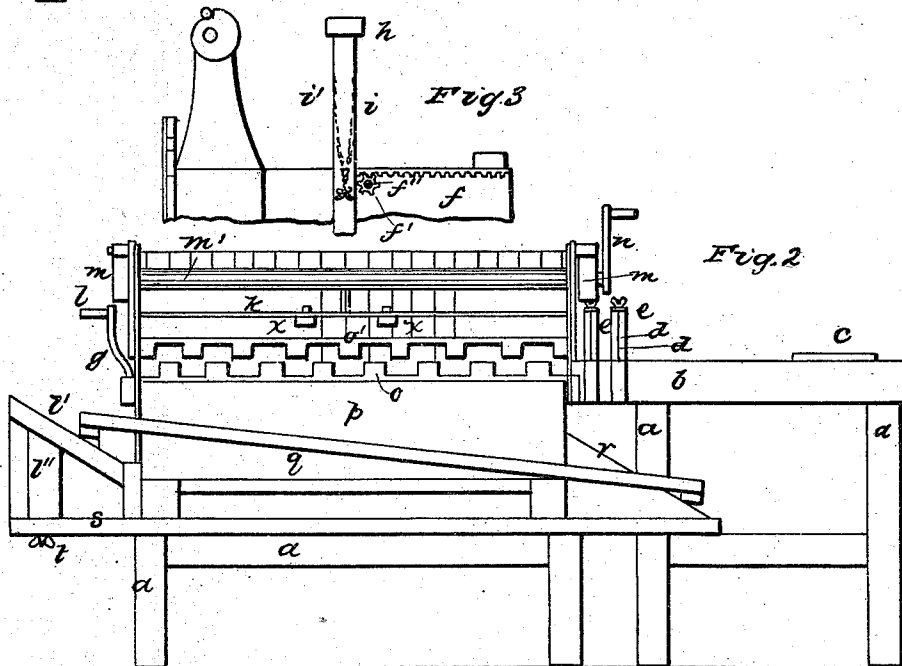
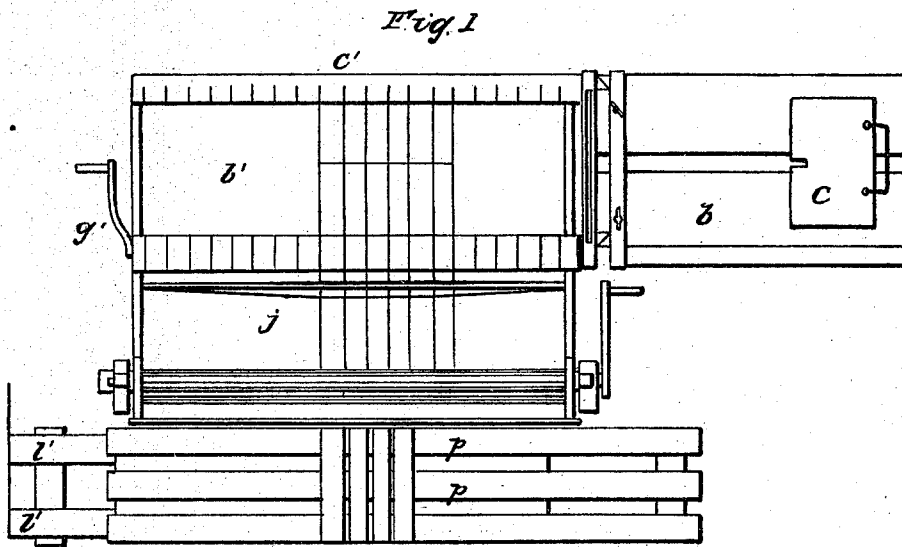


C. LEHMANN.

Soap Cutter.

No. 102,949.

Patented May 10, 1870.



