

(No Model.)

2 Sheets—Sheet 1.

F. W. & J. E. MELCHER.

CUTTING APPARATUS FOR MOWING MACHINES.

No. 371,963.

Patented Oct. 25, 1887.

Fig 1

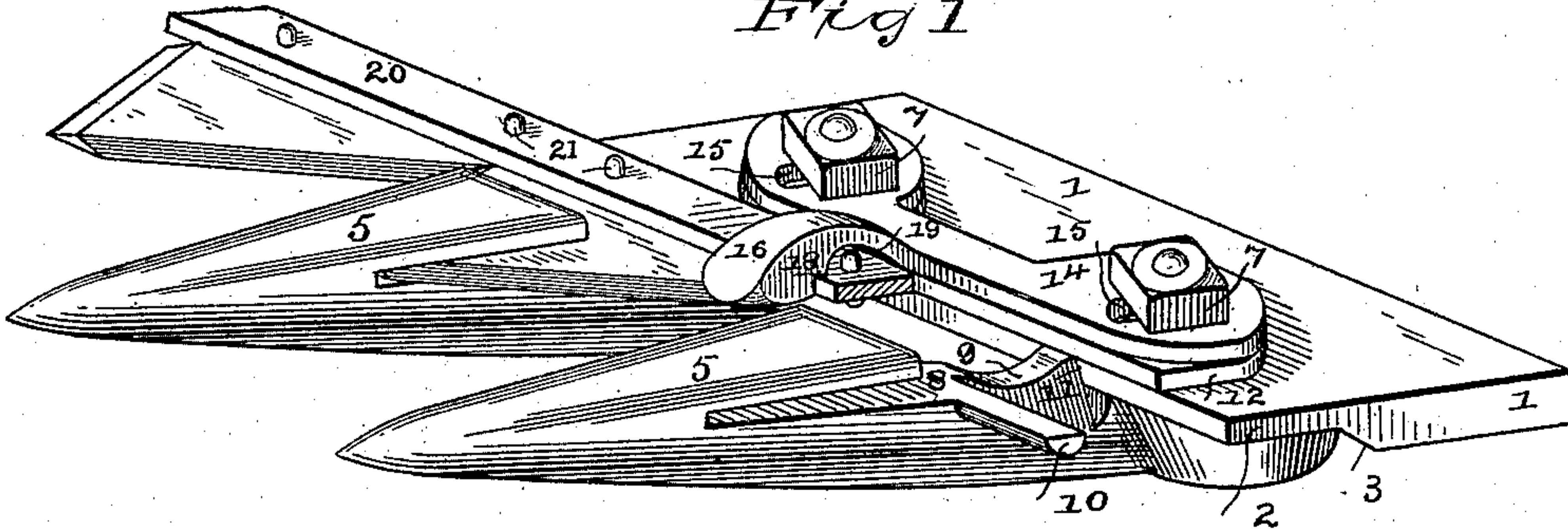


Fig. 2.

