(No Model.)

R. B. PUMPHREY.

MEAT CUTTER.

No. 305,225. Patented Sept. 16, 1884.

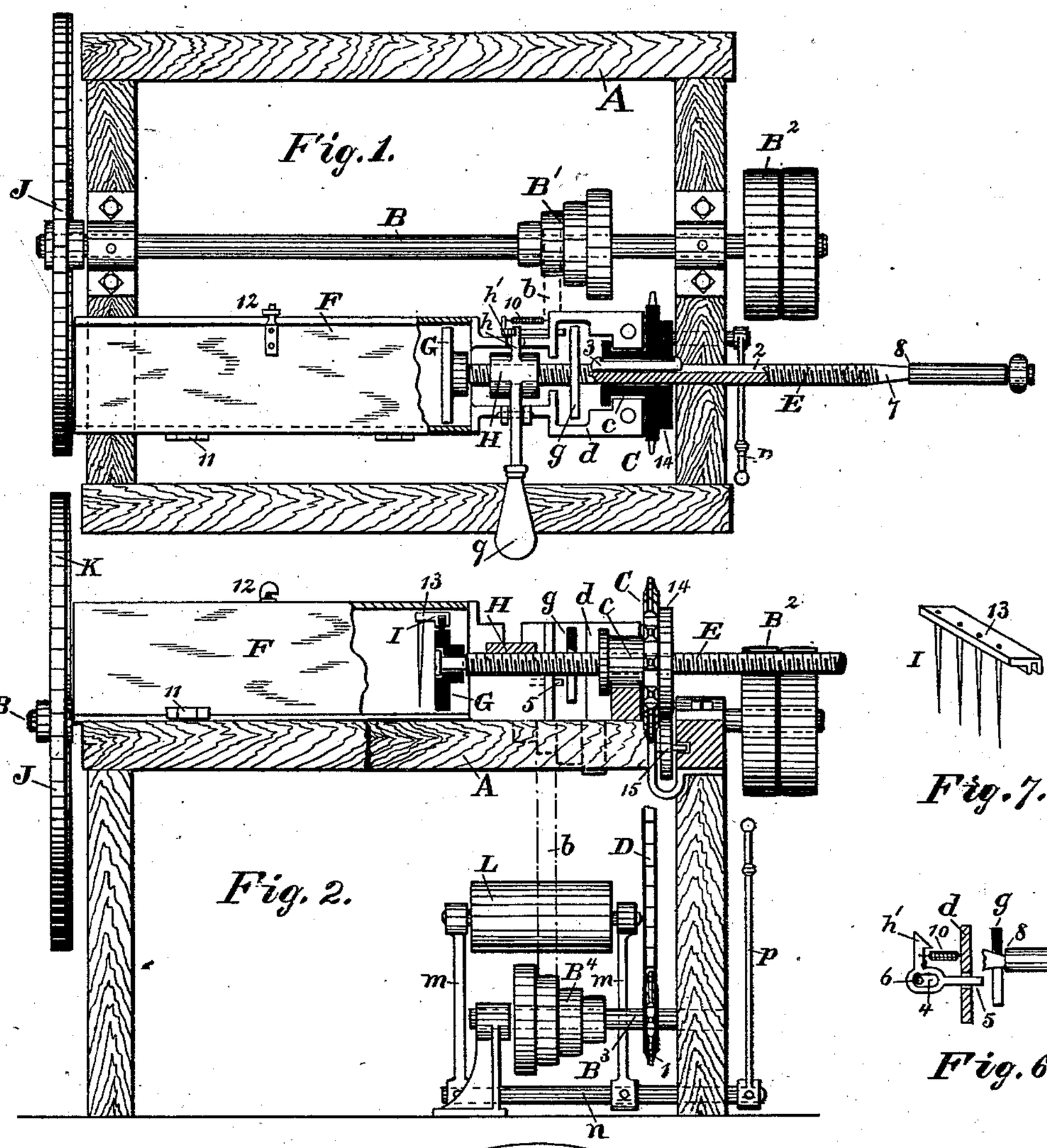

Fig. 1.

Fig. 2.

Fig. 7.

Fig. 6.

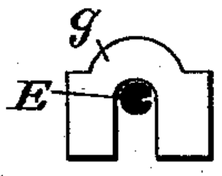

Fig. 5.

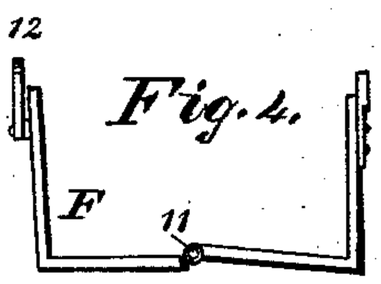

Fig. 4.

