certain periods, on Natural Philosophy and Chemistry; the subjects for discussion will be announced in future.

RECENT AMERICAN PATENTS.

The following are some of the most important improvements for which Letters Patent were issued from the United States Patent Office last week ; the claims may be found in the official list:—

Improved Governor.—This invention consists in making the rod which opens and closes the governor or throttle valve, or which bears a similar relation to the source of power and parts to transmit said power to the working machines, with a spring and with a fly-wheel, to which an intermediate rotary motion is imparted, in such a manner that when the intervals characterizing the intermittent motion are long and consequently the motion of the fly-wheel slow, the spring has power enough to overcome the momentum of the fly-wheel and to carry the valve rod back to its original position after each stroke or motion of the fly-wheel; but if the intervals characterizing the intermittent motion of the fly-wheel shorten, and in consequence thereof the circumferential velocity of the fly-wheel increases, the momentum of the fly-wheel overcomes the power of the spring, and the valve rod moves back so as to close the valve and regulate the speed of the engine or other machine with the greatest nicety and entirely independent of the position of the governor, rendering the same of peculiar value for the purpose of regulating the speed of marine engines. Peter Louis, of 220 Center street New York, is the inventor.

Machine for coating and flocking Cloth.—The object of this invention is to coat cloth or textile fabrics in pieces a thousand yards, more or less, long, by machinery which applies the requisite coat of waterproof or other composition or varnish, and the flocks if desired, and at the same time conveys the cloth to a drying room and hangs it in folds upon stick or slats automatically. The long pieces of cloth are made up of shorter ones cemented or secured together as for calendering. The process of coating is effected while the cloth is being conveyed to the drying room, and the machine at the same time delivers a series of newly-arranged lattice frames which are supplied to it at suitable intervals and upon the slats or rounds of these frames the cloth is deposited in folds, four or more yards upon each slat, according to the hight of the room. Edwin M. Chaffee, of Providence, R. I., is the inventor.

Knitting Machine.—The object of this invention is to afford facility for what is termed narrowing and widening the work in circular knitting machines, bringing the parts nearer to or further from the center of the machine, and by reducing and increasing the number of loops in the circular courses. The invention consists, principally, in the employment in a circular knitting machine of separately-adjustable sinkers so applied in combination with the needles as to provide for their being set nearer to or further from the center of the machine and for the removal of any number of them at pleasure. It also consists in making the needle operating-cam adjustable for bringing the needles nearer to or further from the center of the machine, and in a device for adjusting the sinkers in a larger or smaller circle. It further consists in so combining the needle operating-cam, the device for adjusting the sinkers nearer to or further from the center of the machine, the yarn conductor, and the rotary-pressing burr, that they are all adjustable together toward and from the center of the machine, Charles W. Blakeslee, of Northfield, Conn., is the inventor.

Simple and Cheap Plan for Preserving Fruits.

A writer in the *Country Gentleman* says:—"Recently I have seen fruits put up upon a plan so cheap, so simple and so easily performed by any member of the family, that I am pleased to furnish it. The fruit is prepared and scalded in the ordinary way, and the jars closed while the contents are *hot*. The method of sealing is, by simply pasting over the mouth of the jar two thicknesses of stout manilla paper previously pasted together. Fruit thus put up for several years has kept perfectly sweet and sound as when put up in the best 'self-sealing' cans or jars. To render the preservation doubly sure to inexperienced persons, I would suggest several improvements upon the plan. First, I would close the jar with a cork before pasting; this would prevent any moisture coming in contact with the paper, in case the jar should be turned on one side. Second, To be sure to guard against any opening through which the air could enter, owing to any improper pasting, I would put the two pieces of paper in separately, making the outside half an inch larger, so as to extend a little below the first around the neck of the jar, thus covering any defect that may have been left in the first, firmly pasting both together; and last, I would cover the whole with a thin coat of shellac or gumarabic. The whole process is very simple, more easily prepared than any that I have seen practiced."

ISSUED FROM THE UNITED STATES PATENT-OFFICE

FOR THE WEEK ENDING SEPTEMBER 20, 1864.

Reported Officially for the Scientific American.

☞ Pamphlets containing the Patent Laws and full particulars of the mode of applying for Letters Patent, specifying size of model required and much other information useful to inventors, may be had gratis by addressing MUNN & CO., Publishers of the SCIENTIFIC AMERICAN, New York.

44,273.—Corn Planter.—J. Armstrong, Jr., Elmira, Ill.:

I claim, first, The friction rollers, d d, placed in the loops, E, in combination with the treadle frame, E, as and for the purpose specified.

Second, The stirrers, P, when arranged or hung so as to be operated from the slide, K, substantially as herein set forth.

[This invention relates to a new and useful machine for planting corn, both in hills and drills, and it consists in a novel arrangement of the framing, whereby the part on which the seed dropping mechanism is placed, and the part in which the wheels are fitted may have a certain action or movement independent of each other, and the framing allowed to conform to the inequalities of the surface of the ground over which it passes.]

44,274.—Cattle Pump.—John B. Atwater, Chicago, Ill.:

I claim, first, The apparatus consisting of the cylinders, A and B, connected by the pipe, C, and provided with the discharge pipe, H, operating in combination with the piston, D, provided with stem, a, and box, b, or its equivalent.

Second, In combination with the foregoing I claim regulating and adapting the apparatus to be operated by animals of various weights, by means of weights applied to the box, b, substantially as specified.

Third, I claim securing and holding the piston, D, and tilting platform in position by means of the spring catch, e, or it equivalent.

44,275.—Stitch for Soles and Vamps.—Lyman R. Blake, Quincy, Mass.:

I claim the employment of the new stitch for uniting soles and vamps of boots and shoes, and for a similar use in other manufactures, in the manner substantially as described.

44,276.—Windlass.—Marcus Bockman, Brooklyn, N. Y.:

I claim the shafts, C D E, cog wheels, F F H, levers, K, and spools, Y, in their specified combination on the bench, B, constructed and arranged substantially as specified.

44,277.—Harvesting Machine.—Jeremy Bradley, Cedar Falls, Iowa:

I claim, first, The combination of an endless chain-raking apparatus having horizontal riving shafts, with the jointed shafting, d m, sliding pinion, k, side gear, J, and lever, L, arranged and operating substantially as described.

Second, The toothed segments applied to guide, H, in combination with rakes which are pivoted to, and operated by, endless chains, and otherwise constructed and adapted for being brought into raking position by said segments, substantially as described.

Third, The combination of open slatted platform, e, endless chain of rakes and toothed segments, for turning the rakes at the commencement of the raking stroke.

Fourth, The combination of the two levers, L L', pinions, K K', inclined shafts, m m', driving wheel, E, cutting apparatus, and endless chain of rakes, all arranged and operating substantially as described.

44,278.—Mode of connecting Cars to Trucks.—Alfred Bridges, Newton, Mass.:

I claim, first, In railroad cars the spring, H, on the truck frame, so combined and arranged with the suspension rod, G, or its equivalent, that it controls both vertical and side motions, substantially as herein set forth.

Second, I claim the combination of the two springs, H and N, with the truck frame, D d, substantially in the manner and for the purposes herein specified.

Third, I claim the thimble, h, when used with the spring, H, truck frame, D d, suspension rod, G, and pedestal, F, substantially in the manner and for the purposes herein specified.

