

pocket of a great coat. She is said to be a fine sea boat, and has made two or three trips, running from Cowes to Ostend, with great speed. The owner intends to use this little steamer for coasting on the Belgian coast.

The largest span of any truss bridge in the United States is that of the great bridge across the Ohio river at Louisville, which is destined to connect the Kentucky and Indiana shores. The bridge itself will be, when finished (and the engineer in charge expects to turn over his contract for the building some time in November), one of the most splendid structures of the kind in this or any other country. This last span covers three hundred and seventy feet, and is a marvel of engineering skill.

The Philadelphia Press says that the miners' strike is spreading throughout the entire coal regions. At Hazleton, Luzerne county, it has assumed a serious aspect. The strikers are laborers employed by the miners to assist them in loading and removing the coal after it has been blasted. On the 23d Aug. they stopped the pumps in all the mines except those of Pardee and Co., and it is understood that work in this mine is also suspended. The sheriff was called upon, and he proceeded to the mines with a posse comitatus with the determination of protecting the engineers.

It is a well-known fact that, when it is desirable to cover metals, especially brass or copper, with a strongly-adhering coating of tin, this is usually effected by boiling the articles to be thus coated with an aqueous fluid, to which is added cream of tartar, crystallized protochloride of tin, and some lumps of pure metallic tin. Dr. Hillier states that, instead of this mixture he uses, with very good success, a solution of 1 part of protochloride of tin in 10 parts of water, to which he next adds a solution of 2 parts of caustic soda in 20 parts of water; the mixture becomes turbid, but this does not affect the tinning operation, which is effected by heating the objects to be tinned in this fluid, care being taken, at the same time, to place in the liquid a piece of perforated block-tin plate, and to stir up the fluid during the tinning, with a rod of zinc.

Business and Personal.

The Charge for Insertion under this heading is One Dollar a Line. If the Notices exceed Four Lines, One Dollar and a Half per line will be charged.

Send for Agents' Circular—Hinkley Knitting Machine Co., 176 Broadway.

Wanted—A competent Sewing Machinist, to take charge of repairing. Address J. F. McKenney, Baltimore, Md.

Wanted—A Roper Caloric Engine, one or two-horse power. Address C. F. Werner, Orange, N. J.

Metallic Pattern Letters to put on Patterns for castings, etc. A first-class article. Allen & Brim, Seneca Falls, N. Y.

Excelsior Turbine Water Wheel.—The patentee of this superior wheel desires to enter into arrangements with millwrights and manufacturers with a view to having them manufacture and sell the cheapest, most durable, and powerful wheel used in this country. Full particulars given by circular. Address Isaac S. Roland, Reading, Pa.

Manufacturers of sugar, saw, and grist mill machinery, also of stationary and portable engines, who may require an Agent in New Orleans, La., will please address P. J. McMahon, Belmont Hotel, New York.

Peck's patent drop press. Milo Peck & Co., New Haven, Ct.

The Best and Cheapest Boiler-flue Cleaner is Morse's. Send to A. H. & M. Morse, Franklin, Mass., for circular. Agents wanted.

Minn. State Fair.—To Advertisers. Send for Circular to Post, Rochester, Minnesota.

Wanted—A Partner with capital to bring out a valuable Patent. E. Myers, Creagerstown, Md.

S. S. Pollard's celebrated Mill Picks, 137 Raymond st., Brooklyn.

Galvanizing.—Wanted—A man to take charge of a shop who perfectly understands galvanizing cast iron. Address, with terms and references, Wm. Resor & Co., Cincinnati, Ohio.

Chas. P. Williams, No. 327 Walnut st., Philadelphia, Analytical and Consulting Chemist, and Metallurgist.

E. Kelly, New Brunswick, N. J., manufactures all kinds of machinery used in working Rubber.

Materials for all Mechanics and Manufacturers, mineral substances, drugs, chemicals, acids, ores, etc., for sale by L. & J. W. Fechtwanger, Chemists, Drug, and Mineral Importers, 55 Cedar st., New York. Postoffice Box 3516. Analyses made at short notice.

Ulster Bar Iron, all sizes, rounds, squares, flats, ovals, and half-ovals, for machinery and manufacturing purposes, in lots to suit purchasers. Egleston Brothers & Co., 166 South st., New York.

Wanted—A second-hand "Index Milling Machine." Send price, etc., to W. F. Parker, Meriden, Conn.

Cochrane's low water steam port.—The best safeguard against explosions and burning. Manufactured by J. C. Cochrane, Rochester, N. Y.

Mill-stone dressing diamond machine, simple, effective, durable. Also, Glazier's diamonds. John Dickinson, 64 Nassau st., New York.

Leschot's Patent Diamond-pointed Steam Drills save, on the average, fifty per cent of the cost of rock drilling. Manufactured only by Severance & Holt, 16 Wall st., New York.

For solid wrought-iron beams, etc., see advertisement. Address Union Iron Mills, Pittsburgh, Pa., for lithograph, etc.

Machinists, boiler makers, tanners, and workers of sheet metals read advertisement of the Parker Power Presses.

Diamond carbon, formed into wedge or other shapes for pointing and edging tools or cutters for drilling and working stone, etc. Send stamp for circular. John Dickinson, 64 Nassau st., New York.

The "Compound" Wrought-Iron Grate Bar is the best and cheapest. Send for circular. Handel, Moore & Co., 12 Pine street. Postoffice Box 5,069.

For sale by State or County the Patent Right for the best Cultivator in use. For terms address Isalah Henton, Shelbyville, Ill.

Answers to Correspondents.

CORRESPONDENTS who expect to receive answers to their letters must, in all cases, sign their names. We have a right to know those who seek information from us; beside, as sometimes happens, we may prefer to address correspondents by mail.

