



ISSUED FROM THE UNITED STATES PATENT OFFICE

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Reported Officially for the Scientific American.

*Pamphlets giving full particulars of the mode of applying for patents, under the new law which went into force March 2, 1861, specifying size of model required, and much other information useful to inventors, may be had gratis by addressing MUNN & CO., Publishers of the Scientific American, New York.

34,187.—T. C. Andrews, of Leverington, Pa., for Improvement in Tobacco Pipes:

I claim the tobacco holder, c, with its perforated base and the flange, e, or its equivalent, when applied to the bowl of a pipe, and serving as a detachable lining for the same, and for the purpose set forth.

34,188.—Lewis Baird, of Cambridge, Mass., for Improved Mode of Preventing Incrustation in Steam Boilers:

I claim the employment of tobacco, or a decoction or extract of the same, for the purpose of preventing the incrustation of steam boilers, or of removing the scale therefrom.

34,189.—J. E. Balderston, of Philadelphia, Pa., for Improved Splicing Bar for Axles:

I claim the splicing bar, A, with its journal, b, and the strap bolts, e, e, the whole being constructed and arranged for application to a broken axle as and for the purpose set forth.

34,190.—M. W. Baldwin, of Philadelphia, Pa., for Improved Rotary Engine:

I claim the flexible diaphragm and disk, in combination with the rollers, whereby, by the action of steam or other fluids between the diaphragm and disk, the rollers are propelled in the manner described.

34,191.—Charles Beidler, of Allentown, Pa., for Improvement in Plows:

I claim attaching the nose, F, to the plow by means of the screw bolt, c, passing through the projections, a, b, of the landside and mold-board, and provided with the collar, f, and share brace, g; all arranged as and for the purpose set forth.

[The object of this invention is to obtain a plow of a superior class, which may be constructed very economically, and in a durable manner, and be of light or easy draft, and capable of being very readily adjusted to plow deep or shallow.]

34,192.—Magnus Benas, of New York City, for Improved Tanning Composition:

I claim the employment of use for tanning purposes of a decoction of Rhizanth, Tormentilla, and Granadilla roots, in connection with Cinchona and Cascarella bark, substantially in the proportions specified, and using said solution with B. may catechu, alum and common salt, in the proportions about as specified, and substantially as described.

[The object of this invention is to expedite the process of tanning, reduce the expense and obtain a superior quality of leather, and have the invention applicable for the tanning of calf, sheep and other light skins, as well as applicable for tanning heavy skins for the production of kip and harness leather, and also sole leather.]

34,193.—Thomas Blanchard, of Boston, Mass., for Improved Scoop Shovel:

I claim a scoop shovel with a bent rim or side, B, having a handle, A, and bottom, E, attached to it, constructed substantially as shown and described.

[This invention relates to a new and useful improvement in the construction of scoops such as are used by farmers for shoveling or scooping grain, roots, &c., and also used for shoveling or scooping coal and similar articles or substances.]

34,194.—J. F. Brooks, of Stafford Springs, Conn., for Improvement in Road Scrapers:

I claim, first, The attaching of the scraper, C, to the frame, A, of the machine, substantially as shown, to admit of the scraper being adjusted in a more or less inclined position, for the purpose specified.

Second, Attaching the draft pole, B, to the frame, A, in the manner substantially as shown, to admit of the pole being adjusted either at right angles with the scraper, or obliquely therewith, for the purpose set forth.

Third, The combination of the adjustable scraper, C, and draft pole, B arranged for joint operation as and for the purpose described.

[The object of this invention is to obtain a road scraper which will admit of being so adjusted as to scrape the dirt or earth to either side of it, or to scrape the earth up and carry it in front for short distances, and also be capable of being adjusted so as to compress the earth and level it where desired.]

34,195.—John Bullard, of Stockbridge, Vt., for Improvement in Apparatus for Distilling Coal Oil:

I claim an egg-shaped retort, arranged substantially as described, with draft opening at its lower end, so that the unburned contents of the retort will always be within the lines of the draft, all as set forth.

Second, In a retort in which the distillation is effected by the gradual burning away of the charge toward the outlet, I claim the introduction of steam into and through the bottom, substantially as and for the purpose specified.

