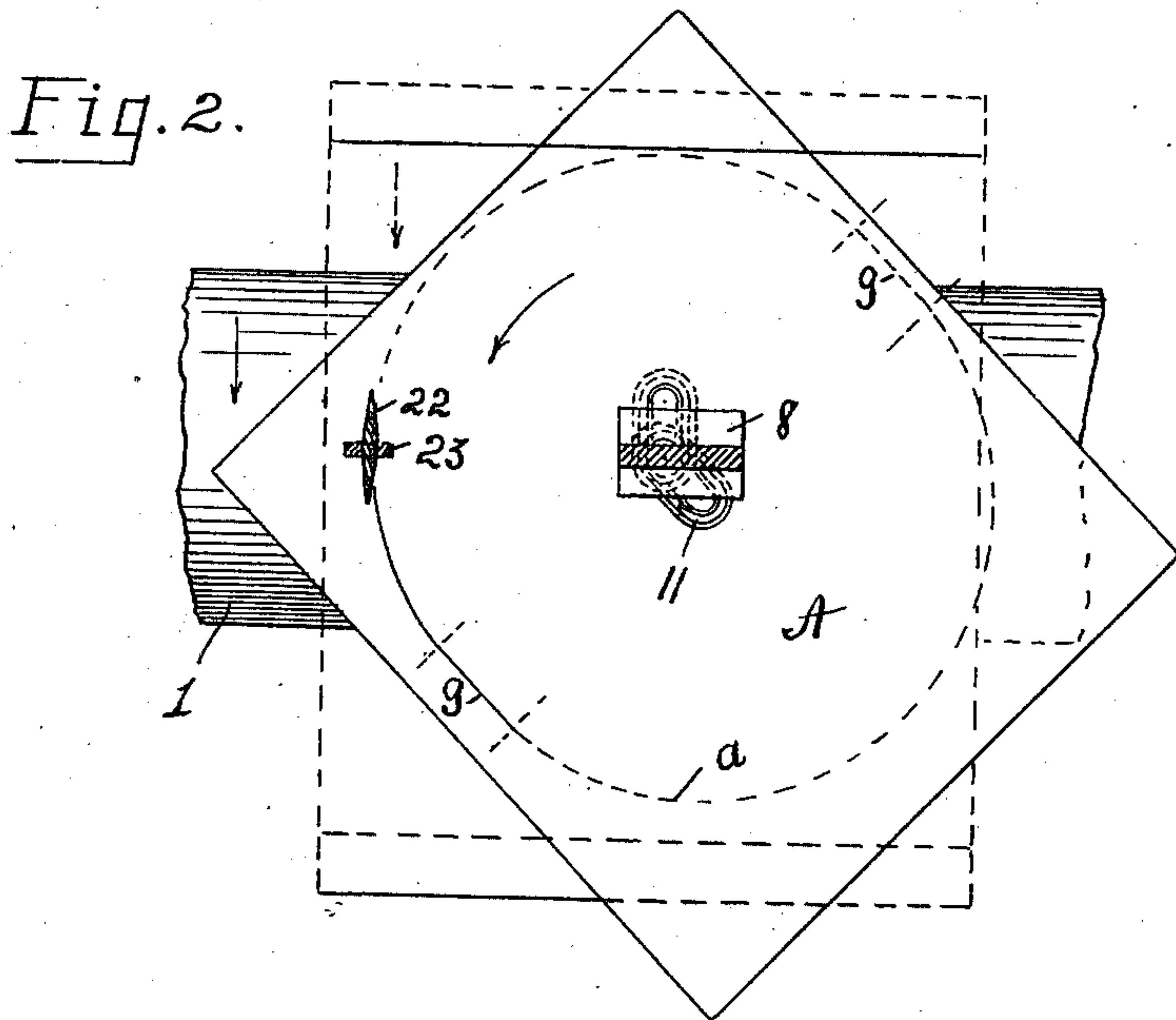
