the voyage being 13,405 miles; the average speed was 275 miles per day. The demand for crinoline wire in Sheffield has greatly fallen off, but the best quality of steel wire for ropes is in good request. The metal market is quiet, and almost without change in prices.

WEEKLY SUMMARY OF INVENTIONS,

The following inventious are among the most useful improvements patented this week. For the claims to these inventions the reader is referred to the official list on another page:-

HYDRAULIC MOTOR.

This motor consists of a cylindrical chamber with two gates, a central hollow shaft and a snail-shaped piston. The shaft is divided by a horizontal partition; so is the snail-shaped piston. The shaft has a supply opening above the partition, and a discharge or exhaust opening below the partition. The piston has an opening at front above its partition and one at back below the partition. The water under pressure passes down the hollow shaft through the piston, and, by its direct pressure, moves the piston round. As soon as the force of the water is spent. one of the gates opens and the dead water exhausts through the back of the piston and passes off through the lower part of the hollow shaft. We have seen this motor in operation, and we think it a most excellent contrivance; it being portable and capable of being attached to the hydrant pipes of buildings, and operated by the water flowing through the same. As a small power for single lathes and like machines it will be found very convenient, and as a power for pressing tobacco its advantage will be very great. Wm. Kennish, of London, England, is the patentee.

KNITTING MACHINE.

This invention consists in so applying and operating the frame needles, rib needles and sinkers of a ribbed knitting machine, that after the sinkers have given the loops to the frame needles, the rib-needles take the loops directly from the sinkers at the back of the frame needles. It also consists in the construction of the sinkers of a ribbed knitting machine with recesses in which the needles are arranged to operate, and across which the loops are extended in such a manner that the needles - have their operation greatly facilitated. It also consists in the novel construction of, and mode of applying. pressers in combination with bearded needles, whereby they are caused to operate upon the needles in a proper manner by the movements of the needles themselves It also consists in a novel mode of applying and operating two fingers in combination with the selvedge needles of straight knitting machine to aid them in forming the selvedge. And it further consists in an improved mode of driving the yarn guide of a straight knitting machine. The credit of this contrivance is due to John Chantrell. of Bristol. Conn.

KNITTING MACHINE.

The knitting of hosiery with properly-shaped heels and toes by the continuous operation of a machine without stopping to adjust the work, is something which has often been attempted by many ingenious mechanics, but we believe no machine has ever been made to do it successfully, up to the time of the invention of the improve ments of W. H. McNary, which form the subject of the claims which appear in this week's list. These improvements, which are of comparatively simple character. effect this desirable result in a very perfect manner. The claims explain the nature of the invention as well as can be done without an illustrated description. The patent is assigned to the McNary Knitting Machine Company, whose office is No. 5. University Building, this city.

This invention has been also patented in several European countries, through the Scientific American Patent Agency.

FLOCK-CUTTING MACHINE.

The object of this invention is obtain a machine that will operate rapidly in cutting flock, perform the work perfectly, and at the same time be capable of being so adjusted as to admit of the ready discharge of foreign substances without injuring the cutting device. The tock from which flock is prepared, being most generally, the refuse from cloth and woolen manufactures, is liable to contain foreign substances such as nails, bits of metal and the like, which are a great detriment to the cutters of a flock-cutting machine, and hitherto the keeping of the cutters of such machines in perfect order, has been N.Y.

attended with considerable expense which is obviated by this invention. The inventors of this improvement are J. Tilton and E. Ritson, of Sanbornton, N. H.

MOLDING MACHINE.

The object of this invention is to obtain a machine by which green-sand molds for casting pipes may be expeditiously formed, and the pipes cast in a vertical position, the difficulty hitherto attending the shrinking and bending of the cross-bar avoided, and the mold enabled to be formed at its ends with male and female screws, so that the pipes may be cast with the same. The invention is applicable to the forming of molds for cylindrical, polygonal, elliptical or other shaped pipes. This improvement was designed by William Doyle, of Albany, N. Y.

GRAIN-WEIGHER.

This invention consists first, in hanging the scale or receiver which is to contain the grain while it is being weighed, on one end of the scale beam in such a manner that it will tilt and discharge its contents at a given time, and then return to its former position for receiving another supply; and it consists in suspending said receiver or weighing box to the scale by a weighted lever having its fulcrum or center of motion in the end of this beam; and in adjusting the weight on the lever so as to give a slight preponderance to this end of the lever, and thereby insure the return of the receiver after dischargits contents;-to a proper position for receiving and holding the grain flowing from the hopper, until the desired weight is attained, when it will be instantly discharged by the preponderance of the opposite end of the weighted arm. - It consists, second, in combining with a weighing box suspended on the end of a weighted arm, having its fulcrum in the end of a scale beam, a novel device for operating and regulating the flow of grain from a hopper to the weighing box, whereby the discharge and cut-off may be automatically effected, and with an up ward movement of the gates or valves which are operated, so as to close alternately in supplying the grain from the hopper to the receiver, and opened simultaneously by the return of the receiver after the discharge of the measured quantity. It consists, third, in combining in a novel manner with the two-throated hoppers and the manner of affecting the cut-off of the grain from the hopper to the receiver, a secondary weight which is brought into action after the first discharge is cut off, so as to allow the second discharge to charge and tilt the receiver, thus obtaining a nicety and accuracy in the filling and discharging of the receiver at the instant the required weight is attained. The device has been patented to Lovett Eames, of Kalamazoo, Mich.

PAINT-MIXER.

The nature of this invention consists in a novel arrangement of fixed knives or blades in the bottom of a tub with revolving knives, or knife-edged arms, fixed to a rotary arm, driven by suitable machinery, whereby the paint will be thrown towards the circumference of the tub and receive a thorough mixing action from the arms, and at the same time the movable and fixed arms will be arranged in such relation to each other that they will pass each other in pairs at equal distances from the center of the shaft, and diametrically opposite each other, and not pass between any two pairs in the tub at the same time, and under the same circumstances. The object of this invention is to give to the semi-liquid contents of the tub a thorough mixing by the action of the fixed and revolving arms, at the same time to equalize the operation of the revolving arms by preventing more than two of these from passing each other at the same moment. The patentees of this invention are C. W. Brown and G. W. Banker, of Boston, Mass.

MOLDING SHOT AND SHELL.

This invention consists in the employment for adjusting the pattern of a mold-board with a central aperture to receive a circular projection on the under side of the pattern, and with a circular flange on one, and a rim on the other side, to fit on one side over a rim turned to the end of one of the semi-flasks, and on the other into a flange projecting from the end of the other semi-flask, said rim and flange in the semi-flasks being at the same time so arranged that they serve as guides for the flasks when the same are connected; and this invention consists also in combining with the flanged end of the lower semi-flasks a cross-shaped gage with a half circular recess for the purpose of adjusting the core. The credit of this invention is due to David Huestis, of Cold Spring



ISSUED FROM THE UNITED STATES PATENT OFFICE FOR THE WEEK ENDING MAY 15, 1860:

[Reported Officially for the SCIENTIFIC AMERICAN.]

** Pamphlets giving full particulars of the mode of applying for patents, size of model required, and much other information use, ful to inventors, may be had gratis by addressing MUNN & CO., Publishers of the SCIENTIFIC AMERICAN, New York.

28,245.—Wm. Clare Anderson, of St. Louis, Mo., for an Improvement in Lifting Jacks: I claim the rack-bar, B, and the lever, C, the latter being provided with an oblong slot, e, through which and the upper part of the bar, B, the fulcrum pin, D, passes, the rack-bar being fitted in a stand, A, or equivalent device, to operate as and for the purpose set forth. I further claim, in connection with the lever, C, and rack-bar, B, arranged as shown, the lugs or projections, g, attached to the lever, and at such a distance from the bar, B, to operate as specified.

[This invention consists in the use of a hollow stand or upright, pro-vided with a base and a pawl at its upper end, and having a rack bar fitted within it, to the upper part of which a slotted lever is at-tached in such a manner as to raise the article to which it is applied, and to remain permanent after raising the article by the weight of the article alone; no other adjustment of the lever being required.]

28,246.-Luther Atwood, of New York City, for an Improvement in Construction of Apparatus for the Re-distillation of Coal Oils:

Ite-distillation of Coal Oils: I claim a separating chamber, constructed substantially as d scribed, when arranged and combined with a volatile oil still an condenser, in such manner as to gradually separate and conden the heavier parts of the oleaginous vapors formed, and continuous return them to the still, for a further action of the heat, and at th same time preserve the lighter vapors, and pass them over to th condenser, substantially as described, and substantially for the pup poses set forth. de-and

28,247.—I. A. Benedict, of West Springfield, Pa., and G. W. Cummings, of Conneaut, Ohio, for an Im-provement in Ditching Machines:

provement in Ditching Machines: We claim, first, The arrangement of the sleeve, G, sliding shaft, F, in combination with adjusting arms and segment gear and pinions, in the manner and forthe purpose described. Second, We claim the adjusting guides, O O', and guides, P P', in combination with the movable buckets, M, when arranged and oper-ating conjointly, in the manner and for the purpose set forth. Third, We claim the springs and levers, in combination with the revolving hinged buckets, M, in the manner and for the purpose spe-effect.

