

## WEEKLY SUMMARY OF INVENTIONS.

The following inventions 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:—

## BONNET CLASP.

To explain the object and nature of this invention we shall first briefly describe the old plan of making the wire frames of bonnets. These frames are made upon a shape constructed of buckram or other stiff fabric or material, with an outwardly projecting margin, which serves as a guide or gage around and within which to lay the wire in proper form to make a frame; and the wire as it is laid around this margin is tacked or stitched to it with a needle and thread to confine it in proper form; and when the frame is so far completed as to permit it been taken off the shape, the tacking-thread requires to be cut and pulled out. The object of this invention is to dispense with the tacking or stitching and to provide a more convenient means of confining the wire to the shape and removing it therefrom when the frame is so far completed as to permit it; and with this end in view, the nature of the invention consists in a metal clasp of an elastic character and of a peculiar construction, which enables it to be readily applied to secure the wire to the margin of the shape at suitable intervals and as readily removed when the confinement of the wire is no longer necessary. The credit of this contrivance is due to H. A. Reynolds, of this city.

## SEPARATOR.

This invention relates to an improvement on a machine for separating garlic from wheat and other grain, for which machine Letters Patent were granted bearing date December 21, 1858. The machine previously patented consists of rollers and a feeding device so arranged that the grain and garlic seed would both be crushed separately from each other by the rollers; the moist garlic seed adhering to the rollers and the crushed grain falling between them; the separation of the garlic seed from the grain, being due to the adhesive tendency of the crushed garlic seed. The object of the present invention is to effect the separation of the garlic seed from the wheat or other grain without crushing the latter. This result is obtained by substituting rollers with an elastic surface, sufficiently soft to yield to the wheat or grain and allow it to pass through uncrushed, but at the same time sufficiently hard to crush the garlic seed, so that it may adhere to the rollers as before, and be scraped or stripped therefrom. This device has been patented to Philip C. Fritz, of Barrytown, N. Y.

## SEWING MACHINE.

This invention consists in so applying the feeding device in combination with the needle of a sewing machine, and with the device or devices operating in conjunction with the needle to enchain the loops of a single thread carried by it through the fabric to be sewed, that the feed movement is imparted to the fabric only after every second passage of the needle into the cloth and corresponding operation of the looping or enchaining device, for the purpose of producing a stitch as herein described. It also consists in certain novel means of combining the needle arm or needle-operating lever with the main shaft or other rotating shaft of the sewing machine which carries the feeding cam, for the purpose of producing two vibrations of the said lever back and forth by every revolution of the said shaft. This machine is for making the stitch patented last week by the same inventor. This improvement was designed by James S. McCurdy, of Brooklyn, N. Y.

## SHARPENING VENEER-CUTTERS.

The object of this invention is to obtain, by a simple means, a device by which the proper level or basil may be given the knives of veneer-cutting, and similar or analogous machines. The invention is designed for sharpening knives for those machines in which either the bolt or the knife moves in the arc of a circle, and which consequently requires, in order to do perfect work, that the basils of the knives have a curvature corresponding to the arc in which they or the bolts move. To this end a rotary and traversing grinding wheel is employed, and the same applied to the bolt bar, or stock of the machine, so that it will have the same vibratory motion as the bolt bar when in operation for cutting the bolts, whereby the grinding wheel is presented to the knife so as to sharpen it with a proper concave basil. This device has

been patented to J. H. Goodell and A. F. Goodell, of this city.

## COOKING RANGE.

This invention relates to an arrangement in that class of ranges, for which a patent was obtained by the same inventor in the year 1849, and it consists in arranging on the rear end of the fire-chamber a hinged water-back on one side, and a hinged fire-brick on the other, to be operated by a certain combination of rods and levers in such a manner that either the water-back or the fire-brick can be brought in the proper position to form the back of the fire-place. It consists also in combining with the ovens, the fire-place and draft-chambers leading from the same to and around the ovens, a passage to admit cold air, which, by coming in contact with the heated walls of the ovens and draft-chambers, becomes heated so as to serve for warming the house, thereby rendering this range complete as well for cooking and baking as for heating. The inventor of this improvement is Fred. S. Merritt, of this city.

## CAR BRAKE.

This invention consists in arranging the car body, the track and the brake-shoes, in such relation to each other that the inertia of the car body serves to operate the brakes. This object is effected by arranging slotted arms or rockshafts, which are actuated by a strong motion imparted to the car body by its momentum or inertia independent from the truck, in such relation to the brake-shoes, that the brakes are applied as soon as the speed of the truck is checked, and taken off on suddenly increasing the speed of the truck. By these means the engineer has perfect control over the brakes of the whole train. This improvement was designed by E. F. Jewett, of Plainville, Ohio.

## LOOMS.

This invention relates to that loom known as the "narrow-ware" loom used in weaving tapes and other narrow fabrics. In these looms it is well known several webs are woven at the same time. The object of the invention is to weave articles or fabrics composed of a series of narrow webs united together at intervals by a filling running through the whole series, such as horse-nets and skeleton skirts, and to this end the nature of the invention consists in a certain construction of the raceway of such looms to provide for the introduction of a filling which will extend through the whole or any portion of the series of narrow webs. The inventor of this improvement was Aaron Williamson, (now deceased) of this city. The assignees are B. Hardy & T. France, same place.

## PIANO-FORTE.

The object of this invention is to simplify the construction of piano-fortes, at the same time to give increased firmness and durability, and to allow a longer or more extended scale to be used in a case of a given size; and to this end the invention consists in so constructing, of a single casting, and applying what is termed the full iron plate, as to make it constitute the upper part of the sides, back and front of the case. James A. Gray, of Albany, N. Y., is the inventor.

## REGULATOR FOR GAS-BURNERS.

This improved regulator consists of a combination of a valve, an independent weight or its equivalent and a stop, the whole applied, arranged and operating very effectively within a burner to produce a uniform issue of gas therefrom and consequently a uniform light, under all variations of pressure in the main or in the pipe which supplies the burner. The credit of this contrivance is due to G. W. Thompson, of this city.

**RECEPTION OF THE JAPANESE.**—The city government of New York has appropriated \$30,000 for the reception of the Japanese embassy which is now on its way to this city. Extensive apartments are to be fitted up in the Metropolitan Hotel, which will be furnished, as much as possible, to accommodate the strange islanders in the mode to which they have been accustomed. It is announced that the *Niagara* is to be sent round to Panama to take these foreigners home when they are ready to return.

**THE Times Paris correspondent says:**—"The Emperor Napoleon has approved the model of a gunboat constructed on a system to be propelled without steam, and has ordered boats to be built on this plan. The power intended to be substituted for steam is hot air. The inventor of this power is a French engineer employed at Lyons. Great results are anticipated from the invention.



ISSUED FROM THE UNITED STATES PATENT OFFICE  
FOR THE WEEK ENDING APRIL 21, 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 useful to inventors, may be had gratis by addressing MUNN & CO., Publishers of the SCIENTIFIC AMERICAN, New York.

28,044.—James Aiken, of Natchez, Miss., for an Improvement in Metal Ties for Cotton Bales:

I claim the formation of the bent plate, with the holes to receive the hoop, and also the form of the rivet catches, as aforesaid, with the mode of fastening the hoop to the plate.

28,045.—E. G. Allen, of Boston, Mass., for an Improvement in Steam Gages:

I claim, first, The use of gas for indicating the pressure of steam or other fluids of a volute spring, the coils of which are of uniform width throughout, and which taper in the thickness only, in combination with the rubber disk, or diaphragm, as set forth.

Second, The thin, flexible metallic disk interposed between the rubber diaphragm and the outer surface of the coils of the volute spring, for the purpose specified.

28,046.—Wm. M. Amall, of Sperryville, Va., for an Improvement in Grain Separators and Cleaners:

I claim the combination of the distributing and equalizing cylinder, I, with the cylinders, D and E, and with the brush, F, when the same are used and arranged substantially in the manner and for the purpose described.

28,047.—Frederick Ashley, of New York City, for an Improved Egg-beater:

I claim the combination of the beating or breaking wires, B, with the screw-threaded shaft, A, and nut, D, as and for the purpose set forth.

28,048.—S. F. Atherton, of Fitchburgh, Mass., for an Improved Machine for Splitting Hoops:

I claim the wedge, b, in combination with the levers, g, operating as described, for the purpose specified.

Second, I claim the vibrating knife, a, operating in the manner specified, for the purpose described.

