

S. ABEYTA.
SHEEP SHEARING MACHINE.
APPLICATION FILED JUNE 11, 1908.

935,137.

Patented Sept. 28, 1909.
2 SHEETS—SHEET 1.

Fig. 1.

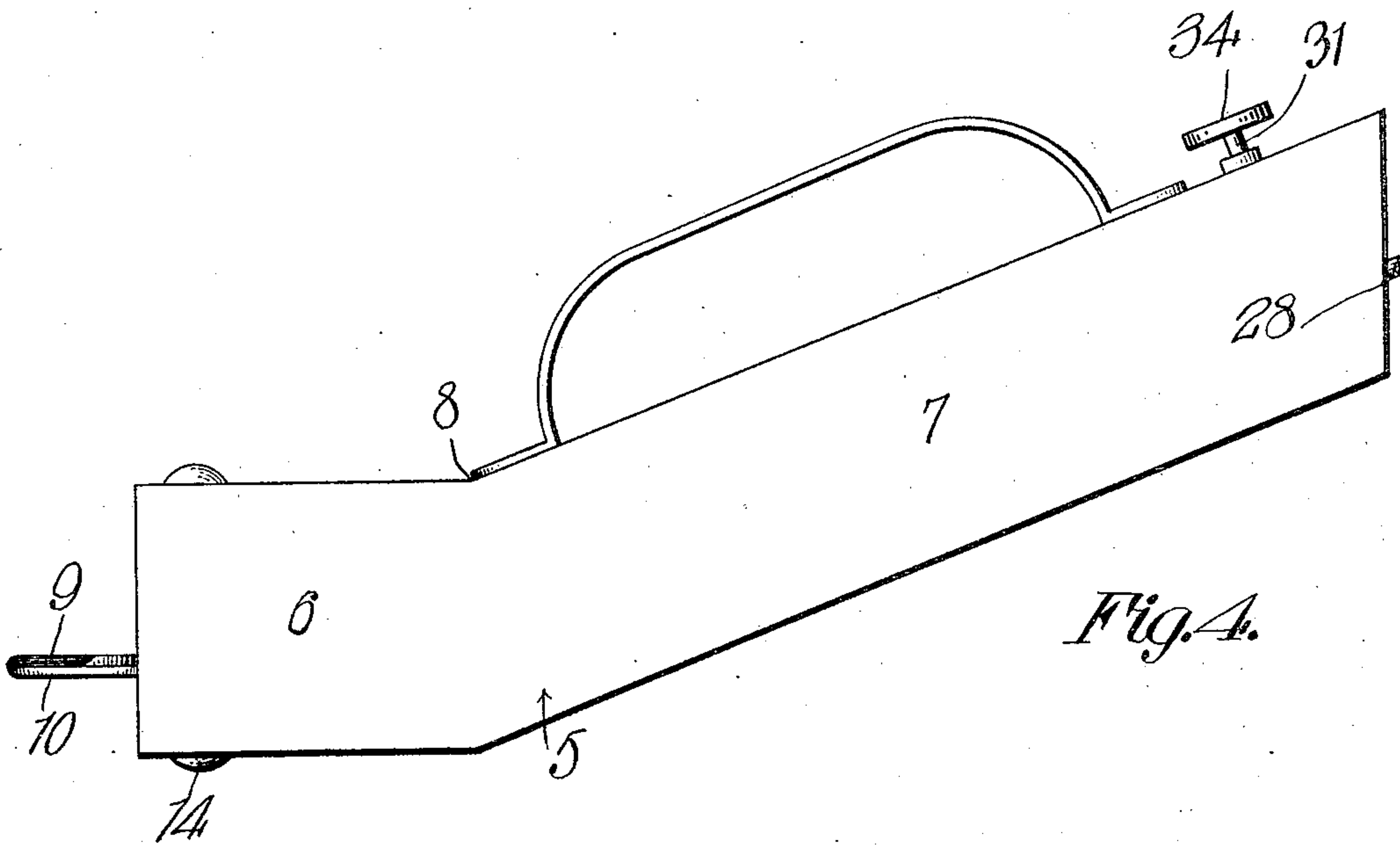
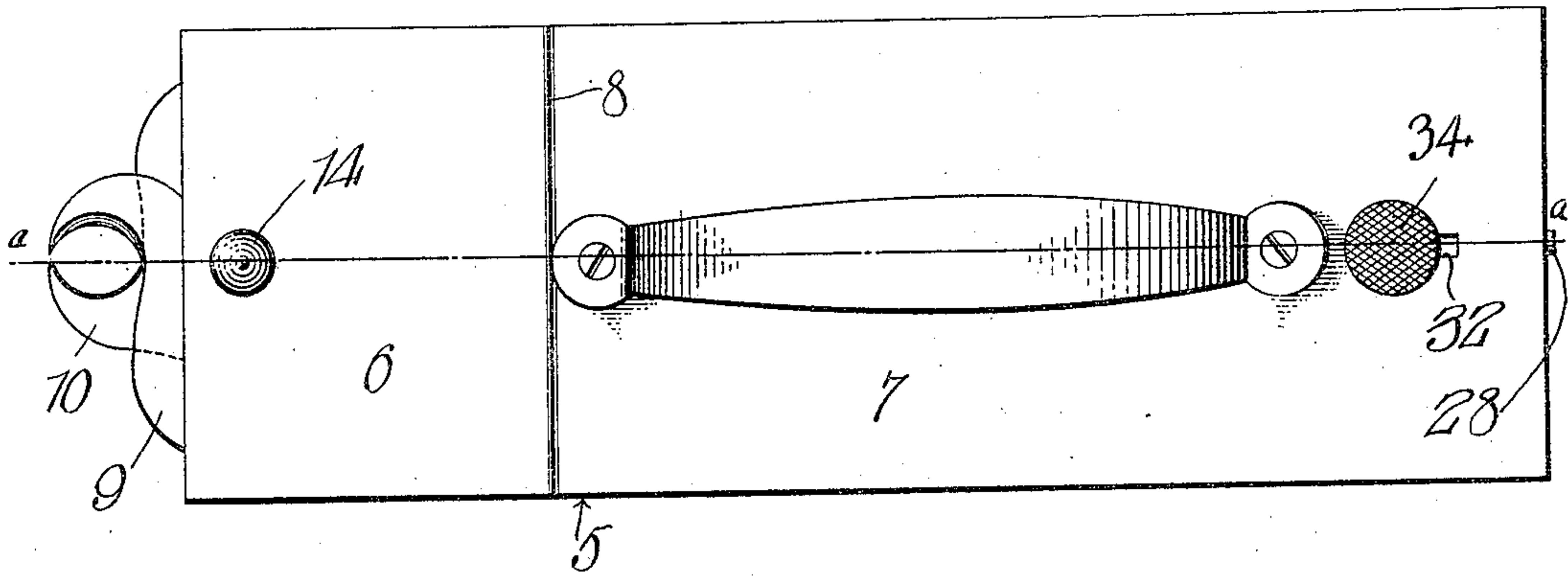