SPECIAL NOTE.—This column is designed for the general interest and instruction of our readers, not for gratuitous replies to questions of a purely business or personal nature. We will publish such inquiries, however, when paid for as advertisements at \$1.00 a line, under the head of "Business and Personal."

All reference to back numbers should be by volume and page.

S. T. D., of Me.—It will take less power to work a force pump having a feed pipe larger than a discharge pipe, where the capacity of the pump is sufficient to supply the full capacity of the discharge. The reasons are, that atmospheric pressure can only force water through a pipe of given size at a given velocity, no matter how fast your pump is worked,

If the pump has not capacity to force out water through the discharge pipe beyond the limit of supply through a feed pipe of given size, the feed pipe need not be enlarged; but force pumps, as a rule, work under more than atmospheric pressure, and consequently will discharge water through a pipe faster than the same sized pipe would supply it under atmospheric pressure. The friction is also less in a large feed pipe. Under the circumstances you describe, where the feed water has to be raised 20 feet and forced through an orifice of 1 1/4 inches, we think the feed pipe ought to be at least 2 inches. The making the feed pipe of a pump too small is a common mistake. The feed water is raised only by atmospheric pressure, 15 pounds, while a much larger pressure is applied to the plunger of the pump. Under such circumstances the water will not be supplied to the pump with sufficient rapidity to meet the demand. If the water in your pump is forced out with great velocity, you may need to employ a still larger feed pipe to obtain satisfactory results.

J. P. D., of La.—The breaking of inferior qualities of glass in the manner described is not confined to lamp chimneys, although from the many changes in temperature to which they are subjected, it is more frequent with them. The difficulty is in the quality of the glass, both its composition and the annealing, are frequently at fault. The breaking of these chimney glasses is a great annoyance, and it is to be hoped that some inventor will give us yet a lamp that will not require a chimney. The only way to prevent in any measure this breakage, is to anneal the chimneys yourself before using them by heating them very hot and allowing them to cool slowly, but few have appliances to do this efficiently and without risk to the chimneys.

W. C. T., of Ga.—The crystals you send have no value. They are composed of quartz or silica, which is one of the most abundant and hardest of minerals, and is a constituent of many kinds of rocks. Silica does not melt under the blow pipe or dissolve in water. The dark colored mineral appears to be a form of limestone containing iron and other minerals, and is apparently of no value. It is, of course, impossible to state the exact constituents of a mineral specimen without making a careful chemical analysis.

A. R., of N. J.—The question whether a given amount of heat will develop more steam in a given time from boiling water than from water before it boils, is yet undecided. Dr. Ure thinks that boiling favors the escape of steam. We have never seen, however, any experiments, or recorded results of experiments, which are conclusive on this point. Our own opinion is that should any such experiments be tried no difference would be found.

A. R., of Pa.—The notion that a boiler sustains more pressure at the top than the bottom is an absurd mistake. The reverse is true, as in addition to the pressure of the steam above the water, there is the hydraulic pressure of the water on the bottom. As, however, the height of the water in a boiler is not generally great, there is not much difference. It is not a fact that all boilers burst at the top.

W. F. D., of N. H.—There would be no very material difference in the amount of friction in water flowing through two pipes of the same size and form, one made of cast-iron and the other of cement. A good cement pipe is as cheap as anything we know of equally efficient. Your other inquiry requires a mathematical calculation, for which you should apply to an hydraulic engineer inclosing five dollars.

J. O. L., of Ill.—We do not know enough of the device you describe to say whether it contains any points of novelty. The idea of propelling a wind wheel by upward currents through a chimney stack is not by any means new, but the method of doing it in this case may be. There is no doubt that a considerable power might be obtained in this way in a tall chimney, but it would be at the expense of the draft.

T. P., of La.—The species of silk worm you ask about, the natural food of which is the foliage of the oak, imported to the southern part of Austria and France from Japan, have not, to our knowledge, ever been brought to this country. Should any of our correspondents happen to know of a trial of this species in the United States, we should be happy to hear from him.

F. K. H., of Ohio.—To make the finest piano finish on walnut chestnut, or other open and coarse-grained woods, it is usual to use a coarse kind of varnish called scraping varnish. A heavy coat of this is laid on the raw wood, and then the surface is scraped with steel scrapers. It is then varnished with a better quality of varnish, rubbed down perfectly smooth with pumice stone, and finally flowed with the best kind of varnish.

E. P. A., of S. C.—The advantages of the hydrostatic press over all others known for certain kinds of work, are enormous power in small compass, with less friction and perfect control, both as to the extent of motion in the platen and the amount of power applied. Your device is not new in principle. A patent would not be granted for it.

C. W. C., of Pa.—The circumstances which compel the removal of your chimney stack so far away from the furnaces are unfortunate, as they will compel you to run your chimney up higher to get the proper draft. We should think thirty feet additional height would not more than fully compensate for the difference in position.

W. H. C., of N. Y.—Simply exhausting a receiver by means of an air pump, can never give any pressure upon its exterior greater than it sustains at all times, both before and after exhaustion. It simply removes atmospheric pressure from the interior.

S. T. B., of Ga.—One of the minerals you send appears to be a soft conglomerate of quartz and felspar, of no value. We find gold in the other specimen, and it appears to be gold-bearing quartz which may be valuable. You should have it analyzed.

J. W. C., of Mich.—You can not profitably extract the sugar from cream sirups which have soured.—The cost of binding the SCIENTIFIC AMERICAN in this city is \$1.50 per volume.

"Pioneer Maggie."—A correspondent wishes to know the name of the builder of the above-named yacht. We do not know, but Henry Steers, of this city, builds first-class yachts.

