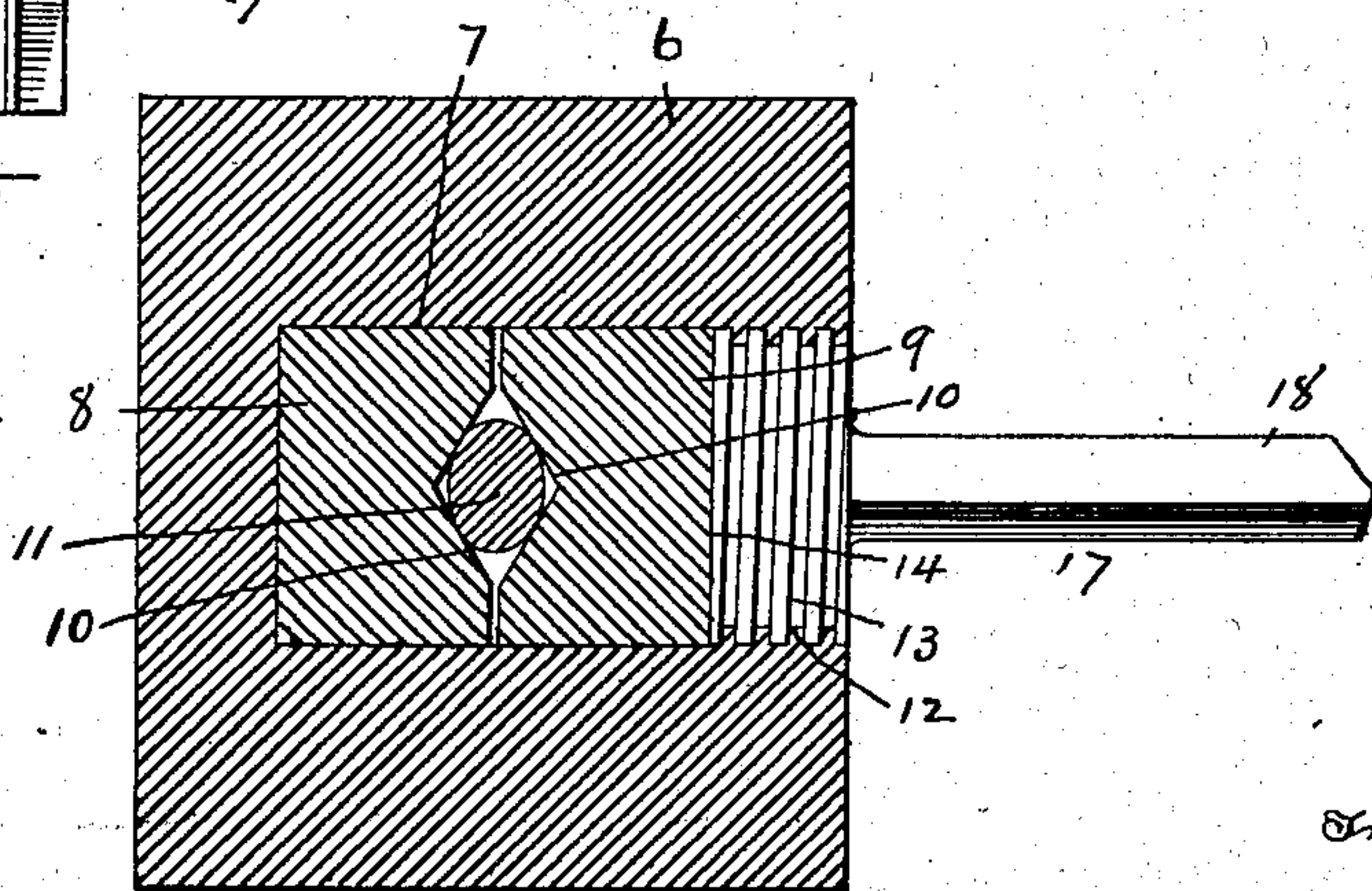
