

PATENT OFFICE.

PATENTS GRANTED FOR SEVENTEEN YEARS. MUNN & COMPANY.

In connection with the publication of the SCIENTIFIC AMERICAN have acted as Solicitors and Attorneys for procuring "Letters Patent" for new inventions in the United States and in all foreign countries during the past twenty years.

Judge Mason, formerly Commissioner of Patents, says, in a letter addressed to us:—"In all your intercourse with the office, I always observed a marked degree of promptness, skill, and fidelity to the interests of your clients."

Ex-Commissioner Holt says:—"Your business was very large, and you sustained and justly deserved the reputation of marked ability and uncompromising fidelity to the interests of your clients."

Ex-Commissioner Bishop says:—"I have ever found you faithful and devoted to the interests of your clients, as well as eminently qualified to perform the duties of Patent Attorneys."

EXAMINATIONS.—If an inventor wishes our opinion in regard to the probable novelty of his invention, he has only to send us a pencil or pen-and-ink sketch of it, together with a description of its operation.

PRELIMINARY EXAMINATION AT THE PATENT OFFICE

is desired, we charge the small fee of \$5. This examination involves a personal search at the Patent Office of all models belonging to the class, and will generally determine the question of novelty in advance of an application for a patent.

If an inventor decides to apply for a patent, he should proceed at once to send us by express, charges prepaid, a model not over one foot in size, and substantially made. He should also attach his name and residence to the model.

PATENTS ARE GRANTED FOR SEVENTEEN YEARS, the following being a schedule of fees:—

- On filing each caveat.....\$10
On filing each application for a Patent, except for a design.....\$15
On issuing each original Patent.....\$20

In addition to which there are some small revenue-stamp taxes; Canadians have to pay \$500.

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NEW RATES OF ADVERTISING.

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"IRON MOUNTAIN."

The Iron Mountain of Missouri, situated some eighty miles west of south from St. Louis, has long excited the wonder and admiration of metallurgists and commercial men.

For further particulars address J. M. COVINGTON, Post-office Box No. 773, New York.

NOTICE.—TO MECHANICS, SOLDIERS, YOUNG and Middle-aged Men who desire to better their condition in life, and to Parents who would make their sons successful, useful men.

Such is the popularity of my System of Practical, Useful Education, that my College at Poughkeepsie, on the Hudson, has grown to be the largest educational institution on the continent.

Mechanics, Young Men from the Farms who can devote the winter to study, Men of Middle-Age who desire to change their present employment for something more remunerative, and Returned Soldiers and others who desire lucrative, honorable situations in business, can enjoy advantages here not to be found elsewhere.

Graduates are assisted to such situations as they merit, through the College Agencies in the different cities. References are given to more than 200 in Government Departments at Washington, and more than 400 in the City of New York alone.

Applicants will apply in person or by letter to the President, H. G. EASTMAN, I. L. D., Poughkeepsie, N. Y., or, for the Western Institution, to E. P. EASTMAN, Chicago, Ill.

50,000 BUSINESS MEN.—ADDRESS FOR CIRCULAR.—"Atwater's Patent Copying Press," Providence, R. I. Cost, with book, by mail, \$1. Copies quickly and well. Many thousands already sold, Stationers and agents supplied.

Ferdinand F. Mayer, Analytical and Consulting Chemist, No. 42 Cedar street, One door west of William.

Prof. Chandler on Incrustations, Says:—"A fraction of an inch exerts a decided influence on the necessary amount of fuel to generate steam—from 20 to 7 per cent."

Deafness.—Haslam's Invisible Voice Conductor—Concealed by the hair. Send for a descriptive pamphlet to E. Haslam, No. 32 John street, N. Y.

For Sale—A Pair of Superior Vertical Blowing Cylinders, 30 inches diameter and 36 inches stroke. The above cylinders were built by a first-class Philadelphia mechanic, and are entirely new and in complete running order.

Engines Lathes—New and Improved Patterns, combining the latest improvements; also Lathes of various styles. For illustrated description of Fay's Combined Lathe Milling Machine and Gear Cutter see Scientific American, Nov. 25.

An Englishman, who is a proficient book-keeper by double or single entry, a good correspondent, and an accurate mechanical draughtsman, desires a situation in a Machine Works or Agricultural Implement Manufactory preferred.

