

columns, extending upward into the same, and with a radiator having its bottom plate to cover the entire dome, F, in manner substantially as described.

Pells Manny, of Waddam's Grove, Ill., for an Improvement in Harvesters. Patented April 7, 1857:

I claim, first, in a automat craking device, the combination of the bar, f, standing at an angle with the wing, C, the bar, S, and the rake, A, arranged in relation to the taper space, R, in the manner and for the purpose substantially as specified.

J. Milton Sanders, of Cincinnati, Ohio, for an Improvement in the Production of Illuminating Gas. Patented July 27, 1858:

I claim the production of an illuminating gas by passing the vapor of water and hydro-carbon, or its equivalent, mixed previously to decomposition into a retort containing carbon at a high red heat, substantially in the manner set forth.

Selah Dustin, of Detroit, Mich., for an Improved Low Water Alarm for Steam Boilers. Patented April 26, 1859:

I claim, first, So combining a steam valve and chamber with a ball or float as that the pressure of the steam in the boiler, in conjunction with the weight of the ball or float, will, when the water falls so low in the boiler that the upward force of the float does not sustain said valve, open said valve and make a free escape of the steam, substantially as described.

ADDITIONAL IMPROVEMENT.

Joseph F. Pond, of Cleveland, Ohio, for an Improved Washing Machine. Patented Oct. 26, 1858:

I claim the brake bar with double-ridged upper surface, as described, in combination with hollowed bearings, a, b, and annular slotted bearing pieces, C, lever and rod, arranged and operating with the roller, A, and apron, D, as set forth.

NOTE.—More than ONE-THIRD of all the patents granted last week, as reported above, were secured through the Scientific American Patent Agency—MUNN & CO., No. 37 Park-row, this city.

Notes & Queries

G. R., Jr., of Pa.—We believe that it would be a great improvement in the manufacture of glue to employ steam heat in stead of direct fire under the boilers.

R. C., of Texas.—You are mistaken in stating that Haswell gives the strength of boiler iron at from 30,000 to 25,000 lbs. on the square inch.

J. S., of Pa.—Your hydrostatic paradox is quite a neat puzzle; but as your vertical columns of mercury, are in fact, equal, there is in reality, no paradox in it.

O. S., of Vt.—We think you will find in Mr. Sprague's second article on "The Obstruction to the Navigation of Rivers caused by the Piers of Bridges," a full discussion of the points which you raise.

L. B., of Mass.—A gang of steam boilers, unless they have independent steam connecting pipes to equalize the pressure cannot besafe. One pump is perfectly able to feed all the boilers, if it is of sufficient capacity.

Towers, of Pa.—An immense amount of labor has been expended by astronomers in searching for small satellites revolving about the earth, and it is thought that one at least has been discovered.

S. R. H.—Your suggestion of a balloon to carry a line ashore from a vessel wrecked on a lee coast has been made before. It seems to us a most excellent plan.

J. M. R., of Ohio.—For a popular treatise on natural philosophy, Wells' is as good as any; but if you want a profound and thorough discussion of the principles of the science, we know of nothing superior to Newton's Principia.

W. B., of N. Y.—Your illustration of a perpetual motion that would not run is ingenious, but our artists are now so busy that we must forego the pleasure of having it engraved.

J. B., of Del.—A body shot into the air will fall with the same velocity as it rises, less, of course, the resistance of the air. When we copied the paragraph of which you spoke from a London paper, we thought of introducing the qualification, but as it is small with a lead or iron bullet, we let it go.

W. H., of Ill.—The crystals which you send us are quartz. There are tons of them scattered through all granite regions. They are valueless.

J. B., of N. C.—If a 25-horse power engine is sufficient to drive certain machinery, a 50-horsepower engine attached to the same machinery would ordinarily require more wood; this, however, would depend on the circumstances of the case.

B. M. J., of Ark.—Your recommendation of a wash for young trees, composed of equal parts of tar, soft soap and hog's lard, we here present to our readers.

W. B. G., of N. Y.—Your communication on the model of ships is received. We have been waiting some time for a proper occasion to give our own views on this subject.

J. B., of Iowa.—We have never seen Garvey's grometer, and as you doubtless understand the general principle of these instruments, we shall not trouble you with any remarks upon them.

C. K., of Mich.—We do not believe your explanation of the light from loaf sugar is correct. Though phosphate of lime is used in clarifying sugar, the quantity of phosphorus left in the refined sugar must be infinitesimal, and not enough to produce visible light.

J. T. B., of N. Y.—Wells' Chemistry will be suitable for you. Seely & Garbanati, No. 424 Broadway, this city, keep everything pertaining to the photographic art.

S. D. T., of Mass.—The several rays of light separated by a prism can be brought together again, when they are found to produce the original white light. Nobody knows why light is refracted.

O. H. Y., of N. Y.—We do not know where you can obtain the oxy-calcium apparatus to be used with dissolving views.

A. A. S., of Va., writes:—"Are not the majority of newspaper advertisements headed '\$1,200 a year, with \$10 capital, — '\$10 a day'— '\$100 a month,' &c., all humbug, to 'peel the greens'; or are they real plans by which an honest man can make money?" It is rather "green" even to ask the question.

B. & Co., of Cal.—Silver ores are not worked in the vicinity of New York, nor do we know a single melting company which imports silver ore to obtain the precious metal.

J. B. G., of Ga.—We do not think that glass coffins are made in this country. There are patents on such coffins.

W. L., of Pa.—We never doctored a heavy horse in our life, and have therefore no skill in prescribing for such diseases.

J. T., of N. B.—We are willing to pay for original contributions of merit, but we do not think the subject of the cause of the aurora borealis would be one of sufficient interest to our readers. You had better communicate with the editors of "Sullivan's Journal," at New Haven, Conn.