28,248 -- Dana Bickford, of Westerly, R. I., for an Im-

28,248.— Dana Bicktord, of Westerly, K. I., for an Improved Compressed Air Engine: I claim one or more reservoirs for compressed air, with movable air-tight head, to be operated with either weight, screw, lever, spring or any similar power, for the purpose of keeping upa uniform pressure upon the contained air, combined with an engine, of any form, for the purpose of propelling vehicles or machinery, the whole constructed, arranged and operating substantially as set forth.

28,249.-J. S. Black, of Bloomfield, Ky., for an Im-

provement in Bee-hives: I claim the combination and arrangement of the bee palace, con-tructed as described with the moth trap constructed as described for ho purpose set forth.

[This invention consists in constructing the bee palace with two central or main chambers, two side gums or chambers, two top cham-bers and a moth trap. The top and side chambors serve for the bees nmence their work in, and the main chambers serve for them to or commence their work in, and the main character serve to reterm to extend their operations. The moth trap serves to catch all the moth or enemies of the bees, which a e caused to fall down from the main work chambers by the attack of the bees. This appears to be a good alace for the queen and her co-workers.]

28,250.—Wm. N. Brown, of Camden, N. J., for an Improvement in Vapor Burners: Iclaim the combination of a heat conductor, with a non-conductor, in hydro-carbon vapor burners, for the purpose of securing to the heat conductor the greatest rossible heat-conducting power, by em-ploying a metallic heat conductor, encased in a non-conducting or partially non-conducting material, as described, and for the purpose set forth in the above given description of my invention, and in the same, and which will produce the intended effect.

28,251.-Andrew Buchanan, of Jersey City, N. J., for

28,251.—Andrew Buchanan, of Jersey City, N. J., for an Improved Arrangement for Balancing Slide Valves of Steam Engines: I claim, first, The combination with a slide valve, to which the steam is admitted from the under side of a valve, A, arranged with a stem, D, and enclosed into steam-tight chamber, C, substantially as and for the purpose specified. Second, The arrangement of the cap, F, with legs, e, and fitting on a seat, c, around the hollow stem, D. in combination with the valve, A, constructed and operating substantially as and for the purpose de-scribed.

A, constructed and operating substantially as and for the purpose de-scribed. Third, The arrangement and combination of the valve. A, mova-ble seat, B, cap, F, and regulating pins, f, constructed and operating substantially as and for the purpose set forth. Fourth, The arrangement of the pipe, G, communicating with the steam chest through the chamber, C, substantially in the manner and for the purpose described.

[The object of this invention is to regulate the pressure of the steam

on the upper and on the underside of a slide valve, according to the difference between that portion of the under surface of said slide valve which is exposed to the pressure of the steam and the entire upper surface of the valve; and this device is more particularly ap-plicable to that class of slide valves in which the steam from the boiler acts on the underside, thereby producing a tendency te lift up the valve and cause a leakage of the steam.]

28,252.-A. L. Currier, of Washington, D. C., for an Improved Saw-set: I claim, first. The control

Improved Saw-set: I claim, first, The construction and arrangement of a series of ro-tating punches and their corresponding matrices working together, to set that et hof saws alternately to the right and left at the same time, thereby completing the operation, by passing it once through the operation. Second, I claim the upright guides, the adjustable slide, B, to re-gulate the degree of set in saws, in combination with the rotating punches, as described, for the purposes specified.

28.253.-H. L. Castile, of Memphis, Tenn., for an Im-

28,253.—H. L. Cassile, of Memping, Tehn, for an im-provement in Axle Boxes: I claim the employment of the cone-sided block, G, having the base resting upon the journal, B, in combination with the inclined sided sided seat, A, as shown and described, so that a space, J, will be left between the upper part of the block G, and the seat, A, and the fibers of the block will be laterally compressed, all as set forth.

[This invention consists in preparing suitable blocks of any [This invention consists in preparing suitable blocks of any wood, by boiling them in oil until the sap or juices of the wood are all driven out and the pores are filled with oil; and, in this condition, the blocks are cut pyramidal or wedge-shaped, or what might be termed the frustrum of a quadrangular pyramid, with their bases curved out, so as to conform to the periphery of the journal and with the fibers of the wood, all perpendicular to the axis of the axlc.]

28,254.-A. W. Chase, of Ann Harbor, Mich., for an

Improvement in Invalid Bedsteads: I claim the peculiar shape or construction of the bed posts adapting them to the open or false mortises, with the head and footboards constructed to correspond thereto, in combination with the spring bolts to keep them in position, or allow any desired change, substan-tially as and for the purposes set forth.

28,255.-John Chantrell, of Bristol, Conn., for an Im-

28,255.—John Chantrell, of Bristol, Conn., for an Improvement in Knitting Machines:
Iclaim, first, So applying and operating the frame needles, the rib needles and the sinkers of a ribbed knitting machine, in combination with each other, so that after the sinkers have given the loops to the frame needles, the rib needles take their loops directly from the Sinkers at the back of the frame needles, substantially as specified. Second, Constructing the sinkers with recesses, in which the ribbed needles are arranged to operate, and across which the loops are extended, in the manner and for the purpose specified.
Fourth, I claim applying the selvedge fingers, and operating them by means of an arm attached to a silder which operates the needles,

stantially as set forth. Fourth, I claim applying the selvedge fingers, and operating, sub-by means of an arm attached to a slider which operates the needles, substantially in the manner specified. Firth, I claim combining the bar which carries the yarn gulde with a slider which operates the needles by means of grooved blooks, Q Q', and spring catches, R R', acted upon by stationary wedges, y y', substantially as described.

28,256.—J. E. Cheney, of Lowell, Mass., for an Improvement in Machinery for Winding Laps: I claim the method of winding a lap lightly upon a small wood roller, disconnected from any weight or motion, otherwise than that given b it by the rollers between which it revolves, by the combination of the three rollers, or their equivalent, arranged substantially as and for the purpose described.

28,257.—Orville Choate, of Morrisville, Vt., for an Improved Mop Wringer:
Iclaim the arrangement of the togglo levers, a a b b, within the uprights or frame, B B', in combination with the pressing rollers, C C', and treadle arms, D, as and for the purpose shown and described.

[This invention consists in applying to any ordinary portable pail or bucket for holding water, two rollers suitably arranged over the same, and hung and arranged so as to be opened or closed, orso as to recede or approach each other by operating a foot treadle connected with them; the object being to squeeze or press the water out of mops—such as are used for washing windows, floors, &c.—atthe same time, the bucket will serve to receive the water pressed out, and to contain the water to be used for washing purposes.]

contain the water to be used for washing purposes.] 28,258 — T. G. Clayton, of Washington, D. C., for an Improvement in Vapor Lamps: I claim the converting of the fluid into gas or vapor below the il-luminating flame by means of the combined generator and burner, B, and the jets of burning vapor below said burner and generator, the whole operating as described and for the purposes set forth. Second, The burner and generator, B, having the gas-chamber, C, below it, constructed and operating substantially as set forth. Third, The use of jets of gas from chamber, C, or burner, B, for making an oxyhydrogen flame, for heating below the combined gen-erator and burner, as set forth.

28,259 - J. B. Cornell and Wm. W. Cornell of New

York City, for an Improvement in Metallic Rolling Shutters :

Shutters : We claim preventing the longitudinal slitting of the individual slats of a rolling metallic shutter, by combining a series of bosses with the face of said shutter, substantially as set forth. We also claim giving the metallic bosses upon the face of our im-proved rolling shutter, such a shape that they will prevent the edges of the slats of said shutter from being forcibly separated from each other, substantially as set forth.

28,260.—John Dougherty, of Cold Spring, N. Y., for an Improvement in Molding: I claim the temple block, M, combined with a hollow shaft, B, and screw shaft, G, and operated substantially in the manner and for the purposes set forth.

[This invention is an improvement in arranging the templets that are used in loam-molding for casting large work—such, for instance, as steam cylinders, large pipes, fly-wheels, and such molds as cannot be conveniently and accurately made in the ordinary method of molding. The method of molding such work in loam is at present attended with many difficulties familiar to those skilled in the art; and it is the special object of this invention to remedy this. The invention consists in a novel arrangement of gearing, combined with the central spindle carrying the templet, for giving to said templet or templets, of any description, accord-ing to the kind of work to be performed, a vertical reciprocating motion, or a vertical motion combined with a circular motion.]