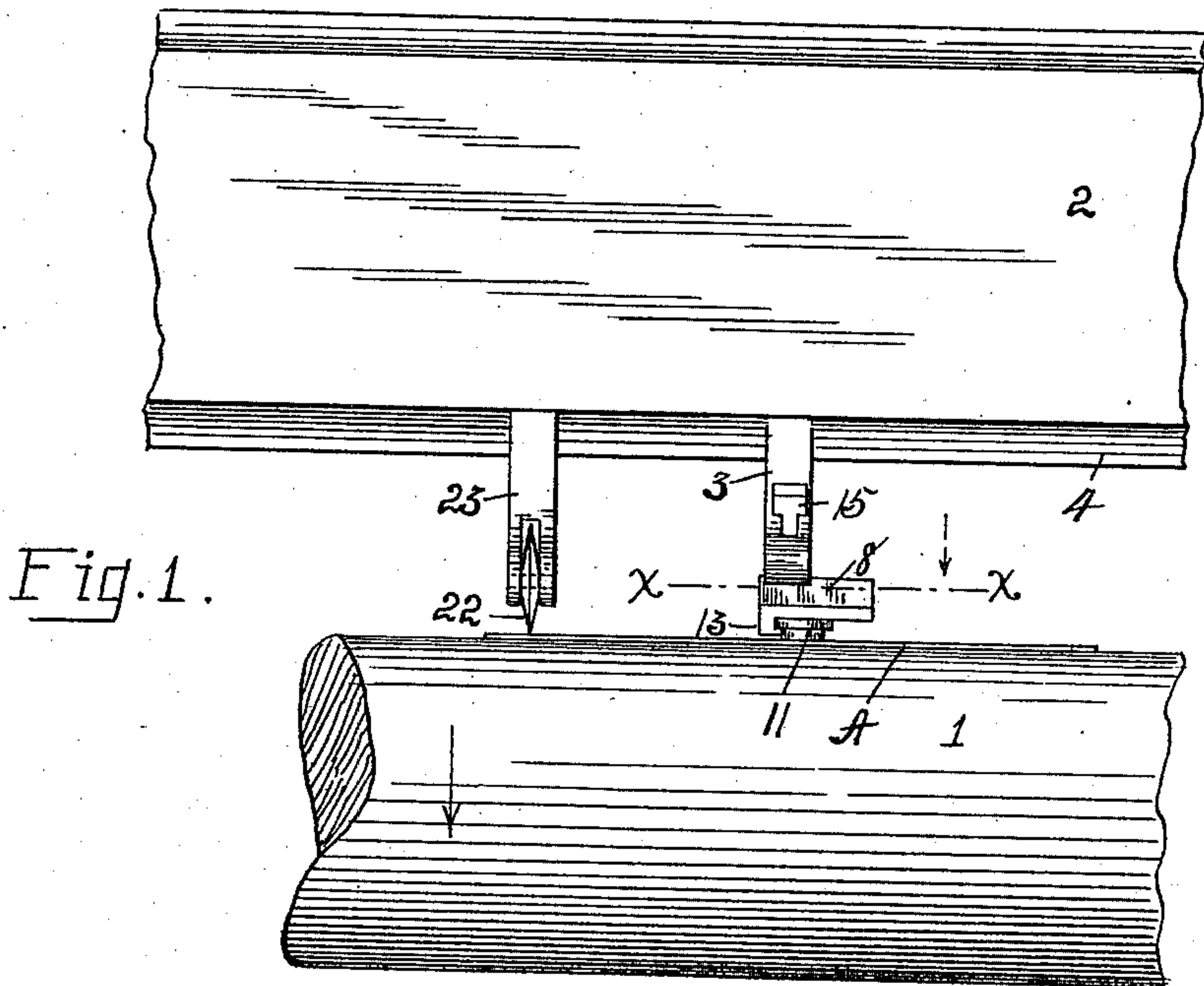