28,049.—N. E. Badgley, of Gadsden, Ala., for an Improvement in Cotton Seed Planters:

I claim the arrangement of the bent bifurcated hooks, c c, slot, b, of hopper bottom, shafts S and S', opener, O, teeth T', and spring coverer, C, substantially as before shown and described.

28,050.—H. F. Baker, of Centerville, Ind., for an Improvement in Mode of Laying Drain Tiles:

I claim the employment of the slides, D D, constructed as described, the rear slide being provided with a shoulder, a, when the same are used in connection with the mole, B, for the purpose of drawing the tiles, E E, into the drain, substantially as specified.

28,051.—Wm. C. Banks, of Como Depot, Miss., for an Improvement in Corn Planters:

I claim the arrangement of the seeding wheel, F, with its flanges, b, spring cleaner, d, and adjusting device, c, connected together, substantially in the manner and for the purpose described.

28,052.—Wm. C. Banks, of Como Depot, Miss., for an Improvement in Corn Planters:

I claim the arrangement of the gage plate, m, for adjusting the size of the seed cell, when combined with the seed slide, n, or its equivalent, and when constructed and operating in connection with the other parts of the machine, substantially in the manner and for the purpose described.

28,053.—Wm. F. Beccher, of Chicago, Ill., for an Improved Pipe Wrench:

I claim, first, The thumb or tongue, d, having the recess, e, with the edges, f f, as set forth, and connected and arranged to the sliding block, g, and with the spring, a, as described.

Second, The sliding block, g, having clutches to traverse the grooves and the set screw, l, and arranged in relation to the other parts of the wrench, as shown and described.

28,054.—Dana Bickford, of Westerly, R. I., for an Improved Embroidery Sewing Stand:

I claim the arrangement of the work-holder clasp, B, with the heavy block, A, and the box, C, all substantially as and for the purpose specified.

28,055.—Horace Billings, of Beadstown, Ill., for an Improved Cement:

I claim a waterproof coating composition, whose peculiarity consists in its being mainly composed of resin and pulverized steel, incorporated with each other in about the proportions and in the manner set forth.

28,056.—S. Bourne, Jr., of New York City, for an Improved Trunk Lock:

I claim the arrangement of the horizontally sliding spring bolts, A A, in combination with the vertically swinging hasp, E, and cam, F, constructed and operating substantially in the manner and for the purpose specified.

[This invention consists in the arrangement of two horizontally sliding spring bolts, in combination with a cam attached to a vertically swinging hasp, in such a manner that by turning down the hasp both bolts are forced out simultaneously, and as soon as the hasp is turned up, both bolts fly back spontaneously by the action of the springs attached to them, thus producing a cheap, simple, and effective fastening of trunks, boxes, &c.]

28,057.—S. Bourne, Jr., and J. G. Cunningham, of New York City, for an Improvement in Locks for Traveling Bags:

We claim the combination with the plate, A, casing, B, and eyes, a a', of a long nose, c', when the said nose are attached to the extremities of a longitudinal bolt, C, and so arranged to operate that the long nose first enters one of the eyes, a, and then the short nose enters the other eye, as and for the purposes shown and described.

[The object of this invention is to render the operation of a double fastening of the frames of traveling bags or valises practicable and easy. A double fastening of such frames is desirable, because, if the bag or valise is well filled, and the frame is fastened in the middle only, its ends spread, thereby exposing the contents. If, on the other hand, a double fastening of the usual construction is employed, it is difficult to bring both bolts to catch properly, it being requisite for this purpose to compress both ends of the frame simultaneously when the key is turned. By arranging the fastening in such a manner that

It takes two distinct consecutive motions of the key to throw the two bolts into their respective eyes, the ends of the frame can be compressed one after the other with one hand, while the key is turned with the other.]

**28,058.**—J. E. Boyle, of Brooklyn, N. Y., for an Improved Vacuum Valve for Water-heating Apparatus: I claim the application to close kitchen or house boilers of a cup leather valve, substantially as described for the purpose set forth.

**28,059.**—Noah Bowles, of Middletown, Md., for a Machine for Printing Addresses on Newspapers: I claim, first, The construction of an endless chain with type boxes, c, said boxes having one or more spring sides, e, substantially as and for the purposes set forth.

Second, The construction of a type-box, c, with one or more spring sides, e, substantially as and for the purposes set forth.

Third, Arranging stationary catches, d and f, in combination with the spring sides, e, of the endless chain of type boxes, c, substantially as and for the purposes set forth.

Fourth, The combination of a paper-feeding and printing roller, M, with the endless chain of type-boxes, c, substantially as and for the purposes set forth.

Fifth, The combination of a type feed box, A, type wheel, B, and shield, h, substantially as and for the purposes set forth.

Sixth, Inking the types, by means of a series of ink rollers, I, revolving round a common central shaft, K, the roller being held in rigid or spring bearings, I', substantially as and for the purposes set forth.

Seventh, Causing type-inking rollers I, revolving round a common central shaft, K, to travel in a straight line while in contact with the type, substantially as and for the purposes set forth.

Eighth, Combining a series of ink rollers, I, arranged in spring bearings, I', with an ink roller, H, arranged at a certain distance from the common central shaft, K, of said ink rollers, substantially as and for the purposes set forth.

Ninth, The combination of a wafting O, and brush, N, with an endless chain of type boxes, c, substantially as and for the purposes set forth.

Tenth, The distributing ink roller, G, set in a vibrating frame, in combination with the main supply roller, F, receiving ink roller, H, and type-inking rollers, I, substantially as and for the purposes set forth.

[This machine comprises a type-feeding and distributing device, an inking device, a paper-feeding and printing device, and a type-cleaning device. All of these component parts work in concert and successively, in such a manner that the type are set automatically in separate boxes, and, as soon as set, are carried forward and inked perfectly; and then brought opposite a wrapped newspaper, which has been previously fed in automatically, and addresses the same; this being done, the paper discharges in one direction, while the type passes in another direction over a revolving brush, which cleans off the ink. This done, it passes forward a short distance, and then falls into a "case" provided for its reception. This is a very ingenious and perfect organization of machinery for the purpose intended.]

**28,060.**—J. C. Briggs, of Woodbury, Conn., for an Improvement in Musical Reeds: I claim making the reed with the heel and toe twist, substantially as described.

I also claim making the reed plate with one or more wind indentations, or notches, against the raised edge of the reed and with respect to the reed opening, as specified; and when they are arranged on opposite sides of the toe of the reed and one corner of the toe is elevated above the other corner, as described.

I claim making the notch, which is next to the elevated corner of less size than the other, for the purpose of equalizing or approximately equalizing the discharge of wind against opposite edges of the toe of the reed.

**28,061.**—S. T. Bruce, of Marshall, Mo., for an Improvement in Harvesters: I claim the combination of the polygonally-shaped tapering roll, L, rotating immediately back of the cutting apparatus, with the obliquely-set cylindrical roll, M, and guards, G', and H I and K, the whole arranged and operating as specified, for the purpose set forth.

**28,062.**—C. S. Buchanan, of Ballston Spa, N. Y., for an Improvement in Boilers for Preparing Paper Stuff: I claim, first, The combination with a rotary boiler, or vessel, of a cylindrical strainer, arranged within said boiler or vessel, substantially in the manner and for the purposes specified.

Second, In rotary boilers, or vessels, provided with cylindrical and concentric strainers, I claim the construction and arrangement of ribs in the form of gutters, substantially as described and for the purposes set forth.

Third, I claim providing the hollow journals of boilers or vessels constructed to operate as described, by rotation with a tubular plug, capable of being shifted on its axis, such plug having one or more openings at the inner end, so arranged as to allow of their coinciding with the channels or ways on the boiler heads, for the discharge from the boiler, of liquid or steam, or of both liquid and steam, substantially as described for the purposes specified.

**28,063.**—M. V. B. Buel, of Buffalo, N. Y., for an Improvement in Vapor Lamps: I claim having the burner, E, connected to the receiver, or fount, B, by a tube, C, so that the top of the burner will extend above the highest level of the fluid in the receiver or fount, B, for the purpose specified.

[This invention relates to certain improvements in that class of lamps generally known as vapor lamps; those in which the burning fluid is volatilized and gasified in the lamp previous to burning. The object of this invention is to avoid the accidents attending the use of this class of lamps, and also to volatilize the fluid without the aid of an auxiliary flame or a heater.]

**28,064.**—J. A. Boyd, of Jackson county, Fla., for an Improvement in Plow Stocks: I claim the arrangement of the bars, A and B, collar, C, bolts E and I, hook, F, wedge, H, and depressions, G and K, as described for the purposes set forth.