44,279.—Bed Bottom.—James Bromiley, Pawtucket, R. I.:

I claim a bed bottom composed of slats, B, connected at their ends to elastic straps, C, by means of clamps, F, constructed and applied as shown, and the straps, C, secured to the head and foot rails of the bedstead by means of the hooks, D, fitted in the straps, substantially as described.

[This invention relates to a new and improved bed bottom of that class which are composed of a series of parallel slats, connected at their ends by elastic straps to the head and foot rails of the bedstead. The invention consists in a novel manner of attaching the elastic straps to the slats, and also in attaching said straps to the head and foot rails of the bedstead, whereby all rails, screws, and bolts are avoided, the slats and bands readily connected and disconnected, and also readily applied to the bedstead, and a greater or less number of slats used, as circumstances may require.]

44,280.—Fruit Basket.—Henry Carpenter, New York City:

I claim a peach or fruit basket, provided with a vertical central partition and lids or covers, substantially as herein shown and described.

[This invention consists in having the basket made of double the capacity of these now used for holding peaches and other fruit, and providing the same with a central partition and two lids, as hereinafter fully shown and described, whereby the expense of transportation is reduced one-half, and the baskets rendered capable of being stowed one on the top of the other without having their contents injured.]

44,281.—Apparatus for coating and flocking Cloth.—Edwin M. Chaffee, Providence, R. I.:

I claim, first, The rollers, A C F G I J K L, and doctor, E, or their equivalents, arranged in relation to each other and to the cloth, substantially in the manner herein described, so that long pieces of cloth can be coated and conveyed to the drying room without bringing the face or varnished side of the cloth in contact with the rollers or anything else except the edge of the doctor.

Second, The employment or use of two toothed wheels, j, arranged substantially as herein specified, to check the fall of the cloth at the desired intervals.

Third, The jointed arms, k l, in combination with the toothed wheels, j, to act substantially as and for the purpose set forth.

Fourth, The combination of the rock-shaft, m, adjustable arms, k l, and wheels, j, substantially as herein specified, to insure the simultaneous catching of both edges of the cloth.

Fifth, The employment of the lattice frames, M, substantially in the manner set forth for the purpose of supporting the cloth while in the drying room.

44,282.—Pump.—John K. Cohick and Jacob Fesher, Mountville, Pa.:

We claim the action of the pump, P, by means of the oscillating beam, c, and jointed connecting rods and piston, f d, in connection with the crank, XI, and triple gearing when operated by a weight and pulley, in combination with a fly-wheel, X, and lever arm, L, click, n, and ratchet, m, and side support, t, all constructed and operating substantially in the manner and for the purpose specified.

44,283.—Spinning Machine.—E. C. Cleveland, Worcester, Mass.:

I claim, first, Enclosing the lifter, C, and the clock and their appurtenance within the arch and one of the posts of the frame, substantially as described.

Second, The locking slide, e, constructed and operated substantially as shown, for locking the lifter, C.

Third, The lifter, C, for operating the clock, constructed and operated substantially as shown.

Fourth, Adjusting the relative positions of the hand wheel shaft and the tin cylinder shaft, in the manner substantially as described.

Fifth, The combination of the bearing of the hand wheel shaft with the means employed for adjusting the inner end of the shaft, substantially as described.

[This invention consists in certain improvements in the construction of jacks whereby I am enabled to place the clock, for indicating the amount of work done, and its mechanism within the frame of the jack; and also in the construction of the mechanism for causing the clock to indicate the work of the jack, and in the manner of operating said mechanism, and also in the manner of constructing and adjusting the bearings of the shaft which drives the shaft of the tin cylinders.]

44,284.—Washing Machine.—Latman W. Cook, Dowagiac, Mich.:

I claim, first, The arrangement and combination of vibrating arms, B, longitudinal arms, C, raised boards, g, and levers, E, substantially as described.

Second, The application of the beaters, D, to longitudinal swinging arms, C, in combination with the divisions, a a g g, and vibrating levers, E, substantially as described.

Third, The arrangement of the vibrating arms, B, longitudinal arms, C, and vibrating levers, E, within a wash-box, constructed substantially as described, in such manner as to admit of the ready removal and replacing of said parts, as herein described.

44,285.—Composition for preserving and Water-proofing Vegetable Fibers.—George A. Cowles, Jesse P. Chase, and Victor Vierow, New York City:

We claim, first, The use of a composition of alum and blue vitriol, mixed together, substantially in the manner and about in the proportion above set forth.

Second, The use of a composition of alum and vitriol, mixed with gelatine, or with soap, or with a mixture of gelatine and soap or oil, substantially in the manner and about in the proportion specified.

Third, The employment of acetate of lead, with or without gum arabic, in combination with the ingredients hereinbefore named and mixed together, substantially in the manner and about in the proportion set forth.

[This composition has been applied with great success to sails and other similar articles exposed to the influence of the atmosphere, also to clothes and other textile material.]

44,286.—Clasp for Shoe Lacings.—William E. Darrah, Middletown, N. Y.:

I claim, as an improved article of manufacture, a clasp for lacings, made in one piece, but with double string plates, a b, disconnected at the outer corners, and central channel, c, all as herein shown and described.

[The object of this invention is a clasp, produced by folding over a piece of sheet metal in such a manner that the plates or jaws are formed with a suitable opening to let the strings of a shoe, or lacing of any other description, pass freely, and to return the ends of said strings or lacings, when the same are drawn midways between the two plates or jaws.]

44,287.—Skeleton Skirt.—Theodore D. Day, Brooklyn, N. Y.:

I claim, first, Forming the hoops of the skirt with joints at the back, so that the springs or hoops will fall more easily when the person is seated, as set forth.

Second, I claim uniting the ends of the springs or hoops of a skeleton skirt, by means of the tapes or strips receiving the said ends, in the manner specified.

44,288.—Potato Digger.—Daniel N. Denman, Millburn, N. J. Ante-dated Sept. 5, 1864:

I claim in a potato digger, of the construction specified, arranging the two driving wheels F F, directly behind the landsides, C C, as herein described and for the purposes specified.

[This invention consists in the employment or use of an inclined curved screen, provided with a share and landsides, and having a toothed shaft placed underneath the back and curved part of the screen; the teeth or the shaft working through the screen, and the shaft being rotated by a traction wheel placed behind one of the landsides, whereby a very simple and efficient potato digger is obtained, and one that may be advantageously used for cultivating or preparing the earth for the reception of seed, etc.]

44,289.—Cattle Pump.—Joseph A. Dickson, Sandwich, Ill.:

I claim the radius frame, D, provided with the trough, J, and connected with a pump, or any suitable waterelevator in such a manner that the animal in its effort to drink will rotate the frame, and thereby actuate the pump and supply the trough with water, substantially as set forth.

I further claim the way, B, in connection with the frame, D, provided with the water receptacle, I, and trough, J, or its equivalent communicating with each other by a trough or tube, I, all arranged to operate substantially as and for the purpose specified.

[This invention relates to a new and improved pump by which cattle themselves may pump up at will the water they require for drinking purposes. The invention consists in having an elevated annular way around and concentric with an ordinary section or force pump, and having one end of a frame fitted loosely on the pump and the other end extending out to the way, said frame having a trough at-

tached to its outer end and a water receptacle at its inner end from which the water flows into the trough through a tube. The frame being provided with a roller which rests upon the way and which by means of a pitman and walking beam operates the pump as the trough and frame are moved around by the cattle in their effort to drink from the trough.)

44,290.—Breech-loading Fire-arm.—Wm. C. Dodge, Washington, D. C.:

I claim, first, So constructing and combining the stock, guard, barrel and retractor of a breech-loading gun, as that a single movement of the guard shall both elevate the barrel and operate the retractor, without the aid or use of any other parts than those herein mentioned.

