Notes and Queries

H. A. L., of Mass.—The control, ownership, right of use and sale of a patent, rests exclusively in the patentee until he assigns his right. He can assign the whole or any portion of his right, either before or after the grant of the patent. It appears to us that he who, in a copartnership, offsets his skill against the capital and business talents of his associates, is morally bound to give them the full benefit of any improvements he may make, connected with the company enterprises. The fact that the improvement is of a portable character makes no difference. Indeed, the very first use to which the man of skill should devote his patent ought to be to secure and assist the company just as far as possible. The creditors of an assignor cannot seize a patent from the assignee, provided the assignment was made in good faith.

R. H. J., of Iowa.—The current produced by a magnetic electric machine, when passing through a wire, renders iron magnetic in the same manner as a galvanic battery. The magnetic current is about the same strength in all parts of a short circuit. You cannot gain any power by arranging a number of water-wheels and permitting the water to pass from the one into the other. One good wheel will give out more power than two or more placed one above the other, and all connected together. We think your improvement in sewing machines for regulating the separation of the needles, when several are used, is a new and patentable improvement.

Ledger, of Penn.—Your failure to give us the size of the hose renders it impossible to answer your question categorically. The greater the length of hose, however, the more would the flow of water through it be obstructed; and while it is impossible that the short piece of hose should burst more readily than the long piece, it may be that the size of the hose is so great in proportion to the size of the nozzle, that the latter would obstruct the flow of the water sufficiently to make the length of hose of no consequence.

H. H. S., of Ill.—It takes about 4,000 cubic feet of hydrogen gas in a balloon to support an ordinary man in the air.

J. H. H., of N. Y.—Copper lightning rods are the best in use. Varnishing a lightning rod injures its conducting power.

J. A., of N. Y.—We have never seen a quartz crusher that we liked better than the common stamping mill. This is formed of a series of upright sticks of scantling—say four inches square—armed with chilled cast-iron at the lower end, and raised by cogs upon a revolving shaft.

E. R., of N. Y.—The powder used in the Grimea confined in small tubes, which were broken by attacking parties, and communicated with explosive wires, was the chlorate of potash and fulminating mercury—percussion powder. Common gunpowder and guncotton may be exploded by the electric spark. You can dilute common powder so as to burn as slow as you please, by using common ground charcoal, but its expansive force will be diminished in proportion as it lacks the requisite quantities of sulphur and niter.

G. F. L., of N. Y.—There is no possible way of making a strip of cloth a first-class conductor of heat. Cloth cannot be made perfectly water-proof without the use of india rubber, or some resin or oil varnish, but it will become partially water-proof by boiling it in a solution of alum and sugar of lead, then drying it in a warm apartment. There is no efficient nor useful mode of producing artificial cold without the use of a fluid.

R. S. S., of Conn.—A vacuum is a place devoid of matter. A partial vacuum can be produced in the bell glass of an air pump, but we have never yet witnessed the formation of a perfect vacuum. Bourne's "Catechism of the Steam Engine" will be very useful to you. Steam has been frequently used with success for extinguishing fires on steamboats.

R. W., of N. Y.—Your invention was patented some years ago by A. S. Lyman. Such chambers are called accelerating chambers. A peculiar construction of such chambers is also embraced in the patent of J. W. Cochran, in 1859.

I. L. A., of N. Y.—Steam is superheated by passing it through tubes situated in the smoke-box, or flues, as it flows from the boiler to the cylinder. Wethered Brothers, Baltimore, Md., fit up superheating apparatuses. C. Copeland, engineer, this city, can give you the information desired about the size of tubes, &c.

C. R. and S., of N. H.—We do not know how the opaque parts of skins, for drum-heads, are rendered clear, but perhaps you may improve their appearance by giving a little stronger "sour" of sulphuric acid.

A. C. R., of Boston, Mass.—Sweet oil of almond may be made to unite with water and form an emulsion, by adding a little pearl ash, or acqua ammonia, to the water, and agitating the whole together for ten or fifteen minutes.

W. W. A., of Ind.—In the earlier volumes of the SCIENTIFIC AMERICAN we published meteorological tables, but we found they occupied too much space for the majority of our readers.

W. H., of N. Y.—Upon inquiry of a painter in this city, who has used English varnish for carriages, he stated that he found no difficulty in managing it so as to dry equally, and not in streaks, when he kept it well stirred, and carried on the operation in a warm dry place. Care must be taken that no moisture be allowed on the surface to which varnish is applied, and it should be of a uniform temperature, or it will dry in opaque streaks.

