

F. M. S. asks: In the manufacture of gun cotton, is the use of chemically pure acids imperative? A. No. The commercial acids are frequently used.

G. A. P. says: I am running a grist mill with two sets of bevel gears, using about 30 horse power. I wish to throw the gears out and use a belt.

D. N. C. R. asks: About what size would a boiler require to be run an engine 300 revolutions per minute, the size of the cylinder being 5 inches stroke and 3 inches diameter?

J. F. D. asks: How can I make small articles of india rubber? Is there a book on the subject? A. Hancock's "Manufacture of India Rubber" will give you considerable information on the subject.

A. S. S. asks: Is this the correct way of finding the actual horse power of a high pressure steam engine? Diameter of cylinder 7 inches, length of stroke 1 1/2 feet, revolutions per minute 80, with steam power on piston at 60 lbs. per square inch, and allowing 1 1/2 lbs. per square inch for friction.

S. asks: 1. How thick would iron have to be to withstand a pressure of 30 lbs. to the square inch? A. It would depend upon the form of the vessel.

W. L. P. asks: 1. Who was the engineer of the Suez canal? A. Ferdinand de Lesseps. 2. What is its length, breadth, and depth? A. About 100 miles long, 300 feet wide at the top, 100 to 150 feet wide at the bottom; average depth 24 feet.

C. W. A. asks: 1. How many grains of chloride of gold will a given number of grains of metallic gold make? A. This is found by first adding together the combining weights of chlorine and gold, and dividing the result by the combining weight of gold alone.

E. R. W. asks: What two substances, elements or compounds (ice and snow excepted) possess the least amount of friction when brought into contact with hard substances? A. It is not possible to answer this question in its present very general form, because it is necessary in the first place to know how the substances are to be brought in contact, and secondly, what the hard substances are, for much depends upon the adaptation of lubricating materials to the circumstances under which they are to be used.

J. H. S. asks: What do the words sin., cos., and tang., and the sign Σ, in algebra mean? A. Sin. = sine of an arc or angle. Cos. = cosine. Tan. = tangent. Σ = the sign of the summative, and means that terms of a series are to be added together.

L. P. C.—For replies concerning the assignments you mention send your address to Munn & Co., and send ten dollars.

S. M. M. asks: Is there an instrument by which any mineral of value in or under the ground may be found? If there is anything of the kind that you know of, please inform me.

G. S. D. asks: Is a process by which milk can be preserved for several weeks, the cream separated and churned at convenience into an extra quality of butter free from incipient rancidity, therefore little prone to deterioration, patentable? A. Probably it is.

E. L. asks: How or where are the wires concealed or put out of sight in connecting an electric burglar alarm with the doors and windows of a dwelling house? A. In new houses, the wires are frequently placed behind the plastering. But ordinarily they run along the base boards of the apartments.

F. H. B. asks: What will remove ink and fruit stains from paper, linen, etc., without injuring the fabric? A. For ink, rub the spot with a weak solution of oxalic acid. For fruit stains, make a mixture of 1/4 lb. chloride of lime and 3 pints water, add 7 ozs. crystallized carbonate of soda dissolved in 1 pint of water.

J. F. asks: What is the correct theory about the formation of ice? Does it form from the bottom of the water or from vapor escaping and congealing on the top? A. It forms at the top, by the production, at the freezing temperature, of innumerable crystals, which interlace one with another until at last there results a solid mass.

W. H. W. M. asks: 1. Can sugar and sirup be made from rags and sawdust by the aid of sulphuric acid? A. Yes. 2. By pouring sirup into the tea, the tea turns a black color; does it denote that the sirup is made from rags, etc.? Would the action of the acid in the sirup operate on the tannin in the tea, and produce the black color? Will not good sirup without acid affect the tea in the same manner? A. It is more likely that there was a trace of iron present, which formed a tannate of iron and caused the inky appearance.

C. O. E. asks: 1. How can I silver plate iron? How can I make the best silver solution for iron? A. Wash in weak lye to remove grease. Dip into weak aqua fortis to remove rust. Scour with a hard brush and fine sand. Then, having fastened to a wire, dip in strong nitric acid and, as quickly as possible, afterwards in the silver bath. This may be made by dissolving silver in pure aqua fortis.

