

THE EXAMINATION OF INVENTIONS.

Persons having conceived an idea which they think may be patentable, are advised to make a sketch or model of their invention, and submit it to us, with a full description, for advice. The points of novelty are carefully examined, and a written reply, corresponding with the facts, is promptly sent free of charge. Address MUNN & CO., No. 37 Park Row, New York.

Foreigners cannot secure their inventions by filing a caveat; to citizens only is this privilege accorded. During the last seventeen years, the business of procuring Patents for new inventions in the United States and all foreign countries has been conducted, by Messrs. MUNN & CO., in connection with the publication of the SCIENTIFIC AMERICAN; and as an evidence of the confidence reposed in our Agency by the inventors throughout the country we would state that we have acted as agents for at least TWENTY THOUSAND inventors! In fact, the publishers of this paper have become identified with the whole brotherhood of inventors and patentees at home and abroad. Thousands of inventors for whom we have taken out patents have addressed to us most flattering testimonials for the services we have rendered them, and the wealth which has inured to the inventors whose patents were secured through this office, and afterwards illustrated in the SCIENTIFIC AMERICAN, would amount to many millions of dollars! We would state that we never had a more efficient corps of Draughtsmen and Specification Writers than those employed at present in our extensive offices, and we are prepared to attend to patent business of all kinds in the quickest time and on the most liberal terms.

REJECTED APPLICATIONS.

We are prepared to undertake the investigation and prosecution of rejected cases on reasonable terms. The close proximity of our Washington Agency to the Patent Office affords us rare opportunities for the examination and comparison of references, models, drawings, documents, &c. Our success in the prosecution of rejected cases has been very great. The principal portion of our charge is generally left dependent upon the final result.

All persons having rejected cases which they desire to have prosecuted, are invited to correspond with us on the subject, giving a brief history of the case, inclosing the official letters &c.

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, under the new law, is \$10. A pamphlet of advice regarding applications for patents and caveats, printed in English and German, is furnished gratis on application by mail. Address MUNN & CO., No. 37 Park Row, New York.

FOREIGN PATENTS.

We are very extensively engaged in the preparation and securing of patents in the various European countries. For the transaction of this business we have offices at Nos. 56 Chancery Lane, London; 29 Boulevard St. Martin, Paris; and 26 Rue des Eperonniers, Brussels. We think we can safely say that THREE-FOURTHS of all the European Patents secured to American citizens are procured through the Scientific American Patent Agency, No. 37 Park Row, New York. 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.

Circulars of information concerning the proper course to be pursued in obtaining patents in foreign countries through our Agency, the requirements of different Government Patent Offices, &c., may be had gratis upon application at our principal office, No. 37 Park Row, New York, or any of our branch offices.

ASSIGNMENTS OF PATENTS.

Assignments of patents, and agreements between patentees and manufacturers are carefully prepared and placed upon the records at the Patent Office. Address MUNN & CO., at the Scientific American Patent Agency, No. 37 Park Row, New York.

It would require many columns to detail all the ways in which inventors or patentees may be served at our offices. We cordially invite all who have anything to do with patent property or inventions to call at our extensive offices, No. 37 Park Row, New York, where any questions regarding the rights of patentees will be cheerfully answered.

Communications and remittances by mail, and models by express prepaid, should be addressed to MUNN & CO., No. 37 Park Row, New York.

TO OUR READERS.

PATENT CLAIMS.—Persons desiring the claim of any invention which has been patented within thirty years, can obtain a copy by addressing a note to this office, stating the name of the patentee and date of patent, when known, and inclosing \$1 as fee for copying. We can also furnish a sketch of any patented machine issued since 1863, to accompany the claim, on receipt of \$2. Address MUNN & CO., Patent Solicitors, No. 37 Park Row, New York.

VARIABLE RULE.—It is an established rule of this office to stop sending the paper when the time for which it was pre-paid has expired.

Models are required to accompany applications for Patents under the new law, the same as formerly, except on design patents when two good drawings are all that are required to accompany the petition, specification and oath, except the Government fee.

RECEIPTS.—When money is paid at the office for subscriptions, a receipt for it will always be given; but when subscribers remit their money by mail, they may consider the arrival of the first paper a *bona-fide* acknowledgment of our reception of their funds.

NEW PAMPHLETS IN GERMAN.—We have just issued a revised edition of our pamphlet of *Instructions to Inventors*, containing a digest of the fees required under the new Patent Law, &c., printed in the German language, which persons can have gratis upon application at this office. Address MUNN & CO., No. 37 Park Row, New York.

