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The revised Patent Law, enacted by Congress on the 2d of March, 1881, 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 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 each 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 a 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 natives of such countries as discriminate against citizens of the United States—thus allowing Austrian, French, Belgian, English, Russian, Spanish and all other foreigners except the Canadians, to enjoy all the privileges of our patent system (but in cases of designs) on the above terms. Foreigners cannot secure their inventions by filing a caveat; to citizens only is this privilege accorded.

During the last seventeen 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 at least TWENTY 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 afterwards 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 those employed at present in our extensive offices, and we are prepared to attend to patent business of kinds in the quickest time and on the most liberal terms.

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, printed in English and German, is 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 the Scientific American Patent Agency, No. 37 Park Row, New York. Inventors will do well to bear in mind that the English law does not limit the issue of patents to inventors. Anyone 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 Government Patent Offices, &c., may be had gratis upon application at our principal office, No. 37 Park Row, New York, or any of our branch offices.

ASSIGNMENTS OF PATENTS.

Assignments of patents, and agreements between patentees and manufacturers are 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 inventors or patentees 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.

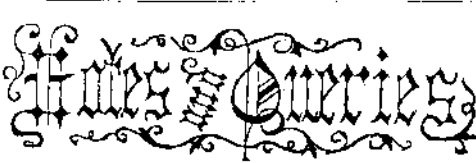
Communications and remittances by mail, and models by express (prepaid), should be addressed to MUNN & CO., No. 37 Park Row, New York.

TO OUR READERS.

Models are required to accompany applications for Patents under the new law, the same as formerly, except on design patents when two good drawings are all that are required to accompany the petition, specification and oath, except the Government fee.

INVARIABLE RULE.—It is an established rule of this office to stop sending the paper when the time for which it was pre-paid has expired.

NEW PAMPHLETS IN GERMAN.—We have just issued a revised edition of our pamphlet of Instructions to Inventors, containing a digest of the fees required under the new Patent Law, &c., printed in the German language, which persons can have gratis upon application at this office. Address MUNN & CO., No. 37 Park-row, New York.



S. G., of N. Y.—The culture of fish has not been prosecuted, so far as we know, in any part of our country. There are rivers in New Jersey, New York and the Eastern States which once teemed with salmon, but in which none of this fish have been taken for thirty years. We believe that such rivers could again be stocked with this excellent fish.

W. B. R., of Mass.—You can make brass of different degrees in quality, according to the quantities of zinc and copper employed. About 65 per cent of zinc, to 35 of copper makes very good brass. White lead is a carbonate, and is formed by submitting thin sheet lead rolled in cones, to the vapor of acetic acid.

H. W., of Conn.—No mordant is required for dyeing silk and wool with aniline colors. You have simply to clean the silk or wool well, then handle it in a warm solution of aniline color dissolved in alcohol.

T. Y. B., of Pa.—If castings of good pig iron be heated to a low cherry red temperature, and then plunged in oil, they will become much tougher, and their strength will be increased about forty per cent.

J. R., of Ohio.—In preparing the juice of your sorghum for boiling, to obtain sugar, mix a small quantity of lime-water with it as soon as it is pressed from the cane. Maple sugar used with the juice of currants and berries makes a superior flavored wine to juice treated with cane sugar. If you have plenty of maple sugar we advise you to use it in preference to cane sugar in making your blackberry and elderberry wines.

J. B. L., of Ind.—Glass for windows, is colored by two different modes. The beautiful stained glass used in cathedrals, is made by fusing coloring agents with it. Painted glass for windows is produced by mixing pigments with a clear varnish—such as is made with Canadian balsam. Very little colored glass should be employed for the windows of churches, or other buildings; as it obstructs the passage of pure white light. We should advise you to get a bell of pure bell-metal (copper and tin), in preference to one of any other alloy.

H. A. W., of Vt.—The bill which was introduced last year into the Canadian legislature, containing the provision for permitting American citizens to secure patents in Canada, did not pass. Several illustrated works on stair-building have been published. You should examine them for your own satisfaction; before deciding which to purchase.

T. M., of R. I.—The natives of Madagascar used just such a bellows in 1838, as the one you propose; you will perceive then that it is not new.

Money Received

At the Scientific American Office, on account of Patent Office business, from Wednesday, Aug. 12, to Wednesday, August 19, 1883:—

