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Managing Windows for Air.

There is always a draught through key-holes and window crevices, because as the external air is colder than the air in the room we occupy, it rushes through the window crevices to supply the deficiency caused by the escape of warm air up the chimney. If you open the lower sash of a window, there is more draft than if you open the upper sash. The reason of this is because if the lower sash be open, cold air will rush into the room and cause a great draft inward; but if the upper sash be open the heated air of the room will rush out, and of course there will be less draft inward. A room is best ventilated by opening the upper sash, because the hot vitiated air, which always ascends towards the ceiling, can escape more easily. The wind dries damp linen, because dry wind, like a sponge, imbibes the particles of vapor from the surface of the linen as fast as they are formed. The hottest place in a church or chapel is the gallery, because the heated air of the building ascends, and all the cold air which can enter through the doors and windows keeps to the floor till it has become heated.

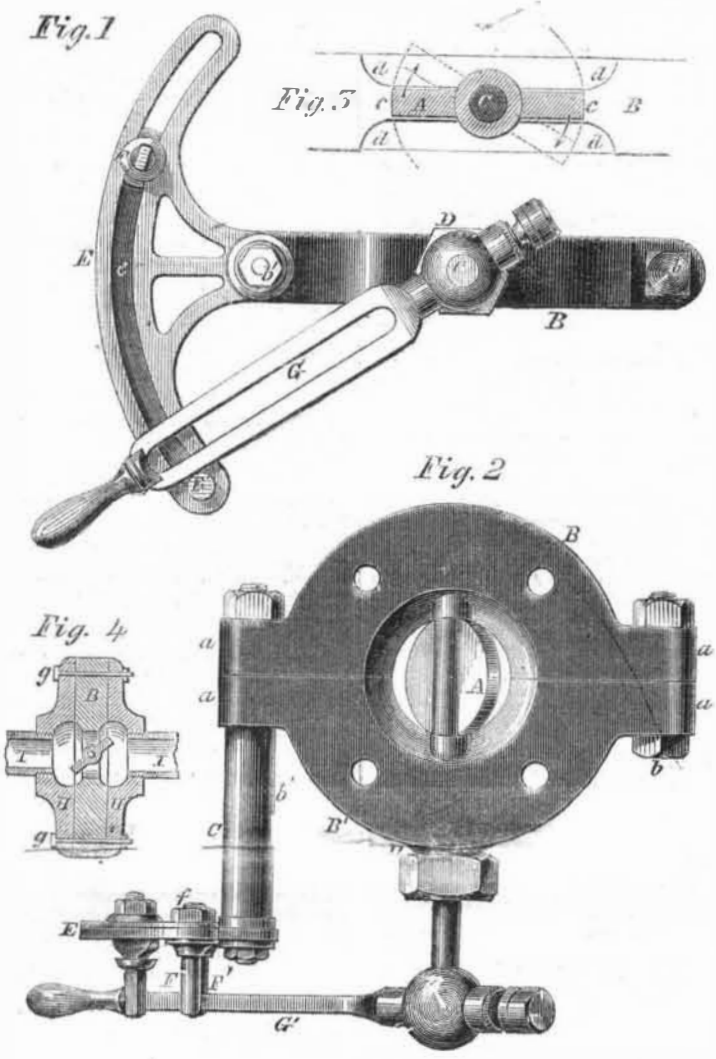
Special attention should be given to the ventilation of sleeping-rooms; for pure air and an abundance of it are, if possible, more necessary when we are asleep than when we are awake. Sleeping-rooms should be large, high, and airy, more especially in warm latitudes, and in situations where the windows have to be kept closed at night on account of malaria.

Ventilating Hats.

A great number of hard-shell hats are made with a small opening covered with gauze in the crown of each, and with this arrangement it is supposed they afford ventilation for the head, and tend to keep it cool during warm weather. This is a mistake, because ventilation can only be effected by a current of air, and as there are no means provided for the inlet of air, but only for its outlet, in such hats, of course they cannot afford ventilation. The true ventilating hat must have perforations at or near the band to secure the inward passage of air, and quite a number of such hats are now manufactured and worn. Felt hats, being somewhat porous in their texture, afford partial ventilation. Silk plush hats being saturated with lac-varnish are perfectly impervious to the atmosphere.

We hope our friends will make up their lists, and send in their subscriptions for the new volume with as little delay as possible. The first number of the new volume will be issued June 29. There is only one more number to be published before this volume will close.

COPE & HODGSON'S GOVERNOR VALVE.



The subject of our engraving is an improvement on what have long been known as "butterfly valves," and is for the purpose of enabling the engine to be controlled with greater accuracy. There is less friction and it is very simple. In our illustrations, Fig. 1 is a front view of the valve, and Fig. 2 is a top view of the valve and its box complete, and ready to be applied to a steam-engine regulator in connection with a governor. A is the valve, B B' the box, and C the valve spindle. The valve may be made of the usual form and about the usual thickness, with the exception that it has its periphery turned to represent a portion of a sphere concentric with C. The transverse section of the valve is seen in Fig. 3. The box, B B', has the seat, *c*, turned of a similar spherical form to the face of the valve to make a close but easy fit thereto. The fitting should be completed by grinding. To provide for the insertion of the valve in the seat the box has to be divided into the two parts, B and B', which have lugs, *a*, on them which receive bolts, *b b'*, that hold the parts together. The seat, *c*, need not not be any wider than the face of the valve, and may have an enlargement to correspond with the enlargement of the valve near the valve spindle. By providing the box with a cavity, *d d*, the valve, when open, has its openings increased or diminished in a greater degree by a given movement than an ordinary throttle valve, as the edges of the valve move directly away from the seat instead of parallel with it. The spindle, C, is shown fitted into a stuffing box in the part, B, of the valve box, but a stuffing box will be unnecessary if the spherical faces of the valve and seat be properly fitted, as in that case no steam could escape around the spindle. E is a slotted plate attached securely by the bolt, *b'*, to the valve box. The slot in this plate is an arc concentric to the spindle. F F' are two stops made adjustable in the slot and capable of being secured in any position therein by nuts, *f*, applied to screw-threads cut upon them. These stops are for the purpose of limiting the movement of the valve gear, G, which plays between them, one of them stopping the valve when closed and preventing it giving steam the wrong way, and the other stopping it when it has the greatest amount of opening. By shifting the lever, G, on the spindle, either with or without changing the position of the stops, the movement of the valve may be controlled in a similar manner, opening in the reverse direction, and hence the valve is applicable in connection with any arrangement of a governor. The spherical-faced butterfly valve may be used not only for a governor valve, but as a cut-off for steam-engines or for any purpose in which a close-fitting and perfectly balanced valve is required. Fig. 4 shows the method of attaching the valve to steampipes. The pipes, I, are screwed into suitable flanges, H H, which are secured to B' by bolts, *g*. These flanges are so cast as to give, when attached to B', suitable steam room to the valve, and making, as it were, a little chamber on each side.

These valves have been in use and are highly approved of by those who have tried them, as is testified by numerous certificates now before us. The inventors are Nathan Cope and William Hodgson, of Cincinnati, Ohio, and they will be happy to give any further information upon being addressed as above. The patent is dated May 10, 1859.