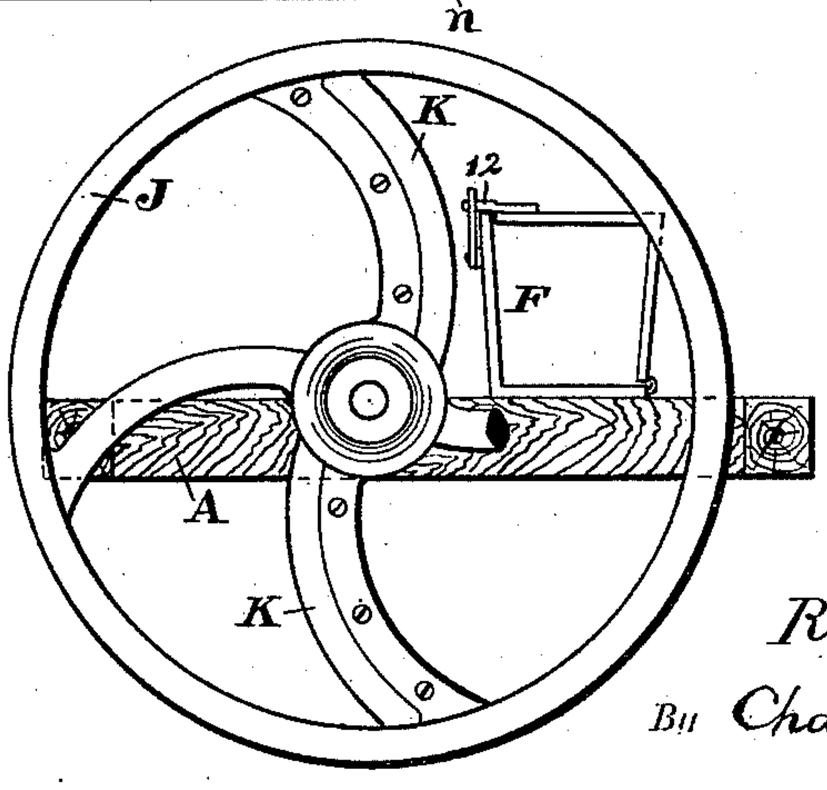

Fig. 3.

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UNITED STATES PATENT OFFICE.

ROBERT B. PUMPHREY, OF BALTIMORE, MARYLAND.

MEAT-CUTTER.

SPECIFICATION forming part of Letters Patent No. 305,225, dated September 16, 1884.

Application filed October 4, 1883. (No model.)

To all whom it may concern:

Be it known that I, ROBERT B. PUMPHREY, a citizen of the United States, residing at Baltimore, State of Maryland, have invented certain new and useful Improvements in Meat-Cutters, of which the following is a specification.

This invention relates to certain improvements in that class of machines for cutting meat, such as dried beef and the like, where a "follower" is employed to feed the meat to the cutters.

The construction of the several parts will first be described, and those features which constitute the invention will then be designated in the claims.

In the accompanying drawings, Figure 1 is a top view of the machine. Fig. 2 is a front elevation, certain parts being in section. Fig. 3 is a partial side view, showing the cutters and meat-box. Fig. 4 is an end view of the meat-box open. Fig. 5 is a view of the movable plate which actuates the automatic release of the clamp. Fig. 6 shows the automatic release mechanism. Fig. 7 shows the meat-fork, which is adapted to be attached to the follower.

The object of this invention is to improve the machine shown and described in Letters Patent of the United States granted me August 21, 1877, No. 194,370.

In the drawings, the letter A designates the frame of the machine; B, the drive-shaft, having cone-pulleys B″ and B^2, the drive-pulley by which power is applied. A shaft, B^3, journaled on the lower part of the frame, has cone-pulleys B^4, and is driven by a belt (indicated by *b*) passing over the upper cone-pulley. This lower shaft carries a sprocket-wheel, 1, and another sprocket-wheel, C, has a hub, *c*, which rests in a box, *d*, on the top of the frame. A drive-chain, D, connects the two sprocket-wheels. A screw, E, passes through the upper sprocket-wheel and its hub, and said screw has a longitudinal groove, 2, which receives a feather, 3, in the sprocket-wheel, whereby the screw will be turned by the wheel, but may move endwise through it. The meat-box F rests upon the frame, and the follower G in the meat-box has the end of the screw fastened to it in such manner as to permit the screw to turn. A clamp, H, is pivoted in the box *d*, and its curved portion just over the screw is threaded internally to engage with the screw when the latter is desired to be moved endwise and press forward the follower which is in the meat-box. A projection, *h*, is on the curved part of the clamp, and an upward-projecting hook, *h′*, has a horizontal slot, 4, and is provided with a horizontal finger, 5, which passes endwise freely through an opening in the wall of the box *d*. A bolt or pin, 6, on the side of the box *d* is passed through the slot 4, and attaches the hook *h′* to the box. By this arrangement the hook *h′* is capable of moving back and forth horizontally, and thereby is adapted to engage with the projection *h*, to hold the clamp H down upon the screw E. The hook is automatically released from the projection on the clamp by the movable plate *g*, which has two downward-projecting prongs, as seen in Fig. 5. This pronged plate is in contact with or sets astride of the screw E, which has at its extremity a taper, 7, terminating at an abrupt shoulder, 8. When the follower has been pressed forward toward the cutters as far as it is designed to go, the tapered part 7 of the screw will have arrived at the movable or pronged plate. The normal position of the pronged plate is next to the end of the horizontal finger 5, and the screw turns and passes endwise freely between the two prongs until its shoulder 8 comes against the plate, as shown in Fig. 6, whereupon the said plate is moved against the end of the finger 5, thereby forcing back the hook *h′* and releasing it from the projection on the clamp. The result then is that the weighted handle 9 of the pivoted clamp will cause the curved portion over the screw to tilt up and disengage itself from the screw. Thereby the movement of the follower is stopped. A spiral spring, 10, having one end attached to the hook *h′* and the other to the wall of the box, serves to move said hook forward again in position, ready to engage with the projection on the clamp.