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ATTACHMENT FOR SCORING MACHINES.  
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2 SHEETS—SHEET 1.



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2 SHEETS—SHEET 2.

Fig. 3.

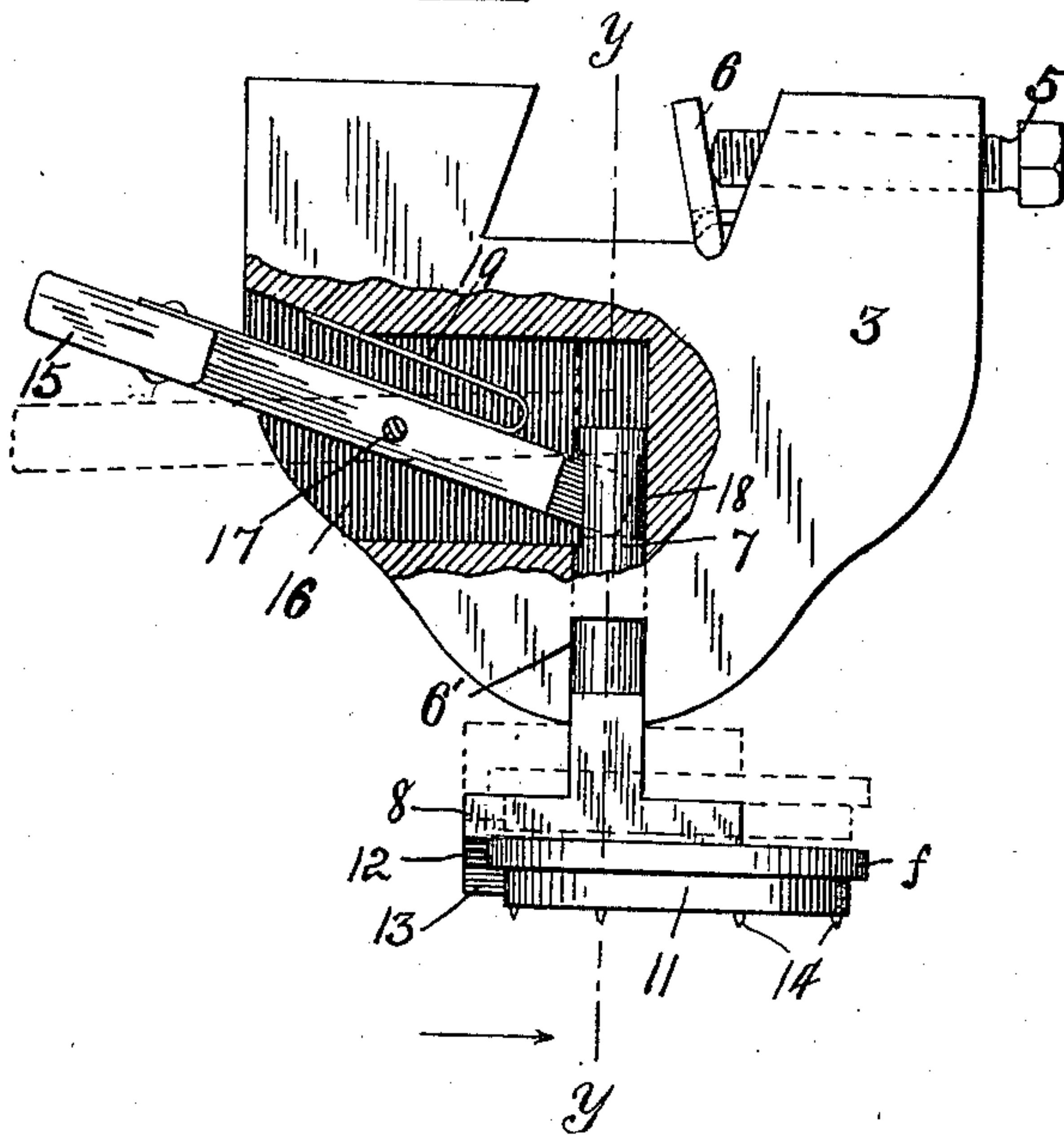


Fig. 4.

