

COMMUNICATIONS RECEIVED.

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

- On a Telescope of Unlimited Power. By J. L. and by J. T.
On Engines and Boilers. By H. McM.
On Pisciculture. By C.
On the Canal Navigation Problem. By W. B. D.
On an Accidental Discovery. By W. H. R.
On Adjusting Journal Boxes. By W. L. C.
On Dreams. By J. L. W.
On Left Handed People. By G. W. C.
On Mental Arithmetic. By F. H. R.
On the Prismoidal Railway. By G. W. G.
On a Figure Exercise. By A. F.
On Magic Squares. By E. B., and by J. E. W.
On the Nebular Hypothesis. By J. S. L.
On Trees as Historians. By G. P.
On Antiquity of the Earth. By H. V. M.
On a Theory of the Tides. By J. N. V.

Also enquiries from the following:

- M. F.—L. F.—E. C. H.—J. McL.—A.—S. W. C.
Correspondents in different parts of the country ask: Who makes small hay presses? Who sells stoves that burn naphtha as fuel? Who makes bars of steel to be used instead of bells? 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

December 2, 1873,

AND EACH BEARING THAT DATE.

[Those marked (r) are reissued patents.]

Table listing various inventions such as Axle for vehicles, Battery, Beds, etc., with corresponding patent numbers.

Table listing various inventions such as Gun, battery, Gunpowder, Hair, machine for heading, etc., with corresponding patent numbers.

APPLICATIONS FOR EXTENSIONS. Applications have been duly filed and are now pending

for the extension of the following Letters Patent. Hearings upon the respective applications are appointed for the days hereinafter mentioned:

- 27,357.—TABLE CUTLERY.—J. W. Gardner. Feb. 18.
27,392.—FOLDING AND PASTING MACHINE.—G. K. Snow. February 18.
27,403.—STEAM & FIRE REGULATOR.—J. Woodruff. Feb. 18.

EXTENSION GRANTED.

- 26,339.—WATER WHEEL.—J. P. Collins.

DISCLAIMER.

- 143,201.—SEAL LOCK.—J. E. Thomas, Buffalo, N. Y.

DESIGNS PATENTED.

- 7,005.—BUCKLE.—J. R. Smith, Waterbury, Conn.
7,006.—PENCIL CASE.—E. Todd, Brooklyn, N. Y.
7,007 to 7,014.—STOVES.—N. S. Vedder et al., Troy, N. Y.
7,015.—CLOCK CASE.—G. H. Blakesley, Bristol, Conn.
7,016.—STATUARY.—J. Rogers, New York city.
7,017.—FAN.—W. A. Smith, Niagara Falls, N. Y.

TRADE MARKS REGISTERED.

- 1,545.—DRY GOODS.—Emery & Co., New York city.
1,546.—HARDWARE, ETC.—T. Hessenbruch, Phila., Pa.
1,547 to 1,562.—WATCHES.—National Watch Co., Elgin, Ill.
1,563.—LINIMENT.—I. Vallier, New York city.
1,564.—MEDICAL COMPOUND.—Moyer & Co., Phila., Pa.

SCHEDULE OF PATENT FEES.

Table listing patent fees: On each Caveat \$10, On each Trade Mark \$25, On filing each application for a Patent (17 years) \$15, etc.

[Specially reported for the Scientific American.]

CANADIAN PATENTS.

LIST OF PATENTS GRANTED IN CANADA ON DECEMBER 10, 1873.

- 2,921.—W. A. Gibbs, Gilwell Park, Essex county, Eng., and A. Borwick, Lloyd's, London, Eng. Improvement on apparatus and arrangements for drying, called "Gibbs & Borwick's Improvement on Apparatus for Drying." Dec. 10, 1873.
2,922.—M. A. Wigle, Kingsville, Essex county, Ontario. Composition of matter to be used for blacking and giving a polish to and softening and rendering impervious to wet the leather of boots and shoes, called "Wigle's Improved Boot Blacking." Dec. 10, 1873.
2,923.—H. P. Huntoon, Cambridge, Mass., U. S., assignee of J. R. Brown, Cambridge, Mass., U. S. Improvement on pipe tongs, called "The Brown Pipe Tongs." Dec. 10, 1873.
2,924.—A. Wood, Worcester, Mass., U. S. Improvement on bolt cutting machines, called "Wood's Bolt Cutter." Dec. 10, 1873.
2,925.—A. A. Wilder, Detroit, Wayne county, Mich. Improvements on machine for forging and slotting track bolts, called "Wilder's Track Bolt Forging and Slotting Machine." Dec. 10, 1873.
2,926.—S. Switzer, Sydenham, Frontenac county, Ontario, and S. O. McGuin. Improvement on rail car axle oilers, called "Switzer's & McGuin's Axle Oiler." Dec. 10, 1873.
2,927.—C. Burgess, Portsmouth, Scioto county, O., U. S. Improvement on the manufacture of iron and steel, called "Burgess' Manufacture of Iron and Steel." Dec. 10, 1873.
2,928.—G. B. Izzard, Hamilton, Ontario. Improvement on bed bottoms, called "Izzard's Adjustable Bed Bottom." Dec. 10, 1873.
2,929.—E. C. Fales, Foxborough, Norfolk county, Mass., U. S. Improved machine for blocking hats, bonnets, etc., called "Fales' Hat Blocking Machine." Dec. 10, 1873.
2,930.—H. Hebert, Montreal, P. Q. Improvement on boilers for locomotive and stationary engines, called "Hebert's Improved Engine Boiler." Dec. 10, 1873.
2,931.—G. Hibberd, Wheeling, Ohio county, W. Va., U. S. Improvement on pumps, called "Hibberd's Pump." Dec. 10, 1873.
2,932.—D. Maxwell, Paris, Brant county, Ontario. Improvement on straw cutting machines for reversing, stopping, and reducing the motion of the feed rollers, called "Maxwell's Change, Stop, and Reverse Motion Straw Cutter." Dec. 10, 1873.

