

44,679.—Harvesters.—Julius Thompson, of New York City:

First, I claim a main frame of a harvesting machine, constructed with a tubular socket for the axle of the running wheels, in such a manner that the said socket performs the double function of sustaining the said axle and of stiffening the frame transversely, substantially as set forth.

Second, I also claim a main frame of a harvesting machine, constructed with a socket for the tongue, in such manner that the said tongue socket performs the double function of sustaining the tongue upon all of its sides and stiffening the frame longitudinally, substantially as set forth.

Third, I also claim the combination of the cog wheels of a harvesting machine, with still or silent shafts, which are rigidly secured to the frame of the machine, substantially as set forth.

Fourth, I also claim the combination of two of the cogwheels that impart motion to the cutter with each other by means of a saw-toothed spring clutch, so that the cogwheel nearer the cutter remains stationary when the machine is backed, and that the clutch may be operated by a lever to stop the cutter, substantially as set forth.

Fifth, I also claim the combination of the finger beam with the main frame by means of lugs and one of the shafts of the cutter gear, in such manner that the said shaft performs the double function of pinion, shaft and joint pin for the hinge joint, substantially as set forth.

Sixth, I also claim the mechanism for raising and lowering the cutter bar, consisting substantially of a winch, vibrating lever and saw-toothed clutch, combined together and operating substantially as set forth.

Seventh, I also claim the combination of the bevelled wheels together, by means of flanges which engage with each other and prevent the separation of the teeth of the wheels by movement in the direction of the axis of the wheels, substantially as set forth.

Eighth, I also claim the combination of the driving pulley of the reel with the grain wheel, by means of a spring clutch, in such manner that the revolution of the reel stops whenever the said grain wheel runs backward, substantially as set forth.

Ninth, I also claim the combination of a hollow reel shaft with a rod that connects the upper ends of the reel standards, so that the reel turns upon the said rod.

44,680.—Apparatus for Handling Vicious Horses.—Owen Turner, of Clinton, Wis.:

I claim, first, A harness adapted for correcting vicious habits in animals, which consists of a fetlock strap, A, controlling rein, A, fetlock strap, D, and girth, B, applied and operating substantially as described.

Second, The elastic-supporting strap, C, in combination with the controlling strap, A, when the latter is arranged substantially as and for the purposes described.

Third, The combination of the controlling rein, A, fetlock straps, A and D, and looped girth, B, with a supporting strap, C, substantially as and for the purposes described.

Fourth, The construction of the fetlock strap, A, for the front foot, with a pulley, B, applied to it in such a manner as to allow the controlling straps to slip freely through it in managing the horse, substantially as described.

44,681.—Mechanical Movements.—Maximilian Wappich, of Sacramento, Cal.:

I claim, first, A spiral thread, partaking closely of the character of a compound wedge, but in form lenticular, substantially as and for the purposes described.

Second, In combination with a pin wheel a spiral lenticular thread which will practically operate upon two or more of the pins of said wheel at the same time, substantially as set forth.

44,682.—Horse-hay Forks.—J. L. Wells, of Stockbridge, New York.

I claim, first, The curved or concave cast-iron head, A, provided with thorns, B B, to operate in connection with the catches, G G, and beam, C, substantially as and for the purpose set forth.

Second, Attaching the tines, F, to the head, A, by means of the bolts, E, and notches, I, as described.

Third, The straps, L, L, attached to the beam, C, as shown, when used in combination with the arms, B, B, and beam, C, substantially as and for the purpose set forth.

[This invention relates to a new and improved mode of constructing the fork generally, whereby great strength may be obtained, the load readily discharged, and device rendered capable of being easily managed by the operator.]

44,683.—Apparatus for Preserving Provisions.—Charles Winship, of New Haven, Conn.:

I claim conducting cooled air to and causing the same to circulate through a chamber, substantially as specified.

44,684.—Method of Stopping Bottles.—Albert Albertson, (assignor to J. N. McIntyre) of New York City:

I claim, first, The employment in combination with a bottle having the interior of its neck suitably formed to receive it, of a stopper constructed to operate in closing and unclosing the bottle, substantially as described.

