

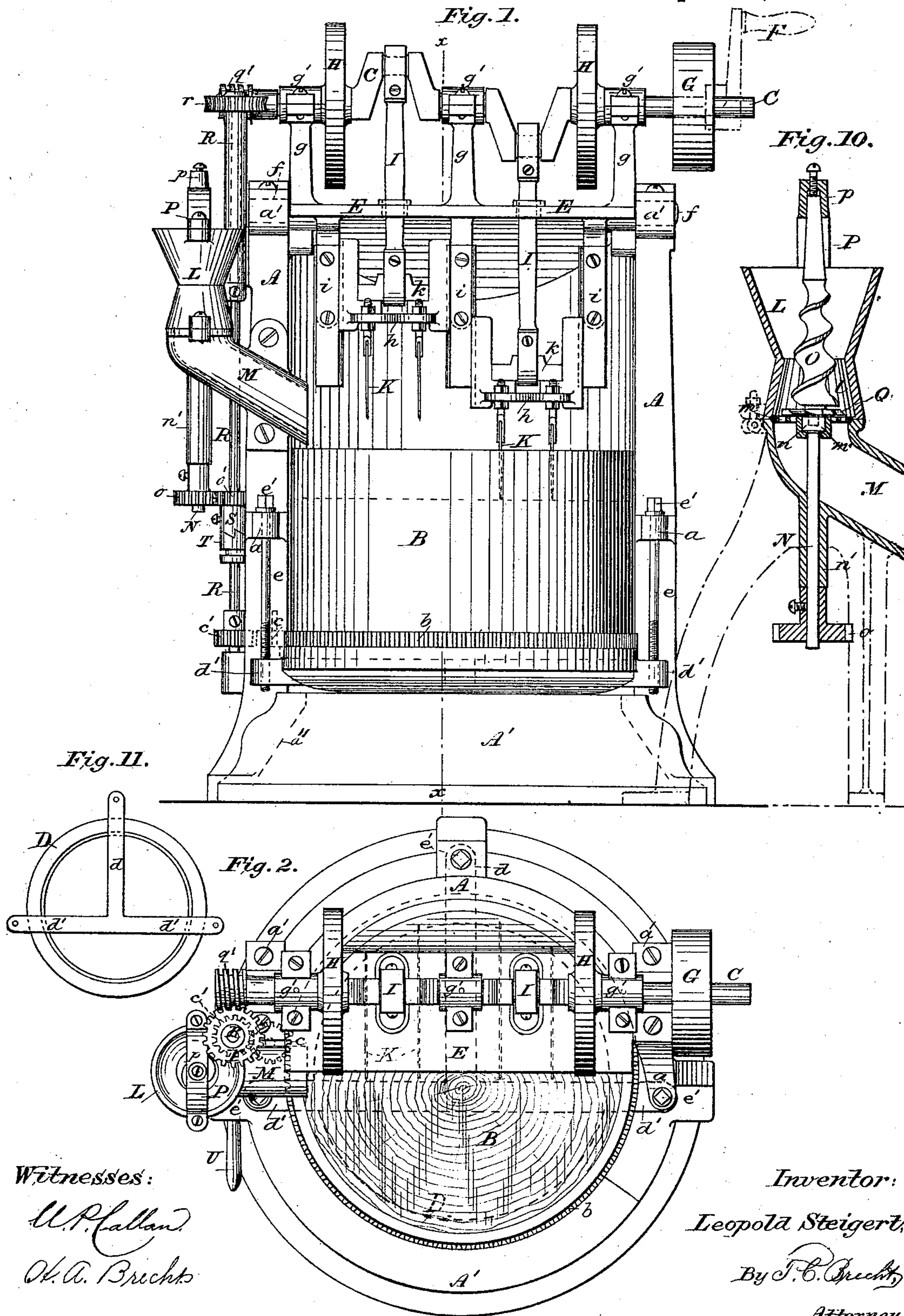
(No Model.)

2 Sheets—Sheet 1.

L. STEIGERT.  
MEAT CHOPPING MACHINE.

No. 459,450.

Patented Sept. 15, 1891.



