

(No Model.)

W. R. ELLIS.
MEAT AND VEGETABLE CUTTER.

No. 480,569.

Patented Aug. 9, 1892.

Fig. 1.

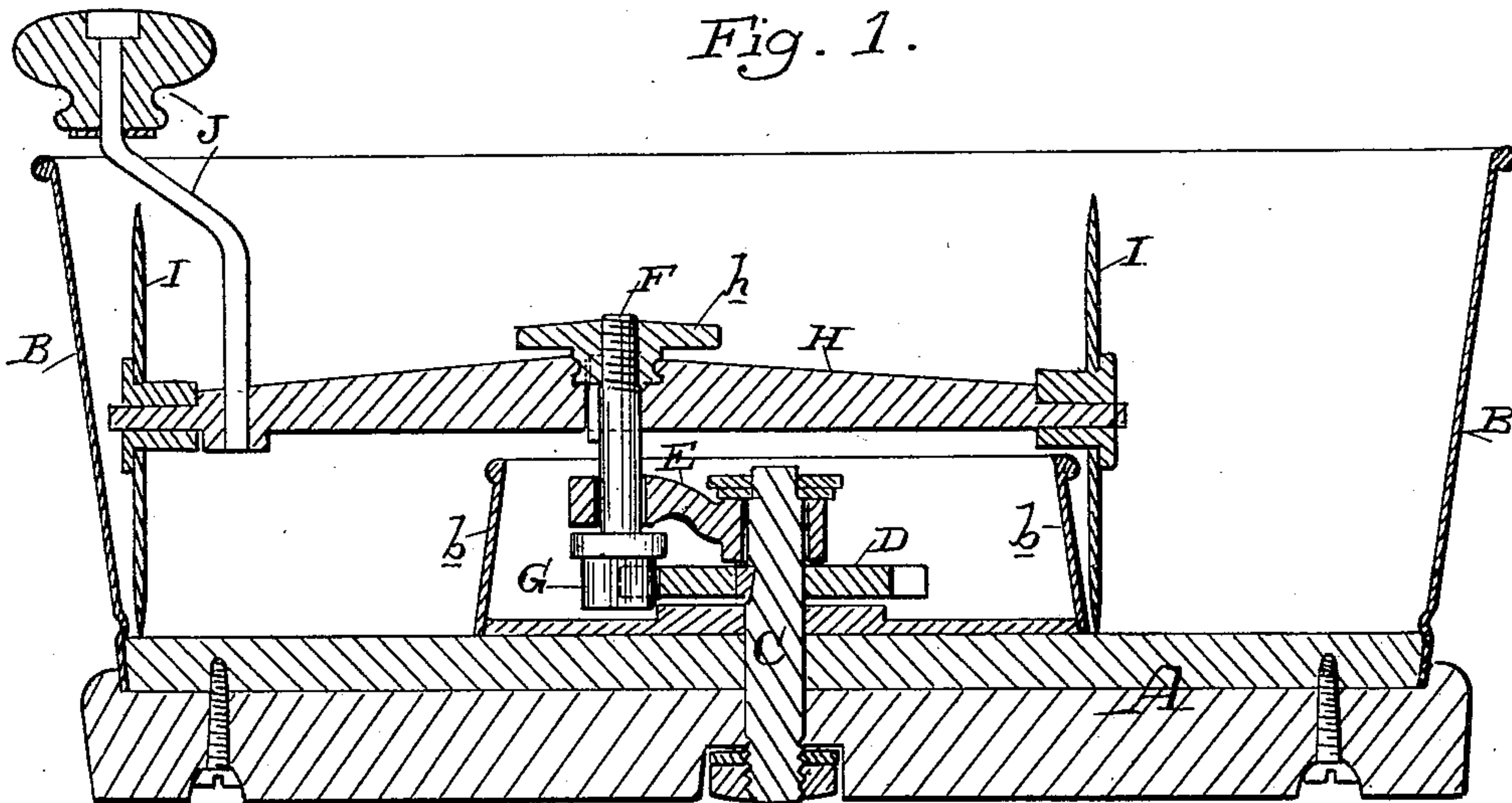


Fig. 2.