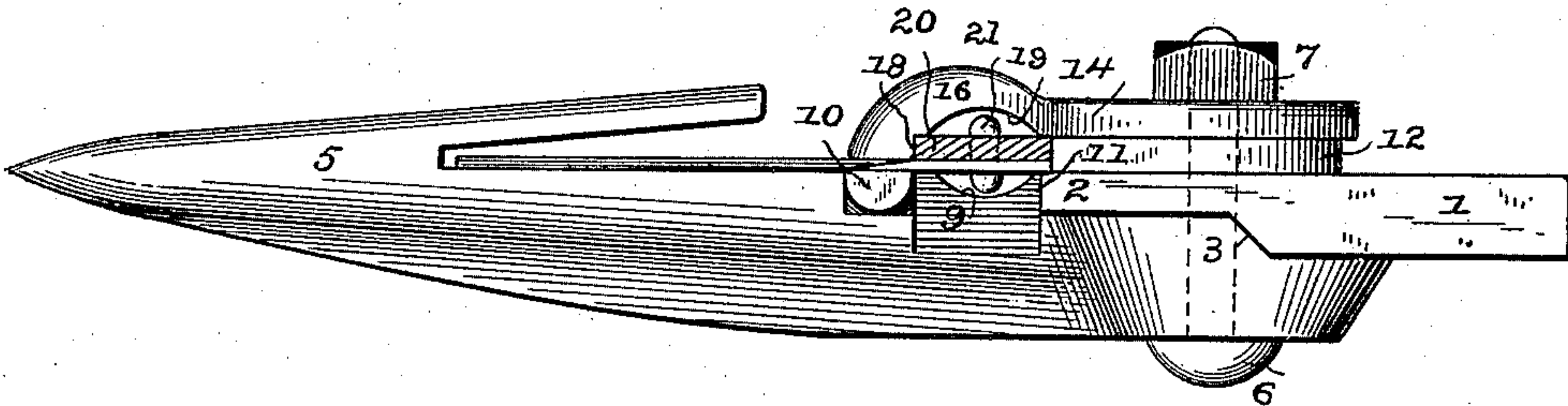
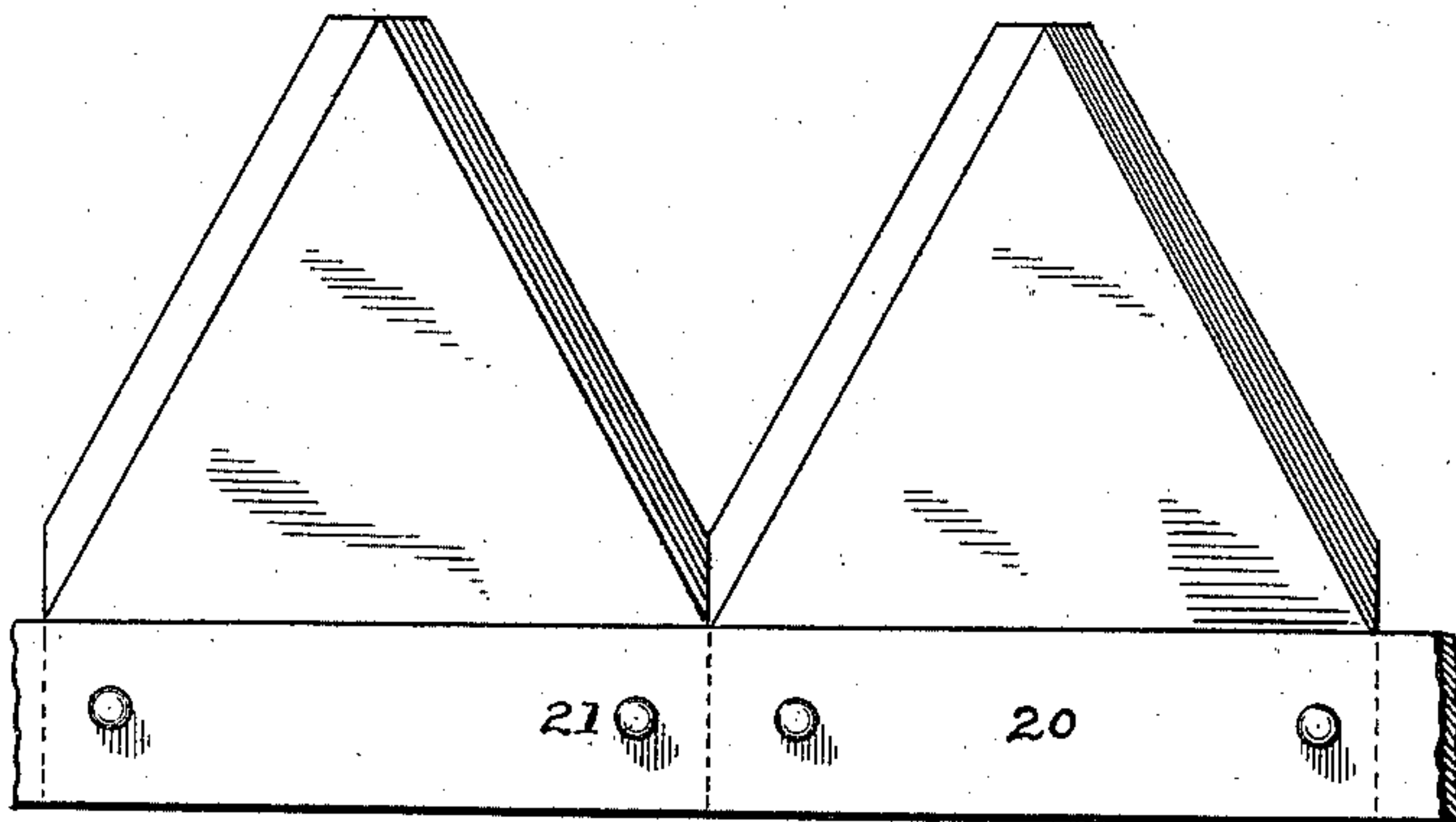


Fig. 3.



