

COMMUNICATIONS RECEIVED.

The Editor of the SCIENTIFIC AMERICAN acknowledges with much pleasure the receipt of original papers and contributions on the following subjects: On Square Measure. By M. C. On the Metric System. By W. F. Q. On a Camera Lucida. By S. B.

[OFFICIAL.]

INDEX OF INVENTIONS

FOR WHICH Letters Patent of the United States were Granted in the Week Ending January 7, 1879, AND EACH BEARING THAT DATE. [Those marked (r) are reissued patents.]

A complete copy of any patent in the annexed list, including both the specifications and drawings, will be furnished from this office for one dollar. In ordering, please state the number and date of the patent desired, and remit to Munn & Co., 37 Park Row, New York city.

Table listing various inventions such as Amalgamator, Animal trap, Axle box, Bag fastener, Ballot box, Barrel, Bed bottom, Bed covering, Bedstead, Billiard and dining table, Billiard table, Bolt cutter, Boot and shoe, Bottle, Bottle rack, Bracket, Bucky, Burglar alarm, Buttons moulder, Calendar, Car coupling, Car coupling, Car heater, Car, railway, Car, railway, Car wheel, Carbureter, Carbureter, Card setter, Cards, Carriage curtain fastener, Carriage running gear, Cartridge shell filler, Carving machine, Caster treadle, Casting heads, Chair, Chair frame, Chair legs, Chair rocker, Change counter, Check rower, Check rower, Chimney top, Churn dasher, Cigar box, Cigar box, Cock, Coffer pot, Collar protector, Colors, Colter for grain droppers, Cooker, Cork cutter, Cotton, Cruet stopple, Crushing roll, Cultivator, Dish washer, Door spring, Dredging apparatus, Dress train supporter, Electric light, Elevator safety attachment, Embroidery show card, Envelope, Eyeglass frame, Feed water heater, Fence wire, Fence wire tightener, Fertilizer, Fibers, Fire back, Fire extinguisher, Fire kindler, Fireman's shield, Folding chair, Folding chair, Furnaces, Galvanic battery, Game counter, Garment clasp, Gas burner, Gas regulator, Governor, Grain binder, Grappling iron, Grinding mill, Grindstone frame, Harrow, Harvester, Harvester grinder, Hat sweat leather, Hay rake, Hay rake, Headlight, Horse power, Horseshoe, Hub, Hub, Injector, Insects, Ironing machine, Jars, Knee protector, Label holder, Lamp, Lamp burner, Lamp burner, Lamp burner, Lamp burner, Lamp wick adjuster.

Table listing various inventions such as Leather splitter, Lewis, Lifting jack, Loom, Loom shuttle, Loom shuttle box, Lubricator, Mail bag, Mallet, Middlings separator, Milker, Millstones, Mining machine, Miter bevels, Mower, Mower, Muclage holder, Nut lock, Oatmeal machine, Oil can, Oil tank, Organ action, Packing box, Pad loop hook, Padlock, Paper, Paper bag machine, Paper, Paper stock, Photographic backgrounds, Photographic pictures, Piano damper attachment, Pipe joint, Planter, Planter, Planter seed, Planter seed, Printing press, Pump, Pump, Pump valve, Pumping system, Railway, Railway frog, Roads, Ropes, Sash fastener, Sash holder, Saw, Sawing machine, Saw, Saw tooth, Seal lock, Seed dropper, Seeders, Sewing machine, Sewing machine, Sewing machines, Shoe, Shoe, Skate roller, Spark arrester, Speed indicator, Spindle bearing, Spinning machines, Spoon, Stair curves, Steam boiler attachment, Steam generator, Steam generator, Steam motor, Steamer, Stone, Stove, Stove, Stove, Straw cutter, Street sweeper, Telephone, Tiling, Tires, Tobacco, Tool, Toy box, Traveling bag, Truck, Truck, Turnstile register, Urinal shield, Vapor generating burner, Vaporizer, Velocipede, Ventilating soil pipes, Wall paper, Washing machine, Washing machine, Watch cases, Watch key, Watch, Watch, Water closet, Water closet, Weather strip, Weather strip, Weft fork, Wick trimmer, Wooden boxes.

TRADE MARKS.

Table listing various trade marks such as Bicycles, Bits, Burton ale, Butter, Cheating and smoking tobacco, Cigars, Cigars and cheroots, Clothes wringer, Fluid glue, Gentlemen's shirts, Grain bags, Jacquard Brussels carpets, Lager beer, Medicinal preparation, Mineral spring water, Pale ale, Pens, Pills, Shoe buttons, Soap, Soap, Stout or porter, Whisky, Woolen cloth.

DESIGNS.

Table listing various designs such as Font of printing types, Font of printing types, Knitted fabric, Knitted fabric, Knitted fabric, Rug pattern.

Value of Patents and How to Obtain Them.

PRACTICAL HINTS TO INVENTORS.

PATENTS, CAVEATS, ORNAMENTAL DESIGNS, TRADE MARKS, LABELS, COPYRIGHTS.

PATENTS THE WEALTH OF NATIONS.

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A patent is granted for 17 years, during which time the patentee enjoys the full and exclusive right to make, use, and sell the invention, and grant rights, licenses, or privileges. There are no taxes to pay on a patent after it is granted in the United States. The owner is not obliged to work the patent within a specified period. The patent remains good and valid, whether it is worked or not.

Preliminary Examination.—Another way to learn more definitely if an invention is patentable, is to have an examination made of the drawings and models in the Patent Office.

