

for the bench of the Supreme Court of the State of Iowa, and the latter is the Postmaster-General of the United States:

Messrs. MUNN & Co.:—I take pleasure in stating that while I held the office of Commissioner of Patents, more than one-fourth of all the business of this office came through your hands. I have no doubt that the public confidence thus indicated has been fully deserved, as I have always observed, in all your intercourse with the Office, a marked degree of promptness, skill, and fidelity to the interests of your employers.

Yours, very truly,
CITIAS. MASON.

Immediately after the appointment of Mr. Holt to the office of Postmaster-General of the United States, he addressed to us the following very gratifying testimonial:—

Messrs. MUNN & Co.:—It affords me much pleasure to bear testimony to the able and efficient manner in which you discharged your duties as Solicitors of Patents while I had the honor of holding the office of Commissioner. Your business was very large, and you sustained (and, I doubt not, justly deserved) the reputation of energy, marked ability, and uncompromising fidelity in performing your professional engagements. Very respectfully,
Your obedient servant, J. HOLT.

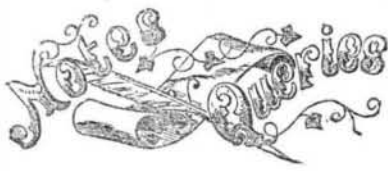
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BRANCH OFFICE—Corner of F and Seventh-streets, Washington, D. C., opposite the United States Patent Office.

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A PAMPHLET AND CIRCULAR OF ADVICE, "How to Procure American and Foreign Patents," sent free on application. All communications considered confidential, and should be addressed to

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REVISED CASES, also applications for the Extension of Patents, receive special attention. In this class of cases, MUNN & Co. have had great success.



W. A. S., of Ark.—We regret we must decline publishing your second letter. It contains some thoughts of general interest to the public. There is, however, a mechanical obstacle to its publication. The handwriting is exceedingly minute (almost requiring a microscope for its perusal); it is also otherwise very illegible, and the matter is written on both sides of the paper. This last fault, though common to persons unaccustomed to writing for the press, gives great trouble to the printer and is almost always fatal to the author, unless the writing is exceedingly distinct, which is far from being the case in the present instance.

G. O. K., of Vt.—The best way for you to procure a second-hand steam-engine will be to advertise for it in the SCIENTIFIC AMERICAN. You will find our terms on another page.

W. P., of Ohio.—In the answer to you on page 126 of our present volume, the word "feet" should have read "inches." A tube 1.728 inches high and of one square inch area contains a cubic foot of water which weighs 62½ pounds water, and exerts this amount of pressure on its base. A similar tube of 1.692 inches (141 feet) high contains about 61 pounds of water; a round tube one inch in diameter, and 178 feet high, contains nearly the same quantity of water, and exerts a like intense pressure on its base. As has been inferred with good judgment, "it is not easy to avoid errors sometimes taking place, in answering so many correspondents, and using so many mixed terms and quantities."

W. M. F., of Pa.—Wagon brakes have been patented to accomplish what you desire. If you have anything new in this department of invention you are entitled to a patent for it. Send us a description of it for examination.

C. R., of Tenn.—If some nitrate of silver is added to printers' ink, it will make indelible stencil ink.

J. L. M., of Ind.—On page 53 of the present volume of the SCIENTIFIC AMERICAN, you will find instructions for plating on iron. We know of no such book as you describe suitable to every mechanical pursuit.

E. H. B., of Mass.—You can make black impression paper with glycerine and lampblack, also with fresh butter and lampblack; dry as well as possible after application.

T. McC., of N. Y.—You can easily calculate the power of a hydraulic press by multiplying the pressure on the square inch into the water area of the ram in square inches, and by the speed, in feet, per minute of the piston. As your ram has an area of 14.75 square inches and a pressure of from 1 to 30 lbs. on the square inch, it moves at the rate of two feet per minute its power will be one-sixth of a horse—512½ lbs. lifted one foot in one minute. Consult a work on horology about pendulums.

E. B., of S. C.—Your idea of placing a perforated diaphragm at the bottom of the steam-chamber to prevent water being carried up into it is an old one, and so is the surface well for collecting and conveying away the foam. We do not very well understand your bulk-head, owing to the imperfection of your drawing, but have seen something very much like it. We have sent to your address one of our pamphlets of information.

