

E. Hall,

Cheese Press.

N^o 5381.

Patented Dec. 4, 1847.

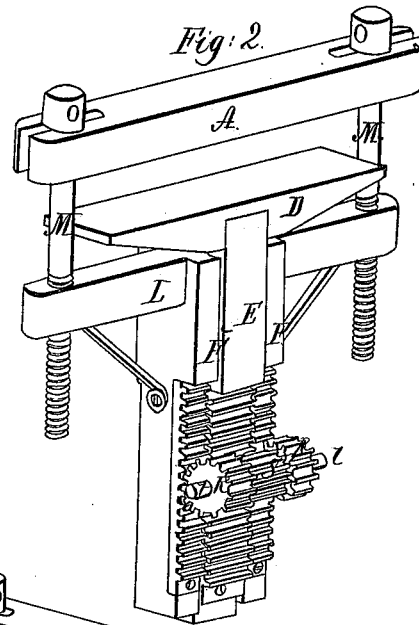
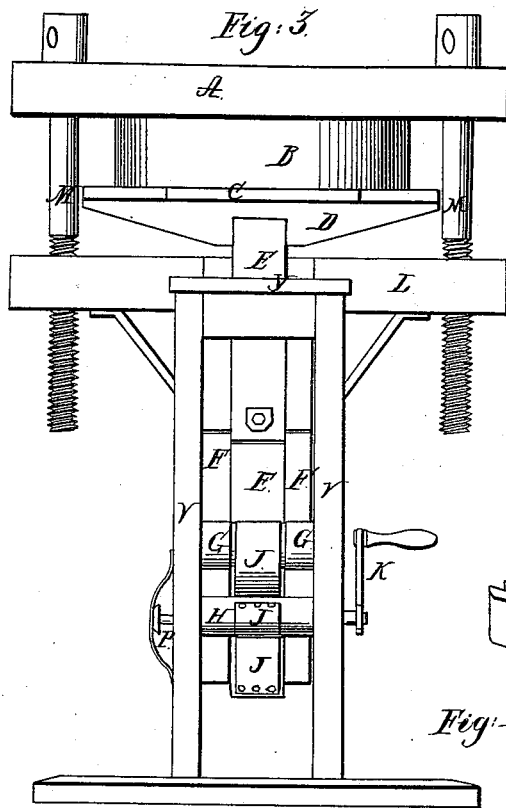
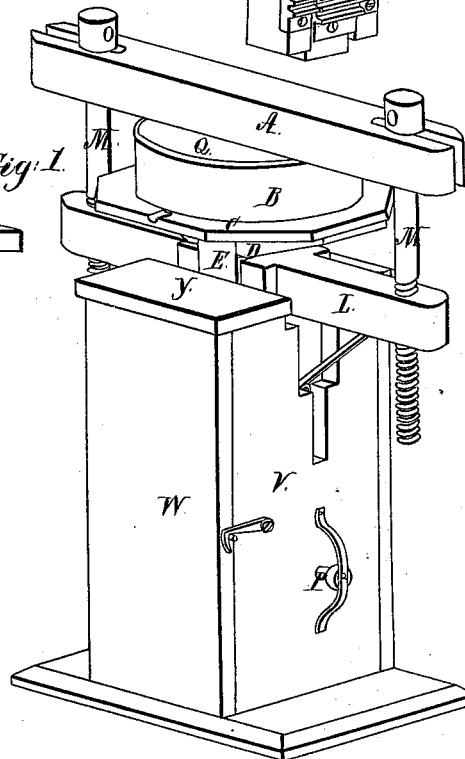


Fig. 1.



UNITED STATES PATENT OFFICE.

ELIAS HALL, OF PERSIA, NEW YORK.

SELF-ACTING CHEESE-PRESS.

Specification of Letters Patent No. 5,381, dated December 4, 1847.

To all whom it may concern:

Be it known that I, ELIAS HALL, of Persia, in the county of Cattaraugus and State of New York, have invented a new and Improved Self-Operating Cheese-Press; and I do hereby declare the following to be a full, clear, and exact description of the construction and operation thereof, reference being had to the accompanying drawings, making
10 a part of this specification, in which—

Figure 1, is a perspective view of a press complete; Fig. 2, is a perspective view of a portion of the same detached; and Fig. 3, an elevation of the rear side of the press, with
15 the back casing removed.

