

(No Model.)

J. E. BOWMAN.
MACHINE FOR CUTTING FAT.

No. 331,862.

Patented Dec. 8, 1885.

Fig. 1.

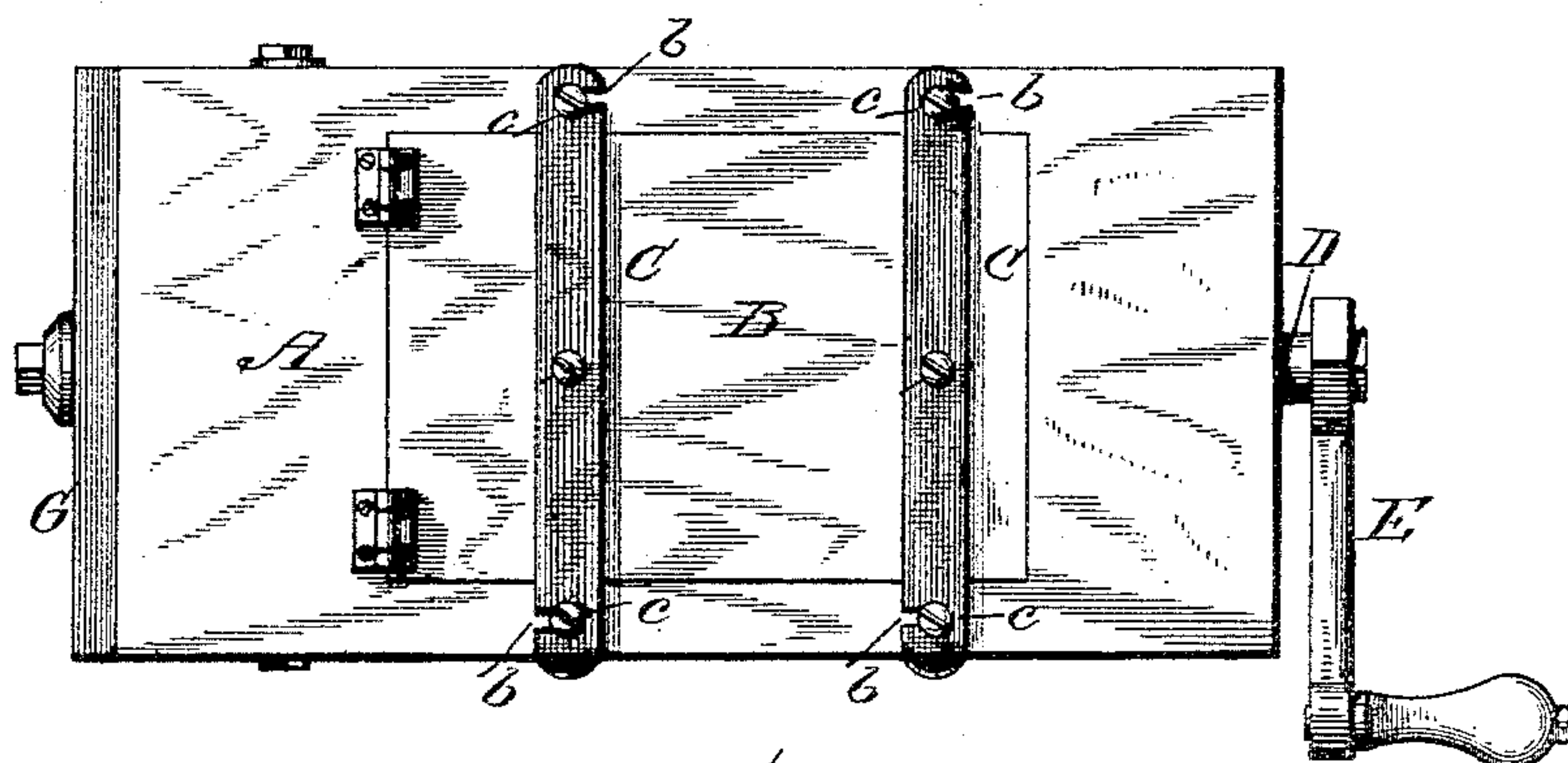


Fig. 2.