R. D., of C. W.—We thank you for proposing to get us up a club of subscribers. We are now electing our numbers each week, and can therefore supply back numbers at all times. Plaster-of-Paris can hold boiling water without being much affected by it. A cement of plaster-of-Paris and fine white sand, in equal parts, mixed up with white lead paint, will answer well, we believe, for stopping the leaks in your tank.

D. P. of Pa.—We do not know of any substance suitable for cleaning fly specks from the feathers of stuffed birds. You had better consult some taxidermist in Philadelphia.

H. M. S., of Mich.—The coal of a wood fire burned in the open air is different from charcoal burned in a pit. The former contains hydrogen, the latter none. Hydraulic cement sets in a very few minutes after it is laid. Platinum is the most expansive metal by heat, and wrought expands more than cast iron. Allow dull files to lay in diluted sulphuric acid until they are bit deep enough. We cannot specify the time that is required.

J. R. B., of Ind.—We cannot think that a few shot would prevent molasses running out of a barrel without the barrel itself was very tight. Lyell's "Manual and Elements of Geology," published by D. Appleton & Co., of this city, will suit you best.

C. L. H., of Vt.—If you take the trouble to figure out the cost of cigar-making, as stated in our article, you will see that our figuring is not so tall as you suppose.

J. M. C., of Iowa.—Boiled linseed oil will keep polished tools from rusting if it is allowed to dry on them. Common sperm oil will prevent them from rusting for a short period. A coat of copal varnish is frequently applied to polished tools exposed to the weather.

H. W. W., of Ill.—A more regular motion is produced by cutting off the steam before the end of the stroke than in carrying full pressure the whole length.

W. S. G., of Ill.—We are not acquainted with the composition of the cement to which you refer. A mixture of india-rubber and shell-lac varnish makes a very adhesive leather cement. A strong solution of common isinglass, with a little diluted alcohol added to it, makes an excellent cement for leather.

M. B., of Mass.—You will find information on the art of lithography by reference to Ure's dictionary. There is no distinction on this subject.

B. C., of Pa.—Superheated steam is gradually coming into more extended use in England, but is making no progress in this country. It has been found most advantageous not to use it too highly heated, as it uses up too much lubricating material when very highly dried.

M. H., of Pa.—We refer you to articles on pages 169 and 204 of Vol. XIV. of the SCIENTIFIC AMERICAN; they contain full information on the subject of balancing saws.

J. O. M., of N. Y.—So far as we know, your improvement in casting cannon of the two metals specified in your letter is new and useful; and it appears to us that, by casting the most fractious on the top of the least fractious metal, as proposed, you will accomplish the desired result.

W. J. P., of Vt.—The hone side of a razor strap is made with fine emery laid on with glue; the polishing side is made of calcined tin or colcothar, but if you cannot get these use black-lead and a little grease. The finishing side is simply buff leather.

C. M. E., of Pa.—There is no patent in existence which covers the use of compressed air as a motor. Any person may use compressed air in the United States for moving cars, as it is public property.

C. A. F., of Mo.—The coating for iron to which you refer is silicate of soda, and will not answer for iron boilers to prevent corrosion. Maspratt's Chemistry is sold by Russell & Bros., 290 Broadway, New York. Your subscription expires Jan. 1.

E. B., of S. C.—You omitted to sign your name to your letter of inquiry about the double boat, but there being evidence of good faith on your part we reply that it is an old idea, and we cannot advise you to apply for a patent on it. Your money would be thrown away upon the government and the agent.

Turner, Maine.—A correspondent from this place seeks information from us, and is disappointed, doubtless, in not receiving an answer. The reason is he forgot to sign his name to his letter.

J. H. R., of Mass.—By all means have your well covered, as it will then be protected from dust and dirt.

W. B. G., of N. Y.—Under some conditions, we have no doubt but that electro-magnetic engines would be most suitable, especially for driving light machinery, such as sewing machines, &c.

