I. W. HEYSINGER.

SAUSAGE-STUFFER.

No. 192,996. Patented July 10, 1877.

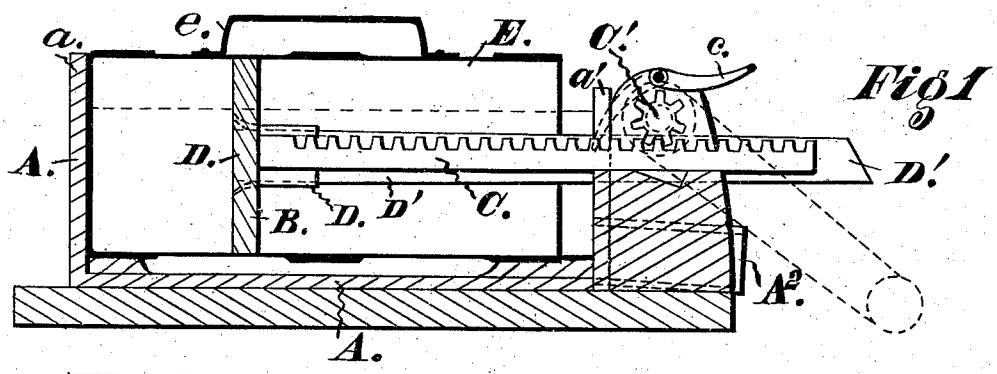


Fig 1

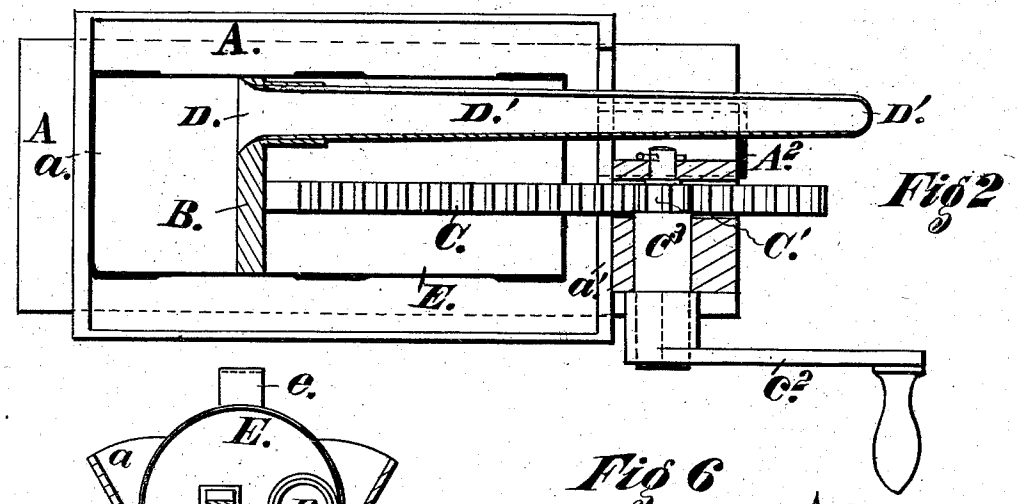


Fig 2

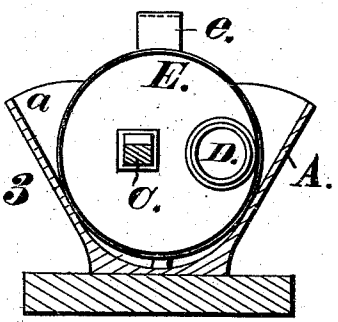


Fig 3

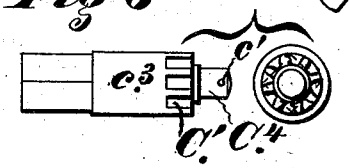


Fig 6

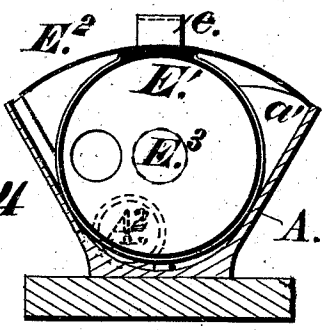


Fig 4

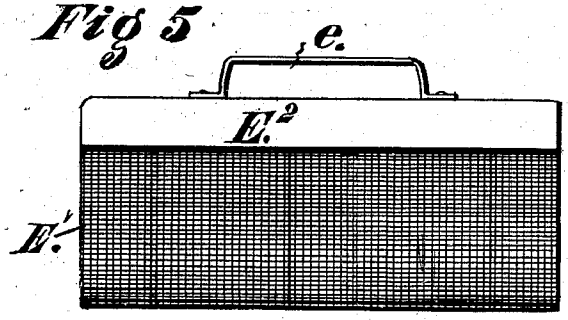


Fig 5

Witnesses

Stanley Williams

Thomas Maher

Inventor

Isaac W. Heysinger

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

ISAAC W. HEYSINGER, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN SAUSAGE-STUFFERS.

Specification forming part of Letters Patent No. **192,996**, dated July 10, 1877; application filed October 30, 1876.

To all whom it may concern:

Be it known that I, ISAAC W. HEYSINGER, of Philadelphia, county of Philadelphia, State of Pennsylvania, have invented certain Improvements in Combined Sausage-Stuffers and Lard and Fruit Presses, of which the following is a full, clear, and exact description, reference being had to the drawing accompanying and forming part of this specification.

Referring to the drawing, Figure 1 is a vertical longitudinal section nearly through the center of the machine. Fig. 2 is a horizontal section through the center, showing the rack and discharge-pipe from above. Fig. 3 exhibits a transverse section alongside and in rear of the plunger B. Fig. 4 is a similar section near the forward end of the machine, the lard-press cylinder E^1 E^2 being shown in end view. Fig. 5 shows the said perforated cylinder in full. Fig. 6 represents the pinion C^1, which gears into the rack C in different positions.

The object sought to be accomplished in this invention is to produce a combined sausage-stuffer and lard-press which should have great lightness, together with strength of construction, and which should be more easily manipulated, quicker in action, more convenient for filling and handling, have fewer parts, and be more readily taken apart for cleaning than those heretofore made.

