

## WEEKLY SUMMARY OF INVENTIONS.

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

## IMPROVED OIL.

This invention consists in combining a small quantity of linseed oil with a large quantity of water by means of sal soda or other alkali, whereby a good substitute for linseed oil is produced. This improved oil, we are informed, has been tried in mixing paints at the United States capitol, and found to effect a very great saving and to answer all the ends of pure linseed oil. The alkali effects a chemical union between the water and oil, gives consistency and strength and durability, and so separates the white lead that all necessity of grinding the same is avoided. The inventor is G. W. Slagel, of Washington, D. C., and the patent is assigned to the above and Dr. O. A. Dailey, of the same city.

## IMPROVEMENT IN SAFES.

This invention consists in making a safe door with square instead of bevel edges and having grooves formed on the inner face of the door to receive tongues formed on the flange or jamb of the safe, against which the door closes. A tongue and groove are also formed at the back edge of the door or jamb. By this construction of safe the bind, which is experienced when a bevel edge door is used, is avoided, and still the joint between the door and jamb are made water, powder and fire-proof. This appears to be an excellent auxiliary to safes and bank vaults. The inventor is L. H. Miller, of Baltimore, Md.

## PIANOFORTE ACTION.

T. S. Seabury, of Stony Brook, N. Y., has an improvement in pianoforte actions, the principal object of which is to allow each or any one of the hammers, and all the moving parts pertaining to it, to be removed from the instrument along with its respective key, for the purpose of examination, adjustment, or repair of the parts, without disturbing any of the other keys or hammers or other parts of the action. The invention consists in pivoting the hammer butt to a post, or its equivalent, that is carried by the key; also in a certain mode of applying and effecting the operation of a jack or fly lever, through which the blow of the hammer is produced, and in a certain improved mode of applying the check.

## IMPROVEMENT IN REEFING FORE-AND-AFT SAILS.

Capt. S. Samuels, of the clipper ship *Dreadnought*, so celebrated for her rapid passages between the ports of New York and Liverpool, has a plan for reefing ship's spunkers, schooner's main and fore sails, and other fore-and-aft sails of similar character, by rolling them on their booms in such a manner that the boom is free to be worked in the same manner as the booms in common use for such sails. The invention admits of an old sail and boom being used, and can be applied to any vessel at small expense.

## QUARTZ PULVERIZER.

The object of this invention is to re-grind the tailings of an ordinary stamping quartz mill, so that the contained gold and quicksilver may be brought in contact and all the gold amalgamated and saved. In using the stamping quartz mill much gold and quicksilver is lost, the great divisibility of the said substances and a lack of proper union, assisted by the presence of sulphate of iron, favoring their escape. The invention consists in the employment or use of a conical grinder in connection with a horizontal oscillating disk provided with annular chambers, the whole being so arranged that the desired object is attained. The inventor is W. H. Howland, of San Francisco, Cal.

## MACHINE FOR CLEANING AND OPENING FLOCK.

The object of this invention is to obtain a machine whereby all foreign substances may be effectually separated from the flock and the latter opened or its particles distended or loosened, so that it will leave the machine in a light state suitable for use. The invention consists in the employment or use of a metal corrugated cylinder and concave fan, and a cone provided with projecting toothed ledges, and fitted within a corresponding shaped shell also provided with teeth, the whole being combined and arranged to effect the desired result. The inventor is W. C. Geer, of Rockville, Conn.

## LADIES' DRESS SUPPORTER.

This invention in skirt supporters consists in a certain novel form and arrangement of short bows with a semi-

circular bow of cane, whalebone, metal, or other material, in which stiffness, flexibility and elasticity are suitably combined, covered with a suitable material and furnished with a waistband and strings, the whole, when applied to the body of the person in a novel manner, constituting a supporter by which the skirts can be supported in such a manner as to relieve the waist and hips of unnecessary pressure. The inventor is John McNeven, of Brooklyn, N. Y.

## CENTERING MACHINE.

This invention consists in a novel arrangement of the clamping device and drill, whereby articles of varying diameters and forms may be expeditiously and accurately centered for the lathe. The inventor is James Cumming, of Boston, Mass.



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25,873.—B. F. Avery, of Louisville, Ky., for an Improvement in Molding Plows:

I claim the peculiar construction of the patterns, B C, of the short land-side, as set forth, so that they may be drawn at opposite angles from each other, for the purpose and in the manner specified.

[This invention consists in constructing the pattern for the short landside of the plow patented by this inventor January 8, 1856, in two parts, so that they may be drawn at opposite angles from each other, and in this manner forming the holes or depressions and ridges, or depressed squares upon the outer surface of the short landside, and by this means giving a variety of forms, by which the joint or lock for fastening the landside to the moldboard of cast-iron plows may be used.]