J. H. L., of Ind.—The spirit obtained from grain is from that part which may be converted into starch, and for this reason starch manufacturers are exceedingly careful to prevent vinous fermentation in their vats. A considerable amount of spirit may be obtained from starch, but at present we cannot give you the exact quantity. The Postmaster ordered your paper to be stopped as unclaimed for.

P. F. K., of Ga.—We do not know where you can get your old tea-trays japanned, but we will tell you how to do it yourself. First clean them thoroughly with soap and water and a little rotten stone; then dry them by wiping and exposure at the fire. Now, get some good copal varnish, mix with some bronze powder, and apply with a brush to the denuded parts. After which set the tea-tray in an oven at a heat of 212° or 200° until the varnish is dry. Two coats will make it equal to new.

Money Received

At the Scientific American Office on account of Patent Office business, for the week ending Saturday, Aug. 26, 1859:—

- F. S. P., of N. Y., \$35; J. A. S., of Mo., \$30; L. M., of Wis., \$7; A. C. P., of N. Y., \$30; C. & L., of N. C., \$30; S. & La. R., of Ind., \$25; W. & W. Mfg Co., of N. Y., \$525; L. W., of Mich., \$1; I. N. P., of Ind., \$35; L. E., of Cal., \$100; C. E. R., of N. Y., \$25; J. W. & H. A. G., of Pa., \$30; J. S., of Maine, \$30; J. B., of N. Y., \$35; H. K. S., of Mass., \$25; W. C. P., of Ind., \$5; N. S., of Minn. Ter., \$30; G. G. N., of Mass., \$30; C. & C., of Pa., \$30; K. & M., of Vt., \$10; G. E. S., of Ill., \$25; T. & J., of Pa., \$25; A. P., of N. Y., \$55; P. C. F., of N. Y., \$25; H. P. L., of Conn., \$25; I. O., of Texas, \$10; I. P., of N. Y., \$30; L. R. F., of Ga., \$15; J. P. A., of Ga., \$25; J. W. D., of Mass., \$30; J. S. C., of Pa., \$30; L. G. K., of N. Y., \$30; C. W. W., of N. Y., \$30; S. R. McD., of Del., \$30; A. L. F., of N. Y., \$25; J. S. L., of Pa., \$25; T. P., of N. Y., \$40; J. A., of N. J., \$30; B. & C., of N. Y., \$25.

Specifications, drawings and models belonging to parties with the following initials have been forwarded to the Patent Office during the week ending Saturday, Aug. 26, 1859:—

- H. K. S., of Mass.; E. D., of La.; C. F. R., of N. Y.; L. M., of Wis.; C. L. R., of Wis.; P. C. F., of N. Y.; A. P., of N. Y.; L. R. F., of Ga.; A. L. F., of N. Y.; G. W. R. B., of La.; W. P. C., of Ind.; J. W., of S. C.; J. P. A., of Ga.; S. & La. R., of Ind.; F. S. R., of N. Y.; H. P. J., of Conn.; L. E., of Cal.; I. N. P., of Ind.; G. E. S., of Ill.; T. P., of N. Y.; J. B. L., of Pa.; J. A., of N. J. (two cases); B. & C., of N. Y.

History of the Scientific American and Important Information to Patentees.

We have printed a supplementary edition of the SCIENTIFIC AMERICAN, in which there is a history of its rise and progress, with illustrations of the building, externally and internally, showing the spacious rooms in which our immense patent business is conducted, and with life-like representations of the artists, engineers and specification writers at their daily labors. The same paper contains information on the many intricate points arising in patent law and practice, and comprises the best popular treatise on the subject ever published; it should be in the hands of all who are interested either in procuring, managing or using patented inventions. The legal information contained in this paper is the result of FOURTEEN YEARS' experience as patent solicitors, and it cannot be found in any other treatise on patent law. It also contains information in regard to Foreign Patents and Extensions. It is published in octavo form, sixteen pages, and mailed upon receipt of two three-cent stamps. Address: MUNN & Co., publishers of the SCIENTIFIC AMERICAN, New York City.

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tion), containing over 350 Illustrations of Mathematical, Optical and Philosophical Instruments; list of Stereoscope-pictures, with attachment of a large sheet representing the Swiss Instruments in their actual size and shape, will be delivered, on application, to all parts of the United States, by sending 12 cents in postage stamps.
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