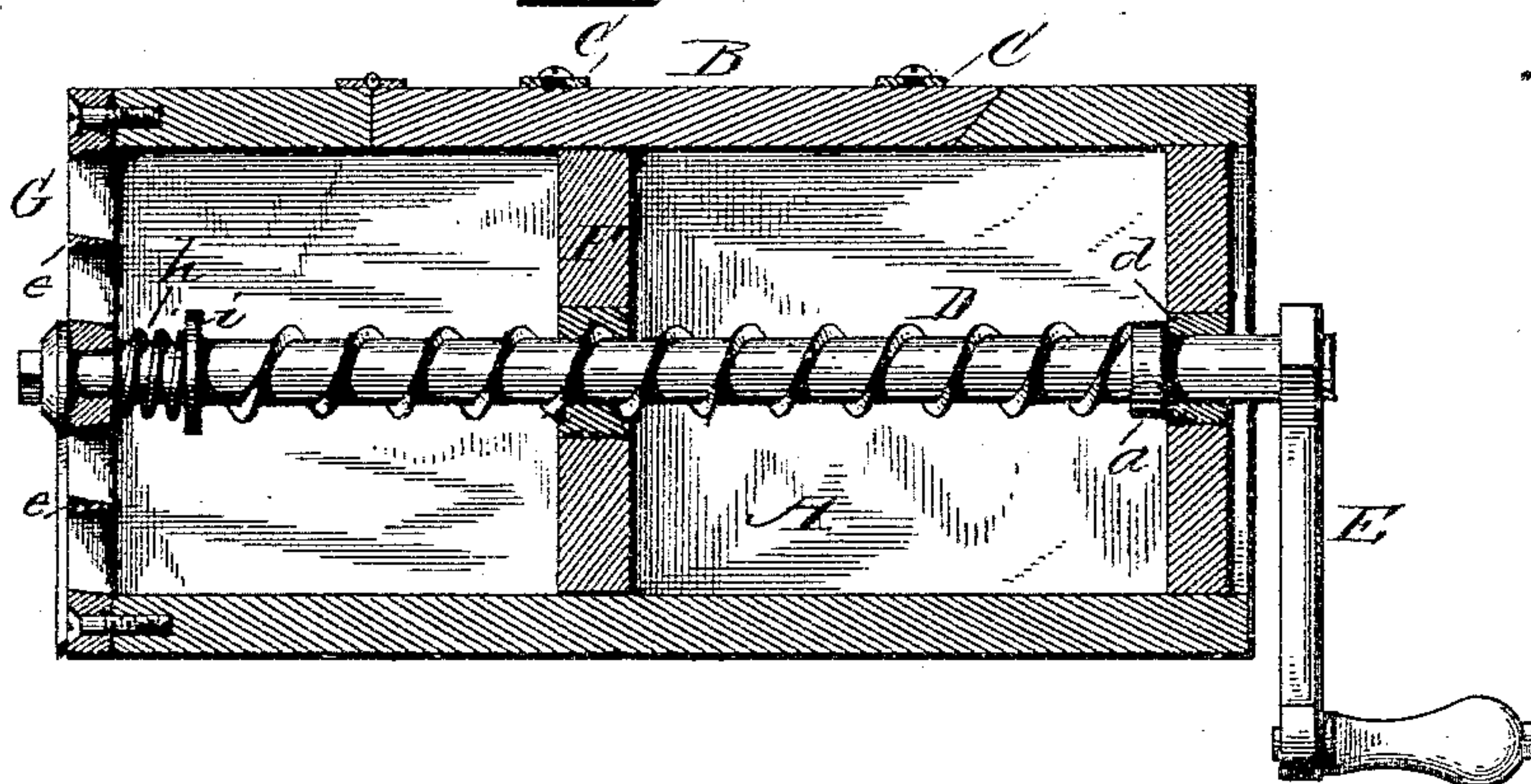


Fig. 3.