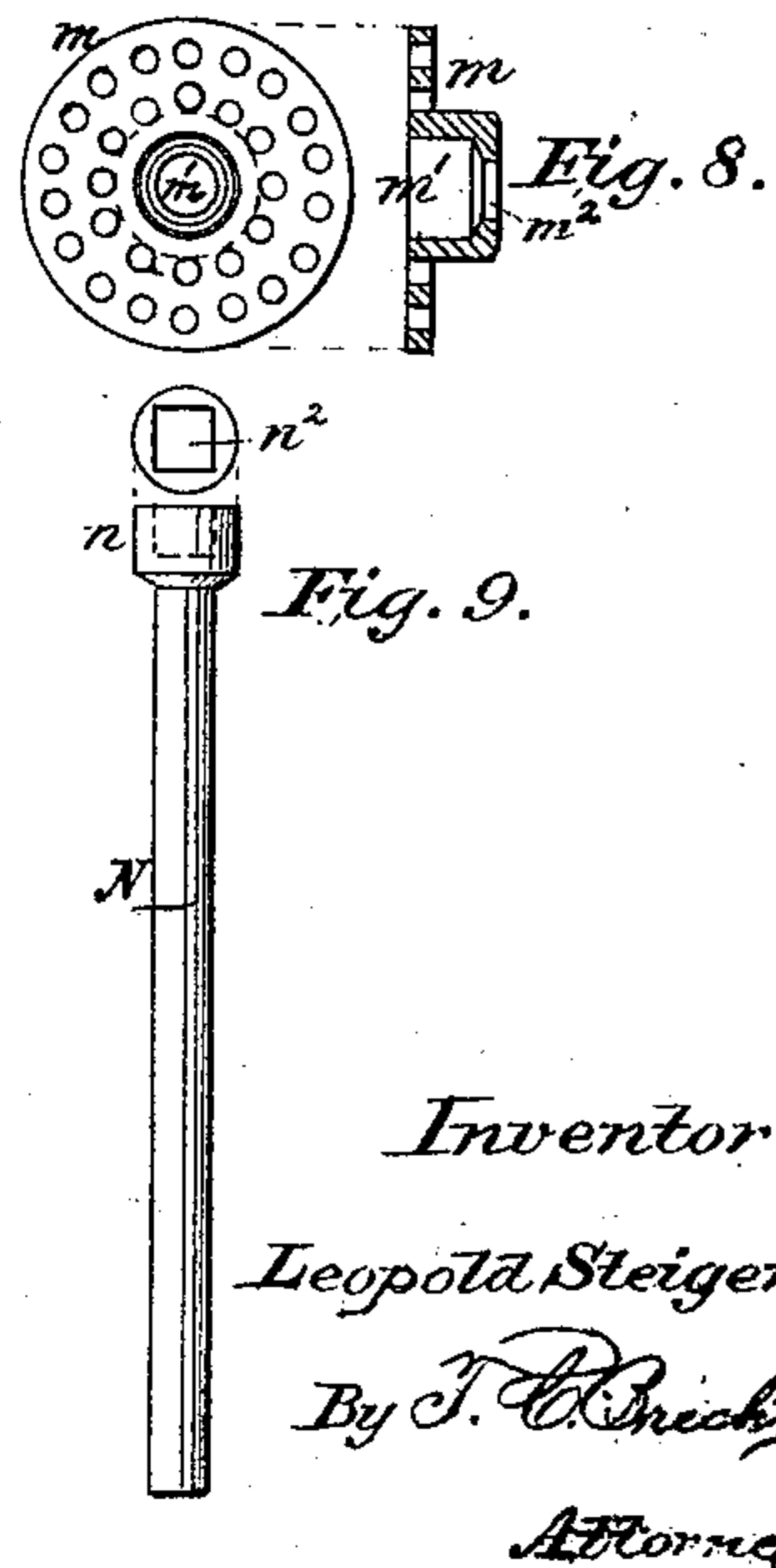
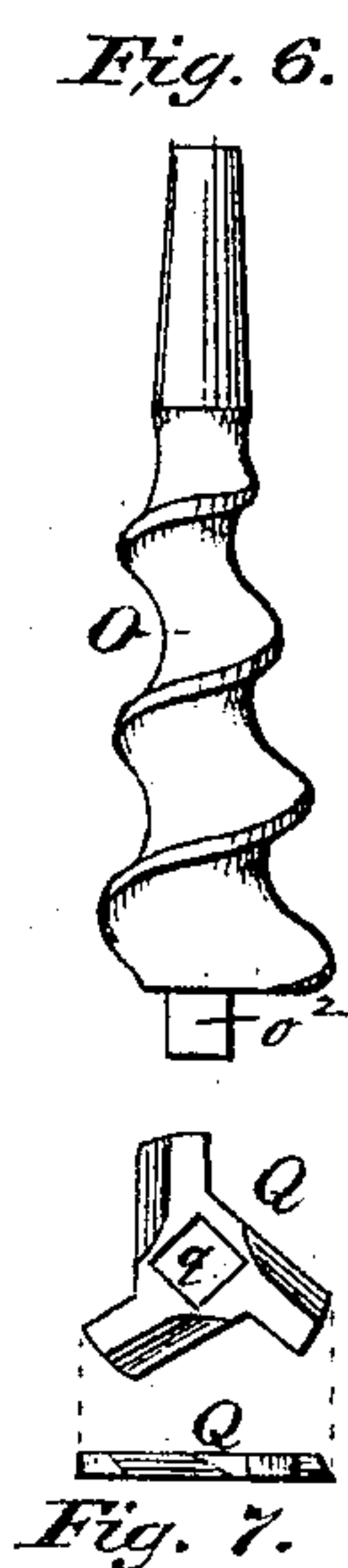
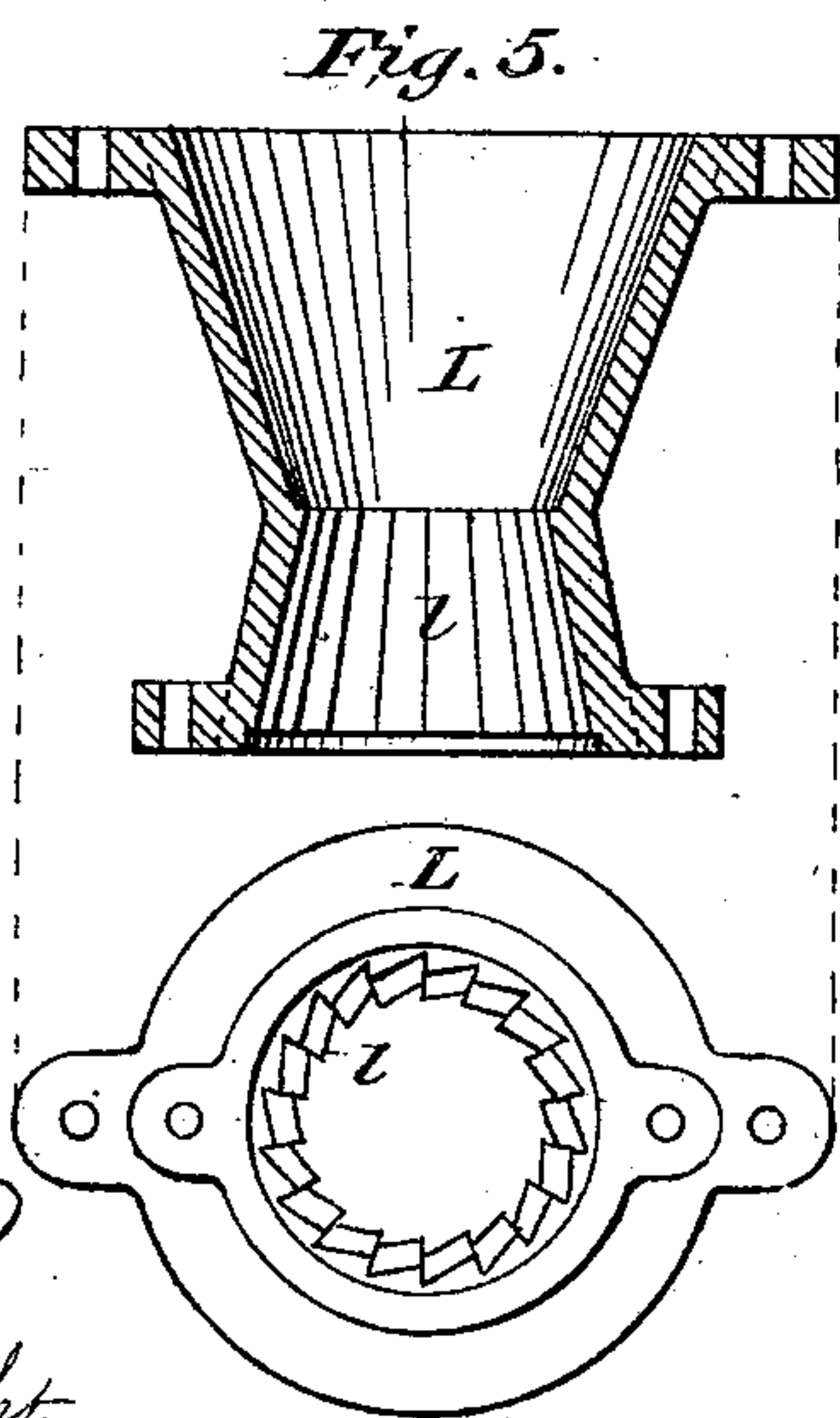