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(No Model.)

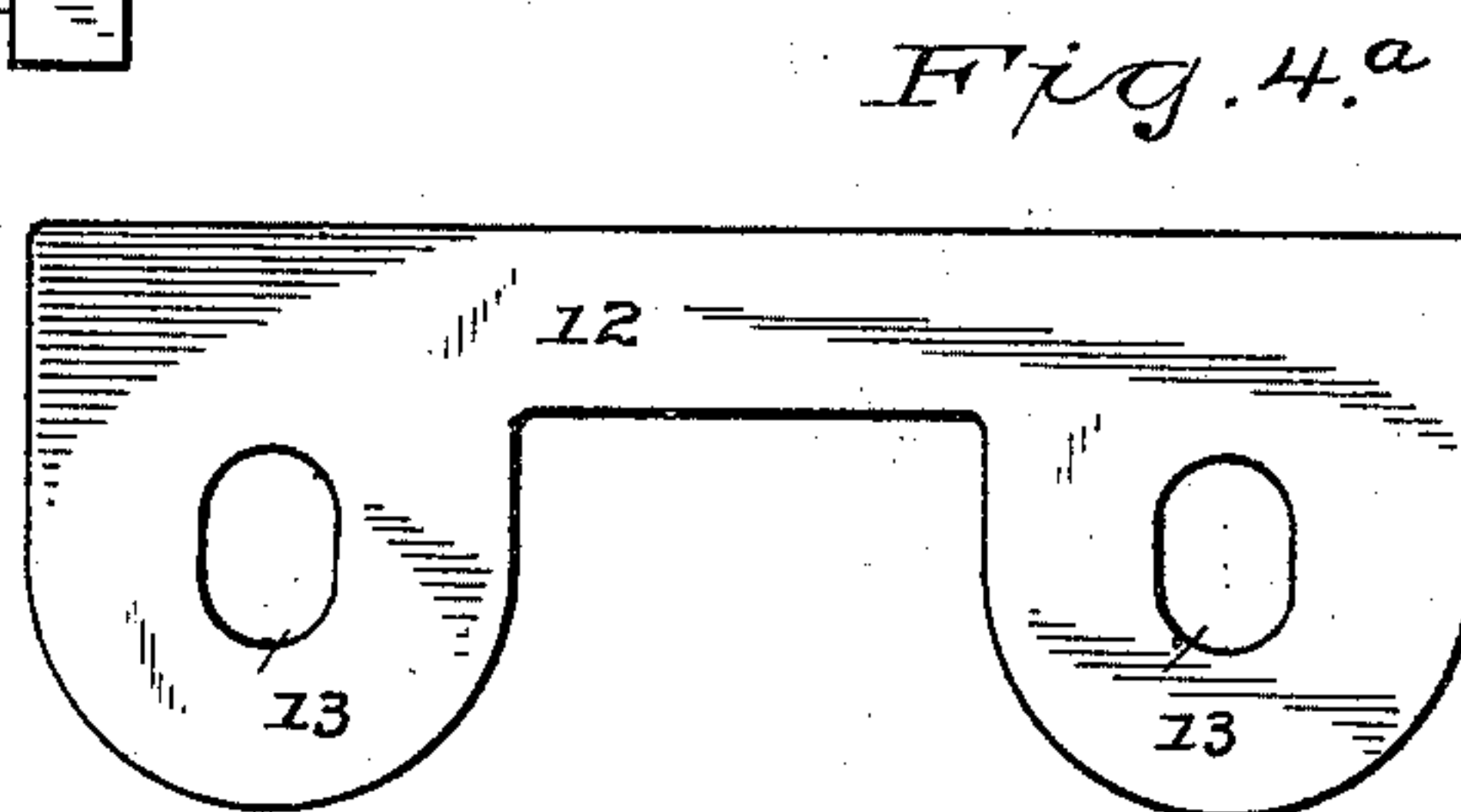