Institution of a vertical motion combined with a circular motion.]
28,261.—Wm. Doyle, of Albany, N. Y., for an Improvement in Molding Iron Pipes:
I claim, first, The core bar, K. made in sections or with joints, S. In combination with a sand mold, when the sections of said bar are constructed with flanches, t, for supporting the sand, substantially as described.
Second, The arrangement of the bars, p p, of the flask with rings, q and the points, L M P, substantially as shown, to admit of the ready adjustment of the same, as set forth.
Third, The employment or use, for the purpose specified, of the hollow screw, S, formed of two longitudinal parts, in connection with the bar, Q, provided with the annular plate, R, having an interval screw thread, the dust of the screw, S.
Fifth, The euter, H, attached to a cylinder, G, or other shaped the parts, and used in connection with the screw and gearing, or other stage on the scate, and used in connection with the screw and gearing, or other shape of the play is the cutter divided within the screw and gearing, or other stage of the dust with the core bar, K.
Sixth, The guider od, I, fitted within the screw n, and cylinder or tube, G, and provided with a socket, n, substantially as shown, for the purpose of forcing the cutter down through the flask concentrically with a socket, n, substantially as shown, for the purpose of forth.

28,262.-Lovett Eames, of Kalamazoo, Mich., for Improvement in Automatic Grain-weighing Ma-

chines: I claim the combination of the weighted pendulum lever, E, with the scale beam, F, and weighing box, D, in the manner and for the purpose substantially as shown and described. I also claim the combination, in the manner shown and described, of the gate, C C', with the double-discharging bottomed hopper, B, and oscillating weighing box, D, for the purpose set forth.

28,263.-Louis Engler and E. F. Krauss, of Paris, 28,263.—Louis Engler and E. F. Krauss, of Paris France, for an Improved Insulator for Electrodes: We claim the insulator consisting of an enameled iron ring, havin a lining of glass permanently cemented within it, and a V-shape opening, a, the sides, c c, of whose throat project inwardly beyond th interior of the lining, substantially as described.

28,264.-J. W. Evans, of Forsyth, Ga., for an Im-Droved Combination of Shovel and Tongs: I claim the combination and arrangement of the shank of the shovel, with the axis of the leg, a, the latch, g, and spring, h, and the proove, f, substantially as set forth.

28,265.—E. N. Foote, of Saratoga Springs, N. Y., for an Improved Filling for the Soles of Boots and Shoes

Shoes: I claim the filling of boots and shoes, made and inserted sub-tially as I have described, and for the purposes set forth.

tany as I nave described, and for the purposes set forth.
28,266.—J. Fraser, of Rochester, N. Y., for an Improved Clothes-frame:
I claim the combination and arrangement of the arms, D, with the standard, A, by means of the crank pivot, g, or its equivalent, substantially in the manner and for the purposes shown and described.

stantially in the manner and for the purposes shown and described. 28,267.—Thomas Fry, of Brooklyn, N. Y., for an Im-provement in Hanging Window Sashes: I claim, first, Arranging that character of window sashes which can be swing into a horizontal or oblique position, in such a manner that the sash, while it turns, is tightened laterally so as to remain in a horizontal or oblique position, substantially as set forth. Second, Providing the sash frame, in the manner described, with a spring strip, which has a recess for the reception of the sash when in an oblique position, substantially as set forth. This invention allows of a window sesh being turned down to

[This invention allows of a window sash being turned down to and held firmly in a horizontal or inclined position, so that they may be washed on both sides with great convenience from the include of the more inside of the room. The sashes are hung on right and left screw pivots, which bind the sash laterally as they are turned down and release them as they are turned up. The pivots are attached to sliding strips, which rise and fall with the sash. These strips and the sash are locked in a vertical position by means of sliding pieces which spring out from the frame when the sashes are turned up, and close the weather spaces. This is a most excellent contrivance. A patent for it has been applied for in England.]

28, 268.—F. H. Furniss, of Cleveland, Ohio, for an Im-provement in Railroad Jacks: I claim the arrangement of the sleeve, F, with the arm, E, and screw, B, and standard, A, in combination with the sliding jack frame, when operating conjointly in the manner and for the purpose speci-fied.

28,269.-Emerson Gaylord, of Chicopee, Mass., for an Improvement in the Manufacture of Bayonet Scab bards:

I claim a bayonet scabbard shaped and finished by the application moisture, heat, saturation and pressure, as stated, for the purpose giving it form, rigidity and a highly polished surface, and making impervious to water, as set forth.

28,270.—James Greenhalgh, Sr., of Pascoag, R. I., for an Improvement in Harness Frames for Looms: I claim the combination of the hollow heddle bars, A A', and the rods, d. d. inserted within the said bars to secure the loops at the ends of the heddles, substantially as described. [This invention consists in a certain construction of the frames for

the reception of wire headles, whereby the headles of one frame are prevented catching against the next frames, or men measures the headles are kept stretched better than by the usual mode of a ed catching against the next frames, or their headles, and

ing them.]
27, 271.—J. H. Haskell, of Baltimore, Md., for an Improved Machine for Stretching Leather:
I claim, first, Making each of the griping devices of two or more separate cams, l, substantially as and for the purposes set forth.
Second, Arranging the cams, l, upon an adjustable bar, m, in such a manner that not only the whole griping surface can be adjusted for pieces of leather of various thicknesses, but that each cam, l, can also adjust itself to the varying thickness of one piece of leather, substantially as set forth.
Third, Combinings griping cam constructed of separate cams, l, and of an adjustable bar, m, with a lever, a, pivoted to the main frame of the machine at d, substantially as and for the purposes set forth.
Yourth, The combination of a flanged pawl, v, and a sliding cam, x, substantially as and for the purpose set forth.
28 271.—C. F. Hitchings of New York City, for an Implementation of a flange of New York City.

28, 271.—C. F. Hitchings, of New York City, for an Improved Boiler for Heating Buildings:
I claim, first, The water-jacketed chamber, B, in combination with a vertical, cylindrical or conical boiler, inclosing the flue, D, between the inner shell, ff, of the chamber, B, and the outer shell, d, of the boiler, A, for the purpose and in the manner substantially as set forth. Second, The diaphragm, C C, formed by an indentation in inner shell, f f, of the chamber, B, or its equivalent, for the purp set forth.

28,273.-I. H. Hobbs, of Philadelphia, Pa., for an Im-

28,273.—I. H. Hobbs, of Philadelphia, Pa., for an Improvement in Machines for Hoisting Persons, &c., from one story in a building to another: I claim the application to a building of any suitable kind, of either a single reciprocating frame, A or A, or of a pair of such frames arranged together substantially as described; the same being actuated by any suitable machinery and motive power, so that the respective platforms, p. p. of the said frame or frames may operate in combination with the several respective floors or landings of a building, substantially as described, and for the purpose of conveying persons from any one floor to its next, or successively to any other floors of the said building, substantially in the manner set forth and described.

28,274.-A. G. Holcomb, of New York City, for an Im-

28,274.—A. G. HOICOMD, OF New LORK City, for an Improvement in Telegraphic Instruments: I claim, first, Producing an additional movement of the armature lever by reversing the electric 1 current in the coils of the magnet, substantially as set forth. Second, The arrangement of the steel cores, i', and iron bush cores, 1, in combination with the coils of the electro-magnet.

28,275.-James Holland, of Conshohocken, Pa., for an proved Post Butt: I claim an earthen

I claim an earthenware post butt, made substantially as described, so as to receive the bottom of the post entirely within it, as also to a luting of pitch, or its equivalent, between them, and having also a bottom support and protection, as described and represented, and for the purpose specified.

28,276.-Richard Hubbard, of Milton, Ind., for an Im-

28,276.—Kichard Hubbard, of Millon, Ind., is an an-proved Bedstead Fastening: I claim the described combination of the dovetail mortise, a, dove-ail tenon, b, metallic lining, C, and metallic casing, D, formed with ylindrical ends, d; the whole being constructed and arranged and perating in the manner and for the purposes explained.

28,277.—David Huestis, of Cold Spring, N. Y., for an Improvement in Molding Shot and Shells: Iclaim, first, The employment for adjusting the pattern of a mold-board, C, with a central aperture, c, flange, d, and rim, d', in com-bination with the semi-flasks, A A', constructed and operating sub-stantially in the manner and for the purpose described. Second, The combination with the flanged end of the semi-flask, A', of a cross-shaped gage, H, with notches, h, constructed and operating substantially in the manner and for the purpose specified.

28,278.-C. S. Irwin, of Madison, Ind., for an Improvement in the Construction of Machinery for Cleaning Starch .

I claim the rotating disk brush, C, placed on the boxor receiver, A, n connection with the bed or platform, D, also placed on the box or receiver, all being arranged as and for the purpose set forth. [The object of this invention is to supersede the manual process

of cleaning starch preparatory to the papering and final drying of the same for domestic use. In the manufacture of starch a slimy crust forms on the sides of the lamps in the preliminary drying process, and this crust has heretofore been removed by scraping with knife. an operation which consumes considerable time and is with much waste.]

attended with inden waste.] 28,279.—Z. L. Jacobs, of Hebron, Conn., for an Im-provement in Screw Plates: I claim, as an improved article of manufacture, a screw plate, pro-vided with changeable pivoted dies, E, screws, A, stock, C, pins, N, and plate, Q, substantially as shown and described.