W. S. P., of Mass.—The origin of yeast is obscure, like the origin of every other existence. Assuming the existence of a first cause, we maintain that it is not a subject for physical inquiry. Somewhere the mind must stop at a cause uncaused, a subject for faith not demonstration.

E. G. F., of Me.—The crank is to be regarded as a lever only, the fulcrum being the center of the axle, and the resistance being applied at the circumference of the axle, the point of application of the power being the center of the crank-wrist.

Inventions Patented in England by Americans.

[Compiled from the "Journal of the Commissioners of Patents."]
PROVISIONAL PROTECTION FOR SIX MONTHS.

- 2,350.—NUMBERING REGISTER.—G. Sickels and J. H. Thorndike, Boston, Mass. August 6, 1869.
- HOLDERS FOR THE CHIMNEYS OF GAS BURNERS.—Elliott P. Gleason, New York city. August 6, 1869.
- 2,378.—MEANS FOR CARRYING OR STORING EGGS.—P. P. Josef, Buffalo, N. Y. August 9, 1869.
- 2,392.—ADDING APPARATUS.—C. Henry Webb, New York city. August 9, 1869.
- 2,392.—TREATMENT OF CONGLOMERATES OF CAST IRON, ETC.—T. S. Blair, Pittsburgh, Pa. August 10, 1869.
- 2,416.—MACHINERY FOR CHARGING GAS RETORTS.—N. O. J. Tinsdale, New Orleans, La. August 12, 1869.
- 2,425.—EXTRACTING COPPER FROM ITS ORES.—T. S. Hunt, Montreal, and J. Bourlas, Jr., Quebec, Canada, August 13, 1869.

Recent American and Foreign Patents.

Under this heading we shall publish weekly notes of some of the more prominent home and foreign patents.

VALVE GEAR FOR STEAM ENGINES.—Charles L. Inslee, New York city, and Wm. H. Inslee, Newark, N. J.—This invention relates to new and useful improvements in valves, ports, and operating devices, whereby it is designed to provide a simple and cheap plan of construction, and a more efficient arrangement of the same for operation, than any now in use. The invention consists in an improved arrangement of steam chest passages and pipes, steam and exhaust balance valves, and operating devices.

TRANSPORTATION CASE FOR PACKING CANS.—Edwin Norton, Toledo, Ohio.—The object of this invention is to provide an improved packing case for the protection of tin shipping cans, such as are used for shipping oil and other substances, and are sent back and forth, both filled and empty, and are thus subjected to damage from careless handling and other causes. The invention consists in a packing case made of wood, or other suitable substance, permanently inclosing the can, and provided with a sectional lid, cover, or door, arranged to open a sufficient space only at the nozzle, to permit of readily filling or emptying the can, the said cover or door, being arranged at any position in the case, to coincide with the nozzle of the can.

IRON MANUFACTURING APPARATUS.—John Coyne, Allegheny City, Pa.—This apparatus consists of a circular carriage arranged to revolve on a circular table, in a horizontal plane, and provided with receiving and discharging molds, which move slowly past the tap of the furnace, and receive the molten metal flowing therefrom, and convey it to the place of discharging as it cools, and from which it is discharged by the dumping of the molds by the attendant.

SHAFT AND POLE HOLDER.—James S. Totten, Lebanon, Ohio.—This invention comprises the application of holding straps of any form or arrangement, when adapted for ready attachment, to the spring bars and shaft cross bars, by buttons connecting the one, and by buckling or looping around the other.

HOSE-PIPE NOZZLE.—Archibald Williscroft, Wilmington, Del.—This invention has for its object to furnish an improved nozzle for hose pipes, which shall be so constructed and arranged that it may be easily and quickly adjusted to throw a larger or smaller stream of water as may be desired.

MILL BURR.—George W. Wilson, Tolono, Ill.—This invention has for its object to enable the burrs of mills to be conveniently and easily balanced to a perfect standing, or running balance, by means of a device simple in construction and easily applied and adjusted.

PEAT MOLD.—Kingston Goddard, Richmond, N. Y.—This invention has for its object to furnish an improved mold for pressing wet peat into bricks or blocks for fuel, which shall be so constructed as to allow the water to escape while retaining the fine particles of the peat.

FLOW.—Edward Ward, Louisville, Ky.—This invention has for its object to improve the construction of wrought iron, steel, and cast-iron plows, so as to make them simpler in construction and more efficient in use.

FLOW.—Edward Ward, Louisville, Ky.—This invention has for its object to furnish an improved plow, which shall be so constructed and arranged that various kinds of plow plates may be used with it, according to the particular kind of plowing required to be done.

MANUFACTURE OF ILLUMINATING GAS.—Cleveland F. Dunderdale, New York city.—This invention relates to a new and important improvement in manufacturing gas for illuminating purposes.

PUDDLING FURNACE.—J. B. Robinson, Duncansville, Pa.—This invention relates to new and important improvements in puddling or boiling furnaces, whereby they are rendered much more durable and more easily managed than such furnaces has hitherto been.

WHEEL HUB.—A. S. Woodward, Pepperell, Mass.—This invention relates to a new and useful improvement in metallic hubs for carriage, wagon, and other wheels, and consists in forming a hollow or shell hub cast in a single piece.

BAG HOLDER.—J. N. Collins, Menasha, Wis.—This invention relates to a new and useful improvement in the method of holding bags for filling with grain or other articles.

DIRECT IRON-PRODUCING FURNACE.—William Griffith, Jr., Pottsville, Pa.—This invention relates to a new furnace for reducing and producing iron directly from the ore by a continuous operation, and has for its object to reduce the expense of, and to economize time during the operation. The invention consists chiefly in arranging a deoxidizing chamber above the welding or puddling furnace, said chamber being heated by the gases that escape from the fire in the said furnace.