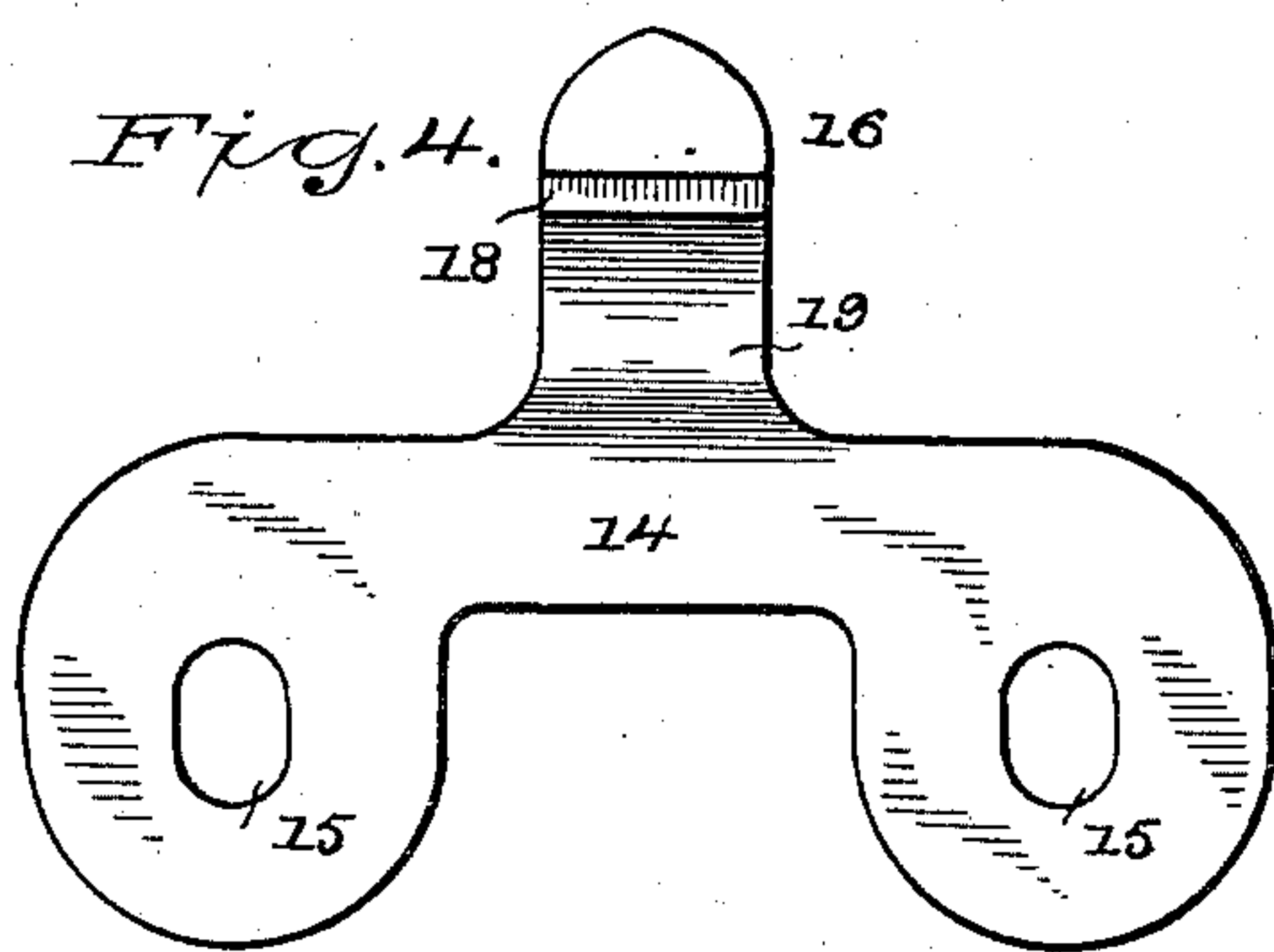
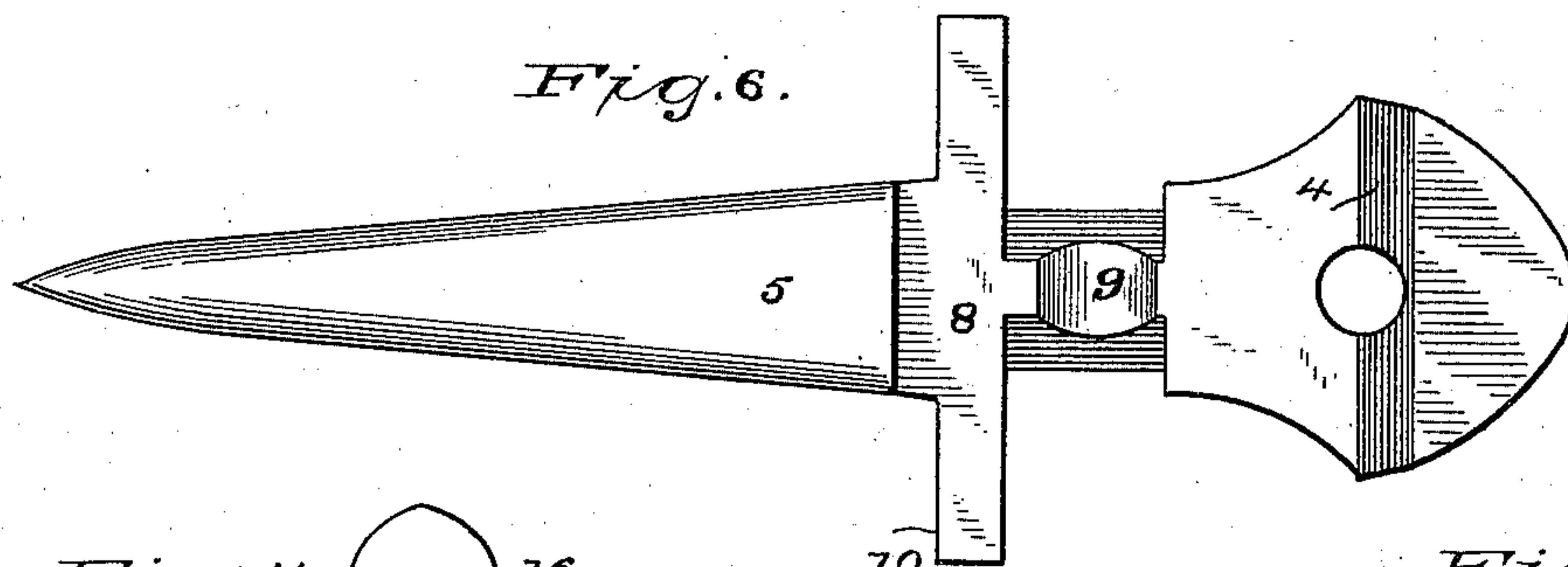
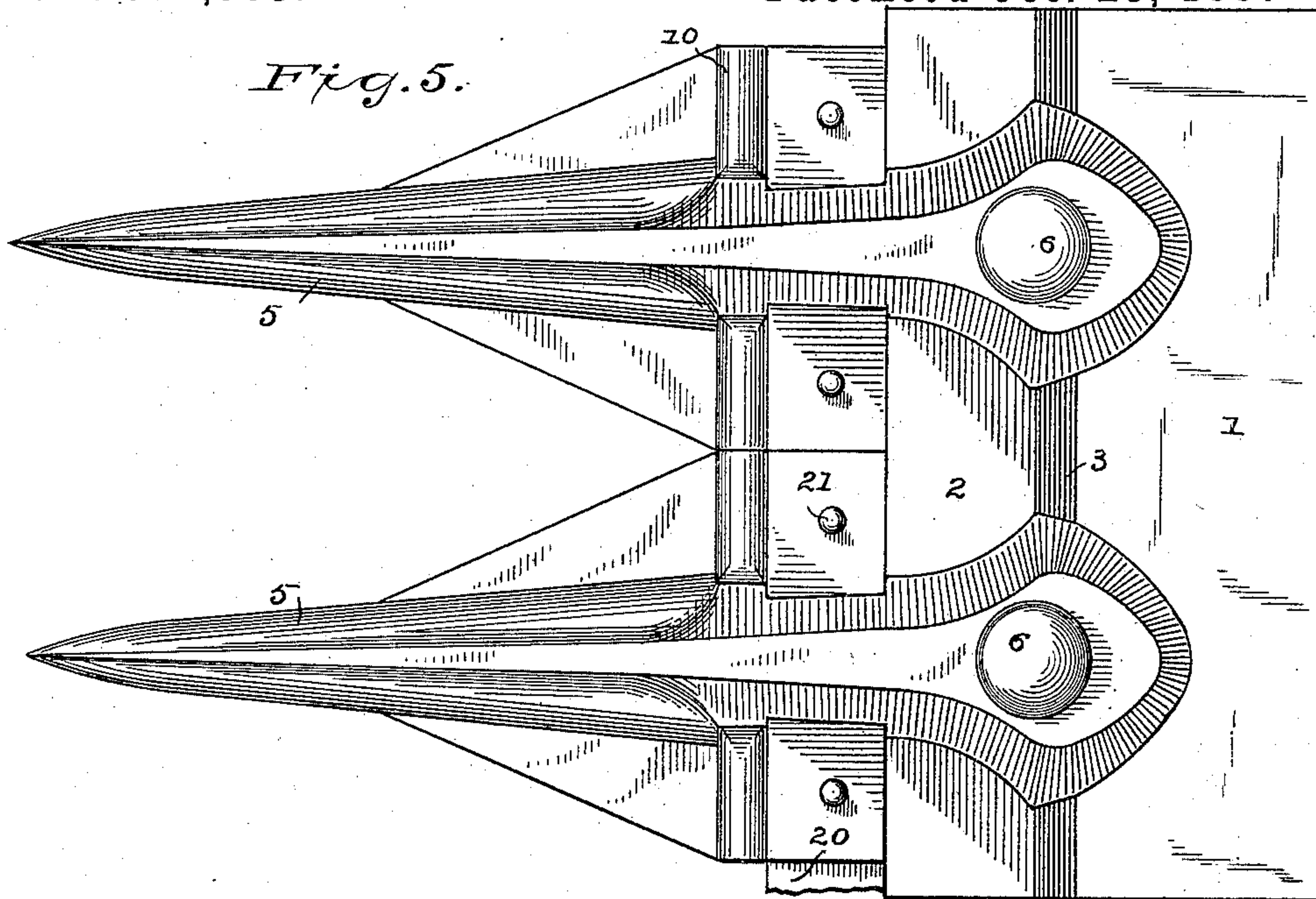
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# UNITED STATES PATENT OFFICE.