28,280.—Pomeroy Johnson, of Whitney's Point, N. Y.,

for an Improvement in Felling Trees: I claim the combination of the pole or scantling, B, provided with a steel or proper metal point, a, the fixed pulley block or shieve, D, and rope, C, with animal or other power attached; all being arranged and applied substantially as and for the purpose set forth. [Th

e object of this invention is to facilitate the felling of trees dispensing with much of the cutting or chopping operation, and at the same time to place the falling of the tree under the complete control of the operator. The invention consists in the en ment and use of a pole or scantling provided with a metal point or nead, and having a rope attached, which passes through a fixed pulley block, whereby, with the aid of a team or other power, the desired end is attained.]

28,281.—M. M. Jones, of Morrisville, N. Y., for an Improvement in Cotton Presses:
I claim the particular arrangement and combination of mechanism described, the same consisting of rods, H, rotating nuts, C, follower, B, bed piece, E, le ver, M, paw H, N, springs, o o, pivot, P, stationary roller, i, the several parts being constructed and arranged relatively as described and for the purposes set forth.

28,282.-Wm. Kennish, of London, England, for an Improved Hydraulic Motor: I claim a diaphragmed snail or other suitably shaped piston, C, which has an opening in its face and another one in its back. in combination with a diaphragmed hollow shaft, D, which has corres-ponding openings with those of the piston, substantially as and for the purposes set forth.

28.283.-Richard Ketchurn, of South Dansville, N. Y. for an Improvement in Mowing and Reaping Ma-

chines: I claim the combination of the cross-bar, K, having supporting rollers, m n, and vibrating bar or beam, C, furnished with rollers, d d, for operation by the corrugated driving wheel, B, all arranged upon the axle, A, for actuating the cutter, substantially in the manner and for the purposes set forth.

28,284.-W. A. Kirby, of Buffalo, N. Y., for an Im-

provement in Harvesters: I claim, in combination with the rod and lifting wheel, the lever and rod, x, with their attachments, substantially as described, for the purpose of raising, lowering and holding the cutters at different hights, as set sorth.

28,285.-F. L. Langley, of Troy, N. Y., for an Improved

Shoemaker's Float: I claim constructing and arr nging the several parts of the machine substantially as described, whereby the rasp may remain movable upon upon its axis, or rigidly fixed there n, as may be re-quired, for the purposes set forth.

28,286 .- J. P. Ledy and Wm. Boyers, of Mount Car-

roll, Ill., for an Improved Apparatus for Breachy Cattle: Ve claim the metallic sheath, A, in combination with the pad, C, clasp, D, constructed in the manner and for the purpose speci-

28,287.-George Little, of New York City, for an Im-

provement in Sewing Machines: I claim the adaptation of a cylinder, piston, rod and valves to, and obstituting a part of, a sewing machine, the whole combined, con-tructed, arranged and operating substantially as set forth.

structed, arranged and operating substantially as set forth.
28,288.—T. J. Mayall, of Roxbury, Mass., for an Improvement in Machines for making Rubber Hose:
I claim, first, An organized machine for the formation of spiral, rubber or gutta percha hose or tubing, the same consisting essentially of a tarveling carriage carrying the fabric of which the hose or tubing is to be formed, and a reversible guide, to which such automatic motions are given, as to wind the said fabric in spiral layers upon a suitable mandrel, substantially as set forth.
Second, I claim the combunation of the traveling carriage carrying the fabric of which the receives an receiver and a substantially as set forth.
Second, I claim the combunation of the traveling carriage carrying the fabric of which the here is to be formed, and made to receive a receiver and the two so operating together that the said guide shall be reversed in position as soon as the fabric is wound spirally in one direction upon the mandrel, where by the fabric is fed along and guided in two opposite directions upon the fabric so as to form. Third, I claim the combination of the traveling carriage carrying the supplying reel and the mandrel upon which the hose is to be wound, as set forth.

28,289.—John McKellar, of Thomaston, Maine, for an Improvement in Beer Powders: I claim the said composition or beer powder, made substantially as described.

I claim the said composition or beer powder, made substantially as described. 28, 290. — W. H. McNary, of Brooklyn, N, Y., for an Improvement in Knitting Machines: I claim, first, The threaded wheel, D, with its movable switch, D', H, applied aubstantially as described, in combination with the needles ring, or other equivalent device carrying the needles, to produce the rotary or traverse movement of the needles in either direction, as may be necessary. Second, The revolving and longitudinally moving studded cylinder, applied and combined with the movable switch wheel, by means of a forked lever, G, and revolving buttons, h', or their equivalents, and operating substantially as described, for the purpose of shifting the switch as often as is desired to reverse the rotary or traverse movement of the needles. Third, I claim the reg lating wheel with its adjustable arms, M M, applied and operating substantially as described, in combination with the needle ring and with suitable appartus for throwing the studded cylinder fuel operating and with suitable apparts for throwing the studded cylinder fuel operations of the work. Fourth, I claim combining the studded cylinder, H, with the disengaging appartus, by which it is made to throw itself out of gear with the main shaft, when knitting round a portion of the series of the needles is required to be resumed after knitting round a portion of the series of the needles is required to be resumed after knitting round a portion of the study of the knitting ma hine, by means of a soluted arm, S, working on a fixed guide-pin, 24, and controlling the movement produce the movement of the stick of the loops from the needles.

loop by means of the cams, Z' Z', at the sides of the wrists of its driv-ing cranks, substantially as described. Seventh, I claim combining the rockshaft which carries the thread guides witch wheel, D, by means of a fork, U4, or its equivalent, substantially as and for the purpose described.

28,291.-George Millard, of Waterbury, Conn., for an Improved Chimney Cowl: I claim the arrangement of the friction rollers, J, to run upon the edge of flanch, B, in combination with the cowl, C C', as and for the purposes shown and described.

[This invention consists in arranging an ordinary curved c cowl or cap on the chimnny top, so that it will be free to revolve by the action of the wind on a vane, and so that it will be securely attached to the chinney so as not to be blown off; at the same t the rain will be prevented from beating down the chinney flue]

28,292.—Harris Morse, of Columbia, Cal., for an Improvement in the Treatment of Snow or Ice, to provement in the Treatment Convert it into Large Blocks:

I claim the said process of treating snow or small pieces of ice. der to convert the same into large blocks or masses fit for preser on and use, as described.

28,292.—S. D. Nelson, of Pittsburgh, Pa., for an Im-provement in the Manufacture of Shovels: I claim the shovel, as a new article of manufacture, having the back strap imbedded in the back of the shovel blade, arranged and constructed as described, and for the purpose set forth.

28,294.-David Niven, of Rochester, N. Y., for an Im-

provement in Potato-diggers:

provement in Potato-diggers: I claim suspending the grate, share and clearing wheel together upon the axle by the supporting wheel, so means of the buils, h h, yoke, k, and axis of said clearing wheel, as described, or their equiv-alents, in combination with a lever, E, so that the said grate, share and clearing wheel may be continually graduated by the attendant to any depth, and adjusted to the undulations of the ground or raised therefrom, independently of the movements of the other parts of the machine, as specified. I also claim forming the upper surface of the circular concentric grate bars, l, with serrated edges, m m, in combination with the in-tervening teeth, n n, of the clearing wheel, for the more effectual separation of the tubers from the earth, substantially as set forth.

28,295.—R. F. O'Brien, of Boonville, Mo., for an Improvement in the Construction of Flues:

I claim the metal base, B, formed of the bottom plate, a, sides, b b, and flanches, c c, applied to the timbers, A A, as shown, and perfo-rated at its bottom or corrugated to receive and hold the plaster or mortar, substantially as and for the purpose set forth.

[This invention has for its object the building of brick flues or chimneys on the flooring timbers of buildings, without the danger or lichalling of the adjoining woodwork taking fire. The invention is more especially designed for building flues or chimneys on the upper floor ing timbers of buildings, to receive a stove pipe from below.]

28,296.-Alanson Ordway, of Stratham, N. H., for an

I claim the combination of the rotating circular grate, C, with the orizontal sliding grate, E, and levers, D F, as and for the purpose lescribed.

[The object of this invention is to obtain a simple and econom tweer by which the blast from the bellow is placed under perfect control and its action upon the fire regulated as occasion may re-quire; the tweer also serving the purpose of a grate, to effect the dis-charge of ashes and cinders from the fire.]

28,297.-S. W. Palmer and J. F. Palmer, of Auburn, N. Y., for an Improvement in Silk or Thread Reels:

Keels: We claim securing the slotted arms of a silk reel to the spindle on which they turn in such a manner that they can be extended and contracted at pleasure and folded up parallel to each other, and so that they can be rigidly secured to each other and to the spindle in any desired position, by means of a thumb-zerew, without prevent-ing the spindle from freely turning in its bear.n 38, substantially in the manner and for the purpose described.