**28,065.**—Wm. Chambers, of Muscatine, Iowa, for an Improvement in Governor Valves for Steam-engines: I claim, first, In the construction of a governor valve of the character described, the combination of the knuckle joint, h, and pointed set screws, G, L, in the manner and for the purpose described.

Second, The combination and arrangement with the governor valve D, and its rod, F, of a weighted lever, I, and spring catch, K, the whole being constructed and operating in the manner and for the purpose described.

[This invention consists in arranging a disk valve between two pointed set screws, and bringing the valve to its rod by means of a knuckle joint, in such manner that the valve may easily be adjusted in relation to its seat, so as to reduce the friction to a minimum; while there is a perfect steam-tight fit between the valve and its seat. With this valve, a weighted lever and a spring catch is used, so that the entire flow of steam from the boiler to the steam chest is instantly shut off whenever the engine attains an excessive or dangerous speed; but so long as a safe speed is maintained, the steam has perfect freedom to flow into the steam chest. We certainly regard this improvement favorably, as it undoubtedly will avoid much friction, and prove a great safeguard against damage to valuable machinery in case the main driving belt suddenly breaks.]

**28,066.**—J. O. Couch, of Middlefield, Conn., for an Improvement in Toy Cannons: I claim, first, Making the barrel, the axle tree, axles, body and trails of the cannon of a single casting, substantially as described.

Second, The attachment of the hammer to the axle tree or other part of the body of the carriage, substantially as specified.

Third, The spring, G, attached to the axle tree or other portion of the body of the carriage, and operating in combination with the downward extension of the hammer, both as a main and cocking spring, substantially as set forth.

[This invention consists in making the barrel, the axle tree, axles, and the body and trails of the carriage of a toy cannon of a single casting, requiring only a pair of wheels to complete the carriage, and so making a mounted cannon of very cheap construction. It also consists in the attachment of a hammer to the axle tree, or other portion of the carriage of a toy cannon, for the purpose of firing it by a percussion priming, and thereby obviating the danger so often arising among boys by the use of powder with fire. And it further consists in a certain mode of applying a single spring, in combination with the hammer, to serve the two purposes of cocking it and giving the blow.]

**28,067.**—George Eaton, of Boston, Mass., for an Improvement in Rails for Street Railroads: I claim the improved double-bearing and grooved street rail, as made in two parts, g, g', bolted and arranged together, and with a gutter, water space or conductor, i, arranged between such parts and between their connections, as specified.

**28,068.**—Nelson Edwards, of Chittenden county, Vt., and E. G. Day, of New York City, for an Improvement in Straw-cutters: We claim the arrangement of the blade, G, the spring guard, I, and the compressor, H, when the latter is made of tapering form, as described, for the purpose set forth.

**28,069.**—S. T. Fowler, of Brooklyn, N. Y., for an Improvement in the Construction of Concrete Walls: I claim the combination, with a concrete wall, of the framing composed of the timbers, I and J, arranged in the wall, substantially as described, for the purpose set forth.

**28,070.**—Charles Fricker, of Mobile, Ala., for an Improved Cement: I claim the described water-proof composition or mortar cement for laying brick, stone, &c., compounded substantially as described.

**28,071.**—P. C. Fritz, of Barytown, N. Y., for an Improvement in Grain-cleaners: I claim the combination of the garlic-mashing, india-rubber surfaced rollers, B, b, garlic-discharging brushes or doffers, C, C', and wheat-exit spout, Z, the whole being constructed and arranged and operating substantially as and for the purposes set forth.

**28,072.**—A. M. George, of Nashua, N. H., for an Improvement in Moving Machines: I claim the combination of the compound slide, W and O, with the guides, X, X', the stirrup and shipping levers, K and G, spring, J, and hook or stop, H, arranged for operation in the manner and for the purpose specified.

**28,073.**—Lyman Gibson, of Elmira, N. Y., for an Improvement in Water Wheels: I claim the arrangement and combination of the case, A, having scrolls, B, wheel, D, E, having radial arms, d, cylinder, G, having openings, a, and the angular-inclined buckets, f, attached at rim, e, the whole being constructed and arranged for joint operation in the manner and for the purpose described.

[The object of this invention is to obtain a center-vent water wheel that will run without being retarded with dead water as hitherto, and also one that will be simple in construction and acted upon both by the direct and re-active force of the water.]

**28,074.**—J. H. Goodell and A. T. Goodell, of New York City, for an Improved Method of Sharpening Cylindrical Cutting Knives: We claim attaching the carriage, L, to the vibrating bolt or bar or stock, F, of a veneer-cutting machine, when said carriage is provided with a rotating grinding mill, M, and so arranged as to have a traversing or lateral movement on the bar or stock, F, and operate on the knife, Q, as and for the purpose set forth.

**28,075.**—John Grey, of Pittsburgh, Pa., for an Improved Machine for Spinning Metallic Hollow-ware: I claim the use in machines for spinning out hollow-ware from disks of metal, of a straight cylindrical mandrel revolving on its axis, of sufficient length to sustain the disk from the circumference to the point where the operation of the tool commences, in combination with a tool having a longitudinal motion parallel to the axis or face of the cylinder, and so arranged as to compress the disk between itself and the mandrel, substantially as described.

Also, the combination of the swinging clamp frame, having its center of motion in the same vertical plane as the extremity of the mandrel, with the adjustable bar, or its equivalent, for setting the clamps which hold the disk at any required distance from the extremity of the mandrel, for the purpose of regulating at pleasure the diameter of the bottom of the kettle, or other article to be made, and at the same time permitting the side of the kettle, or other article, to lie close to the mandrel while the tool is passing over it, no matter what degree of "dish" is given to the disk.

**28,076.**—N. F. Griswold, of Meriden, Conn., for an Improved Ice Pitcher: I claim a refrigerating pitcher having double walls and an ice chamber, C, communicating therewith, arranged in the manner substantially as set forth.

[This invention consists in introducing within a double wall and double bottom pitcher a chamber extending from the bottom to the top of the same, and communicating with the space between the walls at the bottom of the pitcher, into which chamber is placed granulated ice for cooling the surrounding contents. The pitcher is furnished with an escape hole for the water running from the ice, and with a perforated strainer for pouring off the liquid clear.]

**28,077.**—Alexander Hanvey, of Steubenville, Ohio, for an Improvement in Wooden Soles for Boots and Shoes: I claim constructing wooden soles for boots or shoes, in the manner substantially as described and represented, and when the parts are united by india-rubber, as set forth.

[This invention consists in uniting the sole by an india-rubber joint just under the ball of the foot so that flexibility and elasticity will be combined, at the same time the joint will be made water-proof; and in giving the requisite strength to the sole at the joint by interposing a small piece of wood which will fit down closely on the india-rubber over the joint of the outer sole and between and under the edges of the inner sole. The inner sole being rendered waterproof by the introduction of a strip of india-rubber under its edge, the whole, when properly secured together, is to be tacked to the upper of a boot or shoe in the usual manner of making wooden-soled boots and shoes.]

**28,078.**—Wm. H. Harding, of Philadelphia, Pa., for an Improved Perforating Rule for Pointers: I claim the combination of the bar, A, provided with a series of teeth, with the form, so that, when the impression is taken, these sharp points will perforate or deeply indent the paper, substantially as set forth.

**28,079.**—J. D. Heatwole and R. C. Mauck, of Harrisonburgh, Va., for an Improvement in Hominy Mills: We claim the combination of the partition, P, with the two systems of headed beaters, c and d, on a cylinder and concave, constructed, arranged and operating substantially as and for the purpose set forth.

**28,080.**—Arthur Hemenway, of Cleveland, Ohio, for an Improvement in Machines for Bending Fellies: I claim the combination of the gripe, Fig. 6, screw hooks, N, and the adjusting plate, T, provided with hooks, M, when arranged in relation to the forming block, and acting conjointly in the manner and for the purpose set forth.

**28,081.**—J. C. Henderson, of Albany, N. Y., for an Improvement in Cooking Stoves: I claim, first, The ash tube, t, passing from the box, S, to the hearth, f, through the oven or behind the front plate or doors, substantially as specified, whereby I am enabled to confine the ashes and prevent them entering either the oven or roaster placed on said hearth, f, as set forth.

Second, I claim the arrangement of the openings, I, I', into the oven on each side of the ash tube, t, in the manner and for the purposes set forth.

Third, I claim admitting air to the fire from the space, S', by the opening, 4, between the lower end of the plate, p, and the grate, r, as and for the purposes specified.