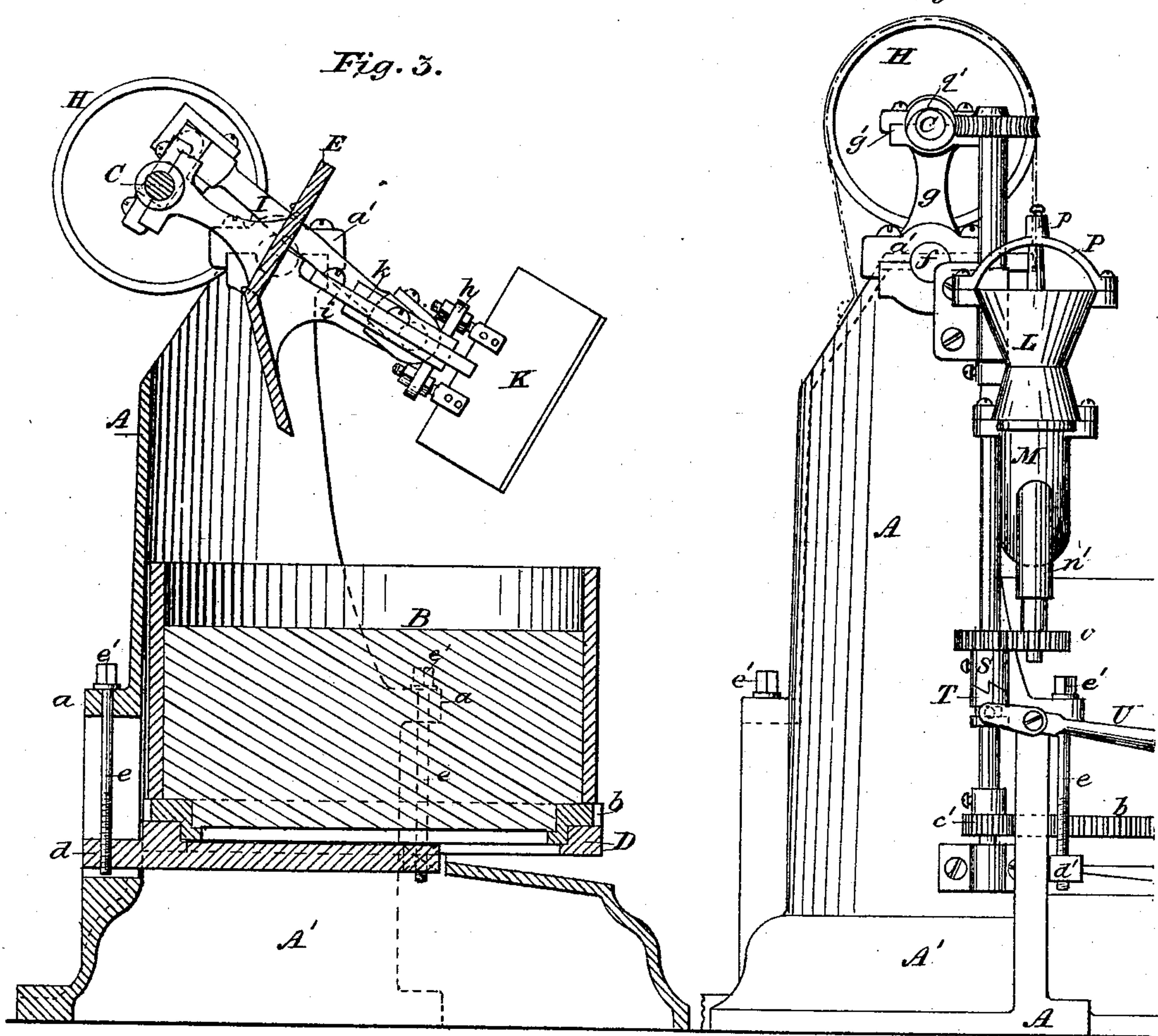
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Witnesses:  
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# UNITED STATES PATENT OFFICE.

