(No Model.)

G. GAMLEN.

COMBINED FRUIT SQUEEZER AND STRAINER.

No. 473,220. Patented Apr. 19, 1892.

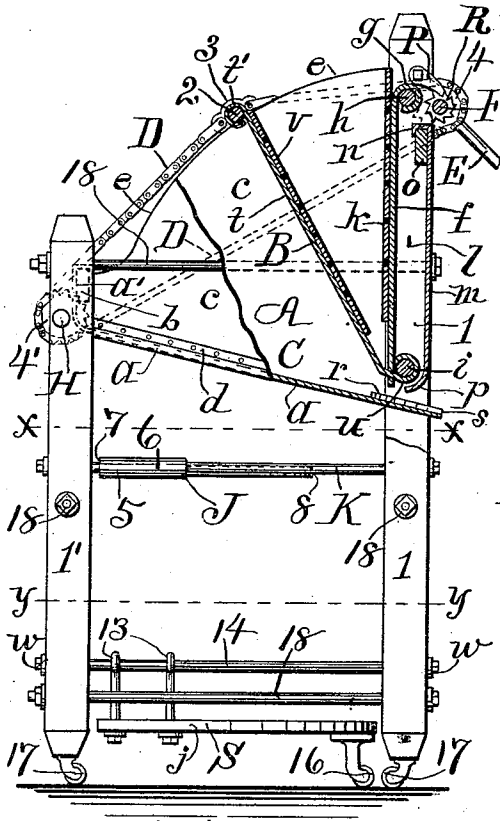

FIG-1-

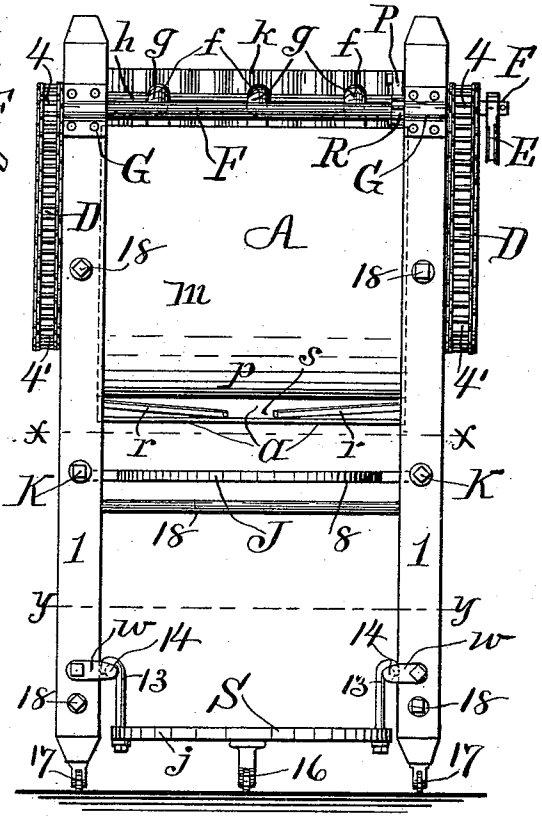

FIG-2-

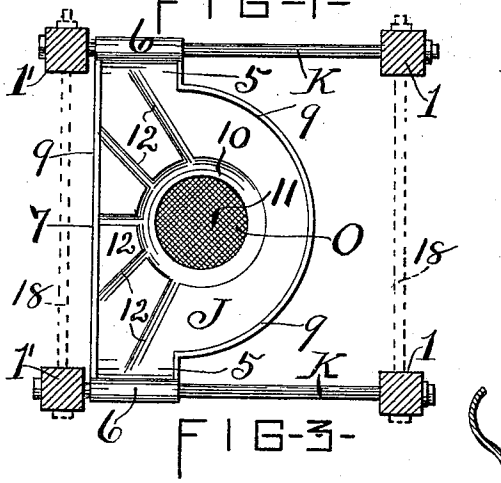

FIG-3-

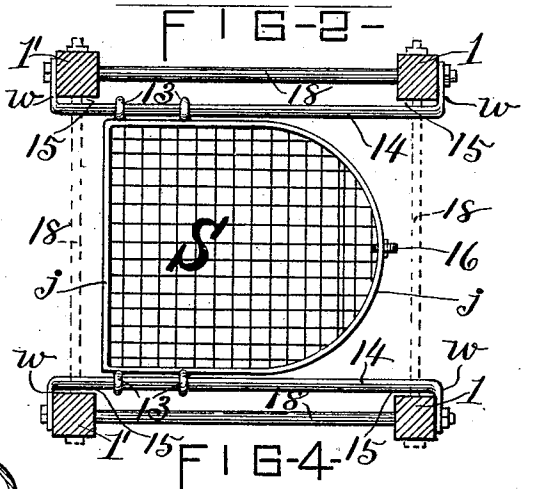

FIG-4-

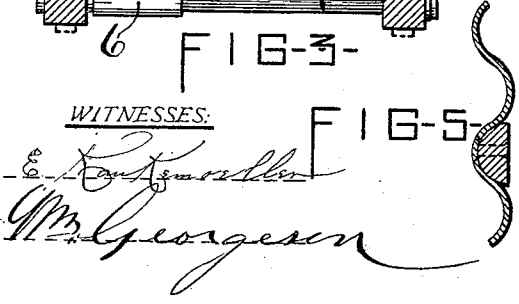

FIG-5-

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COMBINED FRUIT SQUEEZER AND STRAINER.

SPECIFICATION forming part of Letters Patent No. 473,220, dated April 19, 1892.

Application filed July 15, 1891. Serial No. 399,650. (No model.)

To all whom it may concern:

Be it known that I, GEORGE GAMLEN, a citizen of the United States, residing at Scipioville, in the county of Cayuga and State of New York, have invented certain new and useful Improvements in a Combined Squeezer and Strainer; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation of my combined squeezer and strainer and showing coincidently, by the partial breaking away of a side wall or plate of the rectangular body, its interior portion. Fig. 2 is a front elevation of the apparatus. Fig. 3 is a horizontal section taken on line *x x*, Figs. 1 and 2; Fig. 4, a horizontal section taken on line *y y*, same figures of the drawings; and Fig. 5 is an enlarged detail of a fragment of a corrugated plate, showing manner of attachment to one of a series of vertical rods, the parts being shown in horizontal section.

Like letters and figures of reference indicate corresponding parts throughout the several views.

My invention relates to that class or species of presses or squeezing devices designed for squeezing or expelling water or other liquids from clothing, cloths, &c., and pressing and macerating berries and small fruits, obtaining the juices, straining the same, and insuring the precipitation of the same into a suitable receptacle.