Second, I claim the lever guard, C, constructed and operating in the manner and for the purpose substantially as above set forth.

Third, I claim the combination of the lever-guard, C, and the cartridge retractor of a breech-loading gun, when constructed and operating substantially as shown and described.

44,291.—Riding Stirrup.—R. N. Eagle, Washington, D. C.:

I claim, first, A stirrup or stirrup frame of wood with arms separate at their upper ends to be indirectly connected by means of a ferrule or loop, or by the suspension strap in any manner, substantially as described.

Second, I claim suspending a stirrup by means of a strap passing between the ends of the arms and secured without the aid of any block employed to connect the said arms.

Third, I claim the inner or upper tread, J, projecting forward to constitute the lower part of the hood or toe cap or rearward to afford an additional foot-rest at back.

Fourth, I claim a stirrup or stirrup frame of wood or other material provided with slots at any desired points intermediate between the tread and shoulder or upper part of the arms, for the reception of the suspension strap, substantially as described.

44,292.—Riding Stirrup, etc.—Robert N. Eagle, Washington, D. C.:

I claim, first, A stirrup or stirrup frame of bent wood, with arms and tread of equal thickness.

Second, I claim one or more slips or blocks, K and K′, of metal or other suitable material applied to or between the upper ends of the arms to strengthen the same and prevent splitting, substantially as described.

Third, I claim a stirrup or stirrup frame of wood with one or more apertures or cavities, M and N, or partial excavations in lieu thereof, substantially as and for the purposes set forth.

Fourth, I claim the shaping or profeling of a stirrup or stirrup frame of wood, by means of concavities or convexities in the rear and front outlines of the tread, or arms thereof, in any manner substantially as and for the purposes set forth.

Fifth, I claim a stirrup hood or toe cap, formed on, or in suitable blocks ordees, in combination with an opaque material to produce the required surface, and for other purposes, substantially as described.

44,293.—Apparatus for Pressing Hats and Bonnets.—Wm. E. Doubleday, Brooklyn, N. Y.:

I claim confining the edges of the material around the edges of the concave die in the formation of hats and bonnets, for the purposes and substantially as specified.

44,294.—Glue and Water Heater.—Joseph Edgecomb, Worcester, Mass.:

I claim the combination of the conical reflector, F, with the lamp and water receptacle, substantially in the manner and for the purposes herein described.

I also claim attaching the reflector, F, to the lamp in such a manner that it can readily be removed therefrom, and that when removed the lamp may be used as an ordinary lamp, substantially in the manner herein described.

I also claim the combination with the lamp of the detachable reflector, F, and water receptacle, I, when the several parts are secured to each other, and when constructed and arranged as herein shown and described.

44,295.—Heating Stove or Furnace.—Adam Ernst, Milwaukie, Wis.:

I claim in combination with the pipes, a, which constitute the fire-pot of the furnace, the cold air chambers, D E and F, whether said pipes are set close together or with spaces, m, between them, substantially in the manner and for the purposes described.

I also claim in combination with the pipes, a, constituting the fire-pot of the furnace, the double radiating drum, I K, when constructed with an inner flue, k, substantially as and for the purpose described.

I also claim the combination of the pipes, a, cold air chambers, D E F, and double-radiating drums, K I, when constructed and arranged as and for the purpose herein described.

44,296.—Apparatus for Boring Cylinders.—L. B. Flanders, Philadelphia, Pa.:

I claim, first, The combination of the boring bar, B, its sleeves or bearings, E and E′, and the cross-plates, D and D′, with their set screws, c, the whole being constructed and arranged for application to and for the adjustment of the boring bar central with a cylinder, substantially as set forth.

Second, The combination of the boring bar, B, the casing, H, and the train of wheels, I J and K, or their equivalents, the whole being arranged and operating substantially as described.

Third, The collar, e′, attached to the boring bar and confined within the sleeve or bearing, E′, substantially as described.

Fourth, The block, K, adapted to the cutting-head, G, to the boring bar, B, and screw, C, substantially as described so as to serve as a nut for the screw and as a key for preventing the cutting head from turning on the bar.

Fifth, The combination of the boring bar, B, its screw, C, and casing, M, or its equivalent, central shaft, p, and the train of wheels herein described or the equivalent to the same for the purpose specified.

Sixth, The detachable bracket, U, and its spindle carrying the bevel wheel, t, in combination with the casing, H, its shaft, L, and the bevel wheel, t.

Seventh, The tapering block, P, its inclined keys, 2, screw, u, and nut, u′, the whole being constructed for central attachment to the head of a steam cylinder and for forming a bearing for one end of the boring bar, substantially as set forth.

Eighth, The plate, Q, its central pin, x, radial sliding bars, R, and the block, T, with its cam like projections, y, the whole being arranged and operating substantially as and for the purpose specified.

44,297.—Oil Cup.—Jacob Foyle, Putnam, Ohio:

I claim the longitudinally sliding globe, B, and receiving cup, C, in combination with the tube, A, holes, j k l, and vent pipe, m, constructed and operating in the manner and for the purpose substantially as set forth.

Also the stuffing boxes, b c, above and below the oil cup, B, in combination with the pipe, A, constructed and operating in the manner and for the purpose substantially as herein specified.

[This invention consists in a vertically or longitudinally sliding globe and oil receiver, in combination with a tube leading to the steam cylinder or other part to be lubricated and provided with holes situated at different levels and separated by a transverse partition and with a vent pipe in such a manner that by moving the globe in one direction it comes in the proper position to receive the lubricating material, and by moving it in the opposite direction it comes in the position to discharge said lubricating material into the cylinder or other part to be oiled.]

44,298.—Chasing Mill.—Wm. M. Force, Newark, N. J. Ante-dated June 6, 1864:

I claim arranging a heating bed outside of and around the grinding bed of a chasing mill, to receive and heat the materials ground and prepare them for pressing, or the next operation.

And in combination with the heating bed arranged around the grinding bed of a chasing mill, I claim the cover, K, of the heating bed, for the purpose set forth substantially as described.

44,299.—Medicine for the Cure of Diptheria, etc.—Thomas J. Glines, Hebron, N. Y. Ante-dated Sept. 10, 1864:

I claim the combination of the medicinal powers of serpentaria in the treatment of disease, in the manner herein described, with muriatic acid and chlorate of potash.

44,300.—Feather Edging Machine.—Louis Goddu, Braintree, Mass.:

I claim in connection with feeding and cutting mechanism and a guiding surface, the employment of a directing rod or point to keep the stock against the grinding surface.

I also claim the construction of the lower feed-roll, with dinking points so arranged as to puncture and space the holes for the peg points, substantially as described.

I also claim the arrangement of the mechanism by which, while the knife is operating has a fixed relation to the surface of the lower feed-roll, the directing rod and upper feed roll yield to the inequalities of the stock.

Also the construction by which the knife and upper feed roll are raised, lowered, and fixed in position together, substantially as set forth.

I also claim combining a horizontal skiving knife with inclined surface feed rolls, in the manner and for the purpose substantially as set forth.

(44,301 Suspended.)

44,302.—Water Wheel.—George Gross, Buffalo, N. Y.:

I claim, first, The arrangement and combination of the hollow perforated and vertical shaft, with its collar, P, and its cavity at the lower end filled with babbit or other metal, its adjustable socket, K, oil tube and sleeves, X, and mill stones at top of shaft, when arranged and combined as herein described and for the purposes set forth.

