

and running in conjunction with each other, substantially as described and set forth.

I also claim the forming of continuous jaws or lips of railroad chairs by rolling into the solid iron of the flange, on the blank bar of which the said lips are composed, and which flange for said jaw or lips is raised upon the blank bar, as aforesaid, by means of said rollers, described and set forth, or by means of any rollers substantially the same.

DESIGNS.

- 1,600.—A. C. Barstow, of Providence, R. I., for Design for a Parlor Stove.
- 1,601.—T. G. Bering, of Philadelphia, Pa., for Design for a Fence.
- 1,602.—J. G. Folsom and B. D. Whitney, of Winchendon, Mass., assignors to J. G. Folsom aforesaid, for Design for a Sewing Machine Frame.
- 1,603.—P. H. Jackson, of New York City, for Design for a Fire-place Frame.

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 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 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 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 charges should be prepaid. Small models from a distance can often 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.

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 En-

glish 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.

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.

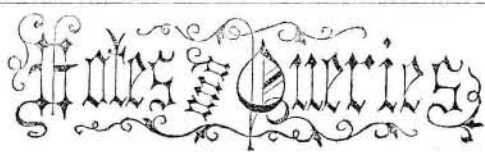
All persons having rejected cases which they desire to have prosecuted are invited to correspond with us on the subject, giving a brief history of the case, including the official letters, &c.

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. K., of Wis.—Your application for a patent is now pending before the Patent Office. We cannot, therefore, introduce into the paper any such additional matter as you describe. If the additional improvement is important, you had better make a new case of it; in fact, you can proceed in no other way.

J. G. S., of Conn.—Whether a third party could patent, or use a combination composed of elements existing in two prior patents, depends altogether on the nature of the patented claims.

S. M., of Del.—The changing of one fluid for another in a chamber, for keeping cool the tube of a kerosene lamp wick, would not be patented. For a description of Adams see page 340 of this volume.

W. A. C., of Mass.—We can supply the back numbers of the SCIENTIFIC AMERICAN to January last. We shall be happy to enrol your friend's name amongst our list of subscribers. It is not new to provide a cannon with a central twisted or rifled rod, and construct projectiles for the same with twisted or rifled central openings to fit the same rod, for the purpose of obtaining rotary motion.

W. S., of Ill.—You do not require any ingredient in boiling water to soften the timber that may be boiled therein, such as plow handles, for the purpose of bending them. Steaming timber will answer just as well as boiling it.

R. H., of Pa.—Cement to stop the seams of a boiler from leaking, should always be applied inside. In a locomotive carrying the usual high pressure steam, the best cement is of little avail.

O. O., of N. Y.—Water may be admitted into the Stevens floating battery by pumping or by a valve in the bottom. It is discharged by a pump. Water ballasting is employed in some of the coal carrying vessels in England.

J. W., of N. J.—Gem salt must be a local term. If it is used for petrifying substances, as you have stated, it is probably the fluoride of lime.

J. I. H., of Minn.—There is not any metallic alloy that will expand and contract, as packing in a cylinder, in the same ratio as the cast iron of the cylinder. One square foot of grate surface, and nine square feet of effective heating surface, are allowed for the horse power of a boiler. Only one half the flue or the tube surface is considered effective heating surface.

J. H. G., of Iowa.—So far as we have been able to ascertain, American sweet potatoes have not yet become an article of export to Europe. If packed in dry saw dust and kept dry, we think they would keep on a voyage across the Atlantic.

H. R., of N. Y.—There is no published work extant which contains illustrations and descriptions of the improved apparatus lately introduced for heating buildings with dry fire heat, hot water and steam. You can only obtain a practical knowledge of these by examining them in buildings where they have been put up. We thought you wished to get a work like Griscam's or Reid's, chiefly devoted to ventilation.

T. E. M., of Phil.—Plaster of Paris figures may be bronzed by giving them a few coats of size, allowing each to dry, then applying the bronze as a varnish. Bronze powders of all colors can be purchased at almost every store where artists' materials are sold. You may mix these powders with glue, or with lac varnish, and apply them to the figures with a brush. The bronze may also be dusted on when the size is damp. Melted pitch is about the best cement known to us for an aquarium. Cocoa nut oil is obtained by grinding the kernel of the nuts and submitting this to pressure in bags. It is said to be inferior to olive oil for the hair

J. H. B., of Minn.—We cannot recommend you to a better source for obtaining information respecting governors of steam engines than the published volumes of the SCIENTIFIC AMERICAN. These contain illustrations of most of the improved governors. The gyroscopic governor is illustrated on page 193, Vol. III. (new series). We do not know where A. Judson, the inventor of the Judson Valve resides at present.

W. P., of Md.—The law is silent as to the time when the \$20 additional fee should be paid on the issue of Letters Patent. If you have no good reasons for delay, we advise you to forward the fee at once and have your patent issue, as you are less likely to encounter an interfering application.

SPECIAL NOTICE—FOREIGN PATENT.—The population of Great Britain, is 30,000,000; of France, 35,000,000; Belgium, 5,000,000; Austria, 40,000,000; Prussia, 20,000,000; and Russia, 60,000,000. Patents may be secured by American citizens in all of these countries. Now is the time, while business is dull at home, to take advantage of these immense foreign fields. Mechanical improvements of all kinds are always in demand in Europe. There will never be a better time than the present to take patents abroad. We have reliable business connections with the principal capitals of Europe. Nearly all of the patents secured in foreign countries by Americans are obtained through our agency. Address Munn & Co., 37 Park row, New York. Circulars about foreign patents furnished free.