Buy the Best—Smith's Green Mountain Shingle Machine. Address: F. Krum & Co., Box E. Albany, N. Y.

Important to Consumers of Steam.—Carvalho's Improved Superheater, in successful operation and awarded a silver medal at the late Fair of the American Institute.

Foot Lathes Made to Order.—Address: Spath & Murray, Philosophical Instrument Makers, No. 137 West Fifth street, Cincinnati, Ohio.

One Hundred Dollars will buy a good, substantial Brick Machine, capable of making 25,000 bricks per day, with one Molder, of Fry, Sheckler & Co., Bucyrus, Ohio.

To Soap Manufacturers.—Prof. H. Dusauce, Chemist, is ready to furnish Plans of Factories, Drawings of Apparatus, Recipes to prepare every kind of Lyes and the following soaps.

Patent for a Life Preserver for Sale.—For particulars address Ernest E. Coe, No. 314 Broad street, Newark, N. J.

To Engineers, Engine Builders, and Machinists.—Broughton's Improved Gage Cocks, Graduating Lubricators, Transparents, and open-top Oil Cups, all new inventions, warranted more perfect in action, more durable, and more economical than any in use.

Mill-stone Dressing Diamonds Set in Patent Protector and Guide.—Sold by John Dickinson, Patentee and Sole Manufacturer, and Importer of Diamonds for all mechanical purposes.

Government Sale.—Extensive Sale of Dry Goods, Bedding, Etc., in Original Packages. Will be sold at Auction, at the Medical Purveyor's Warehouse, No. 17 Market street, Nashville, on Tuesday, Feb. 6, 1866.

- 2,000 Hair Mattresses, jointed;
15,000 Hair Pillows;
47,000 Bed Ticks;
22,000 Counterpanes, Linen and Marseilles;

- 42,000 Shirts;
40,000 Drawers;
25,000 Dressing Gowns;
19,000 Socks;
10,000 Shirts;
10,000 Night Caps.

- 34,000 Towels, full size, huckaback;
17,000 Roller Towels, crash;
1,000 Napkins;
2,000 yards Red Flannel;
2,000 yards Gutta Percha Cloth;

Patent Telescopic Gun-Sight.—Most Perfect Instrument manufactured. Explained in my book, "The American Sharp-shooter" (mailed, postage paid, on receipt of price \$1 cents). Town, County, and State Rights for sale. Address: Daniel Wood, Rochester, N. Y.

The Philadelphia Photographer. A Monthly Journal, devoted to Photography, illustrated by photographs. The best of its class in the world. Five dollars a year. Prospectus sent free. Specimen copies free.

For Sale—Scientific American from Nov. 25, 1843, up to date. [53] S. Kalfus, 170 Bleeker st., N. Y.

Wanted to Purchase.—The Patent for the Best File-cutting Machine in the world. A liberal price will be paid, if we are satisfied that the machine presented is the one sought for.

Steam-Boiler Explosions.—No Boiler should be without one of Ashcroft's Low Water Detectors. Call on or address [142] John Ashcroft, 50 John st., N. Y.

Atmospheric Trip Hammers. Persons intending to erect, or those using hammers, are invited to call and examine Hotchkiss's Patent Hammer, made by Charles Merrill & Sons, No. 566 Grand street, New York.

McConnell's Tube Expander is offered to manufacturers of boilers, proprietors of steamers, and railroad managers, as the most superior tool produced for flue work.

Persons Interested in Machines for Straightening Railroad Iron are requested to communicate with the subscriber, inclosing description and cost of machine.

Machinery.—Stationary and Portable Steam Engines and Boilers, Steam Pumps, Lathes, Planers, Drills, Iron and Wood-working Machinery of all kinds, Judson & Slocum Patent.

To Engineers.—Incrustation Removed and Prevented.—Baird's Patent Incrustation Preventer and Remover, for Steam Boilers, in either Salt or Fresh Water.

The First American-European Patent Co. (Chartered) of Louisville, Ky., purchases, sells, negotiates, introduces Patents and Inventions throughout both the United States and Europe.

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The Patent Right for Neubert's Artificial Leg, described in Vol. XII., No. 18, of this paper, is now offered for sale, in whole or part.