Second, I also claim the construction and combination of the adjustable socket, K, with its box, H, as described and for the purposes set forth.

Third, I also claim the incline projection, f, on the inside of the scroll, for the purpose specified.

Fourth, I also claim the angular construction of the bucket, b, of the wheel, as herein described.

44,303.—Combined Sword-handle and Revolving Fire-arm.—Sive Guilbert, New York City:

I claim, first, Using the guard, G, of the saber, for the spring, which acts on the hammer, E, as specified.

Second, The trigger, H, guard, G, and hammer, E, arranged in combination with each other, and with the perforated hilt, A, and revolving cylinder, D, in the manner and for the purpose substantially as described.

Third, The hook, l, which catches in the chambers of the cylinder and acts in combination with the trigger, H, substantially in the manner and for the purpose herein set forth.

[This invention consists in the application of a revolving-chambered cylinder to the rearend of the hilt of a saber, in combination with a hole bored through said hilt, and corresponding in size to the chamber in the cylinder, in such a manner that by revolving said cylinder one of the chambers after the other can be brought in line with the hole in the hilt, which takes the place of the barrels, and said hilt forms a regular revolver.]

44,304.—Scroll Sawing Machines.—Andrew Hanauer, Covington, Ky.:

I claim, first, The two levers, C I, in combination with the two saws, P P, and connecting rods, M S, and slides, N Q, arranged to operate in the manner substantially as and for the purpose herein set forth.

Second, The adjusting of the upper lever, I, through the medium of the cams, J J, for the purpose of straining the saws, as herein specified.

Third, The tubular pitman, V, provided with fibrous or absorbent filling, b, for the purpose herein set forth.

[This invention consists in the employment or use of two levers, connected by rods and saws, the levers working on central fulcrum pins, and one of the levers having its fulcrum pin fitted in adjustable boxes, so that said levers, by means of certain mechanism, may be adjusted to strain the saws. This invention also consists in a peculiarity of the construction of the pitman, which communicates motion to the saws, by which construction the journals on which the pitman is fitted may always be kept in a properly lubricated state. The invention further consists in the employment or use of adjustable saw guides, arranged and applied in a novel way, so as to be capable of being readily adjusted, as required.]

44,305.—Beehives.—William Harden, Chariton, Iowa:

I claim a bee house or bee palace, provided with a series of compartments in front, having slides, g, in which openings, h, are made covered with wire cloth; in connection with a series of hives, A, placed together or fitted within the house or palace provided with spare honey-boxes, C, the front ends of which are above the board or cover, e, of the compartments, and are fully exposed for their ready removal from and insertion within the house or palace, substantially as herein set forth.

[This invention relates to a new and improved bee house or bee palace, and is designed to prevent the swarming of bees, and also to protect them from the moth, as well as to afford facilities for feeding the bees and removing the spare honey from the house or palace.]

44,306.—Farm Gate.—W. D. Harrah, Davenport, Iowa:

I claim, first, The slot, b, located as described, for the purpose set forth.

Second, The extension, c3, aiding to sustain the weight of the gate and relieve the pin, f, as set forth.

Third, The bevels, a′ a′, on the parts, a a, of the post, for the purpose described.

44,307.—Stoves.—John R. Hawkins, Syracuse, N. Y.:

I claim the division of the space within the outer shell of the stove into the different compartments, by the partitions, Z Z′ Z″, and P P′, as above-described, in combination with the fire-pot grate, coal reservoir and outer shell, as above described.

Second, The fire-pot made circular at the bottom and elliptical at the top, in combination with the grate and coal-reservoir, as above described.

Third, The combination of a grate, made in the form of a pyramid, with bars and a toothed edge, and a bed-plate, having the edge of the opening in which the grate is placed, also toothed as above described, in connection with the fire-pot and coal receivers, as above described.

44,308.—Manufactuae of Stamped Ware.—G. H. Hazelton, Philadelphia, Pa.:

I claim coating stamped ware made of tinned iron, substantially as and for the purpose herein set forth and described

34,309.—Manufacture of Wash-boilers and otner vessels.—G. H. Hazelton, Philadelphia, Pa.:

I claim the manufacture and use of bottoms for wash-boilers and other similar vessels, made of the material, and substantially as herein set forth and described.

44,310.—Process for Tempering Steel.—William Hazen, Milwaukee, Wis.:

I claim the process as above described.

44,311.—Adjustable Percolator.—J. Q. Hill, Worcester, Mass.:

I claim, first, The combination of a supporting rim or part, B, with adjustable or flexible flanges, b, and a perforated diaphragm, substantially as and for the purposes set forth.

Second, The combination of the supporting part, B, with a series of flanged supports, for the purposes set forth.

44,312.—Breech-loading Fire-arms.—W. D. Hillis, Joliet, Ill. Antedated Sept. 16, 1864:

In combination with the lever, F F2 f′, sliding leg, G, ways, g, and spring, F′, I claim the projection, H, provided with the niche, h, when arranged in the manner and for the purpose described.

44,313.—Clothes-wringing Machine.—R. B. Higunin, Cleveland, Ohio:

I claim the sectional shafts, A A, substantially as and for the purposes specified.

I also claim the sheets, B B, adjusted substantially as and for the purposes specified.

44,314.—Extracting Rosin and other substances from Pine Wood.—Duane Hull, Newburgh, N. Y.:

I claim the art of producing rosin directfrompine wood by the application of heated air or super-heated steam, as above described, and the improved mode of producing spirits of turpentine by means of hot air or super-heated steam, as above described.

44,315.—Water Elevators.—George Illias, Dallastown, Pa.:

I claim, first, The movable platform, B, constructed substantially as shown, in combination with the flooring of the main platform, E, substantially as described.

Second, I also claim the combination of the double buckets, the chain and sprocket wheel, the forked rod, b, the trough, C, ratchet with double detents, and the driving shaft, substantially as described.

Third, I further claim the combination of the movable platform with the devices in the claim next preceding, substantially as described.

[The invention combines a movable platform with the main platform of the well, so as to cover the well-hole, without interfering with the chain, and also improves the operating parts of the apparatus, by a new arrangement of various devices.]

44,316.—Paint Oil.—Wm. Johnson, Allegheny City, Pa.:

I claim as a new article of manufacture a paint oil, composed of the ingredients and mixed in the proportions herein specified.

44,317.—Escapements for Chronometers.—Jacob Karr, Washington, D. C.:

I claim the construction of an escapement lever, as is shown in figures 1 2 3 4 and 5, in its combination, as designated by the letters A B C D E F G H L M and S, for the uses and purposes herein described.

44,318.—Machine for Cutting Leather into Counters.—Aberdeen Keith, North Bridgewater, Mass.:

I claim for splitting leather into counters or like articles the combination of the tapering feed-rollers with the cutting-knife, arranged with them as specified, the said tapering rollers causing the knife to cut in a curved path.

And, in combination with the feed-rollers and the knife, I claim a mechanism for adjusting, in manner substantially as and for the purpose described, the declination of the knife in accordance with the variation of the distance between the feed-rollers such mechanism as explained, being the movable standard, its weighted lever and knife-supporting bracket, the whole being connected with the lower feed-roller shaft, as set forth.

44,319.—Connecting Rotary into Reciprocating Motion.—A. E. Kline, Goodville, Pa.:

I claim the guard, e′ e2, applied to the pins, d′ d2, and operating in combination with the arms, a′ a2, of the yoke, attached to the disk or plate, A, substantially as and for the purpose herein set forth.

