

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 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.

The revised 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 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 or 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 all 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. 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 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.

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 unable 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.

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.

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 inclosing \$1 as fee for copying. We can also furnish a sketch of any patented machine issued since 1863, 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.

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.



R. P., of Ohio.—We don't know that any proof positive has been brought up against the *Adiantum* tree, to cause its universal extirpation in cities. The unpleasant odor emanating from its bloom made it many enemies, though there may be nothing poisonous in the exhalations. Its tropical foliage and racemes of brown seed capsules make it a fine ornamental tree. We would suggest the catalpa as a substitute suitable to the climate of your latitude.

J. S. M., of C. W.—We have no record of the fastest time made by screw steamships.

E. W., of Pa.—The quantity of water per horse-power required for a steam boiler depends on the pressure of steam and other circumstances, such as leakage, priming, &c. About one cubic foot per hour is allowed for the feed to the boiler of a high pressure engine; but Professor Rankine states that 347 of a cubic foot of feed water may suffice for the indicated horse power per hour of an expansive working engine.

I. J., of Pa.—The weight of an iron plate 6 feet in length, 24 inches wide and 4 inches in thickness, is about 1,948 pounds.

W. P. N., of Mo.—We have received your letter and sketch of a wind-vane attached to a circular carriage, and you inquire if it would not be a perpetual motion—keep moving of itself after it was started. It would not. After the first impulse was removed, its motion would gradually be reduced, owing to the friction of its parts. A perpetual motion is a mechanical fallacy.

H. H. W., of Ohio.—A comparison of durability between a box placed in a fire with a stream of cold air passing through the box, and one without that protection is almost unnecessary; the difference would be trifling and in favor of the cold one.

W. T., of N. Y.—We cannot answer your inquiries about Kinsella's balloon, and do not care to open our columns to a discussion of its merits. They are probably obvious to most of our readers who have examined it. You had better open a direct correspondence with him on the subject.

G. H. M., of N. Y.—You have found a mare's nest. The item you have taken so much pains to explain to us alludes to the sanitary benefit to be derived from getting up and going to bed at the time specified; which would doubtless be equal to the addition of 10 years to a man's life.

W. R., of Ohio.—A machine which will start of itself and run until its parts are worn out is a perpetual motion. When all England was crazy about the "South Sea bubble" in 1720, a prize was offered for a perpetual motion, but the offer ended the next year with the explosion of the bubble. You ask us "what such an invention is worth?" Just as much as it will bring.

W. B., of Md.—Petroleum is supposed to be shale oil, formed by a natural subterranean process. It has recently become an extensive article of export from the United States. The principal wells are in Western Virginia, Pennsylvania and New York. The most noted oil region is in Venango Co., Pa., near the Allegheny river; a town has sprung up there, within a short time, equal to the new gold region towns in California. It has its newspaper and railways, its churches and schools, its adventurers and gamblers, just like any other modern city.

A. C. W., of Ky.—How simple a thing is when once known. To make paper adhere to tin, paste, gum, wax, or glue will not effect it, unless the surface is well rubbed with acetic acid or strong vinegar. Many other acids will answer, but vinegar is always cheapest and most convenient. Such knowledge is almost invaluable in domestic economy.

E. T. D., of Pa.—We have already given you all the information we possess—on page 133, current volume of the SCIENTIFIC AMERICAN—respecting Laveissiere's mode of forming hollow ingots for brass tubes.

A. L. S., of Ohio.—You ask why Americans do not use more fruit at their meals. The reason is, simply because they have not time, they are such a busy people. It would be more healthy to use more vegetables and fruit at meals; but you can't force them to do so, though your State does produce the best in the world. Flower gardeners might want them to feed on flowers, if they could then sell their flowers higher. Apropos of eating flowers: there is a flower, common to the Bahama Islands, of which a sub-acid pleasant-tasted sauce is made, equally as palatable as tamarind or plum jelly. It is called *sorrel*; the bud with seed-capsule is stewed and sweetened, and is then ready for immediate use. In most countries of Southern Europe you see fruit on the table at every meal: the people are not such meat-eaters as we Americans.

E. D., of Mass.—No reliable accounts of the process of manufacturing Russian sheet iron has ever been published, so far as we know. Notices have appeared several times in public prints, that the secret of making such iron had been obtained by some of our American engineers who had been in Russia; but we have always discredited these statements. If any of our people had obtained the secret, they would have made use of it here before this. You will find a notice of American imitation Russian sheet-iron on page 38, Vol IX. (old series) of the SCIENTIFIC AMERICAN.

W. B., of Maine.—We cannot say why tiles are not more in use for roofing houses in this country. They are said to be cooler than shingles, slate or tin. The old Spanish tile is only seen in some of the old towns of Texas, Louisiana and Florida. They are made of common red clay, in the form of a half cylinder, 18 inches long and 6 wide, and are baked in a kiln like bricks. There is a new, French, flat tile, now coming into use in the West Indies, South America and Mexico, which makes a very handsome and durable roof. Encaustic tiles are flat, enameled, variegated earthen squares, or lozenges, much used and very appropriate for floors in warm countries. The floors of the Capitol, in Washington, are laid with them; and the halls of most of our aristocratic mansions, in Fifth avenue, are paved with the same material. They can be made here, but the best are imported from England.

