Æ its Durties re v p ~~~6

W. S., of Ohio .- The bore of Whitworth's gun is made six-sided, as you supposed, and with a twist. His English patent

coversal polygonal forms. G. T., of Mass.—We think that water cement and gravel makes the best pipe for conducting water. It will be necessary to get some one who understands the art to lav it for you, or to show m how

E. H. P., of Ill .--- We do not think your diagram of the net's positions of sufficient interest to pay for engraving.

W. R. T., of N. Y .- There is difference of opinion about the propriety of placing iron shields for ships upon elastic surfaces; some high authorities claiming that the more solid the backing, the better. It is entirely settled, however, that plates welded together in one solid mass offer far greater resistance than if merely riveted or bolted together.

- W. E. S., of Conn.-Sharp's percussion pellets were patented in 1853. If e also has a patent for throwing a percussion let between the hammer and nipple while the hammer is falling. p∎l.
- W. H., of N. Y.-By boiling cocoanut oil with a small quantity of carbonate of soda, an ounce to the gallon, for half an hour, then allowing it to settle, it will be deprived of its feetid smell neasure, but not perfectly. in a great
- G. G., of Ohio.-You can obtain Holzanfel's "Mechanical Manipulations" from Balliere Brothers, No. 440 Broadway, or John Wiley, No. 56 Walker-street, this city.

G. S., of Mo .- When A, who is patentee, sells a machine to B, the latter can lend it to whom he pleases, unless there is some specific clause in the bill of sale prohibiting him to do so.

- T. S. H., of Ill .- Various specifics have been recommended for preventing scale in steam boilers. The use of some slippery elm bark fed into the boiler weekly, and blowing off with the surface cock frequently, will keep a boiler clean for a long time when using hard water.
- W. F. M., of Pa.-Bourne's "Catechism of the Steam En gine," and Bourne's "Treatise on the Steam Engine," would afford you all the information desired. They are published in London.
- T. G., of Md.-When or by whom guns were invented is uncertain. The origin both of guns and gunpowers is involved in obscurity. It is recorded that Mahoraet II. battered the walls of Constantinopie with cannon in the year 1453, some of them being of the caliber of 1,200 lbs., throwing enormous stones at the rate of three or four per day. During the interval of firing, all damage done to the assaulted fortification could generally be repaired. earlier period than this, the French procured cannon for the invasion of Italy, which cannon were mounted on carriages and drawn by horses

D. C. of Canada.-We cannot encourage you to apply for a patent on your paddle wheel. The same thing was patented years ago by Abner Chapman, and we find it also illustrated in the olume of Canadian patents just issued, page546.

J. R. F., of N. Y.-You do not state clearly when the in fringement commenced, nor whether they infringed both the original claim and the reissued claim, or only the latter. If there was an in fringement of the original claim, then the infringer is liable for damages upon the original patent up to the date of the reissue. Liability as to the reissued patent would commence with the date of the

- D. McJ., of C. W.-The substance that you send us is mica, one of the three stones that form granite. The other two are quartz and feldsnar. In regard to your subscription, our books show that your term expired with No. 22, Vol. IV. We presume you were credited with the amount you specify.
- O. P. C., of Maine.-We do not know anything about the merits of McCormick's extension cases, and have seen none of the testimony. What we hope ever to contend for, in all such cases, is a fair, impartial hearing, and a decision based upon the facts as sustained by the evidence. If mere prejudice and interest are allowed to bear rule against an applicant, then the intention and spirit of our patent law is nullified. If a man is arrested for crime, he is supposed to be innocent until found guilty by eviden cording to law
- B. M., of N. Y .- Wells' "Philosophy," published by Gould & Lincoln, Boston, will give you the latest facts in electricity. The following are reliable works on photography :-- Hardwick's 'Photographic Chemistry,'' \$2.25; Waldack's '' Photography,'' \$1; "The Ambrotype," 25 cents. You can get these of Chas. A. Seely, editor of the *Photographic Journal*, No. 244 Canal-street, New York. There is no gain of power by the lever. What is gained in power is lost in time

A. J. B., of C. T.-Iron pyrites may be rendered soluble in water by roasting slowly first in the open hearth, or roasting in any furnace where a full supply of air is admitted.

E. H. F., of Mass.-In order to become a first-rate en gineer, you must go into an establishment where engines are built, and become a practical engineer. King's work on steam propellers is published by D. Van Nostrand, No. 192 Broadway, this city.

BYRON KILBOURN, Milwaukie, Wis., wishes to correspond with the best manufacturer of steel in the United States.

J. G. W., of N. Y .- You can procure a good steam heat ing apparatus of Messrs. Leeds & Vaux, No. 110 Broadway, this city.

C.C., of Pa.-Send us on your model and first installment of patent fee without delay, and we will prepare your case at once, The business of the Patent Office goes on with great regularity.

J. B. S., of Pa.-We do not know any maker of pumps who will erect them and insure their drawing water through 150 yards of suction pipe, and force it 60 feethigh. That pumps can be made to draw water that distance, we have no doubt; but the difilculty in making them operate satisfactorily will be in securing perfectly air tight suction pipes.