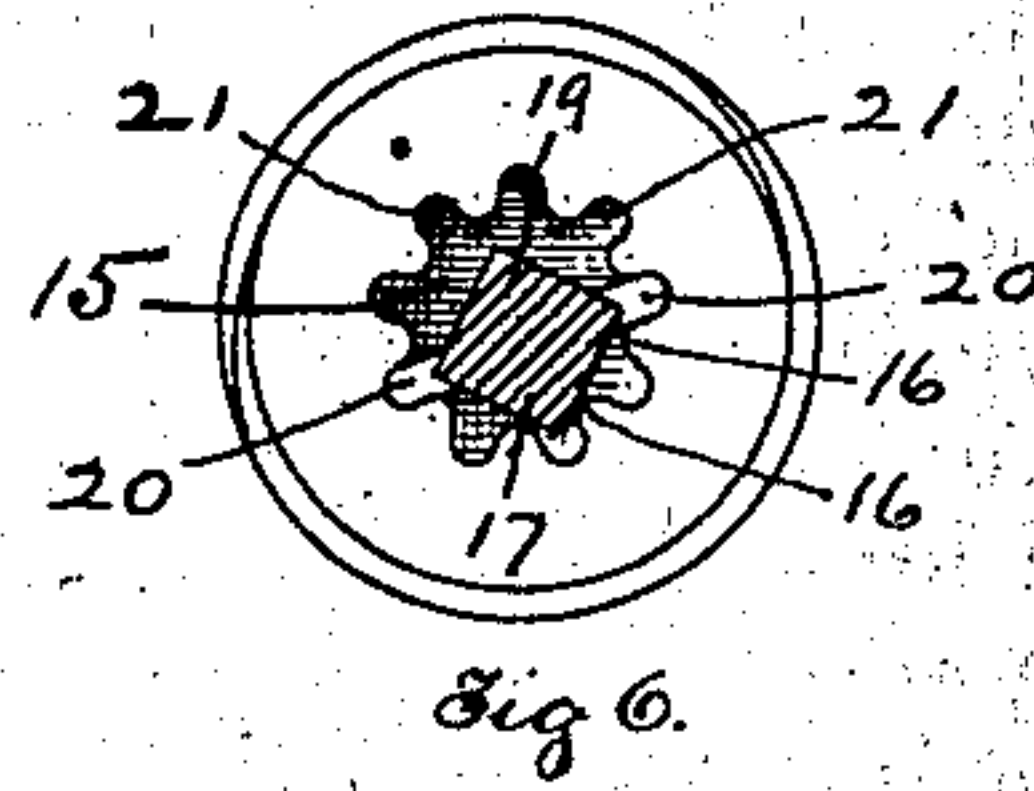
