

689.—G. B. Phillips (assignor to J. S. Littell), of Newark, N. J., for an Improved Wagon Wrench:

I claim, as a new article of manufacture, the wrench described in the foregoing specification and represented in the accompanying drawing.

690.—Arcalous Wyckoff and Lafayette Stevens, of Elmira, N. Y., assignors to Arcalous Wyckoff aforesaid, for an Improvement in Hollow Augers:

We claim constructing the cutter head of annular augers by the combination of two rings, first accurately fitted together by annular tongue and groove respectively on and in the adjacent surfaces thereof, and then by dividing one ring into a series of separate cutters, &c., and properly fastening and securing them, while the other ring remains entire and unaltered from its original accurate form, so that, upon attaching the sections to the entire ring by screws or otherwise, unerring accuracy of form and perfection of parts are secured, substantially as represented.

We also claim the advance blunt terminal point, m, of the prime cutter, l, constructed and operating substantially in the manner and for the purpose shown and described.

RE-ISSUE.

45.—D. W. Shares, of Hamden, Conn., for an Improvement in Harrows. Patented Jan. 27, 1857:

I claim a series of coulters, H, formed substantially as specified, and arranged diagonally to the line of motion, so as to form a harrow that loosens, mollifies and harrows the soil, as described.

I also claim the tooth, G, at the front end of the center bar, formed with two divergent wings, in combination with a series of harrow teeth, H, on the diagonal bars, B'B', as set forth.

ADDITIONAL IMPROVEMENTS.

317.—Douglas Bly, of Rochester, N. Y., for an Improvement in Attaching Thills to Vehicles. Patented April 12, 1859:

I claim the tightening block, D, in combination with the movable collar, G, and nut, H, substantially as and for the purpose specified.

318.—S. E. H. Vance, of New York City, for an Improved Electrical Apparatus for Lighting Gas. Patented Feb. 5, 1861:

I claim the employment or use of the stationary electric machine, as described, in place of the lamp, candle, taper, or other match, generally used for lighting gas.

EXTENSION.

E. B. Bigelow, of Boston, Mass., for an Improvement in Brussel Looms. Patented March 20, 1847; re-issued Sept. 11, 1849:

I claim, first, Giving to the two parts of the mechanism—that which weaves the cloth or forms the body of the fabric, and the one which operates the figuring wires—a separate and distinct organization, substantially as described, when these are connected and confined by an intermediate mechanism which shifts the motive or driving power from one to the other, substantially as described; and, in combination with this, I also claim the employment of two brakes to arrest the momentum of the moving parts, to prevent any conflict in the operations of the two parts of the mechanism.

Second, I claim, in combination with a loom for weaving such looped fabrics as designated, the employment of a box, trough, or the equivalent thereof, for receiving and holding the figuring wires preparatory to their being introduced under the figuring warps, substantially as described.

Third, I claim the fingers, or their equivalents, which receive the figuring wires from under the pile or figuring loops, in combination with the trough box, or the equivalent thereof, into which they are deposited preparatory to the introduction of them under the figuring warps, substantially as described.

Fourth, I claim, in combination with the mechanism which withdraws the figuring wires from under the pile or figuring loops, the fingers, or their equivalent, for transferring the said wires to the trough or the equivalent thereof, from which or by which they are transferred to the open shed of the figuring warps, substantially as described.

Fifth, I claim the method, substantially as described, of introducing and dropping the figuring wires in the open shed of the figuring warps, as described.

Sixth, And finally I claim the method, substantially as described, of supporting the figuring wires in the opening shed of the figuring warps when they are being introduced, as described.



T. D. A., of N. Y.—Your siphon will keep the water in your two tanks at the same level. The water will not separate in the middle of the siphon when the water comes to a level as your friends affirm.

G. L. P., of N. Y.—Leaves may be reduced to skeletons and made perfectly white by first pouring some boiling water over them in a suitable vessel, then exposing them in a pan placed in a moderately warm situation until they ferment. After this the pulpy parts can be easily removed with the thumb and fingers, so as to leave the skeleton only. This is now bleached by immersion in weak chloride of lime, or by smoking it with the fumes of burning sulphur in a close wooden box. The operation requires patience and care, but is not difficult to perform. The leaves of trees containing tannin or resin are unsuited for making phantom bouquets; oak, willow, pine, &c., are therefore not well adapted to such purposes.

C. F., of Ohio.—There have been several patents taken out for machines for dressing millstones.

E. C. C., of Ohio.—We are not able to give you the price of peanut oil in this market.

B. F. W., of Conn.—We are not familiar with the rules and regulations of the West Point Military Academy.

W. C., of Ill.—We do not remember the name of the patentee of the lock which you describe. We could probably ascertain by making a preliminary examination, which we advise. The work to which you refer was published by Blackie & Son, of this city.

C. W. S. H., of Mass.—Gouge-formed grooves, as substitutes for square grooves in rifles, are old, and in many instances have been used. We have a diagram of a rifle that was made with such grooves 16 years ago. According to the opinion of Colonel Jacobs, an author on rifled firearms, three grooves are just as good as five or six. The French rifle pistols are made with triangular grooves, which are perhaps better than either the square or rounded grooves.

