

FOREIGN PATENT LAWS.

The Foreign Patent Laws which afford the highest security for Inventors seem to be those of Great Britain, France, Spain, the Roman States and Bavaria.

While the legislation of most countries in respect to this subject might be materially improved, it is to be lamented that in some countries, for instance in Portugal and Belgium, the laws, such as they are, have been in some points disregarded by the authorities themselves, and applicants for patents have been subjected to arbitrary conditions.

A brief survey of the Patent Laws of Europe may be of advantage to some readers of the Scientific American.

GREAT BRITAIN.

The British Government grants Patents both of importation and invention for not more than 14 years.

A patent granted in England comprising the principality of Wales and the town of Berwick, costs £110 sterling, or about \$528.

A patent for Scotland alone costs £80 sterling, or about \$380.

A patent for Ireland alone costs £138 sterling, or about \$662 40.

A patent for England and Scotland costs about £190 sterling, or about \$912.

A patent for England, Scotland and Ireland costs £218 sterling, or about \$1046 40—and even these enormous sums do not include the amounts charged in addition for the Colonies.

With respect to the fees of English Patent Agents, they range from £10 to £20 sterling.

By the Act of 7 and 8 Victoria, the term of the patent may be extended for a period not exceeding 14 years.

Patents of addition for improvements are granted.

FRANCE.

The French Patent Law is clear and liberal. Patents are issued in France either to citizens or to foreigners for all industrial inventions, except pharmaceutical compounds or remedies, which are subject to special laws—and also except plans and combinations of credit and finance. No discovery is deemed patentable, if made public before application as to enable any one to execute it.

The charges for patents are:—For a term of 5 years 500 francs, or about \$93 70.

For a term of 10 years 1000 francs, or about \$187 40; and for a term of 15 years 1500 francs, or about \$281 10.

These charges are to be paid in annual instalments of 100 francs, or about \$18 74.

Neglect in making a payment causes a forfeiture of the patent.

No other person besides the original patentee can obtain a patent of addition, within a year from the date of the patent,—but any one in possession of an improvement, may deposit a demand for such a patent, which will remain sealed until the expiration of such 12 months, when it may be granted provided the original patentee has not in the meantime demanded a patent for a similar improvement.

The subject patented must be put in practical operation within two years from the date of the grant.

The term of a patent's duration cannot be prolonged without an express legislative act.

If a foreign patentee obtains a patent in France, the French patent will expire with the foreign patent.

AUSTRIA.

In this country patents of invention are granted to applicants whether natives or aliens, for terms of from 1 to 15 years, at the option of the petitioner. The petitioner may procure a patent for one year and prolong it as he may think proper, within the limits allowed. Patents are not granted for the preparation of food or medicine.

Patents by the act of January, 1840, are granted for and at the following prices and rates respectively:—For 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 years—at 25, 35, 45, 55, 65, 80, 100, 125, 155, 190, 230, 275, 325, 380, 440 florins of Austria, which are about the value of 47 cents each, and those payments must be made in full at the time of soliciting the patents, according to a recent alteration, and there is a further annual tax to be paid on account thereof ranging from \$3.56 to \$4.80.

A patent of addition, as such, cannot be

granted. An improvement can only be protected by a new patent.

A patent right must be exercised within the first year of its acquisition, and not neglected during a year. Foreign patentees, or their assignees, may procure patents in Austria, for not more, indirectly, than 15 years, and determinable with the foreign patent.

PRUSSIA.

Prussian patents, both of invention and importation, are granted *nominally* only to residents of that kingdom, and, if transferred, the assignees must also be residents.

The government usually fixes the period for which patents shall run. They are usually granted for 8 years. For such patents the charge is about \$4.86.

The subject of the patent must be new and never have been divulged in any printed work.

In consequence of the cheapness of patents in this country, patents of addition for improvements are not demanded, but new patents for this purpose are taken out.

The government fixes the term within which the patent must be set in operation, which term is usually 5 months after its issue.

BELGIUM.

In this kingdom a patent, either of invention or importation, may be granted for 5, 10 or 15 years, at the option of the petitioner.

If a patent of importation be granted, it expires with the original patent procured in the country from which the importation is made. So that if an American patent has 10 years unexpired, the Belgian patent of importation should be taken out for 10, not for 15 years.