A. B. C. asks: How can I make a cheap and efficient induction battery for medical use? A. By wrapping a coil of stout insulated wire around a core of soft iron, and connecting the ends of this wire with a galvanic battery. Around this coil another coil consisting of fine insulated wire is wrapped, and of much greater length. The ends of this wire are the poles to be used.

D. B. W. says: In the SCIENTIFIC AMERICAN, December 3, 1873, I find a recipe for making a rubber cement by dissolving rubber in benzine, which falls to work; the rubber does not dissolve. Can you tell what the difficulty is? A. Try pure unvulcanized rubber and stir the ingredients well together frequently, with a stick or knife. The benzine must be highly rectified and pure. Sulphide of carbon is also a solvent of rubber.

E. B. asks: Is there a sure and simple test for distinguishing between genuine and artificial butter? A. There are sure tests, but they are too complicated for anyone but a practical chemist to apply. For answers to your other questions, consult a stationer.

H. W. J. says: 1. I wish to make a telescope with a four inch lens, 72 inches focus. What must be the size of my eyepiece? What can I see with such a telescope? A. You can apply an eyepiece of one inch focus; but unless the object glass be achromatic you cannot employ the full aperture, nor in any case have a very satisfactory field of view.

P. H. M. asks: Is the cause of the existence of the Gulf stream known? If so, what is it? A. It is caused by the heating of the waters of the Atlantic ocean under the equator, which makes them lighter, and causes them to flow over the top of the water lying to the northward, this water flowing in below towards the equator.

F. C. B. asks: Is there any process to restore blackberry wine or any other liquid that has become musty by putting it in a musty barrel? A. Mustiness in wine, it is said, may frequently be removed by violently agitating the wine for some time with a little coarsely powdered charcoal, freshly burnt, or even some slices of bread toasted black. A little bruised mustard seed is occasionally used for the same purpose.

E. S. M. says: I am about to construct a reflecting telescope, the mirror being formed by silver chemically deposited upon glass. Can you give me some recipe for a solution to deposit the silver in a proper form? A. There are various methods of depositing silver upon glass. Here is one which you may make available by practice: A solution of gun cotton in caustic potash is added to a solution of nitrate of silver, followed by sufficient strong liquor of ammonia to redissolve the precipitate. The resulting argentiferous liquid is applied to the glass which is then slowly heated over a water bath until effervescence ensues and the deposit of silver is complete.

G. E. R. asks: What substances are used with extract of logwood to make a cheap red color? A. In a decoction of three pounds sumac, the goods are steeped over night, and then spirited at 2° Twaddle; wash and work through a decoction of three pounds Lima wood and one pound logwood for thirty minutes, then raise with a gill of red spirits; work for fifteen minutes more; wash out and finish.

S. asks: What colored light is best for persons to read by, and how can I impart that color to lamp chimneys? A. Blue. It can be painted over with a thin coat of Prussian blue.

H. R. R. asks: 1. How can a handsome purple color be made for druggists' show bottles? A. Make a solution of permanganate of potash in distilled water. 2. Can I make two different colors in the same bottle, that is, two colors that will not mix, as, for instance, red and green? A. Aqueous solutions alone will not answer. Dissolve some sulphate of nickel for the green, and upon this pour some oil colored with cochineal.

F. P. C. asks: Is there any satisfactory way of testing adulteration of linseed oil with cotton seed oil? If so, what? A. We are not aware of any reliable experiments on this point. Consult some good practical chemist.

W. says: I have bought 100 square inches of water, to be taken from the raceway under a 2 feet head. When the water is used, the surface in the pond and raceway lowers about 4 inches. If I draw my water through a 10 inch square hole, how deep must I put my flume, so that I can get my 100 inches of water and no more? A. See article on "Friction of Water in Pipes," p. 48, vol. 29.

V. T. asks: How can I make a fuse that will burn at the rate of about 200 feet per minute, and that will take fire at a temperature of about 150° or 200° Fahr.? A. Consult the specifications of the recently patented fire alarms.