28,298.-J. G. Perry, of South Kingston, R. I., for an

Improved in Sausage Machine: Iclaim the combination of the sliding knives, D, with the cylin-r, C, substantially as herein described and for the purpose set

28,299.—I. W. Pettibone, of Norfolk, Conn., for an Improvement in Vapor Lamps:

I claim the combination of the vapor valve at the mixing chamber with a supplementary valve—the two being constructed and opera-ting substantially as set forth. I also claim the combination of the mixing chamber with an air table or tubes, to deaden the whistling noise which generally accom-panies such burners.

panies such burners. I also claim arranging the air tube in such a manner with refer ence to the mixing chamber of the vapor burner, that it can be re moved therefrom, to permit cleaning, substantially as herein se move forth.

28,300.-G. B. Phillips, of Newark, N. J., for an Im-

proved Wrench: I claimla curved bar provided with a rack of teeth, in combination with a scroll nut for traversing and holding the sliding jaw, as de-scribed for the purpose specified.

28,301. W. C. Pitts, of Austin, Texas, for an Improvement in Seed Planters:

IIICHL IN DECU FIANTETS: I claim the arrangement of the double hoppers, e f, double tubes or ducts, B C, and single seed slide, d, operating together in the manner and for the purpose set forth and described.

28,302. J. S. Pond, of Cleveland, Ohio, for an Im-proved Washing Machine: I claim, first, The construction and arrangement of a compound rubbing board, having a series of alternate ridges and rollers, to compress and rub at the same time as described for the proved washing information and arrangement of a composing board, having a series of alternate ridges and rollers press and rub at the same time, as described for the purpose

compress and rub at the same way, we are specified. Second, The compound rubbing board in combination with a fluted roller or its equivalent, as set forth.

28,303.—J. T. Price, of Rockville, Ind., for an Improved Sediment Collector for Steam Boilers: I claim the system of pipes, F G I, applied to a boiler in connection with a heater, D-the whole arranged substantially as described, for the purpose set forth.

[This invention consists in a novel system of pipes applied to a boiler in connection with a water-heater arranged as a bridge in the boner in contrast, for the purpose of collecting the mineral or other sedimentary matter from the water and preventing its deposit in the boiler.]

28,304.-T. J. Price, of Industry, Ill., for an Improve-ment in the Construction of Evaporating Appara tuses:

the constructing evaporating pairs with a series of dampers, D D D, inserted between the cross partitions, B B B B, and operated with a series of levers, i i i, substantially, s shown for the purpose specified.

28,305.-A. F. Reeder, of Bloomington, Ill., for an Im-

20,000.—A. F. Keeder, of Bloomington, Ill., for an Improvement in Rotary Engines: I claim the engine constructed with a cylinder of the form described, with a partition, I, with the induction ports in its abutments and with a cavity, a, and series of projecting surfaces, t u v v, in and upon its rotating piston head, D, substantially as herein decribed. [This is a very ingenious and simple improvement in rotary en

es.]

28,306.—J. H. Rollins, of Wapello, Iowa, for an Im-proved Vapor Lamp: I claim the combination, with the vaporizing chamber, E, of the removable, flanched, screw bottom, a, and globe, I, so that the globe will be-supported or hung from said bottom—all as and for the pur-pose shown and described.

[This invention relates to an improvement in that class of lamn which are designed for burning volatile hydro-carbons, and which vaporize the fluid in a chamber distinct from, but connected with the fount, by the heat from the illuminating flame. The object of the invention is to facilitate the cleaning of the lamp and also to pre shade being cast by it, while permitting the use of a glass globe.]

28,307.-W. J. Sanderson and Sidney Stanton, of Sy-racuse, N. Y., for an Improvement in Steam Boiler Feeders:

Feeders: We claim the arrangement of a discharging valve constructed in the manner stated and connected with the water pump of steam boilers, A, solid float, B, within the boiler, balanced by a weight without, and the steam whistle, G, connected with the balancing beam, E, as described, when the valve, J, operates as set forth, to re-gulate the amount of water in the boiler-and the whole constructed. arranged and operated in combination, substantially as described.

28,309.-J. M. Scribner, of Middleburgh, N. Y., for an

20,000.—0. M. SCRIDNEY, Of Middleburgh, N. Y., for an Improvement in Lathes: I claim the arrangement of devices is described, for traversing the leg or article cut to and from the cutter, and rotating it at the same time by the mechanism described, or its equivalent, so as to cut or form curves on the article so turned and t aversed, substantially as described.

28,309.—Philander Shaw, of Boston. Mass., for an Improvement in the Method of Preparing and Molding Wood into Dif erent Forms:
relaim the method or process of treating wood, consisting in commensume in within molds and afterwards heating it while thus confined under pressure.
Also the process of treating wood by impregnating it with steam and restnous, oily or other water-proof matter and mineral or metallic salts and preservative chemicals and dyes, or any of these or process above-claimed.

28,310.-Marvin Smith, of New Haven, Conn., for an

I claim the combination, with the stationary hollow concave rail. B, standard, a, and fork, D, of the sliding, hollow, concave rail, E, standard, d, fork, F, and spring, o, as and for the purpose shown and described.

28,311.-S. J. Smith, of New York City, for an Im-

28,311.— 5. J. Sintell, or from Long and perced particle, a lever, I claim the combination of the fixed and corved particle, a lever, R constructed as not forth, with the spring, D, and the eccelentic hand lever, C-all relatively arranged and combined, as and for the pur-poses described and represented. [This invention consists in the employment of a cam lever that is

acted upon by a coiled springarranged in such a relation to a curved fixed jaw and operated by a lever having an eccentric motion, that two jaws will be obtained, one a curved and the other a straight one. between which nuts of any ordinary size or kind may be placed and cracked with greater facility and with little power.]

28,312.-Lydia W. Stiles, of Brooklyn, Ohio, for an

Improved Butter-worker: I claim the special arrangement of the workers, B B', hinged to the adjustable post, E'sin combination with the revolving bowl, when operating conjointly in the manner and for the p rpose set forth.

28,313.—Abraham Stoler and S. A. Sisson, of Bristol, Pa., for an Improvement in Harvesters: We claim the arrangement of the caster wheel, H, with its frame, G, connected to me main axie, in combination with the levers, K and L, fulcrum, I, rod, M, and shoe, S, applied in the manner and for the purpose substantially as described. We also claim the combination and arrangement of the rod, M, and levers interposed between the caster wheel frame and pivoted shoe, S, for adjusting the cutting apparatus, substantially as described.

S, for adjusting the cutting apparatus, substantially as described.
28, 314. — A. M. Swain, of Lowell, Mass., for an Improvement in Water Wheels:
I claim, first, The annular chamber, I, arranged substantially as shown, and provided with slots to receive the guides, e, when the litter are attached to the cylinder, J, for the purpose set forth. Second, The arrangement of the guides, e, and cylinder, J, attached to curb, B, and chamber, I, forming the gate, when said parts are arranged in relation to the wheel, G, substantially as and for the purposes specified.
Third, The adjusting of the block, E, by means of the bar, b, and for the wear of the step.
[The object of this invention is to obtain a simple and efficient horizontal water wheel-one that will have all its parts accessible for re-

tal water wheel-one that will have all its parts accessible for re pairs and which will give the maximum power of varying heads with ical use of the water.]

28,315.—R. A. Tilghman, of Philadelphia, Pa., for an Improvement in the Method of Decomposing Fats into Fatty Acids and Glycerine:

into Fatty Acids and Glycerine: I claim the process of decomposing fats into fatty acids and glyce-rine by means of water at a light temperature and pressure, either with or without the presence of an alkali... 1. Applying the water in several successive portions and removing those portions when partly satured with glycerine. 2. Arranging the fat and water in shallow layers so as to give an increased surface of permanent contact between them. 3. Causing the fat and water, arranged in shallow layers, to flow in opposite directions so as to bring fresh water in contact with the partly-decomposed fat. 28,316.-Jeremiah Tilton, of Northfield. N. H.

8,316.—Jeremiah Tilton, of Northfield, N. H., and Edwin Riston, of Sanbornton, N. H., for an Im-provement in Machinery for Cutting Flock: We claim the employment or use, in a flock-cutting machine, of rocutters, II J, arranged substantially us shown, so that one cutter, t, will have a rotary motion and a vertical adjusting movement, at the other cutter, J, an universal self-adjusting movement, for the purposes set forth.

28,317. Malrice Vergnes, of New York City, for an Improvement in the Construction of Voltaic Gas

Batteries:

Hatteries: I claim the use, in gas batteries or combined acid and gas batteries, of porous platinized coke, substantially as and for the purposes set forth. I also claim the general arrangement of the whole battery or appa-ratus, substantially as described.

28,318.—J. H. Wait, of Portsmouth, Ohio, for an Im-provement in Mechanical Movements: I claim constructing a crank with an elongated wrist pin set obliquely to its axis of rotation, so that a pitman connected thereto can be made to give any desired length of stroke or throw within the capa-city of the erank, without retarding the motion thereof, in the man-ner substantially as described.

28,319.—C. P. S. Wardwell, of Lake Village, N. H., for an Improved Swift. Ante-dated April 25, 1860: I claim the spring, D, in combination with the jaw formed by lips, B B, substantially as set forth and represented.

