S. McNAIR.

Sausage Machine.

No. 7,800. Patented Nov. 26, 1850.

Fig. 3

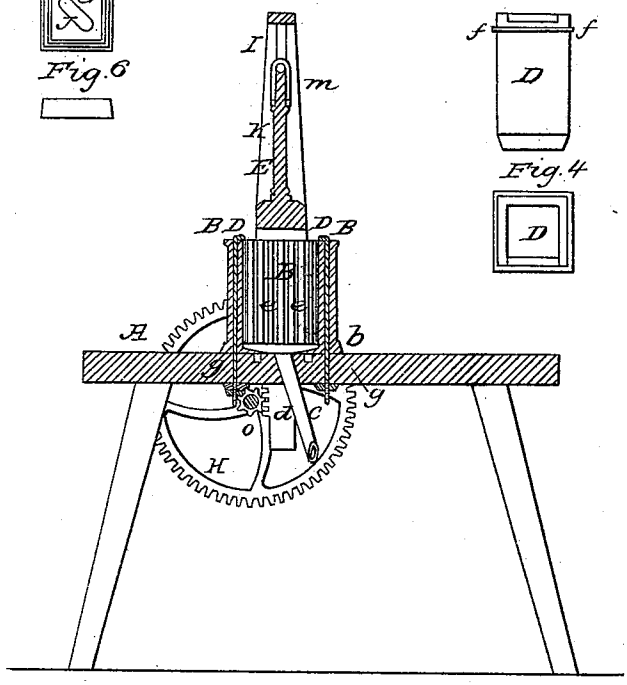


Fig. 6

Fig. 4

Fig. 1

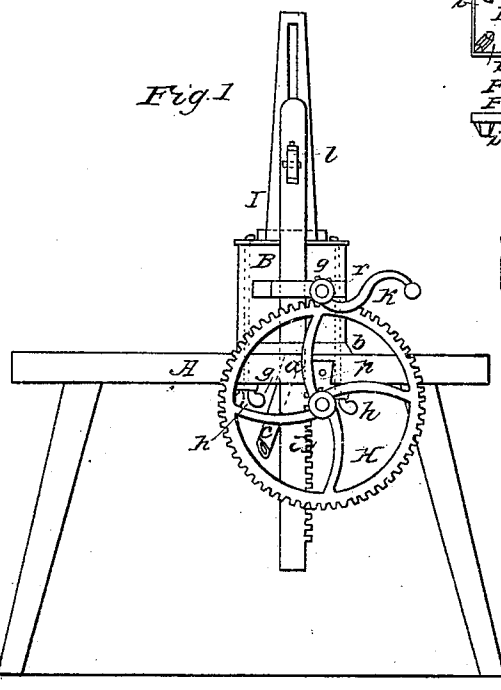


Fig. 5

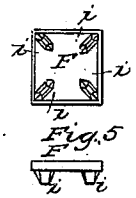
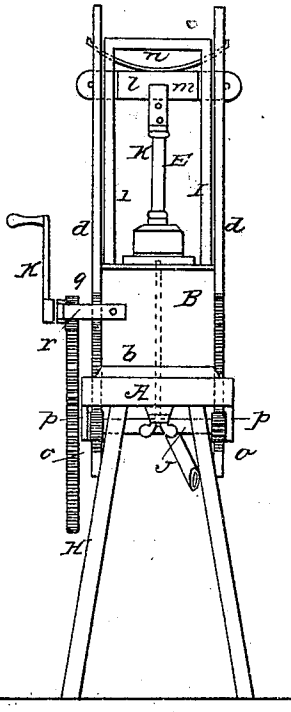




Fig. 2



N. PETERS. Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

SIMON McNAIR, OF HATBOROUGH, PENNSYLVANIA.

SAUSAGE-STUFFER.

Specification of Letters Patent No. 7,800, dated November 26, 1850.

To all whom it may concern:

Be it known that I, SIMON MCNAIR, of Hatborough, in the county of Montgomery and State of Pennsylvania, have invented a new and useful Machine for Stuffing Sausage, Pressing Lard, Tallow, &c., which I call the Combined Stuffer; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1, is a longitudinal elevation of the machine; Fig. 2, a transverse elevation of the same; Fig. 3, a vertical section thereof; and Figs. 4, 5, and 6, are details.

A, represents a bench of suitable dimensions, on the top whereof a mortise is cut or sunk in, for the reception of the lower end of the inner case D, corresponding for that purpose in size and shape; cleats *b*, are nailed or screwed fast to the bench and embrace the outside of the case B, when it is fastened down on the bench, serving the double purpose of keeping the case steady and preventing leakage. On opposite sides of the outer case, mortises *a*, are cut through the bench for the rack-rods *d*, to move up and down in.

C, represents the discharging pipe, which is made tapering and small enough at the lower end to receive the skins on it; and is fastened into the bench in the bottom of the broad mortise extending downward a suitable distance.

The outer case B, may be made of any convenient size and proportions, and is open at the ends (previous to its being fitted on the bench) and is provided with ribs or slats *e* applied to the inner surface thereof (see Fig. 3) in such manner as to form fluted-funnels by their intervening spaces, which should be of such proportions, as will allow the expressed liquids to flow freely down to the bottom without allowing the bag containing the matter to be pressed, to be forced into them.