Gutta Percha and Ships' Compasses.

One of our cotemporaries states that the new steam frigate, *Lancaster*, which is at present lying at the Philadelphia navy yard (where she was built), "has two binnacles on the spar deck arranged with gutta-percha so as to cut off the effect of local attraction." Gutta-percha is an electric insulating material, but not a magnetic insulator. A magnet will attract a piece of metal with a piece of glass interposed between them, and yet glass is superior to gutta-percha as an insulator. The remedy for local attraction between the machinery of a steamship and the compasses is *distance*, not gutta-percha, as the attraction is inversely according to the square of the distance. A stratum of dry air is superior to either glass or gutta-percha as an insulating medium.

Fever and Ague.

There are some situations where fever and ague prevails every season, and this is the case in the vicinity of creeks and swamps in Long Island, not one mile from New York City. An acquaintance of ours, who has resided for several years on one of these creeks, never has had a single case of fever and ague in his family, while all his neighbors have been more or less affected with it every season. He attributes his immunity from this troublesome disease to the use of a good fire in his house every chilly and damp night in summer and Fall. When the Indians travel at night or early in the morning in swampy regions, they cover their nose and mouth with some part of their garments to warm the air which they inhale, and this they say prevents chills and fevers.

Pitch Phenomenon at Sea.

While the bark *Rolla*, of New York, was in the Gulf of Mexico, on May 4, it passed through a scum of smoking pitch which extended for several miles, and emitted a most nauseating odor. It was supposed by her captain (Mr. Rogers) to be thrown up by a submarine eruption from some part of the bottom of the ocean. This, we think, is the true explanation of the phenomenon. There are extensive formations of mineral pitch in Cuba, Trinidad, and other West India islands, and no doubt there are beds of this material under the waters of the gulf.

Sulphurous Acid.

As this acid is not to be obtained at the druggists, and as some of our readers may occasionally wish to use it in chemical experiments for bleaching &c., the following simple method of making it, taken from the London *Chemical Gazette*, will be found useful:—

Take 2 ounces of sulphur in fragments, and 25 ounces of sulphuric acid and place them in a glass flask furnished with a gas tube. After this heat it over a spirit lamp, when the sulphur will soon melt and an evolution of sulphurous acid will take place, which is conducted by the tube into the condensing vessel through cold water.

GLASS *vs.* METAL.—Practice has developed the fact that one-third more light is transmitted by glass than by metallic specula; hence the old catoptric or reflecting light-houses are disappearing and giving place to catoptric or glass systems.

Issued from the United States Patent Office

FOR THE WEEK ENDING JUNE 7 1859.

[Reported officially for the Scientific American.

*** Circulars 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.

PRINTING OILCLOTHS—James Albro, of Elizabeth, N. J. : I claim forming ornamental figured surfaces on oilcloth, by raising parallel ridges or surfaces, b, on the ground color, when in a soft or green state, by means of a properly prepared block pressed upon it; and then forming parallel ridges or raised surfaces, d, at right angles thereto, and in the form of the design or desired configuration by means of a properly prepared block. It being understood that I claim the privilege of having either the ground, b, or figure, d, one of them only, if desired, composed of dots or broken lines, or ridges, in order to obtain a similar effect.

[The object of this invention is to give to the surface of oilcloth a new ornamental effect resembling damask, the improvement being used in connection with the ordinary method of printing, It consists in raising the body of the tint or ground color which is laid on the canvas or cloth in the usual or any proper way by means of a block, the face of which is formed of a series parallel raised projections, leaving spaces of about equal width between them, and forming figures on the ridged ground-work by means of a block, the figure or face of which is formed of parallel projections running at right angles to the tint or ground block, so that the figure or ornament will be produced simply by lines or ridges having a position at right angles to the ground, the damask appearance being produced by the action of light without the aid of color.]

BREAKWATER—D. Hillen Armour, of Columbia, Texas: I claim the projecting or overhanging sand plate, F, applied in combination with the diagonal walls of the breakwater, substantially as and for the purpose described.

[This breakwater is designed to protect a channel across a bar from the flow of sand which comes in upon the bar with each tide, and thus keep the channel open without the necessity of making the channel in the bar narrower than the channel in the river. This will, of course, give accommodation to more ships entering a river with a tide, and will ensure a course for ships even at low water.]

WASHING MACHINE—D, S. Ayres, of Hope, N J. : I claim the revolving disks or heads, with the mode of operating the same as applied to washing machines.

DEVICE FOR RAISING WATER—J. A. Ayres, of Hartford, Conn. : I claim the wind-wheel, H, vane, G, endless chain, J, with buckets, d, and weight, L, attached; the cylinder, C, and annular receiving trough, D, the whole being arranged and combined for joint operation, substantially as and for the purpose set forth.

[An endless chain of buckets, a wind-wheel, and annular water-receiver applied to a well constitute this invention, which is intended to raise water in a ready and economical manner.]

REVOLVING FIRE-ARMS—Thomas Bailey, of New Orleans, La. Patented in England, Jan. 17, 1859: I claim first, The placing of the within-named working or actuating means within the body, as set forth.

Second, The revolving chamber, working on two adjustable centers of suspension instead of in the ordinary way.

Third, The mode described of connecting the barrel to the body.

Fourth, The stopping or retaining of the revolving chamber by means of a spring stop acting on the ratchet, such stop being actuated by a cam on the tumbler.

Fifth. The notch or cavity, in the cap guard or cock-nose, to fit upon the solid part of the chamber, and retain the chamber in a safe position.

BRIDLE BITS—J. B. Baker, of Syracuse, N. Y. : I claim the attachment, as described, of sliding rings, or rein-connections, P, to the curb-bars of bridle bits, when the same are operated upon by springs attached to the bit, substantially in the manner and for the purpose set forth.

CHIMNEY COWL—Henry Bedlow, of Newport, R. I. : I claim the arrangement and combination of the chimney top, or tube, A, chamber, F, tubes, G, or other external draft passages and deflectors, b b, c c' C, the tube chamber and draft passages communicating with each other and the external air, to operate as and for the purpose set forth.

[The cowl is constructed in such a manner that the upper end of the chimney on which it is fitted will be encompassed by a chamber provided with a deflecting plate, and communicating with upright tubes or pipes attached to the outer side of the chamber, the whole being arranged to secure a proper draft in the chimney at all times and under every condition of the atmosphere.]

METHOD OF SAWING SHINGLES FROM THE BOLT—N. Boardman, of Fond du Lac, Wis. : I claim, first, The employment or use of two bolt carriages, F F, when used in connection with the adjustable planes, H, and arranged in the relation with the circular saw, C, as shown, so that a shingle may be sawed from each bolt at each movement of its carriage, and the two bolts operated upon simultaneously by means of one and the same law.

Second, The adjustable or tilting tracks or bolt frames, E E, in combination with the reciprocating carriages, F F, and saw, C, the whole being arranged to operate substantially as and for the purpose set forth.