LEOPOLD STEIGERT, OF CINCINNATI, OHIO.

## MEAT-CHOPPING MACHINE.

SPECIFICATION forming part of Letters Patent No. 459,450, dated September 15, 1891.

Application filed July 25, 1889. Serial No. 318,634. (No model.)

*To all whom it may concern:*

Be it known that I, LEOPOLD STEIGERT, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Meat-Chopping Machines; and I do 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 appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to improvements in meat-chopping machines in which vertically-reciprocating knives operate in conjunction with a rotating chopping-block and a primary cutting apparatus; and the objects of the invention are to provide means in a meat-chopping machine by which the chopping-knives with their operating mechanism can be tilted or partly revolved on journals, so as to facilitate the sharpening of said knives without the necessity of removing them from their places, as is now usually the case; also, to produce convenient means for adjusting the rotating chopping-block vertically when it becomes worn; furthermore, to produce mechanism by which the meat to be chopped is first cut and reduced in size before being fed to the chopping-block to be acted on by the reciprocating chopping-knives, and, finally, to prevent lubricating oil or grease from the crank-shaft or operating parts connected to it being thrown into the meat on the chopping-block and injuring said meat.

With these objects in view my invention consists in the construction of certain details and arrangement of parts as will be more fully described hereinafter, and specifically pointed out in the claims, reference being had to the accompanying drawings and the letters of reference marked thereon.

Similar letters refer to similar parts throughout the several views of the drawings, in which—

Figure 1 represents a front elevation of the entire machine. Fig. 2 is a top view or plan of the machine. Fig. 3 is a vertical section of the same on line *x x*, Fig. 1, with the reciprocating knives tilted for sharpening. Fig. 4

is a side elevation of the machine, partly cut away. Fig. 5 is a detail view in section and plan, on an enlarged scale, of the hopper of the primary cutting apparatus. Figs. 6 to 9, inclusive, are detail views of the cutting apparatus on an enlarged scale, and more definitely hereinafter described. Fig. 10 is an enlarged sectional view of the entire primary cutting apparatus. Fig. 11 is a detail top view of the adjusting-ring for the chopping-block on a reduced scale.

In the drawings, A is the main frame of the machine, in which the rotating chopping-block B is mounted, being rotated by a toothed rim-wheel *b*, with which the pinion *c* meshes, and with the pinion *c* another pinion *c'* gears, the latter secured to a vertical shaft R, that receives motion by a worm-wheel *r* and worm *q'* on the crank-shaft C. The chopping-block B is adjusted vertically by an annular supporting-ring D, provided with the arms *d d'*, with which the screws *e*, having square heads *e'*, engage, and pass through lugs *a* on the frame. The arm *d* extends rearward, while the arms *d'* extend sidewise, being placed forward of the center, as best seen in Fig. 11, and by turning the screws *e* by their heads *e'* the block B can be adjusted. The front part of the base A' may be provided with an opening *a''* to gain access for washing the bottom, &c. The rear part of the frame A is closed to prevent scattering of the meat while chopping, and at its upper sides it is provided with the bearings *a'* for the journals *f* of the tilting part or top E of said frame. Said part E, when tilted in its normal position, also forms a closed back for the machine and prevents oil or grease from the operating parts being thrown into the meat which is being chopped on the chopping-block. This part E is provided with three or more standards *g*, having the journal-boxes *g'* for the crank-shaft C, forming also the driving-shaft for the entire machine. A pulley G imparts motion to the shaft C and is driven by a belt from the driving-pulley, although for small machines a crank-handle F (shown in dotted lines in Fig. 1) may be used to operate the machine. The balance-wheels H are secured to the shaft C and serve to give a steady motion to the operating parts. The pitmen I connect with the cross-heads *k*, which are re-