J. B. asks: How is a person affected by laughing gas? Is it injurious? How is it administered? A. Taken in moderate quantities, it exercises a strong influence upon the muscles which are brought into play when there is laughter: but in larger doses, of five gallons and upwards, it produces unconsciousness and insensibility to pain. When manufactured from pure nitrate of ammonia, and washed by passage through water, solution of green vitriol, and solution of potash, it may be taken without danger by persons in good health, if administered in a proper manner.

N. S. asks: 1. How can I seal the ends of small glass tubes? A. Use a blowpipe. 2. What is the process of silver plating? A. See pp. 299, 315., vol. 29.

E. C. M. asks: 1. Are the Cornwall (England) tin mines the only ones in the world? A. No. 2. Is it true that one has been discovered in California? A. Yes. For answers to your other questions see books on metallurgy, frequently advertised in our columns.

W. R. asks: 1. How many figures denote a billion, and how many a trillion? A. A billion is 1,000,000,000. A trillion is 1,000,000,000,000. 2. Has the earth two revolutions, one on its axis, the other round the sun? A. The earth rotates on its axis, and revolves round the sun. 3. Is the sun the center of the solar system? A. Yes. 4. Are the stars inhabited? A. Nobody knows. The approximate constitution and condition of many of the stars has been determined by the spectroscopic, and the results show that none that have yet been examined present the conditions necessary to support human life.

F. H. S. says: 1. I want to cast a small steam engine of brass: what is the composition that the founderies use to put in their flasks? Can I melt brass in a common stove? A. A good composition is 7 lbs. copper, 3 lbs. zinc, 2 lbs. tin. Probably you will find a forge better for the purpose. 2. How much power would an engine cylinder 1 1/2 x 4 inches, with 10 lbs. of steam have, and also with 30 lbs.? A. See article on "Indicating Steam Engines," page 64, vol. 30. 3. Would a crank do instead of an eccentric for the slide valve? A. Yes. 4. Can you recommend me a good book on molding brass, and one on the steam engine? A. Byrne's "Practical Metal Worker's Assistant," and Bourne's "Catechism of Steam the Engine." 5. How thick should a small boiler (about 2 feet x 1 foot) be to withstand a pressure of 10 lbs. and also one of 30 lbs.? How thick would brass have to be? A. Sufficient data not sent. 6. How does a steam gage tell the pressure in a boiler? Must the pipe leading to the gage be one inch? A. The gage is so graduated that a pressure of 1 lb. per square inch gives a corresponding indication. The size of the connecting pipe makes no difference.

G. N. K. says: We wish to heat a factory (30x80 feet and four stories high) with exhaust steam and are advised to put in 4-inch tin pipes, one tier in each room, painting those where the most heat is wanted some light color, and where less heat is wanted, a dark color. Will this answer as well as iron pipes? Why will the tin pipe radiate heat when painted? A. A tin or iron surface covered with lampblack radiates more heat than the plain metal. When coated with white lead, it radiates about the same amount of heat. Tin is a fair conductor of heat, having about one third of the conducting power of gold.

C. V. asks: If an engine crank pin suddenly breaks, thereby destroying the connection between piston and crankshaft, what will follow? A. The piston would strike against the cylinder head; and if the latter be not strong enough to resist the blow, it would be broken.

A. O. B. says: In answer to a correspondent, you say that "eyestones are not alive." I think so too, but would like to know why they move about when placed in strong vinegar. A. We suppose it is on account of the generation of carbonic acid. For answers to your other questions, see "Friction of Water in Pipes," p. 48, vol. 29.

E. says: I have a double acting engine of one nominal horse power, speed 300 revolutions per minute. What would be the proper width of belt to connect engine to line shaft? A. Probably about an inch.

W. H. G. asks: Why is it that oxygen and hydrogen, when mixed in certain proportions and ignited, explode? The product is water, but does not an expansion take place? A. When these gases unite, the volume of the combination is much less than the original volume of the gases; so that a vacuum is produced, into which air rushes with great rapidity.