This government rarely extends the life of patents beyond the period first fixed.

The subject of the patent must be new, and never published in any printed work.

The charges for Belgian patents are:—For a 5 years patent about £13 or \$62 40; for 10 years, about £26 or \$124 80; for 15 years, about £52 or \$248 60. Of this sum £1 or £2 is required to be paid on delivery of patent, and the balance in 2 years. In default of payment the invention is declared to be public property.

Patents of addition are issued gratuitously, but with the same formalities as those prescribed in case of the original patent.

Belgian patents must be put in activity within two years from the time of their issue, although this term is sometimes extended.

Belgian patents may be granted either to natives or to foreigners, and for almost any invention, although the government has in some cases refused to grant patents for improvements connected with railroads, probably supposing that they would be able eventually to procure the benefit of such improvements without paying for them.

A Belgian patent is, by a most illiberal provision, forfeited by taking out a patent in the same name in another country.

HOLLAND.

The Patent Laws of Holland are identical with those of Belgium, although in some respects differently construed by the governments of those countries respectively.

RUSSIA.

The Russian government grants patents of invention and also of importation, both to citizens and aliens.

The actual charges for patents of invention are:—For 3 years, 300 roubles or about \$75; for 5 years, 500 roubles or about \$125; for 10 years, 1500 roubles or about \$375. And patents of invention are not granted for a longer period than 10 years.

The charges for patents of importation are: For 4 years, 800 roubles or about \$200; for 5 years, 1000 roubles or about \$250; for 6 years 1200 roubles or about \$300. Patents of importation are not granted for a longer period than 6 years.—[Euling's Foreign Patent Laws of 1845.

No patent of addition will be granted in this country, so that if an improvement be made, a new patent must be granted.

The term prescribed by the Russian government for setting the object of a patent in operation is six months.

(To be continued.)

The more ideas a man has of other things, the less he is taken up with the idea of himself.

Insect Architects.

The ground spiders may well be ranked among the wonderful native architects of Australia; they are of various sizes, and differ in their color, form and markings. They hollow a circular hole in the earth, adapted to the size of their body, and more beautifully formed, and perfectly round, than any engineer with all his scientific instruments could have made it. Within it is nicely tapestried with the finest web, woven closely over the wall of this subterranean drawing room, the depth of which I never accurately ascertained, as at a certain distance they seem to curve, or perhaps lead into a side cell, where the feelers of fine grass I have introduced could not penetrate. Some of these tunnels terminate at the surface with merely a slight web spun over the grains of soil close to the aperture, as if to prevent their rolling into it; the holes being from one sixth of an inch to an inch in diameter. Some of them boast of an extraordinary luxury of a front door; these I imagine to be rather first rate kind of spiders, and the doors are as beautiful instances of insect skill and artifice as any that our wonder-teeming world displays to us. When shut down over the hole, nothing but the very most accurate previous knowledge could induce any person to fancy they could perceive any difference in the surface of the soil but, perhaps if you remain very still for some minutes the clever inhabitant will come forth—when you perceive a circle of earth, perhaps the size of a wedding-ring or larger, lifted up from beneath, like a trap-door; it falls back gently on its hinge side, and a fine, hairy, beautifully pencilled, brown or grey spider pops out and most probably pops in again to sit just beneath the opening, and wait for his dinner of flies or other eatable intruders. Then we see that the under side and the rim of his earthen door are thickly and neatly webbed over, so that not a grain of soil can fall away from its thickness, which is usually about the eighth or tenth of an inch, and although so skilfully webbed below, the upper preserves exactly the same appearance as the surrounding soil. The hinge also consists of web, neatly attached to that of the lid, and box. I have the greatest respect and admiration for these clever mechanics, and though I very often with a bent of grass, or a soft green twig, try to persuade one to come up, and be looked at (which they generally do, nipping fast hold of the intrusive probe.) I never was guilty of hurting one. I have picked very large ones off the ground that the plough had just turned over, and have carried them to places unlikely to be disturbed; and I generally have two or three particular friends among them, whom I frequently take a peep at. They often travel some distance from home, probably in search of food, as I have overtaken and watched them returning, when they seldom turn aside from hand or foot placed in their way, but go steadily on at a good swift pace, and after dropping into their hole put forth a claw, and hook the door too after them, just as a man would close a trap-door above him when descending a ladder.—Mrs. Meredith's *New South Wales*.