Binding the "Scientific American."

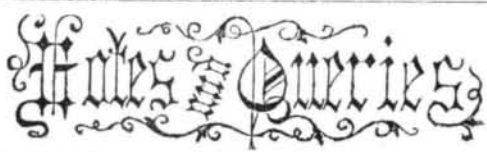
It is important that all works of reference should be well bound. The SCIENTIFIC AMERICAN being the only publication in the country which records the doings of the United States Patent Office, it is prepared by a large class of its patrons, lawyers and others, for reference

some complaints have been made that our past mode of binding in cloth is not serviceable, and a wish has been expressed that we would adopt the style of binding used on the old series, i. e., heavy board sides covered with marble paper, and morocco backs and corners.

Believing that the latter style of binding will better please a large portion of our readers, we commenced on the expiration of Volume VII. to bind the sheets sent to us for the purpose in heavy board sides, covered with marble paper and leather backs and corners. The price of binding in the above style is 75 cents. We shall be unable hereafter to furnish covers to the trade, but will be happy to receive orders for binding at the publication office, No. 37 Park Row, New York.

Back Numbers and Volumes of the Scientific American

VOLUMES I., II., III., IV., V., VII. AND VIII. (NEW SERIES) complete (bound) may be had at this office and from periodical dealers. Price, bound, \$225 per volume, by mail, \$3—which includes postage. Every mechanic, inventor or artisan in the United States should have a complete set of this publication for reference. Subscribers should not fail to preserve their numbers for binding. VOL. VI. is out of print and cannot be supplied.



E. L. W., of N. Y.—The height of the atmosphere is supposed to be between 45 and 50 miles, but there is no absolute certainty on this point. The calculations made respecting its height have been based upon the pressures taken at different altitudes.

W. A. M., of Mass.—The best solution that we have tried to render cloth water-proof and yet porous to the air, is made with the acetate of lead and sulphate of alumina. Take 4 ounces of alum and 2 ounces of the sugar-of-lead; dissolve them separately in half a gallon of water each. Now mix them, stir thoroughly and allow the sediment to settle for two hours. Pour off the clear, handle the cloth in this until it is saturated and dry it in a warm room. Give two dips and dry after each.

S. S. & Co.—Your plan to exhaust the smoke box of air, or rather to apply the blower at that point, is a good one if you can make it work. We imagine, however, that some difficulty would be experienced in the passage of the smoke through the fan or exhausting apparatus to the chimney. The usual method of introducing air through the furnace is the most feasible. Use a Dimpfel blower. Slippery elm (powdered) is good to loosen scale in boilers; put in two ounces per horse-power.

W. C., of C. W.—We are surprised that you should ask us if condensed water from the worm would run back into the boiler against steam pressure. The impracticability of the thing would strike anybody at once.

T. D. L., of N. H.—You cannot employ a syphon for elevating water from a lake over a bank to be employed to any practical purpose in operating a water wheel. Cut a race through the bank and bring the water to the wheel by direct gravitation.

G. L., of Mass.—The opinion which you entertain that if the shot in a gun is not crammed down close upon the powder the gun will burst when discharged, does not accord with some experiments made with guns, an account of which was published on page 254, Vol. III. (old series) of the SCIENTIFIC AMERICAN. The experiments were conducted by Captain Stockton, of the Navy, with the following results:—With the shot "rammed home" the bursting charge of powder was 6½ ounces; with a space of two inches between the shot and powder, the bursting charge was 7½ ounces; with a space of four inches between them, the bursting charge was 8 ounces; with a space between them of 6 inches, the bursting charge was 9½ ounces. Your suggestion respecting welding some kinds of forgings by heating the metal with a blow-pipe is good and has been successfully carried out in some cases already. Winged rifle shot are objectionable because they meet with too much resistance from the atmosphere. Pointed shot is inferior to round and flat-fronted projectiles for penetrating thick iron plates.

A. S. R., of N. H.—If your bail wire is bright and brittle put it into an oven until it assumes a blue color, then allow it to cool slowly, when it will be somewhat softer. You can anneal it by covering with sand and subjecting it to heat from a fire, and afterwards allowing the wire to cool slowly, but it is liable to become black. For a flat roof tin is the best material that you can use. There is an excellent roofing material illustrated on page 176, Vol. VII. (new series) of the SCIENTIFIC AMERICAN. A mixture of equal parts of asphaltum and coal tar boiled in a cauldron for two hours and mixed with dry sand, makes a cheap roofing material, laid upon the top of thick tar paper, then covered over the surface with fine gravel.