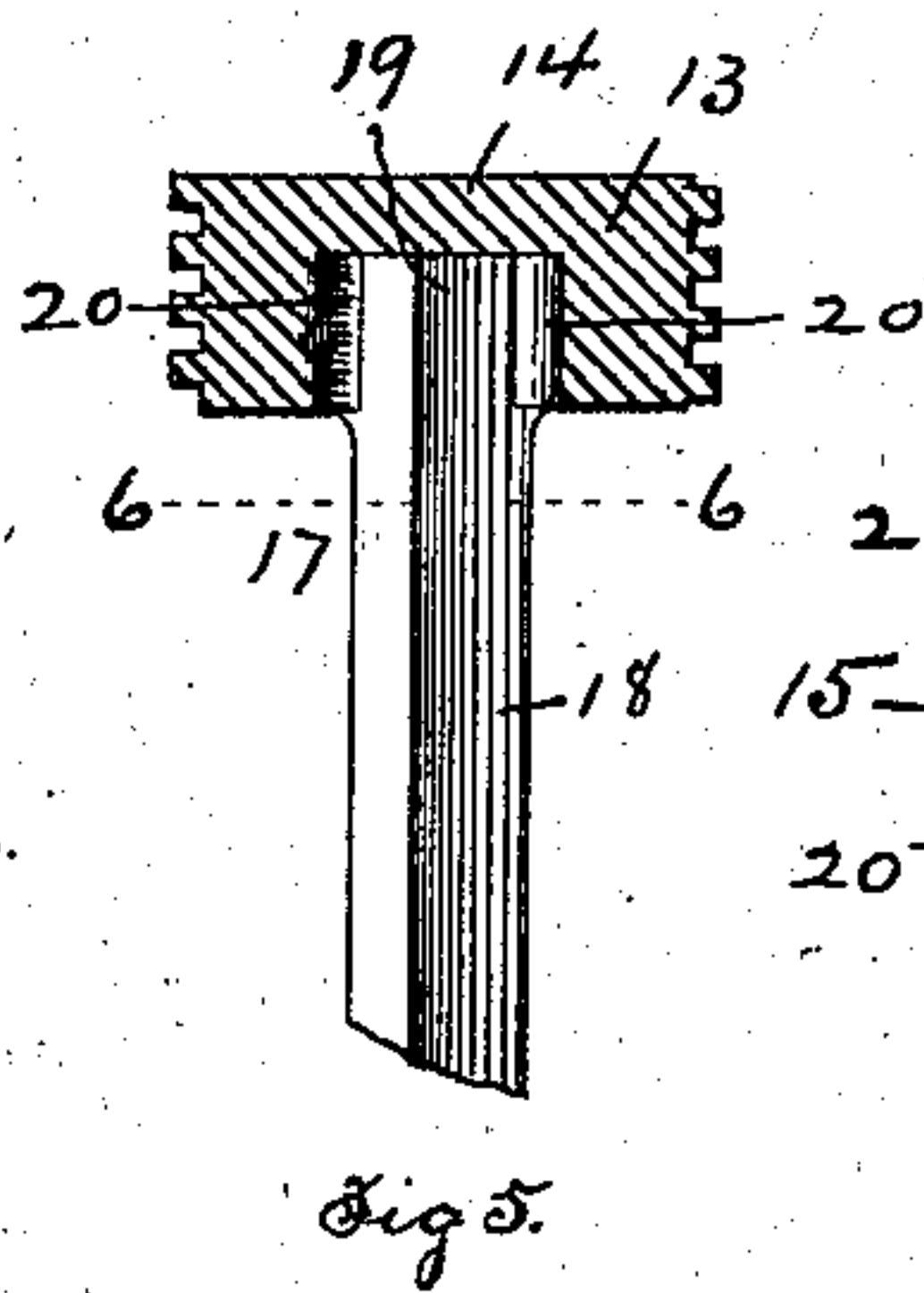
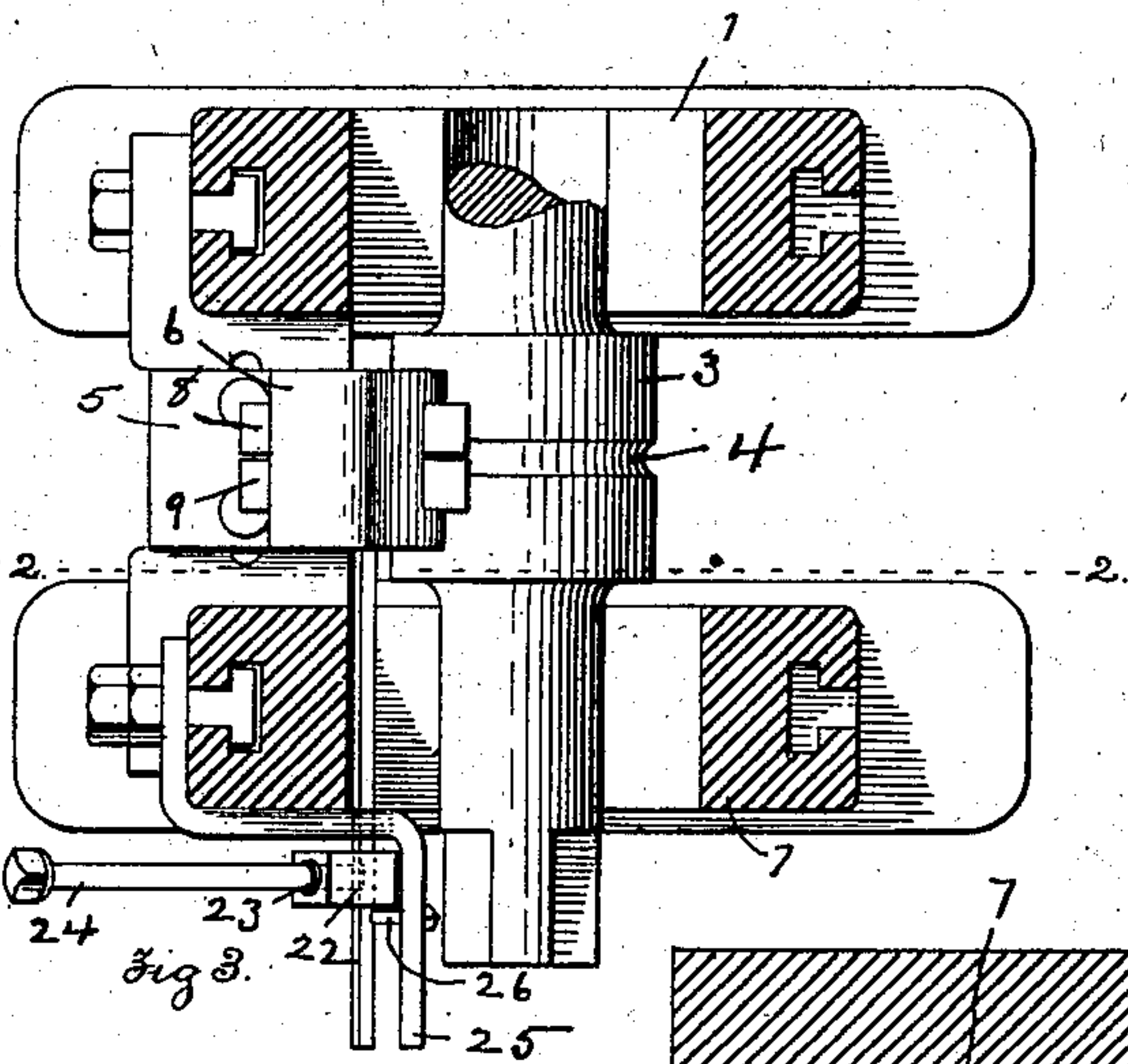