28,320.—C. O. West, J. R. Smith, John Carey, George Janney, R. Hunt, Amos Hatchett, D. West, Eliel

West and G. Garner, of Martinsville, Ohio for an Improvement in Ditching Machines: : We claim, first, The employment of the fin, M, in combination vibit the inclined bottom, L, as and for the purpose shown and de-cribed.

scribed. Seco 4, The combination of the rih, c', with the inclined bottom, B, as a d for the purpose set forth. Third, The employment of a hinged triangular beam, A, and ad-justable sled, F, in combination with the plow as and for the purpose shown and described. Fourth, The combination with the plow, the beam, A, and sled, F, of the adjustable pivoted brace-rod, K, standard, I, and front brace-rod, J, as and for the purposes shown and described. [This invention consists in an improved machine for forming ditabas and transformed and beam in the proved machine for forming

ditches or trenches of any desirable width or depth, or having either perpendicular or inclined sides. The machine consists in a shovel plow peculiarly constructed, by which the earth, in the operation of digging, is thrown up and out from the ditch and away from its edges a sufficient distance to prevent its falling back again. The above claims will give an idea of the machine.]

cannow will give an idea of the machine.] 28,321.—I. W. Wetmore, of Erie, Pa., for an Improve-ment in Railroad Chairs: I claim, first, The lip chair, E, formed for a longitudinal wedge under the rails and fitting them exactly, because of the trimming of the web, u u, the upper surface of the base of the chair being beveled at each end, w v w v. Second, The wedge, G, passing between all the spikes except onel and held in place under the joint by notches, h, catching the spike, R, 98, 292. I. M. Whitnerer es A activity. N. K. Guner, J.

28,322.—J. M. Whitney, of Astoria, N. Y., for an Improved Sash-fastener

Elaim, as an improved article of manufacture, a window sash-ener composed of a plate, a, hinged noose strut, C, and a hinged E, arranged as shown.

[This invention consists in arranging, in combination with a strut or band that is fastened to the meeting bar of the inner sash, a that the same most effectually prevents persons from opening the window from the outside.]

28,323.—Dudley Wood and Albert Byrington, of Byron, Ill., for an Improvement in Plows:

e claim the arrangement of the tubular beam, A, tubular stand-B, secondary joint, b, and inside coupling bolts, a a, substantially escribed. ara, . as de

as described. 28,324.—C. W. Brown and G. W. Banker, of Boston, Mass., assignors to G. W. Banker and G. O. Car-penter, of South Reading, Mass., for an Improve-ment in Machines for Mixing Paint: We down the method of constructing and arranging the 'mixing as to describe scrolls from the central tube, or center of the tub, and arranged in such a way that the fixed arms in the tub shall be set so as to describe scrolls from the central tube, or center of the tub, and arranged in such a relation to the parallel revolving arms that they will pass each other only in pairs, at nearly equal distances from the axis of the spindle, in the manner described and represented, for the purpose set forth. 28,325.—Patrick Mihan of Boston Marc

28,325.—Patrick Mihan, of Boston, Mass., assignor to himself and M. A. Lane, of q harlestowil, Mass., for an Improvement in the Construction of Conden-sors of Stills.

I claim the combination of a conical mouth-piece, F, of the supply pipe, E, with the conical bottom, b, of the reservoir, C, substan-tially as and for the purpose specified.

[This invention consists in combining an annular steam chamber, around a vessel that contains cold water, and the elevated conical bottom of said vessel with a conical receiving chamber, in such a manner that if said vessel is placed on a kettle containing boiling water, the steam arising from the latter, by coming in contact with the conical bottom and with the cold walls of the steam chamber denses and collects in the context varies of the steam chamber, con-tained by the state of the context receiving chamber, from which it is drawn by a suitable faucet; and it also consists in the arrangement of a conical month-piece at the end of the supply pipe, in com-bination with the conical elevated bottom of the reservoir, for the purpose of spreading the cold water over all parts of said bottom, and to enable it to act with the best possible effect in condensing the steam that may come in contact with it.

28,326.—Purches Miles, of New Haven, Conn., assignor to A. P. Plant, of Plantsville, Conn., for an Im-proved Bedstead lu stenin! :

in the arrangement of the shaft, c, provided with eccentric, a', flanches, b', the dovetail mortise, a, tenon, b, and female screw u, d', with the bracket bearing, C, substantially as and for the set forth. ad. d'

The object of this invention is to obtain a lock joint or fastening by which the rails and posts of bedsteads, or other two similar parts to be connected, may be drawn firmly together in close contact and locked by a dovetail; the locking of the dovetail and the drawing of the parts together being simultaneously performed by a simple move ment of a lever or the turning of a shaft.]

128,327.-J. H. Parker (assignor to E. H. Ashcroft), of Bos on, Mass., for an Improved Hand Drill:
I claim the arrangement of the spring clutch with the drill-carrier and its lever, and within, so as to be protected by the sleeve or cap, L, substantially as specified.

L, substantially as specified.
28, 328. —J. H. Parker (assignor to E. H. Ashcroft), of Boston, Mass., for an Improved Hand Drill:
I claim my improved hand drill, as constructed, not only with the application of a male screw, G, and a concentric oil-holder or tubu-lar cap, L directly ho, and so as to project from, the drill-carrier, A, but with the tubular s nak of the female screw extended directly from the pivot, F, or a handle, K, intervening between the two, as described.
I also claim connecting the chambers, M N, by one or more pas-sages, b, separate from the female screw, that the oil may pass from one chamber into the other, under circumstances and for the purpose set forth.

28.329.-Wm. C. Pitts (assignor to Wm. A. Pitts), of

28,329.—W m. C. Pitts (assignor to W m. A. Pitts), of Austin, "Lexas, for an Improvement in Plows: Iclaim the construction of the plow with double points with the hole in the center, so that either end may be turned to the ground and fastened to the stock or "helve" of the same, by the bolt through the hole in the center, so that when one point wears out or breaks off, the other can be turned down; also, the separate bar, so constructed as to fit and sustain the plow, as specified. And I hereby disclaim the invention of the stock of said p claim only the invention of the share and bar, as specified.

28,330.—Ephraim Russell, of Coatsville, Pa., assignor to himself and J. S. Wiley, of Sadsbury, Pa., for an Improvement in Seed Planters:

an improvement in Sect 1 milets. claim the arrangement of the sides, D'D', the equivalent lever, armed cylinder, F, screw stems, m m', slotted plates or loops, n at the double dovetail keys, G G G'G', operating in the man-described and for the purpose specified. T claim

ner deseribed and for the purpose specificat.
28,331.—Edward Savage, of Cromwell, Conn., and H. S. North, of Middletown, Conn. (assignors to the Savage Revolving Fire-arms Company, of Middletown aforesaid), for an Improvement in Revolving Fire-arms. Fire-arms:

Fire-arms: We claim placing the coiled spring which forces back the rotatin cylinder away fram the muzzles of the charge chamber, and coverin it with the shoulder, b, of the cylinder axis pin, so that its actio cannot be clogged by the accumulation of smoke, burned powder c dust from the muzzles when fired; and also increasing the facilit with which the rammer can be put in and taken out, all as shown an describel:

wing winch the rammer can be put in and taken out, all as shown and described. Second, The employment, in combination with the regulating server, G, of a thimble or bushing, F, applied to the recoil shield, to serve, at the same time, as a bearing for the rear end of the cylinder axis pin, D, and a bearing for a set screw, f, by which to secure the regulating screw, substantially as described. Third, The set screw, f, applied in combination with the thimble or bushing, E, of the recoil shield, and with the regulating screw, G, substantially as and for the purpose described. Fourth, The combination with the plunger, I, fitted to a guide in the head of the cylinder axis pin, D, as described, and the slot, m, in the plunger, and connected with the sold head, and to a slot, m, in the plunger by a cam-like slot, b, and pin, p, substantially as specified.

[This invention consists in certain improvements in the revolver

which constitutes the subject of the patent granted to H. S. North on June 7, 1856.]

28,332.-Wm. Shields (assignor to Joseph Lockett and

28,332.—Wm. Shields (assignor to Joseph Lockett and Robert Leake), of Manchester, England, for an Im-provement in Machines for Engraving Rollers, &c. Patented in England, Oct. 30, 1857: I claim the combination and arrangement of the mechanism de-scribed, by which the movements of a tracer can be modified in ex-tent and changed in direction and transmitted to etching instru-ments, and the roller or cylinder to be operated upon; and I particu-larly claim for these purposes the use of the levers or bars, e6 and h4, and the bars or carriages, e e9 f and gl.

 28,333.—Emil Trittin (assignor to himself and J. A. Cummings), of Philadelphia, Pa., for an Improvement in Burners for Vapor Lamps:
 I claim, first, The tube, A, with its chamber, C, and slotted top, a, in combination with the stem, D, and the attachment, E, or its equivalent; the whole being arranged substantially as and for the purpose set forth. loombination whole being arranged substantianty to see the whole being arranged substantianty to see the second. The cap, d, with its openings, having inclined sides, y, in ombination with the slotted top, a, of the burner; the whole being tranged and operating substantially as specified.

