

NOTES ON FOREIGN INVENTIONS AND DISCOVERIES.

Enameling Articles of brass and German silver.—Fancy enameled metallic work has only been produced on articles of gold and copper. Silver, brass and German silver are not adapted in their nature for withstanding the heat to which the fused enamel is subjected, hence enamel will not adhere to such metals. Mr. Samuel Fearn, of Birmingham, England, has obtained a patent for enameling articles of brass and German silver, which is described in substance as follows in Newton's London *Journal of Arts and Sciences*.—The invention consists in coating with copper the surface of the article of brass or German silver to be enameled, or that portion of the surface of the article to which the enamel is to be applied, whereby the fused enamel will be enabled to attach itself firmly. In producing designs in enamel on metallic surfaces, that portion of the surface which is to be enameled is generally sunk or depressed, and the enamel fused in the portions of the surface. By afterward grinding or polishing, the surfaces of the enamel and the unenameled or metallic parts are made flat or flush with one another. The sunken designs may be produced either by engraving or etching with acid, or by transferring a design, printed from a copper plate, stone, glass, steel, zinc, or other printing surface; the design being printed in some material not affected by acid, and afterward biting by acid, to the necessary depth, those parts of the design which are required to be enameled. Or the designs may be produced by embossing or impressing the surface of the articles, by means of dies, or rollers, or other tools. After the sunken or depressed design has been produced a film or layer of copper is deposited upon the whole surface of the article, or upon those parts only which are to be enameled; by the ordinary process of electrical deposition. The enameling of the coated parts is then effected in the ordinary way. The enameled surface is next ground or polished, and the enameled article is afterward finished, by silvering, bronzing, or lacquering the surface of the unenameled or metallic parts of the article, in the usual way. When the form of the article is such that all parts of it can be readily reached by any of the ordinary polishing processes, it is unnecessary to stop out any portion of the surface, by means of varnish, prior to the deposition of the copper on the said article, that is to say, the whole surface of the article may be coppered. After the enamel has been fused in the sunken parts, the whole surface of the article is ground or polished, by which grinding or polishing the copper on the unenameled parts of the article is removed, and the enameled and metallic parts made flush with one another. The unenameled or metallic surface of the article is afterward finished by silvering, bronzing, or lacquering.

Revolving Steam Boilers.—D. F. Grimaldi, of Teramo, Italy, has constructed a steam boiler formed of a series of tubes set in a cylinder, which is made to rotate in the furnace. The trunnions of the boiler are hollow, and the water is fed through them, so that they are kept comparatively cool.

Renovating Old Cannon.—J. Snider, Jr., has obtained a patent for rendering worn-out cast-iron serviceable again as follows:—He first rebore the cannon so as to rectify any inaccuracies arising from wear. In this bore is then fitted and fastened a steel cylinder which may be either rifled or smooth and it forms the bore of gun.

RECENT AMERICAN INVENTIONS.

Veneer Cutting.—This invention consists, firstly, in giving the bolt from which the veneers are cut a peculiar motion so that the bolt will be presented to the knife, which is stationary, with a rolling and drawing cut, and the veneers cut therefrom in a suitable and even manner with a moderate application of power; secondly, in a peculiar feeding device for adjusting the knife to its work at the commencement of each cut, whereby the thickness of the veneers may be graduated as desired with the greatest nicety, and the knife also withdrawn from the bolt during the return movement of the latter so that the edge of the knife will be preserved and much friction avoided; and, thirdly, in a novel and improved arrangement of dogs for securing the bolt to its bed, whereby the dogging of the bolt may be expeditiously performed and all irregularities of the bolt compensated for by a

self-adjusting feature of the dogs. Invented by Loring P. Hawes, of New York city.

Rotary Engines.—Two patents, the claims of which will be found in this week's list of claims, have been granted for improvements in rotary engines by John B. Root, and a third for other improvements in such engines by J. Clayton and A. Campbell, all of which have been assigned to Root's Rotary Steam Engine Company of New York city, which is manufacturing engines under these and other patents of Mr. Root. The improvements relate more particularly to that description of rotary engine whose inner rotating drum to which the pistons are attached is arranged eccentrically within the stationary cylinder. The improvements consist in contrivances for directing the pistons in their movements; in means of packing the pistons, drum and abutments; in means of warming the cylinder uniformly to prevent unequal expansion; and in means of reversing the engine; and all of the improvements tend to make a very simple and, we believe, a very durable and effective rotary engine.

