(No Model.)

A. A. SKINNER.

BUTTER WORKER.

No. 301,167. Patented July 1, 1884.

Fig. 1.

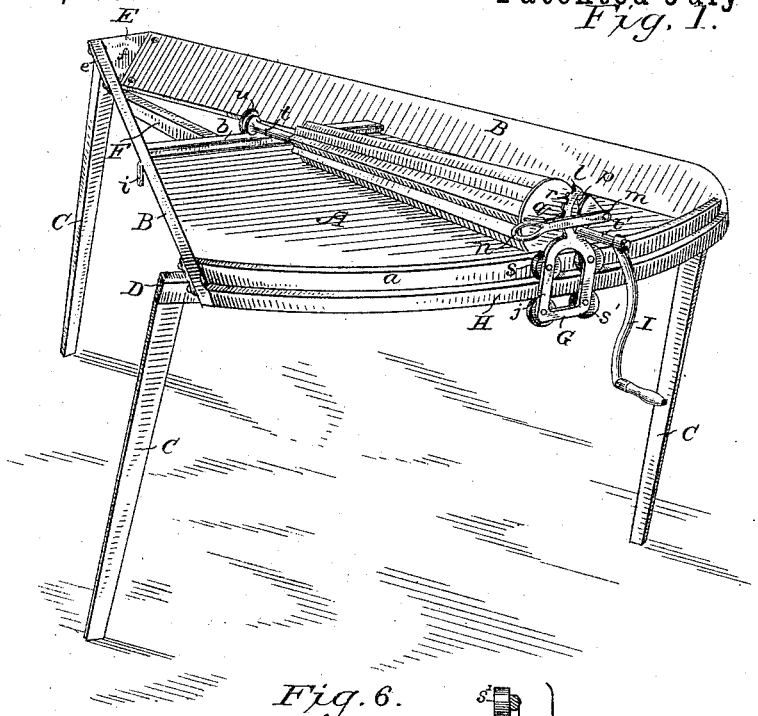


Fig. 6.

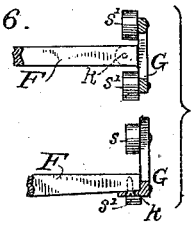


Fig. 2.

Fig. 3.

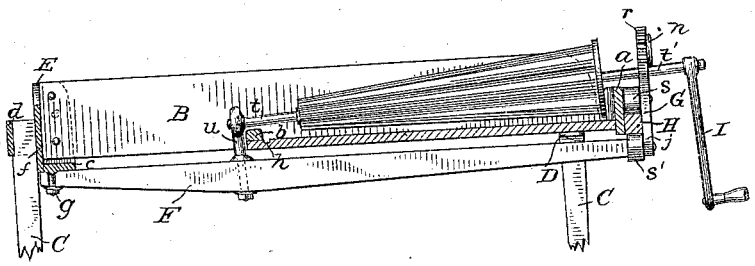


Fig. 4.

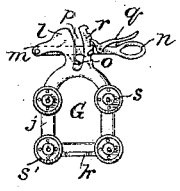
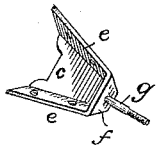
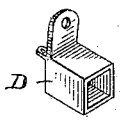


Fig. 5.





WITNESSES

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UNITED STATES PATENT OFFICE.

ALBA A. SKINNER, OF GREENE, NEW YORK.

BUTTER-WORKER.

SPECIFICATION forming part of Letters Patent No. 301,167, dated July 1, 1884.

Application filed January 2, 1884. (No model.)

To all whom it may concern:

Be it known that I, ALBA A. SKINNER, of Greene, Chenango county, New York, have invented certain new and useful Improvements in Butter-Workers, of which the following is a specification.

My invention consists in certain improved apparatus for expressing superfluous liquids from butter.

My apparatus is simple in construction, and may be conveniently and reliably operated.

In the accompanying drawings, Figure 1 is a perspective view of my improved apparatus; Fig. 2, a side view, partly in section. Fig. 3 is a view of my improved roller-carriage; Fig. 4, a view of the back-leg socket; Fig. 5, a view of one of the side-leg sockets, and Fig. 6 shows the manner of connecting the radial arm to the carriage.

