

W. W. Stanard (assignor to S. S. Jewett and F. B. Root), of Buffalo, N. Y., for a Design for a Cooking Stove (two cases).

W. W. Stanard (assignor to S. S. Jewett and F. B. Root), of Buffalo, N. Y., for a Design for a Parlor Stove.

NOTE.—In the foregoing list of claims, we recognize THIRTY-FIVE patents, or more than ONE-THIRD of the whole issue, which were solicited through this office.—Eds.



**CORRESPONDENTS** sending communications for publication in our columns are requested to avoid writing on both sides of a sheet of paper. This fault, though common to persons unaccustomed to writing for the press, gives great trouble to the printer (especially in long articles), and, when combined with illegibility of handwriting, often causes interesting contributions to be regretfully consigned to our waste-paper basket.

**MECHANIC**, of Mass.—The answer to your inquiry in the last number is entirely erroneous. The friction of large journals is greater than that of small journals.

**SIMPSON & HOOKER**, of New Berne, N. C., wish to know where they can obtain supplies of plow handles on the best terms.

**ANGLICANUS**, of —.—Every printing office must have same standard for spelling, and we have adopted Webster. He gives the preference to center. It is true that this is immediately from the French, "centre," and Latin, "centrum;" but the primitive root is the Greek verb, "centeo," to prick.

**J. H.**, of Tenn.—We have no positive data in favor of the superiority of the tin-roofing to which you refer.

**R. A. W.**, of Miss.—Your communication on boiler explosions contains a most excellent recommendation for safety, namely, "the feed pump ought always to be kept working." The same lesson you will find inculcated by us on page 194, Vol. I. (new series), of the SCIENTIFIC AMERICAN. The article on this subject, on the page referred to, has met the approval of every engineer with whom we have conversed.

**S. S. R.**, of Tenn.—A gun barrel may be made of aluminum, but the present wholesale price in Europe is about \$9 per pound, and it is less suitable for a gun barrel than steel or iron. Aluminum bronze, consisting of 90 parts of copper to 10 of aluminum, would make a better gun barrel in every respect than pure aluminum. The soldering of this metal has proved to be an exceedingly difficult process. We presume that Ball, Black & Co., of this city, keep it.

**A McA. & Son**, of N. Y.—Type metal is composed of 10 parts lead and 2 of antimony by weight. The antimony is added when the lead is melted. This should answer for your seals, if you are careful in casting it. Another composition for type-metal may suit your purpose better, as it expands when cooling. It consists of 9 parts lead, 2 of antimony and 1 of bismuth. Stereotype plates are formed of this alloy. Some persons employ tin as a substitute for the bismuth.

**R. T.**, of Del.—It requires a certain amount of power to force air into a heated cylinder, because it exerts back pressure as its temperature increases. Air doubles its volume when heated to 491° Fah., and exerts a pressure of 15 lbs. on the square inch. A cast iron cylinder may be heated to 500° without injury. About 380 is a safe temperature to work hot air in a cylinder.

**G. W.**, of Conn.—Common molding-sand, carefully sifted and mixed with one-fourth of its quantity of loam, is employed for brass molds. Old damp sand is preferred to fresh material, as it permits the patterns to be more easily removed from the molds. Fine flour is employed for facing the molds of common small articles; for the finest work, charcoal dust is employed. A fine face is sometimes given to molds by drying them over a slow fire of cork shavings, by which their surface receives a coating of smoke.

**T. McG.**, Jr., of Ohio.—Enameled paper for cards is manufactured by L. I. Cohen, No. 184 William-street, this city, but the fancy enameled paper for pamphlet covers is mostly imported from Europe. We do not know a single factory in which it is made in this section of the country. The process of enameling is by friction-rubbing the surface of the paper with heated rolls.

**S. C. S.**, of Mass.—We do not know where you can obtain a work for directing you in making cast letters of copper. This metal is very difficult to cast, because it is so pasty when in a molten state that it will not run into the cavities and sinuosities of molds. You should add some tin or zinc to it, if you wish a good casting.

