

**IMPORTANT TO INVENTORS.**

PATENTS FOR SEVENTEEN YEARS.

**MESSRS. MUNN & CO., PROPRIETORS OF THE SCIENTIFIC AMERICAN,** continue to solicit patents in the United States and all foreign countries, on the most reasonable terms. They also attend to various other departments of business pertaining to patents, such as Extensions, Appeals before the United States Court, Interferences, Opinions relative to Infringements, &c. The long experience Messrs. MUNN & Co. have had in preparing Specifications and Drawings, 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.



**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.

**PRELIMINARY EXAMINATIONS AT THE PATENT OFFICE.**  
The service we render gratuitously upon examining an invention does not extend to a search at the Patent Office, to see if a like invention has been presented there, but is an opinion based upon what knowledge we may acquire of a similar invention from the records in our Home Office. But for a fee of \$5, accompanied with a model or drawing and description, we have a special search made at the United States Patent Office, and a report setting forth the prospects of obtaining a patent, &c., made up and mailed to the inventor, with a pamphlet, giving instructions for further proceedings. These preliminary examinations are made through our Branch Office, corner of F and Seventh streets, Washington, by experienced and competent persons. Many thousands such examinations have been made through this office. Address MUNN & CO., No. 37 Park Row, New York.

**HOW TO MAKE AN APPLICATION FOR A PATENT.**  
Every applicant for a patent must furnish a model of his invention if susceptible of one; or, if the invention is a chemical production, he must furnish samples of the ingredients of which his composition consists, for the Patent Office. These should be securely packed, the inventor's name marked on them and sent, with the Government fees, by express. The express charge should be pre-paid. Small models from a distance can often be sent cheaper by mail. The safest way to remit money is by draft on New York, payable to the order of MUNN & CO. Persons who live in remote parts of the country can usually purchase drafts from their merchants on their New York correspondents; but, if not convenient to do so, there is but little risk in sending bank-bills by mail, having the letter registered by the postmaster. Address MUNN & CO., No. 37 Park Row, New York.

The revised Patent Laws, enacted by Congress on the 2d of March, 1861, are now in full force, and prove to be of great benefit to all parties who are concerned in new inventions.  
The duration of patents granted under the new act is prolonged to SEVENTEEN years, and the Government fee required on filing an application for a patent is reduced from \$30 down to \$15. Other changes in the fees are also made as follows:—

On filing each Caveat.....	\$10
On filing each application for a Patent, except for a design.....	\$15
On issuing each original Patent.....	\$20
On appeal to Commissioner of Patents.....	\$20
On application for Re-issue.....	\$30
On application for Extension of Patent.....	\$50
On granting the Extension.....	\$50
On filing a Disclaimer.....	\$10
On filing application for Design, three and a half years.....	\$10
On filing application for Design, seven years.....	\$15
On filing application for design, fourteen years.....	\$30

The law abolishes discrimination in fees required of foreigners, excepting natives of such countries as discriminate against citizens of the United States—thus allowing Austrian, French, Belgian, English, Russian, Spanish and all other foreigners except the Canadians, to enjoy all the privileges of our patent system (but in cases of designs) on the above terms. 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 afterward 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 are 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.

**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.

**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.

**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 story of the case, inclosing the official letters, &c.

**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. 66 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.



**J. H. P., of N. Y.**—The hair hygrometer consists of a human or other long hair prepared by immersion in a solution made with soda and slacked lime. One extremity of it is fastened to a hook and the other end is attached to a small weight to keep it stretched. The hair passes over a small brass pulley on the axis of which is a pointer that moves over the face of a dial. When the surrounding atmosphere is moist, the hair is elongated by absorbing an additional quantity of moisture; the counterpoise then descends and turns the pulley which moves the index hand. A solution of common salt and lime is a good hygrometric preparation, and a piece of cotton cord will answer the same purpose as a hair. With respect to the utility of barometers, we have seen several that were of no more use than a piece of wood. Their utility depends upon the accuracy of their construction.

**B. and B., of Wis.**—Galvanized iron is not a non-conductor of heat. The oxides of zinc and copper are poisonous. Tinned iron pans are better than zinc iron pans for concentrating sorghum sirups. Vacuum copper pans heated with steam are employed in all our large sugar refineries.