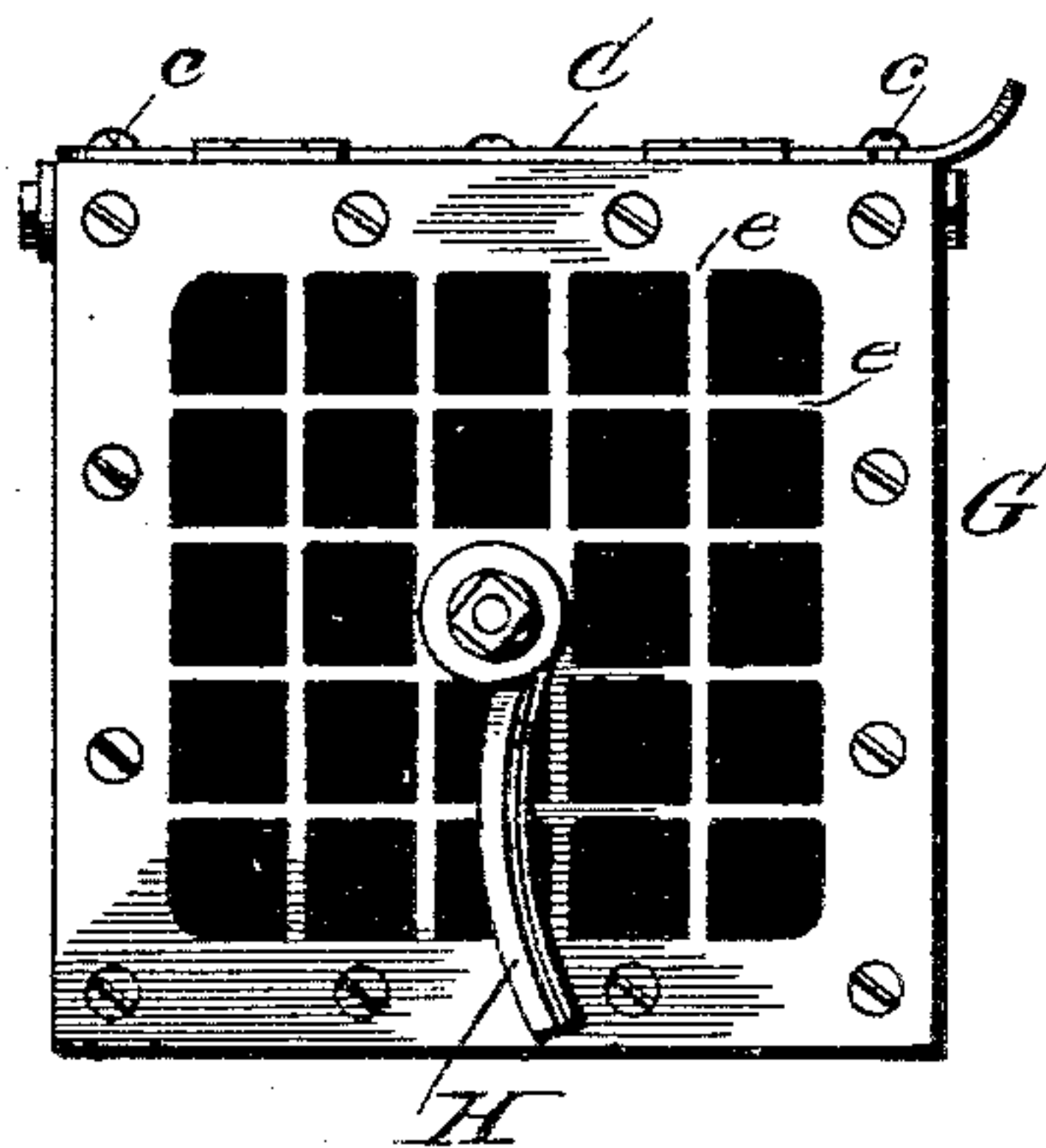
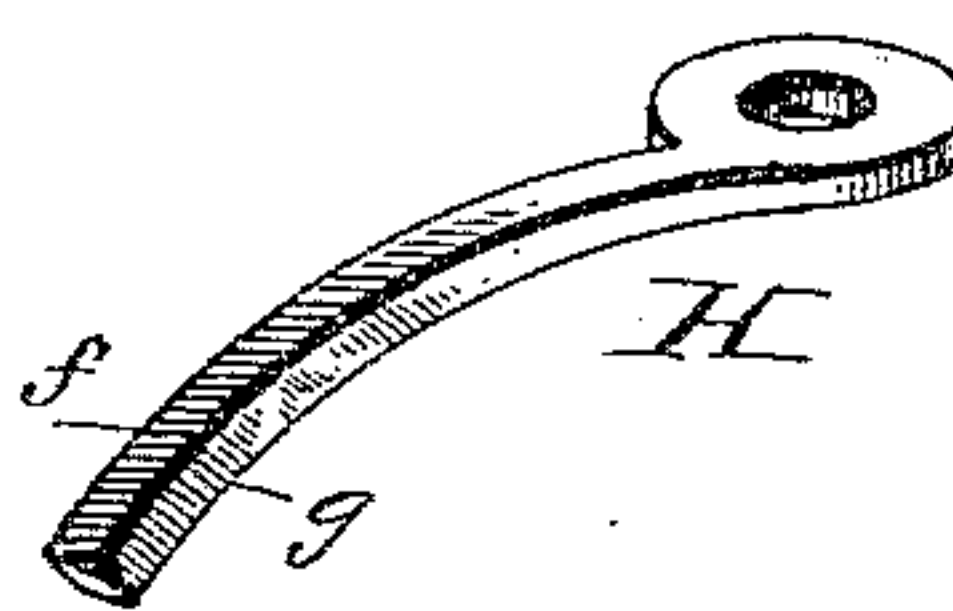


Fig. 4.