[This is one of those shingle machines in which a circular saw is employed to cut the shingle from the bolt, and the invention consists in using in connection with a circular saw reciprocating bolt carriages, self-acting adjustable dogs and movable or adjustable carriage tracks, all arranged to operate, so that shingles may be sawed simultaneously from two separate bolts by one and the same saw, and the machine is rendered automatic in its operation throughout.]

ENAMEL COMPOSITIONS FOR BRICKS, &C.—Decius W. Clark, of Bennington, Vt. : I claim the enamel or glaze for pottery ware, or other articles formed of the ingredients and substantially as specified.

IMPROVEMENT IN TANNING—John Brainard and W. H. Burridge, of Cleveland, Ohio: We claim the described process of treating skins or hides in a preparation liquor or liquors, substantially as set forth for the purposes described.

POCKET-HANDLE FOR BILLIARD TABLES—John M. Brunswick, of Cincinnati, O. : I claim the pocket-handles, A A', arranged and secured substantially as described, and formed of vulcanized gutta-percha or india-rubber, as a new article of manufacture, for the purposes set forth.

MACHINES FOR BURRING WOOL AND GINNING COTTON F. A. Calvert and C. G. Sargent, of Lowell, Mass. : We claim a cylinder having spaces between the teeth for the accommodation of the seed, as set forth, in combination with a revolving guard, operating in the manner substantially as described.

CORN HUSKERS—J. C. Clapp, of Seneca Falls, N. Y., I claim the combination and arrangement of the carriage, B, fly-clearer, a, cross lever H, concaves and gage, F E, blade, L, and tread lever, J, operating conjointly, substantially as and for the purpose set forth

METHOD OF JOINTING SHINGLES—S. C. Coffin, of Lawrenceville, Pa. : I claim so combining with the horizontal saw, B, that saws the shingle from the bolt, the transverse piece, J, and carriage, K, upon it, so that the same saw that cuts the shingles from the bolt may be used for jointing said shingles, as set forth and explained.

KNITTING MACHINES—Enoch Colvin, of Ponltney, Vt. : I claim, first, The combination of the needle arm d, and the iron rim upon the ring, c, constructed as described for raising each needle by itself, and completing each stitch before another is begun.

Second, The cylinder, o, for reversing and regulating the motion of the machine while forming the heel and toe.

Third, The combination of the notched wheel, t, the toothed bar, u, with its pointer, v, the cylinder, o, the elevating arm, n, the elevating bar, S, and cam thereon, and the pin on the wheel, l, by means of all which the motion of the machine is reversed back and forth, and regulated so as to knit upon a straight hose flaps of the proper form for the heel and toe.

Fourth, The wheel, P, and the elevating arm, n, combined with the several parts and devices mentioned in the last preceding claim or paragraph, as above described, for setting in motion at the proper juncture the machinery for regulating the formation of the flaps for the heel and toe.

LIGHT SHADE FOR BILLIARD TABLES—David Conlan, of New York City : I claim, as an improved article of manufacture, a shade for billiard tables, &c., having two reflecting parts, B' B'', and otherwise made as shown and described.

[In playing billiards by night-time, it is desirable to have as much light as possible, and this invention consists in making the gas shades or reflectors that are placed on burners over billiard tables square, and of such an angle or inclination from their base to apex as to throw all the light of a burner on the table, leaving the rest of the room in comparative darkness.]

RAKES—Thos. Crane, of Fort Atkinson, Wis. : What I claim is my improved harvesting rakes for gathering and elevating cut stalks of grain preparatory to binding the same into sheaves, when the said rake is composed of side handles, gathering fingers, and swinging legs, or the equivalents of the same, substantially as set forth.

LOCK—Thos. Dougherty, of Macon, Ga. : I claim the employment of the spring tumblers, C D and E, when constructed and operated in the manner described, in connection with the bolt, B, the said springs being detained by the key to let the bolt slide, as specified.

CHAIN PUMP—Daniel Du Prè, of Raleigh, N. C. : I claim, first, The endless chain for raising water, composed of the curved detachable links, M, when said links are constructed and united in the manner and for the purposes set forth.

Second, Keeping the chain stiff between the upper and lower pulleys by means of projections, R, on the links, substantially as and for the purpose set forth.

Third, The combination of the curved links, M, with the peculiarly shaped curved buckets, N, when constructed and operated substantially in the manner and for the purposes set forth.

RAILROAD CHAIRS—Wm. B. Dunning, of Geneva, N. Y.: I claim, first, The peculiar form of a partly-raised and double-slotted bed-plate, as described.

Second, I claim the peculiar form and position of the clamps, one part of them being confined and borne down on the tie by the weight of the rail and all above it, and the other part, viz., the jaw, resting upon the flange of the rail and holding it fast.

Third, I claim the combination of the several parts, as described, or their mechanical equivalent.

HYDRANTS—James Fay, of Baltimore, Md. : I claim the arrangement of the stock, L, and chamber, B, as constructed with the india-rubber ball, F, rod, E, opening in the top of box, I, nut, G, spring, J, valve stem, n, valve, m, and thimble, H, the several parts being used and operating conjointly, substantially in the manner and for the purpose specified.

HORSE-POWER MACHINES—Wm. Field, of Providence, R. I. : I claim arranging and supporting a hollow driving shaft, and the driven shaft passing through the driver, substantially as described, whereby both driver and driven shaft turn in the same direction, and both ends of the driver are fully supported by boxes independent of the shaft passing through it, while at the same time the bearing of the shaft passing through the hollow driver will be on the driver only at a point directly opposite its journal, so that any slight displacement of either shaft will not cause them to bind on each other so as to increase the friction of the machine.

MACHINE FOR OPENING OLD ROPE—Archibald Ford, of Newport, Ky.: I claim the elevated bar, K, provided with cavities, k k, arranged in the described relation to the feed mechanism and drum, and operating in combination with the latter, to preparatorily open the butts of the rope, as set forth.

MODE OF STARTING CITY RAILROAD CARS—Geo. P Frick, of Baltimore, Md. : I claim the application of a lever acting temporarily upon the axle of a railway carriage or other wheeled vehicle, in combination with the pulley and chain, substantially as set forth, and whether the pulley is of uniform or different diameters, as described.

I also claim such lever, in combination with the ratchet wheel and catch, substantially as set forth in their application to railway or other wheeled vehicles.

I also claim the cord whereby the lever may be loosened from the catch at the will of the driver, in combination with the said lever and catch pulley and chain, when applied to a railway carriage or other wheeled vehicle.

I also claim the combination of the catch and ratchet wheel with the chain and weight described in the foregoing specification, whereby the engaging and disengaging of the catch is operated by the motion of the draft bar, substantially as described.

LEGS FOR PIANOS—Felix Gelin and Chas. Gelin, of New York City ; We claim the glass socket, F, so mounted in the legs of musical instruments, that the escape of sound from the instrument to the floor is checked, without injuring the appearance or endangering the strength or durability of the instrument.

MONEY BOXES FOR STAGES, &C.—T. W. Gibbons, of Franklin, N. J. : I claim, first, The box, A, provided with the drawers, B D, the former having a flap or door, h, in its bottom, and arranged to operate substantially as and for the purpose set forth.