HOW TO OBTAIN Patents and Caveats IN CANADA.

PATENTS are now granted to inventors in Canada, without distinction as to the nationality of the applicant. The proceedings to obtain patents in Canada are nearly the same as in the United States. The applicant is required to furnish a model, with specification and drawings in duplicate. It is also necessary for him to sign and make affidavit to the originality of the invention. The total expense, in ordinary cases, to apply for a Canadian patent, is \$75, U. S. currency. This includes the government fees for the first five years, and also our (Munn & Co.'s) charges for preparing drawings, specifications 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.

For further information about Canadian patents, assignments, etc., address

MUNN & CO., 37 Park Row, New York.

Advertisements.

RATES OF ADVERTISING.

Back Page - - - - - \$1.00 a line. Inside Page - - - - - 75 cents a line.

Engravings may head advertisements at the same rate per line, by measurement, as the letter-press.

Todd & Rafferty Machine Co.

MANUFACTURERS OF The celebrated Greene Variable Cut-Off Engine; Lowe's Patent Tubular and Fine Boilers; Plain Slide Valve Stationary, Hoisting, and Portable Engines. Boilers of all kinds. Steam Pumps, Mill Gearing, Shafting, &c.; Sinks, Tow, Oakum, Bagging, Rope, Flax, and Hemp Machinery. Agents for the New Haven Manufacturing Co.'s Machinists' Tools; for Judson's Governors and Stop-Valves; Starveant Blowers and Differential Pulley-Blocks. WARE ROOMS, 10 BARCLAY ST., NEW YORK. WORKS, PATERSON, NEW JERSEY.

LIGHT GREY IRON CASTINGS made to order promptly. Light work on Specialty. Address LIVINGSTON & CO., Iron Founders, Pittsburgh, Pa.

JUDSON'S

PATENT LATHE CHUCK was awarded a diploma, by the American Institute Fair at New York. 873. DWIGHT ROBERTS, MFR. Wythe Ave., Brooklyn, N. Y.

FOOT POWER JIG SAW—good article, \$30. S. C. HILLS, 51 Courtlandt St., New York.

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WANTED!—To open a correspondence with parties having gun or other machinery, to manufacture the coming year from 20,000 to 50,000 Pairs of the MOST POPULAR SKATES in the WORLD, secured by about half a dozen letters patent. Address HARDWARE, P. O. Box 1134, New York.

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DRAWING DEFERRED TILL 31st of March Next, to complete the sale of tickets and make a FULL DRAWING.

12,000 Cash Gifts will be Distributed by lot among Ticket Holders.

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Total, 12,000 Gifts, all Cash, amounting to \$1,500,000. The concert and distribution of gifts will positively and unreservedly take place at the day and place, whether all the tickets are sold or not, and the 12,000 gifts all paid in proportion to the number of tickets sold.

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WHERE TO WINTER—EAST, West, North, or South—for Health and Comfort. THE SCIENCE OF HEALTH for January gives particulars; also, "How to Get Well and Keep Well," "Illustrations of the Human Body, in parts," "Heenan, the Pugilist," "Do We Murder Our Daughters?" "Corsets," "Over Study," "Heritage of Woe," "Goblins of Pathology," "The Sleeping Beauty," "Economy of Health," "Night Air," "Country Girls," "How to Preserve One's Complexion," "The Secret Revealed," New vol. No. 1 ready, 1874, 20c. Only \$2 a year. Address S. E. WELLS, No. 389 Broadway, New York. THE SCIENCE OF HEALTH is the only illustrated and thoroughly INDEPENDENT Health Magazine now published. It teaches how to live healthfully.

The American Turbine Water Wheel. Recently improved and submitted to thorough scientific tests by James Emerson, showing the following useful effect of the power of the water utilized, being the highest results ever known. Percentage of Part Gate: ¼, 50.08; ½, 69.64; ¾, 78.73; ¾, 82.53; ¾, 82.90. Per cent. of Whole Gate: 83.14. A full report may be obtained of STORR, MILLS & TEMPLE, Dayton, Ohio.