**28,082.**—A. Henri, of Louisville, Ky., for an Improvement in Bonnets: I claim, as a new article of manufacture, the bonnet, constructed as described, for the purposes set forth.

[This invention consists in putting together the four parts constituting the bonnet in such a manner that the same may be made to assume a flat state, and in this shape be readily packed away in a very compact box without tumbling or injuring the bonnet, nor the trimming of the same; and when the bonnet is to be used, the parts are so put together and furnished with tie strings and hooks and eyes, or buttons and loops, that the required neatness of shape may be given to the bonnet by simply tying the strings and hooking the parts together, at the same time the peculiarity of the bonnet will be hidden from view, and on the head, it will have all the appearance of those of the ordinary style of manufacture.]

**28,083.**—Samuel Hoyt, of Wilmington, Del., for an Improvement in Cementing Millstones: I claim the use of lead, solder, or other similar molten metal, for the purpose of uniting the sections of a millstone and binding the same together at the eye and circumference, and at the same time giving increased weight to the stone, substantially in the manner described.

[By using lead, as stated in the above claim, the necessity of using cement is avoided, the molten lead insinuating itself into the cellular or honeycomb-like surfaces of the burr stone, and thereby dowsing or locking the sections together in the firmest possible manner; and while this important result is attained, the metal in the spaces which heretofore were filled with light, weak cement, serves to give additional weight to the stone, the same as does the metal which has been run round the outer circumference in the eye and on the top surface of the stone, for the purpose of bracing the stone. This is a very valuable improvement, and is one of the results of twelve years' labor on the part of the inventor in developing the burr stone resources of our country.]

**28,084.**—W. W. Hubbell, of Philadelphia, Pa., for an Improvement in Projectiles for Breech-loading Ordnance. Anti-dated Feb. 28, 1860: I claim, first, The combination of the recess, x, shoulders, y and w, with the band, b, and the wire coil, o, secured in the band, as described.

Second, I claim the beveled cylindrical lead band, b, in combination with the flutes, c, c', and the wire coil, o, in the recess, x, so as to easily enter, compensate and indent the band into the rifled bore, and give it great comparative strength to retain its proper form and position under this action, and with certainty rotate the shell or shot in the breech-loading rifled gun.

Third, I claim the beveled cylindrical canvas covering extending around and in front of the lead band, and secured by the groove and wire, u, to the body of the projectile, in combination with the flutes, c, c', and the wire coil, o, so that its beveled front may easily enter and indent in the rifled bore without stripping, and the flutes allow the lead to compensate under it to the lands and grooves, and the wire strengthen and hold the lead firm that the canvas may be enabled to assume a form and firmness of bearing to co-operate with the lead band in rotating the projectile in the breech-loading rifled cannon.

Fourth, I claim the firing holes, j, j, in front of the striker, in combination with the striker and the magazine, m, to facilitate the explosion in shells adapted to long arranged rifled cannon.

Fifth, I claim the circular ribs, y, y, and z, inside of and uniform around the axis of the shell, in combination with and at each end of the circular recess, x, and band, b, so as to strengthen and support both the front and rear ends of the projectile and the base of the circular recess, resist the shock of discharge, the compression into the grooves and the shock of penetration, by restoring the strength lost in the application of the lead band.

**28,085.**—T. E. Hughes, of Birmingham, Pa., for an Improved Shaving Cup: I claim the shaving cup, as a new article of manufacture, consisting of a soap cup, mirror and water receptacle, arranged and constructed as described and set forth.

**28,086.**—Elisha Hughes, of McCartyville, Cal., for an Improved Writing Desk: I claim a writing box, arranged as described, with paper rollers, E and F, a blotting roller, D, at a table, C, in combination with an inkstand, G, and with an almanac roller, I, for the purpose specified.

[The object of this invention is to provide travelers with a box or valise which contains, in a comparatively small space, all the requisites for writing: viz., paper, pen and ink, and also the table on which the writing can be executed, and a blotting roller, a ruler and an almanac, the whole being arranged in a small space and convenient to be transported.]

**28,087.**—E. F. Jewett, of Plainville, Ohio, for an Improvement in Car Brakes: I claim the arrangement and combination of the slotted arm, H, brake shoes, F, rock shafts, h, arms, I, and standards, J, or their equivalents, substantially as and for the purpose described.

**28,088.**—J. F. Keeler, of Cleveland, Ohio, for an Improved Device for Adjusting Clocks Vertically: I claim, in the construction of clocks, the use of the plumb line, the spirit level, or the index under the pendulum, either or any of them, substantially in the manner and for the purpose set forth.

**28,089.**—E. R. Knorr, of Washington, D. C., for an Improved Method of Finding Courses and Bearings on Marine Charts: I claim, first, Putting the two movable compass cards together around a hollow cylinder of metal, or any other fit material, so as to allow their adjustment over any point on the charts of conic or orthographic, or Mercator's projection, and to show at once the true and compass bearings between any two points.

Second, I claim the ruler wire or string radiating from the center, in combination with said compass cards, for the purposes set forth.

Third, I claim putting on both or either cards constituting my instrument, lines or marks, parallel or at right angles with the zero or any diameter, as means to adjust the instrument into the meridian of the chart, as well for the purpose to use both cards in connection as to use only one, detached from the other, in order to find only one of the relative bearings either true or compass.

28,090.—George Lindsay, of Petersburg, Va., for an Improvement in Pumps:

I claim the pump barrel, in combination with the large piston plunger, B, the small piston, C, and the hand wheel, or its equivalent, for connecting and disconnecting the pistons, the whole being constructed and operated in the manner and for the purpose set forth.

28,091.—Benjamin Livermore, of Hartford, Vt., for an Improvement in the Construction of Cement Drains:

I claim covering or enveloping the cement aqueduct or water pipe, as it is being laid in the ditch or trench, with the flexible material, d, in the manner and for the purposes substantially as described and set forth.

Also the attachment to the mold or former of the spindle, f, for the purpose specified.

28,092.—Henry Lockwood, of New York City, for an Improved Door Lock:

I claim the arrangement of a number of plugs or pieces, in combination with a revolving cylinder and a fixed frame, when said cylinder acts directly on the bolt while turning, in the manner and for the purpose as described.

I further claim the arrangement of the cupplate, F, so constructed as to cover the key as soon as the same shall begin to turn the cylinder, substantially as set forth.

28,093.—Wm. Mannheim, of New York City, for an Improved Table Fork:

I claim the combination of a hollow handle, A, with a spring, B, knob, C, and additional member or prong, E, substantially as described, for the purpose aforesaid.

28,094.—Patrick McMahon, of Scottsville, N. Y., for an Improved Machine for Filing Saws:

First, I claim the combination of the spring, S, with the stop joint, n, in connection with the other parts of the file carrier, the whole operating in the manner and for the purpose substantially as set forth.

Secondly, I claim the combination of the index plate, D, and disk, d, with the shaft, C, said shaft being composed of two sections—one cylindrical and the other square, the square section passing through the disk, d, and being carried round by it; the cylindrical section passing through the index plate, D, and moving freely in it; the whole operating in the manner and for the purpose set forth.

28,095.—Frederick Seymour, of Cincinnati, Ohio, for an Improved Fire-escape:

I claim, first, My mode of forming ladder and shutter, having the blind, shutter or ladder folding inside of the frame.

Second, I claim the mode of fastening the ladder and shutter to the window sill, as described.

Third, I claim the combination of the ladder and shutter, substantially as described, and for the purposes set forth.

28,096.—W. S. Mayo, of New York City, for an Improvement in Water-backs for Ranges, &c.:

I claim a water-back with a compressible body or substance, of whatever form or material which, being placed inside the water-back, shall take off the pressure of freezing water and prevent the water-back from bursting when exposed to frost.

28,097.—J. S. McCurdy, of Brooklyn, N. Y., for an Improvement in Sewing Machines:

I claim, first, So applying the feeding device, in combination with the needle of a sewing machine, and with a device operating in combination with the needle, to enclose the loops of a single thread carried by it through the fabric to be sewed, that the feed movement is imparted to the fabric only after every second withdrawal of the needle from the fabric, and a stitch is produced of the structure described.

Second, Combining the needle arm or needle-operating lever with the main shaft, or with any rotating shaft, of a sewing machine, which carries the feeding cam by means of the rectangular-grooved plate, K, sliding pins, d, and slide, N, the whole applied and operating substantially as and for the purpose set forth.

