

illustrated in the SCIENTIFIC AMERICAN, would amount to many millions of dollars! Messrs. MUNN & CO. would state that they never had a more efficient corps of Draughtsmen and Specification Writers than those employed at present in their extensive offices, and that they are prepared to attend to patent business of all kinds in the quickest time and on the most liberal terms.

PRELIMINARY EXAMINATIONS AT THE PATENT OFFICE.
The service which Messrs. MUNN & CO. 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 they may acquire of a similar invention from the records in their Home Office. But for a fee of \$5, accompanied with a model, or drawing and description, they 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 the Branch Office of Messrs. MUNN & CO., corner of F. and Seventh streets, Washington, by experienced and competent persons. Many thousands of such examinations have been made through this office, and it is a very wise course for every inventor to pursue. Address MUNN & CO., No. 37 Park Row, New York.

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 pre-paid. Small models from a distance can often be sent cheaper by mail. The safest way to remit money is by a draft on New York, payable to the order of Messrs. 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.

Patents are now granted for SEVENTEEN years, and the Government fee required on filing an application for a patent is \$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 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 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 (except in cases of designs) on the above terms. Foreigners cannot secure their inventions by filing a caveat; to citizens only is this privilege accorded.

CAVEATS.

Persons desiring to file a caveat can have the papers prepared in shortest time by sending a sketch and description of the invention. The Government fee for a caveat is \$10. A pamphlet of advice regarding applications for patents and caveats is furnished gratis, on application by mail. Address MUNN & CO., No. 37 Park Row, New York.

REJECTED APPLICATIONS.

Messrs. MUNN & CO. are prepared to undertake the investigation and prosecution of rejected cases, on reasonable terms. The close proximity of their Washington Agency to the Patent Office affords them rare opportunities for the examination and comparison of references, models, drawings, documents, &c. Their success in the prosecution of rejected cases has been very great. The principal portion of their 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 MUNN & CO., on the subject giving a brief history of the case, inclosing the official letters, &c.

FOREIGN PATENTS.

Messrs. MUNN & CO. are very extensively engaged in the preparation and securing of patents in the various European countries. For the transaction of this business they have offices at Nos. 66 Chancery lane, London; 29 Boulevard St. Martin, Paris; and 26 Rue des Eperonniers, Brussels. They think they can safely say that THREE-FOURTHS of all the European Patents secured to American citizens are procured through their 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 MUNN & CO'S Agency, the requirements of different Government Patent Offices, &c., may be had, gratis, upon application at the principal office, No. 37 Park Row, New York, or any of the branch offices.

SEARCHES OF THE RECORDS.

Having access to all the official records at Washington, pertaining to the sale and transfer of patents, MESSRS. MUNN & CO., are at all times ready to make examinations as to titles, ownership, or assignments of patents. Fees moderate.

INVITATION TO INVENTORS.

Inventors who come to New York should not fail to pay a visit to the extensive offices of MUNN & CO. They will find a large collection of models (several hundred) of various inventions, which will afford them much interest. The whole establishment is one of great interest to inventors, and is undoubtedly the most spacious and best arranged in the world.

MUNN & CO. wish it to be distinctly understood that they do not speculate or traffic in patents, under any circumstances; but that they devote their whole time and energies to the interests of their clients.

COPIES OF PATENT CLAIMS.

MESSRS. MUNN & CO., having access to all the patents granted since the rebuilding of the Patent Office, after the fire of 1836, can furnish the claims of any patent granted since that date, for \$1.

THE VALIDITY OF PATENTS.

Persons who are about purchasing patent property, or patentees

who are about erecting extensive works for manufacturing under their patents, should have their claims examined carefully by competent attorneys, to see if they are not likely to infringe some existing patent, before making large investments. Written opinions on the validity of patents, after careful examination into the facts, can be had for a reasonable remuneration. The price for such services is always settled upon in advance, after knowing the nature of the invention and being informed of the points on which an opinion is solicited. For further particulars address MUNN & CO., No. 37 Park Row New York.

EXTENSION OF PATENTS.

Many valuable patents are annually expiring which might readily be extended, and if extended, might prove the source of wealth to their fortunate possessors. Messrs. MUNN & CO. are persuaded that very many patents are suffered to expire without any effort at extension, owing to want of proper information on the part of the patentees, their relatives or assigns, as to the law and the mode of procedure in order to obtain a renewed grant. Some of the most valuable grants now existing are *extended patents*. Patentees, or, if deceased, their heirs, may apply for the extension of patents, but should give sixty days' notice of their intention.

Patents may be extended and preliminary advice obtained, by consulting or writing to MUNN & CO., No. 37 Park Row, New York.

ASSIGNMENTS OF PATENTS.