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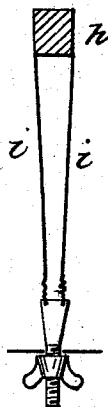
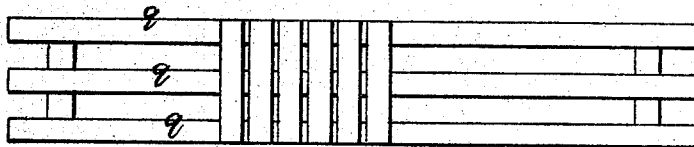
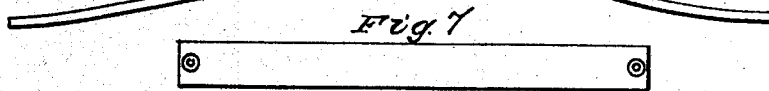
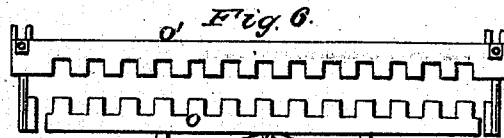
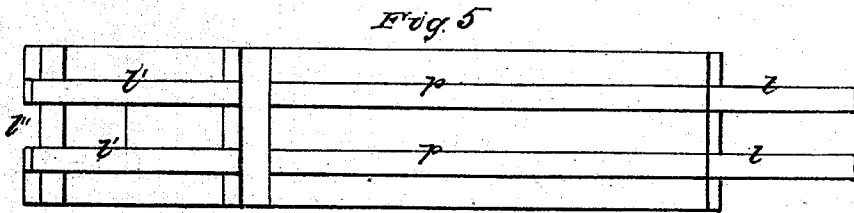
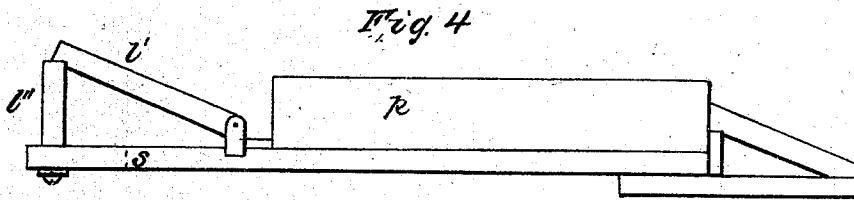
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Fig. 10

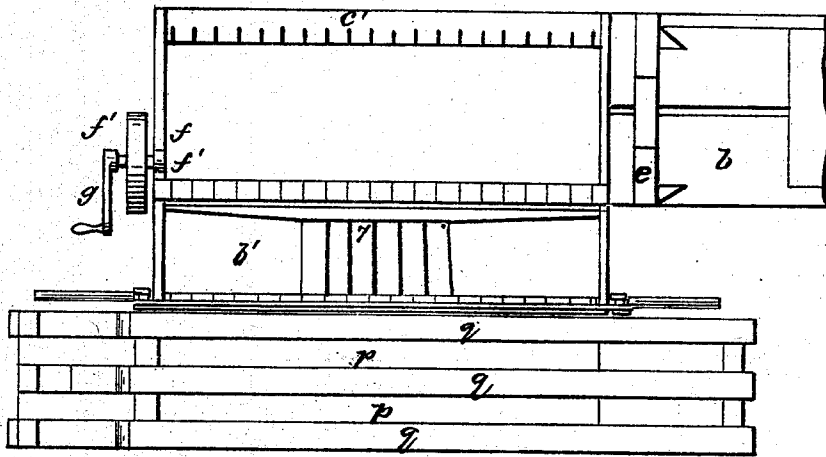
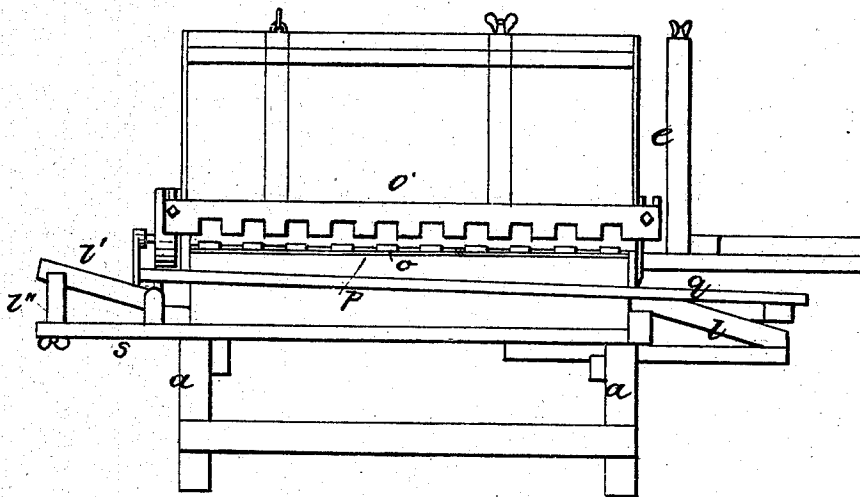


Fig. 11



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CHARLES LEHMANN, OF HARTFORD, CONNECTICUT.