Third, The combination with the outlet of the retort of a still which has its interior pipes provided with a cold water injection, as and for the purpose shown and described.

34,196.—Alfred Burchard, of Sylvan, Mich., for Improvement in Iron Cutters or Sleighs:

I claim the construction and use of wrought iron or steel braces, supports, bolts and nuts, when used and in combination with the running parts of sleighs or cutters made exclusively of wrought iron or steel, in the manner and form and for the purposes as described.

34,197.—L. D. Cowles, of Armada, Mich., for Improvement in Carriages:

I claim, first, The combination of the springs, E, G, attached to the axle of a two-wheeled carriage by means of a rolling joint, e, f, with the stationary spring F, when arranged and operating in the manner set forth.

Second, The combination of the volute springs, H, J, with the rolling springs, E, G, and stationary spring, F, when arranged in the manner described.

[This invention consists in a peculiar construction and arrangement of springs of an ordinary two-wheeled carriage, whereby the lateral and nodding motion of the same produced by one of the wheels striking against an obstruction in the road or dropping into a rut, is neutralized, and a gentle and easy motion given to the carriage.]

34,198.—J. H. Connelly and J. W. Phillips, of Wheeling, Va., for Improved Steam Boiler Furnace:

We claim, first, The introduction of petroleum, or well oil into the furnace of steam boilers by means of the steam jet or pipes, for the purpose of facilitating the combustion of the gases of the fuel, whether wood or coal.

Second, We also claim the side furnace, a, in connection with the boiler, b, reservoir, c, steam pipes, e, and oil pipes, e, constructed and arranged substantially as and for the purposes specified.

34,199.—Alanson Cary, of Worcester, Mass., for Improvement in Starting Apparatus for Horse Railroad Cars:

I claim, first, The combination with one of the wheels on the axle

of a rail car of a ratchet wheel, E, or its equivalent, and two dog levers, F, F', provided with dogs or moving pawls, substantially as and for the purposes set forth.

Second, The combination of a ratchet wheel or device fast to one of the wheels of a rail car, as set forth, and a suitable pawl device suspended so as to be free to vibrate or oscillate around the axis of said wheel, with suitable mechanism so constructed and combined with the body and platform of the car as to enable the driver to start the car while attending to his team at the front of the car, for the purposes set forth.

Third, The peculiar construction and relative arrangement of the dog levers, F, F', whereby the pawls and stop devices are well protected by their flanges, d, d', and whereby one is made to fit and work against the other like a ratchet joint, and operating levers, G, G', are brought over the other, as shown.

Fourth, Operating the dog levers, F, F', by means of the hand crank, L, at the front of the car, substantially as shown and described.

Fifth, The mode of throwing the operating dogs in and out of action with the ratchet teeth, substantially as described.

Sixth, Forming the operating dogs, e, e, in the peculiar manner set forth, and as shown in Fig. 6.

Seventh, The combination of the dog levers, F, F', with the tubular projection, G', of box, C, whereby all friction and wear of the parts, when the starting device is not in operation, is avoided, as described.

Eighth, The combination of the tubular brake shaft, K, with its hand crank, L', and hand crank L, with its central shaft, with the fender board on front of the car, substantially as described.

34,200.—John Duke, of Milesbury, Pa., for Improved Roofing:

I claim a roof constructed in the manner and of the materials as set forth.

34,201.—M. Easterbrook and J. M. Wood, of Geneva, N. Y., for Improvement in Machines for Peeling Willow:

We claim, first, The two pressure wheels, D, F, when provided respectively with the beveled projections, a, b, and the other with a beveled projection, c, and used in combination with a stripping device formed of the projections, m, of plate, L, for the purpose set forth.

Second, The projections, m, attached to yielding slides, l, which are fitted in a plate, L, between the bars, K, K, and arranged in relation with the wheels, D, F, to operate as and for the purpose specified.

Third, The combination of the wheels, D, F, projection, m, of the plate, L, and the brushes, N, N, in the manner and for the purpose set forth.

