

## 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 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.....	\$10
On filing Disclaimer.....	\$50
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 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.

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 writ 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, 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 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 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. 56 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 statement of the case, inclosing 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.



R. W., of N. Y.—Percussion in mechanics means the striking of one body against another, or the shock arising from the collision of two bodies. The theory of percussion with respect to the comparison of pressure and percussion has engaged much discussion among philosophers.

J. T., of Mass.—Water is very slightly compressible, but for all common purposes it is considered incompressible. It is this quality which renders it so useful for being employed in Bramah presses and hydraulic jacks, by which thousands of pounds pressure to the square inch may be transmitted in a rising column for elevating great weights. The tubes of the Victoria tubular bridge, each weighing 1,200 tons, were raised 100 feet by water pressure through hydraulic presses.

S. T., of Conn.—Gas made from resin has about double the illuminating power per cubic foot of gas made from coal. The gas which is made from candle coal is also much richer in oil than the gas (which is the principal agent of illumination) than the gas obtained from ordinary bituminous coal, like that at Pittsburgh, Pa. It is not the quantity of gas, therefore, which determines its value, but its illuminating power.

J. S. H., of Pa.—It is true, as you state, that the elementary gases of steam are hydrogen and oxygen, which produce an explosion when ignited; but steam is never decomposed in a boiler by red hot iron plates except by absorbing the oxygen and setting the hydrogen only (which is not explosive), free. An explosion in a steam boiler, therefore, cannot be accounted for by the chemical theory but by overpressure of the steam, as a low pressure easily tears asunder weakened, overheated plates.

C. C., of Mass.—The manufacture of paper was introduced into England in 1588. We do not know precisely when its manufacture began in this country, but it is said that the first mill was erected in Delaware in 1714. The term Fourdrinier, as applied to paper making machine, originated from a wealthy firm of stationers in London who made valuable improvements in paper machinery. Like many other inventors they failed to realize that reward for the ingenuity which they deserved.

P. G. E., of Pa.—Martin's boiler differs from the common tubular marine boiler in having water in the tubes instead of using the tubes for flues. It is described in "Engineering Precedents" by Mr. Isherwood, Engineer-in-Chief, U. S. N.

D. & H., of Ohio.—The invention which you describe for making steel is the same as that patented by Josiah M. Heath, of England in 1839. You have evidently not made the history of this subject a study or you would not have wasted your time in reinventing a process so well known to the trade.

J. S., of N. J.—Before the introduction of machinery for the purpose, lint was made on a large scale by hand. In this process the linen rag or cloth was stretched on a small table and a sharp knife suspended above it, with the edge parallel with one series of the threads, the filling, for instance, was brought down upon the cloth with a force so exactly adjusted that it cut part way through those threads which were at right angles with the edge of the blade. The knife then received a slight motion lengthwise, turning up the severed fibers in a very light, loose, soft, feathery nap; and the sheet of lint was still left with considerable strength in the direction of the threads which lay parallel with the knife, and which were consequently not cut.

A. C. I., of O.—A is right. After the pressure in the generator has risen above 10 pounds and thus become sufficient to open the check valve the pressure in the receiver will always be 10 pounds less than that in the generator, for the effect operating to close the valve is equal to the pressure in the receiver plus the weight on the valve, while the effect operating to open the valve is equal to the pressure in the generator.

C. G. C., of Mich.—Machines have been invented for loading a wagon with hay as the wagon is drawn along; but it is quite possible that you may have a novel and patentable arrangement of parts to effect the desired object. You had better send us a sketch or model of the device, as we could then give you an opinion respecting its patentability.

L. E., of Conn.—The fact that the heads as well as the tails of comets are a vapory mass is proved by stars being visible through them. There is generally a small nucleus which may be opaque.

A. T., of Vt.—Prof. Charles A. Seely, 24 1/2 Canal street, New York, will make a reliable analysis of your ores.

M. D. G., of N. Y.—The army with which Xerxes invaded Greece was measured by building a square inclosure and filling it with soldiers standing as close as they could to each other, counting them, and then filling the inclosure in succession with all the troops. After making allowances for probable exaggeration, the most intelligent historians estimate the numbers of this army at 1,700,000 fighting men. The largest number ever killed on one side in any battle was probably 80,000, the number of Romans who fell at the battle of Cannae.

M. S. T., of Ill.—Polishing wheels made of gum shell-lac and emery are in constant use, and have been for several years. They give good satisfaction.

S. M. C., of N. Y.—In spite of the authority of any number of the daily papers you may be sure the phrase "The ship was laying at the wharf," is not grammatical. To lay is a transitive verb, and unless a ship has the power of laying eggs or laying something else, this verb cannot be used in connection with her. It should certainly be "The ship was lying at the wharf."