Second, I claim so constructing the valve, C, and the mouth of the bottle that the former may be readily forced through the latter in one direction, and incapable of easy passage through it in the opposite direction, as hereinbefore described, for the purpose set forth.

Third, I claim making the entire stopper of such a length that it cannot turn over in the body of the bottle, as and for the purpose set forth.

44,685.—Apparatus for Filling Bottles.—Albert Albertson, (assignor to J. N. McIntyre) of New York City:

I claim filling and unclosing the filled or supplied bottles substantially as set forth, by the gravitation of the stopper.

44,686.—Running Stitch Sewing Machines.—John D. Dale, (assignor to himself and A. M. Badger) of New York City:

I claim, first, The combination of the clamping levers, E and D, with the rolling needle stop, A', operating substantially in the manner and for the purpose set forth.

Second, I claim the relief tooth wheel, in combination with yielding feed rollers, B B, and reciprocating cloth guide, C, substantially in the manner and for the purpose set forth.

Third, I claim the manner described, or its equivalent, for clamping and holding a common sewing needle firm enough to prevent its slipping while the cloth is being pulled out.

44,687.—Apparatus for Cutting and Creasing Paper for Envelopes, etc.—Martial Dimock, of Newark, N. J., assignor to Fitch, Estee & Co., of New York City:

I claim the countersink, G, Fig. 4, with elastic bed, and the die, F, Fig. 3, with projecting blades, H, to indent or partially sever the paper or other material used (for the purpose of facilitating the folding thereof), constructed and operated substantially as and for the purpose set forth.

44,688.—Machine for Paring the Edging of Boots and Shoes.—Horatio Hodges, (assignor to himself and David Waddy) of Lynn, Mass.:

I claim the rotary or sole edge cutter or combination of the annular bar and the guard or guide, arranged together and on a shaft, as specified.

I also claim the combination of the tubular split, tapering shank and its screw and nuts, with the bur and the guide or guard, the whole being arranged together substantially as specified.

44,689.—Caster for Trunks.—Henry T. Lee, (assignor to himself and David Frost) of Jersey City, N. J.:

I claim the flanged rocket, D, in combination with the caster, E, spring, C, and cap, A, constructed and operating in the manner and for the purpose substantially as set forth.

[This invention consists in a yielding spring caster, applied in combination with a cap, forming a cavity to receive the spring and shank of the caster, in such a manner that by the cap the cover of the trunk or other article to which it may be attached is prevented from uplifting, and at the same time the cap forms a guide for the shank of the caster, and prevents the same being exposed to a lateral strain.]

44,690.—Machines for Making Boxes.—Thomas C. Luther, of Lee, Mass., assignor to the American Flask and Cap Company, of Waterbury, Conn.:

I claim the stationary rollers, G G, in connection with the movable or adjustable roller, I, and belt, J, all arranged to operate substantially as and for the purpose herein set forth.

I further claim the box, D, and roller, E, in connection with the drum, C, and the rollers, I G G, all arranged to operate substantially as and for the purpose herein set forth.

[This invention is more especially designed for putting the covering on external paper band or cylindrical paper boxes, for the purpose of securing the top and bottom to the body of the box. It may, however, be used for covering wooden or sheet-metal cylindrical boxes.]

44,691.—Pegging Machine.—Joseph F. Sargent, (assignor to Elmer Townshend) of Boston, Mass.:

I claim in a pegging machine the employment of a jack, so constructed or mounted that it can turn or be turned laterally, to hold the shoe properly to the action of theawl, throughout its varying lateral curvature.

I also claim so organizing the jack with the levers or system of levers supporting it that the jack is turned automatically, to bring the shoe laterally into position for the proper insertion of theawl and peg.

I also claim operating the swing piece by the eccentric, to produce the feed and transfer of contact, substantially as set forth.

Also the combination of the eccentric for operating the swing piece with the cam and spring for operating the driver bar.

I also claim giving the swing piece, K, a simultaneous lateral and vertical motion, substantially as and for the purpose set forth.

I also claim the employment of the swinging brake, E, operating upon the wheel, C, substantially as specified.

I also claim so constructing and applying the feed-foot, as to operate in the same vertical plane with the retainer (instead of through a slot in the same), in the manner and for the purpose substantially as set forth.