G. W. M., of C. E.—The atmosphere is diathermic, that is to say, it allows the rays of heat to pass through it; but this is not the case with brick. Hence, a chimney becomes heated by absorbing the sun's rays, and transmitting the heat to the air within, rarifies the air and produces an upward current.

W. B. M., of Mass.—Address Charles A. Seely, No. 424 Broadway, this city, for the price of the photographs you inquire about.

C. P., of Ind.—Iron to be placed in water may be prevented from corroding by coating it with zinc. We know of no paint better than that made from lead for preserving wood.

W. F., of Va.—There are so many rifles, each claiming to be the best, that we must let you select for yourself.

C. P. K., of Cal.—The objection to the use of water from city works as a motor is that it is too expensive.

J. R. L., of Ind.—Rotary engine motion would be preferred by machinists were it not for mechanical difficulties, one of which is the difficulty of packing without great increase of friction. There would be no gain, however, from "lever power"; what is gained in power is lost in time.

W. C. D., of Fla.—We advise you to buy a steam engine. If the wind in your locality is sufficiently constant, a windmill might answer your purpose, but you would probably find it a source of constant vexation.

A. J. W., of Conn.—About 60 per cent of the power is all that you will probably get from an overshot wheel as usually constructed. Stevenson's turbine yielded, at the trial at Philadelphia, 87 per cent. Turbines, however, are not adapted to work in which there are great changes in the amount of power required. Your several improvements could probably be embraced in one patent, though this would depend on the circumstances of the case.

C. C., of Ill.—Whether the water you speak of will produce foam in a steam boiler could be most readily ascertained by trying it. Sulphuric acid would be injurious to your boiler unless the quantity was very minute.

C. H., of Conn.—Smee's "Electro-metallurgy," published by John Wiley, No. 56 Walker-street, this city, is the work you want.

W. N. R.—We know of no work on the manufacture of corn starch. You will find articles on the subject on pages 151, 167 and 181, Vol. II. (new series), of the SCIENTIFIC AMERICAN.

S. S. R., of Tenn.—You can get the combined iron and steel plates made in large quantity at the Novelty Works or the Al-laire Works, in this city, and we have no doubt that there are plenty of establishments in Cincinnati and St. Louis which would fill your order. The price would depend on the quality of steel that you require.

J. M. L., of Mich.—To enable electricity to pass to a distance through an imperfect conductor, it must possess high intensity, while for chemical decomposition its power is in proportion to the quantity. The Ruhmkorff coil will charge a Leyden jar the same as an electrical machine. 80,000 feet of No. 32 copper wire have been used by Ritchie, of Boston, in the construction of one of these coils. This projected a shower of sparks 16 inches in length. The power of the magnetic machine described would depend on its size.

S. C. S., of Mass.—Take a strong solution of logwood and mix it with some common lac varnish, and you will obtain a quick drying stain for wood. The black enamel which you have noticed on certain wooden articles is produced by several coats of paint, rubbed down after drying, and then varnished and polished.

C. D., of La.—We advise you to communicate directly with Mr. Kase respecting his rice mill. We think it is a good improvement.

J. W. P., of Mass.—You will find the process of enameling hollow iron ware described on page 318, Vol. XIV. (old series), of the SCIENTIFIC AMERICAN.

J. D. A., of N. Y.—You can distil bituminous shales and obtain oil from them by admitting highly heated steam into the retort among the shale and then condensing the products of distillation. This method of distilling such substances is not patented; it is an old process, and may be remunerative in your hands.

E. F. A., of Mo.—We have seen machine-made bricks equal in quality to any made by hand. Those who informed you to the contrary must be mistaken.

Money Received

At the Scientific American Office on account of Patent Office business, for the week ending Saturday, March 16, 1861:—