PIN CATCH FOR BRESTPINS AND SIMILAR ARTICLES.—Samuel Ayres, Danville, Ky.—This invention has for its object to so construct brestpins and other similar articles, such as badges, etc., that they can be secured to garments by means of an ordinary pin, in a secure manner, and with great convenience.

REVOLVING SPRING GUN.—Charles Bunge, Geneva, N. Y.—This invention relates to a new spring air-gun, which is so constructed that it can be readily set to automatically place a charge into the barrel, or at least in line with the same; it being provided with a reservoir which contains a suitable large number of charges. The invention consists chiefly in the combination of a perforated revolving feed plate with a stationary supply or reservoir chamber, from which, as the feed plate is turned, the balls constituting the charges, are transferred into the apertures of the feed plate.

SPINNING FRAME.—Wm. H. Brothers, Winooski, Vt.—This invention relates to a new spinning jack, which is so arranged that the mule or carriage will receive its motion by automatic machinery, without requiring any personal attention of the operator or attendant. The object of the invention is to do away with the necessity of working the shipper bar for reversing the motion of the mule, and to provide automatic means for changing the motion. The invention consists in the construction of devices for changing and reversing the motion of the mule for imparting to the thread the necessary drawing and twisting motion, and the requisite tension while twisting, and for operating the whole mechanism.

PRINTING TELEGRAPH MACHINE.—Charles T. Moore, White Sulphur Springs, West Va.—This invention consists of a set of sending apparatus, a set of receiving operating apparatus, and a set of apparatus for "calling" the office or station to which the message is to be sent, all conveniently arranged upon a stand, and adapted to work in conjunction with similar machines at all the stations, and capable of communicating with all the stations simultaneously, or with only one, as required.

PLANTING AND CULTIVATING MACHINE.—Nicholas Whitehall, Newtown, Ind.—The object of this invention is to provide a machine capable of planting and cultivating corn or other grain planted in a similar way, which may be readily adjusted to the condition of a planter or cultivator.

NAIL MACHINE.—F. Davison, Richmond, Va.—The object of the present invention is to provide an improved feeding apparatus, whereby the plates will be self-actingly fed in succession from a feed box containing a number of plates; also, an improved arrangement of vibrating feeding apparatus whereby the plates are so presented as to ensure the disposing of a sufficient amount of metal at the wide ends of the blanks and delivery of them to the gripping dies to form the heads which are alternately on opposite sides of the gripping dies; also an improved arrangement of carrier guides for conveying the blanks from the cutters to the gripping dies.

PRESSES FOR COTTON AND OTHER SUBSTANCES.—John Simpson, Chestpr, S. C.—This invention consists in an arrangement of two followers to be moved toward each other by pinions working into toothed racks upon each end of the followers.

TACHYPHOSCOPE.—Jules Marie de la Rue, Nogent sur Marne, France.—This invention is composed, according to the use for which it is intended, of two, three, or more boats or floats, which are connected together by cross bars, and so held apart as to allow the driving paddle wheels to be fitted between them.

IMPLEMENT FOR HOLDING EARS OF CORN.—Wm. A. Morgan, Brooklyn, N. Y., and T. B. Mosher, New York city.—The object of this invention is to provide a device, by which boiled ears of corn can be conveniently held to the mouth so as not to soil the hands. The invention consists in the construction of a spring clamp, having two pointed jaws and a shank, the jaws having sufficient spring to cause them to fit and hold cobs of different lengths. The spring is also sufficient to prevent the cob from turning loose on the jaws.

EVAPORATOR.—Thomas and James M. Scantlin, Evansville, Ind.—This invention relates to certain improvements in sugar cane, and other evaporators, and has for its object to produce simple action and perfect satisfactory operation.

FLOW COUPLING.—Wm. Reck, Mendota, Ill.—This invention relates to a new device for connecting shovel plows and for allowing their adjustment apart. The invention consists in the use of connecting bars and a connecting clamp and stop.

CAR WHEEL.—C. Delafield, Castleton, and Frank G. Johnson, Northfield, N. Y.—This invention relates to improvements in car wheels, whereby it is designed to provide more elastic, durable, and cheaper wheels than those now in use. The invention consists in an improved construction of car wheels made of metal and wood.

REGULATING APPARATUS FOR WATER TANKS.—J. M. Crose, Lebanon, Ind.—This invention consists in a peculiar arrangement of valves, water recesses, a tilting bar, and balancing weights, in connection with the water tank and supply pump, to be set into motion by a float in the tank when the water falls too low, for closing an air passage to a constantly-moving pump by which the tank is supplied, to cause the said pump to work for filling, the tank, and to be operated by the surplus water to cause the pump to cease working, as required by the supply of the water.

APPARATUS FOR BURNING HEAVY CLAY PIPES.—W. Wassall, Wellsville, Ohio.—This invention consists in a semicircular holder for the tube, arranged on rockers, pivoted or otherwise, and adapted for standing on end beside the tube which stands on a board or floor, so that the tube may be tilted into or with the holder, as the latter is rotated on the rockers to turn the upper end down.

WASHING MACHINE.—Herman Carmer, Sonora, Cal.—This invention consists in an arrangement of a grooved rotating cylinder in a suitable tub and operating mechanism; also the same of a heating furnace for boiling or heating the water in the tub.

CHURN.—J. A. Ham and W. Carpenter, Jr., Barry, Mo.—The object of this invention is to provide an improved arrangement of means for operating a double churn dasher, or agitator, in opposite directions simultaneously; also for removing the operating machinery where access to the interior of the churn is desired.