My improved cheese press is constructed in such a manner that the pressure is exerted by the weight of the cheese itself, and is steady and continuous, progressing uniformly and undeviatingly as the cheese diminishes in thickness, until the requisite
20 solidity is attained.

Similar letters refer to corresponding parts in all the figures.

25 B, is the hoop in which the curd is placed to be formed into cheese, resting on a bed piece C, which is channeled in the usual manner for carrying off the whey. The bed C, is supported on the cross-head D, secured
30 to the top of the vertical rack bar E; the rack bar E, is placed between two side rack bars F, F.

V, V, are the sides of a vertical box or casing, in which the rack bars E, and F, F, are supported and guided. The racks on the bars F, F, mesh into the pinions R, R, and the rack on the bar E, meshes into a smaller pinion S, placed between the pinions R, R,
40 on the axle *t*, to which they are all made fast. The axle *t*, has its bearings in the sides V, V, of the casing. L, is a cross-head secured to the top of the side bars F, F.

Q, is the follower fitting into the hoop B. A, is a cross-piece, resting on the follower
45 Q, the ends of which are connected to the cross-head L, by the screws M, M, as represented.

The bars F, F, are pressed forward and the racks on their front edges caused to
50 mesh into the pinions R, R, by the rollers G, G, in their rear, the axle of which has its bearings in the sides V, V, of the casing. The bar E, is pressed forward, causing the rack on its front side to mesh into the pinion
55 S, by a roller playing loosely on the center

of the same axle with the rollers G, G. The rack bars E, and F, F, are elevated so as to bring the respective parts of the press into a position for operating, as follows.

H, is an elevating shaft placed in the rear of the posts, below the rollers G, G. 60

K, is a crank on the projecting axle of the shaft H.

J, is a strap made fast to the center of the elevating shaft H, passing from the
65 same upward and over the roller placed centrally between the rollers G, G, and descending is made fast to the bottom of the central rack bar E. By turning the elevating shaft H, the central rack bar E, is elevated by the
70 strap J, and imparting motion to the axle *t*, as it rises,—by means of the pinion S,—causes the pinions R, R, to elevate the rack bars F, F, more rapidly, and to a greater height than the rack bar E, itself is elevated, 75
in consequence of the larger diameter of the pinions R, R, than S. The rack bars F, F, and E, are elevated to such a height that the pin P, passing through an aperture in one side of the casing V, can be inserted under
80 the bottom of one of the side rack bars F, which retains them all in an elevated position. The curd is then placed in the hoop B, the follower Q, properly adjusted, and the cross piece A, brought to press closely
85 upon the follower Q, by turning the screws M, M; the pin P, is then withdrawn and the weight of the cheese and the rack bars E and F, F, are suspended by the axle of the pinions S, and R, R. The weight of
90 the cheese in forcing down the post E, acts upon the pinion S, and thereby causes the larger pinions R, R, to draw down the side bars F, F, bringing the cross piece A, with such force against the follower Q, as to suspend
95 the posts and cheese by the axle of the pinions S and R, R, by which means the desirable pressure is given to the cheese and continued uniformly as the same diminishes in thickness, till the requisite degree of solid-
100 ity is attained.

It will readily be perceived that the unequal size of the pinions R, R, and S, will cause the cross piece A, to approach nearer to the bed C, as the rack bars E, and F, F, descend, and the reverse when they are elevated; and consequently by varying the proportions of the pinions the amount of pressure can be regulated and governed.

Having thus fully described my self acting 110

and continuously operating cheese press, what I claim therein as new and desire to secure by Letters Patent, is—

5 The combination and arrangement of the vertical rack bars E, and F, F, (to which the cross-heads D, and L, are connected,) with the suspension and self operating pinions S,

and R, R, on the axle *t*, in the manner substantially as herein set forth.

ELIAS HALL.

Witnesses:

GEORGE H. HALL,
GEO. S. HICKCOX.