A. R. GILLIS.
Meat-Cutter.

No. 204,811. Patented June 11, 1878.

Fig. 1.

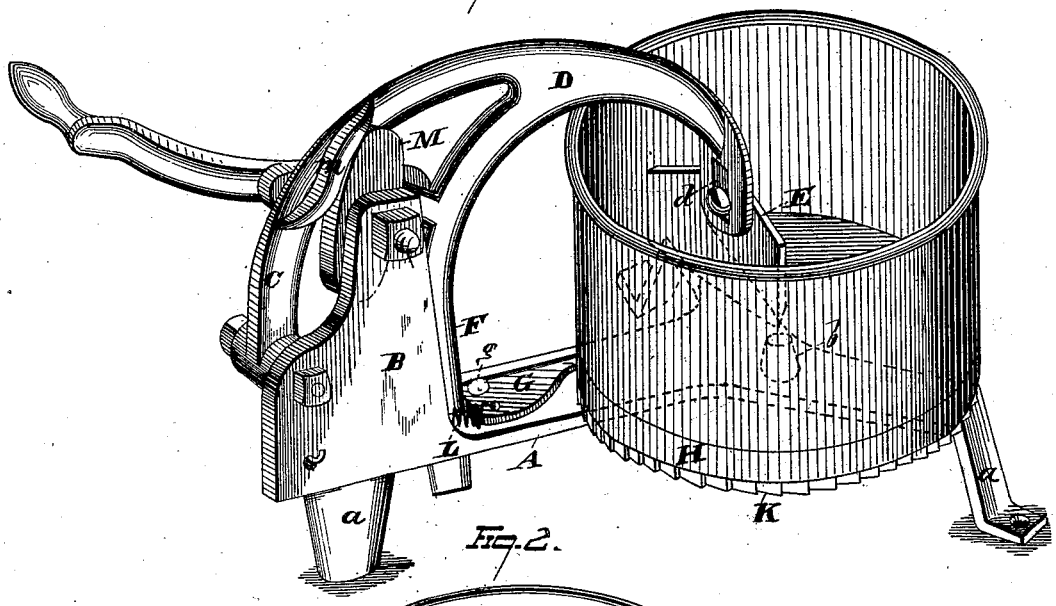


Fig. 2.

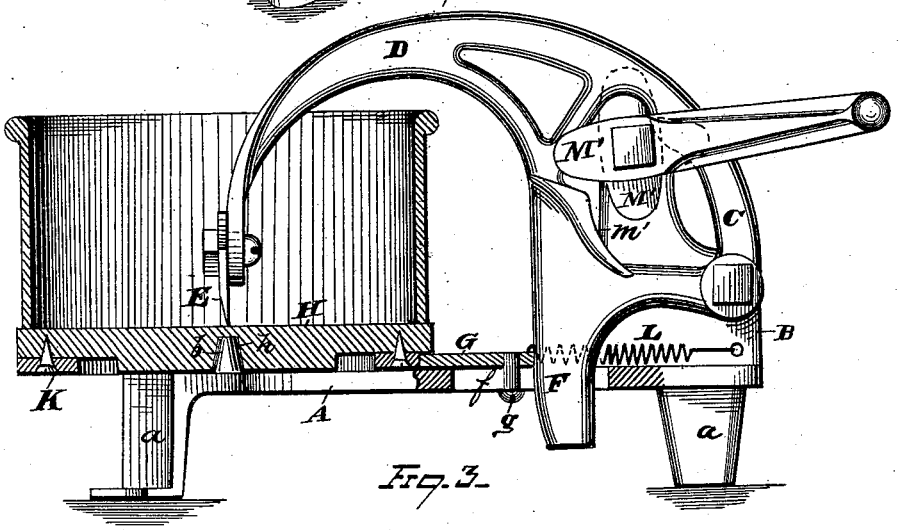
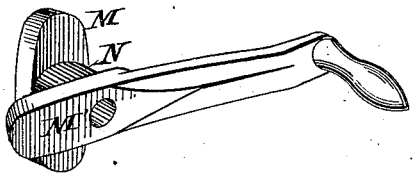


Fig. 3.



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UNITED STATES PATENT OFFICE.

ALBERT R. GILLIS, OF SALEM, OHIO.

IMPROVEMENT IN MEAT-CUTTERS.

Specification forming part of Letters Patent No. **204,811**, dated June 11, 1878; application filed February 16, 1878.