**W. T. B.**, of Mass.—We are perfectly agreed with you that the yellow substance that is frequently found on the top of cisterns and pools after showers of rain, and which is supposed to be sulphur, is vegetable pollen; we have noticed this fact at further length in another column.

**C. F. B.**, of Vt.—Your communication is rather too much out of our line.

**G. B.**, of Pa.—We shall be pleased to read your account of any facts which throw any light on vegetable physiology.

**A. P.**, of N. Y.—"The same distance on each side of the meteor's track" is a typographical error. We wrote it "some distance," &c. Of course, it makes no difference whether the observers are the same distance or not, but the farther the better.

**S. D. H.**, of Wis.—Heat is transmitted through a vacuum by radiation. A thermometer in vacuo would come to an equilibrium with the surrounding air, and would indicate its temperature.

**H. C. B.**, of Mo.—So far as our personal experience goes, soldered tin roofs are not so liable to leak as those which are laid on in sheets, lapped over the edges; at the same time, much depends in both cases on the care taken to execute the work. Red lead and boiled linseed oil makes a good roofing paint for tin. A coating of fine white sand, dusted over fresh paint on a tin roof, serves the purpose of a partial non-conductor, to modify the action of solar heat, which tends to expand the joints of the tin plates.

**E. N. J.**, of Conn.—Water can be heated up to 1,000°, and even above this heat, according to the pressure to which it is submitted. In a steam boiler the water is the same temperature as the steam, and ranges generally from 230° at 20½ lbs. pressure, and 320° at 88 lbs. pressure, and so on, according to the pressures. Water boils at quite a low temperature in a vacuum.

**W. B. G.**, of N. Y.—We are not acquainted with any method of preparing paper for Bain's chemical telegraph, so that it may be used perfectly dried. When sponged slightly with some dilute glycerine, it will always remain moist for constant use. Blue and blanch marks can be produced on the same piece of paper with a current of electricity, sent first through an iron pen into the paper, then reversed and sent through a silver pointer. Black telegraphic characters can be produced on paper prepared with a solution of sumac or galls, by sending a current of electricity through an iron or steel pointer. The paper prepared for blue marks is treated with the persulfate of potash and a dilute nitric acid.

**H. M. S.**, of N. Y.—The substance which you send us is hematite, one of the most valuable ores of iron.

**W. F.**, of N. Y.—The necessity of a lightning-rod would not be materially increased by painting your tin roof. Hoop iron would make a good rod. Lead is a terrible poison, producing in many constitutions a train of frightful diseases—paralysis, neuralgia, colic, &c. The poison slowly accumulates in the system, and the diseases are almost absolutely incurable. Zinc paint is less injurious than lead paint.

**B. H.**, of Cal.—To make a cheap filter for water, take a barrel with one head and bore the head full of gimlet holes; cover the bottom over these holes with a clean flannel, and pour in fine sand to the depth of six inches; fill with freshly burned charcoal to the depth of one or two feet, cover with a clean flannel and add weights to keep the contents in place. The sand and charcoal will require to be renewed occasionally.