The object of my invention is the production of an apparatus of the character aforementioned especially adapted for household and family service, hotels, boarding-houses, stores, halls, &c., and for farm-house purposes—in fact, wherever a simple yet durable and effective press and readily movable, having the qualities of a perfect squeezer and strainer, is serviceable for the manifold purposes it is applicable to. Moreover, the purpose of my present invention is to improve the efficiency and working of as well as render more satisfactory the service and coincidently the adaptability of my novel combined squeezer and strainer embodied in the Letters Patent of the United States granted unto me on the 12th day of August, 1890, and numbered 434,128, the novel features of construction and adaptation to perfect service incorporated in my present invention attaining the securing of the desirable qualities in construction and operation contemplated by this improved construction.

My invention consists in the novel features of construction, combination of parts, and adaptability hereinafter described, and fully enumerated in the claims hereunto annexed.

My device is constructed as follows:

A denotes the stationary body, (or box,) creating an operating-chamber, &c., supported at a suitable height upon front legs or standards 1 1 and rear legs or standards 1′ 1′, the front legs projecting upward a greater distance than the rear legs, as clearly indicated in Fig. 1 of the drawings. The rectangular body, open at its top, is secured at its corner portions to the respective supporting-legs, as indicated. This body portion has an inclined bottom *a*, preferably of metal, whose pitch is downward to the front of the apparatus, said bottom plate being bent perpendicularly at the rear of the machine, and thereby forming thereat a rear wall *a′* of medium height, said wall being secured at the top by a flanged projection resting upon a cross-piece *b*, that extends from one rear leg to the adjacent rear leg, and the bottom plate *a* at its front termination is secured to the front legs in any ordinary or suitable manner, preferably by its abutting side edges entering into the leg's sides.