Second, The change slide or plate, G, one or more used in connection with tubes, s, and arranged relatively with drawer, B, to operate substantially as and for the purpose set forth.

Third, In combination with the drawers, B D, and change plate or plates, G, the bell, g, and index, n, and dial, o, arranged substantially as and for the purpose set forth.

[The public who ride in, and the proprietors who own, stages, omnibuses, and other public conveyances, are exposed to being cheated by the drivers or money-takers with the present arrangement of paying the fares to them. This invention consists in having a drawer or till placed within a box, and arranged with a lever, change slides and plates, and supplemental drawers, an alarm and an index or dial, all arranged so that passengers may deposit their fares in a drawer and take the necessary change therefrom in view of the driver, without the latter having any control over the money which is safely locked in the box, to be taken therefrom by the proprietor or his agent at the end of the route.]

SAFETY CAGE FOR COAL SHAFTS—D. Glover, of Township, of Cass, Schuylkill County, Pa.: I claim the construction of the cage in two separate sections, separated at the guides, and so connected by hinges at the top of the bottom of the sill that, when the rope or chain used in hoisting breaks or the power ceases to operate, the cage shall open at the top where the sections are joined, and the light and weight of each section shall operate as a lever and weight to force the iron shoe on the ends of the sills and pieces, B B, powerfully against and into the guides, and by this means entirely prevent the dropping of the cage and car down the shaft.

CLEANING SPINNING MULE CARRIAGE TOPS—Robert Greaves, of Philadelphia, Pa. : I claim the described mode of cleaning mule carriage tops, or any mechanical equivalent therefor.

WIND-WHEELS—W. L. Gregory, of Theresa, N, Y.: I claim the arrangement of the main vane, K, and the regulating vane, L, to operate in combination with the wings, E, substantially as and for the purpose described.

[By the use of this wheel an even and regular motion is obtained no matter what be the force of the wind, as the position of the vane is regulated according to the strength of the breeze by a main vane that moves with the wind and operates them.]

ROCKING CARRIAGE—Albert C. Griswold, of Hartford, Conn., and Wait R. Griswold, of Durham, Conn.: We claim the employment of the rockers, A, in combination with the seats or cribs, B, as and for the purpose described.

Also the railway track or frame work, D, with the cords or rods, E, springs, F, when used as and for the purpose described.

Also the employment of the elastic substance, H, attached to the rocker, for the purpose as described.

PADDLE-WHEEL—John W. Harris, of Durhamville, N. Y.: I claim constructing paddle-wheels for boats in such a manner that the paddles may be folded laterally upon the frame and the wheel thereby withdrawn from projecting beyond the sides of the boat, or extended at pleasure, whether the boat be in motion or at rest, the paddles, H, being connected to the frame work, A and D, substantially as described, and their outer edges of the form shown, the whole operating substantially as set forth.

ROTATING DUMPING CAR—William A. Hawkes, of Corinth, N. Y.: I claim the arrangement and combination of the rotating platform, C, provided with dumping boxes, L, with the shaft, K, and gearing, D E H b G i i' m, and the clutches, d j, substantially as herein shown and described, so that the car may be propelled and the dumping boxes rotated by turning shaft, K, as desired, all as set forth.

[The object of this invention is to obtain in a compact form a dumping car of great capacity, so that steam power may be advantageously applied to it for its propulsion and the car manipulated with facility. It consists in having a series of tilting boxes or bodies attached to a platform which rests on rollers, the platform being fitted on a proper truck, and so arranged that the power of the engine may at any time be transferred from the gearing through which the car is propelled to that connected with the platform to which the tilting boxes are attached, and said platform, while the car is stationary, be intermittently rotated, so that the boxes may be successively tilted and their contents discharged at the proper or desired point.]

MATTRESS—Henry W. Henley, of New York City : I claim the use or employment of the serrated section, B B, when the same shall be combined for the purpose specified.

HARROWS—J. Herald and C. B. Tompkins, of Trumansburg, N. Y. : We claim the arrangement of the plates, B B', with recesses, a a' and b b', and projections, c c', and with a hole in their center for the purpose of securing the bars, A A', and the tooth, C, substantially in the manner specified.

[This is an improvement in the construction of harrows with iron frames, and it consists in arranging two plates with suitable recesses and with a central hole in such a manner that the same serve to secure the bars that constitute the frame at those places where they cross each other, by the same nut that secures the tooth to the plates.]

MACHINE FOR MOVING IRON AT THE ROLLS—Charles Hewitt, of Trenton, N. J.: I claim the movable floors, platforms or supports, A B, for moving iron or other metal at the rolls while in process of manufacture, constructed and operated as described, or otherwise substantially the same.

MACHINE FOR WORKING BUTTER—Gideon Hotchkiss, of Windsor, N. Y.: I claim the combination of the lever stern ladle and oblong bowl by means of the revolving joint, the projecting cope and follower ladle, substantially as described.

LOOM TEMPLES—Wm. H. Howard, of Philadelphia, Pa.: I claim the rollers, D and D', twining in bearing or steps, arranged to yield independently of and in contrary directions to each other, on the opening of the warp threads, substantially as and for the purpose set forth.

CONSTRUCTION OF PRISONS—Enoch Jacobs, of Cincinnati, O.: I claim a secret passage or guard chamber around the outside of an iron plate jail, and between said jail and a surrounding enclosure, constructed and arranged substantially as described for the purposes set forth.

MANUFACTURING KNITTED FABRICS—Joseph K. Kilbourn, of Pittsfield, Mass., and Edwd. E. Kilbourn, of Litchfield, Conn.: We claim the new knitted fabric described, composed of columns of stitches oblique to each other, having openings at the places where the oblique columns of stitches diverge, the same being a new article of manufacture.

SAW FILING MACHINE—T. E. King, of West Andover, Ohio : I claim the suspending the file holder upon arms, as herein set forth, so that it is susceptible of adjustment horizontally, vertically and obliquely, and in combination with the curved faced slot in the holder, as described.

MACHINE FOR SAWING CIRCULAR BEVELS—John Lemman, of Cincinnati, Ohio: I claim the adjustable rest, e, hinged to the bed, f, in the manner described, and adjustable vertically with reference thereto, substantially as and for the purposes set forth.

BUNG CUTTER—Josiah Kirby, of Cincinnati, Ohio : I claim the mode of pointing the lower or last end cut off the plug or hung by forcing it into a separate dog, made and used substantially and for the purpose as described.

I also claim the mode of lifting the plug out of the dog, after it has been compressed, by means of rod, G', when operated in the manner and for the purpose described.

I also claim the mode of driving the plug out of the cutter into the compressing dog, by movable rod, as at a, Fig. 3, when operating in the manner and for the purpose described.

ADJUSTABLE HAMMER FOR REVOLVING FIRE-ARMS—Alex. Le Mat, of New Orleans, La.: I claim providing the hammer with a hinged head, so arranged that it shall present the same face in different directions for the purpose of discharging, in succession, different barrels, or a grape shot pistol and a revolving fire-arm, as may be desired, and providing the same with small lateral wings for locking the revolving chambers in position, in the manner and for the purposes set forth.