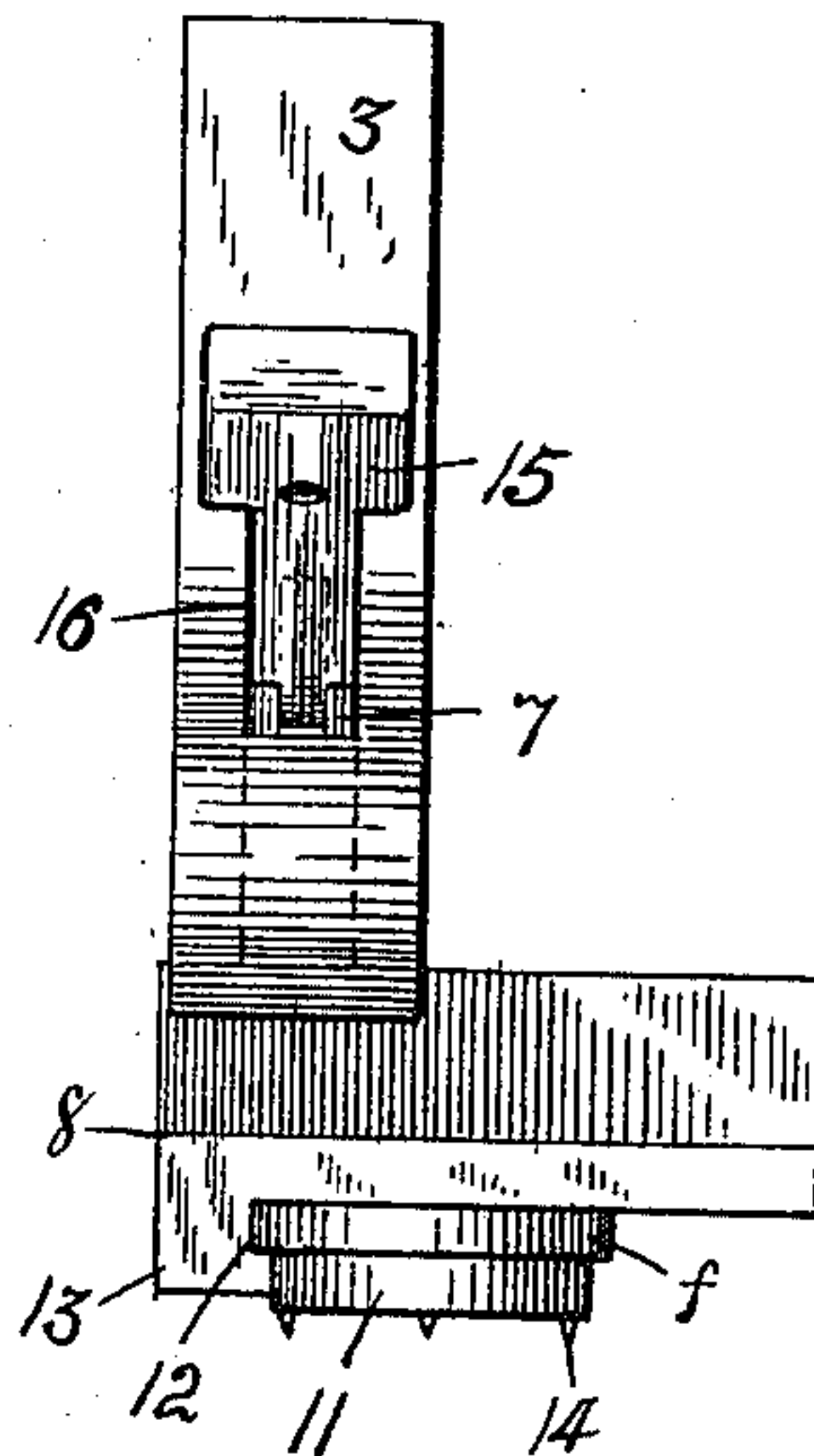


Fig. 6.



Fig. 5.

