

PATENT LAW OF BRAZIL.

We are indebted to an American citizen—G. B. Zieber, residing in Rio Janeiro—for the annexed translation of the law of Brazil relating to the grant of Letters Patent for new inventions:—

“Let every one of our subjects know that the Parliament or General Assembly has determined, and we confirm, the following law:—

ART. I. The law assures to the discoverer or inventor of any useful industry the proprietary and exclusive use of his discovery or invention.

II. He who will improve a discovery or invention has, in the improvement, the right of a discoverer or inventor.

III. To the introducer of a foreign industry will be granted a reward proportioned to the utility and difficulty of the introduction.

IV. The right of the discoverer or inventor will be confirmed by a patent allowed gratis, payment only to be made for the seal and workmanship; and to obtain it—

1. He will show, by a writing, that the industry to which it refers is of his own invention or discovery.

2. He will deposit in the public archives an exact and certain exposition of the means and process he has employed, with plans or delineations, drawings and models to explain it, without which the subject cannot be exactly elucidated.

V. The patents will be granted according to the qualities of the discovery or invention, for a term of 5 to 20 years, a special law being required for a longer time.

VI. If the government will buy the secret of the invention or discovery, he will order it to be published; but in case of only having granted a patent, the secret will be concealed till the expiration of the term allowed to the patent.

VII. The infringer or transgressor of a patent will lose the instruments and products; and will, besides, pay a fine equal to the tenth part of the value of the products manufactured, the costs being always subjected to the indemnification of loss and damages. The tools, instruments, products and fine will be given up to the owner of the patent.

VIII. He who possesses a patent may dispose of it as he likes, using it himself or pass it to one or several persons.

IX.—In case of their being two or more applicants for a patent (interested in the same invention) it will be granted to them collectively.

X. All patents will be finished and without effect, upon—

1. Being proved that the possessor has not been faithful and true in what he has said, or has been short or abridged, concealing any essential matter in the exposition or explanation made to obtain the patent.

2. Being proved not to be the original inventor or discoverer.

3. If the invention or discovery is not put into operation within two years after the granting of the patent.

4. If the inventor or discoverer has already obtained a patent in any foreign country; but in such a case, he will obtain, as an introducer, the right of the reward established in Art. III.

5. If the goods or objects made or manufactured are proved to be prejudicial to the public good or contrary to the laws.

6. Making public or using the invention before the patent is obtained.

XI. The government is authorized to order the patents to be passed according to the provisions of the present law, the king's attorney being always heard on it, &c.

XII. All the laws and provisions to the contrary are revoked.

Given at the Palace of Rio de Janeiro, on the 23d of August, 1830, the ninth year of the Independence and Empire, &c.”

PATENT EXTENSIONS.

The Commissioner of Patents has lately extended, for seven years, the patent granted to Beriah Swift, deceased, August 16, 1845, for an Improvement in Grinding-mills. In this mill, the grinding is done between two plates. A series of cutting teeth are formed on each plate, which fit into furrows on the plate opposite. The furrows tend to keep the teeth sharp, and thus to render the machine, to a certain extent, self-sharpening.

The improvement is said to be a most excellent one, and it is alleged that, owing to its self-sharpening qualities, it may be made to perform a given quantity of work in a better manner, with less power and in a less space of time, than any other mill of the sort. It is adapted to the grinding of coffee, spices, medicines, &c., and may be used by hand or with power, several sizes being manufactured. W. J. G. Lane, of Washington, Dutchess county, N. Y., is the assignee. The extension was obtained through the SCIENTIFIC AMERICAN Patent Agency.

Applications have been made by the following parties for the extension of their patents, viz.:

Wm. Cales Fuller, of England: Improvement in India-rubber Springs for Cars. Patented Oct. 25, 1845; hearing Oct. 17, 1859.

Christian V. Queen, of Peekskill, N. Y.: Improvement in Forges. Patented Nov. 18, 1845; hearing Nov. 7, 1859.

David B. Rogers, of Pittsburg, Pa.: Improvement in Cultivator-teeth. Patented Nov. 1, 1845; hearing Oct. 17, 1859.

John McFarrar (administrator of the inventor, Jos. E. Andrews, late of Boston, Mass.): Improvement in Planing-machines. Patented Nov. 21, 1845; hearing Nov. 7, 1859.

Application for extensions should be made more than 60 days prior to the extension of the patent. See our advertisement, in another column.

FIRE-PROOF COMPOSITION TO RESIST FIRE FOR FIVE HOURS.—Dissolve, in cold water, as much pearlash as it is capable of holding in solution, and wash or daub with it all the boards, wainscotting, timber, &c. Then diluting the same liquid with a little water, add to it such a portion of fine yellow clay as will make the mixture the same consistence as common paint; stir in a small quantity of paperhanger's flour paste to combine both the other substances. Give three coats of this mixture. When dry, apply the following mixture:—Put into a pot equal quantities of finely pulverized iron filings, brick-dust, and ashes: pour over them size or glue water; set the whole near a fire, and when warm stir them well together. With this liquid composition, or size, give one coat; and on its getting dry, give it a second coat. It resists fire for five hours, and prevents the wood from ever bursting into flames. It resists the ravages of fire, so as only to be reduced to coals or embers, without spreading the conflagration by additional flames; by which five clear hours are gained in removing valuable effects to a place of safety, as well as rescuing the lives of all the family from danger! Furniture, chairs, tables, &c., particularly staircases, may be so protected. Twenty pounds of finely sifted yellow clay, a pound and half of flour for making the paste, and one pound of pearlash, are sufficient to prepare a square rood of deal-boards. When the Chinese were told the risk we ran of being roasted alive in our many-storied mansions, they remarked, “What little land the English must possess, that compels them to build such high houses!”—*Builder*.