**L. W. A., of N. Y.**—In heating iron wire from the freezing to the boiling point of water—212 Fah—it expands 1-312th of its length. It expands and contracts uniformly. Zinc is the most expansive of all metals; a rod of it expands 1-323rd of its length in being heated 180 degrees. Two distinct inventions cannot be secured under one patent.

**J. S. Q., of Mass.**—Smiles's "Lives of the Engineers" is an English publication, not republished here so far as we know.

**A. R., of N. Y.**—G. P. Putnam, No. 532 Broadway, this city, is the publisher of Rutan's work on the "Ventilation of Buildings."

**W. H., of Ill.**—Among the very first telegraphs constructed was Alexander's, which had a separate wire, as you propose for each letter of the alphabet. It would be far too expensive to construct and operate lines with such a number of wires.

**L. W., of Mass.**—We cannot give you much light upon the subject of frictional gearing for the reason that very little is known concerning their practical operation. There is no earthly reason to our thinking why they should not work unless it be that they absorb more power than toothed wheels; this would hardly seem possible. As you can readily understand our time is too much occupied to devote any considerable portion of it to researches bearing exclusively upon one point. The only way in which information can be obtained in regard to the efficacy of these agents is to experiment carefully. This we hope to see done, and we will gladly publish any information we receive on the subject.

**L., of Pa.**—If you were to give your invention to the Government, it would be taken no notice of, unless it were brought to the notice of the War Department by some person of influence, and then it would be unwise to trust to the authorities for remuneration. Your only chance of making anything by your invention is to get some person of capital and influence interested with you by giving him a good share, take a patent and have a gun made for testing before the proper officers, and then if satisfactory be ready to execute such orders as you might obtain.

**J. S., of Ohio.**—A lense is not suitable to place in the wall of your dark cellar for obtaining light. Use good common window glass.

**T. F., of Ind.**—There is no first-class work on millwrighting extant. Since the publication of Oliver Evans's work, H. C. Baird, of Philadelphia, has published "Hughes's American Miller," which may answer your purpose.

**Lieut. P., of Va.**—Your apparatus for disabling guns is altogether too cumbrous and costly. A patched round shot would answer just as well as it, and they are frequently used for the purpose. Something that can be used quickly and carried easily is what is required.

**Money Received**  
At the Scientific American Office, on account of Patent Office business, from Wednesday, January 21, to Wednesday January 28, 1863:—

P. B., of N. Y., \$26; R. E., of N. Y., \$26; W. M., of N. Y., \$26; J. F. T., of N. Y., \$26; W. L. F., of N. J., \$40; J. B., of N. Y., \$26; D. J. S., of N. Y., \$20; D. L. D. G., of N. J., \$45; E. Van H., of Mass., \$20; J. G., of N. Y., \$20; H. B., of N. J., \$20; A. B., of N. J., \$30; J. G. H., of N. Y., \$20; L. B., of N. Y., \$15; J. B., of N. Y., \$41; F. T., of N. Y., \$25; E. B., of France, \$20; M. B. D., of Pa., \$41; E. M., of N. Y., \$20; G. A. W., of Vt., \$15; J. J., of Mass., \$20; G. S., of N. Y., \$15; L. K., of Mass., \$20; A. C., of Va., \$45; H. S. S., of N. Y., \$20; C. W. H., of Mass., \$66; S. S. W., of Pa., \$67; L. E., of N. Y., \$22; G. W. A., of Mass., \$10; W. B. A., of O., \$15; T. J. H., of O., \$15; L. B., of Wis., \$15; G. H. S., of Iowa, \$20; J. & D. S., of Wis., \$15; J. H., of N. Y., \$22; J. A. A., of Conn., \$10; J. E., of Conn., \$25; M. D. H., of N. Y., \$12; J. R., Jr., of Mass., \$10; J. P. E., of Pa., \$30; L. H. O., of N. Y., \$15; F. D., of R. I., \$25; J. C. C., of Pa., \$20; J. H., of Ill., \$25; W. B., of Conn., \$15; G. F. C., of Mass., \$15; J. C. P., of N. Y., \$25; H. W., of Cal., \$25; J. A. W., of Wis., \$15; T. & N., of N. Y., \$25; J. F. L., of N. Y., \$25; G. C. B., of Ill., \$10; A. M. H., of Cal., \$30; F. W. G., of N. Y., \$150; C. H. H., of C. W., \$15; A. L., of N. J., \$15; G. S. A., of N. Y., \$34; E. J. W., of N. Y., \$15; L. L., of N. Y., \$25; T. H. C., of N. H., \$25; W. J. R., of N. S., \$15; C. R. S., of N. H., \$15; G. M., Jr., of Ill., \$25; M. A. D., of Mich., \$25; J. R., of Minn., \$15; A. P., of N. Y., \$15; W. E. E., of N. Y., \$26; B. & H., of N. Y., \$26; S. A. Co., of N. Y., \$392; S. & M., of Ind., \$15.