B. D., of Boston, Mass.—Thin black paint is the only indelible black marking fluid, known to us, for application on boxes with a brush. All the common inks wash out with rain. Nitrate of silver in solution is the common indelible ink sold for writing on linen.

A. O. P., of N. Y.—We do not think that a machine for removing the spikes of cannon—if it is complicated—would be of much service to an army. We could form a more correct opinion of such a machine, if we saw it, so as to judge of its construction and operation.

J. W. P., of N. Y.—Professor Vergnes' electro-magnetic machine did not generate its own power. A large galvanic battery was employed to give it motion. The inventor resides in this city.

H. H. G., of Conn.—The subject of centrifugal force is fully discussed in "Morin's Mechanics," translated by Bennet, and published by D. Appleton & Co., of this city. To calculate the force with which any given segment of the ring of a revolving fly-wheel tends to fly away from the center, divide the weight of the segment in pounds by 32, multiply the quotient by the square of the velocity of the ring in feet per second, and the product by the radius in feet; the last product will express the force in pounds.

W. S., of N. Y.—The telescopic sight for rifles, to which you refer, has not been patented in this country. Dick does not describe a telescope, in his "Practical Astronomer" as applied to rifles. It is probable that Dr. Dick never fired a rifle in his life.

J. H., of Pa.—Gas stoves are most useful and convenient apparatus for cooking in summer. They are more cleanly, and we believe more economical, also, than coal stoves. The gas should be mixed with a portion of air, in a separate chamber, prior to admitting into the combustion chamber.

C. S., of Mo.—You are right, "I done" is ungrammatical. You should say "I did," and "I have done." But "the boat was laying at the wharf" is not right; it should be "the boat was lying at the wharf."

Money Received

At the Scientific American Office on account of Patent Office business, during one week preceding Wednesday, July 10 1861:—

C. F., of Wis., $15; R. W., of Iowa, $15; W. A. D., of Ill., $15; P F., of Pa., $15; W. H., of Ct., $25; E. H., of Maine, $25; C. M. S., of Ct., $550; L. B. L., of Cal., $30; J. A. A., of Ct., $25; B. and C., of N. Y., $15; H. H. W., of Cal., $50; H. C., of Cal., $35; J. H. M., of Mich., $25; W. M., of Mass., $15; A. S. L., of N. Y., $20; B. A. M., of Ct., $10; T. B. R., of Ill., $25; C. F. L., of Pa., $15; W. M. M., of Ill., $20; S. M. D., of Mass., $5; E and B., of Vt., $15; P. J. B., of N. S., $15; J. N. D., of N. Y., $25; R. G. T., of Mass., $15; W. B., of N. Y., $15; A. J. S., of Iowa, $22; L. A., of Mass., $15; J. E. S., of N. Y., $40; W. L. G., of N. Y., $15; G. J., of N. Y., $15; P. F., of Austria, $30; P. C., of N. Y., $25; L. and W., of N. Y., $5; F. J. B., of Wis., $25; C. A., of N. Y., $12; G. D. H., of Ill., $25; C. F. B., of R. I., $20; E. T. de V., of N. Y., $15; W. H., of N. Y., $22; G. G. G., of Ct., $45; A B., of N. Y., $20; H. T. C., of Ct., $20; J. and M., of N. Y., $20; M. G. C., of N. Y., $20; W. P., of N. Y., $20; W. and L., of N. Y., $20; G. S. R., of N. Y., $20; W. H., of N. Y., $20; I. P. I., of Min., $20; W. and S., of Ohio, $25; E. F. H., of N. Y., $25; W. and L., of N. Y., $25; G. S. R., of Vt., $25; S. M. D., of Mass., $25; A. C. C., of R. I., $15; W. H. B., of Ct., $25; W. L. W., of Mass., $25; C. R. S., of Vt., $25; G. G. G., of Ct., $25.

Specifications and drawings and models belonging to parties with the following initials have been forwarded to the Patent Office from July 3 to Wednesday, July 10, 1861:—

S. M., of Mass.; J. C. G., of Mass.; E. H., of Maine; T. B. R., of Ill.; J. A. A., of Conn.; W. M. M., of Ill.; W. E., of N. Y.; J. H. M., of Mich.; A. R. D., of N. Y.; H. C., of Cal.; C. N., of N. H.; C. T., of N. Y.; R. B., of Iowa; A. J. S., of Iowa; C. C., of Pa.; E. G., of Maine; R. R. P., of Mass.; A. P., of Conn.; R. D., of N. Y.