Enamel for Leather.—The manufacture of enameled leather, commonly known as "patent leather," has, up to this day, been kept a profound secret by the French and German manufacturers, and notwithstanding the fact that a large number of manufacturers in this country have tried to imitate the French enamel, they have not succeeded in producing an article of the same beauty and durability in hot and cold weather, and the French patent leather has still the preference in the market. Mr. C. W. Held, of Brooklyn, N. Y., has now discovered an enamel which, when properly spread on the leather, will not crack in the cold nor lose its luster in the heat, and which in every respect equals the best French or German patent leather.

Lamp.—This invention relates to an improved lamp for burning coal oils without a glass chimney, and consists in having the wick of the lamp fitted in a tube of glass, porcelain, or other material which is a good non-conductor of heat, by which the oil is prevented from volatilizing too rapidly, or in greater proportion than the supply of oxygen requires, thereby ensuring perfect combustion and consequently a good illuminating flame. The inventor is Thomas J. Barron, of Brooklyn, N. Y.

Carriages.—This invention is particularly designated for light carriages, though it is equally applicable to all kinds of four-wheeled vehicles which are hung upon elliptic springs. The object of the invention is to allow the carriage or other vehicle to which it is applied to turn in a small compass, and it consists in an arrangement for turning the hind axle of the carriage by and simultaneously with the front axle and in opposite direction. Patented to Nathaniel Adams, of Cornwall, New York.

Tuck and Plait Creasers.—This apparatus is designed for creasing cloth in the proper lines of the folding of tucks and plates, either to be sewed by hand or by a sewing machine, and in either case may be entirely separate from the sewing machine, though it may be attached thereto when desirable. The invention consists in the employment, in combination with a guide, of two rollers or other surfaces, one of which presents an edge and the other a groove, and between which, and in contact with the guide, the cloth or other material to be tucked or plaited is drawn for the purpose of being creased in the proper lines to fold the material to form the tucks or plates. It also consists in a certain mode of applying and supporting one of the said surfaces, in combination with the other parts of the apparatus, whereby the tucked or plaited or merely creased portion of the material is separated from that which has not been creased; and it further consists in a guard applied so as to prevent the material from getting in an improper direction between the creasing surfaces. Invented and patented by W. L. Fish, of Newark, N. J.

Implement for Cutting the Snouts of Swine.—The object of this invention, by Reuben Hurd, of Spring Hill, Ill., is to obtain a simple and efficient improvement for cutting the noses or snouts of swine, so as to prevent them from rooting, and thereby supersede the ordinary practice of "ringing," for effecting the same result. The invention consists in the employment or use of a cutter and block attached to the end of levers which cross each other and are connected by a fulcrum pin similar to the levers of a pair of scissors, all being so arranged as to effect the desired purpose.



ISSUED FROM THE UNITED STATES PATENT OFFICE

FOR THE WEEK ENDING FEBRUARY 11, 1862.

Reported Officially for the Scientific American.

* * Pamphlets giving full particulars of the mode of applying for patents, under the new law which went into force March 2, 1861, specifying size of model required, and much other information useful to inventors, may be had gratis by addressing MUNN & CO., Publishers of the SCIENTIFIC AMERICAN, New York.

34,342.—Nathaniel Adams, of Cornwall, N. Y., for Improvement in Running Gear Carriages:

I claim the arrangement of the arm, c, perch, f, and pivot, e, with the independently-pivoted axles, A B, as shown and described, for the purpose set forth.

34,343.—C. M. Alexander, of Washington, D. C., for Improvement in Bridle-Bit Attachments:

I claim the arrangement of the looped wires, L L, passing through the springs, when used in combination with the shank, A, strap, F, and bridle rein, H, as and for the purpose specified.

34,344.—J. L. Baldwin, of Newark, N. J., for Improvement in Molds for Making Daguerreotype Cases:

First, I claim the combination with the upper portion of the die, C, frame or block, A, and lower parts of the die or mold, of the plunger, D, substantially as described.

Second, The combination with the parts, C and D, of the key, g, so as to accomplish the purpose set forth.

Third, Constructing the part, C, with two thread portions or screws of equal pitch, one of which fits into the block, A, and the other of which forms the screw upon the work, substantially as and for the purpose set forth.

34,345.—J. S. and T. B. Atterbury and James Reddick, of Pittsburgh, Pa., for Improvement in the Manufacture of Hollow Glassware:

We claim, first, The manufacture of lamp pegs or bowls, and other descriptions of hollow glassware, with the ornamental designs or figures, intended to be blown in the inner and outer plain surfaces of the glass, of which the articles are composed, substantially in the manner described.