COMBINED TURN AND SUBSOIL PLOW.—J. C. Gross, Goshen Hill, S. C.—This invention has for its object to improve the construction of the plow for which letters patent No. 27,026 were issued, March 27, 1868 (which letters patent were assigned to Mr. Gross, May 1, 1868), so as to make it simpler in construction, stronger, and more readily and conveniently adjusted for the various purposes to which it may be applied.

MACHINE FOR CUTTING TUBULAR PAPER BOXES.—Joseph Spooner and Ebenezer Spooner, New York city.—This invention has for its object to furnish an improved machine, by means of which tubular paper boxes may be cut from tubular paper rolls conveniently, rapidly, and accurately, and which shall be simple in construction, and easily and conveniently operated.

DITCH GAGE AND SCOOP.—David Gore, Carlisle, Ill.—This invention has for its object to furnish a simple and convenient gage and scoop for forming a groove in the bottom of open ditches for laying tiles, by means of which the groove may be formed accurately, and of the desired form and size, and at the same time at the desired grade.

AX.—Allen H. Jumper, Sunman, Ind.—This invention has for its object to improve the construction of the various kinds of axes, so as to make them more convenient and satisfactory in use.

SELF-WATERING SCRUBBING BRUSH.—A. D. Granger, Talbotton, Ga.—This invention has for its object to furnish a simple, convenient, and effective scrubbing brush, which shall be so constructed as to discharge water upon the floor while being used.

BRICK-PRESSING MACHINE.—J. F. M. Pollock, Manchester, England.—This invention has for its object to furnish an improved machine for pressing brick, which shall be simple in construction, effective in operation, and convenient in use.

ADJUSTABLE THILL COUPLING.—T. H. Andress, Sparta, N. J.—This invention has for its object to furnish an improved thill coupling, which shall be simple in construction, and easily and quickly adjusted to the distance apart of the thill or tongue irons to be attached, and which will hold them securely and safely in whatever position they may be adjusted.

COMBINED PLANTER AND CULTIVATOR.—James A. Currie, Xenia, Ohio.—This invention has for its object to furnish a simple, convenient, strong, and effective machine, which shall be so constructed and arranged that it may be readily adjusted for use as a planter or cultivator, doing its work equally well in either capacity.

POTATO DIGGER AND PICKER.—H. M. Smith, Long Branch, N. J.—This invention has for its object to furnish an improved potato digger, which shall be strong, simple in construction, and effective in operation, and which shall, at the same time, screen the potatoes and deposit them in a basket, or other receptacle, suspended at the rear of the machine.

COTTON SEED AND CORN PLANTER.—John G. B. Gill, Chestnut Grove, S. C.—This invention has for its object to furnish a simple and convenient machine, which shall be so constructed and arranged that it will be readily adjusted for planting corn or cotton seeds, or for distributing fertilizers, may be desired.

SYRINGE.—James F. McMillan, Mansfield, Ohio.—This invention relates to a new and useful improvement in syringes, to be used in the practice of medicine and surgery.

WEIGHING SCALES.—John Decker, Sparta, N. J.—This invention relates to a new and useful improvement in scales for weighing, more especially designed for domestic use, and the invention consists in a balance beam, or bar, so marked or graduated that it serves as a measure, and so that each inch indicates one pound weight.

DOUBLE WINDOW.—Stephen, Earl of Mount Cashell, Moore Park, Ireland.—This invention relates to improvements in the windows of dwelling houses and public buildings, whereby the same are made much more effective in excluding cold air in the winter season, as well as insects and reptiles in the summer season, than the ordinary window.

STRAINER AND CUT-OFF FOR CISTERNS.—Samuel Ayres, Danville, Ky.—This invention relates to a new apparatus for straining the water running from a roof into a cistern, and for cutting it off, when it is to be conducted into a garden, or some other place, or to prevent overflowing of the cistern.

GARDEN PLOW.—W. F. Pagett and S. K. Gara, Springfield, Ohio.—The object of this invention is to provide for public use a simple and easily-adjustable instrument to be propelled by hand, which shall answer the purpose of a garden plow or scraper.

VEHICLE.—B. N. Carpenter, Mt. Jackson, Va.—This invention consists in providing, upon the under side of the bar which couples the forward and rear axles of a wagon, and longitudinally of the same, two or more friction rollers, against which the triangular frame, that forms the rear part of the tongue, may play, as the forward axle turns to one side or the other, the arrangement taking the place of a fifth wheel.

WASHING MACHINE.—J. W. Myers, Lyons, Iowa.—The object of this invention is to provide a simple, cheap, and efficient washing machine for washing clothes, and it consists in an arrangement of horizontal grooved rubbing disks, a tub, and operating mechanism.

RIGGING VESSELS.—E. W. Brown, Cambridge, Ill.—This invention consists in an arrangement of vertical rollers around the mast and rigging for

spreading the sails, which are connected to the said rollers by drawing them outwardly along the spars as they are unwound from the said rollers, and taking them in by an opposite movement.

ICE CREAM FREEZER.—Wm. Hawkins, Oregon, Mo.—This invention consists in so arranging the cream holders, and the beaters therein, that both shall be rotated, but in opposite directions, and providing the holder with exterior ribs, to keep the ice in motion, and thereby withdraw the heat more rapidly from the cream; also, in other details of construction.

NAIL MACHINE.—John Coyne, Allegheny city, Pa.—This invention relates to improvements in cut-nail machines, designed to provide an arrangement whereby the nippers will be prevented from opening before the grippers do, when the gripping cam becomes worn, and, consequently, lengthened in the part which holds the grippers together, thereby holding them in contact longer than when in the original and correct form.