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 acknowledgment 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, January 21, to Wednesday, January 28, 1863:—

P. B., of N. Y.; R. E., of N. Y.; W. M., of N. Y.; J. F. T., of N. Y.; W. L. F., of N. J.; J. B., of N. Y.; M. B. D., of Pa.; S. S. W., of Pa.; G. M. Jr., of Ill.; T. H. C., of N. H.; L. L., of N. Y.; J. M. Y., of N. Y.; J. C. P., of N. Y.; J. F. L., of N. Y.; T. and N., of N. Y.; H. W., of Cal.; E. S., of N. Y.; J. H., of N. Y.; W. J. C., of England; J. H., of Ill.; J. A. A., of Conn.; J. E., of Conn.; S. W. B., of N. Y.; H. and B., of Conn.; B. and H., of N. Y.; W. H. H., of Mich.; M. D. H., of N. Y.

**Back Numbers and Volumes of the Scientific American VOLUMES I., II., III., IV., V. AND VII. (NEW SERIES)** complete (bound or unbound) may be had at this office and from periodical dealers. Price, bound, \$2 25 per volume, by mail, \$3—which include postage. Price, in sheets, \$1 50. 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. Nearly all the numbers of VOL. VI. are out of print and cannot be supplied.

**TO OUR READERS.**

**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.

**INVARIABLE 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 is required to accompany the petition, specification and oath, except the Government fee.

**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 1853, to accompany the claim, on receipt of \$2. Address MUNN & CO., Patent Solicitors, No. 37 Park Row, New York.

**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

**RATES OF ADVERTISING.**

**Twenty-five Cents** per line for each and every insertion, payable in advance. To enable all to understand how to compute the amount they must send in when they wish advertisements inserted, 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.

**FOR SALE—STATE RIGHTS OR THE EXCLUSIVE** Right of Pepley's Economical Automatic Lathe Machine. For particulars address JACOB PEPELY, Bainbridge Ind. 8 2eow\*

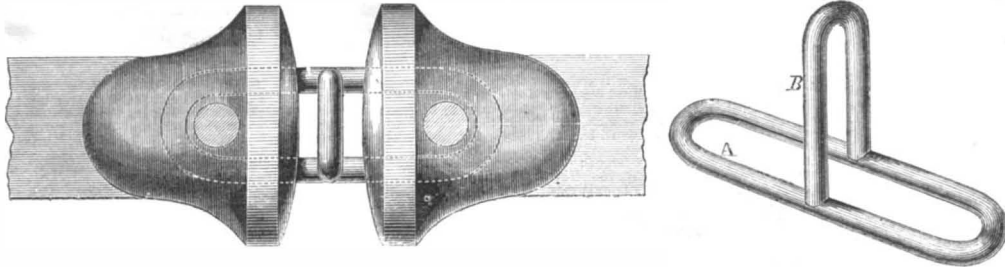
**DRAIN TILE MACHINES.**—I AM MANUFACTURING and have for sale, the best Drain Tile Machine in America. All Machines warranted to be as recommended, or no sale. Send for a circular. A. LA TOURIETTE, Jr., agent, Waterloo, Seneca Co., N. Y. 8 5\*

**EXCELSIOR MOWER AND REAPER—THE BEST IN** use.—The Patent for sale or lease. A fortune can be made by building these machines. Territories for sale. Send for a circular and you will get all the particulars. ROBERT BRYSON, Schenectady, N. Y. 8 6\*



**Improved Patent Car Coupling.**

So many accidents have occurred and so many valuable lives have been lost while trains of cars were being coupled together, that it has become a matter of necessity to provide some method by which the danger can be averted. Our illustration represents such a device, and we think it is well adapted to the end sought for, viz.: safety. The coupling, A, is provided with a handle or staple, B, firmly riveted to it. The brakeman, or other person making up the train, grasps this projecting handle, and inserts the coupling between the buffers as the cars come together. By using this coupling the necessity for going between the cars is obviated, as the connection

**BARNES'S PATENT CAR COUPLING.**

can be made, if desirable, from the platform of the car itself.