The body portion (or operating-chamber) A comprises at either side a slab or strip of wood (or metal, if preferred) *c*, the top edges being arc-shaped, as shown at E, said side walls *c* continuing downward to the bottom plate *a*, and forwardly and rearwardly secured to the lineal front and back legs, the forwardly-rising portion of the respective sides terminating adjacent to the top of the forward legs and at a point much higher than the plane at which the curvilinear descending portion of the sides *c* are secured to the rear legs or standards. The bottom plate *a* is securely and tightly attached to the sides *c c* by its edges overlapping the lower edges thereof a brief distance exteriorly, and held tightly thereto by a binding-strip *d*, nailed

or riveted thereat and insuring a practically non-leakable operating-chamber. Obviously the bottom plate may be attached to the sides *c c* by any other suitable means.

At the forward portion of the body there are erected several metallic bars *f*, of half-round shape, in cross-section, disposed equidistant apart and vertically parallel one to the other, said bars being suspended by their hook portion D from a horizontal transverse supporting-rod *h*, extending from one front leg or standard to the opposite one, and are retained horizontally stationary by their lower ends abutting against the rear side of the cylindrical rod (or axle) *i*, stationed on a horizontal plane transversely of the apparatus and mounted rigidly (or movably) at its ends in the front legs or standards 1 1.

Secured to the rear and rounded face of the respective half-round bars *f*, by riveting, (or otherwise,) is a corrugated metallic plate *k*, of sheet form, suitably perforated and extending practically the width of the operating-chamber and upwardly the height of the body at its front and terminating downwardly at a short distance above the rod or axle *i*, and whereby spaces are created between the projecting extremities of the bars *f*, that serve as fingers.

Forwardly of the corrugated plate *k* and its bars *f* there is created a vertical passage-way *l*, formed by the said plate *k* in conjunction with a vertical metallic plate *m*, erected at a moderate distance therefrom at the front of the apparatus and secured edgewise to the front legs or standards by any satisfactory means, said plate terminating in a horizontal inwardly-projecting flange *n* at its top that overlaps upon a horizontal transverse bar *o*, extending from one front leg to its companion leg, and at its bottom portion curved in such degree as to form a curvilinear shelf *p*, extending slightly underneath the axle *i* and lying a short distance above the bottom *a* of the machine. Upon said bottom *a*, at either side of its forward portion, are erected guide-strips *r r*, standing convergently and having an opening or gate *s*.

B is the compressor, pivotally mounted within the operating-chamber and facing the stationary perforated plate *k*, and comprising uprightly-disposed bars *t*, of half-round form, transversely lying equi-distant apart, their upper ends being curved, as at *t'*, and surrounding loosely a cylindrical horizontally-disposed carrying-rod 2, arranged transversely the chamber C, and whose extremities, extending a distance outward, rest movably upon the curved top edge of the respective sides *c* of the chamber-body, and at their lower ends *u* the half-round bars *t* extend to and partially surround in loose contact the axle or rod *i*, that serves as their pivotal supports, and *v* denotes a corrugated metallic plate, properly termed the "compressing-plate," that is secured by riveting or otherwise to the several pivotally-movable bars *t* at their front face, the said plate, which is perforated, occupying nearly the width of the operating-chamber, and in height extending from the carrying-rod 2 down to within a short distance of the axle or rod *i*, said compressing-plate standing transverse the chamber and directly facing the stationary corrugated plate *k*. It will be perceived that sufficient pitch or incline is given to the bottom *a* of the chamber C to insure unretarded and expeditious flow of the water, juices, or other liquids to the discharge of the apparatus.

In my attachment of the corrugated plates *k* and *v* to their supporting-bars, that are of half-round shape transversely, I erect each bar so that its convex face will lie and fit into the adjacent concave portion of the corrugated plate, thereby securing positive lodgment thereof when the plate thereat is secured to the bar by riveting or other sure means, and whereby each individual bar forms a reliable brace, stiffening, and support for the attached plate, said construction being exemplified in Fig. 5, wherein I show in cross-section a portion of a corrugated plate and one of the bars whereto it is secured.