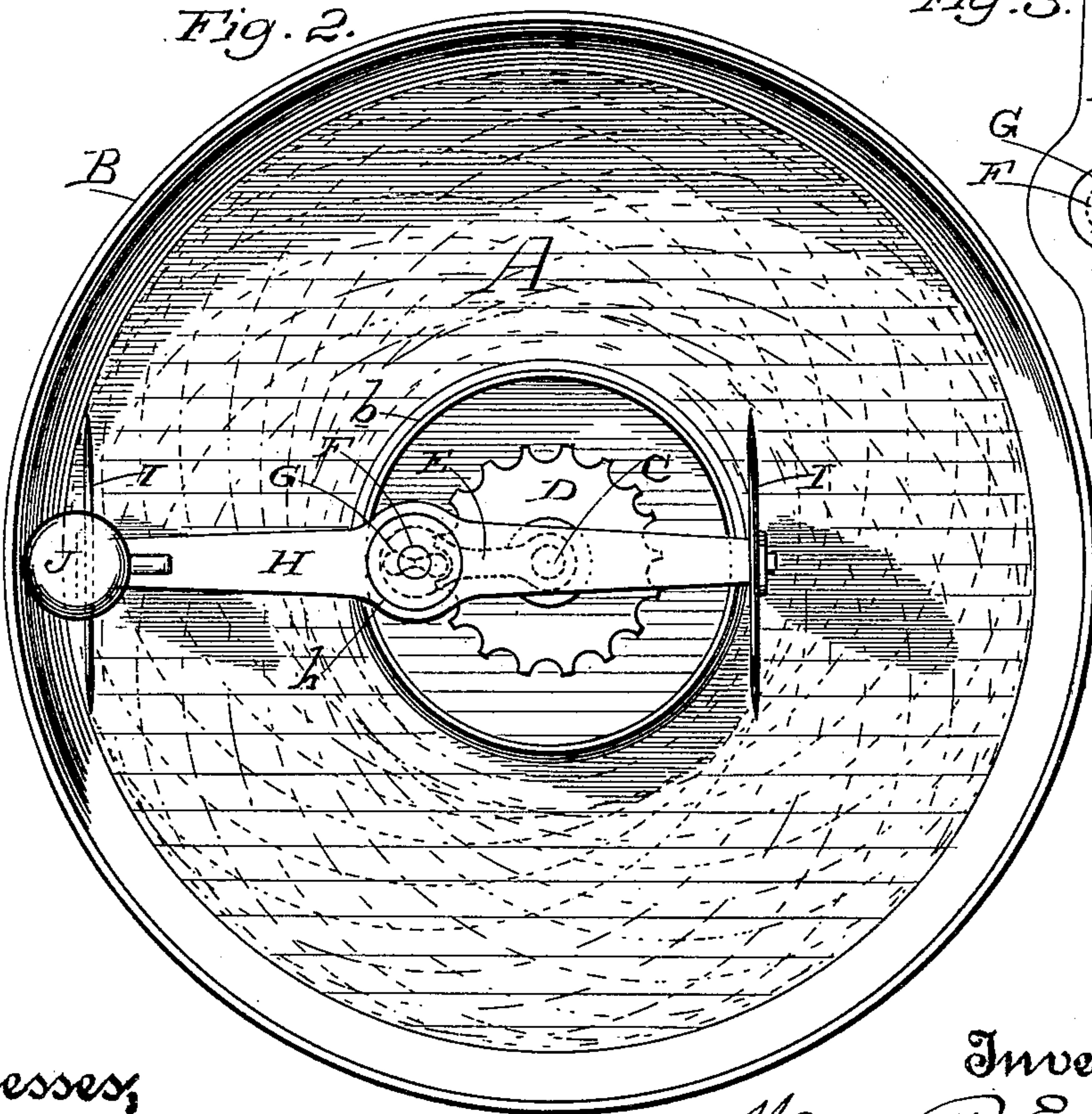
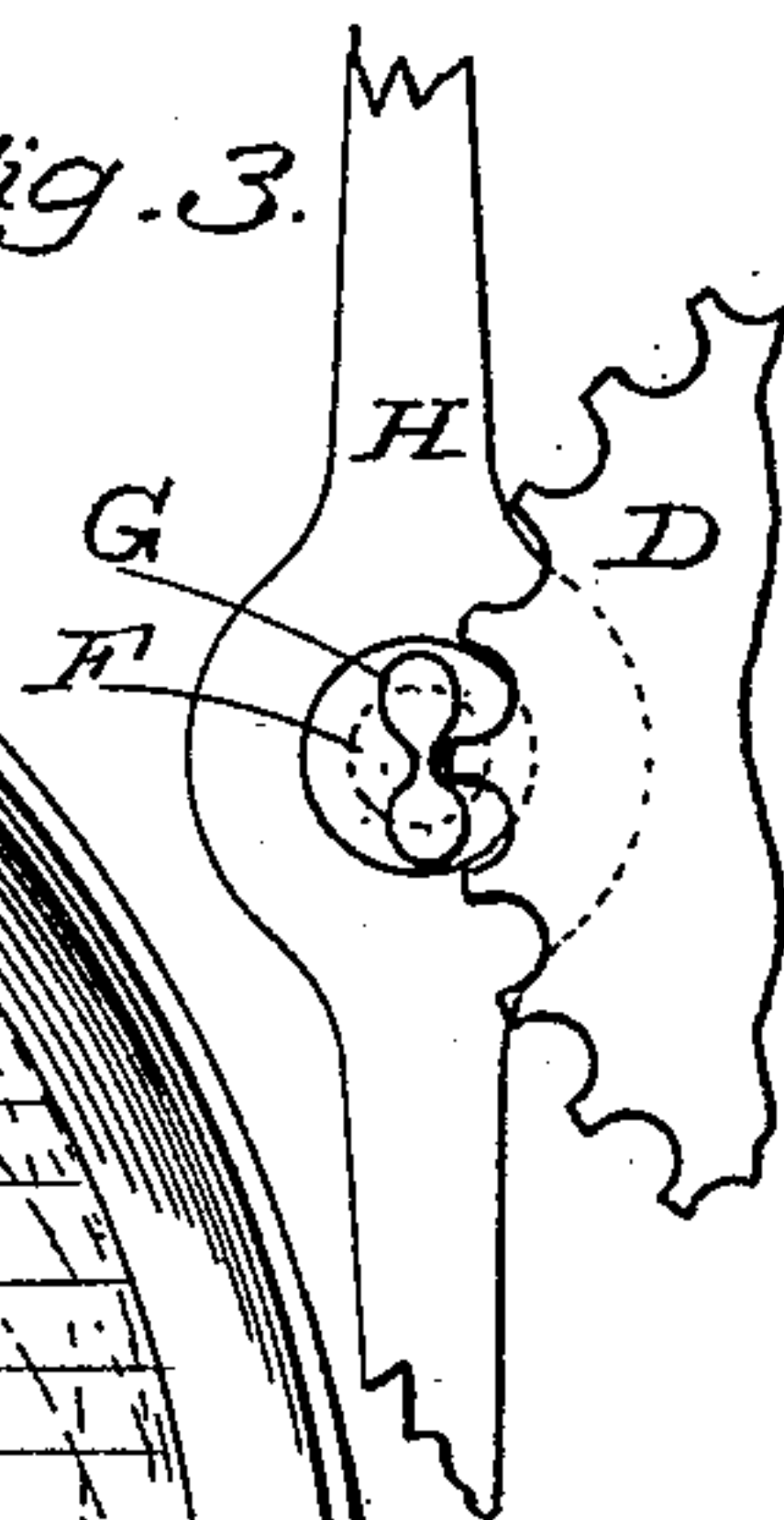