The patent for this invention was procured May 13, 1862, by Henry A. Barnes, of Milwaukee, Wis., and further information can be had by addressing him at that place.

**Canadian Oil Springs.**

A recent writer in the *Toronto Globe* says:—

"The question most eagerly asked of persons just come from Enniskillen, is generally the all-important one of whether the wells are holding out or not. It is a fact that many of the flowing wells have ceased to flow; and others, while still continuing to flow, do no longer yield the immense quantities that they did at first. But then, there remains yet untouched a large area of what there is every reason to believe to be good productive oil territory. The work of drilling and sinking wells is still vigorously carried on, and a rise in the price of crude oil to \$1 or \$2 per barrel would set the drills agoing at a rate hitherto unheard of. The owners of wells which have ceased to flow do not think it worth while to drill down any further until a more remunerative demand arises for crude oil. When this takes place, every effort will be made, both by drilling further and pumping, to bring the oil up, if there is any to bring. The question whether former flowing wells will yield oil by pumping, has yet to be determined.

"Oil Springs is certainly the busiest place of its size to be seen; in fact, a perfect hive of industry, full of life and motion. The population of the whole diggings is estimated at 2,000 or more. There are still more people than can find houseroom to live in, and rents are of tiptop height. Landlords of houses appear to have taken "Excelsior" for their motto. Think of six dollars a month for the up-stairs, merely, of a frame house about 18 by 24, and three or four competitors for it at that! People continue to come in faster than houses can be built for them. The hotels and boarding-houses are crowded, and the unfortunate inmates are fairly lost for want of a place to go to in the evening, and even for seats to sit upon after supper time."

**Speed of Steamships.**

A correspondent wishes to know "The highest rate a steam vessel has accomplished?" The question is a broad one, and does not distinguish between river and sea-going steamers. It has been claimed for two or three mail steamers that, under a full head of steam and canvas, with a strong wind, they have run 18 knots. Under steam alone, 17 knots has been accomplished by ocean steamers. This is equal to 19 and 4-7th statute miles. But this has been surpassed by river boats. It has been said that 31 miles per hour have been got out of an American steamer, but we do not believe it. We have not heard on this side of the Atlantic of any boat exceeding in speed the *Rothsay Castle*, registered at Glasgow

in 1861, as of 191 feet 5 inches in length, 19 feet breadth, and 8 feet 3 inches depth, with engines of 110 horse-power. This steamboat is said to have run at the rate of 21 miles per hour, but whether she continued that speed for one whole hour, we cannot say. Perhaps our fast Gravesend boats have either exceeded or approached this speed. As we have no long rivers like those in the United States, we shall never have a class of powerful boats such as the Americans have, and as size gives speed, we cannot compete with them in this respect.—*Mitchell's Steam Shipping Gazette.*

[The fastest running of an American steamboat, for a continuous trip of 150 miles, was performed by the

*Daniel Drew* on the 13th of October, 1860, on the Hudson river, between New York and Albany. The average speed was 25 miles per hour, and an account of the trip will be found on page 277, Vol. III. (new series) of the *SCIENTIFIC AMERICAN*.—Eds.

**FIELD'S IMPROVED ICE-CREEPER.**

Every person whose occupation renders it necessary for him to be out in frosty weather must have felt the inconvenience, to say nothing of the pain, which ensues from a fall upon the icy ground. These accidents are continually occurring, and are



caused by the imperfect foot-hold of the pedestrian. It is not a little mortifying to a young gentleman to be suddenly interrupted in some good thing which he was saying to his "affianced" by feeling his person come into sudden and violent contact with the pavement. To prevent all casualties of this kind the ice-creeper here illustrated has been invented. It consists of the metal plate, A, provided with a second plate, B, having a series of corrugated teeth, a, set at right angles with its base. The ends of the plate, A, flare outwardly in order to embrace the foot properly, and have narrow slots, b, in each through which the leather straps, C, are thrust and secured. The ends of the straps, C, are provided with either buckles or strings to fasten the creeper to the foot. The small spike, c, seen in the detached creeper, enters the heel of the foot and the spring, e, prevents the

creeper from slipping forward or backward from its place.