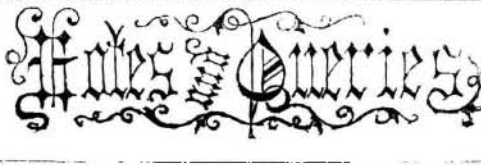
The assignment of patents, and agreements between patentees and manufacturers, carefully prepared and placed upon the records at the Patent Office. Address MUNN & CO., at the Scientific American Patent Agency, No. 37 Park Row, New York.

UNCLAIMED MODELS.

Parties sending models to this office on which they decide not to apply for Letters Patent and which they wish preserved, will please to order them returned as early as possible. We cannot engage to retain models more than one year after their receipt, owing to their vast accumulation, and our lack of storage room. Parties, therefore, who wish to preserve their models should order them returned within one year after sending them to us, to insure their obtaining them. In case an application has been made for a patent the model is in deposit at the Patent office, and cannot be withdrawn.

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.



T. J. B., of Mass.—The son can get a patent for his father's invention in the character of executor or administrator. He can, however, get a patent for any compound of his own invention by making application in his own name, and if the compounds are the joint invention of father and son, then the son must join with the administrator or executor of the father's estate in the application. A question would arise in the Patent Office whether so many years' public use (from 1859) would not work an abandonment of the invention to the public, as the law requires that an invention belongs to the public after two years public use, but if it could be established that the materials and proportions of the compound were never divulged, the Office might decide that the statute did not apply. If a patent is obtained, it runs from its date, and is not retroactive. A label or title to medicines and packages can be copy-righted, or if it is artistic in its design, can be patented as a "design."

Frankfort, Pa.—You will find a table of the strength of iron used for steam boilers on page 71, Vol. X, of the SCIENTIFIC AMERICAN. The machinist who told you that three-eighths iron was three-eighths iron, and would bear as much pressure in a large boiler as in a small one knew nothing of the subject.

J. S. H., of Tenn.—In reckoning the power of steam boilers 15 feet of heating surface is generally allowed for a horse power; some maintain that 10 feet is sufficient, but the best makers give 15 feet. You will find full directions for measuring or laying off the device known as "the Pittsburgh cam," on page 39 of King's "Steam and the Steam Engine;" the process is too long and not easily understood without the aid of diagrams. With these it is very simple. D. Appleton & Co., have the work for sale.

R. P. B., of Conn.—Petroleum may be burned under small steam boilers by the use of what is called a sand-wick, that is to say the petroleum flows into the sand and gives off its vapor so that the latter is easily ignited and burns with an intense heat. We intend to investigate this subject and shall give an account of the results.

T. B., of R. I.—If you know the weight of the ball upon your lever, its distance from the center of the valve and the distance of the valve center from the fulcrum, you can find the weight on your valve by the following rule:—Multiply the weight in pounds by the distance in inches to the fulcrum, divide this by the distance between the fulcrum and the valve center, and the quotient, added to the weight of the valve and half the weight of the lever, is the weight on the valve.

E. L. F., of Maine.—One plan for compressing air is to let water into the bottom of a tight upright cylinder, when every 33 feet head of the water will give one atmosphere pressure. Or you may compress it by an air pump. The latter plan would cost the least, perhaps, in apparatus, though the work of compression would be more laborious.

G. H. C., of N. J.—We were not aware that zinc could be made negative to iron. Tin is negative to iron, and if you coat your zinc with a perfect stratum of tin, you may preserve it from the action of the acid. In your case we still suspect that the action must be on the zinc.

W. S., of Canada West.—We honor your benevolence to the disabled man. Advice in regard to procuring patents we make our speciality. There are numbers of persons who devote their time to selling patents, and some of them have made a good deal of money at it. Having no experience in that department we consider ourselves quite incompetent to advise you how to proceed.

C. S., of Cal.—We have no doubt that turbine wheels would be the best generally for the California quartz mills.

W. H. M., of Ohio.—A practical treatise on coal, petroleum, and other distilled oils by Dr. Cesner, has been published by Balliere Brothers, 520 Broadway, New York.

J. H. T., of Mo.—Fans are best for forcing air against a moderate pressure, but if you wish to use the air to drive machinery you must employ a cylindrical pump.

H. J. C., of N. J.—All of the large modern works on chemistry contain the process for making alcohol from olefiant gas. You will find "Miller's Chemistry" in the library of the American Institute.

J. H. D., of Mass.—Gutta-percha is soluble in sulphide of carbon, spirits of turpentine and benzine. In our office the SCIENTIFIC AMERICAN is retailed at eight cents per copy.

D. F. R., of N. Y.—It is not necessary that an English invention should have been patented in Britain in order to have it received here. Any new and useful improvement is patentable but no person except the inventor can apply for a patent.

S. C. H., of N. Y.—We do not receive orders for blacking boxes, neither do we know the name of the party alluded to in our article. We mentioned therein that the person in question had as much as he could do for four years to come, so it is not likely that you could get any until that period had elapsed.