The carrying-rod 2 (whereto the compressor is connected at its upper edge) has its extremities respectively journaled in traveling boxes (or bearings) 3 3 at either outer side of the walls *c c* of the body, said boxes having forward and rearward ears or lugs, whereto is pivotally attached a link belt or chain D, that continuously extends to and meshingly around sprocket-wheels 4 4', journaled externally upon the legs 1 1 and 1' 1' of the machine, respectively, while E is an operating-handle for operating the front sprockets 4 4, and thereby, through the medium of the link-belt connection with the back sprockets 4' 4', imparting movement to the compressor B, either forward or backward, according to the direction in which the sprockets 4 are rotated. The sprockets 4 are mounted on the ends of an axle F, disposed in journal-boxes G, attached to the face of the front legs, and the sprockets 4', mounted on a like axle H, erected at the rear end of the apparatus.

J is an auxiliary strainer disposed a slight distance beneath the bottom of the body portion A, and lying horizontally, said strainer being mounted upon side rods or ways K, extending, respectively, from a rear leg to a front leg at either side of the machine, by means of side arms 5 5, having tubular terminations 6 6, that loosely encircle the rods, and thereby adapting said auxiliary strainer to longitudinal travel thereon and allowing it to expeditiously be stationed in an inoperative position directly beneath the bottom of the operating-chamber or propelled forward to such degree that its central portion will lie directly underneath the discharge or guideway of the operating-chamber, whereat the juices are precipitated downward, and

thereby bring in complete operative position, and the strainer when not required for purposes of straining is pushed backward underneath the body of the apparatus. This auxiliary strainer is straight edged at its rear end 7, and of semicircular form at its front edge 8, and provided with a vertical flange 9 at its boundary edges that intersects the cylindrical ends 6 6 of the side arm portions 5 5 of the strainer. Centrally the strainer is slightly dished or concaved, as at 10, and provided with a circular orifice O, of fair size, across which is drawn and secured firm woven-wire cloth 11, or other suitable straining fabric; or, if preferred, the central opening may be dispensed with and said spot provided with infinitesimal perforations, which will serve the same purpose. 12 are radial channels, stamped or otherwise created into the top surface of the material of the auxiliary strainer, designed to expedite the flow of the juices dropping thereon into the dished portion and through the straining opening. The opposite parallel rods (or ways) whereon the adjustable strainer is mounted pass through the lineal legs of the apparatus and are held rigidly in place by screw-nuts or other fastenings.

S is a movable support or shelf for the reception of a mop-pail or other utensil, constructed of coarsely-woven wire secured to an encircling metallic frame *j*, (or in other satisfactory manner, and provided at its sides with upright hooked terminating arms 13, encircling by their hook portion a supporting-rod 14, disposed at either side of the apparatus in proximity to the lower ends of the supporting-legs 1 1 and 1′ 1′, said respective rods 14 lying horizontally and longitudinally with the machine and secured by their right-angular extremities *w* to the forward face of the front leg, and lineally opposite longitudinally to the rearward face of the back leg, the straight portion of the side rods 14 standing inwardly a slight distance from the interior face of the legs of the apparatus, as indicated at 15, and whereby free and unobstructed movement from rear to front of the machine is insured the support or shelf S in its longitudinal movement upon its supporting-rods, the function of said rods being, as is apparent, to permit of the sliding forward of the shelf S partially beyond the front of the apparatus and its sliding rearward directly under the body portion when not required for service.

The supporting-rods are secured to the legs of the machine by means of screw-bolts or other fastenings.

Underneath the front portion of the movable pail-support S is attached a sustaining-roller 16, designed to retain the same horizontal at its weakest portion against downward tilting or displacement from the weighty pail or other water-filled vessel that may be mounted thereon, and 17 are rollers attached to the bottoms of the legs of the machine, whereby it is adapted to ready propulsion through the various rooms or parts of a room of a dwelling or other building or other spot.

R denotes a ratchet-wheel or pinion keyed to the forward sprocket-carrying axle F, adjacent to the inner face of a front leg 1, and P is a pawl or click pivotally secured to the said post above the ratchet-wheel, and adapted to engage with the ratchet as the compressor B is carried forwardly, and securing it at any position desired until the pawl is disengaged and thrown upward out of the way—a feature of importance in the advantageous working of my apparatus, as the pressure to which the contents of the chamber are being subjected may be retained at whatever degree desired without necessity of the operator holding to the handle for the insuring of continued and lengthy pressure of the compressor against the substance undergoing squeezing.