Fig. 3.



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UNITED STATES PATENT OFFICE.

WILSON RALPH ELLIS, OF WOODLAND, CALIFORNIA.

MEAT AND VEGETABLE CUTTER.

SPECIFICATION forming part of Letters Patent No. 480,569, dated August 9, 1892.

Application filed March 9, 1892. Serial No. 424,335. (No model.)

To all whom it may concern:

Be it known that I, WILSON RALPH ELLIS, a citizen of the United States, residing at Woodland, Yolo county, State of California, have invented an Improvement in Meat and Vegetable Cutters; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to that class of cutters for meats and vegetables in which rotary cutters are made to travel eccentrically over the block.

My invention consists of the constructions and combinations of devices which I shall hereinafter fully describe and claim.

The object of my invention is to provide a meat and vegetable cutter in which the cutter blades or disks shall be caused to travel over and act upon every portion of the material.

Referring to the accompanying drawings for a more complete explanation of my invention, Figure 1 is a vertical section of my cutter. Fig. 2 is a plan of same. Fig. 3 is a detail showing the arrangement of the two-toothed pinion G.

A is a block, which is preferably made of two parts screwed together, as shown, the upper part being arranged with its grain vertical. To this block is fitted a rim B, and around its center is an inner guard-flange b in the shape of a truncated cone. Thus a pan is formed with an annular channel between its central cone or flange and its rim, and in this channel the material to be cut is placed.

Secured to the block and rising from its center is a fixed standard C, upon which is keyed or otherwise secured a gear D. Upon the upper end of the standard is pivoted a bracket E, in the outer end of which is journaled a vertical shaft F, carrying a pinion G at its lower end, which engages the gear D.