SCREEN PUNCHING MACHINE.—J. Wellington Nesmith, Black Hawk, Colorado.—This invention consists in improved arrangements of a punching roller and grooved roller between which the sheet is passed to be punched, whereby they may be varied, to punch finer or coarser holes; also, whereby the sheet may be readily inserted and removed, so as not to punch the border. The said invention also consists in an improved construction of the punching roller.

TREATING FARINACEOUS SUBSTANCES.—John J. Ridge, St. Johns, England.—This invention consists in subjecting the said farinaceous substances to a roasting or drying process while contained within closed vessels or chambers, surrounded by and maintained under heat, uniformly, for about six hours, to the temperature of boiling water, steam, or otherwise, suitable outlet pipes or passages in the apparatus being provided for the escape of the vapor or gases evolved during the process, the ingredients thus prepared are then to be mixed or incorporated with other substances of an alkaline or saccharine nature in such proportions as may be found necessary for allaying acidity, or otherwise rendering the same soothing or agreeable to the palate. The invention also comprises an improved apparatus for treating the said substances.

Official List of Patents.

Issued by the United States Patent Office.

FOR THE WEEK ENDING AUG. 31, 1869.

Referred Officially for the Scientific American.

SCHEDULE OF PATENT OFFICE FEES: On each caveat... On filing each application for a Patent (seventeen years)... On issuing each original Patent... On appeal to Commissioner of Patents... On application for Reissue... On application for Extension of Patent... On granting the Extension... On filing a Disclaimer... On an application for Design (three and a half years)... On an application for Design (seven years)... On an application for Design (fourteen years)... In addition to which there are some small revenue-stamp taxes. Residents of Canada and Nova Scotia pay \$500 on application.

Provision of Claim of any Patent issued within 30 years... As sketch from the model or drawing, relating to such portion of a machine as the claim covers, from... The full specification of any patent issued since Nov. 20, 1866, at which time the Pat. in Office commenced printing... Official Copies of Drawings of any patent issued since 1850, we can supply at a reasonable cost, the price depending upon the amount of labor involved and the number of views... Full information, as to price of drawings, in each case, may be had by addressing Patent Solicitors, No. 37 Park Row, New York.

- 94,170.—INGOT MOLD.—George Abel and John Peddler, Temperanceville, Pa.
94,171.—REST FOR LOCOMOTIVE CROSS HEADS.—S. A. Alexander and Edward Dunn, Sunbury, Pa.
94,172.—COMBINED LATCH AND LOCK.—J. H. Allen and John Schwab, Louisville, Ky.
94,173.—ANIMAL TRAP.—James W. Bagby, Northcutt's Store, Ky.
94,174.—HORSE HAY FORK.—William D. Ballard, Davidsburg, Mich.
94,175.—GUIDE FOR SEWING MACHINE.—Menzo M. Benster, Detroit, Mich.
94,176.—CHURN.—George Berkstresser, Bedford, Pa.
94,177.—FLAX BRAKE.—A. G. Bill, Cuyahoga Falls, Ohio.
94,178.—PRINTING TELEGRAPH.—John Blackie, New York city.
94,179.—SPRING SEAT FOR CHAIRS, CARS, CARRIAGES, ETC.—J. D. Bonney, Pembroke, Mass.
94,180.—REEL AND SWIFT.—M. V. Brigham, Mannsville, N. Y.
94,181.—VEGETABLE WASHER.—Jacob Bump, Hartford, N. Y.
94,182.—CLOTHES DRYER.—F. R. Butler (assignor to himself and L. R. Welles), Rocky Hill, Conn.
94,183.—BUTTON OR STUD.—John B. Carter, Hartsville, Ind.
94,184.—SKATE.—S. P. Castle (assignor to O. H. Castle), Urbana, Ohio. Antedated Aug. 14, 1868.
94,185.—MARKER FOR CORN GROUND.—Oliver H. Catey, Williamsburg, Ind.
94,186.—BEEHIVE.—David Collom, Tallmadge, Ohio.
94,187.—SEWING MACHINE.—Job A. Davis, Watertown, N. Y.
94,188.—KILNS FOR DRYING BRICKS.—E. C. Dean, Henry Hamilton, G. P. Tenney, and A. T. Putnam, Detroit, Mich.
94,189.—MACHINERY FOR CUTTING MATCH STICKS.—Francois de Bowens, Philadelphia, Pa.
94,190.—PUMP.—Alexander Dixon, Aurora, Ill., assignor to himself and J. J. Hall.
94,191.—SEA DRAG.—Jacob Edson, Boston, Mass.
94,192.—GAS STOVE.—I. N. Elwell, Flint, Mich.
94,193.—COOKING STOVE.—M. G. Fagan, Troy, N. Y.
94,194.—MACHINE FOR MAKING CUT NAILS.—D. J. Farmer, Wheeling, W. Va.
94,195.—FENCE POST.—Daniel Fisher, Fair Haven, Ohio.
94,196.—MACHINE FOR BOARDING AND GRAINING LEATHER.—L. A. Gignac, Troy, N. Y.
94,197.—CURRIER'S KNIFE.—L. A. Gignac (assignor to himself and P. Pollock), Troy, N. Y.
94,198.—ELECTRO-MAGNETIC ALARM FOR RAILROAD CARS.—Webster Gillett, Ypsilanti, Mich.
94,199.—FENCE.—James Godfrey, Allegheny City, Pa.
94,200.—LATHE FOR TURNING HUBS.—Andrew Goodyear, Albion, Mich.
94,201.—MACHINE FOR SHAPING HUBS.—Andrew Goodyear, Albion, Mich.
94,202.—SHRUB AND FLOWER BOX.—Gustaf Gustafson, Oakland, Cal.
94,203.—VENTILATOR.—Geo. Hayes, New York city.
94,204.—METHOD OF SEASONING AND PRESERVING WOOD.—Theodore William Heinemann, New York city. Antedated August 17, 1868.
94,205.—MACHINE FOR ROUNDING THE CORNERS OF SLATE FRAMES.—Robert Henage and Albert Storer, Buffalo, N. Y.
94,206.—MANGLE.—Peter Henry Hink and Herrmann Kaack, Moline, Ill.
94,207.—SPRING BED BOTTOM.—C. Hogeboom, M. Hogeboom, and L. Van Vleck, Winslow, Ill.
94,208.—APPARATUS FOR RE-JEWELING WATCHES.—C. Hopkins, Philadelphia, Pa. Antedated Aug. 19, 1869.
94,209.—LOW-WATER INDICATOR.—G. M. Hopkins and J. A. Straight, Albion, N. Y. Antedated Aug. 17, 1869.
94,210.—METALLIC CARTRIDGE.—B. B. Hotchkiss, New York city.
94,211.—APPARATUS FOR FLUTING AND QUILLING.—Geo. R. Houghton, Flint, Mich.
94,212.—SEWING MACHINE FOR WORKING BUTTONHOLES.—Edmund Howard, Flushing, and W. H. Jackson, Brooklyn, N. Y.
94,213.—CRIMPING BRAKE.—Jarvis Howe, Milford, Mass. Antedated Aug. 21, 1869.
94,214.—MANUFACTURE OF CARBONATE OF LEAD, ACETATE OF COPPER, AND ACETATE OF IRON.—Otto Jacobi, Philadelphia, Pa.