P. O. T. asks: Will a leaden ball, if thrown into the sea, sink to the bottom? If not, why not? A. Yes. 2. What is the depth of the deepest sea soundings? A. About 30,000 feet.

H. T. L. asks: Is there any chemical compound that will unite with or dissolve the albumen on albumenized paper? A. If the albumen is that of the white of eggs, it may be dissolved in alcohol containing a little alkali in solution.

"Erfinder," St. Louis, Mo.—Please send your name and address.

P. W. L. says, in reply to the query: "Can the four roots of the following equations be obtained: x^2+y=7, and y^2+x=11?" Certainly they can, and are as follows: x=2 and y=3, or x=3+13i+2j, and y=-2-905-118+

H. D. M. says, in answer to N. F. T., p. 123, vol. 30: It is the soot on the bottom of the kettle that prevents it from burning the hand. It will prevent it only for a short time, probably until N. L. T. thinks it quits boiling. A bright bottomed kettle will burn the instant it touches the hand.

E. says, in reply to M. who asked for a good metal for models: Melt 6 lbs. tea lead, 1/2 lb. tin, and 1/2 lb. antimony. This will be a good stiff metal.

E. S. says, in further explanation of the board question, propounded by D. M. A. (see p. 91, vol. 30): Let W and w equal the two widths. Then will (W^2 - w^2)^(1/2) = the width of the board at the dividing point.

Application to your question: ((12^2 - 4^2)^(1/2)) = (80)^(1/2) = 8.9442

MINERALS, ETC.—Specimens have been received from the following correspondents, and examined with the results stated:

J. A. S.—Rounded fragments of quartz, the one of a yellow color being ferruginous quartz.

J. C.—This product appears to be a fair specimen of lard. To determine whether it is adulterated or not will require a chemical analysis. Lard oil is a commercial product and burns well in lamps if the wick tube be kept cool. It is chiefly obtained as a secondary product in the manufacture of stearin.

S. B.—The shining particles are mica and are mixed with rounded fragments of quartz.

M. McK.—It is white sand of superior quality, and is useful for making glass.

COMMUNICATIONS RECEIVED.

The Editor of the SCIENTIFIC AMERICAN acknowledges, with much pleasure, the receipt of original papers and contributions upon the following subjects:

- On Healing Wounds by Charcoal, etc. By P.
On American Inventions in Europe. By H. S.
On Pavements. By S. S.
On Detecting Gold and Silver in the Earth. By G.
On the Curvature of the Earth. By G. E. W.
On the Thousand Feet Tower. By E. C. M.
On American Silk Manufacture. By H. C. F.

Correspondents in different parts of the country ask: Where are cotton seed linters sold? Where can the seed and cuttings of sumac be obtained? Who sells machines for making broom handles? Who makes the best clothes wringer? Who makes waterproof gloves, for use in handling strong lyos, etc.? Who makes a cider press that will get four gallons of cider from a bushel of apples? Makers of the above articles will probably promote their interests by advertising, in reply, in the SCIENTIFIC AMERICAN.

Correspondents who write to ask the address of certain manufacturers; or where specified articles are to be had, also those having goods for sale, or who want to find partners, should send with their communications an amount sufficient to cover the cost of publication under the head of "Business and Personal," which is specially devoted to such enquiries.

[OFFICIAL.]

Index of Inventions

FOR WHICH

Letters Patent of the United States

WERE GRANTED IN THE WEEK ENDING

February 10, 1874,

AND EACH BEARING THAT DATE.

[Those marked (r) are reissued patents.]