Second, We claim the performance within a sectional mold, such as we have shown, of the pressing and blowing processes, successively in the production of one and the same hollow article of glassware, substantially as and for the purposes set forth.

34,346.—Samuel Bentz, of Carroll Co., Md., for Improved Hulling Machine:

First, I claim the employment of a conveyer trough, substantially as described, with flights, as specified, for moistening the grain, and in combination with the conveyer, the regulated water discharge, as and for the purposes set forth.

Second, I claim the employment of an unbranched, for removing the husk, or bran, from the grain in a moist state, consisting of a horizontal cylinder with inclined revolving wings, constructed substantially as and for the purposes set forth.

Third, I claim, in combination with a moistening apparatus and unbranched, the drying apparatus, through which the grain is passed to be dried.

Fourth, I claim the construction of the drying apparatus, with its partitions, &c., by which the air is compelled to mingle with the grain, either alone or in company with the detached bran or husk, as specified.

Fifth, I claim polishing the grain after it has been dried, by passing it through an unbranched apparatus, as described.

Sixth, I claim removing the bran, either in a moist or dry state, from one or all the points, while passing through the apparatus, by means of a blast apparatus, applied substantially as and for the purpose set forth.

Seventh, I claim regulating and controlling the current of air through the dryer, by means of the exhaust, as and for the purposes described.

Eighth, I also claim the apparatus for cooling the grain, constructed and arranged as set forth.

34,347.—John Buser, of New York City, for Improvement in Bottling Apparatus:

First, I claim the revolving holder, k, with the receptacles, 9, for the bottles, in combination with the crosshead, m, and parts attached, for filling and corking said bottles, as presented by the said revolving holder, k, as set forth.

Second, I claim the arrangement of the sliding bar, l, talon, 7, spring, 8, and lever, 6, when combined with the revolving holder, k, for giving motion to the said holder, and presenting the bottles to be filled in unison with the other movements of the machine, as specified.

Third, I claim the lever, p, in combination with the cross heads, m and c, and acting in the manner specified, to turn the yoke, 10, over the cork, as the cross head, m, is raised, as specified.

Fourth, I claim the vessel, r, spout, s, and tipping dipper, t, in combination with the revolving holder, k, and corking apparatus, for supplying sirup or other liquid to the bottles in said holder, k, immediately prior to the corking, as set forth.

34,348.—N. W. Clark, of Clarkston, Mich., for Improvement in Apparatus for the Manufacture of Salt:

First, I claim, in combination with the salt block, a heating reservoir, in and through which there is a constant flow of water, substantially as described.

I also claim, in combination with a steam boiler, placed over the furnace of the salt block, a heating reservoir, F, placed over and projecting beyond said boiler, for the purpose of utilizing the otherwise wasted heat from and around the boiler, substantially as described.

I also claim projecting the sides or ends of the pans over the sides or main face of the salt block, for the purpose of affording a table on which the salt drawn or scraped from the pans may drain, and allow the drainings to run back into the pans, substantially as described.

I also claim making the salt pans of metal and of wood, so arranged and combined as that while the saline water shall lie upon both, the metal only shall be exposed to the fire or heated products of combustion, substantially as and for the purpose described.

I also claim so arranging the flow-ways from one pan to the next adjacent one throughout the series, as that the metal portions of the pans shall be always covered by the saline water in them, and thus prevent corrosion of the pans, and consequent destruction, as well as avoiding the staining of the water or discoloring of the salt, as set forth and explained.

34,349.—S. A. Clemens, of Rockford, Ill., for Improvement in Hemp Breakers:

I claim, first, The method of breaking flax or other fibrous substances by a beater, constructed substantially as described, which oscillates upon an axis on one side of its center, and has its breaking edges on the other side, extending at unequal distances from the axis, when combined with two bars, the breaking edges of which are in correspondence with those of the beater, substantially as described and for the purpose specified.

Second, I also claim a whipper, vibrating either upon an independent axis on one side or upon an axis common to it and the beater, when combined with a beater or pair of feed rollers, substantially as described and for the purpose specified.

Third, I also claim an air pipe, j', with its discharging spout so arranged as to direct an artificial current of air across the machine, above the whipper, in connection with the latter, substantially as described and for the purpose specified.

Fourth, I also claim an annular-grooved receiving roller, d, resting over or upon an endless apron, and in connection with a pair of plain pressure feed rollers, substantially as described and for the purpose specified.