- J. R., of N. Y., \$15; O. H. & M. R. B., of Mass., \$25; A. M., of N. Y., \$50; L. C., of N. J., \$10; C. M., of Conn., \$100; J. G., of Mass., \$25; M. B., of Conn., \$40; R. R., of N. Y., \$65; H. McD., of Pa., \$25; J. B. D., of Mass., \$15; M. D. B., of Cal., \$22; E. G., of Mass., \$10; J. O. F., of Mass., \$10; G. L. T., of N. Y., \$15; H. C. H., of Ill., \$60; M. C., of Pa., \$15; J. P. S., of N. Y., \$10; G. P. W., of N. Y., \$15; M. F., of N. Y., \$40; G. T. L., of Pa., \$25; R. T., of N. Y., \$15; P. H., of Mo., \$20; J. N., of N. Y., \$25; N. H. B., of Ill., \$35; B. & H., of N. Y., \$40; D. R., of N. Y., \$30; W. D. L., of N. Y., \$35; T. H. M., of La., \$55; J. N., of N. Y., \$10; E. F. F., of Tenn., \$150; R. R., of N. Y., \$55; C. M., of N. Y., \$15; H. McK., of Ala., \$30; G. M., Jr., of Ill., \$10; L. H. A., of Mass., \$15; D. B., of Ill., \$25; W. M., of N. Y., \$30; B. J., of Mass., \$35; T. S. B., of N. Y., \$30; F. W. Y., of Ohio, \$25; C. & W. R., of Mass., \$15; J. V. B., of N. J., \$10; P. G. B., of Cal., \$25; L. A. B., of N. Y., \$40; W. H., of Pa., \$25; F. H., of Mass., \$25; G. M., of N. Y., \$25; V. C., of Va., \$25; L. D. B., of N. Y., \$40; C. A. W., of Mass., \$25; T. P., of Ill., \$25; J. H. B., of N. J., \$100; C. V., of N. Y., \$15; M. T. G., of Ill., \$30; S. J., of N. J., \$10; E. H. L., of N. Y., \$25; C. C. H., of N. Y., \$25; T. D., of Iowa, \$30; S. R. D., of N. Y., \$15; P. C., of N. Y., \$15; W. C. C., of Wis., \$30; C. & S., of N. Y., \$10; E. L., of L. I., \$10; G. L. W., of Pa., \$30; A. M., of Pa., \$15; F. C., of N. Y., \$15; A. D., of Oregon, \$35; D. P., of Iowa, \$30; W. & L., of N. Y., \$30; J. M. H., of Cal., \$25; G. I. M., of Conn., \$25; G. H. C., of N. Y., \$25; W. H. N., of N. Y., \$35; D. E. T., of N. Y., \$25; N. & B., of Mass., \$22; J. M. B., of N. Y., \$10; G. B. T., of N. Y., \$22.

Specifications, drawings and models belonging to parties with the following initials have been forwarded to the Patent Office during the week ending March 16, 1861:—

[The patents on these cases, when issued, will be granted for seventeen years under the new Patent Law.]

- J. G., of Mass.; O. H. & W. R. B., of Mass.; D. R. P., of Conn.; W. & L., of N. Y.; R. R., of N. Y.; H. McD., of Pa.; C. P. W., of N. Y.; H. C. S., of Ohio; E. F. H., of Ill.; A. D., of Oregon; L. D. B., of N. Y.; G. H. C., of N. Y.; J. V. B., of N. J.; L. & K., of Iowa; L. C., of N. J.; G. B. T., of N. Y.; J. R. R., of Mass.; H. McK., of Ala.; E. G., of Mass.; N. H. B., of Ill.; J. H. Van R., of N. Y.; G. T. L., of Pa.; M. F., of N. Y.; F. W. Y., of Ohio; V. C., of Va.; T. P., of Ill.; T. H. M., of La.; J. N., of N. Y.; E. H. L., of N. Y.; D. B., of Ill.; C. C. H., of N. Y.; J. O. F., of Mass.; M. D. B., of Cal.; S. J., of N. J.; W. H., of Pa.; W. D. L., of N. Y.; C. S., of N. Y.; J. P. S., of N. Y.; W. H. N., of N. Y.; J. M. B., of N. Y.; N. & B., of Mass.

New Books and Periodicals Received.

THE AMERICAN JOURNAL OF SCIENCE AND ART—Conducted by Professors B. Silliman, B. Silliman, Jr., and James H. Dana, in connection with Professor Asa Gray and Professor Louis Agassiz, of Cambridge, and Dr. Wolcott Gibbs, of New York. Published by the editors at New Haven, Conn.

This old established and substantial bi-monthly journal continues to present to its readers the latest discoveries in every department of science, all treated in the most profoundly learned style. The March number contains some letters from the eminent French paleontologist, J. Barrande, which tend very strongly towards settling the old dispute between Dr. Emmons and Professor Hall, in favor of Dr. Emmons.

NOTES ON SCREW PROPULSION.—By W. M. Walker, Commander, U. S. N. Published by D. Van Nostrand, No. 157 Broadway, this city.

This is a little sketch of the history of screw propulsion, from the first efforts of John Stevens, of Hoboken, in 1804, down to the present time. Captain Ericsson receives the credit of practically introducing the system.

NORTH BRITISH REVIEW.—Published by Leonard Scott & Co., Gold-street, this city.

This periodical is a representative of the Free Presbyterian Church of Scotland, and is second to none of the great British quarterlies. The number for the present quarter contains a long list of very able articles, and one on "Engineers and Engineering," by Sir David Brewster, is of the most instructive and interesting character to men of science.

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On filing each application for a Patent, except for a design.....\$15
On issuing each original Patent.....\$20
On appeal to Commissioner of Patents.....\$30
On application for Re-issue.....\$20
On application for Extension of Patent.....\$50
On granting the Extension.....\$50
On filing 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, except in reference to such countries as discriminate against citizens of the United States—thus allowing English, French, Belgian, Austrian, Russian, Spanish, and all other foreigners except the Canadians, to enjoy all the privileges of our patent system (except in cases of designs) on the above terms.

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