Letters Patent No. 102,949, dated May 10, 1870.

IMPROVEMENT IN MACHINES FOR CUTTING, STAMPING, AND PACKING SOAP.

The Schedule referred to in these Letters Patent and making part of the same

To all whom it may concern:

Be it known that I, CHARLES LEHMANN, of the city and county of Hartford, and State of Connecticut, have invented certain new and useful Improvements in Soap-Cutting Machines, and to enable others skilled in the art to make and use the same, I will proceed to describe, referring to the drawings, in which the same letters indicate like parts in each of the figures.

The nature of this invention consists in arranging incline ways upon the machine, or in close proximity therewith, in connection with stationary slats or supports, astride of which the drying-frames are placed before the bars of soap are pushed forward thereon for the drying frame to slide upon, so that, by moving the drying-frame endwise, (upon the incline surfaces,) it will lift one bar of soap, then move a short distance farther, and it will lift a second bar of soap, and so on, alternately, moving and lifting in rapid succession, taking up one bar at a time, till all of the bars are placed upon the drying-frame, and spread apart, so as to allow the air to circulate freely between them for drying.

It also consists of notched bars or breakers, so constructed and arranged in the machine that, after the bars of soap have been cut, and while they are yet lying upon the table, or partially upon the table and stationary bars, by lifting or depressing a lever or levers, every other one of the bars of soap, one, three, and five, &c., will be simultaneously lifted above the surface of the intermediate ones, two, four, and six, &c., so that each bar shall be perfectly severed from the other.

It also consists in arranging two wires, a little distance apart, one directly in rear of the other, so that the second wire shall work in the path of the first, to recut or perfectly sever the bars from each other.

It also consists of a follower, having one straight side, and the other side formed in a curved line, so that its width in the center of its length shall be considerably greater than at its ends. This follower is for the purpose of being placed directly at the rear end of the bars of soap after they have been cut, so that the ends of the succeeding bars of soap shall bear against the straight side of the follower, and, as they are pushed forward, shall cause the front ends of the bars of soap (the rear ends of which rest against the curved side of the follower) to move in diverging lines, thereby increasing the spread distance between the bars upon the drying-rack, to facilitate the process of drying before they are lifted from the stationary frame or supporting-slats.

It further consists in arranging two tables, one at right angles with the other, so that they can be easily attached and detached at will, to economize room, and,

when put together, to more rapidly execute the cutting of the soap into bars.

In the accompanying drawings—

Figure 1 is a top or plan view.

Figure 2 is a side or front elevation.

Figure 3 is a partial-end view.

Sheets 2 and 3 show detail views of its parts.

Figure 10, sheet 2, is a top view of the table upon which the bars of soap are cut.

Figure 11 is a front elevation of the same.

Figures 4, 5, and 8, sheet 3, show a device for spreading the bars of soap upon the drying-rack.

Figure 6 shows a breaker device for thoroughly separating the bars of soap, one from the other, after the cutting operation.

Figure 9 shows double cutting-wires, and how they are connected, so that they can be secured in the desired position and tightened by simply turning of a thumb-nut, while the distance between the wires which governs the width of the bars of soap is regulated in the common way, as slits formed in the cross-bar upon which they (the cutter-wires) are arranged.

a is the frame-work of the machine.

b is the table or bed of the machine, upon which the soap is placed and moved forward from one point to another, by means of a pusher-block, *c*, which is fitted to the table so as to move forward and back thereon by manual or mechanical pressure applied thereto by pulley, crank, rack, and pinion, &c.

d are wires, arranged perpendicularly in the frame *e*. The outside ones are for cutting the soap the width required for the length of the bars when finished. The middle wire cuts through the center of the cake, each side of which is of the width of the length required for the length of the bar.