[This invention relates to a new and improved machine for stripping the bark from willow preparatory to the manufacture of the same into basket. The invention consists in the employment of use of two pressure wheels, one of which has a V-shaped and the other a grooved periphery and using in connection therewith a stripping plate, rotary brushes and discharging rollers.]

34,202.—J. D. Flansburgh, of Philadelphia, Pa., for Improved Culinary Pot:

I claim, as an improved article of manufacture, the culinary pot described, the same having the supplementary handle, c, cast thereon, substantially as set forth, and for the purposes specified.

34,203.—B. W. Franklin, of New York City, for Improved Fusible Gage for Temperatures:

I claim the described fusible gage, the fusible alloys being used in the peculiar manner specified, in indicating the temperature by the condition of the alloy, whether the same be granular, semifluid or fluid, substantially as set forth.

34,204.—W. C. Goodwin, of Hamden, Conn., for Improved Folding Arm Chair:

I claim the folding arm chair made with double seat rails, when the substance used for the sacking, or seat, also constitutes the hinges, and the whole is constructed and fitted for use substantially as described.

34,205.—A. H. Hastings, of New York City, for Improved Refrigerator:

I claim the described refrigerator as an article of manufacture, constructed, arranged and used in the manner and for the purpose specified.

34,206.—Obadiah Hopkins, of New York City, for Improvement in Defending Redoubts by Shells:

I claim the application of the mechanical device, or its equivalent, for elevating and exploding shell above the covering at the apex, substantially as and for the purposes specified.

34,207.—C. T. James, of Providence, R. I., for Improvement in Hot Projectiles for Ordnance:

I claim making elongated shot with a separable point, which can be readily taken off and put on, substantially as and for the purpose specified.

And I also claim making elongated shot with separable point, substantially as described, in combination with the separable packing, or the equivalent thereof, to be expanded by the force of the discharge, substantially as and for the purpose specified.

34,208.—Rannah Justis, of Dublin, Ind., for Improvement in Churns:

I claim the horizontal open volute dasher, E, having door, G, wings, I, and detachable shaft, C, as and for the purposes set forth.

34,209.—S. D. Kendall, of Brooklyn, N. Y., for Improvement in Truss Girders for Bridges:

I claim the arrangement and combination, substantially as described, of the chords, A, B, C, posts, D, D', braces, E, E, tension rods, G, G, binding blocks, F, F', and couplings, h, h, the whole forming a truss girder for a bridge or other structure.

[This invention consists in a certain arrangement and combination of chords and posts, of cast-iron diagonal braces, vertical tension rods, and couplings of wrought iron, and binding blocks of cast iron, making a truss of great strength, in proportion to the weight of material employed in its construction.]

34,210.—Thomas Langham, of Philadelphia, Pa., for Improvement in Knitting Machines:

I claim, first, Producing a circular-ribbed fabric by means of a series of self-acting needles so arranged in radial grooves of two stationary plates and so operated that some of the needles shall operate on the outside of the fabric, while others operate on the inside of the fabric, as specified.

Secondly, The employment of radial reciprocating needles made self-acting at both ends combined with the devices described, or their equivalents, whereby the said needles may be so transposed as to operate either on the inside or outside of the fabric, without any interruption of the forces of knitting, as set forth for the purpose specified.

34,211.—L. G. Merrill, of Angels, Cal., for Improved Mode of Chopping to Pieces Ships or other Wooden Substances Under Water:

I claim the construction and arrangement of the several parts, A, B, C, D, E, and a, in the manner described, to be operated by the action of the water, as described, for the purpose stated.

34,212.—F. S. Merritt, of New York City, for Improvement in Cooking Ranges:

I claim, first, The combination of a fire brick, c, and water back, E, arranged at the back part of the chamber, A, of a cooking range, so as to form a cylinder or a frustum of a cone, and be rotated so that either the fire brick or the water back may form the back of the fire chamber, as desired.

Second, The air-heating chamber, F, interposed between the fire brick, C, and water back, E, when the same are suspended and made to rotate, as and for the purpose specified.

Third, The tubular runners, a, b, provided with passages, d, d', in combination with the sockets, b*, b**, provided with the holes or openings, e, e, and arranged and applied to the rotating water back, E, as shown, to automatically stop and start the flow of water through the water back, E, as set forth.