#### MONEY RECEIVED

At the Scientific American Office on account of Patent

Office business, for the week ending Saturday, August 4, 1860:—  
S. L. P., of N. Y., \$55; C. A. R., of Ala., \$30; T. S., of Cal., \$100; J. W., of N. Y., \$30; S. R. W., of R. I., \$30; A. B. C., of Ga., \$30; T. E. C. B., of Ky., \$30; C. M., of N. Y., \$25; W. M. K., of N. Y., \$25; J. H., of Ind., \$25; A. W. J., of Conn., \$25; J. L. G., of Ga., \$30; C. H., of La., \$32; J. F. F., of S. C., \$25; G. W. & J. J. K., of Pa., \$50; E. J. S., of N. Y., \$30; J. B., of N. Y., \$30; J. C., of La., \$37; S. C. A., of Ark., \$25; D. B., of Ill., \$30; L. S. C., of N. Y., \$55; J. H. S., of N. Y., \$25; I. G., of Pa., \$25; O. C., of Ill., \$30; J. T. H., of Miss., \$30; G. I., of Conn., \$25; J. W. H., of N. C., \$30; I. F., of Va., \$30; Z. M. D., of Ky., \$20; C. H. B., of N. J., \$10; E. A. P., of Mass., \$30; G. B. M., of Mich., \$25; J. & E., of Ill., \$15; M. & B., of Miss., \$5; B. & N., of Vt., \$30; A. J. K., of Iowa, \$28; J. K. B., of N. Y., \$56; F. G., of Mich., \$25; B. & B., of Ind., \$30; E. G. F., of N. Y., \$100; A. C., of Mass., \$55; J. D. A., of Conn., \$25; W. C., of Conn., \$32; S. Y., of Ala., \$25; O. P. A., of Mass., \$25; H. O. & F. W. A., of La., \$58; H. C. D., of Mich., \$25; L. E., of Va., \$75; G. W. S., of Conn., \$30; J. S., of N. Y., \$250; S. H., of L. I., \$30; E. E., of Mass., \$30; J. E., of Pa., \$25; J. H., of Ind., \$25; D. F., of Pa., \$50; J. W. T., of Vt., \$25; M. & L., of Mass., \$25; M. A. R., of N. Y., \$30; W. F. E., of Ohio, \$30; T. B., of Conn., \$20; T. H., of Cal., \$75; R. G., Jr., of Fla., \$30; C. L., of N. Y., \$30; J. W., of N. Y., \$25; and \$50 by Adams & Co.'s express, for which an owner is wanted. The envelope containing the money is marked "Coxesville, Pa." Who sent it? The name of the sender is nowhere to be found on the envelope, and we have no letters in hand announcing the sending of such a parcel.

Specifications, drawings and models belonging to parties with the following initials have been forwarded to the Patent Office during the week ending Saturday, August 4, 1860:—

L. S. C., of N. Y.; B. H., of N. Y.; I. G., of Pa.; J. H. S., of N. Y.; J. E. F., of S. C.; F. G., of Mich.; W. M. K., of N. Y.; J. E., of Pa.; G. B. M., of Mich.; E. A. P., of Mass.; J. Y., of Pa.; C. J., of N. Y.; S. Y., of Ala.; J. W., of N. Y.; A. J. K., of Iowa; J. W. B., of N. Y. (two cases); B. & N., of La.; A. W. J., of Conn.; H. C. D., of Mich.; C. & M., of N. Y.; S. C. A., of Ark.; C. G., of La.; J. H. Y., of Ala.; J. W. T., of Vt.; M. & L., of Mass.; C. H., of La. (two cases); J. H., of Ind.; McN. & L., of N. Y.; J. D. A., of Conn.

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**INVENTORS SENDING MODELS** to our address should always enclose the express receipt, showing that the transit expenses have been prepaid. By observing this rule we are able, in a great majority of cases, to prevent the collection of double charges. Express companies either, through carelessness or design, often neglect to mark their paid packages, and thus, without the receipt to confront them, they mulct their customers at each end of the route. Look out for them!

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#### IMPORTANT TO INVENTORS.

**THE GREAT AMERICAN AND FOREIGN PATENT AGENCY.**—Messrs. MUNN & CO., Proprietors of the SCIENTIFIC AMERICAN, are happy to announce the engagement of HON. CHARLES MASON, formerly Commissioner of Patents, as associate counsel with them in the prosecution of their extensive patent business. This connection renders their facilities still more ample than they have ever previously been for procuring Letters Patent, and attending to the various other departments of business pertaining to patents, such as Extensions, Appeals before the United States Court, Interferences, Opinions relative to Infringements, &c., &c. The long experience Messrs. MUNN & Co. have had in preparing Specifications and Drawings, extending over a period of fifteen years, has rendered them perfectly conversant with the mode of doing business at the United States Patent Office, and with the greater part of the inventions which have been patented. Information concerning the patentability of inventions is freely given, without charge, on sending a model or drawing and description to this office.