34,350.—Isaac Crandal, of Middlefield, N. Y., for Improvement in Pleasure Wagons:

I claim forming the body, A, of the vehicle, of two elastic parts a a

I also claim the lever, V, spring, J, segment gear, U, in combination with the cog, S, and cam, E, and spring, Y, in the manner and for the purpose described.

34,397.—J. Lofodahll (assignor to himself and N. P. Lindergreen), of Boston, Mass., for Improvement in Spool-holding Devices:

I claim the construction of the bracelet or wristband, A, and hooks, B C, either or both, to form a new and useful implement or device for the purpose set forth.

[This invention consists in attaching one or more hooks to a bracelet or wristband for the purpose of holding the balls or spools of yarn, the bracelet or wristband being placed on the arm of the person knitting, and the ball or spool suspended to the bracelet or wristband by the hook or hooks, so that the yarn may freely unwind from the ball or spool during the process of knitting.]

34,398.—J. W. Wheeler (assignor to H. H. Wheeler), of Cleveland, Ohio, for Improvement in Water Elevators:

I claim a wheel or pulley having a V-shaped channel upon its periphery to receive the chain or rope, the inclined sides, A, of said channel being corrugated laterally and the bottom, C, open, as and for the purpose described.

RE-ISSUES.

1,273.—Moses Marshall, of Lowell, Mass., for Improvement in Pegging Machines. Patented November 5, 1861:

I claim a feeding point so arranged and operated as to enter the hole previously made by the awl and move the machine along, for the purpose set forth.

1,274.—D. B. Rogers, of Allegheny, Pa., for Improvement in Cultivator Teeth. Patented November 1, 1845. Re-issued September 20, 1859, and Extended:

First, I claim making cultivator teeth entire of thin plate steel, the shank or upper part being bent or curved round in front, substantially as described and for the purposes set forth, irrespective of the mode of attaching the tooth to the beam.

Second, Attaching cultivator teeth to the cultivator frame by inserting the upper end of the shank (curved round in front for that purpose), into a suitable hole in the beam, and driving a key or wedge into the cavity of the tooth, thereby pressing the shank against the sides and front of the hole in the beam and thus securing it in its place.

1,275.—C. T. James, of Providence, R.I., for Improvement in Projectiles. Patented February 26, 1856. Re-issued December 11, 1860:

I claim combining with the body of the projectile an expansible packing, substantially as described, and capable of being expanded outwardly against the bore of the cannon, and into the grooves thereof if rifled, by the force of the exploded charge acting inside of such packings, substantially as described.

I also claim connecting the expansible packing with the body of the projectile by clips, which will not prevent the required expansion, and which will insure the rotation of the body of the projectile with such packing as described.

I also claim making the outer surface of the packing of projectiles, intended to be forced into contact with the bore of the cannon and into the grooves thereof, of fibrous, textile, or equivalent non-metallic substance, substantially as described.

DESIGNS.

1,524.—John Eiberweiser and Edward Kettle, of Cincinnati, Ohio, for Design for Stove.

1,525.—H. G. Thompson, of New York City, assignor to the Hartford Carpet Co., for thirteen Designs for a Carpet Pattern.

PATENTS FOR SEVENTEEN YEARS.



The new 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 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 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.

During the last sixteen 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 more than FIFTEEN 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.

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 to us, with a full description, for advice. The points of novelty are carefully examined, and a reply written corresponding with the

facts, free of charge. Address MUNN & CO., No. 37 Park-row, New York.

Preliminary Examinations at the Patent Office.

The advice 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. More than 5,000 such examinations have been made through this office during the past three years. Address MUNN & CO., No. 37 Park-row, N. Y.

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 prepaid. 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.

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, in English and German, 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. 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 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.

Circulars of information concerning the proper course to be pursued in obtaining Patents in foreign countries through our Agency, the requirements of different Patent Offices, &c., may be had gratis upon application at our principal office, No. 37 Park-row, New York, or either of our Branch Offices.

Assignments of Patents.

The assignment of Patents, and agreements between Patentees and manufacturers, 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 the Inventor or Patentee 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.