N. R. G., of Ohio.—The usual charge of powder for breaching masonry is 1/2 the weight of the solid shot. Benton says that this is the greatest that can be fired without overstraining the gun and its carriage; and, besides, as the resistance of the air increases nearly with the square of the velocity, very little additional useful effect would be produced by a greater charge. The mean weight of siege guns is about 250 times the weight of the shot.

C. S. D., of N. Y.—It has been stated in the papers that the French Government has paid Prof. Doremus over \$50,000 for the right to use his cartridge.

A. B. W., of Mich.—Any importer of books will get you Lt. Harris's rules for rifle shooting. Morgan James, of Utica, will make you a good telescopic rifle. Maynard's breech-loading rifle is held to be good for hunting purposes. The cost for a telescopic rifle will be about \$70, we believe.

E. F. J., of R. I.—You have judged correctly of our silence respecting the "great motor" to which you refer. The utility of any invention can only be determined by a practical test.

A. M. A., of Mo.—The propulsion of steamers by a column of water ejected through a bent tube at each side of the vessel was undoubtedly the invention of your father—Alex. Anderson of Philadelphia—in 1812, and it has been revived several times since. About six years ago a steamer so propelled was built at Leith in Scotland, and was used for fishing, but we never heard whether it was successful or not. In all likelihood, the one lately tried on the river Scheldt in Belgium, to which you refer, has been copied from the one that was built at Leith.

J. H., of N. J.—Under the circumstances you speak of the first experimenter has no claim whatever to the invention because he abandoned his experiments. The patent of the second experimenter is valid, whether he knew of the abandoned experiments or not, and he has all the rights of any patentee, as well against the first experimenter as others. "Legal priority" attaches to him who is both the first and original inventor—who only is entitled to a patent in any case. An experimenter would not be regarded as an inventor if he failed to complete the invention.

R. S. M., of Mass.—Electro-plating without a battery is conducted as a regular business at least at one place in the country. L. L. Smith, at College Point, Long Island, uses for all his extensive operations Beesely's magneto-electric machine, driven by a steam engine.

#### Money Received

At the Scientific American Office on account of Patent Office business, from Wednesday, Sept. 10, to Wednesday, Sept. 17. Persons having remitted money to this office will please to examine this 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.

C. I. Van O., of N. Y., \$15; O. S. G., of N. Y., \$15; H. M., of Mass., \$15; S. N. L., of Mass., \$43; J. C. B., of Wis., \$25; L. K., of Mass., \$25; C. A. R., of N. Y., \$30; J. K., of N. J., \$22; E. D., of Mass., \$15; H. G., of Pa., \$15; J. W. F., of Pa., \$15; H. C. A., of Ill., \$40; F. E. & K., of Cal., \$25; J. J., of Mass., \$15; E. T. S., of N. Y., \$250; J. J. E., of N. Y., \$250; W. & F., of N. Y., \$200; F. N., of Conn., \$10; J. McN., of Pa., \$25; H. H. S., of N. Y., \$25; L. F. H., of N. Y., \$25; P. McG., of Iowa, \$15; A. B. S., of Pa., \$50; H. & K., of N. Y., \$25; J. L. B., of R. I., \$25; T. S., of Ky., \$25; G. C. G., of Ill., \$15; C. E. S., of Wis., \$20; C. C., of Mass., \$15; J. M. M., of N. Y., \$10; R. F. C., of N. Y., \$15; A. Y. McD., of Iowa, \$25; G. M. C., of Me., \$25; T. & P., of Conn., \$15; J. B., of N. Y., \$12; J. K., of N. J., \$37; E. F. & J. H., of N. Y., \$10; C. & M., of N. Y., \$25; R. P. G., of Wis., \$20; A. B., of N. J., \$20; C. H. & G. W. D., of Pa., \$20; W. D. A., of N. Y., \$30; P. & G., of N. Y., \$20; I. H., of Wis., \$20.

Specifications and drawings and models belonging to parties with the following initials have been forwarded to the Patent Office from September 10 to Wednesday, September 17, 1862:—

J. K., of N. J. (2 cases); G. C., of Mich.; J. C. B., of Wis.; L. K., of Mass.; A. J. B., of Iowa; J. McN., of Pa.; L. F. H., of N. Y.; C. A. R., of N. Y.; J. B., of N. Y.; E. F. & J. H., of N. Y.; W. H. F., of Mass.; G. M. C., of Me.; A. Y. McD., of Iowa; T. S., of Ky.; T. W. W., of Mich.; J. L. B., of R. I.; S. N. L., of Mass.; H. H. S., of N. Y.; H. U., of N. Y.; A. T. F., of N. Y.; H. & K., of N. Y.; W. L. L., of Mass.; A. McG., of Iowa; W. D. A., of N. Y. (2 cases).

#### Back Numbers and Volumes of the Scientific American.

VOLUMES I, II, III, IV, V, VI. (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. Numbers 3, 4, 6, 8, 9, 10, 11, 12 and 16, of Vol. VI. are out of print and cannot be supplied.

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