Consultation may be had with the firm, between NINE and FOUR o'clock, daily, at their PRINCIPAL OFFICE, No. 37 PARK ROW, New York. We have also established a BRANCH OFFICE in the CITY OF WASHINGTON, on the CORNER OF F AND SEVENTH STREETS, opposite the United States Patent Office. This office is under the general superintendence of one of the firm, and is in daily communication with the Principal Office in New York, and personal attention will be given at the Patent Office to all such cases as may require it. Inventors and others who may visit Washington, having business at the Patent Office, are cordially invited to call at their office.

They are very extensively engaged in the preparation and securing of Patents in the various European countries. For the transaction of this business they have Offices at Nos. 66 Chancery Lane, London; 29 Boulevard St. Martin, Paris, and 36 Rue des Epicerons, Brussels. We think we may safely say that three-fourths of the European Patents secured to American citizens are procured through our Agency.

Inventors will do well to bear in mind that the English law does not limit the issue of patents to inventors. Anyone can take out a patent there.

A pamphlet of information concerning the proper course to be pursued in obtaining patents through the Agency, the requirements of the Patent Office, &c., may be had gratis upon application at the Principal Office or either of the Branches. They also furnish a Circular of Information about Foreign Patents.

The annexed letters, from the last three Commissioners of Patents, we commend to the perusal of all persons interested in obtaining Patents:—

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 THE 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,

CHAS. 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 have discharged your duties of 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.

Messrs. MUNN & Co.:—Gentlemen: It gives me much pleasure to say that, during the time of my holding the office of Commissioner of Patents, a very large proportion of the business of inventors before the Patent Office was transacted through your agency, and that I have ever found you faithful and devoted to the interests of your clients, as well as eminently qualified to perform the duties of Patent Attorneys with skill and accuracy. Very respectfully,

Your obedient servant, WM. D. BISHOP

Communications and remittances should be addressed to

MUNN & CO.,  
Publishers, No. 37 Park-row, New York.

**LABORATORY OF CHEMISTRY.—PROFESSOR H. DUSSANCE**, chemist (from the Conservatoire Imperial of Arts and Manufactures, Paris), gives consultations on chemistry applied to agriculture, metallurgy, arts and manufactures. Information on chemical fabrications, such as india-rubber, gutta-percha, acids, alkalies, salts, glass, pottery, colors of lead and zinc, sugars, distillation, vinegar, paper, matches, lighting, heating by gas, coal oil, candles (common, refined), French soaps, oils, varnishes, lakes, calico printing, dyeing, perfumery, animal black, natural and artificial manures, mining surveys, commercial essays, &c. Address, New Lebanon, N. Y.

**PATENT DOUBLE-ACTION SUCTION SHIP PUMP.**—Patented at Quebec, C. E., by John Brokenshire of Bowmanville, C. W., March 27, 1860.—The novel features of this pump consist in having a double bore in the same stick; in having two pistons to cause a double action in the same pump; in the combination of three valves, so that one piston has no control over the other, while the double valves are in order; in the bore connector, by which the bores can be connected and the safety valve inserted with ease; and in the plate and screws for covering the same. These principles are claimed as new, either in wood or iron. Address, JOHN BROKENSHIRE, Bowmanville, C. W.

**THE WEAVER'S GUIDE.—TWO HUNDRED** samples of ground weaving, from 2 to 16 harness, accompanied by drawings and explanations; by E. Kellermann. Prices: one copy, \$5; two copies, \$9; three copies, \$13; four copies, \$16. On receipt of the amount stated, copies will be sent without delay. All orders promptly attended to.

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