- 94,215.—VELOCIPEDE.—S. H. Jennings, Deep River, Conn.
94,216.—COAL-BREAKING MACHINE.—John Jones, Chestnut House, Stratford, and S. P. Bieder, Jr., Hillfield, Mitcham, England. Patented in England, Nov. 17, 1868.
94,217.—STUMP EXTRACTOR.—J. A. Kaussler and H. B. Cook, White Pigeon, Mich.
94,218.—STOPPING MECHANISM FOR KNITTING MACHINE.—John Kennedy, Claverack, N. Y.
94,219.—APPARATUS AND PROCESS FOR OBTAINING LIGHT FROM GAS AND OIL.—Joshua Kidd, New York city.
94,220.—PRINTERS' INK.—Camille Krejci, Scranton, Pa.
94,221.—LOTION FOR THE DESTRUCTION OF INSECTS.—Daniel Leibert, Washington, D. C.
94,222.—ALARM ATTACHMENT FOR STILLS.—J. C. Leistner, Cincinnati, Ohio.
94,223.—BASE-BURNING STOVE.—M. W. Lester, Chicago, Ill.
94,224.—HOT-AIR FURNACE.—M. W. Lester, Chicago, Ill.
94,225.—MACHINE FOR MAKING HORSESHOES.—W. W. Lewis, Cincinnati, Ohio.
94,226.—STEAM GENERATOR.—Herman W. Luders, Philadelphia, Pa.
94,227.—PASTRY ROLLER.—H. S. Maltby, Cincinnati, Ohio.
94,228.—PROCESS OF PREPARING WOOD FIBER FOR PAPER STOCK.—E. Marshall, Laurel, Ind.
94,229.—TRACE BUCKLE.—J. H. Martin, Columbus, Ohio.
94,230.—HAMES FASTENER.—J. T. McDivitt, Fayetteville, Ohio.
94,231.—STEAM ENGINE VALVE.—J. D. Moon and J. T. Foster, Jersey City, N. J.
94,232.—MACHINERY FOR MAKING AXES.—H. D. Morris, Baldwinville, N. Y.
94,233.—RACK FOR SUGAR, CREAM, SALT, ETC.—M. A. S. Mullin, Osgood, Ind.
94,234.—FLYING-HORSE MACHINE.—G. L. Newhall and J. F. Cummings, Chelmsford, Mass.
94,235.—LIQUID METER.—Chas. Nida, Greenville, N. J.
94,236.—PRESERVE JAR.—T. G. Otterson, Camden, N. J.
94,237.—MINING MACHINE.—W. H. Pierce, Bangor, Me.
94,238.—FENCE.—S. M. Prentice, Aurora, Ill.
94,239.—LATHE CHUCK.—John Rich, Painesville, Ohio.
94,240.—UMBRELLA.—H. T. Robbins, Boston, Mass., assignor to Ellis, Knapp & Co., New York city.
94,241.—PIPE WRENCH AND PIPE CUTTER.—A. Robes, Somerville, and J. C. Chapman, Cambridgeport, Mass.
94,242.—SHIPS' FENDERS.—W. D. Robinson, Buffalo, N. Y.
94,243.—EXTENSION TABLE SLIDE.—Otis E. Sanford, La Porte, Ind.
94,244.—CROUT CUTTER.—J. G. Schwarz, Indianapolis, Ind., assignor to himself and J. G. Brand.
94,245.—VENTILATOR.—W. T. Sears and Wm. Edison, Boston, Mass., assignor to W. T. Sears.
94,246.—PROCESS FOR EXTRACTING OILS, ETC.—C. A. Seeley, New York city.
94,247.—SHEAR.—R. H. Seymour (assignor to Henry Seymour and Co.), New York city.
94,248.—FRUIT JAR.—H. E. Shaffer, Rochester, N. Y.
94,249.—EVAPORATOR.—A. W. Shidler, South Bend, Ind.
94,250.—WASHING MACHINE.—D. Smallwood, Middletown, Ohio.
94,251.—HARVESTER CUTTER.—J. S. Smith and John Coder, Swanton, Ohio.
94,252.—HUSK MAT.—J. P. Smucker, Ashland, assignor to himself and R. S. Owen, Bryan, Ohio.
94,253.—PRESS FOR CASTING METAL.—J. B. Tarr, Fairhaven, Mass. Antedated Aug. 25, 1869.
94,254.—LUBRICATOR FOR VENTILATOR.—Hugh Thomas, New York city. Antedated Aug. 18, 1868.
94,255.—HANGING CIRCULAR SAWS.—Charles R. Tompkins, Rochester, N. Y.
94,256.—STONE-CHANNELING MACHINE.—Frederick Townsend, Albany, N. Y.
94,257.—PRESS.—I. H. Trabue, Livingston county, Ky.
94,258.—SEEDING MACHINE.—W. A. Van Brunt, Horicon, Wis.
94,259.—WATER WHEEL.—Henry Van De Water, Attica, N. Y.