Money Received

At the Scientific American Office on account of Patent Office business, during one week preceding Wednesday, Feb. 19, 1862:—

J. B. Van D., of N. Y., \$20; J. G. L., of Del., \$40; B. and B., of Pa., \$20; D. F. M., of Conn., \$40; G. W. P., of N. Y., \$45; W. L. G., of N. Y., \$45; L. C. P., of Conn., \$45; J. A. A., of Wis., \$40; R. G., of N. Y., \$15; O. W. S., of Me., \$15; J. E. S., of N. Y., \$15; J. H. C., of Pa., \$25; H. and B., of Mich., \$10; R. H., of N. Y., \$15; C. and F., of Iowa, \$15; P. H., of France, \$245; A. J. A., of Wis., \$40; R. G., of N. Y., \$15; L. F. L., of Ill., \$15; J. W. K., of Mich., \$15; W. T. G., of N. J., \$15; R. M. G., of Me., \$25; C. W. S., of Me., \$20; C. B. S., of Mass., \$20; J. P., of N. Y., \$20; F. H. C., of N. J., \$20; E. M. and J. E. M., of N. Y., \$45; G. O. T., of Mass., \$60; J. S., of Pa., \$43; W. N., Conn., \$22; W. O. H., of Pa., \$40; A. McF., of Wis., \$25; I. S., of N. Y., \$22; C. N., of N. H., \$25; J. H. V., of Mass., \$15; W. H. H., of Conn., \$30; C. R., of Pa., \$15; C. J. A., of N. H., \$12; W. McK., Pa., \$15; S. B. O., of Cal., \$15; O. S., of O., \$20; G. N. C., of Conn., \$15; H. T. P., of Conn., \$15; A. K. R., of Vt., \$15; E. M. J., of N. Y., \$20; J. A. B., of Mass., \$20; J. A. W., of O., \$20; G. M. Z., of O., \$20; G. W. R., of Ind., \$20; F. W. S., of Pa., \$20; J. H., of N. Y., \$25; J. H. G., of Mass., \$15; R. J., of O., \$25; S. A., of —, —; A. J., of N. Y., \$15; C. C., of Pa., \$20; J. B., of N. Y., \$15; A. J., of Iowa, \$15; J. H. I., of Ill., \$55; E. J. W., of N. Y., \$25; J. S. F., of Ill., \$25; F. and S., of Wis., \$15; K. H. E., of Vt., \$25; S. A. B., of R. I., \$25; J. N. B., of N. Y., \$15; J. J. A., of Mich., \$15; J. Z., of Ill., \$15; J. M. N., of Cal., \$18; M. L. and V., of N. Y., \$15; J. McG., of N. Y., \$15; E. C., of Ky., \$100; V. L., of N. Y., \$10; B. and Van D., of N. Y., \$30; C. C., of Mich., \$15; J. L. L., of Pa., \$25; C. E., of Germany, \$160; G. P. and W., of Ill., \$20; H. S. and R., of Vt., \$43; G. W., of N. Y., \$45; A. McN., of N. J., \$25; L. J. and E. D. G., of N. Y., \$25; M. and T., of N. J., \$25; W. H. D., of N. Y., \$30; S. A., of Me., \$15.

Specifications and drawings and models belonging to parties with the following initials have been forwarded to the Patent Office from Feb. 12, to Wednesday Feb. 19, 1862:—

H. S. and R., of Vt.; D. F. M., of Conn.; J. G. L., of Del.; H. J., of Conn.; P. J., of N. J.; A. McN., of N. J.; A. McF., of Wis.; L. J. and E. D. G., of N. Y.; R. J., of O.; J. H., of N. Y.; J. H. C., of Pa.; C. N., of N. H.; W. H. H., of Conn.; J. S., of N. J.; C. J. A., of N. H.; J. S., of N. Y.; K. H. E., of Vt.; O. S., of O.; S. A. B., of R. I.; R. W. G., of Me.; J. S. F., of Ill.; J. H. I., of Ill. M. and T., of N. J.; J. P., of N. Y.; A. J. A., of Wis.; E. J. W., of N. J.; C. C., of Pa.; W. H. D., of N. Y.; G. F. J. C., of N. J.; L. and D., of London; B. and Van D., of N. Y.; W. N., of Conn.; C. E. S., of Wis.; L. F., of Germany.



E. L., of N. Y.—H. L. Lloyd & Co., map publishers, No. 25 Howardstreet, have issued by far the best map of the United States we have yet seen.

L. R. R., of Pa.—We are not advised of any efforts on the part of the Canadian Parliament to modify the patent laws of the provinces.

E. A. D., of Mass.—Gumshellac dissolved in alcohol makes a water-proof glue sufficiently adhesive we should think for paper.

J. F. A., of New Brunswick.—Hydraulic cement is the proper substance for plastering your water vat. It must be wet in small quantities and put on immediately. If suffered to stand half an hour after it is wet before being applied, it is spoiled.