New Books and Periodicals Received.

The *American Railway Review* has just commenced its fifth volume. It is an able weekly, devoted to railway finances, engineering and public works. It occupies a position in disseminating information respecting railways which is creditable to its publishers and editor. It generally discusses questions relating to railways with impartiality, and in a very intelligent manner. It appears to be an indispensable companion for all who are particularly interested in railways.

INSTRUCTIONS ABOUT EUROPEAN PATENTS, With a Synopsis of the Patent Laws of the Various Countries.

AMERICAN INVENTORS SHOULD BEAR IN MIND that, as a general rule, any invention which is valuable to the patentee in this country is worth equally as much in England and some other foreign countries. Four patents—American, English, French and Belgian—will secure an inventor exclusive monopoly to his discovery among 100,000,000 of the most intelligent people in the world. The facilities of business and steam communication are such that patents can be obtained abroad by our citizens almost as easily as at home. The majority of all patents taken out by Americans in foreign countries are obtained through the Scientific American Patent Agency. We have established agencies at all the principal European seats of government, and obtain patents in Great Britain, France, Belgium, Prussia, Austria, Spain, &c., with promptness and dispatch.

It is generally much better to apply for foreign patents simultaneously with the application here; or, if this cannot be conveniently done, as little time as possible should be lost after the patent is issued, as the laws in some foreign countries allow patents to any one who first makes the application, and in this way many inventors are deprived of valid patents for their own inventions.

Many valuable inventions are yearly introduced into Europe from the United State, by parties ever on the alert to pick up whatever they can lay their hands upon which may seem useful.

Models are not required in any European country, but the utmost care and experience is necessary in the preparation of each case.

GREAT BRITAIN.

Patents for inventions under the new law, as amended by the act of Oct. 1, 1852, and now in operation, include the United Kingdom of Great Britain and Ireland in one grant, which confers the exclusive right to make, use, exercise or vend. This is conceded to the inventor, or the introducer, for a period of fourteen years, subject, after the patent is granted, and the first expenses paid, to a government tax twice during its existence—once within three years, and once again within seven. The purchaser of a patent would assume the payment of these taxes.

There is no provision in the English law requiring that a patented invention shall be introduced into public use within any specified limit. Under the Patent Act of October, 1852, the British government relinquished its right to grant patents for any of its colonies, each colony being permitted to regulate its own patent system. If a patent has been previously taken out in a foreign country, the British patent will expire with it.

FRANCE.

Patents in France are granted for a term of fifteen years, unless the invention has been previously secured by patent in some other country; in such case, it must take date with and expire with the previous patent. After the patent is issued, the French government requires the payment of a small tax each year so long as the patent is kept alive, and two years' time is given to put the invention patented into practice.

It should be borne in mind that, although the French law does not require that the applicant should make oath to his papers, yet if a patent should be obtained by any other person than the inventor, upon proof being adduced to this effect before the proper tribunal, the patent would be declared filegal.

BELGIUM.

Patents in Belgium are granted for twenty years, or if previously patented in another country, they expire with the date thereof. The working of the invention must take place within one year from date of patent; but an extension for an additional year may be obtained on application to the proper authorities. Inventors are only legally entitled to take out patents.

THE NETHERLANDS.

Patents are granted by the Royal Institute of the Netherlands to natives or foreigners represented by a resident subject, which extend to a period of about two years, within which time the invention must be brought into use, and upon payment of an additional tax, a patent will be granted to complete its whole term of fifteen years. Unless these conditions are complied with, the patent ceases.

PRUSSIA.

Applications for patents in Prussia are examined by the Royal Polytechnic Commission, and unless there is novelty in the invention, the applicant's petition will be denied; and if it is granted, the invention must be worked within six months afterward. A respite, however, of six additional months may be obtained, if good and sufficient reasons for it can be shown.

AUSTRIA.

Austrian patents are granted for a term of fifteen years, upon the payment of 1,000 florins, or about $500 in American currency. This sum, however, is not all required to be paid in advance. It is usual to pay the tax for the first five years upon the deposit of the papers, and the patent must be worked within its first year. The Emperor can extend the patent and privilege of working by special grant. In order to obtain a patent in Austria, an authenticated copy of the original Letters Patent must be produced.