ciprocated on the guides *i*. The chopping-knives *K* are adjustably attached to lugs *h* on the cross-heads *k*, and the guides are secured to the under side of the part *E*.

5 To one side of the frame *A* is secured what I term the "primary cutting apparatus," which consists of a hopper *L*, having its lower part provided with teeth *l*, and it is connected to a tubular part *M*, extending toward the  
10 chopping-block. At the juncture of the parts *L* and *M* is arranged a plate *m*, with perforations and a depression *m'*, into which the head *n* of a shaft *N* fits. This shaft passes through a hole *m*<sup>2</sup> (see Fig. 8) and through a  
15 hub *n'* on the tube *M*, and has a gear-wheel *o* on its lower end, by which it is operated. The head *n* has a square depression *n*<sup>2</sup>, into which the lower square end *o*<sup>2</sup> of a feeding-screw *O* fits and receives its motion. The up-  
20 per end of said screw is journaled in a hub *p* on a yoke *P*, secured to the top of the hopper. At the lower end of the screw *O*, on the square part *o*<sup>2</sup>, is arranged a revolving cutter or knife *Q*, (shown in Fig. 7,) and it has a  
25 square hole *q*, and by said cutter the meat is cut before passing through the perforations in the plate *m*. On the end of the crank-shaft *C* is secured a worm *q'*, which meshes with a worm-wheel *r* on the upright shaft *R*,  
30 to which a gear-wheel *o'* is attached that imparts motion to the wheel *o* and feeding-screw *O*. Upon the shaft *R* a clutch is attached, with which the sliding part *T* of the clutch engages by being moved in and out by the  
35 lever *U*. Whenever it is desired to dispense with the use of the primary cutter, the clutch *T* is moved out of contact with the part *S*. If desired, the primary cutting apparatus may be secured to a separate stand, as shown by  
40 the dotted lines in Fig. 10, and used in connection with the ordinary chopping-machine now in use, being then operated by a crank and suitable bevel-gearing.

The operation is as follows: The different

parts being in proper position and the belt 45 or other gearing connected to a motive power, the meat is placed in the hopper *L* of the cutting apparatus, when it is forced downward by the feeding-screw *O*, and is first torn by the teeth *l* and then cut into pieces small 50 enough to pass through the holes in the plate *m*, and passes through the tubular part *M* onto the revolving chopping-block. It is here acted on by the chopping-knives *K* until the meat is fine enough for the purpose desired, 55 when it can be removed and replaced by another quantity. If it is desired to dispense with the use of the primary cutting apparatus, the clutch is thrown out of gear and the rest of the machine can operate without it. 60

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

1. In a meat-chopping machine, the combination of the chopping-block, the crank-shaft, 65 the pitmen *I*, the reciprocating chopping-knives carried by the cross-heads *k*, the guides *i*, the pivoted tilting top *E*, to the under side of which said guides are attached, and the frame *A*, all arranged and operating as shown 70 and described.

2. In a meat-chopping machine, the combination of the rotary chopping-block, the knife-actuating crank-shaft, the vertical shaft *R*, geared to said crank-shaft and to the block, 75 the primary cutting apparatus consisting of the hopper *L* and the knife *Q*, the shaft *N*, carrying said knife and geared to said shaft *R*, the clutch *S* on shaft *R*, the lever for operating the sliding part of said clutch, and 80 the tube *M*, communicating with the chopping-block, substantially as described.

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

LEOPOLD STEIGERT.

Witnesses:

T. C. BRECHT,  
M. P. CALLAN.