Fig. 4.

Witnesses

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2 SHEETS—SHEET 2.

Fig. 2.

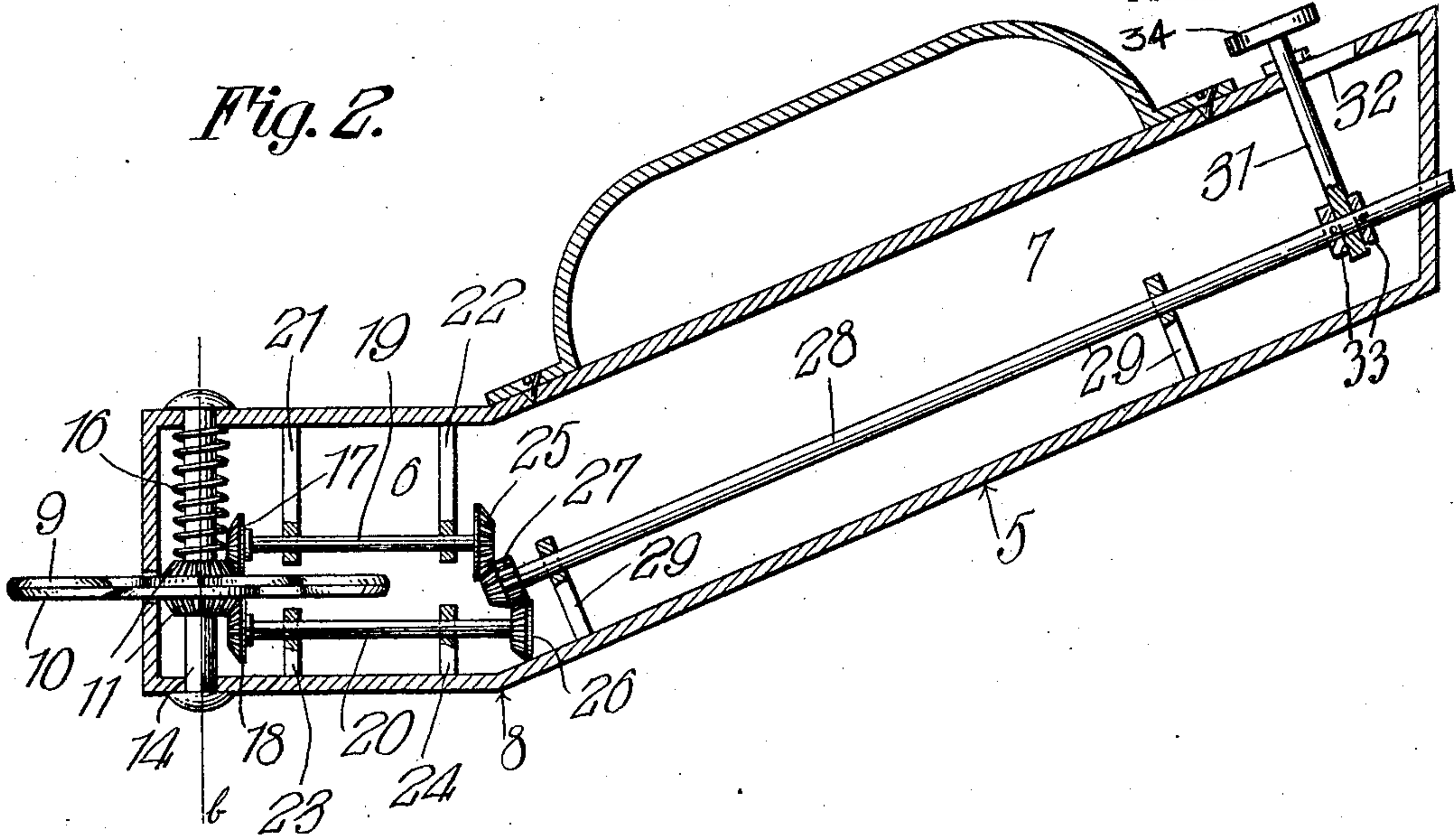


Fig. 5.