Fourth, Rotating the frustum, D, by means of the pins or teeth, f, and screw, H, when the latter is placed or formed on a rod, I, which passes through the center of the fire chamber, so that the frustum can be turned by the operator or attendant at the front of the stove.

34,213.—A. W. Morse, of Eaton, N. Y., for Improvement in Track Clearers in Mowing Machines:

I claim, first, A track clearer to a grass harvester, capable of being extended or retracted, and adjusted laterally, in combination with an adjustable handle, attached to it in such a manner as to regulate its capacity, as circumstances may require, substantially as and for the purpose set forth.

Second, The adjustable handle, M, when combined with a track clearer, by means of the socket and fastening, substantially as and for the purpose specified.

34,214.—James Piercy, of Bloomfield, N. J., for Improvement in Washers for Paper Pulp:

I claim the combination of the washer, B, its journal box, c, and the valve board, C, under a method of construction and operation, substantially as described.

34,215.—B. F. Ray, of Baltimore, Md., for Improvement in Harvesters:

I claim, first, Making the frame bar and the frame of the cutter bar of one continuous piece, having the curved part, x, as described.

Second, I claim the arrangement of the bearings and bases of the rocker shaft, in combination with the friction roller, and cam groove, as described.

34,216.—A. T. Russell, of New York City, for Improved Cork Screw:

I claim the application of the cam or eccentric and piston as a leverage or power to attach to cork screws, for drawing corks or stopples from bottles.

34,217.—Wm. Sellers, of Philadelphia, Pa., for Improvement in Mode of Transmitting and Arresting Motion:

I claim, first, The described device for transmitting and arresting rotary or vibrating motion, consisting of a ratchet wheel and pawl, when the ratchet wheel is the driver, combined with a stop or stops, in the manner set forth.

Second, The employment of a friction pad or its equivalent, in connection with a ratchet wheel, pawl and stop or stops, operating substantially in the manner and for the purpose specified.

Third, Combining with the device for transmitting and arresting motion, adjustable stops, for the purpose of varying the motion transmitted to any desired portion of a revolution, as set forth.

34,218.—C. A. Slack, of Frenchtown, N. J., for Improvement in Wagon and Carriage Brakes:

I claim the employment, in combination with the body, J, and bolsters, F, G, of the inclined blocks, K, substantially as and for the purpose shown and described.

[This invention consists in having the body of the vehicle, or a frame on which the body rests, placed loosely on the bolsters, so that a sliding movement will be allowed the body independent of the running gear, and the former made by its own gravity, to actuate the brake in descending eminences, the body resuming its proper position and relieving the wheels from the brake when the vehicle passes on level ground.]

34,219.—E. Smith, of Cold Spring Harbor, N. Y., for Improvement in Harvesters:

I claim the pawl, W, actuated from the pulley, F, substantially as shown, in connection with the plate, U, provided with the serrated spindle holder, a, and the shaft, M, all being arranged to operate as and for the purpose set forth.

I further claim, in combination with the pawl, W, and serrated plate, U, arranged as shown, the pulley, F, connected with the main frame, A, by the cord or chain, K, cam, H, and lever, I, the pulley, cam and lever being attached to the draught pole, C, and all arranged substantially as and for the purpose specified.

34,220.—Moritz Stange, of New York City, for Improvement in Pianoofortes:

I claim the arrangement of the pins, f, with the pins, e, e, and strings, c, c, as shown and described.

[This invention consists in so applying and arranging the steady pins in the sound-board bridge, and in combination with the strings as to obviate the tendency to twist the bridge and so strain the sound board, consequent upon the usual arrangement of pins.]

34,221.—E. N. Steere, of Providence, R. I., for Improvement in Spindle Bolsters:

I claim the combination of the isolated absorbent, s, and the passenger or conductors, e, e, in connection with the ordinary metal bearing of a spindle bolster, the same being arranged and operating substantially as described, and for the purpose specified.

34,223.—S. S. White, of Philadelphia, Pa., for Improvement in the Manufacture of Artificial Teeth:

I claim the manufacture of mineral teeth, with pins having heads, d, d, at their outer ends, substantially as and for the purpose specified.