Money Received At the Scientific American Office on account of Patent Office business, during the week preceding Wednesday, July 17. 1801

K. G., of N. Y., \$15; B. & T., of N. Y., \$43; E. T. de \$15; W. H. S., of Conn., \$15; R. P., of N. Y., \$15; J. A. & A. S. H., of Ill., \$25; N. H. B., of Mass., \$15; F. J. B., of Wis., \$10: H. H., of Ill., \$12; G. & B., of N. Y., \$15; J. M., of Ohio, 15; L. K., of N. Y., \$15: J.W. C., of N. Y., \$20: C. F. B., of R. L. \$20: A. H. H., of Mass. \$25; T.E. R., of Mass., \$25; S.L. M., of Conn., \$15; J. C., of Oho,
\$25; J. E. R., of Joss., \$25; S.L. M., of Conn., \$15; J. C., of Oho,
\$25; J. M. of Iova, \$15; D. P. M., of III, \$15; A. F. W., of Pa., \$20;
O. W. K., of Wis., \$15; M. M., of Mass., \$15; C. C. P. W., of Mass., W. K., of Wis, \$15; M. M., of Mass., \$15; C. C. P. W., of Mass.,
\$30; K. & B., of Cal., \$5; P. H. S., of Cal., \$5; G. W. M., of Ohio,
\$15; J. J., of N. Y., \$15; J. B. V. D., of N. Y., \$15; T. G. B., of Mass.,
\$15; M. C. W., of Hi, \$12; L. H. O, of N. Y., \$15; J. L., of Mich.,
\$25; W. H. B., of Mass., \$30; J. A., of Maine, \$25; W. J. S., of N. Y.,
\$25; A. L. W., of Mass., \$20; S. C., of N. Y., \$20; W. D., of Mo., \$20; A. B., of C. W., \$20; T. D., of Iowa, \$20; C. K., of Vt., \$20; W. D. B., of Mass., \$20.

Specifications and drawings and models belonging to ent office from July 10 to Wednesday, July 17, 1861:--

ent Office from July 10 to Wednesday, July 17, 1851:--M. C. W., of Ill.; B. A. M., of Ct.; J. N. D., of Iowa; P. H. S., of Cal.; W. R., of N. Y.; J. M. B., of N. Y.; J. K. G., Jr., of N. Y.; C. C. P. V., of Mass.; J. C., of Ohio; J. L., of Mich.; J. J. S., of N. Y.; L. C., of N. Y.; D. S., of N. Y.; W. H. B., of Mass.; T. C. R., of Mass.; A. II. H., of Mass.; B. and C., of N. Y.; J. A. and A. S. H., of Ill.; J. M., of Ohio; H. H., of Ill.; G. J., of N. Y.; G. D. H., of Ill.; C. A. of Ill.; L. and W., of N. Y.; C. A., of Paris.

TO OUR READERS.

Models are required to accompany applications for Patents under the new law, the same as formerly, except on Design Patents, when twogood drawings are all that is required to accompany the petition, specification and oath, except the government fee.

NVARIABLE 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 pat entee and date of patent, when known, and inclosing \$1 as fee for copying. We can also furnish a sketch of any patented machine issues since 1853, to accompany the claim, on receipt of \$2. Address MUNN & CO., Patent Solicitors, No. 37 Park Row, New York.

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

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NEW PAMPHLETS IN GERMAN.—We have just issued a re vised edition of our namphlet of Instructions to Inventors, containing est of the fees required under the new Patent Law, &c., printed in the German language, which persons can have gratis upon appli-

cation to this office. Address

MUNN & CO., No. 37 Park-row, New York.

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 pat-entee in this ountry 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 discov ery among 100,000, 000 of the most intelligent people in the world. 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 ernment, and obtain patents in Great Britain, France, Belgium, Prus-

sia, Austria, Spain, &c., with promptness and dispatch. It is generally much better to apply for foreign patents simultane 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 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 utmo 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 oright to make, use, exercise or vend. This is conceded to the inventor, or the introducer, for a period of fourteen years, subject, after the pat-ent 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.

seven. The purchaser of a patent would assume the payment 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 relin-quished 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 coun-

try; in such case, it must take date with and expire with the previous patent. After thepatent is issued, the French government requires the payment of a small lax each year so long as the patent is kept alive, and two years' time is given to put the inventionpatented 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 pat-ent should be obtained by any other person than the inventor, upon proof being adduced to this effect before the proper tribunal, the pat-ent would be declared illegal.

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 upplication to the proper authorities. Inventors are only legally entiapplication to the prope tled 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 compiled 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 but in the second secon

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.

obtain a Cuban patent requires a special application and an extra 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 mineral and agricultural products, and there seems to be a held open forcertan kinds of improvements. The present Emperor is very lib-erally 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 sacane, specially sent out by the Emperor to examine Amdrican inventions. As Rus-sian 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. ther 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. Soveral zealous friends of reform in Canada are working earnestly to bring about a re-ciprocal 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 peti tion. 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 lifteen years. Patents forlive 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 vithin one, two or four years. AUSTRALIA.

Date of law, March 31, 1854. Careful examination made by compe tent 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 vasily important that inventors should have their papers prepared only by the most competent solicitors, in order that papers prepared only by the most competent solutions, in other that they may stand the test of a searching legal examination; as it is a common practice when a patenice 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, s they cannot ordinarily be trusted with valuable inventions.

as they cannot ordinarily be trusted with valuable inventions. Messrs, MUNN & CO, have been established fitteen years as Ameri-can and Foreign Fattent Attorneys and publishers of the SCHENTHOUG 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 yar-donable 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, Peris, and other Continental clifes, are among the oldest and most reliable l'Aironi Solicitors in Europe, and they will have no connection with any ether. CAUTION, The secome a somewhat common practice for agents lo-cated in England to send out circulars soliciting the patronage of American inventors. We caution the latter against heeds ing such ap-plications, or they may otherwise fall into the hands of irresponsible paties, and thus bieffraude of their rights. It is much shift for in-ventors to entrust their cases to the care of a competent, reliableagent at home.

ventors to entrust their cases to the care of a competent, reinableagent at home. PERS.-The fees required by us for the preparation of foreign appli-cations 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. Thaties desiring to procure patents in Europe can contrast uid 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.