[This invention relates to that kind of device for converting rotary into reciprocating motion, and vice versa, which is composed principally of a rotating disk or plate, containing two straight slats crossing its center at right angles to each other, and a reciprocating rod or pitman, furnished with two pins working in the said slots.]

44,320.—Mode of Separating Gold and Silver from Ores.—Matthew Laflin, Chicago, Ill.:

I claim separating gold or silver from quartz or other substances, by means of molten lead or its equivalent, under a mode of operation substantially as above set forth.

44,321.—Linch Pins.—Thomas Laly, Philadelphia, Pa.:

I claim the combination of the linch pin, its recess or opening, X, and loose dog, b, the whole being arranged and operating as and for the purpose set forth.

44,322.—Steaming Grain in Process of Grinding.—Jas. F. Lawton, Venedy, Ill.:

I claim treating grain preparatory to grinding by subjecting it to an immersion, in an atmosphere of free steam, substantially as shown.

44,323.—Medical Compound.—Jacob Leich, Brooklyn, E. D., N. Y.:

I claim the use of a compound made of the ingredients above-specified, mixed together in about the proportion and substantially in the manner set forth.

[The object of this invention is a compound, which, by several years' practice, has been found to be a sure remedy for consumption, to be used by persons of both sexes, and by children as well as grown persons.]

44,324.—Fruit-drying Oven.—David Lippy and Samuel Linn, Mansfield, Ohio:

We claim the oven, C, provided with the flues, G, and shelves or drawers, K, when used in connection with the chamber B, fire-box, A, pipe, F, and drum, D, arranged substantially as and for the purpose, herein set forth.

We further claim the registers, a b H and I, when applied respectively to the chamber, B, flues, G, and oven, C, substantially as and for the purpose set forth.

[The object of this invention is to obtain a device by which fruit may be dried with rapidity and in a thorough manner, and to this end the invention consists in providing an oven with a series of flues and registers and arranging the same with the fire-box and a device, in such a manner that the fruit which is placed in drawers or on shelves within the oven will be exposed to the requisite degree of heat to expel moisture from them and due provision made for the escape of the moisture.]

44,325.—Governors.—Peter Louis, New York City:

I claim, first, The rod, A, and spring, C, or their equivalents, in combination with the fly-wheel, D, constructed and operating substantially as and for the purpose herein shown and described.

Second, The bell crank, k′, slotted and curved as described, in combination with the dog or its equivalent, and arranged so as to give a forward motion to the dog at each stroke, in or out of the piston.

44,326.—Manufacture of Stop Cocks.—Joseph L. Lowry, Pittsbargh, Pa.:

I claim constructing the valve, valve seat and lifting screws of stop cocks, in the manner and by processes and means, substantially as described.

44,327.—Steam Engines.—Joseph L. Lowry, Pittsburgh, Pa.:

I claim, first, The combination herein described for utilizing or revoking the steam or vapor of a pumping engine, after having been used for lifting the piston with its weight to the top of the cylinder or the full length of the upward stroke, by passing it into the other end of the cylinder so as to act on the opposite side of the piston, and assist by the force of expansion to drive in connection with the weight the water through the main pipe to its place of destination.

I also claim the combination of the valves marked O and T and d and c, for the purpose herein set forth and described.

I also claim so constructing the condenser of a pumping engine in connection with the main pipe, as that all the water operated on by the pump shall either be forced around or drawn through it, for the purpose of condensing the steam rapidly, however great the quantity.

44,328.—Seeding Machine.—Joseph Lyle, Clarksville, Iowa:

I claim the combination of the inclined floor, a, apertures, d d, gate, P, and agitating device, J K L M N O, having curved teeth projecting from the outside into the hopper horizontally through the apertures, d d, and all constructed, arranged and operating in the manner and for the purposes herein specified.

[This invention consists in the employment or use of a series of agiators attached to a horizontal rod, which is connected to levers operated from a crank shaft, which receives its motion from one of the traction wheels of the machine. The agitators are rods, which work at the rear of the seed-box, and in the same through openings made in the back of the seed-box, the area or capactty of the openings being regulated by means of a slide.]

44,329.—House-warming Furnace.—Peter Martin, Cincinnati, Ohio:

I claim, first, The provision in an air-warming furnace of an exterior shell formed of corrugated metallic plates, A, in the described combination with the crown and bed plates, B and C, as described.

Secondly, The arrangement of warm air-chamber, D, inclosing the

furnace proper, and provided with tubes, G, interior tubes, G', in the manner and for the object described.

Third, The sectional fire-pot, O o, formed and arranged in the manner and for the object stated.

Fourth, The arrangement of provisions, O o, P p p', Z, for converting a coal into a wood-burning furnace, and vice versa.

Fifth, The provision, K L L M N, for purifying the entering air, as set forth.

Sixth, The arrangement of tank, N, water supply and discharge pipes, Y Y', vapor pipes, v, and warm air tubes, W, as described.

Seventh, In this connection the provision of the direct exit pipe, G'' for the object stated.

44,330.—Rotary Steam Engines.—T. G. Massie, Port Henry, N. Y.:

I claim, first, The cams, c c', on the inside surfaces of the cylinder heads, arranged in combination with the transversely-sliding piston, E, and piston wheel, D, constructed and operating in the manner and for the purpose substantially as shown and described.

Second, Making the sides of the piston concave, substantially as herein specified, to allow the steam to pass through the piston wheel and act on both sides of the piston.

Third, The roller frames, F, applied in combination with the piston, E, piston wheel, D, and cams, c c', substantially as and for the purpose herein shown and described.

Fourth, The doors, f*, in the sides of the cylinder, arranged in the manner and for the purpose set forth.

Fifth, The spring abutments or packing pieces, h h', applied to the apexes of the cams, c c', in the manner and for the purpose substantially as herein specified.

Sixth, The movable slats, e, applied in the sides of the piston, in combination with wedges, f, and spring, g, or their equivalents, constructed and operating substantially as and for the purpose set forth.

[An engraving and full description of this iuvention will be found in No. 7, Vol. XI., of the SCIENTIFIC AMERICAN.]

44,331.—Device for Cutting Glass.—A. S. McClure, New Buffalo, Pa.:

I claim my steel glass cutter as an article of manufacture as herein constructed and described and for the purpose set forth.

44,332.—Sewing Machine.—T. L. Melone, Granville, Ohio:

I claim, first, The main driving shaft, B, arranged vertically below the shuttle driver and near the raceway, and in relation to the needle arm and shuttle driver substantially as herein specified, the same containing thereon, and the whole cast in one piece, the band wheel, needle-operating cam, fly-wheel and feed cam, substantialy as herein specified.

Second, The employment for feeding the material to be sewed, of a feeding dog, attached to and receiving its forward and back movements from a reciprocating shuttle-race, substantially as and for the purpose herein specified.

[The principal object of this invention is to simplify and reduce the cost of the shuttle sewing machine. It consists in a novel construction and arrangement of the mechanism for operating the needle, the shuttle and the feeding device, whereby the number of the parts of the machine is reduced, its construction simplified, and the machine enabled to be driven with less power. It also consists in making the shuttle race and feed bar of one piece; or, in other words, in the employment for feeding the material to be served of a longitudinally-movable shuttle race, thereby reducing the number of parts of the machine.]

44,333.—Cutter Arms for Planing Machines.—Rufus N. Merian, Worcester, Mass.:

I claim the described method of fastening the cutters, substantially as and for the purpose herein specified.