To all whom it may concern:

Be it known that I, ALBERT R. GILLIS, of Salem, in the county of Columbiana and State of Ohio, have invented certain new and useful Improvements in Meat and Vegetable Cutters; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in meat and vegetable cutters; and consists in a construction of the following description: The actuating-shaft is formed with two double cams or wipers, between which a swinging arm works in a vertical plane, and which is operated both in its upward and downward movement, respectively, by the said cams. One of the double cams engages with a motion-cam formed on the swinging arm in such a way as to throw the arm up, while the double cam on the other side of the arm engages a motion-cam on that side to bring the arm down upon the meat-block. The swinging arm is formed with a curved lever in its upper body, to which the cutting-knife is secured in vertical adjustment, while its lower body is formed with a downwardly-projecting lever, which works in a slot made in the bed-plate, and which serves the double purpose of steadying the swing-arm, so as to hold the cutting-knife firm, and also of actuating the pawl which rotates the meat-block. This pawl engages with a circular rack secured to the bottom of the meat-block, and is provided with a headed pin or stud, which latter works in the same slot of the bed-plate with its actuating-lever. It has a positive action under engagement with said lever in rotating the meat-block upon its axial connection with the bed-plate, while it is returned for re-engagement with the rack of said block by a spiral spring or similar elastic element.

Referring to the drawings, Figure 1 is a view, in perspective, of the invention. Fig. 2 is a longitudinal view, partly in elevation and partly in section, of that side which is not shown in Fig. 1. Fig. 3 represents parts detached.

The bed-plate A, with its standards *a* and supporting-upright B and the bearings and stud *b*, on which the block has axial rotation in a horizontal plane, is preferably cast in one piece; but the several parts may be made independent of each other, or of other material than cast-iron.

To the upright B the swinging arm C is secured by bolt or pivot, so as to have free movement in a vertical plane thereon, and on the upper body of this arm the curved lever D is formed. The free end thereof is provided with a slot, *d*, in which the clamping mechanism of the knife E has vertical adjustment. The lower body of the arm is provided with the downwardly-projecting lever F, which passes through the slot *f* in the bed-plate, and which serves both to hold the swinging arm against lateral displacement, so as to maintain the cutting-knife in firm and operative position, and also positively actuates the pawl G in engagement with the meat-block H. This pawl is provided with the pin or stud *g*, headed at its lower extremity, and which works in the slot *f* of the bed-plate. It is also provided with a suitable spring, which withdraws it from its point of engagement with the circular rack K of the meat-block, and causes it to engage at a new point therewith. This spring also serves to take up the wear between the pawl and its actuating-lever, and thus maintain the length of travel of the pawl.

The spiral spring L is shown by me, as it is my preferred manner of spring; but it is evident that rubber or other elastic element, or other forms of metal springs, might be substituted therefor. So, too, though the circular rack K is preferably made of metal and secured to the bottom of the meat-block, yet the same can be of other material, and be secured to the edge or periphery of the block. Also, instead of having the stud *b* formed on the bed-plate and fitting into the hole or slot *h* in the bottom of the meat-block, the reverse might be the case, and the bottom be formed with an axial projection or stud which fits into a hole formed in the bed-plate.

The block is suitably moved in axial rotation at every upward stroke of the knife, so as to present a new portion of the meat and vegetable mass to the next downward stroke

of the knife. The means for actuating the swinging arm so that both of these two results may obtain consists of the two double cams M M′, formed on the shaft N. Between these two cams the swinging arm has pivotal movement in a vertical plane, and is alternately actuated by each of them. Each of these double cams is formed with its two parts or wipers on respectively opposite sides of the actuating-shaft. The one, M, on the outer side of the cutter engages with the motion-cam *m*, formed on the respective outer side of the swinging arm, while the opposite cam, M′, is adapted to engage with the motion-cam *m′*, formed on the corresponding side of said arm.

An advantage in making the cams in single piece with the actuating-shaft arises from the firmness and rigidity thus given to these parts in operating the cutter.

While I have described the foregoing as a meat and vegetable cutter, it is evident that it is not restricted to any particular use, and the same may be applied to any form of use to which it is suitable.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with the swinging arm formed with the motion-cam on either side thereof, of the actuating-shaft provided with the two double cams or wipers, adapted to engage respectively with said motion-cams, substantially as set forth.

2. In a meat and vegetable cutter, the combination, with the actuating-shaft formed with the two double cams or wipers, all cast in the same piece with the crank-handle, of the swinging arm which works in a vertical plane between the said double cams, substantially as set forth.

3. The combination, with the lower lever formed on the swinging arm, of the spring-pawl which operates the meat-block, said pawl being provided with the stud or pin which works in the slot of the bed-plate, substantially as set forth.

4. In a meat and vegetable cutter, the swinging arm formed with the curved lever, adapted to secure the knife in vertical adjustment, and the downwardly-projecting lever, adapted to steady the knife-lever by working in a slot made in the bed-plate, substantially as set forth.

5. The combination, with the meat-block, secured by loose pivotal connection to the bed-plate and provided with the circular rack, of the pawl, which latter is provided with the guide-pin working in the slot of the bed-plate, and also with the recoil-spring which returns the said pawl for re-engagement with the rack, substantially as set forth.

6. The combination, with the pawl adapted to rotate the meat-block, of the spiral or equivalent spring connected therewith, and adapted to maintain the two in engagement, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 11th day of February, 1878.

ALBERT R. GILLIS.

Witnesses:
ARCH HINSHILLWOOD,
PRESTON B. LEE.