I also claim the construction by which the blow of theawl and peg driver bar is arrested at the bottom of the swing plate, substantially as described.

And in combination with anawl bar (or anawl and peg driver bar, having its downward movement imparted by a spring), I claim the method of regulating the force of the blow given to the bar by an adjusting screw, O, substantially as shown and described.

44,692.—Priming Cartridges.—Charles Edward Snelder (assignor to himself and Thomas Poultney), Baltimore, Md.:

I claim, first, In combination with a cartridge which is exploded by an end blow upon a pin reaching the fulminate or cap on the base of the ball, making the cartridge case extend out as far as the point of the ball, so as to abut against the rear end of the barrel and prevent the forward motion of the ball or its protrusion into the bore previous to firing.

Second, I claim the combination of the recessed end of the cartridge case and the central cartridge pin, which form a gas-tight joint by the contraction of the rear of the case around the pin, under the force of the discharge.

44,693.—Buckle for Harness Tugs.—Richard Tattershall (assignor to himself and A. J. Battin), Belvit, Wis.:

I claim the frame, A, provided or cast with the plates, C C D, in combination with the clamp, B, fitted in the frame, A, as shown, and the lever plate, C, provided with the eccentric projection, D, fitted to the bar, E, substantially as and for the purpose herein set forth.

[This invention relates to a new and improved buckle for harness tugs, wherein the use of a tongue is dispensed with and consequently the perforating of the trace.]

44,694.—Car Truck.—Charles D. Tisdale, East Boston, Mass., assignor to himself and Joseph H. Clapp, Boston, Mass.:

I claim the new or improved wheel locking mechanism, or combination consisting of the double-catch, D, the elastic band, E, and either one or two grooves, C D, and applied to the wheel sleeve and axle, and so as to operate therewith substantially as herein specified.

44,695.—Cigars.—S. Davis, Montreal, Canada:

I claim as a new article of manufacture a medicated segar composed of tobacco leaves mixed with the leaves of belladonna, in the manner and proportions herein specified.

[This invention consists of segars made of a composition of tobacco leaves mixed with a small quantity of the leaves of belladonna, digitalis, or other similar medical plants, in such a manner that the specifics contained in said plants are introduced into the system of the human body together with the tobacco smoke in a finely divided state, and thereby the healing qualities of said plants are enabled to exert a much more powerful effect than they can when introduced into the system in the ordinary manner.]

44,696.—Propeller and Steering Apps.—Henry Ressel, Vienna, Austria:

I claim, first, The studs, f, and segmental grooves, e, applied in combination with the socket, c, and globe, d, and with the shafts, C and F, in the manner and for the purpose substantially as set forth.

Second, The use of the cap, h, in combination with the ball and socket joint, G, and shafts, C and F, applied and operating substantially as and for the purpose described.

Third, The grooves, i, and rings, j, applied in combination with the ball and socket-joint, G, propeller screw, A, shafts, C and F, and frame, B, in the manner and for the purpose substantially as set forth.

44,697.—Ventilating Sweat Leather for Hats and Caps.—A. H. Taylor, San Francisco, Cal.:

I claim, first, The application to a hat or cap of a corrugated sweat lining, said corrugations running diagonally with the plane of the under side or rim as shown in the drawings, the corrugations running around the inside of the hat or cap with the exception of a portion in front, which is smooth to fit the forehead.

Second, I claim the smooth part of the lining in front in combination with the diagonal corrugation, as described.

Third, I claim corrugating a sweat lining, in the manner shown and specified (as occupying the complete inner circle of the hat or cap, with the exception of the portion in front, which is made smooth to fit the forehead of the wearer), substantially as shown and set forth herein.

RE-ISSUES

1,790.—Horse-shoe.—O. A. Howe, New York City. Patented Sept. 15, 1863:

I claim a horse-shoe provided at its under or face side with a groove, having pendant projections or their equivalent within it to hold a filling of india-rubber or any other suitable material, substantially as herein set forth.

1,791.—Water Wheel.—James Lefel, Springfield, Ohio. Patented Jan. 14, 1862:

I claim, first, The above described wheel, constructed with two independent sets of buckets, A and B, the former having a central, and the latter a vertical discharge, substantially as described.