An examination of the figures will show the construction very clearly.

A is an open cast-metal trough or hopper, with closed ends, narrowed toward the bottom, and resting upon a wooden base. (Shown in Fig. 1.) In the bottom of this trough rests, by its own gravity, the hollow, light metal cylinder E, closed at the bottom, a minute air-hole being preferably left in the same. This cylinder is removable by means of the handle *e*, the perforated cylinder E^1 E^2 being substituted therefor when using the apparatus as a lard or fruit press. There may be employed two of these cylinders E, so that while one is being emptied the other may be filled from the tub, and so expedite the process, as much time is ordinarily lost in filling, the operation of stuffing being then suspended. These cylinders, being made of standard sizes, serve an admirable purpose as measures of quantity about a house or barn, when not otherwise in use. The cylinder E is provided with a hole in its bottom, (shown at E^3 in Fig. 4,) which, while not large enough to allow the escape of solid matter while filling, will permit a rod to be introduced to thrust out the pomace, though, the cylinder being independently removable, this may be done by rapping it upon the tub or bench. To the top of the perforated cylinder E^1, Figs. 4 and 5, is attached a curved screen, E^2, which closes over the trough A, and prevents the splashing out of juices while under pressure. These juices run down into the bottom of the trough A, and along the same, a space, as shown, being left around the cylinders, which are supported at their ends, Fig. 1. The juices flow out at the nozzle A^2, Figs. 1, 2, 4, into a proper receptacle arranged beneath.