Table listing inventions and their patent numbers, including: Abdominal supporter, M. S. Larned; Air, navigating the, S. Franck; Air, cooling, J. Parissette; Axle clip, J. Ives; Baller, P. Miles; Bale tie, J. W. Hedenberg; Bale tie, cotton, H. Estes; Bale tie, cotton, H. Estes; Bale tie, cotton, J. E. Lea; Barrel hoop, L. Reed; Basket, H. C. Jones; Basket former, A. F. Scow; Bed bottom, T. S. Judd; Bed bottom stretcher, H. D. Goldsmith; Bed, sofa, J. F. Birchard; Bell, sleigh, A. Harrison; Belt clamp, Minich & Lohnes; Blackboard, F. G. Huot; Blasting, G. Frisbee; Blasting plug, G. Frisbee; Boiler flue, steam, C. B. Stilwell; Boiler, sectional steam, J. Harrison; Boiler, sectional steam, E. B. Jucker; Boiler, steam, M. W. Shapley; Boiler safety valve, E. F. Steele; Bolt threading machine, A. Wood; Book binding, C. S. Murphy; Boot heels, molding, Simonds & Emery; Boring machine, G. W. McCready; Bosom pad and protector, J. E. Hodgkins; Box for transporting eggs, etc., H. A. Knight; Box, letter, J. D. Stewart; Brush and mop holder, M. J. A. Keane; Brush, hat, F. Hickman; Brush, marking, E. W. Hitchings; Brush, tooth, J. G. La Fonte; Buckle, harness, B. D. Jessup; Buckle, suspender, H. A. House; Burial casket, M. M. & S. G. Hersman; Burner, gas, C. C. Bingham; Butter package, F. A. Lane; Can, oil, K. Kiltroe; Car axle, G. W. C. timore.