The four-sided meat-box F, as shown in Fig. 4, is composed of two pieces of cast metal, each piece embracing two sides hinged together. By this construction the hinge 11 is at one of the lower corners, and the meeting-edge of the

two pieces is at the diagonal upper corner, whereby the top and one side of the box can be turned away from the bottom and other side, as seen in Fig. 4, thus opening the box wide, and enabling the meat to be packed closely in the box and in front of the follower. To thus properly pack the meat in the box is important, because if not packed so as to be immovable, the cutters will not do their work well. A suitable catch, 12, is employed to fasten the two parts of the box together.

The follower G is provided with a detachable fork, I, on which the meat is pinned or impaled to be kept in position. The prongs of the fork are attached to a head, 13, having a straight groove, which receives the edge of the follower. The fork may be attached to the follower by the grooved head resting on the top, as shown in Fig. 2, with the points projecting downward; or the position of the fork may be reversed—that is, the grooved head may be below the follower and the points project upward.

The cutter-wheel J is mounted on the end of the drive-shaft, and the knives K are attached to the said wheel. This part may be constructed as shown in my former patent, or in any other way.

The upper sprocket-wheel, C, has on the outer side a face, 14, and an idle-wheel, 15, is mounted in suitable bearings immediately below. The idle-wheel is in contact with the face 14 of the sprocket-wheel on its under side and aids in sustaining the latter from tilting when the greater length of the screw is projecting, as when the follower is entirely back in the end of the box.

The upper and lower cone-pulleys and their connecting-belt serve to regulate the thickness of the slices cut from the meat. This results from the fact that while the speed of the cutter-wheel on the drive-shaft, which carries the upper cone, is unvarying, the movement of the follower which feeds the meat to the cutters may be made faster or slower by shifting the belt *b* on the cones. When the follower moves faster, the slices are thicker, and when it moves slower they are thinner.

The starter for the feed mechanism consists of a roller, L, mounted on two upright arms, *m*, attached to a rock-shaft, *n*, which is provided at its end with a hand-lever, *p*. By moving the hand-lever the roller is carried toward or away from the belt *b*, and when the roller is against the belt, the latter is tightened on the cones, thereby starting the drive-chain, screw, and follower.

Having described my invention, I claim and desire to secure by Letters Patent of the United States—

1. The combination, with the follower, the screw provided with a shoulder, and a pivoted clamp to engage with the screw, of the hook *h'*, adapted to move back and forth and engage the clamp, and provided with a finger, 5, and a movable plate, *g*, in contact with the aforesaid screw, whereby when the said shoulber comes against the movable plate the latter strikes the finger and releases the hook from the clamp, as set forth.

2. The combination of a rotary cutter, J, a four-sided box composed of two pieces, each embracing two of the sides, the said two pieces being hinged together at one corner, whereby the top and one side may be turned away from the bottom and other side, and having their meeting-edges at the diagonal opposite corner, and a follower, G, adapted to move in a horizontal plane through the said box, as and for the purpose set forth.

3. In a meat-cutter, the combination, with the follower G, of the herein-described fork I, consisting of a head, 13, having prongs attached thereto, and provided with a straight groove, which receives the edge of the follower, as set forth.

4. In a meat-cutter, the combination of a meat-box, the follower, a screw to drive the follower, a wheel, C, to turn the screw provided with a face, 14, and an idle-wheel, 15, below and in contact with the said face, as and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

ROBERT B. PUMPHREY.

Witnesses:

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JNO. E. MORRIS.