J. B., of N. J.—You can bleach leaves by hanging them in a barrel and burning a little sulphur in the barrel. The product of the combustion of sulphur is sulphurous acid which is a powerful bleaching agent, and a gas.

F. E., of Mass.—It was asserted that saltpeter confined in one of the stores in New York was the cause of several explosions during a large fire, but experiments have failed to confirm such assertions.

R. H. J., of Ill.—Operators on telegraph lines frequently communicate with one another by touch without a sounding magnet. No visitors are now permitted to stand in the vicinity of the sounding magnet in the telegraph offices.

L. C. C., of Mass.—The gun powder engine to which you refer is not patented. We do not think such an engine is suitable for propelling your air ship.

A. J. K., of Ill.—We do not know where you can obtain a hollow iron wire tube about 1/4 of an inch in diameter.

H. B., of C. W.—A niline colors are not suitable for coloring glass by being melted in a crucible for blowing.

L. E. H., of Conn.—About the time the article to which you refer about perpetual motion, appeared in the Journal of Commerce, we published the article in full in the SCIENTIFIC AMERICAN. We refer you to the back volumes of the paper.

G. H. W., of N. Y.—On page 198, Vol. IV. of the SCIENTIFIC AMERICAN, you will find the regulation about the admission of engineers into our navy.

R. J., of Ill.—You will find tables of the weight of round and square rolled iron on page 184 of "Nystrom's Mechanic's Pocket Book," published by J. B. Lippincott & Co., Philadelphia. Muntz metal is composed of 6 parts copper and 4 of zinc.

S. C., of N. Y.—Porcelain is gilded by painting finely comminuted gold on to the surface mixed with a fusible frit. It is allowed to dry and is put into a potters kiln and fired. Messrs. Haughtwout, Broadway, this city, ornament their own porcelain.

A. E. J., of Conn.—The silicate of potash renders wood hard and impervious to moisture, if it is washed with dilute muriatic acid after the silicate has become dry.

S. O. C., of N. Y.—The composition for rockets consists of one pound of gunpowder to two ounces of soft charcoal in powder and one and a half ounces of saltpeter. For the largest rockets add some sulphur and iron filings. Mix these ingredients dry. The composition may be varied and you can use just such a quantity of it as will answer for the size of the rocket you require.

V. P. F., of Vt.—It has been proposed to us several times to propel a vessel by a steam jet acting upon the water through a tube at the stern, but the mode is not good, on account of the condensation of so much steam without producing mechanical propelling action in the vessel. A jet of water has been applied in this manner without success. This was Rumsey's mode of propelling vessels and was used upon the first steamboat in America.

E. & R., of —.—Zinc is manufactured by the Lehigh Zinc Co., Bethlehem, Pa., to whom we refer you for particulars.

C. S., of Ohio.—You will find a full account of the Bessemer process in the back volumes of the SCIENTIFIC AMERICAN to which we refer you. Unless you can show good reason for your delay, in applying for a patent on your improvement in the manufacture of iron, the office might refuse to allow your claim on the ground of abandonment. It will not do for an inventor to look on and see another develop and put into public use an improvement and then come forward after the delay of two or three years and make claim to it. This practice will not do.

C. T., of Phila.—Horn is softened by boiling it in water. It becomes so pliable that it may be molded under pressure into almost any form. In order to render horn smooth it should be scraped when it is soft after being boiled. It may be scraped so thin as to become almost transparent. The nitrate of silver is employed to stain it black and nitric acid colors it yellow.

W., of N. Y.—The lens having the highest magnifying power is the double convex, and its power is in proportion to its convexity.

J. G. W., of N. Y.—The application of several charges in the barrel of a musket, to be discharged in succession, one after another is not new, as a patent was granted in 1825 to J. Mould, London, for thus constructing fire-arms.

SPECIAL NOTICE—FOREIGN PATENT.—The population of Great Britain, is 30,000,000; of France, 35,000,000; Belgium, 5,000,000; Austria, 40,000,000; Prussia, 20,000,000; and Russia, 60,000,000. Patents may be secured by American citizens in all of these countries. Now is the time, while business is dull at home, to take advantage of these immense foreign fields. Mechanical improvements of all kinds are always in demand in Europe. There will never be a better time than the present to take patents abroad. We have reliable business connections with the principal capitals of Europe. Nearly all of the patents secured in foreign countries by Americans are obtained through our agency. Address Munn & Co., 37 Park row, New York. Circulars about foreign patents furnished free.