Car brake, N. Kirchrath.....	147,407
Car brake, atmospheric, H. E. Marchand.....	147,416
Car brake, hydraulic, T. McBride.....	147,338
Car coupling, W. C. T. Davidson.....	147,309
Car coupling, J. X. Pease.....	147,428
Car coupling, W. Stiles.....	147,350
Car, dumping, C. C. P. Meyer.....	147,341
Car, street, C. M. Murch.....	147,421
Car fire extinguisher, W. L. Drake.....	147,248
Car water closet, Brown & Latimer.....	147,363
Carbureter, Davey & Griswold.....	147,244
Carbureter, J. Gray.....	147,256
Card, photographic visiting, T. T. Smith.....	147,289
Carriage, G. H. & E. Morgan, (r).....	5,761
Carriage, child's, H. D. Ambler.....	147,354
Carriage curtain, A. H. Tuttlebee.....	147,450
Cartridge creasing implement, W. B. Hall.....	147,321
Castings seals, machine for, H. Holt.....	147,395
Chamber seat, G. H. Blair.....	147,360
Checks, etc., preventing alteration of, E. J. Fischer.....	147,382
Churn, rotary, C. M. Oliphant.....	147,314
Cigar lighter, gas, H. Kruger.....	147,409
Clamp for mosquito net, W. M. White.....	147,298
Claw bar, D. Ferenback.....	147,251
Cloth cutting machine, A. Warth.....	147,453
Cloth measuring machine, T. M. Brintnall.....	147,245
Cloth sponging machine, J. W. Dammerall.....	147,243
Clothes pin machine, H. & E. W. Locke.....	147,277
Coal, etc., loading, C. W. Hunt.....	147,400
Cock, etc., steam, J. P. Connell.....	147,240
Cotton gin, I. F. Brown.....	147,361
Dental plate and teeth, R. E. Burlan.....	147,369
Digger, etc., quack, L. W. Dickerson.....	147,245
Disinfecting apparatus, J. D. C. Outwater.....	147,425
Dominoes, J. W. Hyatt, Jr., (r).....	5,760
Door check, J. S. Ryan.....	147,434
Drill, rock, S. Ingersoll.....	147,402
Eavestrough hanger, Jones & Evans.....	147,329
Elevator, G. Lane.....	147,411
Engine for rock drills, etc., steam, S. Ingersoll, et al.....	147,403
Explosive compound, C. Dittmar, (r).....	5,759
Felted material from waste, J. F. Greene, (r).....	5,763
Felted material from waste, J. F. Greene, (r).....	5,764
Fence, S. B. Tinkham.....	147,449
Fire arm, breech loading, E. Whitney.....	147,457
Fire extinguisher, W. L. Drake.....	147,249
Fire extinguisher, chemical, J. H. Steiner.....	147,442
Fishing reel, C. W. MacCord.....	147,414
Fruitmasher and sifter, C. S. Bucklin.....	147,301
Fruit picker, A. W. Overholser.....	147,426
Furnace, etc., E. S. Wheeler.....	147,456
Furnace, hot air, W. S. Stevenson.....	147,444
Furnace, tyre heating, Sax & Kear.....	147,287
Furnace, waste gas, P. L. Welmer.....	147,455
Furnace casing, J. Magee.....	147,277
Game board, Dahmer & Klein.....	147,376
Game board, O. H. Richmond.....	147,431
Gas cigar lighter, H. Kruger.....	147,409
Gate, automatic, W. W. Gilbert.....	147,318
Gearing, expansion, L. P. Hoyt.....	147,398
Glass letters, mold for, T. H. Banks.....	147,302
Goods on bias, cutting, G. Moore (r).....	5,756
Grain for starch, etc., treating, Adams & Simond.....	147,353
Grate and ash sifter, G. W. Pettit.....	147,347
Halls, preventing reverberation in, J. P. Taylor.....	147,294
Hammer, claw, D. W. Parker.....	147,427
Harness saddle, J. F. Knorr.....	147,408
Harvester, J. C. Crawford.....	147,242
Harvester, J. D. Martin.....	147,336
Harvester, binder attachment, W. C. Dentler.....	147,310
Harvester, binder platform, A. Eljah.....	147,378
Hasp fastener, W. H. Hart.....	147,260
Hog pen, P. Burke.....	147,306
Hog ringing plunchers, J. Burger.....	147,357
Hoop skirt, G. W. Hubbell.....	147,399
Horsehoe, J. Jorey.....	147,371
Horsehoe, bar for, Carruthers & Russell.....	147,371
Horsehoe for marshy ground, Milbury & King.....	147,342
Horsehoe nail machine, Whysall & Merrick.....	147,458
Horsehoe, calk for, G. McGregor.....	147,417
Hose coupling, E. B. Jucket.....	147,406
Indicator, station, D. H. Close.....	147,308
Ink in the form of paste, J. B. F. Jud.....	147,334
Inkstand, E. M. Dickinson.....	147,216
Jack, lifting, C. D. Smith.....	147,440
Knitting machine, T. Colman.....	147,372
Lamp extinguisher, S. Stern.....	147,443
Latch, gate, C. Bartlow.....	147,237
Leather, etc., waterproofing, H. Martyn.....	147,337
Leather, stuffing, J. A. Enos.....	147,379
Leggings, G. M. Gernshyn.....	147,385
Lock, bag, J. L. Skinner.....	147,439
Lock cases, securing cap plates to, J. Hamill.....	147,258
Lock, permutation, J. G. O'Neill.....	147,345
Locomotive head light, T. S. Ray.....	147,283
Loom harness, T. Clegg.....	147,238
Loom web stop, Isherwood & Nuttall.....	147,327
Lounge, extension, C. Streit.....	147,447
Marble, etc., removing stains from, H. H. Elliot.....	147,350
Mattress, T. Burdick.....	147,366
Metal fastening for leather, E. P. Richardson.....	147,430
Mill, grinding, Phillippy & Elser.....	147,429
Mixing and sifting machine, M. Von Beust.....	147,296
Nut lock, A. B. Buell.....	147,305
Nut lock, S. T. Lamb.....	147,273
Offer for machinery, O. H. Warren.....	147,452
Ore washer, D. Zeigler.....	147,464
Pail, dinner, E. Snape.....	147,290
Paper, machine for coloring, C. Wolmuth.....	147,300
Paper, corrugating, H. D. Cone.....	147,239
Peg cutting machine, Bacon & Sawyer.....	147,356
Pen, fountain, D. L. Latourette.....	147,323
Photographic visiting card, T. T. Smith.....	147,289
Pianoforte, C. E. Rogers.....	147,285
Piston rod adjuster, D. Bly (r).....	5,758
Pitman, J. F. Seiberlink.....	147,456
Planer, feed roller for, L. P. Hoyt.....	147,397
Planter, corn, R. S. Hazen, Sr.....	147,392
Plow, J. C. Bidwell.....	147,233
Plow, wheel, I. B. Green.....	147,320
Pot, coffee, W. S. Blaisdell.....	147,361
Pot tilter, J. Grant.....	147,255
Potatoes, assorting, D. A. & A. B. Banker.....	147,301
Press, J. W. Fields.....	147,317
Press, cotton, M. Huesey.....	147,326
Printing press, reciprocating, J. F. Hallenbeck.....	147,257
Privy house, J. Holt.....	147,266
Pulverizer, J. Ferguson.....	147,316
Purifier, middlings, M. T. Greenleaf.....	147,388
Railway rail joint, A. Johnson.....	147,270
Railway signal, Hopkins & Nortop.....	147,396
Railway ticket cutter, J. Tregurtha.....	147,295
Railway ticket holder, etc., J. K. Macdonald.....	147,278
Railways, removing snow from, W. Bush.....	147,307
Rake, horse hay, A. Kieckart.....	147,432
Razor strops, paste for, C. M. Egbert.....	147,315
Register, etc., hot air, W. G. Cremer.....	147,374
Revenue, stills to prevent frauds on, L. Wolf.....	147,299
Roof plate, T. Hyatt.....	147,401
Rubber spring for stirrups, F. Crane.....	147,373
Sash pulley, A. Halladay.....	147,322