28,098.—H. A. Mears, of Peconic, Ill., for an Improvement in Car Brakes:

I claim, first, The arrangement of the sliding frame, D, with the friction wheels, d', in combination with the friction wheel, d, chains, g, and brakes, F', constructed and operating substantially in the manner and for the purpose set forth.

Second, The combination of the pawls, e, and ratchet wheels, f, f', with the friction wheels, d, d', arranged in the manner and for the purpose set forth.

[This invention consists in arranging a sliding frame with two friction wheels to act on the opposite side of a corresponding friction wheel secured to the axle of one pair of wheels, in such relation to the brakes as well as to the bumpers that, in slackening the speed of the engine, the momentum of the cars causes the sliding frame to be pushed up against the friction wheel on the axle, whereby the brakes are applied. The said friction wheels are combined with ratchet wheels and pawls in such a manner that an application of the brakes in the wrong direction is prevented.]

28,099.—F. S. Merritt, of New York City, for an Improvement in Cooking Ranges:

I claim, first, The combination of the hollow faucet hinges, i, with the water-back, I, back plate, b, and supply pipes, h, so that the water will be admitted to the back, I, when the latter is turned towards the fire, and shut off when the back is swung away from the fire, as shown and described.

Second, The arrangement of the water-back, I, and fire-brick, H, to swing from opposite ends of the back plate, b, substantially as shown, so that, when desired, both fire-brick, H, and water-back, I, may be swung aside, to allow the heat of the fire to act directly upon the air pipe, J, as set forth.

Third, The arrangement of the fire-place, A, ovens, B, gas chamber, C, D, E, and air chamber, J, as and for the purpose shown and described.

28,100.—E. W. Mills, of Amber, N. Y., for an Improvement in Windmills:

I claim the general arrangement and combination of the several parts, viz: hub, D, wheel, E, spring, L, and wheel, G, with its stops, N and P, and catch, Q, spring, M, rods, H, and crows, K, when constructed as specified, and used for the purpose set forth.

28,101.—O. W. Minard, of Waterbury, Conn., for an Improvement in Measuring Tapes:

I claim the employment, substantially as described, of the spring, a, the pointer, b, and the graduated plate, i, in combination with the measuring tape, for the purpose specified.

28,102.—Edward Mingay, of Boston, Mass., for an Improvement in Stove Grates:

I claim my improved arrangement of the shafts, B and D, (for effecting the rotary and tilting movements of the grate) with each other, and in respect to the grate and its surrounding ring or part, C; the shaft, D, in such arrangement, being tubular and concentric with the shaft, B, and the latter being carried through the former, and both made to project from one side of the ring, C, in manner as described and represented—the grate being operated by a slotted crank connection, or its equivalent, applied to it and the tubular shaft, D.

28,103.—G. W. Morris and Wm. Quann, of Philadelphia, Pa., for an Improvement in Restoring Burnt Iron:

We claim refining burnt iron while melting it in the cupola furnace, by mingling with it a manganian iron ore in proper proportions and melting the whole mass together in the furnace as described.

28,104.—W. T. Nicholson, of Providence, R. I., for an Improvement in Spirit Levels:

I claim the improvement in the article of manufacture described, consisting of the use of a protecting sheath, or its equivalent, in combination with the fluid tube of a mechanic's level, substantially as described.

28,105.—J. K. Park, of Marlboro, N. Y., for an Improved Basket:

I claim constructing baskets by two lamina of wood slit toward their ends and laid across each other, and interlaced with filling, so as to form a square box shape at the bottom and a round basket shape near the top, as set forth.

And, in combination therewith, I claim the metal and wood rim, constructed as shown, with the wood rim in the inside, so as not to injure the berries, as set forth.

28,106.—Amos Seaman, of Winnebago county, Ill., for an Improvement in Corn Planters:

I claim the arrangement of the lever, A, connecting rod, B, iron straps, C, plow beams, D, axles, E, foot lever, H, post, I, crank lever, J, and axles, O, operating as described for the purposes set forth.

28,107.—Thaddeus Sellek, of Greenwich, Conn., for an Improved Method of Employing Franklinite Pig Metal for Making Grinding and Abrading Surfaces:

I claim the method herein described of employing Franklinite pig metal as a grinding or abrading surface, as specified.

28,108.—W. P. Martin, of Salem, Mass., for an Improvement in Machines for Finishing Leather:

I claim the employment of an adjustable and reversible plate, a, in combination with a suitable spring, and arranged on the hand substantially as and for the purposes specified.

I also claim the employment in the hand of a yielding tool, b, so arranged in the hand as to be capable of yielding uniformly along its whole length, or unevenly as hereinbefore described for the purposes set forth.

I also claim the combination of two or more yielding tools, b, c, when their edges are each ground on a different angle, as hereinbefore specified—the whole arranged to operate as and for the purposes set forth.

I also claim the combination of the spring plate, a, and yielding tools, b and c—the whole arranged and operating as specified for the purposes set forth.

I also claim arranging each glass in a separate case, i, in such manner that while the case always remains in the same relative position with the other parts of the hand, the glass or tool may be set out as and for the purpose set forth.

I also claim, in combination with the device for adjusting each end of the table separately, the bars, l, m, and their equivalents, for raising the whole table simultaneously, as and for the purposes set forth.

I also claim the combination of the slotted pendant, Q, pendulum bars, P, bent arms, o, o', and the connecting rod, o, with the fly wheel, M, and fixed stud, Y; the whole arranged to operate as and for the purposes specified.

28,109.—Benjamin Singleton, of Portsmouth, Va., for an Improvement in Hammer Guards for Fire-arms:

I claim the combination of an arched guard, A, constructed and applied to a fire-arm, substantially as described, and a hammer with a laterally-projecting thumb-piece, B, working through one side of said guard, substantially as specified.

[The object of this invention is to prevent, more effectually than has hitherto been done, the accidental discharge of fire-arms, more particularly of sporting guns, by the catching of the hammers against any obstacles which may present themselves in their way, in careless carriage; and to this end the invention consists in the employment of a fixed guard constructed and applied to a fire-arm in combination with a hammer having a laterally-projecting thumb-piece working through the said guard.]

28,110.—Walter Stewart, of Natchez, Miss., for an Improvement in Wrought Iron Ties for Cotton Bales:

I claim the tie or mode of fastening iron hoops on bales (of cotton or other compressed material) by means of a link or links and serrated or notched edges of the hoop, as represented in the accompanying drawings.

28,111.—W. M. Storm, of New York City, for an Improved Safety Valve for Steam Boilers:

I claim the valve suspending the weight from and below itself and within the boiler (or a chamber opening to the same), together with an adjustable counterpoise on a lever outside; the valve also to rise independently of such lever, and to be covered by a bonnet or its equivalent—the whole being constructed, arranged and operating substantially as described.

I also claim, in combination as above, the valve and its seat, at or near the zone of their contact, spherical, so that its pendant weight may slightly oscillate it, without causing escape of steam, while thus preventing it becoming fast in its seat.

28,112.—Jacob Stuber, of Utica, N. Y., for an Improvement in Hot-air Furnaces:

I claim the independent attachment or heating apparatus designated by the letters, A a and B, in Fig. 3, the pear-shaped pipes, C, C, and the bevel or tunnel-shaped extensions of radiating surface, D D E E, in Fig. 2, as combined and arranged in the drawing accompanying my application, and described in this specification.

28,113.—G. W. Thompson, of New York City, for an Improvement in Gas-burners:

I claim the regulator composed of the valve, D, an independent weight, E, or its equivalent, and a stop, g or h; the whole applied to a burner and operating substantially as described.

28,114.—J. B. Thorp, of Plantsville, Conn., for an Improved Wagon Shaft Shackles:

I claim an improved article of manufacture (a wagon shaft shackle) constructed substantially in the manner as herein set forth and described.

28,115.—Thomas Thorp, of New York City, for an Improvement in Machines for Making Cigars:

I claim, first, Causing the belt, E, to run in a line oblique to the axis of the cigar, for the purpose of giving the lighter a traversing motion towards the heading socket, K, substantially as and for the purpose set forth.

Second, I claim the employment of the conical rollers, D and D', and conical drums, C and C', in combination with the inclination of the axis of either, for the purpose of causing the belt, E, to retain its oblique position, substantially as described.

Third, I claim the projecting ridges, c and c', on the drums, C and C', in combination with the grooves, d and d', on the rollers, D and D', for the purposes specified.

Fourth, I claim reversing the angle made by the axis of the cigar and the path of the belt, E, substantially in the manner described, to enable one and the same machine to wind right and left hand leaves at pleasure.