AUTOMATIC FINGER FOR CLOSING THE VENT OF CANNONS, &C.—Alex. Le Mat, of New Orleans, La.: I claim first, The apparatus, B and B', with automatic finger, C, substantially as described.

Second, The inclined plane, H, in the manner and purpose described, or as an equivalent, the inclination of the slot of the percussion lock, for the purpose set forth.

COMPOUND RAILROAD AXLES—H. J. Lombaert, of Philadelphia, Pa.: I claim the divided tubular axle, A and A', and the solid undivided center piece or mandrel, C, when the same are constructed and combined together, with each other and with the wheels, B and B', so that the two said tubular parts, A and A', shall project through their respective wheels and form their journals, and also rotate out of contact and independently of each other, substantially in the manner and for the purposes set forth and described.

FURNACE GRATE BARS—Warren S. Low, of Albany, N. Y.: I claim the combination of the corrugated and circular removable face piece, C, with the body, A, of a furnace grate bar, in the manner and for the purposes set forth.

SHOE SOLE—Wm. J. Lyman, of East Hampton, Mass.: I claim the use or application or employment of a metallic in-soles to shoes, boots, &c.

HARVESTING MACHINES—H. H. Luther, of Warren, R. I.: I claim, first, Attaching the finger bar, P, to the frame, J, suspended on the shaft, K, and fitted between bars, J J, on frame, G, and arranged on shaft, H, substantially as shown, so that the finger bar, D, and sickles may, when necessary, be elevated, placed directly over the main wheel and shaft, as described.

Second, Adjusting the finger bar, P, and sickles, r r, in a more or less inclined position, in order to cut the grass or grain the desired hight, by having the finger bar attached to a circular frame, C, fitted on the arm of the driving-wheel, F, and secured at the desired point by means of the lever, I, and projections, or any equivalent fastening.

Third, The arrangement and combination of the frames, J G, applied to the driving wheel, F, in connection with the gearing, w t' t' u and v v, respectively, on the wheel, F, shafts, t t, and in the frame, J, substantially as and for the purpose set forth.

[The object of this invention is to place the finger bar and sickle completely under the control of the driver, so that the sickle may, with great facility, be raised over obstructions, be adjusted to cut the grass or grain at any desired hight from the ground, and also be raised and adjusted over on the body of the machine when the latter is not in use or is being moved from place to place.]

BURNISHING MOLDINGS—Robt. Marcher, of New York City : I claim attaching a self-adjusting burnisher, I, to a reciprocating plate or carriage, C, when used in connection with a molding, N, suspended and attached to the machine, in the manner as shown, or in any equivalent way, to admit of being acted upon by the burnisher, for the purpose set forth.

[Burnishing moldings is now usually performed by hand, and is a tedious and slow process. By this machine it can be done much quicker and in a more uniform and perfect manner. The burnishing tool is attached to a reciprocating slide or carriage, and the molding to be burnished is fitted between center points or in a laterally sliding frame, either or both, to attain the object in view.]

MACHINES FOR FINISHING BRICKS—W. S. Mayo, of New York City : I claim the combination of the box, A, plunger, B, and plates, K, with or without the feed block, F, substantially as and for the purpose set forth.

[This is an improved machine for giving a smooth even surface to bricks previous to the burning, and after they have been properly dried. These unburnt bricks, technically termed "clots," by being subjected to a requisite pressure within metal molds have their sides smoothed, and present, when burned, a finished appearance, having a smooth, compact and even surface with angular corners. Bricks of this character are generally used for facing houses of a superior class and are considerably more expensive, on account of the labor hitherto required in their manufacture, a great portion of the labor being due to the inefficiency of the machines used for finishing the "clots." The object of the invention is to expedite, and so cheapen the process; and it is so arranged that steam may be used as a motor, and provision made for the varying thicknesses of the "clots."

MANUFACTURE OF INDIA-RUBBER BLANKETS OR APRONS, USED IN THE PRINTING OF FABRICS, BOOKS, &C.—Chas. McBurney, of Boston, Mass. : I claim bringing the blanket to a uniform thickness and smooth surface by passing it between a revolving emery roll and a revolving feed roll, so arranged with respect to each other that the surface of the feed roll shall be ground by the emery wheel, as set forth, for the purpose specified.

ROTARY HARROWS—J. W. McLean, of Lebanon, Ind.; I claim the combination of the specified obliquely set teeth, with two or more harrow frames revolving in opposite directions, substantially as and for the purpose set forth.

[Two revolving wheels are connected to a common draft pole in such proximity to each other that the teeth, which are arranged on the circumference of the wheels in an inclined position, serve to clean each other as the teeth of one wheel pass by those of the other.]

SEWING MACHINES—James S. Moody, of Cincinnati, Ohio : I claim the employment of an endless belt, arranged and operated as described, to carry one or more hooks to draw the thread through the cloth, in the manner described.

I claim the tension collar, G, embracing the thread and needle, and operating to hold the thread, in the manner set forth.

I claim alternately holding and releasing the double pointed needle by means of sliding keys, c and c', operating so as to pass through notches, d d, towards the ends of said needle at the proper times, arranged and operating substantially in the manner set forth.

TRUSS FOR ROOFS, BRIDGES, &c.—Saml. J. Reeves, of Philadelphia, Pa., and Montgomery C. Meigs, of Washington, D. C.: We claim the mode of trussing or stiffening a curved or arched beam or rafter for bridges or roofs by means of tension rods or ties of metal, wood, or other suitable material, connected at their outer ends with the arched or curved beam or rafter at various points, and converging towards and connected together at their inner ends at a point within the space contained between the arc or arched or curved beam or rafter and the straight line joining its extremities, substantially as described and as represented in the drawing and model.

APPARATUS FOR DRYING GLUE—M. Newbauer and P. Adelman, of New York City: We claim the arrangement of a chamber of circular or polygonal form, which is provided with a fan blower, or its equivalent, to which air of the proper temperature is conducted by means of a pipe, h, and tube, E, for the purpose of drying the cakes of glue, substantially as described.

STEAM BOILERS—Wm. Oldman, of Buffalo, N. Y.: I claim the central water space, F', in the combustion chamber, F, arranged in relation to the annular water space, F'', and to the tubes, D, or their respective equivalents, substantially as set forth, for the purpose of inducing an active circulation of the water radially among the tubes, with the advantages explained.

APPARATUS FOR EXHIBITING STEREOSCOPIC PICTURES—Stuart Perry, of Newport, N. Y.: I claim, first, A movable frame-work for holding a series of stereoscopic pictures, from which the pictures are brought to be inspected and then returned to it again by a mechanism operated by the user, substantially as described.

Second, I also claim bringing each individual picture or pair of pictures, in succession, to the same point or place, before they are projected from their compartments to be exhibited, by mechanism substantially such as described.

Third, I also claim, in combination with a movable picture holder, a reciprocating carrying frame, that catches each picture, or pair of pictures, in succession, and carries them to the place where they are to be inspected, and returns them to their compartment again, substantially as described.

Fourth, I also claim, in combination with a box or case, containing within it a series of pictures and a mechanism for projecting them from said case, a framework on the outside of said box or case for receiving said pictures, substantially as described.

