wood, knotty pine, and other obstinate descriptions of wood where ordinary machine chisels fail.

This machine will make mortises of any length from a round hole up to 2 1/2 inches, and of any width, depth, and angle desired in a window blind, leaving the mortise free from chips ready for the slat, and is self-operating in all its parts; all the workman has to do is to put in the stiles and set the machine in motion, when it does its work, and having done, it stops. It does the work on both stiles at once, at the rate of 50 mortises per minute. The bit or burr that does the work is a very simple and cheap affair, not liable to be broken, and costs but 10 cents. This machine is wholly of iron and steel, thoroughly built, easily set up and put in operation, and not liable to get out of order. Manufactured and for sale, together with all other kinds of Woodworking Machinery, by MARTIN BUCK, Agent, Lebanon, N. H.