Second, I claim constructing and arranging the annular diaphragm, D, to operate in the manner and for the purpose herein set forth.

Third, I claim in combination with the diaphragm, D, I claim the vertically discharging buckets, B, when constructed and arranged to operate as and for the purpose set forth.

Fourth, In combination with an upper plate, B, whose inner surface shall be slightly concave in that portion directly over the buckets, I claim making the surface upon which the lower edge of said buckets rest, curved as shown and described.

1,992.—Case for Water Wheels.—James Lefel, Springfield, Ohio. Patented Jan. 14, 1862:

I claim, first, The crown plate, A, provided with the horizontally projecting rim, C, and hub, A', as and for the purpose set forth.

Second, The cylindrical tube, R, provided with the horizontally projecting flange, E, when used in combination with plate, A, as herein described.

Third, I claim the gate, H, when constructed and operating as and for the purpose substantially as herein specified.

Fourth, In combination with the parts, A and R, I claim the use of a series of gates, H, as and for the purpose set forth.

Fifth, In combination with the cylindrical casing of a turbine wheel, I claim a series of scroll shaped gates so hung that they shall be nearly balanced by the pressure of the water.

Sixth, I claim the combination and arrangement of the collar, L, rods, P, lever, M, provided with the rock-bar, O, and pinion, N, when constructed to operate in the manner and for the purpose herein set forth.

1,993.—Cider Mill.—H. K. Parsons (assignee by mesne-assignments of John Kranser), Harrisburgh, Pa. Patented Aug. 30, 1853:

I claim, first, So locating the hopper, as that the substance to be ground shall be delivered upon that portion of the piston or crusher which shall be within the hopper when thrust forward, or into the space formed by the withdrawal of the same, when thrown backward.

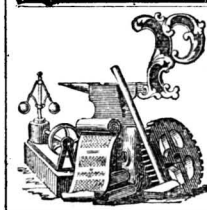
Second, I claim operating the pistons or concaves of a cider mill, by means of eccentrics, whether said pistons be arranged as in Figs. 1 and 2, to move in a straight line, or to be pivoted at top or bottom, as in Figs. 8 and 9.

Third, I claim the concave, K, arranged to operate in combination with the pistons, P, or with the concaves, D, as and for the purposes set forth.

EXTENSION.

Water Wheel.—Timothy Rose, Cortlandville, N. Y. Patented Sept. 24, 1850:

I claim the discharge aperture of the chutes movable relatively to the axis of the wheel, or the axis of the wheel movable relatively to the aperture of the chute, substantially as described, for the purpose of varying the effective diameter of the wheel and thereby increasing or decreasing the velocity thereof, substantially as described.



PATENTS

GRANTED

FOR SEVENTEEN YEARS!

MUNN & COMPANY,

In connection with the publication of the SCIENTIFIC AMERICAN, have acted as Solicitors and Attorneys for procuring "Letters Patent" for new inventions in the United States and in all foreign countries during the past seventeen years. Statistics show that nearly ONE-THIRD of all the applications made for patents in the United States are solicited through this office; while nearly THREE-FOURTHS of all the patents taken in foreign countries are procured through the same source. It is almost needless to add that, after seventeen years' experience in preparing specifications and drawings for the United States Patent Office the proprietors of the SCIENTIFIC AMERICAN are perfectly conversant with the preparation of applications in the best manner, and the transaction of all business before the Patent Office; but they take pleasure in presenting the annexed testimonials from the last ex. Commissioners of Patents:

MESSRS. MUNN & CO.—I take pleasure in stating that, while I held the office of Commissioner of Patents, MORE THAN ONE-FOURTH OF ALL THE BUSINESS OF THE OFFICE CAME THROUGH YOUR HANDS. I have no doubt that the public confidence thus indicated has been fully deserved, as I have always observed, in all your intercourse with the office, a marked degree of promptness, skill, and fidelity to the interests of your employers. Yours very truly, CHAS. MASON.