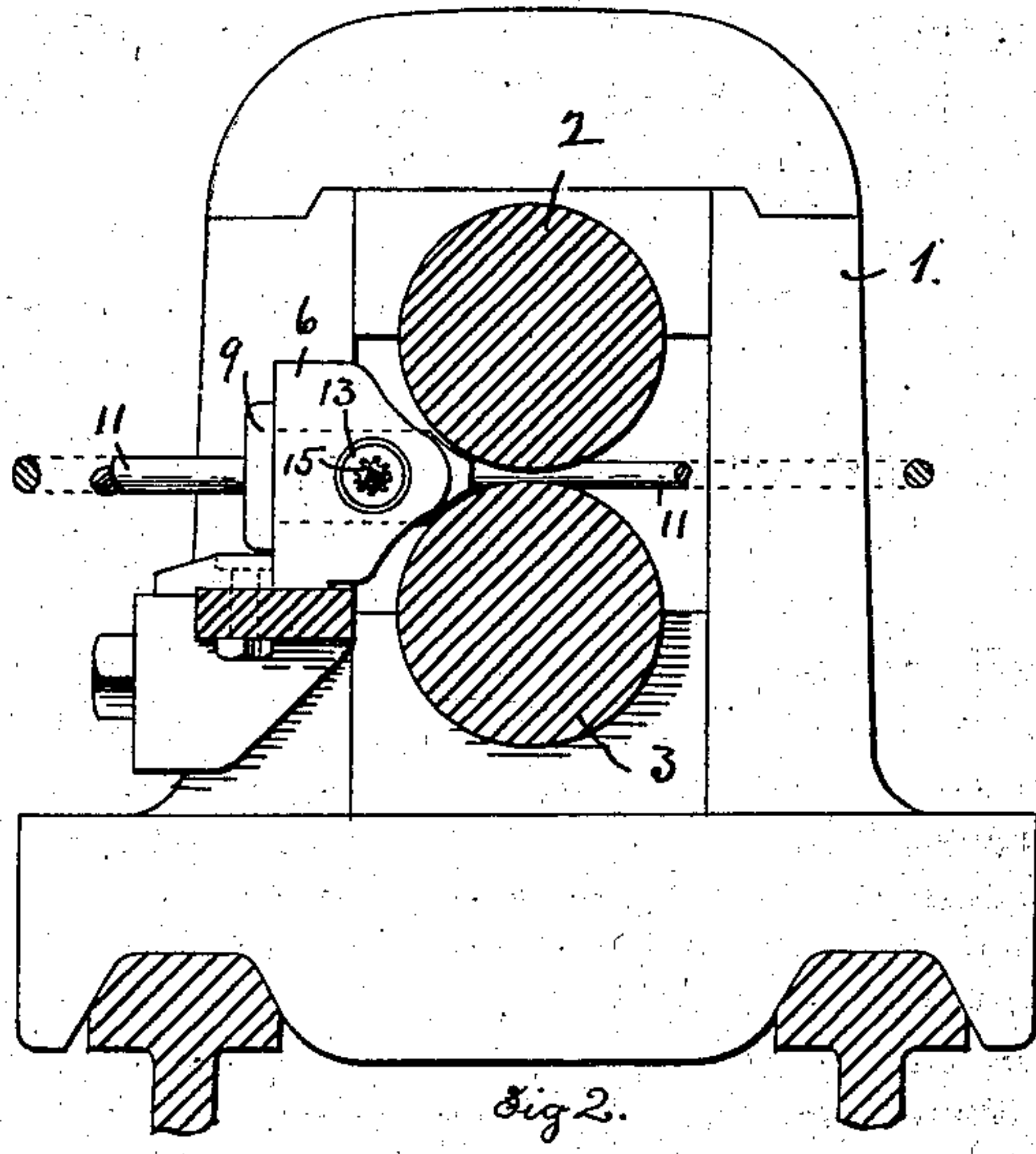