Fifth, I also claim the slots in the picture holder barrier, f, and in the box or case, so that the picture, from its compartments in the picture holder, may be projected through both slots or openings to the outside of the box, substantially as described.

Sixth, I also claim the friction brake, t, or its equivalent, for holding the picture holder and prevent it from moving until started by the crank, substantially as described.

Seventh, I also claim making the frame, B, in sections, or with an opening, for the purpose of introducing the pictures through said frame into the compartments of the picture holder as well as removing them therefrom, substantially as described.

Eighth, I also claim the clamps, as applied to single or double pictures, for the purpose of strengthening them, preventing their warping or bending, and thus facilitating their passage through the slot, which they must pass through, to the place where the are exhibited, as described.

MACHINERY FOR DRYING PAPER—Edward L. Perkins, of Roxbury, Mass.: I claim a new mode of drying paper, which consists in feeding the paper from a roll outside of the drying chamber, through proper openings, to a series of rollers, arranged as described, and then conducting it over said rollers, vertically, through the apparatus, and subjecting it, during its passage, to a gentle current of heated air, produced by forming inlets at the bottom for the reception of the atmospheric air, which passes up and is heated by a suitable heating apparatus, and escapes readily through apertures at the top, as set forth, and then out of the drying chamber through proper openings to a receiving roller, in the manner substantially as described.

TAIL PIECES FOR VIOLINS—John Pfaff, of Philadelphia, Pa.: I claim the metal tail piece, A, with an eye, a, adapted to the detachable pin, h, recesses, 1 2 3 and 4, for the reception of the strings, and with the rib, h, the whole being constructed and applied to a violin, substantially as and for the purpose set forth.

CUTTING OUT STRAP HINGES—Saml. M. Richardson, of New York City: I claim the relieving die, d, in combination with the shaping die, f, and cutter, g, in the manner and for the purposes specified.

DUST-PAN—J. Hall Rohrman, of Philadelphia, Pa: I claim, as a new article of manufacture, a dust-pan, having its bottom corrugated and its back edge seamed over, substantially as described, for the purposes of making the bottom of the pan rigid without extending any brace from the handle, and rendering unnecessary the wiring of the back edge of the pan.

FURNACES AND STOVES—Charles B. Sawyer, of Fitchburg, Mass.: I claim, first, The arrangement of the closed topped fire-pots K, gas or combustion chamber, X, fire or draft flues, H, small gas openings, e, and air-heating flues, G, in relation to each other, substantially as shown and described.

Second, The arrangement of the horizontal ventilating flue, J, ventilating chamber, I, and exit ventilating flue, O, and right angled draft flue, F, in relation to each other and in the top of the furnace, as shown and described.

SPRING BEDSTEAD BOTTOMS—Geo. Schott and John Loudon, of New York City: We claim the arrangement of the eyes, d d, elastic cord or strap, 1, and hooks, 2 2, on the ends of the slats, c c, substantially as and for the purposes specified.

We also claim the studs, 3 3 and 5 5, constructed and acting as specified, to sustain the slats, c c, on the strap or elastic cord, 4, as set forth.

GRINDING MILLS—Joseph Sedgebeer, of Cincinnati, Ohio: I claim, first, Constructing the rotating plate, A, with the same dress or finish upon its grinding face as that of the stationary plate, B, substantially as described, for the purposes set forth.

Second, I claim the diamond-shaped teeth, a b c e, constructed and arranged substantially as and for the purposes set forth.

MEANS OF SECURING THE BITS OF BENCH PLANES—Chas. W. Seely and Benj. F. Locke, of Wellington, Ohio: We claim stopping the upper end of the interposed bit below the screw, and upsetting it so as to catch into the cross serrations in the bed-piece, as set forth.

MODE OF SWITCHING OFF RAILROAD CARS FROM ONE TRACK TO ANOTHER—M. Semple, of Philadelphia, Pa.: I claim the immovable switch or turnout, J P, in combination with the guide bars, G: when arranged and operating substantially as described.

MACHINE FOR RAISING WATER—Peter Shank, of Jefferson Township, Ohio: I claim the combination of the horizontal float wheel, the crank motion (as produced by the three pins) which gives six motions of the pump to one revolution of the wheel, and the horizontal double pump, substantially as described, for raising water.

OPERATING MACHINERY BY DOG POWER—Dexter C. Slater, of Lawrens, N. Y.: I claim the arrangement and combination of the wheel, G, shaft, F, cam, H, and lever, I, substantially as and for the purpose set forth.

[In this economical age even the dog is no longer allowed to waste his master's time by lazily passing the day, but is expected to do his quota of work. This invention is an arrangement whereby a dog may be made to work light machinery such as churns, grindstones, and the like.]

CHEESE-CUTTERS—De Witt Stevens, of Newark, N. J.: I claim, first, The arrangement of the platform, B, with the projecting rings, g, to operate in combination with the corrugated cutting edge of the knife, substantially as and for the purpose described.

Second, The arc, D, arranged in combination with the platform, B, with the handle, C, and with the handle, C, and with the knife, F, so that the cheese on the platform can be cut up in slices of any given weight, substantially as set forth.

Third, The arrangement and combination of the lever, I, the link, J, and the slide, G, for the purpose of operating the knife, F, substantially as specified.

[With this cheese-cutter it is easy to cut a slice down to the bottom and through the rind, and the cheese, by being placed on a graduated platform, can be cut into slices of any desired weight.]

ROCKING CRADLE—W. D Tewksbury, of Cuylersville, N. Y.: I claim the two escapement wheels, h and k, arranged in combination with the verge, E, and with the arm, F, and operating substantially in the manner and for the purposes described.

[Mothers will think much of this invention, for it saves them all the trouble of rocking the cradle which contains "the precious baby," as all they have to do now is to wind up the spring and the cradle begins and continues to rock without any trouble.]

METHOD OF PRINTING BANK NOTES—Alfred Tichenor, of Newark, N. J.: I claim, first, The making bank notes and other engraved plates, or sections of plates, with tongue and groove or dowel joints.

Second, The locking-together tongue and grooved bank note or other engraved plates, by a chase, having its formed with tongue or groove, or with dowels made to match or correspond to the ends and sides of the tongue and grooved plate, which chase is made in pieces, fitted together and furnished with set screws, e e, substantially as described.

BEE-HIVES—Ruggles S. Torrey, of Bangor, Me.: I claim providing the troughs in the tops of the comb-bars, arranged with the series of conducting tubes for conveying the feed to the troughs, and with apertures or slots for the free exit of the moisture to the condenser, in the manner and for the purpose described.

BRICK MACHINES—Wm. S. Watson, of Madison, Ind.: I claim, first, The combination and arrangement with a stationary pressing block, K, of an intermittently reciprocating press-box, formed with one or more chambers, I J, and provided with one or more plungers, L L', having a joint motion with the press-box and an independent movement thereto, essentially as and for the purpose set forth.

Secondly, The combination, with the intermittently reciprocating press-box, of the top and bottom holding slides, b b', or either of them, arranged to move conjointly with the press-box and independently of it, substantially as specified.