28,334.-Jedediah Weiss (assignor to himself and Chas

Brodhead), of Bethlehem, Pa., for an Improvement

Brodnead), of Bethlehem, Fa., for an Improvement in Telegraphic Machines: I claim the application of clock-work to the drawing-out and let-ting-back of the spiral spring, circular spring or elastic substance (commonly used for adjusting the telegraphic circuit), by combining with the clock-work the accountry of (2, the lever, A and roller, I, the movable axis to the wheel, S, the sliding wedge-shaped knob, K, and the lever, O O, in the manner and with the click for the particularly in the foregoing specification and the annexed drawings.

particularly in the foregoing specification and the annexed drawings.
28,335.—D. H. Williams, of Alleghany, Pa., assignor to himself and R. B. Fitts, of Philadelphia, Pa., for an Improved Apparatus for the Combustion of Smoke in Steam Boiler Furnaces:
I claim the use of steam under pressure, for the purpose of forcing air (through suitably arranged, conically-shaped tubes or other openings, by means of the steam pipe apparatus, operating substantially as described) into steam boiler; the steam jets, H, with their openings, K or their equivalents, being in combination whether with or without the deflecting or heat-receiving wall, E.
28, 236.—T. T. Woodward of South Reading Mass.

28,336.-T. T. Woodward, of South Reading, Mass., assignor to himself and Whiton, Browne & Wheel right, of Boston Mass., for an Improved Signal Ap-

paratus: I claim, first, Aportable revolvingsignal apparatus, containing a series of pyrotechnic charges, such as blue-lights or rockets, &c., and operated so as to receive an intermittent rotary motion, and to suc-cessfully ignite the several charges by any suitable arrangement of mechanical devices. Second, The arrangement of devices for rotating the apparatus and igniting the charges at the same time; the same consisting of the spring hammer and cam-grooved cylinder, c, both actuated, as de-scribed, by the rod.

RE-ISSUES.

W. E. Kidd, of New York City, for an Improvement in Bonnet Frames. Patented April 13, 1858: I claim making the tip of bonnet frames of two separate thicknesses of the fabric knewn as "cape net," by subjecting the same, while in a moist state, to heat and pressure in metallic molds of the required form to impart the required shape, and effect the union of the two thicknesses at one and the same operation, substantially as de-scribed.

ribed. I also claim making the crown of bonnet frames of two separate icknesses of the fabric known as cape net, by subjecting the same, hile in a most state, to heat and pressure in metallic molds of the quired form to impart the required shape, and effect the union of a two thicknesses at one and the same operation, substantially as evolved. th the two describ

rribed. nd I also claim making the entire bonnet frame of two separate knesses of the fabric known as cape net, by subjecting the same, le in a moist state, to heat and pressure in metallic molds of the inred form to impart the required shape, and effect the union of two thicknesses at one and the same operation, substantially as whed

H. F. Knoderer and L. F. Knoderer, of Chillicothe

H. F. Knoderer and L. F. Knoderer, of Chilhcothe, Ohio, for a Composition for Preventing Incrustation of Steam Boilers. Patented Jan. 3, 1860:
We claim the application of a compound of alum, glue, wood-ashes and wheat-bran, prepared and applied as specified, to prevent incrus-tation on the interior of steam boilers and pipes, of whatever kind, pertaining thereto, as specified and substantially set forth.
Samuel La Forge, of Cleveland, Ohio, for an Improve-ment in Waterproof Leather Goods. Patented Feb. 28, 1860:

Field in vvaterproof Leather Goods. Patented Feb. 28, 1860: I claim the article of manufacture named, prepared from the un-ressed akin exposed to heat, coated with the charged rubber solu-on or compound, and then subjected to the vulcanizing process, and i forth.

D. M. Mefford, of Jeffersonville, Ind., for an Improve ment in Corn Huskers. Patented Dec. 22, 1857: I claim the combination of husking rollers and pressure flap, open ating substantially as and for the purpose set forth.

Clark Tompkins and John Johnson, of Troy, N. Y., for an Improvement in Knitting Machines. Patented

an Improvement in Knitting Machines. Patented Sept. 18, 1855: We claim the apparatus for revolving the take-up machinery, in

unison with the needle cylinder, as specified, substantially in the manner and for the purpose set forth. We clso claim revolving the shaping plates, S and C, by a positive motion with, and at the same velocity as, the take-up motion, sub-stantially as described and for the purposes specified. ADDITIONAL IMPROVEMENTS.

Mahlon Gregg, of Philadelphia, Pa., for an Improved Machine for Cutting Tenons on Spokes. Patented

Fred. 9, 1858: J chain operating the carrier, B, and bearer, C, upon the faceplate A, by means of the eccentrics, f and g; the same being constructed and arranged together substantially in the manner and for the pur-pose specified.

pose specified. I also claim adjustably securing the cutter pieces, D D, by means of the nutted T-bolt, E, when the same are arranged and applied to-gether in relation to each other and the carrier, B, in the manner de-scribed and set forth.

Josiah Lyman, of Lenox, Mass., for an Improved Pro-tractor. Patented May 25, 1858: I claim, first, The arrangement of the several verniers, limbs, scales and rule in one instrument, in the manner described, for the

scales and rule, in one instrument, in the manner described, for the purposes set forth. Second, I claim the peculiar arrangement of the sliding vernier scale pake, by which it can be applied with equal readiness and facil-ity to either side of the rule, so as to read the given angle and its complement in connection with the given distance, or be used separ-ately, as the case may require. Third, I claim, as an improvement, the arrangement set forth for adjusting the several verniers of the scale plate to their correspond-ing scales.

DESIGNS.

M. Gibney, of New York City, for a Design for Spoon and Fork Handles.

Jas. Greer and R. I. King, of Dayton, Ohio, for a De sign for a Stove.

H. S. Hubbell and T. H. Wood, of Buffalo, N. Y., for a Design for Stove Plates.

Jacob Resor, of Cincinnati, Ohio, for a Design for Stoves.

John Siddons and J. C. Hart, of Rochester, N. Y., for a Design for a Stove Plate.

Wm. W. Stevens (assignor to N. P. Richardson & Co.), of Portland, Maine, for a Design for Parlor Stoves.

NOTE.-In counting the above list of claims, we observe there were ninety-six patents issued for the week ending May 15th. Of this number, we recognize THIRTY-SIX patentees who had their applications conducted through this office.



A. F. W., of C. W.-It will require no more fuel to run a steam engine at 150 revolutions per minute than 70 during ten hours, provided the entire work is equal. It requires about the same amount of fuel to run an engine at 60 lbs. pressure as at 50 lbs., provided the expansion is properly conducted and there will be a greater amount of work done. In the first case, with the higher speed, it is understood that less steam is employed at er revolution, but that the total quantity is the same for both speed

G. S., of Ala .- We do not advise you to use lead pipes for conveying water for domestic purposes, as some of the metal may be taken up in solution by the water, and thus poison the lifemay be taken up in solution by the water, and thus poison the life-sustaining fluid. Use either cast iron or wooden pipes. You state that your yard and garden are 90 feet above your spring, and you wish to convey the water from the latter 500 feet to the former, and ask "what proportion of the water can you get from the power of the water itself—can you get a fall of from one to 12 feet?" We do not understand your questions, because you have not slatd whather your spring heaves are fell wap to I fit has a 12 not stated whether your spring has any fall or not. If it has a 12 foot fall, you will be able to raise about one-twelfth of its water 90 igh a three-inch tube, 500 feet long. If it has no fall it feet thre ate any of its water.

C. L., of C. W.-We have not seen the machine to which you refer, and cannot therefore give you the desired informspecting its qualities or operation. ation re

W. H. B., of Conn.-We believe the British steamer "Persia" has made the quickest eastward passage, and that the time was about 9 days 2 hours. The last passage of the American steamer "Vanderbilt" to New York, made in 9 days, 12 hours and 30 min-utes, is claimed as the quickest westward passage. It must be e in mind, however, that the average time of passage eastward ich less than that westward, and we think that the "Vander-The minor reso shall blink westward, and we think that the "value" value bill's" westward passage is, at least, as remarkable as the "Persia's" eastward. The passage between Liverpool and St. Johns, Newfoundland, has been made, we believe, within six days. See, also, an article on this subject in our present issue.

W. P. H. of Conn.-We have no means of ascertaining theamount machine-made hosiery manufactured in this coun-There are many muchines patented in this country, and on which make men's nostery (socks) with a properly shaped heel, without a seam up the leg; but two machines have always been required to make a complete sock, the work being transferred from one to the other. Such machines are made and for sale by J. B. Aiken, of this city. A company—called the McNary Knitting Machine Company—has just started, and has applied for patents on a machine which makes the sock from beginning to end, with a proper heel. James J. Wilson, of this city, is president or manager of this company. There are many machines, both European and American, which will knit a sock like a bag or one end of a sausage without stopping. Such socks are afterwards shaped on a block for sale, but when they have been washed they resume the original form. There never has been a machine to knit ladies' h a properly shaped leg, without a seam up the leg; an believe that if such a machine could be invented, it would be one of the most remunerative things ever got up. The English bosiery manufacturers have long desired such a machine.