To the upper end of the shaft F is secured an arm H, upon the ends of which are journaled the cutter blades or disks I. A handle J is connected with arm H to turn it. The length of the arm is such that, moving with the shaft F as a center, its cutter blades or disks play over the surface of the block, with the rim for their outer limit and the cone-flange for their inner limit, and as the shaft F is eccentric of the block it is obvious that

each cutter blade or disk in moving through one hundred and eighty degrees passes from one limit to the other. Now as the arm H is revolved the shaft F turns axially, and as its pinion G engages the fixed gear D the pinion travels around said gear, thus carrying the shaft or axis F around a circular path, with the standard C for a center. This travel of the shaft or axis F causes a corresponding travel of the arm H, so that its cutter blades or disks do not describe the same figures each time, but move in progressive curves, which intersect each other, and thus the cutter blades or disks reach every portion of the block A. When the pinion G is a perfect one, the travel of the eccentrically-located axis F about the standard C would be a practically continuous one. The movement in such a case, while good and capable of effecting the object of the machine, can be improved upon by not having the continuous progression of a perfect pinion, but the intermittent advance due to a mutilated pinion or the equivalent, as I have here shown in the two-toothed pinion G. This pinion has its teeth arranged to project in line with the arm H. This is for the purpose of causing the pinion to make its advancing engagement with the gear D and to move forward only in the line or direction of travel of the cutter blades or disks and not at right angles to said direction of travel. If the teeth were arranged at right angles to the arm H, they would engage the teeth of gear D at a time when their advance would be at right angles to the cutter blades or disks and said disks would be subjected to a pushing or pulling strain from or to the center; but by the teeth of pinion G being arranged as shown the advance takes place directly in the line of travel of said disks. Thus friction and strain are avoided. The circular travel of the axis F and the consequent advance of the cutter blades or disks are intermittent, due to the mutilated or two-toothed pinion, and this is of advantage in having a slower progression over the material to be cut and closer intersecting curves.

Although I have here shown two cutter-blade disks, that number is not material, as I may have but one, or three, four, or more; nor is it essential that the power to rotate the parts be applied to the arm H, as for some machines

it may be applied to shaft or axis F. A thumb-nut *h* on shaft F regulates the vertical position of the cutter-disks and permits their easy removal.

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

10 1. In a meat and vegetable cutter, a cutter blade or disk having a revolution about an axis located eccentrically of the block over which the blade or disk travels, said axis itself having an independent movement in a circular path about the block-center, substantially as herein described.

15 2. In a meat and vegetable cutter, a cutter blade or disk having a revolution about an axis located eccentrically of the block over which the blade or disk travels, said axis itself moving intermittently in a circular path about the block-center, substantially as herein described.

20 3. In a meat and vegetable cutter, the combination of a block, a cutter blade or disk traveling over said block, an axis located eccentrically of the block and about which the cutter blade or disk revolves, and means for effecting the intermittent travel of said axis in a circular path about the block-center, substantially as herein described.

30 4. In a meat and vegetable cutter, the combination of a block, a cutter blade or disk traveling over said block, a shaft located eccentrically of the block and to which the cutter blade or disk is connected and about which it revolves, a pinion on the shaft, and a fixed gear in the block-center and with which the pinion engages, whereby the shaft travels around said gear, substantially as herein described.

40 5. In a meat and vegetable cutter, the combination of a block, a cutter blade or disk traveling over said block, a shaft located eccentrically of the block and to which the cutter

blade or disk is connected and about which it revolves, a mutilated pinion on the shaft, and 45 a fixed gear in the block-center with which the mutilated pinion engages, whereby the shaft travels intermittently around said gear, substantially as herein described.

6. In a meat and vegetable cutter, the combination of a block, a cutter blade or disk traveling over the block, a shaft located eccentrically of the block, an arm connecting the shaft with the cutter blade or disk, whereby the latter revolves with the shaft as a center, 55 a fixed gear in the block-center, and a two-toothed pinion on the shaft engaging the gear, said pinion having its teeth extending in line with the arm connecting the cutter blade or disk with the shaft, substantially as herein 60 described.

7. In a meat and vegetable cutter, the combination of a block having a central fixed standard with a gear, a bracket pivoted on said standard, a shaft journaled in the bracket 65 and having a pinion engaging the gear, a cutter blade or disk traveling over the block, and an arm connecting the blade or disk with the shaft, substantially as herein described.

8. In a meat and vegetable cutter, the combination of a block having a central fixed 70 standard with a gear, a bracket pivoted on said standard, a shaft journaled in the bracket, a cutter blade or disk, an arm connecting it with the shaft, and a two-toothed pinion on 75 the shaft engaging the gear, said pinion having its teeth in line with the arm carrying the cutter blade or disk, substantially as herein described.

In witness whereof I have hereunto set my 80 hand.

WILSON RALPH ELLIS.

Witnesses:

R. EDGAR CAMPBELL,
J. LENHOLD.