25,874.—G. H. Babcock, of Westerty, R. I., for a Bronzing-machine:

I claim, first, in combination with mechanism for conveying the brush, the rollers, B, and brush, F, one or more of each, for the purposes and operating substantially in the manner described.

Second, I claim the use of one or more stationary rubbers, H, or their equivalents, for the purposes specified.

Third, I claim the wire, x x x x, or their equivalents, for freeing the brush from the powder.

Fourth, I claim constructing the gripper in the manner described, whereby I obtain the advantages set forth.

Fifth, I claim enclosing the rubbing and brushing cylinders in a case, for the purpose of retaining the powder and preventing waste.

25,875.—J. W. Barcroft, of Friendship, Va., for an Improvement in Ditching-machines:

I claim, first, The combination of a revolving wheel, B, having its buckets, or scoops, C, set tangentially with a stationary circular guard, I, and an adjustable scraper, G, substantially as and for the purposes set forth.

Second, Having the buckets or scoops hung on an axis, D, at the center of their length, and adjustable at both ends, substantially as and for the purposes set forth.

Third, Providing sharp cutters, a, projecting at right angles from the center of the scoop, substantially as and for the purposes set forth.

[This invention consists in a revolving wheel, with a series of diggers on its circumference. The diggers conduct the dirt into the inside of the wheel where it is scraped off, and caused to fall on to a conveyor. The diggers are adjustable, so as to dig both in the back and forward movement of the machine, and thus avoid the necessity of turning the machine round. This appears to be a well-contrived machine, and we should think it would work to advantage in many locations.]

25,876.—Wm. T. Barnes, of Buffalo, N. Y., for an Improvement in Sewing-machines:

I claim the arrangement of the threaded elastic looper, H, as constructed with a receiving and transferring spring, G, when the two are secured on opposite sides of the needle and operated to and from the needle by means of levers, E and F, connecting-rods, D and D', and frames, C C, the several parts being combined and connected, substantially as and for the purpose set forth.

25,877.—Mellen Battel, of Albany, N. Y., for an Improvement in Coal-sifters:

I claim the stationary plows and brushes, and ribbons, in combination with the horizontal revolving sieve, as before described and set forth, and made to operate.

25,878.—C. F. E. Blaich, of Elyria, Ohio, for an Improved Apparatus for Operating Rudders:

I claim the combination of the rudder, B C, spiral ribs, D, and spirally grooved sliding tube, E, substantially in the manner and for the purposes set forth.

[This invention consists in arranging two spiral flanches or ribs on the rudder shaft, and fitting on said shaft and to the flanges a sliding tube, having spiral grooves in its eye or bore. This tube is attached to a lever, so that by depressing the lever it is raised, and its grooves, in concert with the spiral flanches, cause the shaft and rudder to turn. This is a very neat and good arrangement, and by its use considerable of the gear which is now required to operate the rudder can be dispensed with.]

25,879.—C. C. Bomberger, of West Carlisle, Pa., for an Improved Method of Elevating Water:

I claim the arrangement of the air-tight boxes, C F, connected by the pipe, G, and communicating respectively with the pipes, A D, in connection with the open vessel, E, tube, H, and the valves, b,

placed to the tube, H, and pipe, P, and operated automatically as shown or in an equivalent way, for the purpose set forth.

[This invention consists in a novel arrangement of air-tight boxes, pipes and valves, so arranged that water may be elevated, and a force or pressure given the same, whereby it may be propelled to certain points at a distance from the well, spring or stream, or used for the propulsion of machinery.]

25,880.—W. N. Brown, of New York City, for an Improvement in Mechanism for Converting Rotary into Reciprocating Motion:

I claim the rock shaft, D, having a hollow hub, F, substantially as described, in combination with the oblong ring, H, and rotating cam J, the said parts being made and operating in the manner set forth and for the purposes described.

25,881.—M. J. Butler, of Nashville, Tenn., for an Improved Floating Safety Cabin:

I claim the arrangement of the detached boat-shaped cabin, A, gate propeller, I J K M, jointed hinged straps, D D, wedge, E, rudder, F, windlass, G, ordinary vessel, O, valve, S R Q, and passage, P, and stairs, N, all in the manner and for the purpose set forth.

[This invention consists in making the cabin of large sea vessel<sup>18</sup> and ships in the form of a boat, and with all the necessary appurtenances for propelling and steering by hand. This cabin is confined on board by straps and chocks, so that in case of the occurrence of fire, leak or other dangerous disaster, it can readily be detached and allowed to float off, when certain valves in the hold of the vessel are opened, and the ship is sunk. By this arrangement the passengers and crew can be saved, as the cabin is to be made of sufficient capacity to accommodate a large number, and is furnished with a propeller, steering apparatus, &c. This is certainly an invention worthy of attention, since its design is to save that which is the most valuable of all things—human life.]