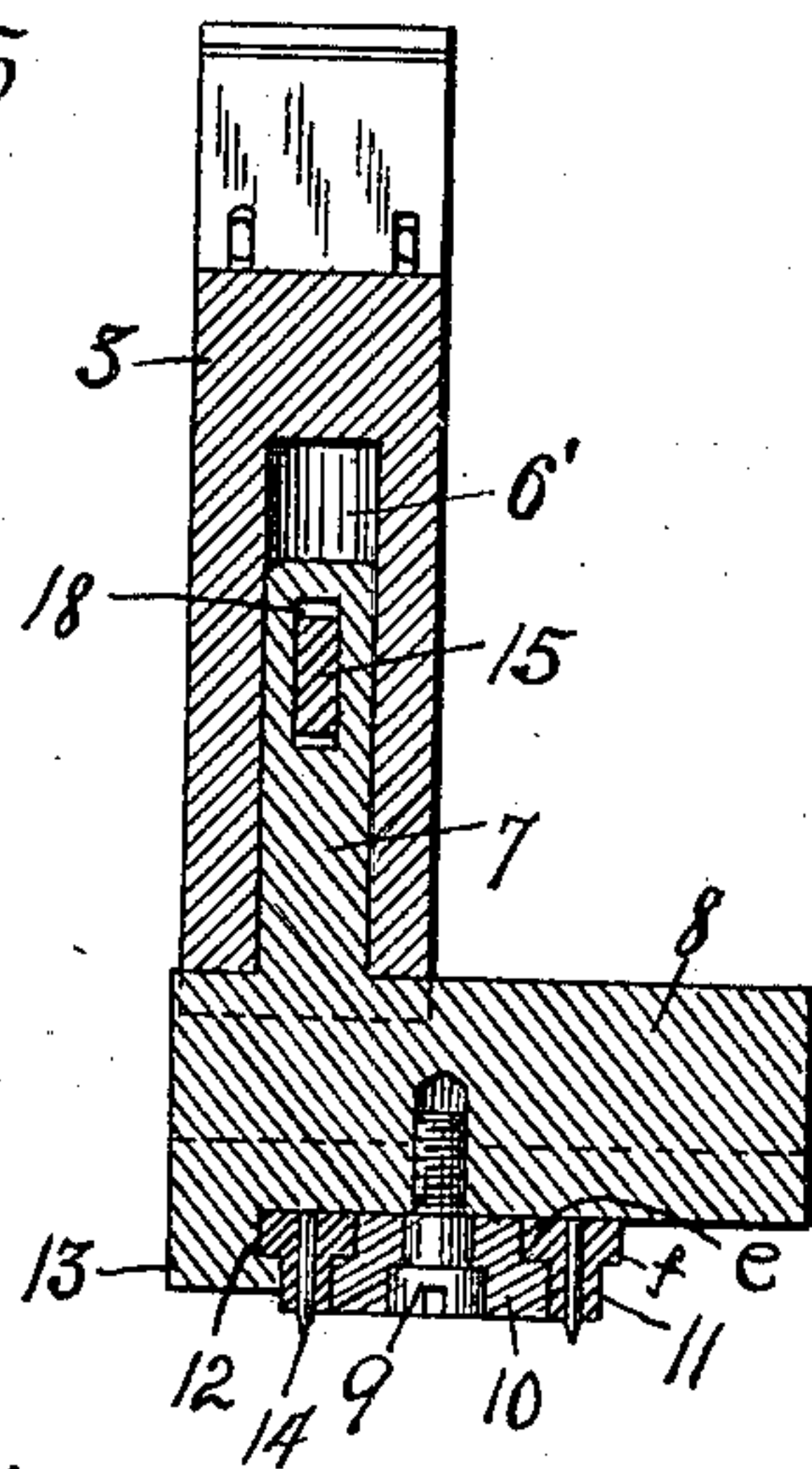


Fig. 7.