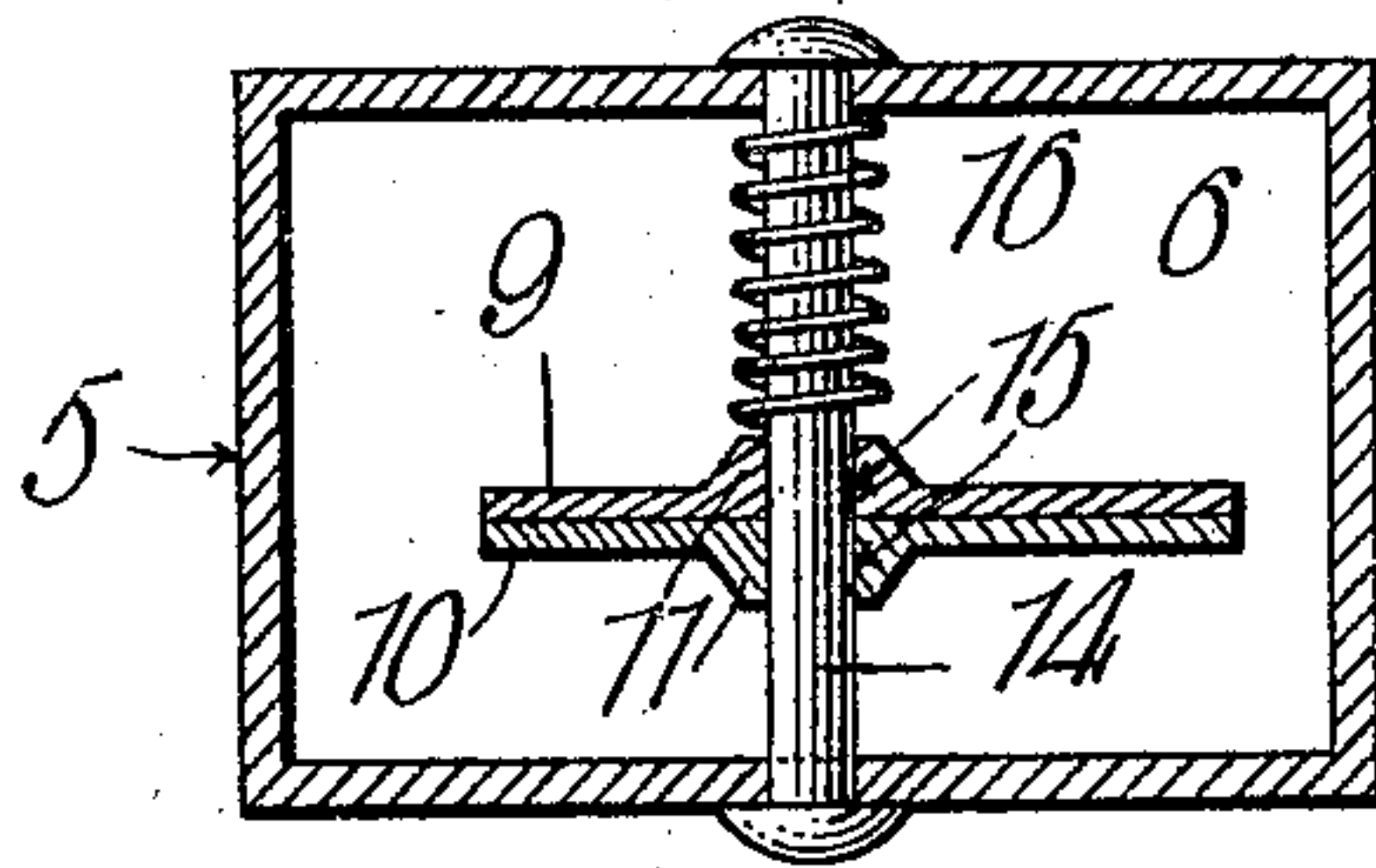