Judge Mason was succeeded by that eminent patriot and statesman, Hon. Joseph Holt, whose administration of the Patent Office was so distinguished that, upon the death of Gov. Brown, he was appointed to the office of Postmaster-General of the United States. Soon after entering upon his new duties, in March, 1859, he addressed to us the following very gratifying letter:

MESSRS. MUNN & CO.—It affords me much pleasure to bear testimony to the able and efficient manner in which you discharged your office while I had the honor of holding the office of Commissioner. Your business was very large, and you sustained (and I doubt not justly deserved) the reputation of energy, marked ability, and uncompromising fidelity in performing your professional engagements.

Very respectfully, your obedient servant, J. Holt

Hon. Wm. D. Bishop, late Member of Congress from Connecticut, succeeded Mr. Holt as Commissioner of Patents. Upon resigning the office he wrote to us as follows:

MESSRS. MUNN & CO.—It gives me much pleasure to say that, during the time of my holding the office of Commissioner of Patents, a very large proportion of the business of inventors before the Patent Office was transacted through your agency; and that I have ever found you faithful and devoted to the interests of your clients, as well as eminently qualified to perform the duties of Patent Attorneys with skill and accuracy. Very respectfully, your obedient servant, WM. D. BISHOP.

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.

As an evidence of the confidence reposed in their Agency by inventors throughout the country, Messrs. MUNN & CO. would state that they have acted as agents for more than 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 they have taken out patents have addressed to them most flattering testimonials for the services rendered them; and the wealth which has inured to the individuals whose patents were secured through this office, and afterwards illustrated in the SCIENTIFIC AMERICAN, would amount to many millions of dollars! Messrs. MUNN & CO. would state that they never had a more efficient corps of Draughtsmen and Specification Writers than those employed at present in their extensive offices, and that they are prepared to attend to patent business of all kinds in the quickest time and on the most liberal terms.

PRELIMINARY EXAMINATIONS AT THE PATENT OFFICE.

The service which Messrs. MUNN & CO. 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 they may acquire of a similar invention from the records in their Home Office. But for a fee of \$5, accompanied with a model, or drawing and description, they 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 the Branch Office of Messrs. MUNN & CO., corner of F. and Seventh streets, Washington, by experienced and competent persons. Many thousands of such examinations have been made through this office, and it is a very wise course for every inventor to pursue 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 a draft on New York, payable to the order of Messrs. 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.

Patents are now granted for SEVENTEEN years, and the Government fee required on filing an application for a patent is \$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.....	\$30
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 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 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 (except in cases of designs) on the above terms. Foreigners cannot secure their inventions by filing a caveat; to citizens only is this privilege accorded.

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

REJECTED APPLICATIONS.

Messrs. MUNN & CO. are prepared to undertake the investigation and prosecution of rejected cases, on reasonable terms. The close proximity of their Washington Agency to the Patent Office affords them rare opportunities for the examination and comparison of references, models, drawings, documents, &c. Their success in the prosecution of rejected cases has been very great. The principal portion of their 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 MUNN & CO., on the subject giving a brief history of the case, inclosing the official letters, &c.

FOREIGN PATENTS.

Messrs. MUNN & CO., are very extensively engaged in the preparation and securing of patents in the various European countries. For the transaction of this business they have offices at Nos. 66 Chancery Lane, London; 29 Boulevard St. Martin, Paris; and 26 Rue des Eperonniers, Brussels. They think they can safely say that THREE-FOURTHS of all the European Patents secured to American citizens are procured through their 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 MUNN & CO'S Agency, the requirements of different Government Patent Offices, &c., may be had, gratis, upon application at the principal office, No. 37 Park Row, New York, or any of the branch offices.

SEARCHES OF THE RECORDS.

Having access to all the official records at Washington, pertaining to the sale and transfer of patents, MESSRS. MUNN & CO., are at all times ready to make examinations as to titles, ownership, or assignments of patents: Fees moderate.

INVITATION TO INVENTORS.

Inventors who come to New York should not fail to pay a visit to the extensive offices of MUNN & CO. They will find a large collection of models (several hundred) of various inventions, which will afford them much interest. The whole establishment is one of great interest to inventors, and is undoubtedly the most spacious and best arranged in the world.

MUNN & CO. wish it to be distinctly understood that they do not speculate or traffic in patents, under any circumstances; but that they devote their whole time and energies to the interests of their clients.

COPIES OF PATENT CLAIMS.