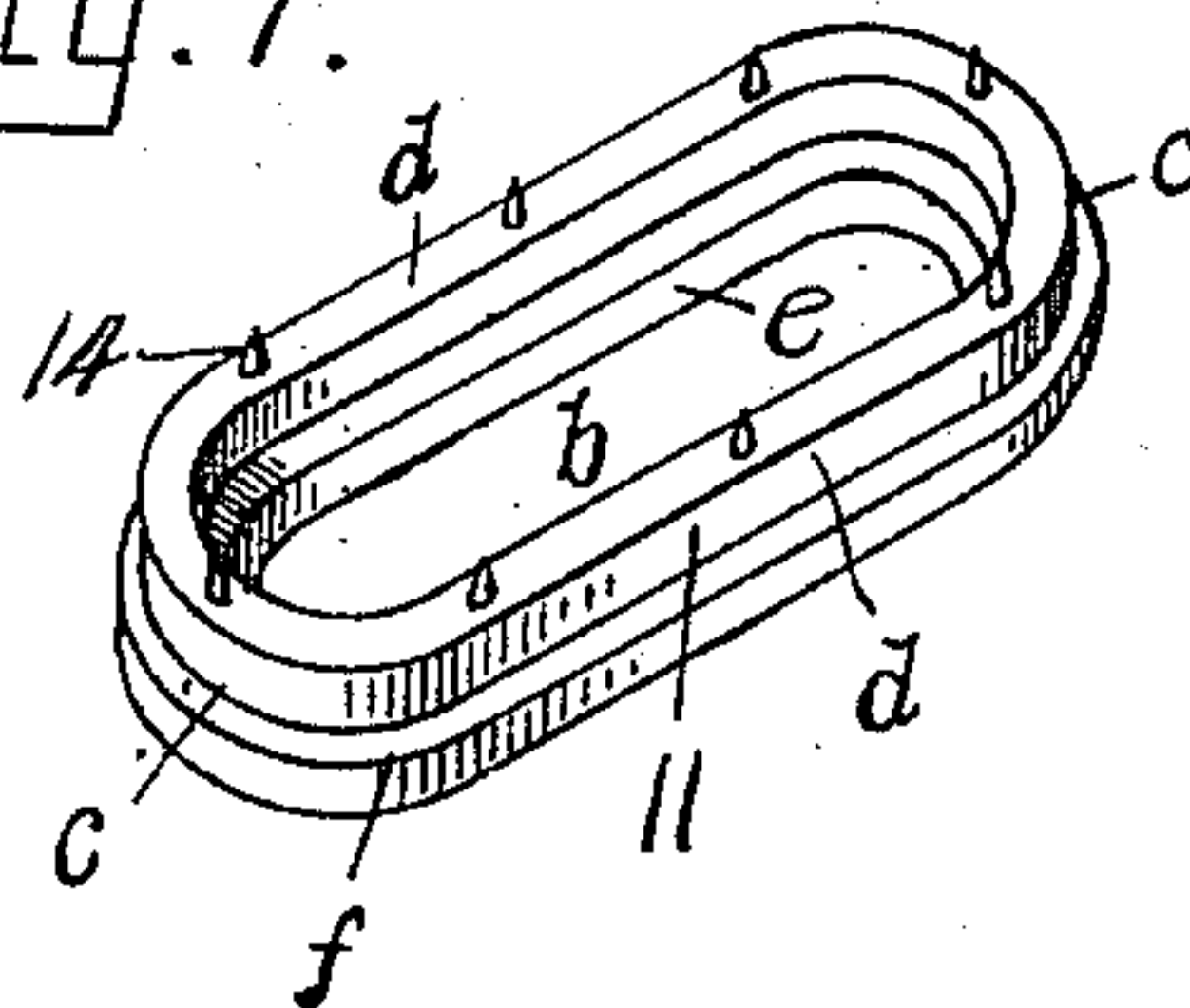
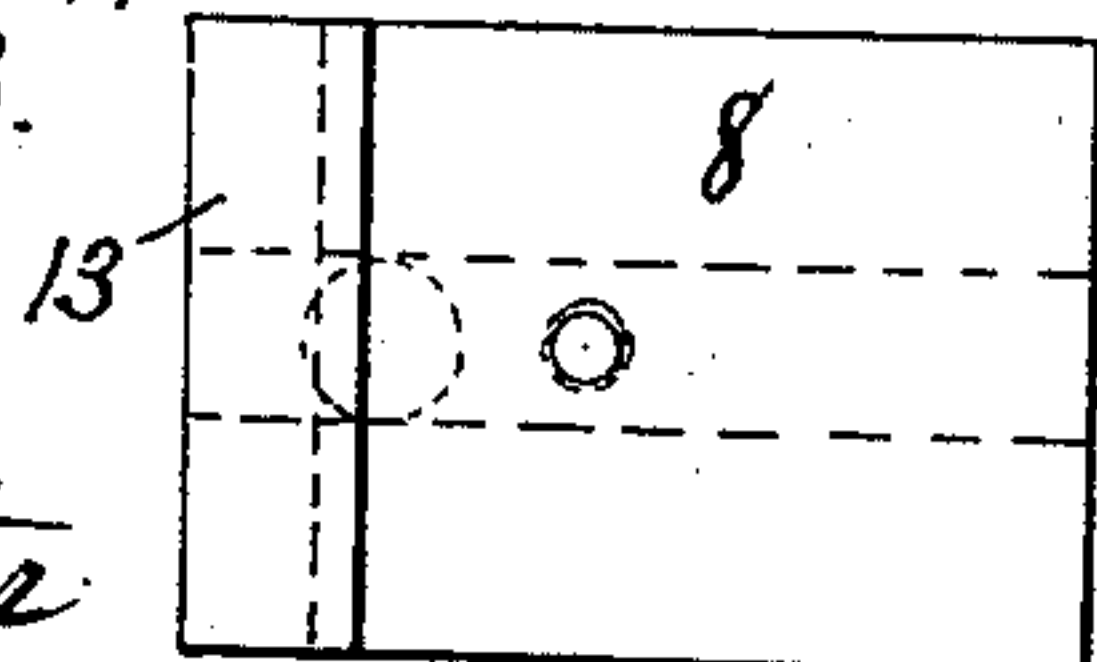


Fig. 8.



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# UNITED STATES PATENT OFFICE.

ALBERT T. MEYER, OF TOLEDO, OHIO, ASSIGNOR TO GERARD G. BLACK AND GEORGE A. BLACK, A COPARTNERSHIP.

## ATTACHMENT FOR SCORING-MACHINES.

976,388.

Specification of Letters Patent. Patented Nov. 22, 1910.

Application filed July 14, 1909, Serial No. 507,488. Renewed October 8, 1910. Serial No. 586,067.