G. G., of N. Y.—It has so happened that two distinct patents have been issued for the same thing, but through an oversight on the part of the Examiner, as two patents cannot equally exist for the same invention. When two patents have been granted for the same invention the patent would belong to the original and first inventor, and the subsequent inventor could not use the improvement without infringing the rights of the first.

D. B., of C. W.—Reading pig iron, manufactured in Pennsylvania, will answer well for making very strong and durable gearing, mixed with a limited quantity of Scotch pig. The latter should never be employed for large castings that are to be subjected to severe strains; because, although it flows very freely and produces a smooth skin, the castings are liable to have flaws and honeycombs in their interior. Most American pig iron is excellent for gear wheels, and that made from Lake Superior ore has now a high reputation.

H. W., of N. Y.—There is no difficulty to be apprehended of the kind you mention in using a gas stove.

G. H., of N. Y.—Your plan of coating a telegraph wire with lead is too slow and tedious a process and not likely to be adopted by any company.

M. K., of N. C.—Your scheme is not feasible in practice. The danger of handling gun-cotton in the manner proposed, as also the nature of the invention, render it unlikely to be of any practical value.

D. B., of N. Y.—The substance which you have forwarded to us will answer very well for paper stock, but it is too brittle to be employed for spinning and weaving into cloth. The most important question connected with it is its cost.

NOTE.—To those correspondents who write to us concerning mechanical books and where to obtain them we would say examine the advertising pages of the SCIENTIFIC AMERICAN and you will be informed.

Money Received.

At the Scientific American Office, on account of Patent Office business, from Wednesday, Dec. 2, to Wednesday, Dec. 9, 1863:—

F. A. De M., of N. Y., \$16; H. F., of N. Y., \$41; A. B. L., of N. Y., \$41; H. S., of N. Y., \$20; E. R. R., of N. J., \$20; J. F. D., of N. Y., \$26; G. B. McD., of Ky., \$20; S. S., of N. J., \$10; I. B., of N. J., \$20; S. B. C., of N. Y., \$20; E. H. B., of Pa., \$20; G. P. G., of N. Y., \$16; M. A. J., of Mass., \$45; R. L. S., of Conn., \$16; F. C., of Mass., \$16; J. N., of Ill., \$16; P. R., of Conn., \$16; T. H., of N. H., \$28; A. B. G., of N. Y., \$16; W. H. W., of Wis., \$35; G. S., of Maine, \$21; F. E. H., of Ind., \$22; E. H. R., of Iowa, \$16; A. B. & N. H. S., of Vt., \$35; J. B., of Ohio, \$45; A. L. S., of Conn., \$16; G. P. S., of N. Y., \$19; S. F., of N. Y., \$25; A. C. C., of N. Y., \$25; V. & M., of N. Y., \$20; A. J. C. P., of La., \$41; G. A., of N. Y., \$41; T. H. & H. J., of N. Y., \$45; S. A. S., of N. Y., \$16; A. C. E., of Mass., \$20; J. B. S., of Mich., \$70; E. P., of N. Y., \$41; J. L. G., of N. Y., \$20; J. McC., of N. Y., \$20; B. & H., of Conn., \$20; A. G., of N. Y., \$10; C. S., of N. Y., \$20; W. G., of Ind., \$16; H. H., of R. I., \$60; J. M. C., of Oregon, \$16; J. S. G., of Mich., \$26; G. A., of Iowa, \$15; A. D. L., of Mass., \$16; N. B., of Ill., \$16; N. A., of Ohio, \$15; J. J. E., of N. Y., \$12; J. H. Q., of N. J., \$30; F. J. V., of Conn., \$359; D. D., of Mich., \$25; H. D., of Ohio, \$16; H. W. C., of Vt., \$31; A. J. C. P., of La., \$25; J. S., of N. Y., \$25; A. S., of N. Y., \$16; R. D. C., of England, \$60; R. W. C., of N. Y., \$45; H. J. Van T., of N. Y., \$45; R. H. G., of N. Y., \$20; C. W. & W. M., of Ill., \$20; W. & M., of Germany, \$20; I. E. P., of Conn., \$10; W. P. B., of N. Y., \$16; L. H., of N. Y., \$31; O. L. G., of N. Y., \$31; G. L. T., of N. Y., \$46; R. W., of N. Y., \$25; D. P. S., of N. Y., \$25; V. H. H., of N. Y., \$10; C. W., of Iowa, \$10; R. S. H., of Iowa, \$20; E. D. A., of Conn., \$25; A. S. H., of Mich., \$25; E. S. N., of N. J., \$15; E. Y., of Mich., \$16; J. G. B., of Mass., \$25; D. B., of N. Y., \$25; S. M. P., of Ohio, \$10; E. H., of N. Y., \$72; W. C. M., of N. Y., \$25; J. F. D., of N. Y., \$26.