I preferably employ a truncated sector-shaped tray, A, having inclined sides B, which are prolonged rearwardly, so as to about complete the sector. The front end or arc of the tray is bounded by a fence, *a*, and the rear end is provided with a ridge or fence, *b*. There is no bottom to the remainder of the sector. At its front end the tray is supported on standards C, which are preferably fitted in metallic sockets D of the kind illustrated in Fig. 5. The rear ends of the prolonged side pieces B are fitted and secured in a metallic socket, E, which preferably consists of a back piece, *c*, having a leg-socket, *d*, two side pieces *e*, which are inclined to correspond to the inclination of the side pieces B, and to which the side pieces are secured, and a bottom piece, *f*, in which is fixed a downwardly-projecting bolt, *g*. The tray has a slight slope or pitch from the front backward. A groove or gutter, *h*, is formed in the bottom of the tray at the edge of the fence *b*, which communicates with a spout, *i*, at one side of the tray. Preferably the groove increases in depth toward the spout from the opposite side of the tray, so that the expressed liquid is readily carried off. The groove may, however, be made with a uniform depth and the tray slightly tilted to one side. A radial arm, F, is pivoted at one end to the bolt *g* at the apex of the sector, and extends under the tray to its front edge. On the outer end of the radial arm is mounted the roller-carriage G. I preferably employ a carriage substantially like that illustrated in the drawings, where it is shown as consisting of a frame, *j*, having a laterally-projecting lug, *k*, to which the radial arm F is secured, as shown in Fig. 6, and an upward extension, *l*, provided with a laterally-extending arm, *m*, to which is pivoted a hand-lever, *n*, having a hooked finger, *o*. A slot, *p*, is formed in the extension *l*, and it is curved in the arc of a circle the center of which is the pivot of the hand-lever. By this arrangement the curved finger always coincides with the slot when the hand-lever is moved vertically. A detent or thumb-latch, *q*, is carried by the hand-lever, which engages with a rack, *r*, on the extension *l*, by which the lever may be fixed in any desired position. Two sets of rollers, *s s'*, carried by the frame, travel over the tray on a track, H. The upper rollers, *s*, rest on the top of the track, and the lower ones, *s'*, bear against the bottom of the the track, by which arrangement friction is largely reduced and the carriage is retained in its normal horizontal plane. The roller is preferably a longitudinally-corrugated frustum of a cone, and is provided at both ends with gudgeons *t t'*. The inner gudgeon, *t*, is journaled in an eye-bolt, *u*, that is carried by the radial arm just outside the ridge or fence *b* of the tray, and the gudgeon *t'* is journaled in the curved finger *o*. The roller may be raised or lowered and fixed in any desired position by means of the hand-lever *n* and its detent *q*. The roller is turned by a crank, I, applied to the end of the gudgeon *t'*. As the roller is revolved, it traverses over the tray, and "works" the butter in a most efficient manner. As the brine is expressed, it flows to the groove or gutter *h*, and thence out through the spout *i*.

It is sometimes desirable to revolve the roller without moving it across the tray, and this may be readily done with my apparatus whatever be the radial position of the roller.

I prefer to employ a tray having the form of a truncated sector, as by that arrangement I am enabled to use short gudgeons, which will not be liable to sag or bend; but so far as part of my invention is concerned the inner gudgeon may be journaled at the apex of the sector.

I claim as my invention—

1. The combination, substantially as set forth, of the stationary tray, the roller which traverses over the tray, the inner bearing for the roller, and the outer bearing in which the roller turns, and which is mounted on the tray and moves horizontally with the roller.

2. The combination of the roller, the sector-shaped tray, the radial arm pivoted at the apex of the tray which supports the outer end of the roller, and the bearings in which the roller turns, substantially as set forth.

3. The combination, substantially as set forth, of the tray, the roller, the bearing for the inner end of the roller, the carriage in which the outer end of the roller is journaled, and devices mounted on the carriage for vertically adjusting the roller.

4. The combination of the tray, the roller, the bearing for the inner end of the roller, the carriage in which the outer end of the roller is journaled, and the track on the tray on which the carriage travels, substantially as specified.

5. The combination of the truncated sector-shaped tray, its prolonged sides which complete the sector, the radial arm pivoted at the apex of the sector, the roller, the bearing for the inner end of the roller, carried by the radial arm near the back edge of the tray, and the bearing for the outer end of the roller, also carried by the radial arm, substantially as set forth.

In testimony whereof I have hereunto subscribed my name this 31st day of December, A. D. 1883.

ALBA A. SKINNER.

Witnesses:

HOWARD L. BRYANT,

A. B. HOLCOMB.