*To all whom it may concern:*

Be it known that I, ALBERT T. MEYER, a citizen of the United States, and a resident of Toledo, in the county of Lucas and State of Ohio, have invented a certain new and useful Attachment for Scoring-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, reference being had to the accompanying drawings, and to the figures and letters of reference marked thereon, which form a part of this specification.

My invention relates to means which is particularly applicable for use on scoring machines or the like and adapted to guide the movement of paper, card board or other material fed thereto to cause it to be cut into a predetermined shape.

The object of my invention is the provision of a simple, and highly efficient device of this class, which, when thrown into operation, is automatically operative to guide the movement of the material being cut relative to the cutter to cause it to be cut into a predetermined shape, such as a circle, oval or the like.

The operation, construction and arrangement of the parts of the invention are fully described in the following specification, and a preferred embodiment thereof illustrated in the accompanying drawings, in which,—

Figure 1 is a front elevation of portions of a scoring machine with my invention associated therewith and adapted for oval or oblong cutting. Fig. 2 is a section of the same, as along the line  $x-x$  in Fig. 1. Fig. 3 is an enlarged side elevation of the attachment comprising the invention, with a portion of the same in section. Fig. 4 is a front elevation of the same. Fig. 5 is a vertical section thereof on the line  $y-y$  in Fig. 3. Fig. 6 is a perspective view of the work engaging part of the attachment which is used when making circular cuts. Fig. 7 is an inverted perspective view of the work engaging part which is used for cutting pieces into oblong shape with circular ends, and Fig. 8 is a bottom view of the pressure-foot.

The attachment constituting my invention is adapted for use on any of the usual forms of scoring machines, such machines comprising in particular a work-supporting shaft or roll 1, the rotary movements of which are

controlled in any suitable manner, and a revoluble bar 2 to which the cutters are attached, and which is rocked by hand to throw the cutters into or out of operative position.

This attachment is shown in the present instance as comprising a holder 3, which is clamped in any suitable manner to a rib 4 on the edge of the bar 2, as by a set-screw 5 threading through a part of such holder and cooperating with a hinged plate 6, as shown in Fig. 3, and is provided in its under side with a vertical bore 6' for the stem 7 of the pressure foot 8 to work in.

A screw 9 is threaded into the under side of the foot 8 and its head carries a roller 10, which is peripherally shouldered to adapt it to cooperate with a work-engaging member 11 to hold it in loose revoluble contact with the bottom of such foot. The member 11, when adapted for guiding work to cause it to be cut into oblong shape such for instance as indicated by the line  $a$  in Fig. 2, is provided with the oblong opening  $b$  for receiving the roller 10, the wall of which opening is of equal thickness throughout its length and constitutes the rounded or semi-circular ends  $c$  and the straight sides  $d$ . The member 11 has its upper inner edge formed with a flange or shoulder  $e$ , which fits over the peripheral shoulder of the screw head, as indicated in Fig. 5, and has its upper outer edge formed with a surrounding flange or shoulder  $f$ , which works in a complementary groove 12, provided in the inner side of a flange 13 depending from one side of the foot 8. The flange 13 has its inner side straight throughout its length to adapt it to cooperate with the roller 10 to guide the member 11 for transverse movement only relative to the foot when a side  $d$  of the member is in contact with such flange, thus preventing a turning of the member until an end thereof moves into contact with the roller 10, when it is permitted to make a half turn around such axis to move its other straight side into contact with the flange 13.

In order to prevent a slipping of the member 11 relative to the work when in contact therewith, such member is provided on its lower face with a plurality of brads 14 for piercing the work.

The lowering and raising movements of the foot 8 are controlled by a lever 15, which



projects within a socket 16 provided in the holder 3 in register with the upper end of the bore 6, such lever being pivoted within said socket, as at 17, and having its inner  
 5 end working within a slot 18 in the upper end of the stem 7. A spring 19 acts on the lever 15 to normally maintain the pressure-foot in elevated position.

If it is desired to cut the work into circular form the member 11 and its holding parts are removed from the foot and a screw or part 20, see Fig. 6, having a pivot-pin 21 projecting from its lower end, is substituted therefor. When lowered in contact with the  
 15 work the pin 21 permits a circular movement thereof.

The usual cutting disk 22, which coöperates with the roll 1 to cut the work, is suspended from the bar 2 by a carrying-arm  
 20 23, which is attached to the rib 4 of the bar 2 in any suitable manner to permit adjustment of the cutter longitudinally of the bar.