Thirdly, Mounting the intermittently reciprocating press-box with a feed-box, having one or more chambers, M M', essentially as and for the purpose set forth.

MACHINE FOR FINISHING LEATHER—T. F. Weston, of Salem, Mass.: I claim, first, The combination and arrangement of the devices herein described, or their mechanical equivalents, for changing the angle of the tool while the machine is in motion, so as to cause it to operate upon the latter, first with a sharp edge, to take out its inequalities, and then with a dull or blunt edge, to smooth the leather, the successive operations producing the peculiar effect desired, for the purposes as set forth.

Second, The arrangement of devices herein described for giving positive motions to the tool, for lifting it from and holding it down upon the bed, the same consisting of the sliding bar and friction box, operating as set forth.

OMNIBUS REGISTER—Robt. F. White, of New York City: I claim the spring platform, B, arranged in combination with the hammer, K, and with the index, k, and operated by the driver, F, or its equivalent, substantially in the manner and for the purpose specified.

[By this invention each passenger, as he or she pays the driver, is registered, by means of an index on a dial, so that the number of fares received by the driver can always be accurately known by his employers.]

LOCK ATTACHMENT—John M. Wilson, of Philadelphia, Pa.: I claim the arrangement, in combination with a lock, A a, and door, B d, of the box, C, key-holes, c b, wards, e, guard, E, plate, F, pivoted stops, G G h h i i, and springs, H H, the whole being constructed and arranged for united operation, in the manner and for the purpose set forth.

[To a lock of ordinary construction this inventor attaches a box, provided with wards, key-holes, and a revolving guard, so arranged as to prevent the lock being picked, and also preventing access to the working parts of the lock, so that an impression in wax cannot be taken, with a view of constructing keys to fit the lock.]

WASHING MACHINE—Samuel Wiswall, of Hyde Park, Vt.: I claim the arrangement and combination, within the oscillating cylinder, B, of a receiving chamber, d, having plates, e e, and a door, f, when said door, f, is corrugated on one side and hinged to one of the plates, e, so that said door, f, may serve as a rubbing-board and also as a presser; all substantially as shown and described.

[The object of this invention is to obtain a very simple clothes-washing device, by which manual labor can be made to assist the mechanical operation in a very facile way, and the parts of the clothes that cannot be perfectly cleaned by the machine alone, finished in an expeditious and perfect manner by the attendant without removing them from the machine.]

CULTIVATORS—John Young, of Joliet, Ill.: I claim, first, The combination of the screw-extension, A, on the bottom of the standard, B, with the oblique slotted castings, C C, attached to the front side of the cross-bar, D, of the beam, E, substantially as and for the purposes set forth.

Second, The combination of the stationary vertically perforated bar, G, with the adjustable rake or harrow, H, arranged on a cultivator, substantially as and for the purposes set forth.

BURGLARS' ALARM PISTOL—John G. Clark, (assignor to himself, D. G. Cotting and Samuel W. Hatch,) of Augusta, Ga.: I claim, first, A pistol arranged on a vertical suspension guide of a hammer, so that the explosion of its cap and the firing of its charges may be accomplished by concussions of the pistol and hammer, substantially as and for the purposes set forth.

Second, Holding the pistol suspended by the means and in the particular manner described for the purpose set forth.

MACHINES FOR TEMPERING CLAY—J. D. Custer, of Norristown, Pa., assignor to himself and J. M. Roberts, of Perth Amboy, N. J.: I claim the arrangement and combination of the stationary toothed rim, O, encompassing the pit, A, the frame, H, with the gearing, k M l, attached to its outer ends; the pinion, b, of the shaft, N, gearing into the rim, O, and the rod or shaft, F, connected with the frame, H, the hollow shaft, g, on the shaft, B, and the belt, e i, passing around the pulleys, K f h j, substantially as and for the purpose set forth.

[This invention relates to an improvement in that class of machines which are used for tempering clay, and similar purposes, and which are composed of a wheel placed on a radial shaft and made to rotate within a circular pit. The improvement is in driving or propelling the wheel, whereby any power—steam, water or animal—may be applied in a very simple and economical manner, and in a way less calculated to injure or rock the working parts than hitherto, thereby enabling machines to be constructed much less cumbersome than usual, and that will take much less power to drive them.]

STEERING APPARATUS—Wm. Goodsoe, (assignor to himself and Isaac Ayres,) of Manchester, Mass.: I claim the combination of the toothed segment, M, and the curved way, P, operating as set forth, for the purpose specified.

STOVES—C. Harris and Paul W. Zoiner, (assignors to themselves and J. Langstaff,) of Cincinnati, O.: We claim the arrangement and combination of the damper, G, chamber, f, double-walled case, a, and pipe, E, substantially as shown, so that the damper, G, which pertains to the oven, shall, when drawn out, extend across the bottom of the pipe, E, and cause the products of combustion to circulate as described, and when closed shall permit a more direct draft, for the purposes set forth.

[This stove is one of those which may be used as heat-diffusers and cook-stoves, and yet have an ornamental appearance, equally so as if intended only for heaters. The invention consists in a novel oven-attachment, which may be applied to the stove and removed therefrom as occasion may require.]

APPARATUS FOR HEATING WATER—Geo. L. Ingersoll, (assignor to J. E. Ingersoll,) of Cleveland, Ohio: I claim the double cylinder heater, C C, the same being united by the plates, G F H I, so as to form the space, J J, for the ascension of the heat, and by the pipes, D E, for the passage of the water, the heating space being covered by the cap, K, and the parts here named being arranged as set forth.

I also claim, in combination with the two cylinders, C C', the ingress-pipe, O, extending to near the bottom of the cylinder, C, the exit-pipe, O', and the pipe, N, in connection with the pipes, D E, for the purpose of establishing a circulation and rapid heating of the water.

SHOE-KNIVES—Ira Merritt, of Abington, Mass., assignor to himself and L. S. Merritt, of Weymouth, Mass.: I claim the described knife-holder, in combination with an extensible blade, so arranged that as the blade is worn it may be protruded, as set forth, for the purpose described.

SPIRIT GAS BURNERS—Charles Miller, (assignor to Henry Danford,) of St. Louis, Mo.: I claim the arrangement of the valve over the tube and wick, for the purpose of extinguishing the flame, or regulating its size and altering its direction, in the manner set forth.

DIAPHRAGM FOR PHOTOGRAPHIC CAMERAS—Felix Miller and Alois Wirsching, (assignors to Felix Miller and H. H. Hayden,) of New York City: We claim the arrangement and combination of the plates, a a', the notched plate, C, and springs, m, as and for the purpose shown and described.

[A number of curved plates are placed in a tube in front of the lens, so as to form apertures of different sizes for increasing or diminishing the intensity or sharpness of the light into the camera from the object, in taking photographic pictures.]

POWER PRINTING PRESSES—Jedediah Morse, of Canton, Mass., assignor to the S. P. Ruggles Power Press Manufacturing Company, of Boston, Mass.: I claim the improvement in the construction of each of the platen rails, s3 s3, the same consisting in the chute, k, and a notch or depression, l, arranged therein and with reference to the rollers or tapes, substantially in manner and for the purpose as specified.