ations and papers, and attending to the entire business. The holder of the patent is entitled to two extensions of the patent, each for five years, making fifteen years in all.

If the inventor assigns the patent, the assignee enjoys all the rights of the inventor.

A small working model must be furnished, made to any convenient scale. The dimensions of the model should not exceed twelve inches.

If the invention consists of a composition of matter, samples of the composition, and also of the several ingredients, must be furnished.

Persons who desire to apply for patents in Canada are requested to send to us (MUNN & Co.), by express, a model with a description, in their own language, showing the merits and operation of the invention, remitting also the fees as above for such term for the patent as they may elect. We will then immediately prepare the drawings and specification, and send the latter to the applicant for his examination, signature, and affidavit.

It requires from four to twelve weeks' time, after completion of the papers, to obtain the decision of the Canadian Patent Office. Remit the fees by check, draft, or Postal order. Do not send the money in the box with model. Give us your name in full, middle name included.

Inventions that have already been patented in the United States for not more than one year may also be patented in Canada.

On filing an application for a Canadian patent, the Commissioner causes an examination as to the novelty and utility of the invention. If found lacking in either of these particulars, the application will be rejected, in which case no portion of the fees paid will be returned to the applicant.

Inventors may temporarily secure their improvements in Canada by filing *caveats*; expense thereof, \$35 in full.

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VALUE OF PATENTS, And How to Obtain Them.

Practical Hints to Inventors.

PROBABLY no investment of a small sum of money brings a greater return than the expense incurred in obtaining a patent, even when the invention is but a small one. Large inventions are found to pay correspondingly well. The names of Blanchard, Morse, Bigelow, Colt, Ericsson, Howe, McCormick, Hoe, and others, who have amassed immense fortunes from their inventions, are well known. And there are thousands of others who have realized large sums from their patents.

More than FIFTY THOUSAND inventors have availed themselves of the services of MUNN & Co. during the TWENTY-SIX years they have acted as solicitors and Publishers of the SCIENTIFIC AMERICAN. They stand at the head in this class of business; and their large corps of assistants, mostly selected from the ranks of the Patent Office: men capable of rendering the best service to the inventor, from the experience practically obtained while examiners in the Patent Office: enables MUNN & Co. to do everything appertaining to patents BETTER and CHEAPER than any other reliable agency.

HOW TO OBTAIN PATENTS

This is the closing inquiry in nearly every

letter, describing some invention which comes to this office. A positive answer can only be had by presenting a complete application for a patent to the Commissioner of Patents. An application consists of a Model, Drawings, Petition, Oath, and full Specification. Various official rules and formalities must also be observed. The efforts of the inventor to do all this business himself are generally without success. After great perplexity and delay, he is usually glad to seek the aid of persons experienced in patent business, and have all the work done over again. The best plan is to solicit proper advice at the beginning. If the parties consulted are honorable men, the inventor may safely confide his ideas to them; they will advise whether the improvement is probably patentable, and will give him all the directions needful to protect his rights.