- E. C., of N. Y., \$164; J. W. R., of Conn., \$16; N. T., of Ohio, \$16; J. T. C., of Iowa, \$15; L. K., of N. Y., \$16; A. M. B., of Mich., \$15; J. J. K., of Ill., \$25; C. F. B., of Conn., \$12; W. P. C., of Cal., \$20; H. S. W., of Mich., \$25; E. S. S., of Sweden \$20; W. R., of N. Y., \$15; T. B., of Ohio, \$15; T. J. V., of Conn., \$15; A. H., of Ill., \$26; R. & B. of Ill., \$25; S. W., of N. Y., \$30; O. P. H., of Mass., \$41; W. H. J., of — \$75; S. & G., of C. W., \$506; D. J. S., of N. Y., \$16; D. S. E., of Mass., \$20; H. K., of N. Y., \$45; J. D. P., of N. J., \$20; J. D., of N. J., \$45; R. B., of N. Y., \$45; D. C., of N. Y., \$30; N. H., of N. Y., \$20; V. G., of N. Y., \$16; D. C., of N. Y., \$30; J. W. T., of Vt., \$20; J. S. T., of Cal., \$41; M. B. W., of Conn., \$16; S. W. N., of N. Y., \$25; G. W. L., of Ohio, \$15; D. C. M., of N. T., \$20; C. E. M., of Vt., \$15; J. B., of Ohio, \$16; G. F. C., of Mass., \$15; N. C. S., of Conn., \$25; A. A. S., of Mich., \$25; B. & C., of R. I., \$73; J. T., of W's., \$20; C. E. S., of Conn., \$20; L. S., of N. Y., \$16; N. F. C., of Wis., \$20; T. W., of Mass., \$20; O. & F., of N. Y., \$16; A. & W., of N. Y., \$20; W. S. W., of N. Y., \$20; G. H. S., of Mass., \$20; H. D. W., of Mass., \$20; J. B., of N. Y., \$20; J. M. M., of Mass., \$25; A. L. F., of Pa., \$55; G. P., of N. Y., \$64; N. S., of Ind., \$20; J. D. B., of Vt., \$20; A. B., of N. Y., \$20; R. L., of N. Y., \$16; J. D. W. W., of N. Y., \$20; C. D. B., of Mich., \$20; J. P., of N. Y., \$145; L. A. J., of Cal., \$20; M. E., of Ill., \$20.

Persons having remitted money to this office will please to examine the above list to see that their initials appear in it, and if they have not received an acknowledgment by mail, and their initials are not to be found in this list, they will please notify us immediately, and inform us the amount, and how it was sent, whether by mail or express.

Specifications and drawings and models belonging to parties with the following initials have been forwarded to the Patent Office from Wednesday, August 12, to Wednesday, August 19, 1883:—C. F. B., of Conn.; J. W. McL., of Ohio; A. A. S., of Mich.; J. J. K., of Ill.; N. C. S., of Conn.; B. & C., of Mo.; S. P. La D., of Iowa; W. W. T., of Wis.; H. W., of Pa.; A. H., of Ill.; S. W. N., of N. Y.; J. L. K., of N. J.; B. & C., of R. I. (3 cases); S. W., of N. Y.; H. B., of Pa.

RATES OF ADVERTISING.

Twenty-five Cents per line for each and every insertion, payable in advance. To enable all to understand how to calculate the amount they must send when they wish advertisements published, we will explain that ten words average one line. Engravings will not be admitted into our advertising columns, and, as heretofore, the publishers reserve to themselves the right to reject any advertisement they may deem objectionable.

THE PRACTICAL BOLT AND NUT-MAKERS.—WANTED. A steady, reliable man who has had practical experience in making pressed bolts and nuts. A good situation, with prospect of advancement, will be assured. Address, stating terms and full particulars, B. D. H., Box 447, Pittsburgh, Pa.

THE PRACTICAL DRAUGHTSMAN'S BOOK OF INDUSTRIAL DESIGN. Just published and now ready for delivery. The Practical Draughtsman's Book of Industrial Design, and Machinist's and Engineer's Drawing Companion; forming a complete course of Mechanical Engineering and Architectural Drawing. From the French of M. Armengaud the elder, Professor of Design in the Conservatoire of Arts and Industry, Paris, and M. Armengaud the younger, an X; Continuation of the Study of Projection.—Use of sections—details of machinery; Plate XI.; Simple applications—splines shafts, couplings, wooden patterns; Plate XII.; Method of constructing a wooden model or pattern of a coupling, Elementary applications—Rails and chairs for railways; Plate XIII.; Rules and Practical Data: Strength of material, Resistance to compression or crushing force; Friction of surfaces in contact. THE INTERSECTION AND DEVELOPMENT OF SURFACES, WITH APPLICATIONS.—The Intersection of Cylinders and Cones; Plate XIV.—The Delineation and Development of Helices, Screws and Serpentine; Plate XV.—Application of the helix—the construction of a staircase; Plate XVI.—The intersection of surfaces—applications to stop-cocks; Plate XVII.; Rules and Practical Data, Steam Unity of heat, Heating surfaces, Calculation of the dimensions of boilers, Dimensions of fire grates, Chimneys, Safety-valves.