Wind Mills.—Wind Mills of the Best Description, all sizes, made to order by R. L. Smith, Stockport, Col. Co., N. Y.

Wanted.—Agents.—\$150 per month to sell the Improved New England Family Sewing Machine. Price \$18. The simplest and best machine for family use in the world.

Dodworth & Son's Music Store.—Improved Rotary Valve Cornets, Clarionets, Flutes, made to order—warranted. No. 6 Astor Place, N. Y.

Bolts, Nuts, Washers, Coach Screws, Set Screws, Etc., on hand, for sale by Leach Brothers, No. 86 Liberty street, N. Y.

Boiler Felting.—Steam Boilers, Steam Pipes, Etc., felted with hair and wool felt, will save 25 per cent of ordinary fan blowers.

Improved Bolt Cutter.—Schlenker's Patent.—The most perfect machine for cutting bolts and tapping nuts combined ever offered for sale.

Boiler Felting.—Steam Boilers, Steam Pipes, Etc., felted with hair and wool felt, will save 25 per cent of ordinary fan blowers, and fully equal in strength to piston blowers.

Great Economy in Water Power.—Leffel's American Double Turbine Water Wheel, patented by James Leffel, of Springfield, Ohio, Jan. 14, 1862, and reissued Oct. 11, 1864.

For Sale.—Portable and Stationary Steam Engines, of various sizes, constantly on hand and in process of construction, well adapted to the requirements of the Southern Market.

Albert Potts, Importer of and Dealer in Iron, Steel, and Metals; also Manufacturers' Mechanics', Engineers', Miners', and Railroad Supplies.

Patent Solid Emery Wheels, Silicate or Vulcanite. Emery by the keg. N. Y. Emery Wheel Co., No. 94 Beekman street, New York.

Steam and Water Gages, Brass and Iron Cocks, Valves, Etc.—Wrought-iron, Brass and Galvanized Steam, Gas, and Water Pipe; Boiler Flues, Pipe-fitters' Tools.

Steam-Boiler Explosions.—No Boiler should be without one of Ashcroft's Low Water Detectors. Call on or address [142] John Ashcroft, 50 John st., N. Y.

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**Improved Horse Rake.**

This engraving represents a new improvement in horse rakes, by which it is claimed they are rendered more perfect in operation, and less liable to raise when not desired.

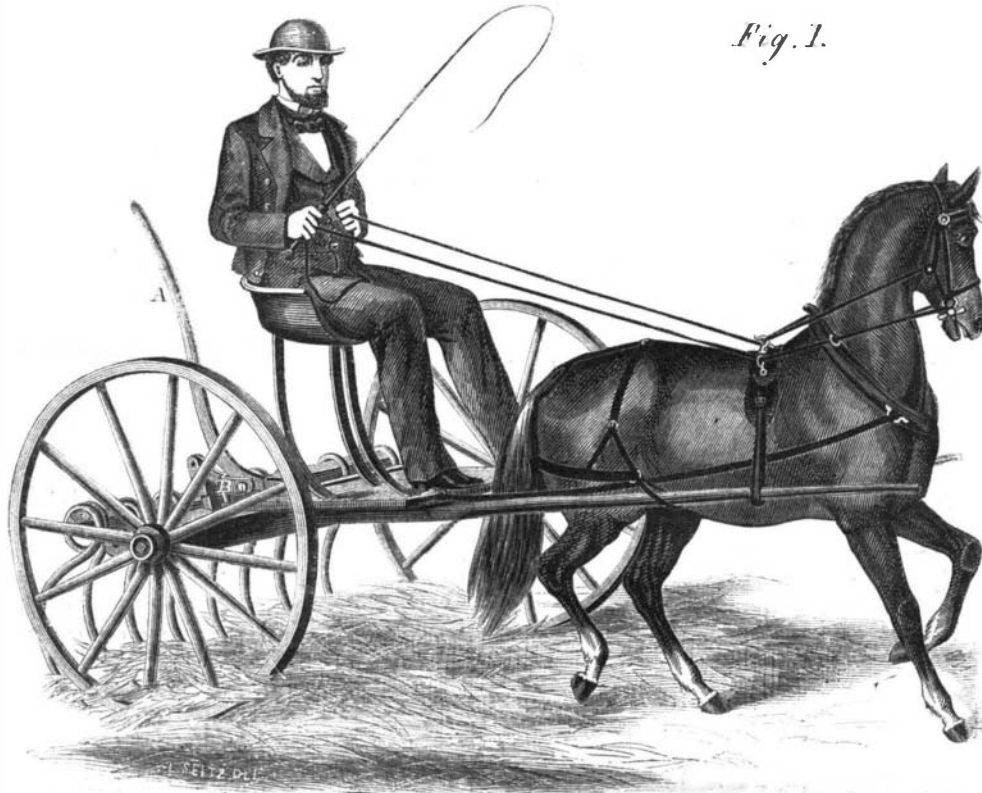
In order to control the action the inventor provides a lever, A, jointed to the frame at one end, and having a short arm, B, working on it. This latter connects with a vertical arm, C, on the rake shaft, as will be seen by the engraving.