Persons having remitted money to this office will please to examine the above list to see that their initials appear in it, and if they have not received an acknowledgement by mail, and their initials are not to be found in this list, they will please notify us immediately, and inform us the amount, and how it was sent, whether by mail or express.

Specifications and drawings and models belonging to parties with the following initials have been forwarded to the Patent Office, from Wednesday, Dec. 2, to Wednesday, Dec. 9, 1863:—

J. F. D., of N. Y.; H. W. C., of Vt.; A. J. C. P., of La.; J. S., of N. Y.; G. A., of N. Y.; N. C. S., of Conn.; R. B. C., of Mass.; R. W., of N. Y.; W. H. W., of Wis.; J. C., of Ohio; W. E. D., of N. Y.; D. B., of N. Y.; E. H., of N. Y. (2 cases); W. C. M., of N. Y.; J. F. D., of N. Y.; H. F., of N. Y.; E. P., of N. Y.; S. & M. P., of Pa. (2 cases); C. F., of Iowa; J. G. B., of Mass.; J. H. Q., of N. J.; E. D. A., of England; J. S. G., of Mich.; D. & C., of N. Y.; J. B., of Ohio; G. P. S., of N. Y.; S. F., of N. Y.; A. C. C., of N. Y.; A. E. L., of N. Y.; L. H., of N. Y.; J. B. McC., of Mo.; A. S. H., of Mich.; G. S., of Maine; D. P. S., of N. Y.; T. H., of N. H.; H. H., of R. I. (2 cases); A. B. & N. H. S., of Vt.; S. M. P., of Ohio.

RATES OF ADVERTISING.

Twenty-five Cents per line for each and every insertion, payable in advance. To enable all to understand how to calculate the amount they must send when they wish advertisements published, we will explain that ten words average one line. Engravings will not be admitted into our advertising columns, and, as heretofore, the publishers reserve to themselves the right to reject any advertisement they may deem objectionable.

FOWLER'S ADDING MACHINE.—THE BOOK-KEEPER and Accountant's Friend. Used in the counting house for adding up columns in the ledger. For tallying numbers, weights of metals, hides, coal, &c. Also for taking the number of yards (or fractions of yards), in dry goods, account of stock, reentering cash sales of the day, &c. Price with full directions \$5—inclose red stamp for circular. First class agents wanted. Address G. B. FOWLER & CO., 37 Park Row, New York, or Box 3, 213 Chicago, Ill. 1*

THE "WORKING FARMER" FOR 1864.—THIS Sterling agricultural publication—established by Prof. James J. Mapes, in 1843—enters upon its sixteenth volume with the January number. It will contain during the year more agricultural matter, adapted to all the States in the Union, than any publication of the day. Each new subscriber for 1864, will receive the December number, now issued, free, besides a valuable Grape Vine, or one of the following engravings, viz: "Merry-making in the Olden Time;" "Niagara Falls;" "Our Generals in the Field;" or "Crucifixion." Every applicant for this premium must remit 10 cents to prepay postage. Terms of "THE WORKING FARMER" \$1 per annum in advance. Single copies 10 cents. Send your subscriptions at once and get the premiums. Specimen copies for the use of Canvasers, and Circulars, containing a list of our valuable premiums, sent on application to the Publisher, WM. L. ALLISON, Nos. 124 and 126 Nassau street, New York. 253

A RARE CHANCE.—"SCIENTIFIC AMERICAN" FOR Sale.—One set old and new series, well bound, perfect and complete, except the first volume of old series, 22 volumes. Price \$100. One set of old series complete, except volumes 1 and 3, well bound and in perfect order. Price \$45. Also a number of complete volumes unbound of old series, cheap, and several hundred numbers from every volume of old series, which I will sell for 10 cents per number to complete sets. Address SCIENTIFIC, Post-office Box 123, Washington, D. C. 252*

PATENT SOLID EMERY WHEELS.—THE NEW YORK Emery Wheel Company, are prepared to fill promptly all orders for their improved wheels, in quantities. Sample wheels sent on receipt of price as per circular. For cutting (metals or glass) grinding or polishing, a wheel will save its cost in one day's work. Office 31 Beekman street, New York. 254