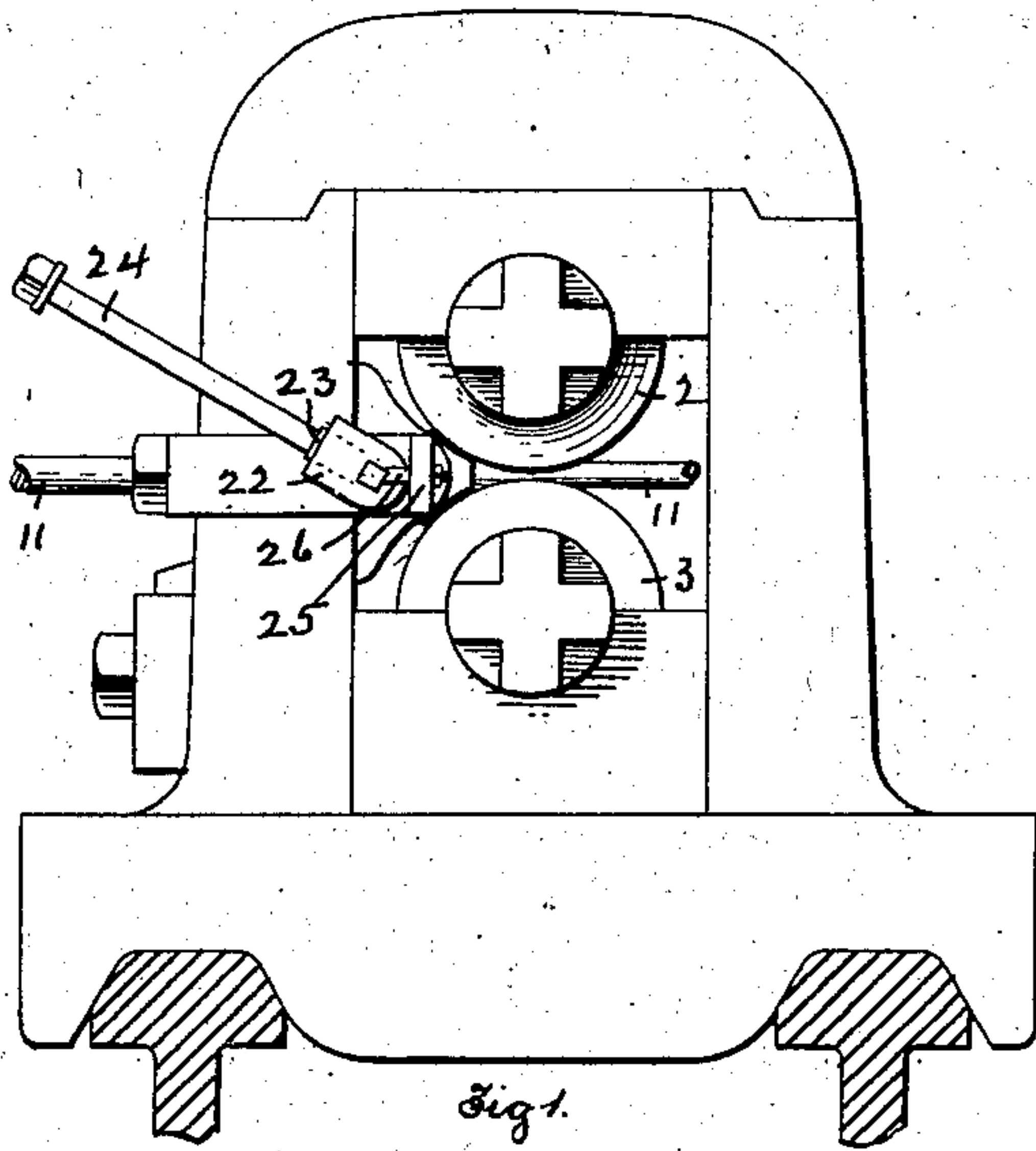