A GOOD INVESTMENT.—A correspondent (J. R. G.) writing to us recently from Louisville, Ky., says:—“I renewed my subscription to your valuable journal through Mr. Skene, and I also added one for my boy, who, although but 9 years old, always claims the first reading. We look upon the SCIENTIFIC AMERICAN as a kind of family pet, or, in other words, as a little savings-bank. I have been offered twice the original cost for the eight volumes which I possess. My son being now 9 years of age, I have reckoned that when he is 21, he will have 12 volumes of the SCIENTIFIC AMERICAN, which at the club rates will cost only \$16.80; if then he should wish to sell them, they will (judging from the past) bring him \$4 per volume, clear of binding, thus yielding \$48, and giving a better result than a deposit in any savings-bank, in addition to the valuable information derived from its weekly reading. But enough! I am trespassing too much on your time.”

ATTENTION.—A. Wykoff, of Elmira, N. Y., inventor of a tubular boring-machine for wooden pipes, desires us to say that letters are frequently misdirected to him at Rochester, N. Y., to which latter place they should not be sent.

A COLUMN OF INTERESTING VARIETIES.

The celebrated leaning-tower of Pisa is 315 feet high, and has an inclination from the perpendicular of 12 feet. A ball of iron, weighing 1,000 pounds at the level of the sea, would be perceived to have lost two pounds of its weight if taken to the top of a mountain four miles high—a spring balance being used; the attraction of gravitation being less at the top of a mountain than at the level surface of the earth. A thick piece of iron, weighing half an ounce, loses in water nearly one-eighth of its weight; but if it is hammered out into a plate or vessel of such a size that it occupies eight times as much space as before, it loses its whole weight in water, and will float, just sinking to the brim. If made twice as large, it will displace one ounce of water, consequently twice its own weight. Every substance becomes lighter in water, in proportion to the amount of water displaced. Most of the engines on the Great North of Scotland Railway have been provided with a smoke-consuming apparatus, the invention of Mr. D. K. Clark. The apparatus is very efficient, produces a saving of fuel, and the passengers are relieved from a great annoyance. Wilmington, in North Carolina, is now lighted with wood-gas, which, it is stated, can be obtained more cheaply than coal-gas. A tun of coal yields about 10,000 cubic feet of gas, while one cord of wood produces 98,000 feet, in the production of light; being as seven to three in favor of ligneous gas over coal. Cotton is best adapted for lamp-wicks, because the arrangement of the fibers of the cotton-wick is such that the whole forms a bundle of minute tubes in which the oil ascends and supplies the flame by capillary attraction. The estimated force of gunpowder, when exploded, is at least 14,750 pounds on every square inch of surface which confines it. Practical experience has demonstrated that the largest piece of ordnance which can be cast perfect, sound and free from flaws, is a mortar 13 inches in diameter; this would weigh about five tons. The French, at the siege of Antwerp, made a mortar having a bore 20 inches in diameter; but it burst on the ninth time of firing. The highest mountain in the world is 29,000 feet. Human footsteps have ascended 19,000 feet; to that height M. Boussingault and Col. Hall clambered on the side of Chimborazo, in the Andes, the greatest elevation yet attained by man without leaving the surface in a balloon. Madrid, the capital of Spain, is the highest of the European capitals; 200,000 people dwell at the elevation of 2,200 feet, on a naked desert plain, chilled by a biting breeze nine months of the year, and are baked the remaining three. The highest permanent residence in Europe is in the pass of Santa Maria—9,272 feet. In the Andes of South America, where a tropical temperature prevails, man dwells much more aloft than in Europe. Potosi, the highest city on the globe, on the celebrated metalliferous mountain, is 13,350 feet above the sea; and a post-house at Ramihuas is 15,540 feet, which is but a trifle below the peak of Mount Blanc, where mortal never stayed above two hours. The pods of the bush known as “chapparral” are about the size of a large pea, and when they come to maturity, instead of opening in a quiet sort of a way, they do so with a report like a pop-gun, shooting the seeds 10 or 15 feet into the air. At a temperature of 103°, liquid ammonia freezes into a colorless solid, heavier than the liquid itself. A salt of lactic acid, gently heated, with five or six parts of oil of vitrol, yields an enormous quantity of perfectly pure carbonic oxyd gas. The balance made by Ramsden for the Royal Society of London was so delicately poised that Mr. Pond, the astronomer-royal, found that the radiated warmth of his own body, when standing within a few inches of either extremity of the beam, was sufficient, by the produced expansion of that extremity, to cause it to preponderate. Marine glue was patented by Mr. Jeffery, in 1842. It is formed by dissolving one pound of caoutchouc, in small pieces, in four gallons of coal naphtha, with frequent stirring, the solution occupying 10 or 12 days; two parts of shellac are then fused in an iron vessel and one part of the solution being well stirred in, the glue is pured out on slabs to cool. A joint made with this glue between two pieces of wood becomes stronger than the fibers of the wood itself. The brilliant prismatic colors of the pearl are attributed to the decomposition and reflection of the light by the numerous minute grooves in its surface.