H. P., of Maine.-The velocity of water in a sluice or tunnel is in proportion to the perpendicular hight of the fall, not the length of incline. The velocity of water in a sluice with a two-foot fall is 11.28 feet per second. S. R., of N. Y .- Thirty-three thousand pounds of water falling one foot per minute excits a force of one horse-power. Con-sequently, to calculate the horse-power which a water wheel would have if there were no waste, you multiply the number of pounds of water which pass through the wheel in a minute by the number of feet which the water falls in passing through and divide the product by 33,000. The power exerted by undershot breast-wheels ranges from, say 35 to about 60 per cent of the whole power of the water, the remainder beine loat in friction leakage. (D) nages 116 and the remainder being lost in friction leakage, &c. On pages 116 and 200 of the present volume of the SCIENTIFIC AMERICAN, you will find ns for bleaching wax fulldirecti

G. M. H., of Maine.-There is no perfect fire-proof wash for shingles known to us, but the silicate of soda is an excellent partial one. As it will be difficult, however, for you to procure this solution, we advise you to use a wash composed of common l sulphate of zinc, salt and skim milk. Use a pound of salt and same weight of the sulphate of zinc to each bushel of lime, an id to same weight of the surplate of and to take busite of time, and to every gallon of the wash add a quart of the skimmed milk. Dimp fell's blower is a very good one for your purpose; it is manufactured at the Novelty Works, this city. It is constructed so as to prevent the air getting behind the blades.

G. J. L., of N. H.-Electro-magnetism has been frequently suggested as a suitable agent for car-brakes, for the purpose of polarizing the wheels: it is not, therefore, patentable as a You may, however, be able to secure a patent if new application. ovide a suitable and improved mechanism for accomplishing ject. The machine to which you refer in the museum of this provid. city, is not a perpetual motion. If you consider a wedge to be a lever, then its fulcra will be the lips of the split into which it is inserted; but it is so different in its nature and application from the common lever, that it is justly held to be a separate "mechanical power," and the two should never be compared together.

- J. Q., of N. Y.-It is impossible to keep copper tanks bright in which water-either cold or hot-is kept. The metal combines with a minute quantity of the oxygen in the water, and forms a thin film of the oxyd of copper on the surface; this is sometimes called "tarnish." The outside of copper kettles, exposed to a coal fire, soon gets coated with the coal dust, and there is no method known to us for keeping it bright.
- W. R. McF., of Tenn.-Hot-air engines are unsuited for fire-engines, because they are too bulky in proportion to their power. Compact high-pressure steam engines are necessary for running through the streets and exerting great force in ejecting the water.
- J. G. L., of N. C .- By coating your cast iron pump with hot asphalt, and then allowing it to dry thoroughly, it will not be liable to rust afterwards. The water pipes in our city are of cast iron, and yet they do not communicate a peculiar iron taste to the water. Pipes made of tin will not be affected by the water in your well, but they are too dear to use for such common purposes.
- N. P., of Del.-Your method of plating with alloys of gold may be patentable, but the patent must be for the process. You will find a chapter on the reduction of alloys by the galvanic battery in "Smee's Electro-metallurgy." This author states that he had not been able to reduce a perfect reguline alloy; but he lays down the principles by which such deposits may be made. F. R. R., of N. Y.—The dark-brown substance which
- you have sent us appears to be a mixture of the oxyd of iron and the oxyd of alumina, and would make a cheap paint. The other powder is apparently a mixture of "green marl sand."

MONEY RECEIVED

At the Scientific American Office on account of Patent Office business, for the week ending Saturday, May 19, 1860 :-

Office business, for the week ending Saturday, May 19, 1860:-J. Y. H., of Pa., \$10; C. C. H., of N. Y., \$32; W. L., of Mass., \$30; J. H. B., of Iowa, \$10; S. F. B., of Mass., \$25; M. & B., of Mass., \$25; S. P. G., of Wis., \$30; J. G. R., of Cal., \$30; J. H., of Pa., \$25; W. A. S., of N. Y., \$10; D. G. G., of L. I., \$25; W. A. C., of Ill., \$100; C. E. L. H., of Conn., \$25; G. W. C., of N. Y., \$100; J. K., of N. Y., \$10; S. Y., of Ala, \$30; D. & H. W., of Pa., \$30; J. J., of Pa., \$25; J. S. of Wis., \$25; C. G. E., of Wis., \$30; G. W. B., of Mich., \$25; G. G., of Wis., \$25; J. T. S., of Va., \$30; J. G. Jr., of Mich., \$25; D. D. A., of Mass., \$25; J. F., of N. Y., \$25; C. M. Y., of Mich., \$25; D. D. A., of Mass., \$30; J. & C., of Ohio, \$20; H. H. A., of Iowa, \$25; G. K. H., of Niss., \$30; D. & O, of Ohio, \$20; G. M. Y., of Ohio, \$25; G. K. H., of Niss., \$30; D. & O, of Ohio, \$20; G. M. Y., of Ind., \$30; S. J., of Ohio, \$20; MeN. K. Co., of N. Y., \$300; C. A. B., of N. Y., \$30; H. A. R., of Ohio, \$20; M. M., of Iaa, \$30; J. G. A. A. H., of Mich., \$35; J. F. W., of Ill., \$10; S. K., of Miss., \$30; F. L. L., of Mich., \$35; J. F. W., of Ill., \$10; S. K., of Mass., \$15; O. F. F., of Ind., \$35; F. D. L., of N. Y., \$57; E. B., of Ind., \$20; P. A. H., of Mich., \$3; J. F. W., of La., <math>\$00; J. M., of Mass., <math>\$1; O.F. F., of Ind., \$25; F. D. L., of N. Y., <math>\$57; E. B., of Ind., <math>\$20; P.& B., of Ohio, \$35; W. M., of Mass., <math>\$30; J. N., of Mass., <math>\$1; O.F. F., of Ind., \$25; F. D. L., of N. Y., <math>\$57; E. B., of Ind., <math>\$20; P.& B., of Ohio, \$35; W. M., of Mass., <math>\$30; H. N., of Pa., <math>\$25; F.McM., of Fla., \$35; E. H., of Cal., <math>\$30; T. & C., of Ky., <math>\$55; A. S., of N. Y., \$30; T. H., of Cal., <math>\$25; G. W. G., of Mass., <math>\$30; B. C.C., of Ga., \$30; C. B. M., of Wis., <math>\$10; H. A. H., of N. Y., \$30; J.J. McD., of Ill., \$60; J. C. R.. of Pa., \$30; F. S., of Ill., <math>\$60; D. F.e., of Mass., \$30; L. & M., of N. Y., \$30; J. H. S. of N. Y., \$10; G.S., of Ga., \$25; H. C. G., of Ill., \$25; J. K., of Ohio, \$30; W. T.,ot Conn., \$30; H. J. H., of Ill., \$25; C. M., of N. J., \$100; J. H., ofIII., \$25; S. A. G., of N. Y., \$25; J. B. of Pa., \$25; J. H. of N. Y., \$30; G. W. W., of N. Y., \$30; G. W. W., of N. Y., \$25; J. E. A. G., of Ill., \$25; J. E. J. of Mass., \$30; F. L. E. H., of Ill., \$25; T. A. G., of Ill., \$30; L. D. L., of Ill., \$30; J. J. H., of Ill., \$25; J. E. A. G., of Va., \$30; H. C. J. J. of N. A. Suff. L. D. H., of Ill., \$25; J. E. A. G., of Va., \$30; H. J. H., of Ill., \$25; J. E. A. G., of Va., \$30; H. J. H., of Ill., \$30; J. J. H., of Ill., \$30; H. J. H., of Ill., \$30; J. J. H., 30; J. J. H.,

Specifications, drawings and models belonging to parties with the following initials have been forwarded to the Patent Office during the week ending Saturday, May 19, 1860 :-

Office during the week ending Saturday, May 19, 1860:-G. H. C., of Maine; C. E. L. H., of Conn.; H. H. H., of Ga; G. M., of N. Y.; J. F., of N. Y.; T. D., of Ohio; W. H. L., of N. Y.; P. & B., of Ohio; S. F. B., of Mass; D. G. G., of L. I; W. F., of Mass; F. S., of Ill. (2 cases); J. M., of Mass; S. K., of Ohio; J. B., of Va.; M. & B., of Mass; R. S., of R. I.; H. N., of Pa.; J. J., of Pa.; J. S., of Wis; J. J. McD., of Ill. (2 cases); H. H. A., of Iowa; E. P. W., of N. Y.; J. H., of Pa.; C. C. H., of L. I.; F. L. L., of Mich.; R. A. W., of Pa.; S. A. G., of N. Y.; H. C. G., of Mich.; G. S., of Ga.; J. H., of Ill.; J. J., of N. Y.; J. E. A. G., of Yay