Money Received

At the Scientific American Office on account of Patent Office business, during one week preceding Wednesday, June 11, 1862:—

- J. E. T., of N. Y., \$15; J. B. W., of N. J., \$10; H. B. S., of Ill., \$15; A. D., of Pa., \$15; J. H. & G. W. S., of N. Y., \$25; M. W., of Ky., \$15; W. H. G., of N. Y., \$80; C. & C., of Pa., \$10; F. & A., of N. Y., \$22; C. F. B., of R. I., \$40; J. D., of Mich., \$35; E. W., of Mass., \$25; S. S. B., of O., \$15; T. M. C., of Me., \$25; J. E. K., of N. Y., \$20; J. K. B., of Ind., \$25; S. M., of Del., \$25; K. & H., of Wis., \$30; C. M., of N. B., \$20; A. S. B., of Conn., \$25; T. & M., of Conn., \$25; R. K., of Mass., \$15; J. C. & Co., of Mich., \$15; G. W. H., of Ill., \$10; D. H., of Ill., \$15; B. S., of N. J., \$15; H. H., of N. Y., \$10; L. & P. K. D., of N. Y., \$15; B. R., of Mass., \$40; K. & M., of Ill., \$25; D. & R., of Iowa, \$25; J. A. R., of N. Y., \$15; J. S. R., of N. Y., \$15; J. T., of N. Y., \$30; E. G. H., of Mass., \$40; C. G. M., of N. Y., \$15; J. C. R., of N. Y., \$15; W. H. C., of N. Y., \$15; S. S. H., of Wis., \$30; S. B. E., of Conn., \$25; R. F., of Mass., \$25; W. S. H., of O., \$25; J. G. Y., Jr., of Me., \$25; C. S. I., of Ind., \$25; H. B. B., of Mass., \$25; W. H. W., of N. Y., \$25; H. T. P., of Mass., \$25; J. H. H., of N. H., \$25; G. P. P., of Conn., \$10; G. B. H., of N. Y., \$25; L. L., of N. Y., \$25; G. W., of N. Y., \$20; J. H. K., of Pa., \$20; J. C. M., of Ill., \$20; R. D. D., of Iowa, \$20; P. & P., of Ill., \$20; E. M. C., of N. Y., \$20; J. F., of N. Y., \$20; D. C., of N. Y., \$10; P. W., of N. J., \$20; H. W. O., of Conn., \$20; A. & M., of Wis., \$50; B. & E. H., of Ill., \$20; W. H. W., of N. Y., \$20; W. B., of N. Y., \$20; J. S. B., of Ind., \$20; A. B. C., of Iowa, \$20; H. K., of Wis., \$20; S. & A., of Mass., \$45; M. H., of Iowa, \$20; J. D. S., of Ill., \$20; W. F., of Germany, \$20; C. & G. M. W., of N. Y., \$40; R. A. T., of N. Y., \$20; N. McG., of N. Y., \$15; M. R. S., of N. Y., \$30.

Specifications and drawings and models belonging to parties with the following initials have been forwarded to the Patent Office from June 4th to Wednesday, June 11, 1862:—

- R. A. T., of N. Y.; C. & G. M. W., of N. Y.; A. I. A., of Wis.; L. L., of N. Y.; G. B. H., of N. Y.; J. G. W., of N. Y.; M. R. S., of N. Y.; J. K. B., of Ill.; J. D., of Mich.; E. W., of Mass.; C. & C. of Ill.; T. M. C., of Me.; S. S. B., of O.; J. H. & G. W. S., of N. Y.; S. M., of Del.; A. S. B., of Conn.; T. & M., of Conn.; W. S. H., of O.; H. T. P., of Miss.; W. H. W., of N. Y.; J. G. Y., Jr., of Me.; J. H. H., of N. H.; R. F., Jr., of Mass.; M. & K., of Ill.; W. T., of N. Y.; J. T., of N. Y., (2 cases); C. A. M., of Pa.; S. B. E., of Conn.; W. H. G., of N. Y.; (2 cases); H. I. S., of N. Y.; J. K., of N. Y.

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 is required to accompany the petition, specification and oath, except the government fee.

PATENT CLAIMS.—Persons desiring the claim of any invention which has been patented within thirty years, can obtain a copy by addressing a note to this office, stating the name of the patentee and date of patent, when known, and including \$1 as fee for copying. We can also furnish a sketch of any patented machine issued since 1853, to accompany the claim, on receipt of \$2. Address MUNN & CO., Patent Solicitors, No. 37 Park Row, New York.

RECEIPTS.—When money is paid at the office for subscriptions, a receipt for it will always be given; but when subscribers remit their money by mail, they may consider the arrival of the first paper a bona fide acknowledgment of our reception of their funds.

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.

Back Numbers and Volumes of the Scientific American.

VOLUMES I, II, III, IV, V. (NEW SERIES) COMPLETE (bound or unbound) may be had at this office and from all periodical dealers. Price, bound, \$1 50 per volume, by mail, \$2—which include postage. Price, in sheets, \$1. Every mechanic, inventor or artisan in the United States should have a complete set of this publication for reference. Subscribers should not fail to preserve their numbers for binding.

We are prepared to bind volumes in handsome covers, with illuminated sides, and to furnish covers for other binders. Price for binding, 50 cents. Price for covers, by mail, 50 cents; by express, or delivered at the office, 40 cents.