34,224.—W. E. Worthem, of New York City, for Improvement in Architectural Sheet Metal:

I claim the new article of manufacture described, which I term architectural sheet metal.

34,225.—H. B. Ames, of Brooklyn, N. Y., for Improvement in Hoop Skirts:

I claim the employment of a piece of leather or equivalent material between the metallic clasp, and the tape or cord, for the purposes, and as specified.

34,226.—C. R. Alsop, of Middletown, Conn., assignor to J. W. Alsop, of New York City, for Improvement in Revolving Firearms:

I claim the combination of the hammer cam, I, with the rearward extremity of the axis pin, D, in the manner and for the purpose shown and described.

[This invention consists in an improved mode of applying a cam, in combination with the hammer or cock, and with the rotary, many-chambered cylinder, for the purpose of forcing the latter forward toward the barrel, to make a tight joint therewith at the time of firing.]

34,227.—Nathan Ames, of Saugus Center, Mass., assignor to the Goodyear India-Rubber Stopples Co., of Boston, Mass., for Improved Bottle Stopples:

I claim, first, As a new article of manufacture, a stopple, consisting of a band, case or thimble, R, of rubber, or any of its compounds, and a core, W, of wood or other material, substantially as described and for the objects specified.

Second, Constructing the core, W, with an annular depression, d, for the purpose of coating the rubber, and allowing the same to be of greater thickness where the most elasticity is required.

Third, Constructing a stopple with a core, W, rubber band, case or thimble, R, and a thin coating of gutta percha, G, substantially as described and for the objects specified.

34,228.—Stephen Curtis, Jr. (assignor to himself and Henry Yale), of New York City, for Improved Ice Pitcher:

I claim the construction and use in ice pitchers or other vessels of the spring bottom, C, supported upon springs, so as to yield to the impact of masses of ice or the like, and preserve the true bottom of the vessel, substantially in the manner and with the advantage set forth.

34,229.—Jehu Hatfield (assignor to Percy & King), of Troy, N. Y., for Improvement in Machines for Making Paper Boxes:

I claim the sliding bar, F, with the roller, G, attached, in connection with the stationary bar or bed, c, spring, E, slide, H, and bar, a, arranged substantially as and for the purpose set forth.

[The object of this invention is to obtain a machine by which strips of paper board may be very expeditiously bent and pressed into angular form, for the manufacture of angular polygonal paper boxes.]

34,230.—Henry Howson (assignor to W. F. Warburton), of Philadelphia, Pa., for Improved Box for Matches:

I claim the receptacle, B, with its projecting front and open top, when so hung to, and so combined with an outer frame or casing, A, of such a shape that the latter shall form a cover for the said receptacle, and when the latter is rendered by a weight or otherwise self-closing against the cover, substantially as set forth, for the purpose specified.

34,231.—J. A. Pease (assignor to C. A. Pease), of New York City, for Improvement in Tobacco Pipes:

I claim the combination of the perforated plug or cylinder, A, with the piston, E, and case or cylinder, C, in which it moves as described

- 34,232.—W. H. Furness, of Quincy, Ill., for Improvement in Coach and Furniture Varnish :
I claim the use of coal oil or kerosene and yellow wax, as ingredients in the making of coach or furniture varnish out of the ordinary gums and driers, used for this purpose, and as set forth.
- RE-ISSUES.
1,260.—F. E. Sickles, of New York City, for Improvement in Steam Engines. Patented Sept. 19, 1845. Extended Feb. 21, 1860.—No. 910.
I claim imparting a co-existing movement to two reciprocating catch pieces, in the operation of the trip of cut off valves, substantially as described.
- DESIGNS.
1,517.—S. D. Arnold (assignor to P. and F. Corbin), of New Britain, Conn., for Design for a Lift or Handle.
1,518.—J. B. Earnshaw, of Cincinnati, Ohio, for Design for a Monument.
1,519-1,520.—E. J. Ney (assignor to the Lowell Manufacturing Company), of Lowell, Mass., for Designs for Carpets, &c. 2 Patents.

PATENTS FOR SEVENTEEN YEARS.