In order to have such search, make out a written description of the invention, in your own words, and a pencil, or pen and ink, sketch. Send these, with the fee of \$5, by mail, addressed to MUNN & Co., 37 Park Row, and in due time you will receive a written report in regard to the patentability of your improvement. This special search is made with care, at Washington.

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 is \$10. A pamphlet of advice regarding applications for patents and caveats is furnished gratis, on application by mail.

To Make an Application for a Patent.—The applicant for a patent must furnish a model of his invention if susceptible of one, or, if the invention be a chemical production, he must furnish samples of the ingredients of which his composition consists. These should be securely packed, the inventor's name marked on them, and sent by express, prepaid. Small models, from a distance, can often be sent cheaper by mail.

Reissues.—A reissue is granted to the original patentee, his heirs, or the assignees of the entire interest, when, by reason of an insufficient or defective specification, the original patent is invalid, provided the error has arisen from inadvertence, accident, or mistake, without any fraudulent or deceptive intention. Address MUNN & Co., 37 Park Row, New York, for full particulars.

Design Patents.—Foreign designers and manufacturers, who send goods to this country, may secure patents here upon their new patterns, and thus prevent others from fabricating or selling the same goods in this market.

A patent for a design may be granted to any person, whether citizen or alien, for any new and original design for a manufacture, bust, statue, alto-relievo, or bas-relief; any new and original design for the printing of woolen, silk, cotton, or other fabrics; any new and original impression, ornament, pattern, print, or picture, to be printed, painted, cast, or otherwise placed on or worked into any article of manufacture.

Design patents are equally as important to citizens as to foreigners. For full particulars send for pamphlet to MUNN & Co., 37 Park Row, New York.

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Foreign Patents and Synopsis of Cost.—The population of Great Britain is 31,000,000; of France, 37,000,000; Belgium, 5,000,000; Austria, 36,000,000; Prussia, 40,000,000; and Russia, 70,000,000. Patents may be secured by American citizens in all of these countries. Mechanical improvements of all kinds are always in demand in Europe. There will never be a better time than the present to take patents abroad. We have reliable business connections with the principal capitals of Europe. Address MUNN & Co., 37 Park Row, New York. Circulars, with full information on foreign patents, furnished free.

Canada.—The expense to apply for a Canadian Patent is fifty dollars (\$50), which includes Government tax, agency, and all charges for five years, after which two additional terms of five years each may be obtained on payment of fifty dollars each—in all, fifteen years. The patent covers Nova Scotia, Prince Edward's Island and both the Canadas.

Caveats may be filed in Canada for \$25, which includes all expenses.

For further particulars address MUNN & Co., 37 Park Row, New York.

Great Britain.—The British Patent extends over England, Wales, Scotland, Ireland and the Channel Islands, but not the Colonies; the latter make their own patent laws.

The expense to apply for an English patent is seventy-five dollars (\$75), which includes Government taxes, agency, and all charges for the provisional patent. No sworn papers are required; no models. The patent issues to the first applicant, whether he be the inventor, or merely the introducer. For additional particulars as to cost for completing the English patent and future taxes, address MUNN & Co., 37 Park Row, New York.

France.—The cost to apply for a French patent is \$100, which covers all expenses for agency and Government taxes for the first year. No official examination is made; no model. The longest term of the patent is fifteen years, subject to a small annual tax. Address MUNN & Co., 37 Park Row, New York.

Belgium.—This kingdom, with its population of five millions, is, industrially, one of the most active and progressive nations in Europe.

Belgium is the manufacturing centre for a large portion of the Continent, and Belgian patents rank among the most desirable of those that are taken out by American citizens.

The expense to apply for a Belgian patent is \$100. Inventions that have already been patented in the United States may be patented in Belgium. The law and proceedings are substantially the same as in France. For full particulars send for pamphlet. Address MUNN & Co., 37 Park Row, New York.

German Empire.—The new Patent law, covering Prussia and all the German States, was put in operation July 1st, 1877. It was formerly necessary to take some twenty-one separate Patents, costing several hundred dollars, to cover the same territory which is now protected by a single Patent. The expense for a Patent and first year's tax for a simple invention is \$100.

Patents can not be obtained in Germany for inventions that have been previously patented in the United States. Therefore the application for the German patent should be made before the United States patent is actually issued.

Austria.—A Patent is granted for fifteen years, subject to a small annual tax. The expense to apply for a patent in Austria is \$100, which includes both agency and government fees. The invention must be worked within one year. Inventions that have already been patented in the United States, if not introduced in Austria, may be patented there. The Austrian patent covers also Hungary, and includes a total population of forty millions.

Russia.—Duration of patent three, five or ten years. The terms can not be extended. The invention must be worked in the empire during the first quarter of the period for which the patent has been granted. No annual taxes. Full particulars may be had by addressing MUNN & Co., 37 Park Row, New York.

Italy.—The expense to apply for an Italian patent is \$150, which includes all fees for the first year. The patent is granted for fifteen years, subject to a small annual tax. This country is making rapid progress in industrial enterprise, and has a population of twenty-seven million.

Spain and Cuba.—By the terms of the new Spanish Law, the patentee now covers Spain, Cuba, and all the Spanish Colonies. Duration of the patent, 20 years. The law is substantially similar to the French and Belgian laws. Cost of the patent, including first annuity, \$100. This is a new and good field for inventors.

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The expense to apply for patents in the above countries varies, but full information may be had by addressing MUNN & Co., 37 Park Row, New York.

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