28,116.—G. H. Timmerman, of St. Louis, Mo., for an Improvement in Governor Valves:

I claim, first, A double plunger balanced valve which has its plungers made tapering on the cylindrical seats of the same, made flaring at top, substantially as and for the purposes set forth.

Second, Combining a hand lever, m, with a sleeve, n, through which the valve rod, k, plays, and with a clampscrew, o, by means of which the sleeve can be clamped to the valve rod, whenever it is desired, by detaching the governor by means of the screw nut, p, to work the plunger valves by hand, substantially as and for the purposes set forth.

28,117.—G. B. Turner, of Cuyahoga, Ohio, for an Improvement in Smut Machines:

I claim the holes, h, in the stationary scouring plates, Q and Q', for the purpose of causing the grain to pass up and down through them, and thus to facilitate the operation of scouring by attrition between the grain as well as the rubbing surfaces, substantially in the manner described.

I also claim the additional scouring face, d, on the dishes, N, when the same is used in combination with the stationary and revolving scouring plates, substantially in the manner and for the purpose described.

28,118.—D. S. Wagner, of Penn Yan, N. Y., for an Improvement in Threshing Machines:

I claim the case, S, enclosing the winnowing apparatus, with the feeding wheels, g and g', when combined with the threshing and separating chamber, V, the tube, F t t, and slats, n, as above described.

28,119.—W. W. Webster, of Foxville, Va., for an Improvement in Grain-cleaners:

I claim the employment of a system of rollers, R R' R'', covered with cloth, felt, or other similar fibrous article, arranged in pairs, with their surfaces in contact, in combination with scrapers, S—the whole operating substantially as set forth, for receiving cockle from grain.

28,120.—W. Wells, of Boston, Mass., for an Improvement in Lasting Machines:

I claim the combination, in a lasting machine, of a holding mechanism for the purpose of holding the last and the materials thereon, with the lasting straps, g, g, when these are combined with yielding springs, h, h, or are elastic in themselves, and are arranged to operate on the vamp of a boot or shoe, substantially as specified.

Also, the combination, in a lasting machine, of converting toer heel slides, or both, with yielding or elastic lasting straps.

Also, in combination with converging toe or heel slides, the block, q, carriage, m, and screw, r, or its equivalent, for the purpose set forth.

28,121.—Lewis Whitehead, of Nunda, N. Y., for an Improvement in Halters:

I claim, first, The construction of the gutter piece with two rings, or their equivalents, in such manner that the neck band may be attached to the upper one, while the chin piece or split lead passes through the ring at the lower end, and

Second, The construction of the neck band in two parts and its attachment to the upper ring of the gutter piece.

28,122.—R. A. Wilder, of Cressona, Pa., for an Improvement in Hoisting Machinery:

I claim, first, In combination with a hoisting wheel suitably furnished with cog or other means of turning it, the ring or bearing of wood to receive the rope or cable that runs over it—constructed, arranged and operating substantially as described.

Second, I claim the shroudings, e, on hoisting wheels, to take the strain of the burden upon the rope or cable, and thus relieve the journals or axles thereof as set forth.

Third, I claim, in a hoisting apparatus, the arrangement of the hoisting, friction, guiding and holding wheels, and the rope or cable, as described and represented—the whole forming a compact, reliable and cheap hoisting apparatus, as set forth.

28,123.—C. A. Wilson, of Cincinnati, Ohio, for an Improved Steam Boiler Regulator:

I claim, first, The inverted siphon, H I, branches, J K, and check valve, L, in the described combination with a steam boiler, for the purposes set forth.

Second, The described combination of the inverted siphon, H I, with the cup, N, float, O, and dampers, F G, for the purposes described.

Third, The supplementary pipe, P, provided with a check valve, q, and connecting the float cup, N, with the bottom of the siphon, H I, for the purposes set forth.

28,124.—Y. F. Wright, of Green Hill, Ga., for an Improvement in Cotton Presses:

I claim arranging the revolving screw nut or burr by which the screw shaft and follower of a cotton press are operated within a block, which is hinged to the upper part of the frame of said press, for the purpose of enabling the operator to swing the block and follower on said hinges, so as to clear the press box when it is to be filled, substantially in the manner described.

28,125.—Tillotson Clarkson (assignor to B. F. Phillips & Co.), of South Adams, Mass., for an Improvement in Looms:

I claim the arrangement, relatively to one another and for united operation, of the auxiliary treadles, J J', pawl, I, main treadle, B, ratchet wheel, G, cams, F F', and harness, D D', in the manner and for the purpose described.

[This invention consists in a novel arrangement of cams and a ratchet wheel, in combination with a suitable system of treadles for fancy and figured weaving, which can be applied conveniently to any common loom.]

28,126.—S. G. Coleman (assignor to himself and Wm. Coleman), of Providence, R. I., for an Improved Mousing Hook:

I claim, as an improved article of manufacture, a hook, A, provided with a perforated stud, D, and a movable strengthening hasp, E, as shown and described.

28,127.—Edward Cotty (assignor to Adam Hautf), of Brooklyn, N. Y., for an Improved Folding Bedstead:

I claim the attaching of the head and foot pieces, C C, to the side pieces, a, a, of the bottom, A, by means of the sliding or adjustable sockets, D, and screws, d, substantially as and for the purpose set forth.

[The object of this invention is to obtain a folding metallic bedstead that may be folded within a smaller compass than usual, and have its head and foot pieces so arranged that they may be adjusted in a more or less inclined position, or readily detached, or so adjusted as to give the bedstead bottom an inclined position, like a lounge; and also admit of the bedstead being shortened, if desired.]

28,128.—J. P. Ellicott, of Washington, D. C., assignor to Phelan & Colender, of New York City, for an Improved Billiard Table Pocket-irons:

I claim, first, A pocket-iron of a billiard table, substantially as described, so that it may yield when struck by a ball and regain its original position after the force of the ball has been spent, as and for the purposes set forth.

Second, I claim the pocket-irons to two arms combined with elastic washers and ball-shaped nuts, substantially as described, for the purpose of allowing the pocket-iron to yield with a parallel motion, as set forth.

Third, The pocket-iron, substantially as described, so that the outer side of the pocket-iron and of the rail of the billiard table shall be one continuous surface, and a recess for introducing the netting and elastic strap formed; and thus a neat finish secured, and the player not interfered with, as set forth.

28,129.—Humphrey Jackman, of Elizabethport, N. J., assignor to J. H. Deming and T. H. Jenkins, of New York City, for an Improvement in Journals and Boxes for Railroad Cars:

I claim the said cone on the axle, in combination with the box provided with friction rollers, the journals of which are supplied with oil by projections on the axle, which, by the rotation, carry up the oil from the lower part of the box, and apply it to the journals of the said rollers; the cone having the effect to catch the oil which is scattered by the operation of lubricating the journals of the rollers, and carry it back into the box, as specified.

28,130.—Duncan McKensie (assignor to M. A. E. McKensie), of Brooklyn, N. Y., for an Improvement in Ovens:

I claim the combination of the hot-air flues, D, escapes, K K, and flue, I, with the lower part or floor of the oven, C, as and for the purpose shown and described.

I also claim the enlargement and downward extension of the rear end of flue, I, in combination with flue, P, as and for the purpose shown.

I also claim the arrangement, in combination with the oven, G, of the flues, I, B I D, and the dampers, K K and L, as and for the purpose shown and described.

[This invention consists in the general arrangement and construction of a fire-place or places, with their arches and bridges or beds, and a system of escape flues which lead off from one side of the fire apartment towards the side of the oven, and conduct the heat directly from the fire and fire arches and flame bed into the oven to the top of the same, and down again, at the front and back ends of the oven, through a central flue which leads to the main escape pipe.]

28,131.—H. A. Reynolds (assignor to R. T. Wilde), of New York City, for an Improved Clamp for Bonnet Frames:

I claim the elastic clamp, constructed and operating substantially as described for purposes substantially such as that specified.

28,132.—John Stuber (assignor to John Carton), of Utica, N. Y., for an Improvement in Lamps:

I claim, first, The air chamber, I, and the air tube, K K, as described, or substantially in that form, in combination with a shallow can, as described.

Second, The outer tube, D, in combination with the cap, E, chimney, L, and button, M, as substantially described.

28,133.—Eli Tiffany (assignor to himself and George Cooper), of Thompsonville, Conn., for an Improvement in Knitting Machines:

I claim, first, The single presser bar, D, and its arrangements, whereby it is made to operate and perform the duty of the two presser bars that are now usually employed.

Second, I claim the arrangement of the two sets of needles, crossing each other at right angles, whereby the bars of each are acted on by the single presser bar, D, reciprocally.