94,260.—DEVICE FOR FILLING STEAM GENERATORS.—Charles Ward, Detroit, Mich.
94,261.—WRENCH.—Walter Ward, Mount Holly, N. J.
94,262.—FENCE.—Thomas Westermann, Clinton township, Pa.
94,263.—MEANS FOR PUTTING UP AND USING POWDERS.—A. P. Willard, Battle Creek, Mich.
94,264.—MODE OF REMOVING STUMPS.—Henderson Willard (assignor to himself and Joseph Walker), Grand Rapids, Mich.
94,265.—GRAIN BIN.—C. D. Woodruff (assignor to himself and Wm. Krauss), Toledo, Ohio.
94,266.—CLAMP SCREW FOR CALLIPERS, ETC.—Daniel Wright, Jr., Waltham, Mass.
94,267.—THILL COUPLING.—T. H. Andress (assignor to himself and John Decker), Sparta, N. J.
94,268.—CLOD FENDER.—Daniel Applegate, Noblesville, Ind.
94,269.—VAPOR BURNER.—Wm. Aurich, Chicago, Ill.
94,270.—FASTENING FOR BREASTPINS.—Samuel Ayres, Danville, Ky.
94,271.—RAIN-WATER STRAINER AND CUT-OFF.—S. Ayres, Danville, Ky.
94,272.—BRIDGE.—Calvin Baker, St. Joseph, Mo.
94,273.—APPARATUS FOR PRESSING AND VULCANIZING INDIA-RUBBER.—Joseph Banjara, Woonsocket, R. I., assignor to the Woonsocket Rubber Company.
94,274.—PERMUTATION PADLOCK.—Tracy Beadle and W. P. Bates, Elmira, N. Y.
94,275.—SPRING-WAGON SEAT.—J. I. Bear, Decatur, Ill.
94,276.—METHOD OF MAKING SQUARE-NECKED BOLTS.—Geo. C. Bell, Buffalo, N. Y.
94,277.—FUURLING AND REEFING SAILS.—E. W. Brown, Cambridge, Ill.
94,278.—JACK FOR SPINNING.—W. H. Brothers (assignor to himself and Elisha Allen), Winoski, Vt.
94,279.—REVOLVING SPRING TOY GUN.—Charles Bunge, Geneva, N. Y.
94,280.—FERRULE.—S. N. Chapin, New Britain, Conn.
94,281.—TURBINE WATER WHEEL.—J. E. Chapman, West Reading, Conn. Antedated Aug. 19, 1868.
94,282.—FIRE AND BURGLAR ALARM.—J. L. Cheston, South Easton, Pa.
94,283.—BAG HOLDER.—J. N. Collins, Menasha, Wis.
94,284.—WOODEN PAVEMENT.—Chas. C. Converse, Brooklyn, N. Y., assignor to S. S. Greeley.
94,285.—MACHINE FOR CUTTING NAILS.—John Coyne, Allegheny City, Pa.
94,286.—APPARATUS FOR THE MANUFACTURE OF PIG-BLOOM.—John Coyne, Allegheny City, Pa.
94,287.—WASHING MACHINE.—Herman Carmer, Sonora, Cal.
94,288.—TANK REGULATOR.—J. M. Crose, Lebanon, Ind.
94,289.—COMBINED PLANTER AND CULTIVATOR.—J. A. Currie, Xenia, Ohio.
94,290.—NAIL MACHINE.—F. Davison, Richmond, Va.
94,291.—ROCK CRUSHING MILL.—J. H. Day, Walla Walla, Washington Territory.
94,292.—COMBINED WEIGHING AND MEASURING SCALE.—J. Decker, Sparta, assignor to himself and E. De Camp, Boonton, N. J.
94,293.—RAILWAY CAR WHEEL.—Clarence Delafield, Castleton, and F. G. Johnson, Northfield, N. Y.
94,294.—FLOATING VELOCIPEDE.—Jules Marie de la Rue, Nogent Sur Marine, near Paris, France. Patented in France, December 14, 1868.
94,295.—LAMP.—J. A. Dew (assignor to himself and O. A. Bague), Chicago, Ill.
94,296.—PLOW CLEVIS.—Thos. Dow, Yorktown, Ill.
94,297.—MANUFACTURE OF ILLUMINATING GAS.—C. F. Dunckerale, New York city.
94,298.—APPARATUS FOR PURIFYING SACCHARINE LIQUIDS, AND FOR CURING, DRYING, AND TREATING SUGAR AND OTHER MATERIALS.—W. B. Espeut, Spanish Town, Jamaica.
94,299.—RUFFLING ATTACHMENT FOR SEWING MACHINES.—J. O. Fairbairn, Milwaukee, Wis.
94,300.—POCKET LAMP.—A. P. Foster and D. E. H. Bartlett (assignors to themselves and C. F. Howe), Lowell, Mass.
94,301.—COTTON SEED AND CORN PLANTER.—J. G. B. Gill, Chestnut Grove, S. C.