B represents the plunger or piston, which works in the above-described cylinders. It is provided behind with a rack, C, actuated by the pinion C^1, to be hereinafter described. This rack may be thrown a little off center, as shown, to make more room for the delivery-pipe D′, which lies alongside, as the resistance is less upon that side, D, on account of delivering through that portion of the plunger. This pipe D′ is of tin, is made tapering, and inserted from the forward side of the plunger through the short tube D, in which it is held by expansion, and may be removed at pleasure, or closed with a plug when the apparatus is being used as a lard or fruit press. The tube D′ is made so long that when the plunger B is fully introduced its tip will still extend well out beyond the cylinder. The rack C is actuated by the pinion C^1, which is controlled, in turn, by the crank C^2. This pinion, with its journals c^3 and C^4, is so constructed as to be entered from the crank side into its bearings, where it is held by a small cross-pin, c^1, Fig. 6. A pawl, *c*, is shown in Fig. 1, which may be thrown back out of gear, or, when the machine is used as a fruit or lard press, be dropped into place, and used to hold the plunger under pressure.

The rack C is so arranged as regards length that, the cylinder being removed, when the plunger is propelled to the forward end of the trough A, it, with its attachments, may be

lifted out of the machine for cleaning, &c., a cavity being left in the rack-bed, immediately beneath the pinion C^1, for the purpose, as is shown in Fig. 1. The bed in which the rack C lies, and which carries the pinion C^1, is cast solid with the trough, and the rack-bed or bearing is made long enough to hold the rack steady in any position.

Instead of the pawl *c* being made to engage in the rack C, the shaft of the pinion c^3 may be provided with a ratchet-wheel next the handle c^2, and the pawl pivoted to the side of the trough A may extend to the rear over said ratchet-wheel, and engage with the same, or be thrown over out of gear when desired; and instead of the rack and pinion shown in the drawing, to which I make no specific claim, another form of rack may be used, having teeth upon the front side, (instead of top or bottom,) and a face-plate with a scroll thereupon made to rest against and engage therein, and operate the same. In this construction the pawl and ratchet would not be necessary, but a very considerable loss of power from friction would ensue.

The operation of the machine is sufficiently simple. The apparatus being attached to a bench or table near the right-hand corner, the rack end to the right, the cylinder is filled with material from the tub or vessel by using it in the manner of a scoop. A sausage-skin having meanwhile been slipped upon the spout D′ in corrugated folds, the cylinder is dropped into place, and the handle turned with the right hand, the delivery of the sausage being controlled by the left, or by an assistant, if so desired. When empty, a second cylinder is substituted, and the operation goes on. In order to use it as a lard-press, the opening D in the plunger B is closed. The perforated cylinder is filled by dipping into the rendering-kettle, whereby the liquid fat is left behind. It is placed in the trough and subjected to pressure. The lard escapes by the nozzle A^2, and for continuous, exhaustive pressure the pawl *c* is applied, and the plunger left to act. When done the plunger is withdrawn, the solid matter knocked out, the cylinder refilled, and the operation repeated.

It will be observed that in stuffing sausage with this machine the mass of meat is not moved, as the delivery is constantly from the surface to the rear, whereby the power requisite is lessened nearly one-half, and better and steadier work is accomplished.

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

1. A sausage-stuffer provided with a cylinder and piston, arranged to deliver the material to the rear, alongside the piston-rod, substantially as described.

2. In combination with the cylinder E, the plunger B, provided with a delivery-tube, D, therein, substantially as and for the purpose set forth.

3. In combination with the trough A, the removable cylinder E, the plunger B, the piston-rod C, and the back-action delivery-tube D′, the whole arranged to operate substantially as and for the purpose described.

4. In combination with the plunger B, provided with the delivery-tube D D′, the imperforate plain meat-cylinder E, the same being removable, and provided with a handle, *e*, for the removal of the same, substantially as described.

5. In combination with the horizontal bed-trough A, concave for the reception of the cylinder E^1, the said perforated cylinder E^1 constructed to rest by its own gravity within the same, and provided with the screen or cover E^2, which closes the trough A from above when the cylinder E^1 is in place, together with the discharge-nozzle A^2 and the piston B, the whole constructed to operate substantially as and for the purpose above described.

6. The combination of the trough A, provided with removable cylinders E E^1, the plunger B, provided with the delivery-tube D D′, the rack C, pinion C^1, and handle c^2, the whole constructed to operate substantially as and for the purpose described.

ISAAC W. HEYSINGER.

Witnesses:
P. O. DONNELL,
HENRY MCINTYRE.