28,134.—G. W. Whipple (assignor to H. Rowell & Co.), of West Acton, Mass., for an Improvement in Powder Flasks:

I claim the described cut-off for powder flasks, consisting essentially of the gate, f, disk, d, and spring, m, operating substantially as specified.

28,135.—Benjamin Hardy (administrator of the estate of Aaron Williamson, deceased, late of New York City), assignor to himself and Thomas France, both of that city, for an Improvement in Narrow-ware Looms:

I claim constructing one portion of the raceway of a tongued plate, G, applied substantially as described, to constitute a guide, which leaves a continuous, unobstructed opening in front of the reed, clear across the loom, substantially as and for the purpose described.

28,136.—J. A. Brock, of Chicago, Ill., for an Improved Amalgamator:

I claim a revolving disk, e, subdivided into a number of receptacles, i, i, in combination with an upper revolving ribbed disk, o; the two disks revolving in opposite directions, so that the ribs of the upper disk carry the pulverized ore all over the surface of the mercury, and the lower disk carries the mercury in a still plane towards the ore, substantially in the manner and for the purposes set forth.

28,137.—J. A. Gray, of Albany, N. Y., for an Improvement in Pianofortes:

I claim, first, What is termed the full iron plate of a pianoforte with an upward projecting rim, c, along its back and sides and round the front corners, to form the upper portion of the exterior of the case, substantially as described.

Second, Casting the bottom, G, of the music rack or desk, and the brackets, b b, to which its sides are attached, with what is termed the full iron plate, substantially as specified.

28,138.—G. H. Jones and John Brown, of Rose, N. Y., for an Improvement in Water Wheels:

We claim the employment of the regulating lever, f, float, D, and gate, e, actuated by the discharge water of the wheel, to regulate the speed thereof, substantially in the manner and for the purpose shown and described.

RE-ISSUES.

Thomas Ellis, Wm. A. Ellis and A. D. Ellis (assignees of Thomas Ellis), of Philadelphia, Pa., for an Improvement in Casting Boxes for Wheel Hubs. Patented Dec. 6, 1859:

We claim supporting the sand core, E, between two sand heads, F, or their equivalents, when used in combination with a chamber, I, of uniform taper, in the manner and for the purpose substantially as set forth.

C. Aultman & Co., of Canton, Ohio, assignees of C. B. Brown, of Griggsville, Ill., for an Improvement in Grain and Grass Harvesters. Patented Dec. 7, 1852:

We claim, first, The bent main beam, so constructed as to serve as an axle for the driving wheel, a finger beam, and a support for the rear end of the tongue and the greater portion of the gearing, whereby the machine is rendered compact, strong and simple, substantially as described.

Second, Constructing the main beam of a reaper and mower with a variable bend, for the purposes substantially as described.

Third, The combination of the pallets, J, geared together, and the arm, G, or its equivalent, with the tappet wheel, C, or its equivalent, for imparting to the cutter a vibrating motion, substantially as described.

C. Aultman & Co., of Canton, Ohio, assignees of C. B. Brown, of Griggsville, Ill., for an Improvement in Grain and Grass Harvesters. Patented Dec. 7, 1852:

We claim, first, The combination of a skeleton track-clearer with the cutting apparatus of a mowing machine, substantially as described.

Second, The construction of skeleton track-clearers of a series of fingers, substantially as described.

Third, A yielding finger, or the equivalent thereof, in track-clearers, substantially as described.

Adolph Brown and Felix Brown of New York City, for a Machine for Cutting Loaf Sugar. Patented March 24, 1856:

We claim, first, The application and use of two or more rollers having brushes around their circumferences, and acting upon both sides of slabs of sugar, for the purpose of cleaning off the dust adhering to the same by the process of sawing, thereby re-producing the appearance of the crystals, as described.

Second, We claim, in a machine for cutting loaf sugar, the combination of two circular surfaces, with knives or cutters on each, and the knives or cutters opposite each other, substantially corresponding in form, and so combined that, in operation, the knives or cutters will act simultaneously on each side of the slab of sugar, in the manner and for the purpose substantially as described.

C. C. Bradley, Jr., of Syracuse, N. Y., for an Improvement in Grinding the Inner Surface of Cast Iron Kettles. Patented Feb. 24, 1857:

I claim forcing around the interior surface loose pieces of grinding material, by means of revolving wings or other sufficient apparatus which shall cause said loose pieces to revolve around, while they are left free to act upon the surface with which they are brought into contact, substantially in the manner and for the purpose set forth.

G. W. Hildreth, of Lockport, N. Y., for an Improved Mode of Hanging Bells. Patented June 19, 1855:

I claim the securing of the bell firmly to the yoke, and suspending the bell upon the shoulders of the bolt, c, passing up through a round hole cast or made in the top of the bell and shank, by the nut and thread upon the end of such bolt, in combination with the round tapering shank of the bell, and corresponding tapering hole in the yoke.

H. H. Stimpson, of Boston, Mass., for an Improvement in Cooking Ranges. Patented April 5, 1859:

I claim, first, The combination of the flange or projections attached to the side plates of the boiler chambers, with the grate constructed by a side plate, where the fuel plate is allowed to expand and contract freely, and made narrower than the fire chamber, as described, whereby the contraction and expansion of the grate is prevented from injuriously affecting the remaining portions of the range or stove.

Second, In combination with the back plate, constructed as described, I claim providing the boiler chamber with flanges or projections of such shape and width as to lap over the lateral end of said back plate, whereby the said plate is allowed to expand and contract without deteriorating the parts adjacent thereto, and without leaving open spaces for the escape at the sides of the products of combustion, substantially as set forth.

Third, The use of the sliding covers, q q, in combination with the top plate, arranged to operate substantially as described.

S. H. Titus and O. Des Granges, of St. Louis, Mo., for an Improvement in Cellular Iron Pavement. Patented Oct. 13, 1857:

We claim combining together a series of hexagonally-formed ribs and cells, so as to constitute a block of pavement of the form shown upon the drawing.

We also claim constructing each cell perfect in itself, and by such construction, making the cells of the upper periphery of the block not only uniform, but affording ledges to support the same upon the adjoining block, and thereby distribute the superincumbent weight equally along the whole side of the block, substantially in the manner described.

ADDITIONAL IMPROVEMENT.

F. D. Newbury, of Albany, N. Y., for an Improvement in Revolving Fire-arms. Patented June 12, 1855:

I claim the application to cylinders having their cones placed within cells, or to cylinders so fitted as to require them being capped from the rear, of a guard, constructed of a ring of metal closed at its end by a disk, having appropriate openings for the access of the hammer to each cone, and with a door giving access to the cone cells; the guard being fitted to move independently of the cylinder, or in connection with it, as required, substantially in the manner and for the purposes set forth in the above specification.

Notes & Queries.

F. B. D., of Conn.—You seem to think that a manufactory of kindling wood in this city must be a novelty. In Cincinnati there is a large and prosperous concern devoted to the manufacture of wrought iron nails. Not long ago, we procured a patent for a man, living on Long Island, for a machine for skinning eels, and it would not be surprising to hear, one of these days, that a large establishment had been erected for the manufacture of these machines. There is no limiting the progress of inventions and manufactures in this country.

C. A. H., of Mass.—There is no work published in this city on wool-carding and machinery for woolen mills.

G. P. W., of N. Y.—A large wheel runs over an obstruction more easily than a small one. The draft of a vehicle varies in the inverse ratio of the diameter of the wheels.

G. W. R., of Iowa.—By running two pairs of burr stones of different diameters with the same spur wheels and pinion, we would expect back-lash in one of the pairs, if you have ample power for driving both at once. The pinions should always be proportioned to the size of the burrs. You should increase the speed of the smaller pair.

E. M. R., of Va.—A bill of exchange for £100 at par would cost \$444.44. To arrive at the cost of a foreign bill in our currency, at a certain premium—say 9%, or 9½%—multiply the unit at par by the rate of premium and add it to the principal; this will give the cost of the bill in dollars and cents.

J. H. T., Jr.—The only work published in this city, on ornamental weaving, is that of C. G. Gilroy, sold by J. Wiley, No. 56 Walker-street,—price, \$5.

S. & S., of —.—Please to inform us where you reside and we will write to you about your hay and cotton press.

H. C. P., of C. W.—We are much obliged for your rule on cutting patterns for the joints of stove-pipe elbows. It is no doubt a good one, but the one we published some time ago must answer for the present.