To Make an Application for a Patent.

The applicant for a patent should furnish a model of his invention if susceptible of one, although sometimes it may be dispensed with; 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. The safest way to remit money, is by a draft or postal order, on New York, payable to the order of MUNN & Co. Persons who live in remote parts of the country can usually purchase drafts from their merchants on their New York correspondents.

How Can I Best Secure My Invention?

This is an inquiry which one inventor naturally asks another, who has had some experience in obtaining patents. His answer generally is as follows, and correct: Construct a neat model, not over a foot in any dimension—smaller if possible—and send by express, prepaid, addressed to MUNN & Co., 37 Park Row, together with a description of its operation and merits. On receipt thereof, they will examine the invention carefully, and advise you as to its patentability, free of charge. Or, if you have not time, or the means at hand, to construct a model, make as good a pen and ink sketch of the improvement as possible and send by mail. An answer as to the prospect of a patent will be received, usually, by return of mail. It is sometimes best to have a search made at the Patent Office; such a measure often saves the cost of an application for a patent.

Preliminary Examination.

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 an acknowledgment thereof, followed by a written report in regard to the patentability of your improvement. This special search is made with great care, among the models and patents at Washington, to ascertain whether the improvement presented is patentable.

Foreign Patents.

The population of Great Britain is 31,000,000; of France, 37,000,000; Belgium, 5,000,000; Austria, 35,000,000; Prussia, 40,000,000; and Russia, 70,000,000. Patents may be secured by American citizens in all of these countries. Now is the time, when business is dull at home, to take advantage of these immense foreign fields. 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. A large share of all the patents secured in foreign countries by Americans are obtained through our Agency. Address MUNN & Co., 37 Park Row, New York. Circulars with full information on foreign patents, furnished free.

Trademarks.

Any person or firm domiciled in the United States, or any firm or corporation residing in any foreign country where similar privileges are extended to citizens of the United States, may register their designs and obtain protection. This is very important to manufacturers in this country, and equally so to foreigners. For full particulars address MUNN & Co., 37 Park Row, New York.

Value of Extended Patents.

Did patentees realize the fact that their inventions are likely to be more productive of profit during the seven years of extension than the first full term for which their patents were granted, we think more would avail themselves of the extension privilege. Patents granted prior to 1861 may be extended for seven years, for the benefit of the inventor, or of his heirs in case of the deceased inventor, by due application to the Patent Office, ninety days before the termination of the patent. The extended time inures to the benefit of the inventor, the assignees under the first term having no rights under the extension except by special agreement. The Government fee for an extension is \$100, and it is necessary that good professional service be obtained to conduct the business before the Patent Office. Full information as to extensions may be had by addressing MUNN & Co., 37 Park Row, New York.

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. Address MUNN & Co., 37 Park Row, New York.

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 woolsen, 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.

Copies of Patents.

Persons desiring any patent issued from 1836 to November 26, 1867, can be supplied with official copies at a reasonable cost, the price depending upon the extent of drawings and length of specification.

Any patent issued since November 27, 1867, at which time the Patent Office commenced printing the drawing and specifications, may be had by remitting to this office \$1.

A copy of the claims of any patent issued since 1836 will be furnished for \$1.

When ordering copies, please to remit for the same as above, and state name of patentee, title of invention, and date of patent. Address MUNN & Co., Patent Solicitors, 37 Park Row, New York.

MUNN & Co. will be happy to see inventors in person at their office, or to advise them by letter. In all cases they may expect an honest opinion. For such consultations, opinions, and advice, no charge is made. Write plain; do not use pencil or pale ink; be brief.

All business committed to our care, and all consultations, are kept secret and strictly confidential.

In all matters pertaining to patents, such as conducting interferences, procuring extensions, drawing assignments, examinations into the validity of patents, etc. special care and attention is given. For information and for pamphlets of instruction and advice, Address

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