The new Patent Laws enacted by Congress on the 2d of March, 1861, are now in full force, and prove to be of great benefit to all parties who are concerned in new inventions.
The duration of patents granted under the new act is prolonged to SEVENTEEN years, and the government fee required on filing an application for a patent is reduced from \$30 down to \$15. Other changes in the fees are also made as follows:—

On filing each Caveat.....	\$10
On filing each application for a Patent, except for a design.....	\$15
On issuing an Original Patent.....	\$20
On appeal to Commissioner of Patents.....	\$20
On application for Re-issue.....	\$30
On application for Extension of Patent.....	\$50
On granting the Extension.....	\$50
On filing Disclaimer.....	\$10
On filing application for Design, three and a half years.....	\$10
On filing application for Design, seven years.....	\$15
On filing application for Design, fourteen years.....	\$30

The law abolishes discrimination in fees required of foreigners, excepting reference to such countries as discriminate against citizens of the United States—thus allowing English, French, Belgian, Austrian, Russian, Spanish, and all other foreigners except the Canadians, to enjoy all the privileges of our patent system (except in cases of designs) on the above terms.

During the last sixteen years, the business of procuring Patents for new inventions in the United States and all foreign countries has been conducted by Messrs. MUNN & CO., in connection with the publication of the SCIENTIFIC AMERICAN; and as an evidence of the confidence reposed in our Agency by the Inventors throughout the country, we would state that we have acted as agents for more than FIFTEEN THOUSAND Inventors! In fact, the publishers of this paper have become identified with the whole brotherhood of Inventors and Patentees at home and abroad. Thousands of Inventors for whom we have taken out Patents have addressed to us most flattering testimonials for the services we have rendered them, and the wealth which has inured to the Inventors whose Patents were secured through this Office, and afterward illustrated in the SCIENTIFIC AMERICAN, would amount to many millions of dollars! We would state that we never had a more efficient corps of Draughtsmen and Specification Writers than are employed at present in our extensive Offices, and we are prepared to attend to Patent business of all kinds in the quickest time and on the most liberal terms.

The Examination of Inventions.

Persons having conceived an idea which they think may be patentable, are advised to make a sketch or model of their invention, and submit it to us, with a full description, for advice. The points of novelty are carefully examined, and a reply written corresponding with the facts, free of charge. Address MUNN & CO., No. 37 Park-row, New York.

Preliminary Examinations at the Patent Office.
The advice we render gratuitously upon examining an invention does not extend to a search at the Patent Office, to see if a like invention has been presented there, but is an opinion based upon what knowledge we may acquire of a similar invention from the records in our Home Office. But for a fee of \$5, accompanied with a model or drawing and description, we have a special search made at the United States Patent Office, and a report setting forth the prospects of obtaining a Patent &c., made up and mailed to the inventor, with a pamphlet, giving instructions for further proceedings. These preliminary examinations are made through our Branch Office, corner of F and Seventh-streets, Washington, by experienced and competent persons. More than 5,000 such examinations have been made through this office during the past three years. Address MUNN & CO., No. 37 Park-row, N. Y.

How to Make an Application for a Patent.

Every applicant for a Patent must furnish a model of his invention. If susceptible of one; or if the invention is a chemical production, he must furnish samples of the ingredients of which his composition consists, for the Patent Office. These should be securely packed, the inventor's name marked on them, and sent, with the government fees by express. The express charge should be prepaid. Small models from a distance can be sent cheaper by mail. The safest way to remit money is by draft on New York, payable to the order of Munn & Co. Persons who live in remote parts of the country can usually purchase drafts from their merchants on their New York correspondents; but, if not convenient to do so, there is but little risk in sending bank bills by mail, having the letter registered by the postmaster. Address MUNN & CO. No. 37 Park-row, New York.

Rejected Applications.

We are prepared to undertake the investigation and prosecution of rejected cases, on reasonable terms. The close proximity of our Washington Agency to the Patent Office affords us rare opportunities for the examination and comparison of references, models, drawings, documents, &c. Our success in the prosecution of rejected cases has been very great. The principal portion of our charge is generally left dependent upon the final result.

All persons having rejected cases which they desire to have prosecuted are invited to correspond with us on the subject, giving a brief history of the case, inclosing the official letters, &c.