MESSRS. MUNN & CO., having access to all the patents granted since the rebuilding of the Patent Office, after the fire of 1836, can furnish the claims of any patent granted since that date, for \$1.

THE VALIDITY OF PATENTS.

Persons who are about purchasing patent property, or patentees who are about erecting extensive works for manufacturing under their patents, should have their claims examined carefully by competent attorneys, to see if they are not likely to infringe some existing patent, before making large investments. Written opinions on the validity of patents, after careful examination into the facts, can be had for a reasonable remuneration. The price for such services is always settled upon in advance after knowing the nature of the invention and being informed of the points on which an opinion is solicited. For further particulars address MUNN & CO., No. 37 Park Row New York.

EXTENSION OF PATENTS.

Many valuable patents are annually expiring which might really be extended, and if extended, might prove the source of wealth to their fortunate possessors. Messrs. MUNN & CO. are persuaded that very many patents are suffering to expire without any effort at extension, owing to want of proper information on the part of the patentees, their relatives or assigns, as to the law and the mode of procedure in order to obtain a renewed grant. Some of the most valuable grants now existing are *extended patents*. Patentees, or, if deceased, their heirs, may apply for the extension of patents, but should give ninety days' notice of their intention.

Patents may be extended and preliminary advice obtained, by consulting or writing to MUNN & CO., No. 37 Park Row, New York.

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.

UNCLAIMED MODELS.

Parties sending models to this office on which they decide not to apply for Letters Patent and which they wish preserved, will please to order them returned as early as possible. We cannot engage to retain models more than one year after their receipt, owing to their vast accumulation, and our lack of storage room. Parties, therefore, who wish to preserve their models should order them returned within one year after sending them to us, to insure their obtaining them. In case an application has been made for a patent the model is in deposit at the Patent office, and cannot be withdrawn.

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



**W. V. H., of N. Y.**—A fly-wheel does not create power—the idea is absurd. It is employed for two distinct offices. First, to give uniformity to the motion of machinery in cases where either the force or the resistance is variable. Second, to accumulate the power where a resistance greater than that of the force is to be overcome for a short period. An instance of the latter application is seen in the steam punch, where the resistance in some cases would stop the engine but for the aid of the heavy fly-wheel, in which the power of the engine for some time has been accumulated.

**J. T. S., of N. Y.**—High piston speed is a desirable element in an engine, but we cannot see how a much higher velocity can be got with a pair of double engines than with one engine of the pair. Some advantage may be derived from one helping the other off its centers, but if one engine runs 600 feet per minute, it does not follow by any means that two engines will run 1,200 feet. A high piston speed is economical, other things being equal. Any engine will run at high speed if you give it steam high enough and it is sufficiently large for the work. Mr. John Wiley, of Broadway New York, will furnish you with a book on ship-building.

**P. S. S., of Pa.**—We have no doubt that Mr. Hogg was in error in supposing that canned fruit will keep better without the addition of sugar. It is true that a small quantity of sugar in water will cause fermentation, but it is also true that a weak solution of sugar will ferment more readily than a concentrated one; indeed if it is sufficiently concentrated no fermentation will take place. All fruit contains sugar or starch enough to induce fermentation, and the addition of more sugar will doubtless tend to prevent fermentation.

**F. E. W., of Mass.**—You are mistaken in regard to the law. Unless you made a definite agreement with your workman to get up the improvement for you, you could lay no claim to it. He is employed by you to do a certain amount of work for certain wages, but has not pledged to you the result of his ingenuity in devising new inventions. This is as we understand the matter.

**W. T. C., of Mass.**—The mistake you made was in delaying your application for a patent, until some one has got a patent for the same thing. In order now to vindicate your rights, you must apply for a patent, and have your claims put into interference with those allowed to the other party. Many inventors by delaying their applications, involve themselves in much trouble.

**B. & D., of N. H.**—Steam causes the whistle to vibrate rapidly, that is what gives the sound. The steam strikes the thin edge percussively, or like a hammer, and that is what makes the vibrations. The pitch or note of all musical sounds is determined by the number of vibrations occurring in a given time.

**J. H. C., of N. H.**—If the watch falls with the same velocity of course the shock of the pivots of the balance wheel will be the same; but with a thicker case it would fall through the air with slightly greater velocity.