C. & L., of Conn.—These correspondents send us fifteen cents accompanied by a request to send them a paper containing a description of a weather indicator made on the principle of Prof. Agassiz. We cannot send such a paper for the reason that we do not know what one it is. To secure attention correspondents should give the exact name of the article, then we can find it in our index, but we cannot spend half an hour in hunting for something we don't know the name of, for fifteen cents.

G. W. S., of Pa.—We do not think it would make any difference about placing the steam pipe between the mud drum connections instead of directly over one of them, as it now is. If the engine works water it is because the steam room of the boiler is too small, to increase it put a dome on your boiler or employ a "dry pipe," which is merely a pipe close under the upper shell pierced with holes half an inch in diameter. Run the steam pipe from this and you will have no trouble.

Money Received.

At the Scientific American Office, on account of Patent Office business, from Wednesday, Aug. 10, 1864, to Wednesday, Aug. 17, 1864:—

- J. V. O., of N. Y., \$20; A. W. H., of N. Y., \$35; W. R. F., of N. T., \$20; T. H., of Ohio, \$20; W. C. B., of Cal., \$20; A. M., of Ind., \$20; H. & S., of Pa., \$20; G. M. M., of Pa., \$41; P. J., of France, \$16; P. G. B., of N. Y., \$15; E. B., of Conn., \$20; W. M., of Mass., \$20; D. E. B., of Ind., \$20; B. & W., of Pa., \$20; F. H. C. M., of N. Y., \$20; E. N., of Prussia, \$15; W. F. C., of N. Y., \$40; C. & N., of N. Y., \$22; F. L., of La., \$20; A. E. W., of N. Y., \$15; J. M., of Mass., \$15; C. H., of N. Y., \$20; J. W. N., of Mass., \$40; S. E., of Pa., \$20; S. C. K., of Mass., \$20; J. L., of N. J., \$15; W. G., of N. J., \$15; J. R., of Mass., \$20; E. H., of N. Y., \$15; J. H. C., of N. Y., \$20; J. M. H., of N. Y., \$15; B. A. W., of Wis., \$30; M. C., of Maine, \$25; P. C. R., of Mass., \$15; J. & W. C. S., of Cal., \$20; D. A., of Pa., \$15; W. R. M., of Pa., \$8; E. B. B., of Ind., \$15; H. B. H., of Mass., \$15; T. E. R., of N. Y., \$25; S. H. M., of Ill., \$15; J. H. F., of Ky., \$40; H. F. B., of Mo., \$50; K. & F., of Ill., \$15; H. K. A., of N. H., \$30; H. B. S., of N. Y., \$30; G. M. F., of Cal., \$15; J. & W. F., of N. J., \$22; W. F. P., of Conn., \$15; R. L. S., of N. Y., \$30; G. B., of Wis., \$20; W. B., of Iowa, \$16; H. B. M., of Mich., \$15; C. & M., of Mass., \$25; R. H., of Conn., \$25; C. C. A., of Tenn., \$21; T. R., of Cal., \$16; J. M. H., of Oregon, \$20; H. L. H., of Cal., \$20; S. & B., of Conn., \$15; F. & B., of R. I., \$15; E. W. M., of Ill., \$15; H. W. B., of N. Y., \$15; J. G., of Ohio, \$25; J. H., of Ohio, \$15.

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, stating 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, Aug. 10, 1864, to Wednesday, Aug. 17, 1864:—R. L. S., of N. Y.; W. R. M., of Pa.; R. M., of Conn.; C. & M., of Mass.; H. K. A., of N. H.; R. T., of Minn.; J. T., of N. J.; T. E. R., of N. Y.; I. M. H., of Oregon; H. L. H., of Cal.; M. C., of Maine; S. K. A., of Wis.; J. B. S., of N. Y.; W. L. & T. W., of London (2 cases); H. E. P., of Conn. (2 cases); J. J., of N. Y.; J. H. P., of N. Y.; B. F. C., of N. Y.; N. & C., of N. Y.; G. M. F., of Pa.; H. S., of N. Y.; W. T. C., of N. Y.; H. S., of N. Y.; W. F. C., of N. Y.; J. H., of Ohio.

Binding the "Scientific American."

It is important that all works of reference should be well bound. The SCIENTIFIC AMERICAN being the only publication in the country which records the doings of the United States Patent Office, it is preserved by a large class of its patrons, lawyers and others, for reference. Some complaints have been made that our past mode of binding in cloth is not serviceable, and a wish has been expressed that we would adopt the style of binding used on the old series, *i. e.*, heavy board sides covered with marble paper, and morocco backs and corners.

Believing that the latter style of binding will better please a large portion of our readers, we commenced on the expiration of Volume VII., to bind the sheets sent to us for the purpose in heavy board sides, covered with marble paper and leather backs and corners.

The price of binding in the above style is 75 cents. We shall be un- able hereafter to furnish covers to the trade, but will be happy to receive orders for binding at the publication office' No. 37 Park Row, New York.