Caveats.

Persons desiring to file a Caveat can have the papers prepared in the shortest time by sending a sketch and description of the invention. The government fee for a Caveat, under the new law, is \$10. A pamphlet of advice regarding applications for Patents and Caveats, in English and German, furnished gratis on application by mail. Address MUNN & CO., No. 37 Park-row, New York.

Foreign Patents.

We are very extensively engaged in the preparation and securing of Patents in the various European countries. For the transaction of this business, we have offices at Nos. 66 Chancery-lane, London; 29 Boulevard St. Martin, Paris; and 26 Rue des Eperonniers, Brussels. We think we can safely say that THREE-FOURTHS of all the European Patents secured to American citizens are procured through our Agency.

Inventors will do well to bear in mind that the English law does not limit the issue of Patents to Inventors. Any one can take out a Patent there.

Circulars of information concerning the proper course to be pursued in obtaining Patents in foreign countries through our Agency, the requirements of different Patent Offices, &c., may be had gratis upon application at our principal office, No. 37 Park-row, New York, or either of our Branch Offices.

Assignments of Patents.

The assignment of Patents, and agreements between Patentees and manufacturers, carefully prepared and placed upon the records at the Patent Office. Address MUNN & CO., at the Scientific American Patent Agency, No. 37 Park-row, New York.

It would require many columns to detail all the ways in which the Inventor or Patentee may be served at our offices. We cordially invite all who have anything to do with Patent property or inventions to call at our extensive offices, No. 37 Park-row, New York, where any questions regarding the rights of Patentees, will be cheerfully answered. Communications and remittances by mail, and models by express (prepaid), should be addressed to MUNN & CO., No. 37 Park-row, New York.



H. B., of Ill.—The Franklin Institute publishes a monthly journal which contains a record of their transactions. The American Institute publishes a yearly volume of its transactions.

B. G., of Iowa.—We have no experimental data respecting the durability of gypsum rock as a building material.

J. A. S., of Colorado Territory.—Probably the best plan for separating gold from iron pyrites is roasting. If fuel is abundant the ore may be piled upon the fuel in the open air. As soon as the ore is sufficiently heated, the sulphur of the pyrites combines with the oxygen of the air to form sulphurous acid, which passes off in the form of gas; leaving both the iron and gold in fine powder. Fuel would be economized by using a reverberatory furnace, such as is employed for reducing iron ores. In any case there should be a free access of air to the ore.

W. G., of Mass.—We have no data which would enable us to form a correct estimate of the velocity imparted to a sledge hammer by a strong man. Assuming that the sledgehammer is brought down with a velocity of 160 feet per second, your 25 lb. weight would have to drop over a distance of 64 feet in order to produce the same effect as a 10 lb. sledge hammer.

L. A. D., of Ohio.—We do not know where you can obtain cast-steel pinions and small wheels. We think they are not made in any foundry. As you state, they would be very strong and durable, and might come into very general use for mill work.

G. W. R., of Mich.—If you warm your plaster molds, you will obtain good stereotype plates. The defects in your plates, in all likelihood, were caused by the metal becoming chilled before entering into the minute spaces of the molds.

Hawley, of Ind.—You will find our views of perpetual motion on page 353, Vol. I. (new series) of SCIENTIFIC AMERICAN. We have heard it stated that offers of rewards have been made for the discovery of perpetual motion, but have never seen the statement on any reliable authority, and do not believe it.

A. N., of Ill.—Supposing the points of the same size we think electricity would pass either into a body or out of it more rapidly by three points than by one.

R. L. H., of Conn.—The power of a turbine wheel with a discharge of 19 inches under a head of 12 feet is 3,739 or nearly 4-horse powers and that of a twelve feet overshoot wheel with 25 inches water drawn under a 4-foot head is 2,827 at nearly 3-horse powers. In both cases the effective power is assumed to be 75 per cent.

A. A. W., of Ill.—Zinc is a volatile metal and when exposed to a high heat it passes off in the form of volatile fumes. By roasting your solder in an open furnace the zinc of it will be driven off, but the lead will be converted into a brown oxide totally useless for any purpose but a drier for paint.

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