It will further be observed that in the position there shown the rake teeth are held firmly to their work, preventing them from raising partially, and scattering loose uneven winrows. At the same time

it will be more effectual than the widest passage that can be afforded in any theater. The fire-proof curtain at Edinburgh has been tested by the architect, Mr. D. MacGibbon, and has been pronounced successful, and to work in the best manner. The whole contrivance is ingenious, and worthy the attention of all managers of first-class theaters here."

**The Opal Mine in California.**

There is great excitement in California over the reported discovery of an opal mine in Calaveras county. The mine is claimed by seven different companies. A local paper describes it thus:—

**HARDGROVE'S HORSE RAKE.**

the teeth are free to conform to undulating ground by the springing of the teeth.

Fig. 2 shows the invention enlarged. This combination forms a toggle joint, and acts equally well to prevent the rake from falling when the lever is thrown forward so as to raise it clear of the ground, as it does when going from one field to another.

This rake is easily operated by any boy old enough to drive, and the lever can be applied to a machine of any style. It may be reversed, if desired, so as to operate from the front instead of the rear of the driver.

In unloading, the lever is brought forward to about an angle of 45° with the shafts, and no further, and can be returned to a rest or lock without letting go of the lever.

It was patented by O. J. Hardgrove, on March 22d, 1864. For further information or shop rights address O. J. Hardgrove & Co., Canton, Ohio.

**Steel Curtains for Theaters.**

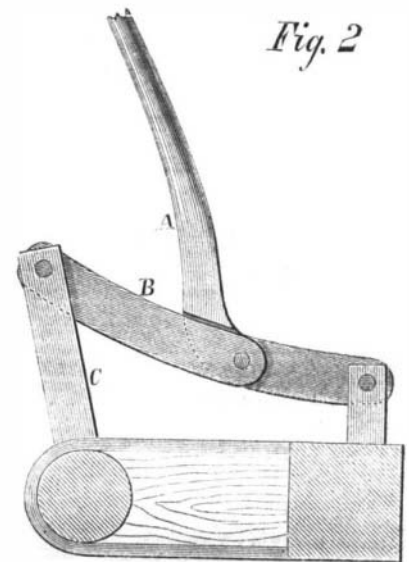
A cotemporary says:—"The new Theater Royal, Edinburgh, Scotland, has a new fire-proof curtains of steel. The theater is divided by a wall two feet in thickness, at the line of the proscenium, which wall passes up to a height of 8 feet, above the roof, dividing the theater into two distinct buildings. In this wall is an opening of 30 by 32 feet, which forms the proscenium; this opening is closed by patent revolving shutters (the largest in the world) in one sheet of steel, coiling above; it is raised and lowered by a hydraulic apparatus, which receives its power from a head of water supplied by a tank at the top of the building, which tank also supplies the fire-mains throughout the theater. It has long been a desideratum how to provide for the safety of the audience in the event of fire. Wide passages and good staircases, no doubt, are of great importance, but if the auditorium is cut off from that portion of the building where fire always originates, thus calming the public mind, and giving them ample time to escape,

"This vein, varying in thickness from four to eight inches, contains a rather large quantity of the minerals, some specimens resembling in form the branches of a tree, others that of kidneys, more or less large. In some parts of the vein the minerals are colored by a mixture of foreign matters, occurring since their first formation. In that state they are either opal jaspers or resinite jaspers. Sometimes they are soft, gelatinous or pasty, and in that state they come from a moist, gravelly trachyte. In other places they are white on the surface, and often to the center; but a dead white like the carbonate of lime. From time to time, in the healthy and compact parts of the vein, an opal has a considerable degree of purity and more or less transparency. We have taken a few specimens of the latter sort from the shaft, at the depth of about one hundred feet, and by our analysis we found it composed as follows:—Silic, 90.50; water, 9.50—100. The elements of that composition are exactly those of the true opal, and the pretty reflections similar to those of the prism, which are met with in this kind of mineral, are certainly due to the presence of a little more water than is required to produce that formula."