18 are horizontal tie-rods disposed at varied heights and extending from leg to leg of the machine, and by means of which the various parts are bracingly strengthened and retained in place, said tie-rods being connected to the legs or standards in any satisfactory manner.

I operate my device substantially as follows: The article or articles to be squeezed or pressed—as, for instance, wet mop-cloths, clothing, &c., or berries or small fruits inclosed in permeable bags or otherwise—are disposed within the operating-chamber at the front of the compressor, and the manipulating-handle being turned in the proper direction the pivoted compressor is, through the action of the link-belt, impelled forwardly and thoroughly pressing or macerating the articles or objects deposited in front of the compressor, and the water or juices contained in same expelled through the perforations in the corrugated plate or between the same, and thence downward upon the inclined bottom of the chamber, and thence, flowing through the convergent guideway thereof, precipitated into a pail, tub, or other vessel stationed in front of the apparatus and directly beneath the discharge of the squeezing-chamber. As is apparent, the function of the perforations in both the stationary and traveling corrugated plate is to strain to a greater or less degree the juices that are through pressure expelled from the berries or fruit being squeezed, as well as the water forced from wet clothing, &c.

In the employment of my apparatus for squeezing or wringing the water or moisture of wet textile fabrics it is obvious that the sliding shelf or support may be slid forward a distance beyond the front of the machine, and a pail or small tub disposed thereon to catch the drippings from the cloths undergoing pressure or be placed in its rearward inoperative position, and a pail or tub placed upon the floor at the front of the squeezer.

My prime and essential object in providing my device with the horizontally-sliding pail-support or shelf is for the utilization thereof by housewives when my apparatus is being

employed as a squeezer or wringer for mop-cloths in the operation of mopping or cleaning floors, and wherein a mop-pail always at hand is an important adjunct for satisfactory mopping, my sliding shelf, being attached to the machine, serving as a reliable support for the mop-pail and insuring its being right on hand at the front of the apparatus wherever the squeezer may be moved or stationed, and thus entirely obviating the necessity of the housewife carrying the mop-pail about, as to whatever part of the floor the squeezer is moved the pail, being mounted upon a support attached thereto, necessarily moves with it.

When my apparatus is employed as a squeezer or press for macerating and obtaining the juices from berries, small fruits, &c., the auxiliary strainer is pulled forward from its rear inoperative position sufficiently to insure its center coming perpendicularly beneath the discharge of the guideway of the bottom of the squeezing-chamber. The function of this auxiliary strainer is to insure perfect straining of the juices dropping thereon from the bed of the operating-chamber, and which, being liable to contain more or less small fragments of berries, fruit, &c., require to be separated from the juices by means of an auxiliary strainer having interstices of such smallness as to thoroughly retard further passage of the foreign particles liable to exist in the juices as the same drops from the squeezing-chamber. This auxiliary or secondary strainer thoroughly accomplishes the result named.

As is evident, both the movable strainer and the movable support or shelf are readily withdrawn rearward out of one's way when not required for service, and either one or both may be drawn forward and utilized, according as may appear advisable to the operator of the machine. These two aforenamed adjuncts, employed in combination and connection with the remaining portions of my apparatus, I consider of essential value and importance to its most perfect operation and adaptability for varied uses.

In order to release the pressure on articles that have been squeezed, the turning of the manipulating-handle in a reverse direction impels the compressor rearwardly and in position for future service.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination, in a combined squeezer and strainer, of an auxiliary strainer mounted movably upon horizontal supports secured to the supporting-legs of the overhead operating-chamber of the apparatus and adapted to forward or rearward longitudinal movement along said supports, substantially as described, and for the purpose specified.

2. The combination, in a combined squeezer and strainer, of a pail support or shelf mounted upon parallel horizontal supports secured to the supporting-legs of the overhead operating-chamber of the apparatus and adapted to forward or rearward longitudinal movement along said supports, substantially as described, and for the purposes set forth.

In testimony whereof I affix my signature, in presence of two witnesses, this 15th day of January, 1891.

GEORGE GAMLEN. [L. S.]

Witnesses:
WM. C. RAYMOND,
L. A. WORDEN.