The operation of the invention is as follows: The cutter-disk 22 having been placed in proper position relative to the holder 3 to cut a blank in the desired size, a blank A is placed between the roll 1 and the disk 22 and pressure-foot 8 with its central portion  
 30 disposed under the latter, and the lever 15 is then operated to lower the pressure-foot to cause the bradded face of the member 11 to engage the work. The rotation of the roll 1 being now started the blank is caused to  
 35 have a circular movement due to the disk 22 holding one side of the same to the roll as it coöperates therewith to cut the blank. The blank, however, instead of having a true circular movement is caused to have  
 40 straight movements equal to the length of the sides *d* of the member 11, when either of said sides is in contact with the guide-flange 13 of the pressure-foot 8, so that opposite sides of the blank are severed in  
 45 straight lines of corresponding length, as indicated at *g*, while the end portions of the blank are severed in circular lines with the pivot roller 10 as their axis, which is due to the ends of the member 11 contacting with  
 50 the roller 10 and describing a half revolution around the same. Should it be desired to cut the blank in a true circle the member 11 and its holding parts are removed from the pressure-foot and the pivot member 21  
 55 substituted therefor.

I wish it understood that my invention is not limited to any specific construction, shape, size or arrangement of the parts except in so far as such limitations are specified in the claims.

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

1. In an apparatus of the class described,  
 65 the combination with a rotatable shaft, and

a cutter coöperating therewith to cut a blank fed therebetween, of means operative to act on the central portion of the blank in opposition to the shaft to guide the movements of the blank to cause it to be cut in other  
 70 than a straight line.

2. In an apparatus of the class described, the combination with a rotatable shaft, and a cutter coöperating therewith, of means mounted above the shaft and operative to  
 75 act on the central portion of a blank in opposition to the shaft to guide the movements of the blank to cause it to be cut in substantially circular form.

3. In an apparatus of the class described, the combination with a rotatable shaft, and a cutter coöperating therewith, of a pressure-foot, and a work-engaging member carried by such foot, and movable therewith to engage work in opposition to the shaft and to  
 85 guide its movements when being cut.

4. In an apparatus of the class described, the combination with a rotatable shaft, and a cutter coöperating therewith, of a bar spaced from such shaft, a pressure-foot carried by said bar for movements relative to the shaft, and means carried by such foot and adapted when moved into contact with work to be cut to guide the movements of such work when being cut.  
 95

5. In an apparatus of the class described, the combination with a rotatable shaft, and a cutter coöperating therewith, of means operative to act on a blank in opposition to the shaft to guide its movements whereby it is  
 100 cut in other than a true circle.

6. In an apparatus of the class described, the combination with a rotatable shaft, and a cutter disk coöperating therewith, of means operative to act on a blank in opposition  
 105 to the shaft to guide its movements to cause it to be cut in oblong shape with semi-circular ends.

7. In an apparatus of the class described, the combination with a rotatable shaft, and a cutter disk coöperating therewith, of a pressure-foot disposed at one side of such shaft, and work-engaging means movably carried by such foot and adapted to coöperate with the shaft to grip the work and to  
 110 automatically guide the same to be cut in a predetermined shape other than a continuous straight line.

8. In an apparatus of the class described, the combination with a rotatable shaft, and a cutter coöperating therewith, of a pressure-foot, and a member carried by said foot for engaging work in opposition to said shaft, said member being capable of movements relative to the foot and adapted to  
 125 guide the movements of the work to cause it to be cut in oblong shape with rounded ends.

9. In a scoring machine, the combination with a rotatable shaft, and a cutter coöper-  
 130



ating therewith, of a pressure-foot suspended above the shaft, a roller carried by such foot, an elongated loop member carried by such roller, means cooperating with the roller for guiding the movements of said member, and means for moving said foot to lower said member into engagement with the work whereby the movements of the work are guided thereby.

10 10. In a scoring-machine, the combination with a rotatable shaft, and a rotary cutter cooperating therewith, of a pressure-foot disposed at the side of the shaft and movable radially thereof, a pivot member carried by

said foot, a work-engaging element carried 15 by said member for rotary and transverse movements relative to the foot, and a flange on the foot which cooperates with the pivot-member to guide the movements of said element.

20 In testimony whereof I have hereunto signed my name to this specification in the presence of two subscribing witnesses.

ALBERT T. MEYER.

Witnesses:

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CORNELL SCHREIBER.