W. F., of —.—We think we could explain the gyroscopes in fewer words than you employ, but the interest in the subject seems to have passed away.

J. A. F., of Ala.—The problem of calculating the force of the sun's attraction on the earth was attacked 170 years ago by the greatest intellect the world ever saw—Sir Isaac Newton. You will find the subject fully discussed in works on mathematical astronomy. For the other points in your letter see Bartlett's Mechanics.

P. M., of N. Y.—Our artists are now very busy, but if they get a little leisure we may give you a cut which would explain to your own and other youthful minds the principle of the steam engine. It is something which every boy ought to understand.

F. M. B., of Wis.—Your inquiry is not very clearly expressed. We presume you will be answered, however, when we say that if A has taken out a patent on a combination of parts exclusively for sewing wheat broadcast, B would not infringe by employing a similar combination to sprinkle the streets with water.

G. W. C., of Mich.—Nitrate of silver should be dissolved in ammonia for mixing with the printer's ink, so as to render it indelible for stencil work. The alkaline ammonia renders the nitrate salt capable of mixing with the oil of the ink.

J. S., of Ohio.—We really believe that the most simple and best way to introduce a reform in our measures would be to adopt the French system; but in the absence of any mere law, it would be better to use the centimeter system, with the foot and inch common terms.

G. A. C., of N. Y.—You have failed to comply with the rule of this office, which requires all letters to be properly signed with the writer's name—not for purposes of publication, but as an evidence of good faith.

L. M. P., of Mass.—Three elements are necessary in calculating horse-power, namely, time, pressure and speed. Nobody can tell "how many cubic inches of 50 lbs. pressure it takes for one horse-power."

H. D. P. & Co., of Miss.—There is no fixed depth at which to carry lightning conductors into the ground. They should be carried down to rest in moist soil, that is all. A rod is a conductor; and one that extends 10 feet above the roof and is 40 feet high, will protect an area of 5,024 square feet according to some authors and only 785 feet according to others. Reliable information on this point is much wanted.

Money Received

At the Scientific American Office on account of Patent Office business, for the week ending Saturday, March 31, 1860:—

- L. & W., of Ind., \$30; H. G., of Mass., \$30; S. S. G., of N. Y., \$25; A. L., of Ga., \$25; T. G. A., of N. Y., \$30; A. J. G., of Mass., \$30; G. W. R., of N. Y., \$30; C. B. P., of S. C., \$35; L. H., of N. Y., \$35; P. B. W., of Ga., \$30; L. B. H., of N. Y., \$30; G. H. M., of Mass., \$30; D. W. A., of Ill., \$35; A. C., of N. Y., \$35; W. P. F., of Conn., \$25; W. J. J., of Ala., \$30; C. F. B., of R. I., \$500; S. B., Jr., of N. Y., \$30; J. H., of Mass., \$33; D. H., of N. Y., \$30; M. W., of L. I., \$30; C. & B., of Ill., \$30; J. H. & A. T. G., of N. Y., \$50; M. A. S., of Ill., \$35; G. W. Van D., of N. Y., \$10; T. G., of Ill., \$25; J. F. H., of Ill., \$15; T. M., of Conn., \$30; J. B. W., of Tenn., \$40; A. C. L., of Mich., \$35; J. R. H., of Conn., \$25; B. & S., of Ohio, \$30; W. M., of Mass., \$30; G. C., of Ill., \$10; J. P., of N. J., \$30; W. D., of N. Y., \$30; A. B. P., of Cal., \$30; S. A. C., of Mass., \$35; B. J., of Ky., \$30; J. J., of N. Y., \$30; R. P. Van H., of Ohio, \$30; C. D., of Mass., \$30; J. B., of N. Y., \$38; S. B. D., of N. Y., \$250; C. C. L., of Pa., \$30; B. I., of N. Y., \$35; R. H. T., Jr., of S. C., \$275; W. C. A., of Mo., \$30; W. D., of Mass., \$35; A. H., of Conn., \$25; J. C., of Conn., \$40; S. F. B., of Mass., \$30; J. B. McC., of Iowa, \$30; F. S., of Ill., \$30; R. & S., of Ala., \$30; C. H. & Co., of N. J., \$30; W. H. D., Jr., of Pa., \$35; A. T. J., of Conn., \$30; J. S., of N. Y., \$30; B. D., of Ohio, \$25; P. M., of Mass., \$35; P. & F., of Ind., \$30; J. J. H., of Md., \$100; E. C., of N. Y., \$30; C. T. B., of N. Y., \$30; J. M., of N. Y., \$30; J. C., of Vt., \$30; J. W. M., of N. Y., \$25; A. W. W., of Conn., \$25; J. D. M., of N. Y., \$26; L. & V., of N. Y., \$5; J. W. T., of Ala., \$55; C. A. B., of Vt., \$25; W. A. H., of N. J., \$380; G. S., of Mass., \$35; E. F. R., of Mass., \$35; D. A. W., of N. Y., \$60; W. & T. S., of N. Y., \$69; W. & T., of Ill., \$25; W. B. G., of Pa., \$30; A. W., of N. Y., \$30; F. F. S., of Ill., \$30; A. B. T. J., of Conn., \$35; C. B., of N. Y., \$58.

Specifications, drawings and models belonging to parties with the following initials have been forwarded to the Patent Office during the week ending Saturday, March 31, 1860:—

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

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. JUDGE 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 fourteen 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. 65 Chancery Lane, London; 29 Boulevard St. Martin, Paris; and Rue des Eperonniers, Brussels. We think we may safely say that three-fourths of all 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. Any one can take out a Patent there.

A pamphlet of information concerning the proper course to be pursued in obtaining Patents through their 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 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.

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.