New Freight Depot of the Boston and Worcester Rail Road.

A short time since, we informed our readers that the increasing business of this road had induced the corporation to buy a large lot of land in Boston for the purpose of building a new Freight Depot. From the Boston Traveller, we learn that this land is nearly opposite the present Freight Depot and runs parallel with the north side of the track. It cost upwards of \$100,000 and was formerly owned by Mr. J. Quincy, Jr., and was the spot selected for the proposed South End Market. The price paid for it was about \$2.25 per foot, and the profit to the seller upon its original cost is stated to be between 75 and 100,000. It is also stated that the price now paid is the same for which it was offered to the road several years since, with the addition of interest. The depot proposed to be built, will be of brick, 460 feet long, and 66 feet wide, and will be of a fashion somewhat similar to their present depot. The driving of the piles for the foundation is to commence immediately. In the Spring, it is proposed to enlarge the present Passenger Depot

of this road, by taking in that formerly occupied by the Old Colony Road.

Natural Resources of Virginia.

The Editor of the Southerner, an excellent exchange published at Richmond, Va., has lately been visiting the South-western portion of that State and Little Tennessee. After describing the rich and inexhaustible lead Mines, near Wytheville, which yield eighteen per cent of silver, he proceeds:

"On traversing the hill sides, and tops where the miners were at work, we found iron ore of the richest kind in vast quantities. In fact, the two ores were almost interstratified. It struck us as most remarkable that while these ores in vast abundance were found on the surface, the soil was as productive as most of the bottom lands on the rivers and bays of the State. Such a state of things can hardly be shown in any other country on the whole sphere which we inhabit. What hath not God wrought for the people of Virginia, and what folly have they not practised!

"These are not the only treasures of this wonderful region. In the Co. of Washington gypsum or plaster exists in vast quantities. In no one region of the world is it so rich and so abundant. This plaster can be sold at the quarries for fifty cents per ton, and yet it is a dead loss to the farmers and others of this State, for the want of means of transportation. There is but one other place in the whole of the United States where it is found. A very small amount of poor quality exists in Western New York. The salt wells in the same county are also the richest in the United States, or perhaps in the world. Beds of fossil or rock salt are found 160 feet in depth, the brine standing at 96 degrees, far superior to the far famed Polish mines. Yet it is of no earthly value, for the want of some better outlet to market. Pig iron can be made and sold at the works for nine dollars per ton, and yet, with the present means of transportation, if it is sent to this city and sold for thirty-five dollars per ton it is a losing business. Is there a man in a thousand, who would believe that Virginia could have been so long insensible to such unheard of, and extraordinary resources? We do not believe that such a vast mineral and agricultural wealth, in the same extent of territory, can be found on the great globe; and yet of what value are they to us under present circumstances.

TO CORRESPONDENTS.

"A. S. F. of Dexter, Me."—A. L. will perceive all the patents granted last year for stoves by consulting our Patent List, which is received every week from the Patent Office at Washington, and published in the Scientific American.

"T. A. D. of Ky."—You will perceive our answer to your last in last week's Scientific American.

"R. V. K. of Utica, N. Y."—See No. 3 of vol. 2 Scientific American, for the desired information respecting the Patent Laws.

"J. H. of Mobile, Ala."—A patent cannot always be secured for a different application of a machine already patented. It depends altogether upon the claim of the patent. Blanchard's machine for turning irregular surfaces although secured first for gun stocks, extends to last turning machines, axe helms and statuary. We think that for the arrangement for knives placed on the cylinder for expanding and contracting, as you described, a patent cannot be obtained.

"J. R. W. of Mass."—Your volume of the "Scientific American," was sent as you ordered on Thursday last.

"J. B. of S. C."—Your books were sent to the care of Robertson & Blackstone, in the packet ship H. Allen, which sailed on Thursday last.

"W. W. R., of Vt."—There are only three primitive colors, yellow, red and blue. All the rest are but shades of these three.

"R. I. of Mass."—Your Anemometer may be new to you, but such an instrument has been long known to us.

"I. R. L., of Md."—Your application, we are glad to hear has been favourably received.

"C. de la R., of Ala."—The chloride of zinc, we think will effectually answer your purpose as a disinfectant. It is simply zinc dissolved in muriatic acid. There is un-