Witnesses

Wm. L. Spinden,
L. L. Miller.

Inventor

John E. Bowman.

By *his Attorney* *Chas. H. Fowler*

UNITED STATES PATENT OFFICE.

JOHN E. BOWMAN, OF BOONSBOROUGH, MARYLAND.

MACHINE FOR CUTTING FAT.

SPECIFICATION forming part of Letters Patent No. 331,862, dated December 8, 1885.

Application filed August 28, 1885. Serial No. 175,604. (No model.)

To all whom it may concern:

Be it known that I, JOHN E. BOWMAN, a citizen of the United States, residing at Boonsborough, in the county of Washington and State of Maryland, have invented certain new and useful Improvements in Machines for Cutting Fat; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a top plan view of my invention; Fig. 2, a longitudinal section thereof; Fig. 3, an end view, and Fig. 4 a detail view in perspective of the cutting-knife.

The present invention has relation to certain new and useful improvements in machines for cutting fat into blocks preparatory to rendering, and refers more particularly to that class in which is employed a longitudinal box, a plunger or piston working therein, a set of knives crossing each other to form squares through which the fat is forced by the plunger or piston, and a rotary knife for cutting the fat as it passes out through the squares of the cross-knives.

It is the object of the present invention to improve the construction of the above-mentioned class of machines, as will be hereinafter described and claimed.

In the accompanying drawings, A represents a rectangular box of any preferred size, which is provided with a hinged lid, B, having pivoted thereto locking-bars C, which are notched at *b* to engage with headed pins *c* on the box, thus retaining the lid closed. The box A is provided with a central worm-shaft, D, having at one end a suitable handle for rotating it, as shown at E. Upon the shaft D is a follower or plunger, F, having a worm-hole to engage with the worm on the shaft, so that when the latter is rotated the follower or plunger will move along the shaft. One end of the shaft D is cast with an annular shoulder, *a*, and that portion of the shaft beyond the shoulder and without the worm has its bearing in a metal bushing, *d*, in the end of the box. The opposite end of the shaft is re-

duced in diameter and has its bearing in a compound cutter-plate, G. I term this a "compound cutter-plate," as it is divided into a series of squares by the knife-bars *e*, which cross each other, as shown in Fig. 3. This plate is provided with holes at its four sides for attaching it to the end of the box by screws or other fastenings. It will be noticed that the bars *e* are V shape in cross-section, their taper extending the entire distance from their cutting-edge to their base, thus forming a series of tapering openings, the largest end thereof being toward the plunger or follower F, so that when the lard is forced into the openings it will be gradually compressed as it is passing through them and cut off by the rotating knife H. This knife H is secured to the projecting end of the shaft D and is curved so as to give a shear cut, and is reversible, it having two cutting-edges, *f* *g*, thus enabling the knife to be removed and reversed when one of the cutting-edges becomes dull. A spring tripping device is employed to force the plunger or follower back in engagement with the worm on the shaft. The tripping device consists of the spiral spring *h* and washer *i*, both of which are placed around the end of the shaft beyond the worm. As the plunger or follower F is passing beyond the extremity of the worm, the spring is compressed and at the moment the worm becomes disengaged the plunger or follower is forced back into position by the expansion of the spring to engage with the worm on the shaft. The employment of the tripping device enables the worm-shaft to be turned in the same direction any length of time without danger of forcing the plunger or follower against the knife-edges of the bars *e*.

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

1. In a machine for cutting fat, the combination, with a worm-shaft and a follower or plunger, of a cutter-plate and a tripping device consisting of a spiral spring encircling the end of the worm-shaft and a washer against which the spring bears, substantially as and for the purpose set forth.

2. A machine for cutting fat, consisting of

5 a rectangular box provided at one end with a compound cutter-plate having tapering openings, a worm-shaft operating a follower or plunger, and a tripping device located between the follower or plunger and the cutter-plate, and consisting of a spiral spring and washer encircling the worm-shaft, substantially as and for the purpose described.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

JOHN E. BOWMAN.

Witnesses:

L. L. MILLER,

J. W. HAMILTON JOHNSON.