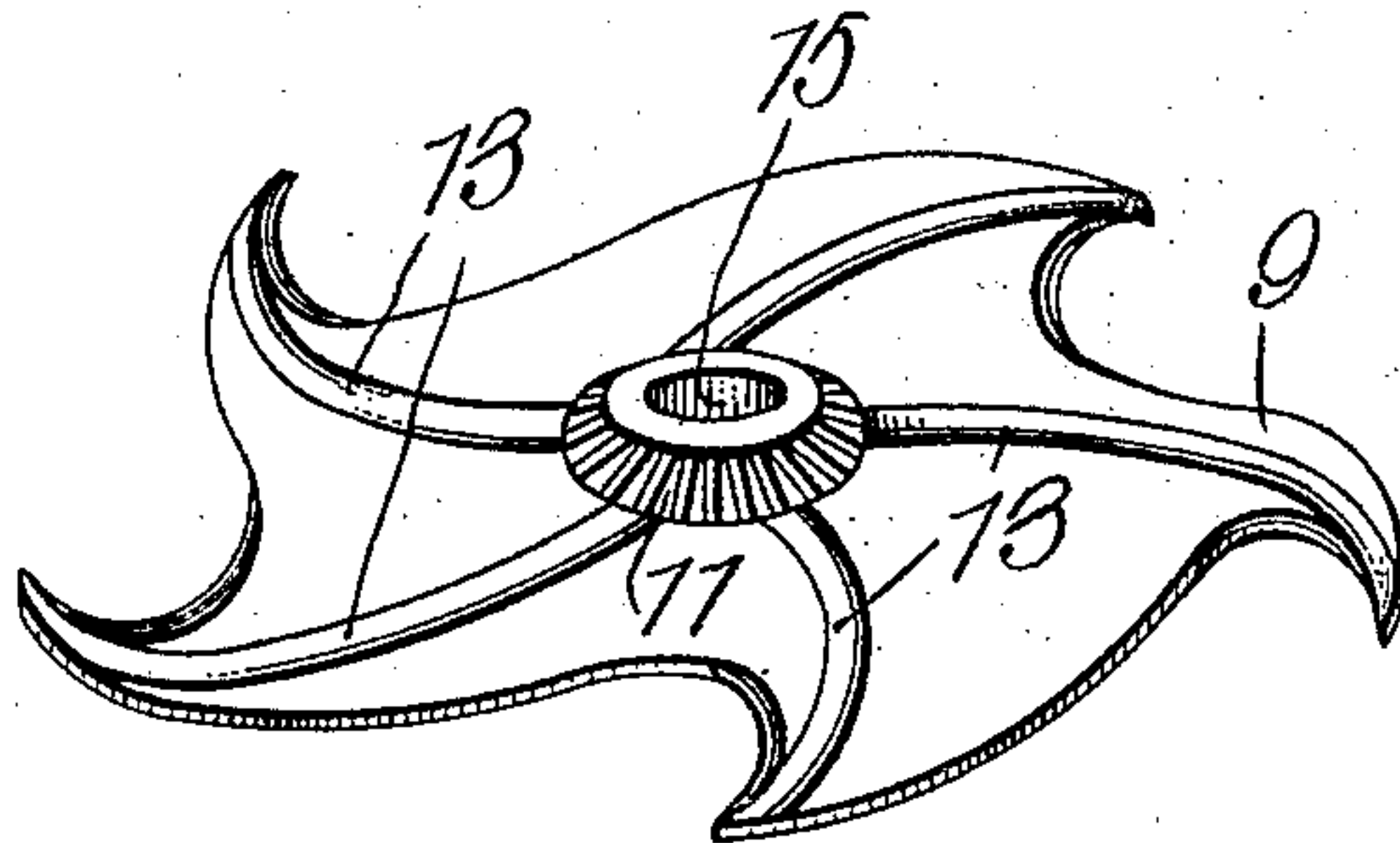