C. S., of Pa.—Asks how to keep cool this hot weather. Let us ask him if he ever hears of an out-door laborer complaining of heat. The way to keep warm in winter is the best way to keep cool in summer—by exercise, sufficient to keep up a free circulation and a liberal perspiration. It is warmer to sit in the shade, drink iced juleps and fanning one's self, than it is to work in the sunshine and refresh the inner man by drinking tepid water. Any haymaker or harvester can tell you that. Now, if you don't believe it, try the experiment and you will find out.

S. N., of Mich.—Your inquiry about the asphaltum pavements is easily answered. It is a Belgian invention, used only for side-walks and public promenades, and not for carriage roads, as many erroneously suppose. Stones, gravel, sand and coal-tar, are the materials commonly used in the composition of asphaltum. Stones, the size of a hen's egg, are placed upon the graded street-walk, and rolled even with a heavy roller; a mixture of gravel and coal-tar is then spread over this; and finally, coarse sand and tar forms the superstratum, made even by the heavy roller. It makes a nice smooth walk, very common now in France and Belgium! Its dark color makes it more agreeable than brick or stone; but it does not absorb the rain like bricks, and of course, does not dry so soon, unless the surface is convex to lead off the water.

Money Received

At the Scientific American Office, on account of Patent Office business, from Wednesday, Aug. 26, to Wednesday, Sept. 2, 1863:—

- T. A. H., of N. Y., \$56; J. S., of N. Y., \$41; W. & M., of Mass., \$32; P. G., of Mo., \$20; F. B. P., of Mass., \$25; C. E. M., of Vt., \$26; A. W., of N. Y., \$250; S. J. A., of Cal., \$25; T. B., of Ohio, \$25; P. S. F., of N. Y., \$16; R. & H., of Mass., \$178; S. B. W., of Kansas \$16; H. S. W., of Mich., \$16; A. B., of N. J., \$20; W. R., of Cal., \$20; J. W. B., of N. Y., \$20; H. & Co., of N. Y., \$62; H. C. D., of Mass., \$20; D. C., of N. Y., \$25; E. F. & J. H., of N. Y., \$10; T. R. T., of N. Y., \$41; J. D. C., of Ill., \$15; E. M., of N. Y., \$16; G. W. L., of Ohio, \$26; K. C. & R., of Wis., \$25; E. W., of Mich., \$15; J. L. L., of Pa., \$16; L. C., of N. Y., \$25; R. R. C., of N. Y., \$16; A. K., of Pa., \$16; H. & S., of Pa., \$16; V. G., of N. Y., \$28; E. C., of N. Y., \$41; R. K., of Mass., \$40; G. S. H., of N. Y., \$45; N. L., of Ill., \$48; A. H., of Ohio, \$20; H. G., of N. Y., \$25; G. R. B., of R. I., \$25; D. A. H., of N. Y., \$16; W. H. G., of N. Y., \$25; J. O., of Ill., \$26; J. H., of Mass., \$16; A. H., of Ill., \$16; E. J. Y. P., of Guatemala, \$310; J. C., of N. J., \$16; C. B. D., of Ind., \$17; W. G. I., of Mass., \$16; W. G. S., of N. Y., \$29; H. A., of N. Y., \$25; A. F. C., of Conn., \$16; W. H. H., of N. Y., \$20; F. J., of Minn., \$20; D. & K., of N. J., \$16; A. G., of N. Y., \$16; A. B., of Vt., \$45; E. D. B., of N. Y., \$20; S. L. H., of N. Y., \$16; W. L. F., of N. J., \$20; G. T., of Maderia, \$15; N. H., of N. Y., \$30; A. C. C., of N. Y., \$45; C. L. G., of N. Y., \$100; T. P. R., of Mass., \$20; J. E., of N. Y., \$20; Y. & C., of N. Y., \$31; C. S., of N. Y., \$31; R. J. M., of N. Y., \$20; R. W. & D. D., of N. Y., \$20; W. M., of N. Y., \$20; W. C. H., of Ohio, \$20; N. C. S., of Conn., \$20; C. W., of N. Y., \$20; G. S., of Ill., \$40; J. W. C., of N. Y., \$25; T. S., of N. Y., \$20; C. L. A., of N. Y., \$20; J. B. C., of Conn., \$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 26, to Wednesday, Sept. 2, 1863:— T. A. H., of N. Y.; D. C., of N. Y.; H. G., of N. Y.; J. S., of N. Y.; G. R. B., of R. I.; E. F. & J. H., of N. Y.; T. R. T., of N. Y.; D. A. H., of N. Y.; G. B., of England (2 cases); D. A. H., of N. Y.; W. H. G., of N. Y.; V. G., of N. Y.; H. S. W., of Mich.; H. & K., of Ind.; H. A., of N. Y.; W. G. S., of N. Y.; T. B., of Ohio; S. J. A., of Cal.; J. O., of Ill.; P. L., of Cal.; K. C. & R., of Wis.; C. E. M., of Vt.; L. K., of N. Y.; G. W. L., of Ohio; T. H., of Cal.; J. W. of Wis.