I also claim the arrangement and combination of the slider, R, with the operating [illegible] the pin, or stud, O, on the rocker toggle, such [illegible] being actuated by a foot-treadle, n, a spring, q, and the cam, r, of the toggle, substantially as described.

I also claim the mode of insuring the return movement of the toggles, and their gradual forward motion, after each impression has taken place, the same being accomplished by the notched wheel, u, or its notch, x, as described.

I also claim the mode of constructing the gears, a' and b', for operating the frisket-carrier, viz: with the toothed arcs, c' c' d' d', and the concave and convex arcs, e' e' and f' f', unprovided with teeth—the whole being arranged so as to operate together, substantially as specified.

I do not claim the subject of the United States patent No. 7,205; but I claim the combination of the two, or any other suitable number of wheels, r2 r2, lever nippers, t2, (applied respectively to them,) and their opening and closing bars, x2 y2, or mechanical equivalents for such bars, the same being substantially as and for the purpose described.

I also claim the specified mode of constructing each of the nippers, v v, for receiving the sheet of paper from the table, G, viz: so that each jaw may move away from the other while the upper is being raised; the same producing the advantages not only of insuring the passage of the lower jaw underneath the sheet of paper simultaneously with that of the other jaw over it, but of both jaws closing upon the paper at one and the same time, so as not to lift it out of place.

I also claim the mode of constructing the lower jaw, g4, of each pair of nippers, v, viz: with a lip or bend, n', arranged thereon and for the purpose described.

I also claim the mode of applying and operating each of the points, 1 2, viz: hinging or jointing it to the table, G, and combining with it a stop, m2, and lever, k2, or the equivalents therefor, the whole operating or being made to operate substantially as described.

I also claim the improved method of operating the frisket-carrier, the same consisting in causing it to descend and pass in an inclined position under the delivering tapes and rollers, while the nippers, v v, may be approaching the sheet table, G, the same enabling the press to be made lower and shorter than when the frisket-carriage is moved horizontally under the said delivering tapes or rollers.

MACHINERY FOR CUTTING COMB TEETH—Wm. Noyes, Jr., of West Newbury, Mass., assignor to S. C. Noyes & Co., of West Roxbury, Mass.: I claim, in combination with the saw, or the same and its peripheral guide or guides, a mechanism or means of pressing or bending the saw laterally, substantially as and for the purpose specified.

I also claim the mode of producing the lateral and longitudinal movements of the carriage of the comb-carrier, viz: by means of the cam and its screw-thread periphery, arranged and operating in conjunction with a rack applied to the said carriage, substantially as described.

MACHINE FOR CONVERTING OSCILLATING MOTION INTO DIRECT CIRCULAR MOTION—Louis Planer, (assignor to himself and Joseph Auger,) of New York City: I claim the grooved dog, F, having its tail resting in a recess, b c, or equivalent resting place, in the lever, E, without being pivoted or otherwise attached thereto, and having a spring, G, applied in combination with it and the said lever, and the whole being applied and combined with the wheel, A, and its axle, E, substantially as described.

[This is a novel arrangement of a dog, a lever, and and a spring, in combination with each other and with the smooth rim of a wheel, whereby an oscillating movement is imparted to the lever by suitable means causes the dog to operate with great certainty to turn the wheel in one direction only.]

HOOKS FOR VEST CHAINS—Anthony Wallach, (assignor to himself and Adolph Wallach,) of New York City: I claim the clasping hook, c, in combination with the bolt, i, in the body, b, of the vest chain hook, for the purposes and as specified.

MOLDS FOR PRESSING GLASS—Thos. Shaw, (assignor to himself and John C. Bailey,) of Philadelphia, Pa.: I claim forming on the plunger, B, a shoulder, f, of a size corresponding to that of the upper edge of the recess in the base, A, of the mold, and limiting the downward movement of the plunger, so that the said shoulder shall coincide, or be slightly below the said upper edge of the recess, substantially in the manner and for the purpose set forth.

PLUG BEDSTEAD FASTENING—Jacob J. Smith, (assignor to himself and J. H. Pugh,) of Philadelphia, Pa.: I claim, first, A double plug fastening for bedsteads, consisting of the two distinct parts, A and A, so constructed as to be adapted for being driven or secured into the post and rail respectively, and also fitted with a wedge-shaped dovetail tenon, d, and a corresponding groove, e, operating together so as to cause the end of the rail to be drawn tightly against the post, in the downward pressure of the said rail, after they are connected together—all substantially in the manner and for the purpose set forth and described.

Second, I also claim making the post-plug, A', with the inclined dovetail groove, g, across in one side of the same so as to operate in combination with the wedge-shaped tenon, e, on the rail-plug, A, substantially in the manner and for the purpose set forth and described.

DESIGNS.

SEWING MACHINES—Solomon B. Ellithorp, of New York City.

COOK STOVE—Anthony J. Gallagher and Jacob Beesley, (assignors to Anthony J. Gallagher,) of Philadelphia, Pa.

Plants in Rooms.

In the crowded city, amid its dust, smoke, turmoil and troubles, it is pleasant to find a memento of the country in the opening rose and the modest daisy. When we see a pot of flowers adorning the window of a room, however humble in appearance the domicile may be, the feeling arises spontaneously in the mind that they are fostered by the gentle hand of some one whose tastes are true and tender. A few words on the culture of plants in rooms may be beneficial to many persons at this particular season of the year. They should be placed in a situation where they can receive an abundance of light and air; otherwise they will become sickly. Exposure to the dews at night (where this can safely be done in cities), then taking them in next morning, greatly promotes their health.

Plants are frequently injured by injudicious watering. Some persons seem to suppose that deluges of water afford a sure remedy for all the evils to which plants are subject. This is a mistake. True, they require a considerable amount of moisture, but not one half the quantity which is oftentimes applied. Evening is the best time to water them, and in every case, cold water from a cistern or a pump should be avoided. The water should be warmed by exposure to the sun, or in some other manner, up to the temperature of the atmosphere before it is used. Many plants are greatly retarded in their growth by cold water being poured upon them. The quantity to be applied varies with the size and nature of the flower; the ground should be thoroughly moistened, but not soaked. If the leaves should become infested with insects, some tobacco juice, mixed with water and sprinkled over them, will soon destroy these. The great feature in cultivating plants, to promote their health, is that which is equally efficacious with human beings—cleanliness.

Improved Seed-Planter.

Joseph McKown, of Geardstown, Va., has patented (May 24, 1859) a seed-planter, in which a horizontally-moving hand lever, divided hopper, &c., are so combined as to produce a very effective and simple machine. It is said to work equally well on smooth or rough soil, and is very highly spoken of by these who have had it in use.

CALIFORNIA WINES—The San Francisco *Herald* states that the present stock of California vines now under cultivation will yield \$50,000,000 of wines and brandies in twenty years from the present day. The wine product of the Golden State increases at the rate of 50 per cent annually, and the quality of these is equal to the best imported. In all wine-growing countries, where the people use wine at their tables and where a bottle of it can be obtained for three or four cents, drunkenness and bar-rooms are unknown.