Fig. 3.



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UNITED STATES PATENT OFFICE.

STEPHEN ABEYTA, OF ENCINO, TERRITORY OF NEW MEXICO.

SHEEP-SHEARING MACHINE.

935,137.

Specification of Letters Patent. Patented Sept. 28, 1909.

Application filed June 11, 1908. Serial No. 437,936.

To all whom it may concern:

Be it known that I, STEPHEN ABEYTA, a citizen of the United States, residing at Encino, in the county of Torrance, Territory of New Mexico, have invented certain new and useful Improvements in Sheep-Shearing Machines; 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 appertains to make and use the same.

My invention relates to improvements in rotary cutting machines and more especially to machines of this character which are adapted to shear sheep, clip horses and the like.

The object of my invention is to provide a machine which will be of comparatively few parts and which will be very simple in construction.

Another object is to provide a machine of the class described which will cut cleanly but not too closely.

Further objects and advantages of my invention will appear from the following description and claims with reference to the accompanying drawings which form a part of this specification in which:

Figure 1 is a top plan view of my invention. Fig. 2 is a sectional view of the same taken on the line *a—a* of Fig. 1. Fig. 3 is a detail perspective view of the cutting knives of my invention. Fig. 4 is a side elevation. Fig. 5 is a transverse section through the pivot.

Referring to the drawings the numeral 5 indicates a box like frame or housing made in two sections, 6 and 7, which are secured together as at 8. It will be seen that while the section 6 of the frame or housing 5 lies horizontally the section 7 is inclined upwardly at an angle to the said section 6.

Arranged within the section 6 of the frame 5 are the two cutting knives, 9 and 10. The said knives are identical in construction, but when placed in operative position one of the said knives is reversed so that the cutting edges of the blades will be placed adjacent to each other. Only one of the said knives will be described as they are identical in construction as before stated. The knife consists of a solid circular central portion 10 on the upper face of which is cast or otherwise secured the bevel gear teeth 11. Extending from the periphery of the said portion 10 are the cutting blades, said blades

being of any well defined shape, but preferably curved as shown in the drawings. On the upper face of the said knife and extending from the central portion to the outer point of the cutting blades are the reinforcing ridges 13. These knives when in operative position are rotatably secured by the pivot pin 14 secured in the casing 6 and passing through the aperture 15 of the cutting knives. It will be seen that while the central and rear portions of the knives are confined within the housing or frame 6, a portion of the cutting blades extends beyond the forward end thereof.

A coil spring 16 acts as a tensioning device for the knives 9 and 10, the said spring being placed on the upper portion of the pivot pin 14 between the under face of the top of the casing 6 and the upper face of the knife 9. The bevel gears on the knives 9 and 10 mesh respectively with the bevel pinions 17 and 18 which are secured to the shafts 19 and 20. The shaft 19 is loosely and rotatably held by the bearing blocks 21 and 22 which extend downwardly from the upper face of the casing or frame 6. This shaft 19 being loosely mounted, it will be seen that the pinion 17 will always be in position to mesh with the gear 11 of the knife 10. The shaft 20 which is supported by bearings blocks 23 and 24 extending upwardly from the lower face of the casing 6, lies directly under the shaft 19 and horizontally thereto. Beveled pinions 25 and 26 are secured to ends of the shafts 19 and 20. A double beveled gear 27 secured to the shaft 28 which is incased by the frame 7, meshes with the two beveled pinions 25 and 26. The said shaft 28 is supported within the casing 7 by means of a pair of bearing blocks 29, the rear end of the said shaft extending up to and passing through the rear of the frame 7, where it is provided with means for connecting it to any suitable motor. Adjacent its rear or upper end, the shaft 28 extends loosely through an opening formed in the lower end of a rod 31, which latter is arranged at right angles to the shaft and has its outer end projecting through a longitudinal slot 32, formed in the frame, the rod being held against movement upon said shaft by means of a pair of collars 33 disposed upon opposite sides of its lower end and secured to said shaft. The projecting end of said rod carries a thumb button 34.

It will be understood that I have arranged the gear teeth of the gears 25, 26 and 27 so that they mesh with sufficient play to permit the shaft 28 to be drawn rearwardly out of engagement with said gears, by simply pushing the rod 31 rearwardly.

A handle 30 is attached to the upper face of the frame 7 and may be constructed or formed out of any suitable material.