**J. F., of N. Y.**—Messrs. Balliere & Brothers, No. 440 Broadway, New York, have published a treatise on coal oil and petroleum by Abraham Gesner, M.D., F. G. S.

**H. H., of Ohio.**—Your improvement in sawing machines seems to be new, but before applying for a patent we advise you to have us make a preliminary examination into its novelty at the Patent Office.

**R. B. W., of Ohio.**—Mr. Richard Dudgeon, machinist, of Columbia street, this city, will furnish you with a punch that will cut an inch hole by hand in a bar one inch thick.

**W. C., of Pa.**—Your quadrant would measure the altitude of a star, but we should think with less trustworthy accuracy than those at present in use.

**C. R. S., of Md.**—The metal you send us is known as Chinese white copper. It is made by taking copper 40.4, nickel 31.6, zinc 26.4, iron 2.6 parts.

**E. A. K., of N. Y.**—The mechanical powers are the lever, the pulley, the wedge, the inclined plane, and the screw.

**N. W. F., of N. Y.**—There is no better electrical machine for medical purposes than Dr. Smith's, the kind you now have.

**R. B., of Canada.**—We know of no prize offered for a demonstration of the problem to bisect an angle.

Money Received

At the Scientific American Office, on account of Patent Office business, from Wednesday, Oct. 5, 1864, to Wednesday Oct. 12, 1864—

L. E., of N. Y., \$25; R. C. & M., of N. Y., \$35; B. & G., of Ill \$20  
F. H. P., of Conn., \$15; E. T. M., of N. Y., \$40; J. B., of N. Y. \$20

I. F. B., of Conn., \$81; L. W. T., of N. Y., \$22; H. S., of Tenn., \$20; I. B., of N. Y., \$20; J. B., of N. Y., \$40; C. T. W., of Pa., \$22; S. & S., of Mass., \$15; W. Y., of N. Y., \$25; G. G. P., of Pa., \$40; A. M. of N. J., \$15; A. J. N., of R. I., \$25; J. S., of Conn., \$25; W. N., of N. Y., \$25; D. H. L., of Ill., \$30; R. P. F., of Maine, \$15; C. L., of N. Y., \$40; J. S., of N. Y., \$25; D. F. W., of Mass., \$15; L. D. C., of Mich., \$40; C. S., of N. Y., \$12; H. B., of N. Y., \$30; E. S., of N. Y., \$20; J. S., of N. Y., \$45; A. C. C., of N. Y., \$40; O. G. B., of N. Y., \$20; J. C., of N. Y., \$20; A. M. G., of N. H., \$20; S. C. R., of N. Y., \$30; G. K., of Vt., \$25; H. O., of Maine, \$15; J. F. L., of Mich., \$15; S. P., of N. J., \$30; S. P. O., of Ill., \$12; A. S. M., of Ill., \$30; S. T., of Ill., \$42; F. L., of Ohio, \$15; D. I. S., of N. Y., \$25; D. F. H., of Mass., \$100; E. J. K., of N. Y., \$10; L. G. K., of Mass., \$20; V. W. B., of N. Y., \$40; M. J. D., of N. Y., \$40; J. L. T., of Ia., \$15; H. N., of R. I., \$20; H. N., of Pa., \$20; P. & S., of Conn., \$20; R. P. B., of Mich., \$20; P. S. P., of N. Y., \$20; R. & S., of Ill., \$25; C. B., of Cal., \$60; C. F., of N. Y., \$30; J. S., of N. Y., \$25; B. & L., of Cal., \$15; J. H. M., of Ohio, \$25; N. B. B., of N. Y., \$30; B. B., of R. I., \$15; T. N. D., of Ind., \$15; J. F. S., of N. Y., \$35; N. T., of N. H., \$25; M. K., of Ohio, \$25; A. J. S., of Cal., \$19; T. M., of N. Y., \$15; W. H. C., of Ind., \$25; J. H. C., of Mass., \$16; G. F., of Ill., \$25; A. R. D., of N. H., \$15; S. W. K., of Mass., \$15; W. C. McB., of N. J., \$35; S. R., of Pa., \$30; G. S., of Mass., \$15.

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