No. 730,244.

PATENTED JUNE 9, 1903.

V. E. EDWARDS.  
GUIDE FOR ROLLING MILLS.  
APPLICATION FILED FEB. 8, 1901.

NO MODEL.



Witnesses:

H. M. Rugg.  
Florence C. Cook

Inventor:

Victor E. Edwards.

By Rufus D. Fowler  
Attorney.



## UNITED STATES PATENT OFFICE.

VICTOR E. EDWARDS, OF WORCESTER, MASSACHUSETTS, ASSIGNOR TO  
MORGAN CONSTRUCTION COMPANY, OF WORCESTER, MASSACHU-  
SETTS, A CORPORATION OF MASSACHUSETTS.

## GUIDE FOR ROLLING-MILLS.

SPECIFICATION forming part of Letters Patent No. 730,244, dated June 9, 1903.

Application filed February 8, 1901. Serial No. 46,464. (No model.)

*To all whom it may concern:*

Be it known that I, VICTOR E. EDWARDS, a citizen of the United States, residing at Worcester, in the county of Worcester and Commonwealth of Massachusetts, have invented a new and useful Improvement in Guides for Rolling-Mills, of which the following is a specification, reference being had to the accompanying drawings, forming a part  
10 of the same, in which—

Figure 1 represents a side view of a rolling-mill housing with a pair of rolls held therein and having a bar-guide embodying my invention. Fig. 2 is a side view of the same with  
15 one side of the housing removed and the rolls shown in sectional view on line 2 2, Fig. 3. Fig. 3 is a top view of my improved guide, showing the lower roll and a portion of the housing in sectional view. Fig. 4 is a trans-  
20 verse vertical sectional view of the guide on the plane of the adjusting-screw. Fig. 5 is a central longitudinal sectional view of the adjusting-screw with a portion of the wrench for rotating the screw and inserted therein. Fig. 6 is a side view of the adjusting-screw  
25 with the wrench shown in section on line 6 6, Fig. 5.

Similar reference-figures refer to similar parts in the different views.

30 My present invention relates to a guide designed for supporting the bar fed to a rolling-mill in proper position to present the rod to the circumferential grooves or passes of the rolls; and it consists in the construction and  
35 arrangement of parts as set forth in the annexed claims.

Referring to the drawings, 1 denotes a roll-housing containing in the present instance a single pair of rolls consisting of an upper roll  
40 2 and a lower roll 3. The upper and lower rolls are provided with the usual circumferential grooves or passes, that in the lower roll being shown at 4, Fig. 3. In front of the rolls is a bar-guide 5, embodying my invention and  
45 consisting of a supporting-frame 6, attached to the housing and provided with a rectangular opening 7, Fig. 4, extending therethrough and forming a chamber for the guide-plates 8 and 9. The inner sides of the guide-plates  
50 8 and 9 are recessed at 10 to fit the sides of

the bar 11, which in the present instance is elliptical in its cross-section, and its contact with the sides of the guide-plates 8 and 9 holds it from rotating about its axis as it is presented to the rolls. On one side of the frame  
55 6 is a screw-threaded opening 12, whose diameter is substantially equal to the width of the adjacent guide-plate 9 for the purpose of receiving an adjusting-screw 13, having a broad inner face 14 bearing against the outer  
60 side of the guide-plate 9, and substantially equal in width to the width of the guide-plate.