J. M., of N. Y.—In order to give directions for fixing your photograph, we should require to know the process pursued in taking it. Your shortest way will be to call on some teacher of the art for practical instruction.

W. A. L., of Ill.—Your unsatisfactory experience with the diamond, for dressing millstones, seems to have been the same as that of all who have tried it.

J. A., of Md.—The method of distilling sassafras oil, which you describe as being practiced in your section of the country, is as good as any other known to us. It is simple distillation with the common copper still. If you had pointed out the defects we might have been able to show that, while you had the proper apparatus, the operations had not been correctly conducted, owing to a want of skill in managing the business.

A. S., of R. I.—It is very difficult to give advice regarding the use of spectacles, either for persons who are shortsighted or those whose vision is failing. The best rule to pursue, in both cases, is to choose spectacles by which print like that of the SCIENTIFIC AMERICAN may be read clearly at about 18 inches from the eyes, which is the natural distance for persons who have good vision. Spectacles which greatly magnify or diminish the size of objects at the natural distance should be avoided.

W. B., of Ill.—Your views regarding the action of the paddle wheels of steamers is correct in the main, but the difficulty in the operation of the wheels of the "Great Eastern" is, not their being too small, but that they have too great a dip in the water. There is no cheap work on propellers in print in this city.

T. S. S., of Mich.—Your statement that ice-boats similar to those which produced so much excitement during the last winter, along the Hudson, have been in use on the western lakes for some time, has been received. We are pleased to give the credit of the invention to whom it is due.

G. M. McL., of N. C.—You state that you wish to obtain reliable information about employing steam or caloric for transporting large timber to sawmills. We do not know where you can get it—if you mean practical experience in the business. We suppose that you want a portable engine for hauling the timber. All you have to do for securing this object is to put a locomotive on small broad wheels.

J. M. W., of N. Y.—The conducting power of a wire depends upon its solid contents—the greater the solid contents, the less is the resistance. The inductive power of a current in the wire of a magnet is in proportion to the magnitude of the wire—the smaller the wire the more intense is the power of the magnet. A fine-wire magnet is one of intensity; a magnet having large-wire coils is one of quantity.

J. W., of N. J.—White oak fence-posts will endure much longer if kyanized. To prepare timber with sulphate of copper, chloride of zinc, or corrosive sulphate, it requires to be steeped in a solution of these substances placed in a tank until the wood is saturated. This can be done in a very short period, in an exhausted iron tank, from which the air may be extracted by a pump, and the solution forced in under pressure; but as you have no apparatus of this kind, we advise you simply to coat the feet of your fence-posts with warm coal tar. This will render them much more durable.

N. S. C., of Mass.—The muriate of zinc, when used as a preparatory soldering-solution is liable to rust tools and all iron articles with which it comes in contact. To obviate such evils, add some grains of black tin to the solution, and always wash your tools and articles with an alkaline solution, such as a little sal-soda dissolved in water. This is all the remedy we can offer at present.

G. W. J., of Mass.—It does no damage to a steam boiler to blow it out while hot, except you permit the water to fall below the fire-line. When the fire is strong, and the steam is seen issuing from the blow-cock, it is a sign that the water is too low.

MONEY RECEIVED

At the Scientific American Office on account of Patent

Office business, for the week ending Saturday, May 6, 1860:— S. & G., of Vt., \$30; S. S. K., of Cal., \$30; A. P. T., of Ga., \$30; M. W. H., of Ind., \$30; S. K., of N. Y., \$30; C. C. of Iowa, \$30; S. P. G., of Wis., \$30; E. P. M., of N. Y., \$30; W. B. T., of Mass., \$25; T. B., of Ill., \$25; J. B., of Pa., \$30; M. H., of Conn., \$30; F. G. & E. A. F., of Ill., \$35; J. E., of Pa., \$30; T. & R., of N. J., \$200; S. J. S., of N. Y., \$45; R. N., of N. Y., \$10; A. & B., of N. Y., \$150; O. J. P., of Pa., \$25; S. M., of Ind., \$30; G. W., of N. Y., \$30; J. P. B., of S. C., \$30; W. H. C., of Ill., \$25; S. R. D., of Pa., \$30; T. S. W., of N. Y., \$15; C. R. B., of Conn., \$30; J. B. W., of Tenn., \$15; C. E. L. H., of Conn., \$30; J. C., of Vt., \$25; W. G., of Wis., \$23; D. P., of N. Y., \$35; B. & C., of Ohio, \$40; W. D. G., of N. J., \$25; W. H. A., of N. Y., \$56; P. V. W., of Mich., \$25; K. J. G., of Ind., \$35; S. & P., of Cal., \$50; J. N. J., of Mass., \$30; M. & B., of Mass., \$30; K. P., of N. Y., \$25; K. & T. C., of N. Y., \$25; A. C., of N. H., \$57; L. P. R., of Mich., \$30; T. H., of N. Y., \$25; H. A. M., of N. Y., \$250; G. H. K., of Pa., \$25; W. T., of N. Y., \$25; J. G., of Mass., \$30; G. S. G., of Pa., \$25; H. & L., of N. Y., \$25; C. J. H., of N. Y., \$30; G. & C., of N. H., \$15; T. & C. C., of Conn., \$200; T. E., of Tenn., \$30; L. A., of Wis., \$30; G. S., of Ga., \$30; D. & M., of Va., \$30; G. W., of N. Y., \$15; G. W. B., of Mich., \$10; B. S. W., of Ohio, \$25; J. J., of Pa., \$30; S. T. R., of Ill., \$40; J. G., of Md., \$30; D. S., of N. Y., \$10; S. K., of N. Y., \$25; J. W., of Maine, \$25; G. P. D., of Texas, \$25; W. W., of Wis., \$30; M. B., of N. H., \$30; H. F., of Ind., \$30; H. B., of Ill., \$30; G. E. F., of L. I., \$25; A. B. K., of N. Y., \$30.

Specifications, drawings and models belonging to parties with the following initials have been forwarded to the Patent Office during the week ending Saturday, May 6, 1860:—

W. D. G., of N. J.; O. J. P., of Pa.; A. M. C., of N. Y.; W. H. A., of N. Y. (2 cases); M. B. T., of Mass.; J. B. W., of Tenn.; S. J. H., of Ill.; F. G. & E. A. F., of Ill.; G. W. R., of N. Y.; J. H. C., of N. Y.; P. V. W., of Mich.; H. & L., of N. Y.; J. W., of N. Y.; T. B., of Ill.; G. S. G., of N. Y.; W. G., of Wis.; G. H. K., of Pa.; S. S. K., of Cal.; R. J. G., of Ind.; S. J. S., of N. Y. (2 cases); S. & P., of N. Y.; C. R. A., of Conn.; E. P., of N. Y.; W. H. C., of Ill.; T. H., of N. Y.; A. H. B., of N. Y.; R. N., of N. Y.; C. J. H., of N. Y.; W. T., of N. Y.; J. T. H., of Md.; T. S. W., of N. Y.; G. F., of L. I.; G. P. D., of Texas; B. S. W., of Ohio; I. W., of Maine; E. N. F., of N. Y.; S. K., of N. Y.; K. H. & T., of Mass.; G. W., of N. Y.; J. C., of Vt.; T. M., of N. Y.

NEW BOOKS AND PERIODICALS RECEIVED.

BLACKWOOD'S MAGAZINE. Published by Leonard Scott & Co., who also publish the four great British Reviews. This favorite magazine, for the present month, contains a leading article on the Duke of Wellington, another on Lady Hamilton, a review of Allison's History, and the story of Norman Sinclair, which is the autobiography of Professor Ayton, by himself. It is an excellent number.

THE HISTORY OF INK, including its Etymology, Chemistry and Bibliography. By Thaddeus Davids & Co., No. 127 William-street, this city.

This is a most interesting publication, and contains a great deal of decidedly interesting matter upon a somewhat odd subject. It is, moreover, one of the most beautiful specimens of the typographic art we have ever seen.

THE BIBLICAL REASON WHY: a Family Guide to Scripture Pleadings and Handbook for Biblical Students. Illustrated with numerous engravings. Dick & Fitzgerald, publishers, No. 18 Ann-street, this city.

This work expounds, by question and answer, the most important events in the history of the Bible—the life of our Saviour and the acts of His apostles; and, so far as we can judge, it is a valuable aid to the study of the Holy Scriptures. It has received the endorsement of some of the most eminent divines of our country.

THE HAUNTED HOMESTEAD. By the well-known authoress, Mrs. Southworth. Published by T. B. Peterson & Bro., Philadelphia.