The body of the soap-so cut is pushed still further forward in a direction at right angles with the first cutting-table *b* onto the table *b'*, just in front of another pusher, *c'*, having a toothed rack, *f*, secured on each end of and extending forward by the side of the table, and connects and works in pinion *f'*, arranged upon the end of a shaft, *f''*, which extends across from one side of the machine to the other, and has its bearings in the frame-work, or studs secured thereto, and is operated by a pulley or crank, *g*.

For the purpose of producing the cutting of the bars into a given width, and to further guard against the bars uniting after the first cut, I arrange two wires, *i* & *i'*, in the frame *h*, so that, as the body of the soap is being pushed forward by the rack and pinion pusher, the first wire, *i*, cuts the soap the desired width, and in the common way, and, as it continues its passage, the second or duplicate wire *i'* recuts or trims the bars, and thereby renders them less liable to stick together as they pass forward.

After these bars have been cut and pushed a short distance forward of the wire *i* by the pusher *c*, I place against the rear ends of said bars a pusher-plate, *j*, one side of which is about straight, and the other curved, so that it will be quite thin at each end and thick along the center thereof, the curved side being placed against the rear ends of the bars, so that, as the next tier of bars is pressed forward against the plate *j* by the pressure-plate *c*, it will tend to direct the movement of the front ends of the bars of soap in diverging lines.

k is a stamping-bar, having two or more stamps *x* arranged thereon, for the purpose of stamping the bars of soap as they pass underneath them.

This bar is arranged to play in the studs *l*, by means of cams *m* upon each end of the shaft *m*, and is operated by a pulley or crank, *n*, upon one end of said shaft.

This stamp-bar *k* is provided with pressure springs, so that, as the stud-pin in the lifting-arm of the stamp-bar rides over the notch of the cam, they will serve to give additional force to its (the stamp-bar's,) own gravity, to imprint upon the bars of soap whatever is upon the face of the stamps.

o o' are breakers. The upper one, *o'* is secured by adjustable set-screws in a fixed position just above the upper side of the bars of soap in the arms from the frame-work, while the lower one, *o*, is elevated and depressed automatically, or by hand, by means of a lever connection, for the purpose of breaking any connection between the bars of soap after they are cut, and before or while they are being pushed forward upon the rack or bars *p*.

q is a drying-rack, which may be made in duplicate number, and are placed, one at a time, astride of the bars *p*, the end pieces of which rest upon the lower portion of the incline ways *r*, so that, when the soap is placed upon the bars *p*, by pushing the rack forward up the incline plane or ways, it (the rack) will first take one bar of soap, then move a short distance, then take another, and so on, till it shall have taken up all the bars from the rack *p*. Thus all the bars of

soap will be lifted and arranged a short distance apart upon the drying-racks *q*, by the simple operation of pushing the frame endwise while in the operation of removing the bars of soap from the rack or bars *p*.

These incline ways *r* are hinged at their lower ends and provided with an adjustable support, *r'*, for the purpose of increasing or diminishing the inclination of the ways *r*, which is effected by moving it back and forth upon the support *s*, and is held in its place by means of a bolt or screw, *t*.

I believe I have thus shown the nature, construction, and advantage of this invention, so as to enable others skilled in the art to make and use the same therefrom.

What I claim, and desire to secure by Letters Patent, is—

1. The incline ways *r*, in combination with the rack or bars *p*, and drier-frame *q*, for spreading the bars of soap, substantially as set forth.

2. The breakers *o o'*, arranged as described, for separating or elevating the surface of the first, third, fifth bars of soap, and so on, above the surface of the second, fourth, and sixth, or *vice versa*, or every other bar will be elevated simultaneously, as shown and set forth.

3. Arranging two cutting-wires *i i'*, and securing them in the desired position by screw and nut, substantially as shown and set forth.

4. A follower or pusher-plate, *j*, to be placed upon the table in rear of each successive tier of bars of soap, after having been pushed beyond the cutter-wires to spread or push the bars forward in diverging lines upon the rack or bars *p*, substantially as set forth.

5. The arrangement of two tables, one at right angles with the other, and capable of being detached at will, as and for the purpose set forth.

CHARLES LEHMANN. [L. s.]

Witnesses:

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JEREMY W. BLISS.