A patent is about to issue on this invention, and further information may be had by addressing the inventor, Wm. Field, at Providence, R. I.

**FEATURES OF THE FEET.**—The French foot is meager, narrow and bony. The Spanish foot is small and elegantly curved, thanks to its Moorish blood, corresponding with the Castilian pride—"high in the instep." The Arab foot is proverbial for its high arch; "a stream can run under the hollow of his foot," is a description of its form. The foot of the Irish is flat and square. The English foot is short and fleshy. The American foot is apt to be disproportionally small.



OF THE

**SCIENTIFIC AMERICAN.****THE BEST MECHANICAL PAPER IN THE WORLD****NINETEENTH YEAR!****VOLUME VIII.—NEW SERIES.**

The publishers of this popular and cheap illustrated newspaper beg to announce that on the third day of January, 1863, a new volume commenced. The journal is still issued in the same form and size as heretofore, and it is the aim of the publishers to render the contents of each successive number more attractive and useful than any of its predecessors.

The *SCIENTIFIC AMERICAN* is devoted to the interests of Popular Science, the Mechanic Arts, Manufactures, Inventions, Agriculture, Commerce, and the Industrial pursuits generally, and is valuable and instructive not only in the Workshop and Manufactory, but also in the Household, the Library and the Reading Room.

The *SCIENTIFIC AMERICAN* has the reputation, at home and abroad, of being the best weekly journal devoted to mechanical and industrial pursuits now published; and the proprietors are determined to keep up the reputation they have earned during the eighteen years they have been connected with its publication.

**To the Inventor!**

The *SCIENTIFIC AMERICAN* is indispensable to every inventor as it not only contains illustrated descriptions of nearly all the best inventions as they come, but each number contains an Official List of the Claims of all the Patents issued from the United States Patent Office during the week previous; thus giving a correct history of the progress of inventions in this country. We are also receiving, every week, the best scientific journals of Great Britain, France and Germany; thus placing in our possession all that is transpiring in mechanical science and art in those old countries. We shall continue to transfer to our columns copious extracts from those journals of whatever we may deem of interest to our readers.

**To the Mechanic and Manufacturer!**

No person engaged in any of the mechanical pursuits should think of doing without the *SCIENTIFIC AMERICAN*. It costs but six cents per week; every number contains from six to ten engravings of new machines and inventions which cannot be found in any other publication. It is an established rule of the publishers to insert none but original engravings, and those of the first class in the art, drawn and engraved by experienced artists, under their own supervision, expressly for this paper.

**Chemists, Architects, Millwrights and Farmers!**

The *SCIENTIFIC AMERICAN* will be found a most useful journal to them. All the new discoveries in the science of chemistry are given in its columns, and the interests of the architect and carpenter are not overlooked; all the new inventions and discoveries appertaining to those pursuits being published from week to week. Useful and practical information pertaining to the interests of millwrights and mill-owners will be found published in the *SCIENTIFIC AMERICAN*, which information they cannot possibly obtain from any other source. Subjects in which planters and farmers are interested will be found discussed in the *SCIENTIFIC AMERICAN*; most of the improvements in agricultural implements being illustrated in its columns.

**TERMS.**

To mail subscribers:—Three Dollars a Year, or One Dollar for four months. One Dollar and Fifty Cents pay for one complete volume of 416 pages; two volumes comprise one year. A new volume commenced on the third of January, 1863.

**CLUB RATES.**

Five Copies, for Six Months..... \$6  
Ten Copies, for Six Months..... 12  
Ten Copies, for Twelve Months..... 23  
Fifteen Copies, for Twelve Months..... 34  
Twenty Copies, for Twelve Months..... 40

For all clubs of Twenty and over the yearly subscription is only \$2 00. Names can be sent in at different times and from different Post-offices. Specimen copies will be sent gratis to any part of the country.

Western and Canadian money or Post-office stamps taken at par for subscriptions. Canadian subscribers will please to remit 25 cents extra on each year's subscription to pre-pay postage.

**MUNN & CO., Publishers,**  
Park Row, New York.

FROM THE STEAM PRESS OF JOHN A. GRAY