Fig. 4, D, represents the inner case, which is made to slide loosely into the outer case B, open at the ends and beveled at the lower end, that it may fit tightly into the broad mortise on the top of the bench. The upper end of which is banded with a flanged hoop *f*, the flanges whereof extend to the edge of the molding on the top of the outer case, and by their contact serve to keep the upper end of the inner case steady. This case D, extends a short distance above the flange, which extension is notched on one side, that the permanent-follower E, may be pressed aside before it arrives at the top edge of the said case, the utility of which is selfevident. The case B, when placed on the bench occupies a portion of the space between the cleats *b*, and the outer edges of the broad mortise *a*, and is secured in its place by screws inserted from the under side of the bench. The case D, being introduced into the outer one, and forced down into its mortise, is kept in its place by two bolts *g*, the upper ends of which turn over the edges of the flange of the hoop *f* and are tightened or loosened by thumb-screws *h* on their extremities below the bench.

Fig. 5, F, represents a movable bottom with brackets or supports *i*, on the under side, to elevate it sufficiently to permit the expressed liquids to pass under it; a strap is attached to the upper side whereby to handle it.

Fig. 6, represents a detached follower of corresponding size, and to be used together with the former; it has a depression formed on its upper side to receive the follower E, and has a strap *j* attached like that on F, and for a similar purpose. When not in use these two last mentioned parts are shoved in between two strips on the under side of the bench in a similar manner, as counter-draws. The follower E, with its rod *k* is attached to the head *l*, by means of the clip *m*, which clasps around on the under side of the head *l*, which together form a hinge-joint whereby the follower is permitted to be moved to either side in a longitudinal direction with the bench. On the top of the head *l* rests the spring *n*, the ends of which are turned upward and pass through the mortises of the rack-rods, *d*. Said spring should be of sufficient strength to lift the rods and draw the teeth of the racks into gear, when detached from their pinions under the bench, and should be made flexible enough to admit of being drawn on to the top of the head *l*, when the machine is operating. The object of this spring is to prevent the machine from being broken, if the handle should be turned after the follower has arrived at the bottom of the case, particularly in the operation of stuffing. The head *l* which carries the follower E, and rod *k*, is moved by the rack-rods *d*, which

gear into the pinions *o* under the bench, on the shaft of the main wheel H. The upper ends of the rack-rods are provided with mortises to receive the tenons of the head *l*, these mortises should be long enough to allow the rack-rods to shift up and down on the tenons of the head, about the distance of the pitch on the teeth of the racks.

The guide posts I, are attached to the sides of the outer case B, and are furnished with long mortises, which admit of a connection of the ends of the head with the rack-rods, and serve also to guide and keep the head in its proper position.

The axle J, carrying the pinions *o*, is placed transversely below the bench, in such a position as that said pinions are brought into gear with the racks. It is supported by boxes *p*, attached and secured to the sides of the bench by dovetails or otherwise; said boxes are placed on the axle J, outside of the pinions *o*. The main wheel H, on the end of the axle is driven by a small wheel or pinion *q*, on the axle of which, the crank and handle K, is attached, said axle being supported by a bearing *r*, fastened to the sides of the outer case.

The following explains the manner of using the machine and its operation: The inner case D, having been screwed down into its place, and filled with minced meat, and the follower E having been drawn into its proper position directly over it, the handle K, is then turned by one person, while another manages the skins on the discharging-pipe C. The handle being turned to the right with a steady but moderate motion, the follower is caused gradually to descend and force the meat out through the discharging tube C, into the skins previously slipped on the nozzle thereof. When the follower E, arrives at the bottom of the case, the last cogs on the upper ends of the racks have moved entirely below and beyond the reach of the cogs of the pinions *o*, and if the crank is turned in the opposite direction the follower will not be raised in consequence of the cogs of the racks having run entirely out of gear, and it would be difficult to draw the follower up again without the aid of the spring *n*, which lifts the rack-rods the instant they are disengaged from the pinions *o*, below, and keeps the cogs of the racks in a position to gear into the pinions, whenever the motion of the crank is reversed. Care should however be taken not to reverse it until the click produced by the rising of the spring at both ends has been heard, otherwise the head may be thrown from its horizontal position and the machine injured. As soon as these have been heard, the motion may be reversed, and the person turning may press with the left hand against the rod of the follower forcing it to one side the instant that it arrives high enough to pass out through the notch at the upper edge of the case, when he must cease turning, the case is then ready for refilling.

If the machine is to be used for pressing it will be necessary to draw out the inner case by loosening the thumb-screws under the bench, and having turned the heads on the top aside, fasten them down again. The movable bottom F, is then shoved down into the outer case until its supports touch the bottom of the depression in the bench. A strong bag made of suitable material and of a size to fit the inside of the case, with flaps on the top, is then introduced and filled with the residuum of the heated lard or tallow, (that remains undissolved after having been heated) or any other substance to be pressed. The flaps are now turned over the top of whatever is to be pressed. The detached follower G is set in with its depressed side upward, and the permanent follower is drawn directly over it. The operator then applies one hand to the handle of the machine and the other to the rod of the follower E, causing it to enter the depression in the top of the follower G. The turning motion should be gentle to allow the expressed liquid time to run off without flooding through the discharging tube C. If the operator wishes to let it stand and drain for a few minutes, a click on the under side of the bench, may be drawn into the cogs of the main wheel, to prevent reaction. After the pressure has been sufficiently applied, and the click turned back the motion may then be reversed, the follower and rod pushed aside, the detached follower G, removed and the bag drawn out by the flaps on the upper end. The remaining contents are then thrown out, and the process repeated until all the substance on hand is exhausted.

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

The introduction of a tube or case D, into the case or cage B, of a press and adapting it thereto in such manner as to form a sausage stuffer in combination therewith, which is operated by the same power and under the same piston and rod that acts upon the press; as herein substantially set forth.

SIMON McNAIR.

Witnesses:
OLIVER P. FRETZ,
JACOB CAUFFMAN.