FREDRICK W. MELCHER AND J. ERNEST MELCHER, OF OMAHA, NEBRASKA.

## CUTTING APPARATUS FOR MOWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 371,963, dated October 25, 1887.

Application filed March 9, 1887. Serial No. 230,249. (No model.)

*To all whom it may concern:*

Be it known that we, FREDRICK W. MELCHER and J. ERNEST MELCHER, citizens of the United States, residing at Omaha, in the county of Douglas and State of Nebraska, have invented certain new and useful Improvements in Cutting Apparatus for Mowing-Machines; and we 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.

This invention relates to improvements in mowing-machines or harvesters.

The improvements relate especially to the guard-fingers, finger-bar, and an adjustable block or bar and clamp for holding the cutter in position and guiding the same.

The finger-bar is formed on its under face with a longitudinal recess or step, which the heels of the guard-fingers fit, so as to bring the top flat faces of said fingers on a level with the top of the finger-bar. The heels of the fingers are each secured to the finger-bar by a single bolt and nut, and are widened and lengthened to extend over and across the recess in the finger-bar. Each finger has in the top face of its heel a transverse groove, and the cutters are secured to the cutter-bar by rivets which project from each face for the purpose of securing the automatic clearing of the cutter-bar and parts adjacent thereto from grass and other accumulating matter. On the top face of the finger-bar is placed a block or bar, against which the heel or rear edge of the cutter-bar reciprocates, and a clip adapted to hook over the front edge of the cutter-bar. This block or bar and clip have elongated holes transversely thereof, through which pass the bolts securing the guard-fingers to the finger-bar, by which means said block and clip are independently adjustable to take up any wear of the cutter-bar and hold said cutter-bar steady in its reciprocating movements.

In the accompanying drawings, Figure 1 represents a perspective view of our improvements. Fig. 2 represents a side elevation; Fig. 3, a detail view of the cutter-bar separately. Fig. 4 represents an under plan view of the cutter-bar clip. Fig. 4<sup>a</sup> represents a similar view of the cutter-bar bearing-block.

Fig. 5 represents an under side plan view. Fig. 6 represents a top plan view of one of the guard-fingers.

1 represents the finger-bar, which on its under side is formed, at its front, with a recessed portion, 2, forming an abutment or step-bearing, 3, for the shoulder on the heel 4 of the guard-fingers 5, so that when said fingers are secured in position, each by a single bolt, 6, and nut 7, to the finger-bar, the surface 8 of the respective guard-fingers, upon which the cutters reciprocate, shall be on a level with the top face of the finger-bar.