THE STUDY AND CONSTRUCTION OF TOOTHED GEAR.—Involute, cycloid and epicycloid; Plates XVIII. and XIX.; Involute; Fig. 1, Plate XVIII.; Cycloid; Fig. 2, Plate XVIII.; External epicycloid described by a circle inside it; Fig. 3; Plate XVIII.; Internal epicycloid; Fig. 2, Plate XIX.; Delineation of a rack and pinion in gear; Fig. 4, Plate XVIII.; Gearing of a worm with a worm-wheel; Fig. 5 and 6, Plate XVIII.; Cylindrical or Spur Gearing; Plate XIX.; Practical delineation of a couple of spur-wheels; Plate XX.; The Delineation and Construction of Wooden Patterns for Toothed Wheels; Plate XXI.; Rules and Practical Data: Toothed gearing, Angular and circumferential velocity of wheels, Dimensions of gearing, Thickness of the teeth, Pitch of the teeth, Dimensions of the web, Number and dimensions of the beams, Wooden patterns.

CONTINUATION OF THE STUDY OF TOOTHED GEAR.—Design for a pair of bevel-wheels in gear; Plate XXII.; Construction of wooden pattern for a pair of bevel-wheels; Plate XXIII.; Involute and Helix' Teeth; Plate XXIV.; Continuation for obtaining Differential Movements, The delineation of eccentrics and cams; Plate XXV.; Rules and Practical Data: Mechanical work of effect, The simple machines, Centre of gravity, On estimating the power of prime movers, Calculation for the brake, The fall of bodies, Momentum, Central forces.

ELEMENTARY PRINCIPLES OF SHADOWS.—Shadows of Prisms, Pyramids and Cylinders; Plate XXVI.; Principles of Shadowing; Plate XXVII.; The Study of Shadows; Plate XXVIII.; Shadows; Plate XXIX. and XXX.; Rules and Practical Data: Pumps, Hydrostatic principles, Forcing pumps; Lifting and forcing pumps, The hydrostatic press, Hydrostatic calculations and data—discharge of water through different orifices, Gaging of a water-course of uniform section and fall, Velocity of the bottom of water-courses, Calculation of the discharge of water through rectangular orifices of narrow edges, Calculation of discharge of water by an overshoot outlet, To determine the width of an overshoot outlet, To determine the depth of the outlet, Outlet with a spout or duct.

APPLICATION OF SHADOWS TO TOOTHED GEAR: Plate XXX.—Application of Shadows to Screws; Plate XXXI.; Application of Shadows to a Boiler and its Furnace; Plate XXXII.; Shadowing in Black—Shadowing in Colors; Plate XXXIII.

THE CUTTING AND SHAPING OF MASONRY: Plate XXXIV.—Rules and Practical Data, Hydraulic motors, Undershot water wheels, whiplaue floats and circular channel, Width, Diameter, Velocity, Number and capacity of the buckets, Useful effect of the water wheel, Overshot water wheels, Water wheels with radial floats, Water wheel with curved buckets, Turbines, Remarks on Machine Tools.

THE STUDY OF SHADOWS AND SKETCHING.—Various applications and combinations: The Sketching of Machinery; Plate XXXV. and XXXVI.; Drilling Machine; Motive Machines; Water wheels, Construction and setting-up of water wheels, Delineation of water wheels, Design for a water wheel, Sketch of a water wheel; Overshot Water Wheels; Water Pumps; Plate XXXVII.; Steam Motors; High-pressure expansive steam engine; Plates XXXVIII., XXXIX. and XL.; Rules and Practical Data: Moments of the Distribution and Expansion Valves; Rules and Practical Data, Steam engines: low-pressure condensing engines without expansion valve, Diameter of piston, Velocities, Steam pipes and passages, Air-pump and condenser, Cold-water and feed-pumps, High-pressure expansive engines, Medium pressure condensing and expansive steam engine, Conical pendulum or centrifugal governor.

OBLIQUE PROJECTIONS.—Application of rules to the delineation of an oscillating cylinder; Plate XLI.

PARALLEL PERSPECTIVE.—Principles and applications; Plate XLII. TRUE PERSPECTIVE.—Elementary principles; Plate XLIII., Applications—Hour mill driven by bells; Plate XLIV. and XLV., Description of the mill; Representation of the mill in perspective, Drawing recent improvements in flour mills, Scheele's mill, Mullin's ring millstone, Barnett's millstone, Hastie's arrangement for driving mills, Currie's improvements in millstones; Rules and Practical Data, Work performed by various machines, Flour mills, Saw mills, Veneer-sawing machines, Circular saws.

EXAMPLES OF FINISHED DRAWINGS OF MACHINERY.—Plate A. Balance wheel of a watch; Engineer's simple machine; Plate B. D. Express locomotive engine; Plate C. Wood planing machine; Plate G. Washing machine for piece goods; Plate H. Power loom; Plate I. Duplex steam boiler; Plate J. Direct-acting marine engines.

DRAWING INSTRUMENTS. The above or any other of my Practical and Scientific publications sent by mail free of postage. Every reader of the SCIENTIFIC AMERICAN is invited to send for a catalogue, and to order books to be sent free of postage. HENRY CAREY BAIRD, Publisher of Practical and Scientific Books, 406 Walnut Street, Philadelphia. 1

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