44,334.—Water Elevators.—Jacob Negly, Fairview, Ill.:

I claim the combination of an endless chain of buckets, with a clock movement and with a receiver, l, constructed and operating in the manner and for the purpose substantially as herein shown and described.

[This invention consists in the combination with a clock movement of an endless chain of buckets descending into a well or reservoir containing water, and passing down in close proximity to a suitable receiver, in such a manner that by the action of said clock movement motion is imparted to the endless chain of buckets, causing the empty buckets to descend into the water, and when full to ascend and discharge their contents, in the receiving vessel, and that by these means a continuous raising of water from the well or reservoir is effected without requiring any labor or attention, except the occasional winding up of the clock.]

44,335.—Molds for Casting Steel Tires.—George Nimmo, Jersey City, N. J.:

I claim, first, The piece, B, with knobs, J, to hold the heat-resisting substance, operated in the manner and for the purpose specified.

Second, The gate, G, attached to A, in the manner and for the purpose specified.

44,336.—Combined Coal Scuttle and Ash Sifter.—Thomas Parker, Philadelphia, Pa.:

I claim the portion, A, with its sieve, D, and drawer, E, in combination with the portion, B, the whole being constructed and arranged substantially as and for the purpose herein set forth.

44,337.—Pumps.—Ely Perry, Baldwinsville, N. Y.:

I claim the combination of the wings, E, arms, E', and the flanges k k, arranged substantially as herein specified.

I also claim forming the under side of the wings with sharp edges, l l, the same being used in combination with the floor of the case, A, substantially as described.

44,338.—Axle Lubricators for Carriages.—Clark Polley, Scott, Ohio:

I claim the combination with the hub, A, of the cylinder, b, cap, c, screw spindle, e, piston, f, and feather, h, operating substantially as and for the purposes described.

[This invention consists in the employment or use of a cylinder inserted into the hub of a wheel and provided with a piston which is attached to a screw spindle screwing into a cap that closes the outer end of the cylinder in such a manner that by the action of the piston grease or lubricating material placed into the cylinder can gradually be forced down upon the axle and by the cap the escape of any part of said grease as the wheel turns, is effectually prevented. To prevent the piston from turning within the cylinder it is provided with a groove which works into a feather on the inside of the cylinder.]

44,339.—Braiding Guide for Sewing Machines.—John Ramsey, Pittsburgh, Pa.:

I claim forming a braiding guide for a sewing machine, by constructing the presser, A, with two or more slots to transverse to the line of feed, and with the guiding shoes, one of which is adjustable by means of the pinch screw, S, so that it can be arranged to suit braids of different widths, or used for ordinary sewing without further change or alteration, substantially in the manner as hereinbefore specified.

44,340.—Apparatus for steaming Oysters and preserving Fruit.—Joseph F. Reeves, Jr., Baltimore, Md.:

In combination with a water-tight car, fitted for steaming oysters and processing or preserving fruit and vegetables, I claim the railtrack on which it runs to and from the boiler, which supplies the steam to heat it.

44,341.—Device for destroying Insects and Vermin.—Peter Reynard and Victor Varin, New-York City:

We claim the blowing apparatus near the hand of the operator, with the vessel containing the powder by means of a tube or air conductor, as and for the purposes specified.

44,342.—Preparing Peat for Fuel.—N. C. Sawyer, Boston, Mass.:

I claim cornering or grooving blocks or bricks of peat, substantially as and for the purpose described.

44,343.—Apparatus for amalgamating Gold and Silver.—H. H. Scoville and P. W. Gates, Chicago, Ill.:

We claim, first, The employment of a scroll or its equivalent in the process of separating metals from their mineral matrix, substantially as described.

Second, A scroll (having one or more mouths) arranged within a cylinder, in combination with a reservoir for receiving the substances discharged from said scroll, substantially as described.

Third, The employment of a separator, E E', or its equivalent, in combination with a scroll, substantially as described.

44,344.—Horse Rake.—Frederick Seidle, Mechanicsburg, Va.

I claim the arrangement of bar, F, connected to the axle, A, by joints or hinges as shown, in combination with the teeth, E, fitted on the shaft, D, and connected to the bar, F, by springs, b, and the lever, G, all arranged to operate substantially as and for the purpose specified.

[This invention relates to a new and improved Horse Rake of that class which are provided with wire teeth, and it consists in a novel and improved manner of arranging and applying the same to the rake, whereby the construction of the same is much simplified, and the teeth made to operate in a perfect manner, and also be capable of being adjusted higher or lower as may be desired.]

44,345.—Base Burning Stove.—S. B. Sexton, Baltimore, Md.:

I claim, first, The combination of a suspended or coal supply magazine, a combustion chamber, a base burning surface, and a hot air chamber around the ash pit, substantially as and for the purpose set forth.

Second, The chamber, f f, and a space or spaces at the margin of the base burning surface, substantially in the manner and for the purpose described.

Third, The damper, j, in combination with the chamber, f f, and space at the margin of the grate, substantially as and for the purpose set forth.

Fourth, The door, l, in combination with the chamber, f f, and extended base burning surface, with a space around its margin, substantially in the manner and for the purpose described.

Fifth, In a stove where the coal is burned and allowed to flow freely out to the wall of the combustion chamber on a shallow base burning surface, I claim providing for the heating of the lower part of the stove, applying a counter draft, and preventing the flying of the ashes into the room, all substantially in the manner and for the purpose described.

Sixth, The construction of the coal supply magazine in two parts, so that the fire brick or other material shall be confined within and between said parts, substantially in the manner and for the purpose described.

44,346.—Frying Pan.—S. B. Sexton, Baltimore, Md.:

I claim, first, So constructing a vessel of the character herein described, that, when in use, a current or currents of external air will be conducted through it, by the natural draft of the stove, in such manner as to carry off the fumes arising in said vessel, substantially as described.

Second, Providing a culinary vessel with a flue or flues, B, through its bottom, and also with a perforated cover, C, or the equivalent thereof, substantially as described.

Third, A frying pan constructed with a flue, B, through its bottom, substantially as described and shown.

44,347.—Gauge Cock.—Samuel Shepherd, Nashua, N.H.:

I claim, first, The valve, C, movable nozzle or teat, E, and spring, d, in combination with each other, and with the shell A B, and lever, G, substantially as and wherein specified.

Second, The india-rubber or other soft packing, applied in combination with the movable nozzle or teat, E, chamber, B, and valve seat, c, substantially as and for the purpose herein described.

44,348.—Parlor Cooking Stove.—Joseph Simpson, Newark, Ohio:

I claim having the hinge loops made movable, in the manner and for the purpose substantially as herein shown and described.

I also claim the combination of the dampers, I J, with the flues, G G' G'', oven, F, and fire chamber, D, in the manner and for the purpose herein shown and described.

44,349.—Ventilator for Ships.—Charles Sinclair, New-York City:

I claim the ventilator, C, provided with rigid lugs, a d, and adjustable lugs, b b, and operating in combination with the porthole, B, of a vessel, in the manner and for the purpose substantially as herein shown and described.

44,350.—Sad-iron Heater.—Walter F. Smith, Greenpoint, N. Y.:

I claim a sad-iron heater, constructed as herein described, as a new article of manufacture.

Also the angular fire grate, C, in combination with the draught hole, D, and top plate, E, with holes, c d, constructed and operating in the manner and for the purpose substantially as shown and described.