9 represents a recess or groove formed in the upper face of the shank or stock of each guard-finger, and 10 represents wings extending transversely across the top face and beyond each side of the respective guard-fingers, which wings serve to brace and support said guard-fingers, and also serve as a bearing-support for the cutters in their reciprocating movements. The bolts 6 are passed upward from below through suitable openings, slots, or holes in the finger-bar, and the nuts 7 engaged therewith on the top of the finger-bar, so as to facilitate the adjustment of the parts. The top faces of the heels of the respective guard-fingers are ground or otherwise formed so as to correspond with and snugly fit the under face of the finger-bar and to overlap the recessed portion thereof, whereby, when secured in position, they each have a firm bearing. The shanks of the guard-fingers extend up to and abut against the front edge of the finger-bar, as shown at 11.

12 represents a block or bar on the upper face of the finger-bar. This block or bar serves as a bearing, along the front edge of which the rear edge of the cutter-bar shall slide during its reciprocatory movements.

13 represents elongated holes in said block or bar 12, through which the bolts 6 are passed to hold said block to the finger-bar. Superimposed upon this block or bar 12 is a clip, 14, also having elongated holes 15 at its rear, through which the bolts 6 pass. This clip is at its front provided with a hook-shaped portion, 16, which, when the cutter-bar 20 is in position, hooks over and embraces the front edge of the cutter-bar, said cutter-bar loosely fitting within a guide-recess, 18,



in the under face of the hook 16. 19 represents a curved recess or groove in the under face of the hook, which, when the parts are in position, is vertically in line with the grooves 5 in the shanks of the guard-fingers.

By forming the bearing or friction bar 12 with elongated holes 13 it can be readily adjusted, either inwardly or outwardly, on the finger-bar, to adapt it to cutter-bars of varying 10 widths, or to compensate for any wear of the rear edge of said cutter bar. Similarly, the elongated holes 15 in the clip 14 permit of the ready adjustment of said clip in either direction transversely, to accommodate the cutter- 15 bar as it wears in use, or to adapt it to clamp or clip cutter-bars of varying widths. Either the cutter-bar, bearing bar or block, or the clip can be thus independently adjusted relatively to each other or to the cutter-bar. Pro- 20 jecting vertically from each face of the cutter-bar 20, and connecting the same and the cutters at suitable intervals, are rivets 21, which, as the cutter-bar reciprocates in use, reciprocate, respectively, in the grooves or ways 9 25 in the fingers and the grooves 19 in the hooks 16, thereby effectually and automatically removing any grass or other material that may enter or would otherwise accumulate between or upon the shanks of the fingers, or 30 upon or between the cutter-bar and parts adjacent thereto, thus keeping the several parts clear from obstruction.

Having thus described our invention, what we claim is—

35 1. The cutter-bar clip herein described, comprising a bearing-plate adapted at its front edge to rest against the rear edge of the cutter bar, and having a rear elongated slotted portion to admit of the independent trans- 40 verse adjustment of said bearing-plate relatively to the cutter-bar, to compensate for

wear, and also to accommodate cutters of varying width, and a plate having a hook-shaped front portion to grasp the front edge of the cutter-bar, and an elongated slotted 45 rear portion to permit of its independent transverse adjustment to suit bars of varying width, take up wear, and hold said bar against its bearing-plate, and bolts and nuts adjustably connecting the two members of said 50 clip together and to the finger-bar, substantially as set forth.

2. The combination, with a finger-bar, guard-fingers having recesses in the upper faces of the shanks thereof, and a cutter-bar having 55 rivets projecting from each face thereof, of a cutter-bar bearing-block superimposed on the finger-bar and resting against the rear edge of said cutter-bar, and having a rearwardly-extending portion having elongated holes 60 therein to permit of its independent transverse adjustment on said finger-bar, a cutter-bar clip resting upon the cutter-bar bearing-block and having a recessed under face to permit of the passage of the rivets on the cut- 65 ter-bar, and a hook-shaped front portion to hook over the front edge of the cutter-bar, and having at its rear portion elongated holes to permit of its independent transverse adjustment, as explained, whereby adjustable 70 bearing-surfaces are afforded the respective front and rear edges of the cutter-bar, and bolts and nuts connecting said bearing-block and clip together and to the finger-bar, substantially as set forth. 75

In testimony whereof we affix our signatures in presence of two witnesses.

FREDRICK W. MELCHER.

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Witnesses:

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