**Water-proof Paint.**

An article in the nature of paint, yet combining more of the preservative and less of the flaky nature of the common lead and oil preparation, was long a great desideratum among mechanics and builders in every line. Our European and coasting steamers, as well as shipping of every description, require expensive outlays at either port of entry, in repainting smoke stacks, boilers, rigging and hull. Among shipmasters and builders, tin, zinc, wood, leather and iron manufacturers, the prime object has been to secure a paint impervious to water, and durable against sea atmospheres and the wear of ordinary use and exposure. C. M. Spooner & Co., of 105 Fulton st., Boston, Mass., have lately perfected one of the best preparations for the above-named practical

purposes, in the market, and its adaptability to an almost endless variety of manufactures, warrants a further mention and commendation of it to our readers. The article is known to the trade as the "elastic black varnish paint," which, unlike varnishes, contains no coal tar, and at the same time yields an even and rich luster, with a body of treble the consistency of ordinary black paint. For painting iron which is to be exposed to heat or the weather, such as boilers and chimney tops, radiators, railings and steam pipes, this black-varnish paint is peculiarly well compounded, since the warmth or atmosphere neither causes it to emit the nauseating odor of benzine, so often arising from newly heated radiators, nor scale off and corrode. It is also a baking varnish and possesses the two-fold advantage of its paint and japan nature, over common varnish. The factory of the firm is located at Edgeworth, and thence it passes into the market under brands suited to its different customers. We notice that in the report of the committee of Mechanics' Association Fair, lately held here, this paint was especially mentioned as one of the best substitutes for ordinary lead, oil, or tar applications, and in



indorsement of that opinion, a medal and diploma were granted its manufacturers.—*Commercial Bulletin, Boston.*

**THE SCIENTIFIC AMERICAN**

IS A WEEKLY JOURNAL OF ART, SCIENCE, MECHANICS, INVENTION, CHEMISTRY, AND MANUFACTURES. It contains Practical Information concerning all the Important Industrial Operations of the Country, Reports of Scientific Societies, Patent Law Decisions and Discussions. Also, an official list of Patent Claims, together with numerous Illustrations of New Inventions, Tools, and Machinery used in workshops and manufactories. It has been published for upward of twenty years, and is admitted to be the most widely circulated and best paper of the kind now published each year.

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**PATENT AGENCY OFFICE.**

MESSRS. MUNN & CO. have been engaged in soliciting American and Foreign Patents for the past twenty years. Inventors who wish to consult with them about the novelty of their inventions are invited to send forward a sketch and description. If they wish to get their applications into Munn & Co.'s hands for prosecution they will please observe the following rules:—

Make a substantial model, not over one foot in size. When finished, put your name upon it, then pack it carefully in a box, upon which mark our address; prepay charges, and forward it by express. Send full description of your invention, either in box with model, or by mail; and at the same time forward \$16, first patent fee and stamp taxes. As soon as practicable after the model and funds reach us, we proceed to prepare the drawings, petition, oath and specification, and forward the latter for signature and oath.

Read the following testimonial from the Hon. Joseph Holt, formerly Commissioner of Patents, afterwards Secretary of War, and now Judge Advocate General of the Army of the United States:—

MESSRS. MUNN & CO.:—It affords me much pleasure to bear testimony to the able and efficient manner in which you discharged your duties as Solicitors of Patents, while I had the honor of holding the office of Commissioner. Your business was very large, and you sustained (and I doubt not justly deserved) the reputation of energy, marked ability, and uncompromising fidelity in performing your professional engagements.

Very respectfully, your obedient servant,  
J. HOLT.

For further particulars send for Pamphlet of Instruction. Address  
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