44,351.—Gang Plow.—John Stone, Plattsburg, Mo.:

First, In combination with the levers, E, and plows, I, I claim the catches, F, constructed, arranged, and operating substantially as and for the purposes herein set forth.

Second, I claim the standards, D', which support the seat, in combination with the levers, E, and catches, F, the same being arranged substantially as and for the purposes set forth.

44,352.—Last Block Fastening.—A. J. Tewksbury, Haverhill, Mass.:

I claim the dove-tail joint, A and C, in combination with the screw, f, which acts as a hinge, substantially as set forth and for the purpose specified.

44,353.—Explosive Shell.—B. H. Tripp, Culpepper, Va.:

I claim, first, The central barrel, B, breech plug, D, and time fuse, b, in combination with an explosive projectile constructed substantially as described.

Second, The combination of percussion exploder, g, time fuse, b, and communication, e, with a central discharge projectile, which is constructed with a central barrel, B, chamber, C, casing, A, and breech-plug, D, substantially as described.

44,354.—Mode of carrying Knapsacks.—Thomas Seaville Truss, London, England.

I claim, first, The construction of levers, forked, branched, or otherwise so formed as to pass over and rest upon the shoulders, and lying as close to the body as convenient, for the purpose of carrying knapsacks or other articles, substantially as described.

Second, I claim the making of the lever, A B C, in two or more parts, for the purpose of regulating the length thereof, substantially as described.

Third, I claim the combination of the lever, A B C, shoulder plates, b, knapsack, d, and waist belt, E, arranged and operating substantially as described.

44,355.—Corn Planter.—Henry Upjohn, Richland, Mich.:

I claim the combination of the cam, j, the bar, g, the lever, k, the slides, f f f, and the jointed beam, a, the whole constructed and arranged substantially as herein set forth.

44,356.—Breech-loading Ordnance.—William Wallace, Ansonia, Conn. Ante-dated June 3, 1862:

I claim the employment of a removable sliding breech, A A, with a series of chambers, E E, and center bore, S, and the spring compensation as described, in combination with the breech strap with its hole, u, and the barrel, N, the whole constructed and operating as described for the purposes set forth.

44,357.—Corn Planter.—Henry W. Wansbrough and Henry M. Diggins, Cincinnati, Ohio:

We claim, first, The combination of the hollow drill tooth, E, guard, F, hopper, N, and slide, G, operating substantially as herein set forth.

Second, The provision of the yielding cut-off, H, applied and operating as set forth.

Third, The arrangement of ground wheel, I, rod, K, lever, L, spring, M, and cut-off, H, in the described combination with the grain slide, G, near the bottom of a hollow drill tooth, substantially as set forth.

44,358.—Hydraulic Jack.—Thomas H. Watson, New-York City:

I claim the fluid reservoir on the upper or front side of the head when in a horizontal position, as described, and for the purposes set forth.

44,359.—Sawing Machines.—W. J. Wells, Delaware, Ohio:

I claim, first, The combination of the screw, I, and swinging nut, H, with the saw-frame, C, for feeding or retracting the saw, as described.

Second, In combination with the aforesaid screw, I, swinging nut, H, and saw-frame, C, I claim the shaft, L, wheels, K S, pulleys, M O, and belts, P N, all arranged and operating as and for the purposes specified.

[This invention relates to a new and improved machine for sawing wood or logs transversely with the grain, and is designed for sawing wood for fuel, and into pieces of requisite lengths for wheel hubs, spokes, and other articles. The invention consists in the employment or use of a circular saw arranged in such a manner as to have a rising and falling movement, and used in connection with a log or timber-feeding mechanism, whereby the machine is placed fully under the control of the operator, and rendered capable of working in a perfect manner for the desired purpose.]

44,360.—Snow Plows.—Jeremiah B. Williams, Madison, Wis.:

First, I claim the digging or excavating wheel, O, having its wings attached in line with its axis, and having the outer edges of said wings formed scoop-shaped or curved as shown.

Second, I claim the wheel, C, in combination with the plow, B, constructed and operating substantially as set forth.

Third, I claim pivoting the plow, B, in such a way that it can be raised or lowered by means of the lever, h, and rod, I, substantially as shown.

44,361.—Safety Brakes for Railroad Cars.—Frederick Wolf, Philadelphia, Pa.:

I claim, first, A self-acting shoe, hung upon a stud or roller, working in a grooved or slotted plate, as shown and described for the purpose set forth.

Second, I claim supporting the frame, B, (to which are attached the ground or slotted guide plates, D), by the axles of the car wheels, as and for the purpose specified.

44,362.—Fusible Metal for filling Teeth.—Barnabas Wood, Albany, N. Y. Ante-dated Sept. 4, 1864:

I claim the herein described metallic composition for filling or repairing teeth, consisting of the ingredients specified in the proportion thereof substantially as set forth, or proportions equivalent thereto, as indicated, so as to produce a metal as described for said purpose.

44,363.—Revolving Firearm.—S. W. Wood, Cornwall, N. Y.:

I claim loading the cartridges into the chambers of the cylinder and expelling the empty cartridge cases therefrom when the said chambers are in line with the hammer, or in the same position as when the discharge takes place.

I also claim expelling the empty cartridge cases by the blows of the hammer, substantially as herein specified.

I also claim turning the barrel aside from its discharge position, in combination with a front loading cylinder, for the purpose of enabling the cartridges to be inserted into, and the empty cartridge cases to be expelled from, the chambers when in line with the hammer, substantially as herein set forth.

44,364.—Clasp for Tobacco Boxes, etc., etc.—Charles C. Ashley, Brooklyn, N. Y., assignor to James L. Harlem, of the same place:

I claim a clasp for tobacco boxes, spectacle cases, etc., formed in the manner described and shown.

44,365.—Knitting Machine.—Charles W. Blakeslee, Northfield, Conn., assignor to Nathaniel Wheeler, Bridgeport, Conn.:

I claim, first, The employment in a circular knitting machine of separately moving sinkers, so applied in combination with the adjustable needles as to provide for their being brought severally nearer to or further from the center of the machine, substantially as herein specified, for the purpose of widening or narrowing, as set forth.

Second, Fitting the needles into grooves in the shanks of the sinkers, substantially as and for the purpose herein specified.

Third, The grooved sinker adjuster, C, applied to operate substantially as and for the purpose herein described, in combination with projections, g, on the sinkers.

Fourth, So combining the needle operating cam, the sinker adjuster, the yarn conductor, the rotary burr, that all are adjustable toward or from the center of the machine, substantially as herein set forth.

44,366.—Boiler Furnaces.—Thomas B. Davis, Boston, Mass., assignor to Stephen G. Taylor, of the same place:

I claim in combination with an ash pit of a steam boiler furnace constructed with doors to open in the usual manner, the passage, f, and steam coil, g, operating together in the manner and for the purpose substantially as set forth.

44,367.—Machine for scraping Chairs and other articles.—Erastus S. French, Hubbardston, Mass., assignor to himself and Luke Sawyer, of the same place:

I claim the machine as consisting of the movable carriage its scraper and pressure roller, and the fixed or stationary rest, as arranged and applied together, and to the frame, A, substantially as described, and having mechanism for imparting to the carriage reciprocating motions in manner as specified.

And I also claim the combination of the rocker bar, O, with the pressure roller, its springs, boxes, and oarrying frame, when combined with the movable carriage or platform, its scraper, and the stationary rest, substantially in manner and so as to operate as explained.