SPAIN.

The duration of a Spanish patent of importation is five years, and can be prolonged to ten years; and the invention is to be worked within one year and one day.

To obtain a Cuban patent requires a special application and an extra charge.

RUSSIA.

Since the close of the Crimean war, considerable attention has been given to Russian patents by Americans. Russia is a country rich in mineral and agricultural products, and there seems to be a field open for certain kinds of improvements. The present Emperor is very liberally disposed toward inventors, and as an evidence of the interest which he takes in the progress of mechanic arts, we may state that we have had visits from two distinguished Russian *savans*, specially sent out by the Emperor to examine Amdrican inventions. As Russian patents are expensive, and somewhat difficult to obtain, we do not take it upon ourselves to advise applications; inventors must judge for themselves; and this remark applies not only to Russia, but also to all other foreign countries.

CANADA.

Patents of invention are granted only to actual residents of Canada and British subjects. Under the general Patent Law of Canada, an American cannot procure a patent for his invention there. The only way in which he can do so is by virtue of a special act of Parliament, which is very difficult, uncertain, and expensive to obtain. Several zealous friends of reform in Canada are working earnestly to bring about a reciprocal law, but their efforts have thus far proved fruitless.

BRITISH INDIA.

The date of the law, Feb. 28, 1856; duration of a patent, fourteen years. Invention must be worked within two years from date of petition. Privilege granted only to the original inventor or his authorized agent in India.

SAXONY.

Duration of patent, from five to ten years. Invention must be worked within one year from date of grant. Careful examination made before granting a patent.

HANOVER.

Duration of patent, ten years; and in case of foreign patent having been previously obtained, an authenticated copy of said patent must be produced. Invention must be worked within six months from date of grant.

SARDINIA.

Duration of patent, from one to fifteen years. Patents for five years or less must be worked within one year, and all others within two years.

NORWAY AND SWEDEN.

Duration of patent, three years, at least; fifteen at most, according to the nature and importance of the invention. Patents for foreign inventions not to exceed the term granted abroad, and to be worked within one, two or four years.

AUSTRALIA.

Date of law, March 31, 1854. Careful examination made by competent persons previous to issue of patent, which, when granted, extends to fourteen years. Imported inventions are valid according to duration of foreign patent. It would require from twelve to eighteen months to procure a patent from the Australian government.

Parties holding foreign patents secured through our agency will be notified from time to time of the condition of their cases.

GENERAL REMARKS.

While it is true of most of the European countries herein specified, that the system of examination is not so rigid as that practised in this country, yet it is vastly important that inventors should have their papers prepared only by the most competent solicitors, in order that they may stand the test of a searching legal examination; as it is a common practice when a patentee finds a purchaser for his invention for the latter to cause such examination to be made before he will accept the title.

It is also very unsafe to entrust a useful invention to any other than a solicitor of known integrity and ability. Inventors should beware of speculators, whether in the guise of patent agents or patent brokers, as they cannot ordinarily be trusted with valuable inventions.

Messrs. MUNN & CO. have been established *fifteen years* as American and Foreign Patent Attorneys and publishers of the SCIENTIFIC AMERICAN, and during this time they have been entrusted with some of the most important inventions of the age; and it is a matter of pardonable pride in them to state that not a single case can be adduced in which they have ever betrayed the important trust committed to their care. Their agents in London, Paris, and other Continental cities, are among the oldest and most reliable Patent Solicitors in Europe, and they will have no connection with any other.

CAUTION.—It has become a somewhat common practice for agents located in England to send out circulars soliciting the patronage of American inventors. We caution the latter against heeding such applications, or they may otherwise fall into the hands of irresponsible parties, and thus be defrauded of their rights. It is much safer for inventors to entrust their cases to the care of a competent, reliable agent at home.

FEES.—The fees required by us for the preparation of foreign applications are not the same in every case; as, in some instances, when the inventions are of a complicated character, we are obliged to charge a higher fee. Applicants can always depend, however, upon our best terms, and can learn all particulars upon application, either in person or by letter.

Parties desiring to procure patents in Europe can correspond with the undersigned, and obtain all the necessary advice and information respecting the expenses of obtaining foreign patents.

All letters should be addressed o Messrs. MUNN & CO., No. 37 Park-row, New York.