From the above description the operation of my device will appear to be as follows: The shaft 28 being connected to any suitable motor will be rotated, thus driving the double beveled gear 27, which meshes with the pinions 25 and 26, and which will, through the pinions 25 and 26 rotate the shafts 19 and 20. It will be understood from my construction that the said shaft 19 will be rotated in the opposite direction from the shaft 20. Thus, the two pinions 17 and 18 will be driven in opposite directions and they will in turn drive the two cutting knives in the same way. Further it will be seen that the knives do not normally lie in contact with the animal that is to be sheared or clipped but that the under face of the frame 6 will be between the animal and the cutting blades, of course if it is desired to shear close the machine may be tilted forward thus accomplishing that result.

By forming and placing my cutting knives as I do, that is, having one disposed directly above the other, the blades of said knives being oppositely disposed and the curved ends of said blades adapted to overlies and cut before the remaining portion of the cutting edges, it will be seen that the said blades will have what might be termed a clutching action, which will tend to draw the wool in and at the same time insure a clean, sharp shear-cut.

What I claim and for which I desire to secure Letters Patent, is:

1. In a shearing machine, the combination of a frame; a pair of superposed cutters rotatably mounted therein, each cutter being provided upon its outer face with a gear; a pair of horizontal shafts mounted within the frame and provided at their front ends with pinions arranged to mesh with the gears upon the cutters, for rotating the latter in opposite directions; a drive shaft; and connections between the last-named shaft and both of the first-named shafts, for driving the latter.

2. In a shearing machine, the combination of a frame; a pair of superposed cutters rotatably mounted therein, each cutter being provided upon its outer face with a gear; a pair of horizontal shafts mounted within the frame and disposed one above and the other below the cutters, said shafts being provided at their front ends with pinions arranged to mesh with said gears, for rotating

said cutters in opposite directions; a drive shaft; and connections between the last-named shaft and both of the first-named shafts, for driving the latter.

3. In a shearing machine, the combination of a frame; a pair of superposed cutters rotatably mounted therein, each cutter being provided upon its outer face with a gear; a pair of horizontal shafts mounted within the frame and provided at their front ends with pinions arranged to mesh with the gears upon the cutters, for rotating the latter in opposite directions; a drive shaft; and connections between the last-named shaft and both of the first named shafts, for driving the latter, the last named shaft being arranged for endwise movement and out of operative position.

4. In a shearing machine, the combination of a frame; a pair of superposed cutters rotatably mounted therein, each cutter being provided upon its outer face with a gear; a pair of horizontal shafts mounted within the frame and disposed one above and the other below the cutters; pinions secured to the opposite ends of each shaft, the pinions on the front ends of said shafts being arranged to mesh with said gears, for rotating said cutters in opposite directions; a drive shaft located within the frame; and a compound gear secured to the front end of the drive shaft and arranged to mesh with the pinions on the rear ends of the first named shafts, for driving the latter, the drive shaft being arranged for endwise movement, to move its compound gear into and out of mesh with the last named pinions.

5. In a shearing machine, the combination of a frame having a longitudinal slot formed therein; a pair of superposed cutters rotatably mounted therein, each cutter being provided upon its outer face with a gear; a pair of horizontal shafts mounted within said frame and disposed one above and the other below the cutters; pinions secured to the ends of each shaft, the pinions on the front ends of said shafts being arranged to mesh with the gears upon said cutters, for rotating the latter in opposite directions; a drive shaft disposed within the frame; a compound gear secured to the front end of the drive shaft and arranged for mesh with the pinions upon the rear ends of the horizontal shafts; and a rod connected with the drive shaft and projecting through said slot, for shifting the drive shaft endwise, to move its compound gear into and out of mesh with the last named pinions.

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

STEPHEN ABEYTA.

Witnesses:

J. M. MARQUEZ,
CRUZ JARAMILLE.