44,368.—Fish Hooks.—Nathan A. Gardiner, Jr., Willett, N. Y., assignor to himself and Joseph Briggs, New-York City:

I claim the combination of a pair of barbed hooks, attached to or forming part of a coil wire spring, c, and provided with eyes, e, and f, and a rod, b, (having a line eye, d,) for setting and releasing the hooks, whereby I am enabled to make a cheap, simple, and effectual spring hook, the whole constructed and operating substantially as described and set forth.

44,369.—Machine for making Cement Pipe.—Humphrey Holden, New-Haven, Conn., assignor to himself and Wm. Goodwin, of the same place:

I claim the combination of one or more rolls with a case and core when constructed and arranged to operate substantially as herein set forth.

44,370.—Process of preparing Chrome Vermillion.—Joseph Huber (assignor to Huber, Heppe & Co.), New York City. Ante-dated Sept. 16, 1864:

I claim a paint produced by mixing white lead and bi-chromate of potash together, about in the proportion herein set forth, and treating it substantially in the manner specified.

[The object of this invention is to produce a paint similar to the Chinese or Japanese vermillion, of equal or better quality, and at a price much lower than the usual price of said foreign paint.]

44,371.—Water Elevator.—Samuel F. Jones, St. Paul, Minn., assignor to Erastus L. Floyd:

I claim, first, The sliding spout, B, pin, m, and bucket, D, arranged substantially as described.

Second, I claim in combination therewith the lever, E, substantially as described.

Third, Operating a discharge valve in a well bucket by thrusting a trough laterally beneath the said bucket to elevate the said valve, substantially as shown and described.

44,372.—Gas Stove.—Edwin A. Leland (assignor to Henry Perrie), New York City:

I claim, first, The construction of that part of the stove over the gas burners of two plates, c and d, with a space, d, between them, the upper plate, c, having holes provided in it for the boilers or other utensils, and the lower one having corresponding or opposite holes for the concentration of the products of combustion under and around the bottoms of the said utensils, and the space, b, between them serving to temporarily confine the products of combustion under the cooking utensils, and convey them to the flue provided for the purpose, substantially as herein described.

Second, The descending flue, D, in combination with the said plates, c d, the space, b, the box, B, containing the gas burners, and the oven, C, substantially as and for the purpose herein described.

44,373.—Row or Scull Lock.—Joseph W. Norcross, Boston, Mass., assignor to W. W. Wilcox and Joseph Hall, Jr., Middletown, Conn.:

I claim the movable or yielding jaw, b, with the retaining spring, C, applied in combination with the universal joint and with the oar, in the manner and for the purpose substantially as herein shown and described.

[This invention consists in the combination with the oar and row or scull lock of a universal joint arranged in such a manner that the oar is prevented from being thrown out of the row lock by the force of the sea or by any other accident, and yet it can be moved freely in either direction; it consists further in the application of one or two movable or yielding jaws in combination with the universal joint and bar in such a manner that the oar can be instantly shipped or unshipped, as circumstances may dictate.]

44,374.—Thresher and Separator. — Samuel Pelton, Trenton, N. J., assignor to Fell, Pelton, & Brearley:

I claim, first, The combination of two straw shakers, E E', suspended by hangers, a1 a2, and moved simultaneously in opposite directions by a double crank shaft and pitman rods, substantially as and for the purpose set forth.

Second, I claim the combination of the shaker, E', and grain board, G', having a combined vertical and longitudinal motion, so as to toss the straw one way and grain the other, substantially as explained.

Third, I claim the automatic blast regulator consistmg of valves, K2 k6 k6, pivoted rod, k2, and weights, k3 k4, the whole being arranged to operate substantially as and for the purpose explained.

44,375.—Spring Mattrass.—R. Stillwell (assignor to himself and Alexander D. Farrell), New York City:

I claim constructing the mattress frame in five sections, of which, when folded, the central one forms the lower section, the adjacent sections, d and f, the sides, and the end sections, c and g, the top, so as to allow the ends to be hooked together and the mattress to assume a rectangular shape, for convenience in packing away or for transportation.

Also the combination of the breaks, c d e f g, with the lips, i, of the hinges, h, constructed and operating in the manner and for the purpose substantially as set forth.

[The object of this invention is to produce a spring mattress, with stuffing, which can be conveniently folded to reduce it to a convenient size for packing, and to make the breaks in the mattrass so that the center of the bed retains its full strength, and the stuffing at that part of the mattrass is not affected by the folding, and at the same time the head piece can be raised to a convenient inclination.]

44,376.—Atmospheric Railway.—Alexander Allison and James Halliwell, London, Great Britain:

We claim, first, The valve, a, whether employed for railway or other purposes, and when used in combination with the chamber, w, or without said chamber, constructed substantially as described.

Second, The curved bar, e, for removing the valve, a, from the aperture, d, and returning the same after the passage of the piston rod, f, substantially as described.

Third, The elastic packing bands, j, when used on a piston head, for the purpose and substantially in the manner specified.

Fourth, The cone valve, H, whether used in a solid piston head or in combination with the elastic band, j, constructed and arranged for the purpose and substantially in the manner specified.

Fifth, The device for operating the cone valve, H, constructed and arranged substantially in the manner specified.

Sixth, The frame, f, with guide rollers, s, so arranged with reference to the bottom of the carriage, P, as to allow the piston, D, to follow the dip of the tube at the crossings, and to prevent any vertical motion of the carriage affecting the said piston.

Seventh, The frame, I, with guide rollers, r, so arranged with reference to the frame, f', as to prevent the oscillation of the carriage, P, being communicated to the piston, D.

Eighth, The branching of the tube, A, at N, Fig. 5, and the branching of the aperture, d, at y, in connection with the dip of said tube for the purpose of conveniently shunting the train or passing from one line of rails to another.

RE-ISSUES.

1,769.—Harvester.—Robert Brown, Newark, Ohio. Patented June 18, 4861:

I claim rigidly connecting the rake frame which is supported on the main frame of the machine, with the hinged finger beam in such a manner that the rake shaft does not change its relative position to said finger beam when the latter is raised or lowered in passing over uneven ground, substantially in the manner and for the purposes herein set forth.

I also claim securing both the finger-bar and rake frame to a hollow shaft, L, the journals, l, of which run in bearings, M, in the main frame and themselves constitute bearings for the journals, h, of the crank shaft, as herein shown and described and for the purposes set forth.

I also claim the reel attachments, o m p, constructed, combined and arranged in the manner specified to enable the attachment of any desired number of arms

1,770.—Grain and Grass Harvester.—J. Russell Parsons, Hoosick Falls, N. Y., assignee of Benjamin T. Rouey, Bristol. Patented March 11, 1856:

I claim, first, The gear or main frame in combination with the movable or cutter frame, by means of lugs and beveled projections, the whole being arranged and constructed substantially in the manner and for the purposes set forth.

Second, In combination with a master guard tooth or shoe of a cutting apparatus, which is free to conform itself both longitudinally and laterally to the undulations of the ground, a roller located in reference to the cutters, and operating substantially as described.

Third, Combining a supplementary frame supporting an endless belt and a cutting apparatus which conforms itself to the surface of the ground, with wheels supporting it and actuating a belt, as described.

DESIGNS.

1,987.—Pump.—George Cowing, Seneca Falls, N. Y.:

1,988.—Aquarium of Fish Tank.—George T. Palmer, Brooklyn, N. Y.:

1,989.—Skate.—Robert S. Stenton, West Farms, N. Y.:

1,990.—Ruffle.—Samuel Trischet, New York City:

Binding the "Scientific American."

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