The opposite side of the adjusting-screw 13 is provided with a circular concentric recess 15, having a series of teeth 16 arranged around  
65 the edge of the recess. The teeth 16 are odd in number, so that each tooth will be located diametrically opposite a space between the teeth. The adjusting-screw 13 is rotated in  
70 the frame 6 by means of a screw-rotating device 17, consisting of a rectangular bar 18, provided with a head 19, having on diametrically opposite corners the projecting teeth 20, adapted to engage the spaces between the  
75 teeth 16 of the adjusting-screw, as shown in Fig. 6, with the plane of the teeth 20 at one side of the center of the adjusting-screw, thereby allowing the teeth 20 to be shifted  
into different spaces 21.

The multiplicity of teeth 16 in the screw  
80 allows the teeth 20 to be shifted into different spaces 21 in order to adjust the bar 18 relatively to the screw, so the operative lever-handle 24 may stand in the proper position  
85 and at a convenient angle when the bar 11 is embraced between the guide-plates. The rectangular bar 18 is rotated by a wrench comprising a block 22, having a rectangular hole  
90 filling the bar 18 and provided with a set-screw 23, which is extended to form a lever-handle 24. The head 19 is loosely inserted in the recess 15 of the adjusting-screw, with its teeth 20 engaging two of the spaces 21  
95 between the teeth 16. The bar 18 passes through and is free to turn in an opening in a bracket 25, attached to the housing, and  
endwise withdrawal of the bar 18 from the recess in the adjusting-screw is prevented by  
100 a stud 26 in the bracket 25 overlapping the block 22. By raising the lever-handle 24



in the position shown in Fig. 1 the adjusting-screw 13 is unscrewed to allow the guide-plates 8 and 9 to separate far enough to permit the easy entrance of the bar 11. The lever-handle 5 is then depressed and the adjusting-screw 13 turned against the guide-plate 9 to bring the recessed faces of the guide-plate into close contact with the sides of the bar, thereby holding the bar firmly against rotation about its axis and at the same time allowing it to move longitudinally between the guide-plates 8 and 9 as the bar passes between the rolls. The guide-plate 9 fits loosely in the rectangular opening of the frame 6 in order to allow its recessed side to adapt itself to the side of the bar, and the guide-plate 9 is prevented from rocking by making the face of the adjusting-screw 13 substantially equal to the width of the guide-plate, and preferably wider than the greatest diameter of the recessed face, so the advance movement of the adjusting-screw will move the guide-plate 9 bodily against the bar 11 and afford a firm support behind the plate and throughout its entire width. By my construction the screw 13 is a plain-faced jaw coöperating with the plate 8 in holding the rod, the plate 9 simply serving to provide a recessed face fitting the side of the bar. The plates 8 and 9 are removable, allowing others to be substituted, and adapted to bars of different shapes in cross-section. A slight movement of the lever 24 serves to release and tighten the bar between the plates 8 and 9.

35 What I claim as my invention, and desire to secure by Letters Patent, is—

40 1. A guide for rolling-mills, consisting of a frame provided with a chamber for guide-plates, a pair of recessed guide-plates substantially filling said chamber in one direction, and adjustable in the opposite direction, a screw-threaded opening in the wall of said

chamber and communicating therewith and having its diameter substantially equal to the diameter of said chamber, and a screw 45 held in said opening with its end bearing against one of said guide-plates, substantially as described.

2. The combination of a pair of guide-plates having recessed faces to engage the bar, a 50 frame for supporting said plates, an adjusting-screw held in said frame and having one end bearing against one of said guide-plates with the diameter of said adjusting-screw greater than the width of the recessed face of the 55 guide-plate, and a toothed recess in the opposite end of said screw to receive a removable wrench-bar, substantially as described.

3. In a guide for rolling-mills, the combination of a guide-plate having a recess adapted 60 to engage one side of a bar, a frame for holding said guide, an adjusting-screw held in said frame and having one end bearing against said guide-plate, the diameter of said screw being greater than the recess in said guide- 65 plate, and a toothed recess in the opposite end of said screw to receive a screw-rotating device, substantially as described.

4. The combination with a guide-plate-holding frame and a pair of recessed guide-plates 70 held in said frame, of an adjusting-screw held in said frame and having one end bearing against one of said guide-plates, with the diameter of said screw greater than the recess in said guide-plate, and a toothed recess in 75 the opposite end of said screw to receive a screw-rotating device, said recess containing an unequal number of teeth, substantially as described.

Dated this 5th day of February, 1901.

VICTOR E. EDWARDS.

Witnesses:

RUFUS B. FOWLER,  
FLORENCE C. COOK.