25,882.—M. M. Camp, of New Haven, Conn., for an Improved Surf Life-boat:

I claim, first, The combination of the water ballast chamber, D, with the aperture, I, and air-pipe, H, for the purpose of ballasting the boat, when she enters the water, and of lightening it when she touches and reaches the shore, as set forth.

Second, The combination of the valve, F, with the ballast chamber, D, and aperture, E, for the purpose specified.

Third, The combination of the floors, C and G, for the purpose of forming the air-chamber, E, beneath the working floor, and between the two floors, as described.

Fourth, The combination of the divisions, I I, with the working floor, G, to form receptacles between said divisions and the sides of the boat, as and for the purpose set forth.

25,883.—J. R. Cannon, of New Albany, Ind., for an Improvement in the Construction of Glass Coffins:

I claim constructing a coffin of glass, the body of which is provided with a groove, x x, and the lid with a flange, a a, and a pump, B, the lid being secured to the body by means of metallic bands, D D, substantially as and for the purpose specified.

25,844.—M. H. Collins, of Chelsea, Mass., for an Improvement in Machines for Bolting Flour, &c.:

I claim, first, A curved frame, in which are placed one or more bolting sieves, d d, this frame being open at each end for the discharge of bran or other coarse material, substantially as and for the purposes set forth.

Second, The combination with the curved frame and sieves of a corrugated rubber, t, the frame and sieves having a vibrating motion in the path of a circle, while the rubber remains stationary, substantially as and for the purposes set forth.

Third, The arrangement of sieves of different sized meshes, and having the same vibrating motion on the circular vibrating frame, and in the relation shown to a fan wheel, which causes a draft at the back of the machine, substantially as and for the purposes set forth.

[This invention consists in a circularly vibrating bolting-frame, open at both ends, and with a sieve in its bottom, so that it bolts on both ends, and discharges the flour through its bottom, and the foreign substances at opposite ends. With this frame is used a peculiar united casing, with a series of receptacles for the various grades of flour, bran, chaff, &c. The secondary separation of the substances being operated is effected by auxiliary screens arranged in the vibrating frame, and by means of a suction fan. The arrangement as a whole is very complete, and by the slightest possible changes it answers for bolting flour, scouring grain, separating quartz, &c.]

25,885.—C. O. Crosby, of New Haven, Conn., for an Improvement in Sewing-machines:

I claim, first, The rotary bobbin case, H, armed with the inclined loop spreader, I, and supporting on a pin, w, in its center, the bobbin, G, which holds one of the threads, in combination with the loop detainer, x, when the whole is constructed, arranged and made to operate substantially as and by the means described.

Second, I claim the method of detaining the loop of the needle-thread after the loop has passed the full diameter of the bobbin-case, by the projection and inclined plane terminating in a point on the buffer.

Third, I claim the frame or form, composed of the curved bar, O, bar, R, and foot, k, in combination with the bolt, D', elbow-shaped lever, i (carrying the pieces, g), and friction cap, a', when the whole is constructed, arranged, connected and made to feed the material, substantially as described.

25,886.—James Cumming, of Boston, Mass., for an Improvement in Centering-machines:

I claim, first, The arrangement of the notched interlocking slides, H H', right and left screws, G G, pinions, E E d, shaft, D, bed-plate, C I, and upright drill, J, all for operating together in the manner and for the purpose described.

Second, The combination of the drill-arbor, J, hollow swivel oiling-cap, K L, independently rising and falling rod, j, and disk, k, attached in the manner and for the purpose described.

35,887.—R. C. Cyphers, of Milledgeville, Ga., for an Improved Washing-machine:

I claim, first, The arrangement of the elastic suspended concave, E, with slate, J, pivoted to elastic strips, g, in combination with the jointed spring-rubber, C, substantially as and for the purpose described.

Second, In combination with the jointed spring-rubber, C, I claim the employment of a flexible band or rope, m, for the purpose of securing the clothes to the rubber, substantially as specified.

Third, The arrangement of the central shaft, f', in combination with the elastic suspended concave, E, and grooves, n, substantially as and for the purpose set forth.

[This invention relates to that class of washing-machines in which a vibrating rubber operates in a concave suspended from springs. The effect of this machine is increased by arranging the rubber with spring joints, and by connecting the slats of the concave with elastic bands, so that the rubber adapts itself the more readily to the concave, and that each slat of the latter has an independent working motion. The clothing is secured to the rubber by an elastic band, and the rubber is guided by its central shaft projecting into grooves in the sides of the tub.]

25,888.—Horace L. Emery, of Albany, N. Y., for an Improvement in Harvesters:

I claim, first, Combining with the cutter-bar an adjustable arm or lever, provided with a roller or other means of sliding easily upon the ground, for the purpose of sustaining the cutter-bar at any re-