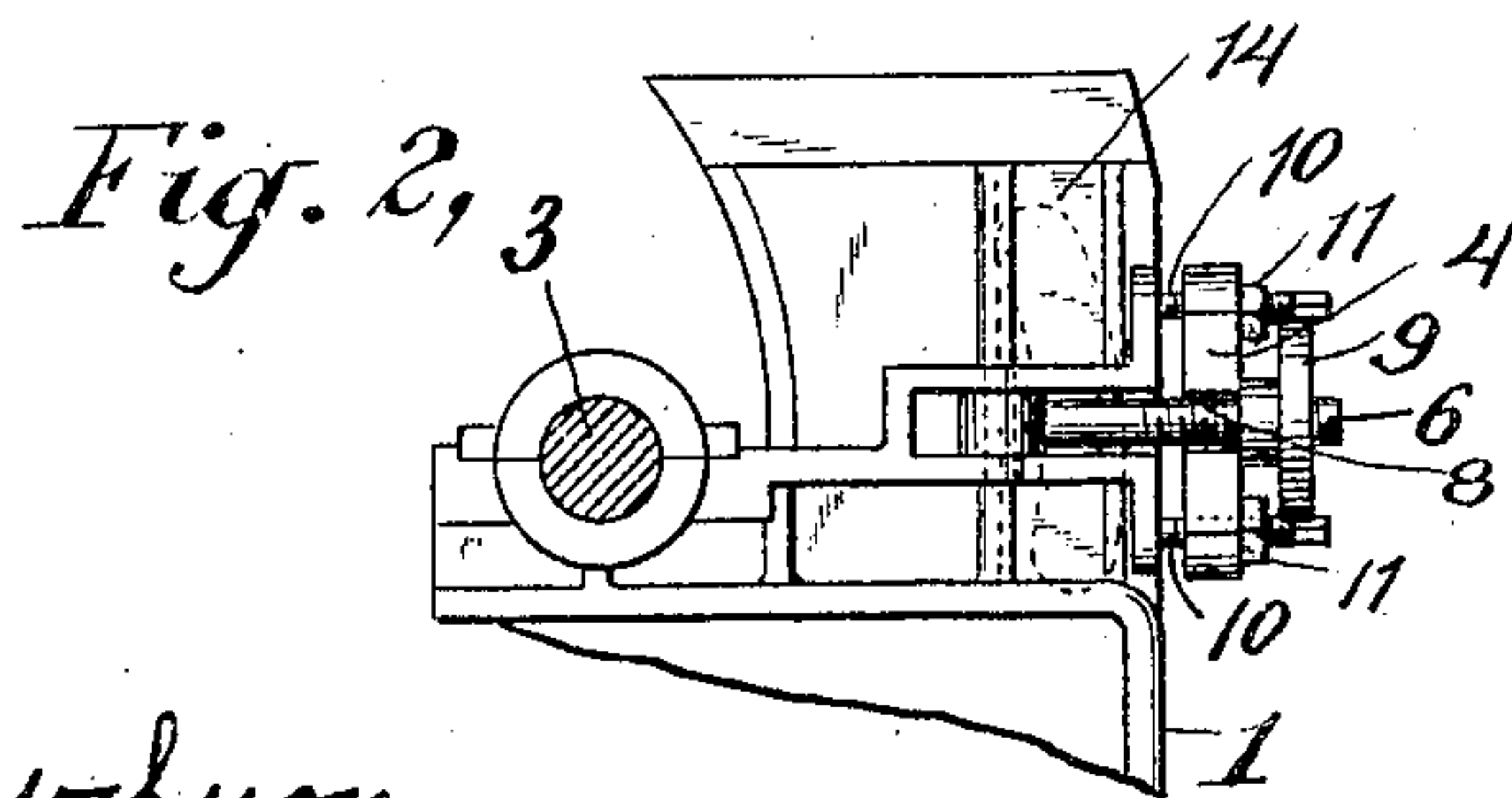
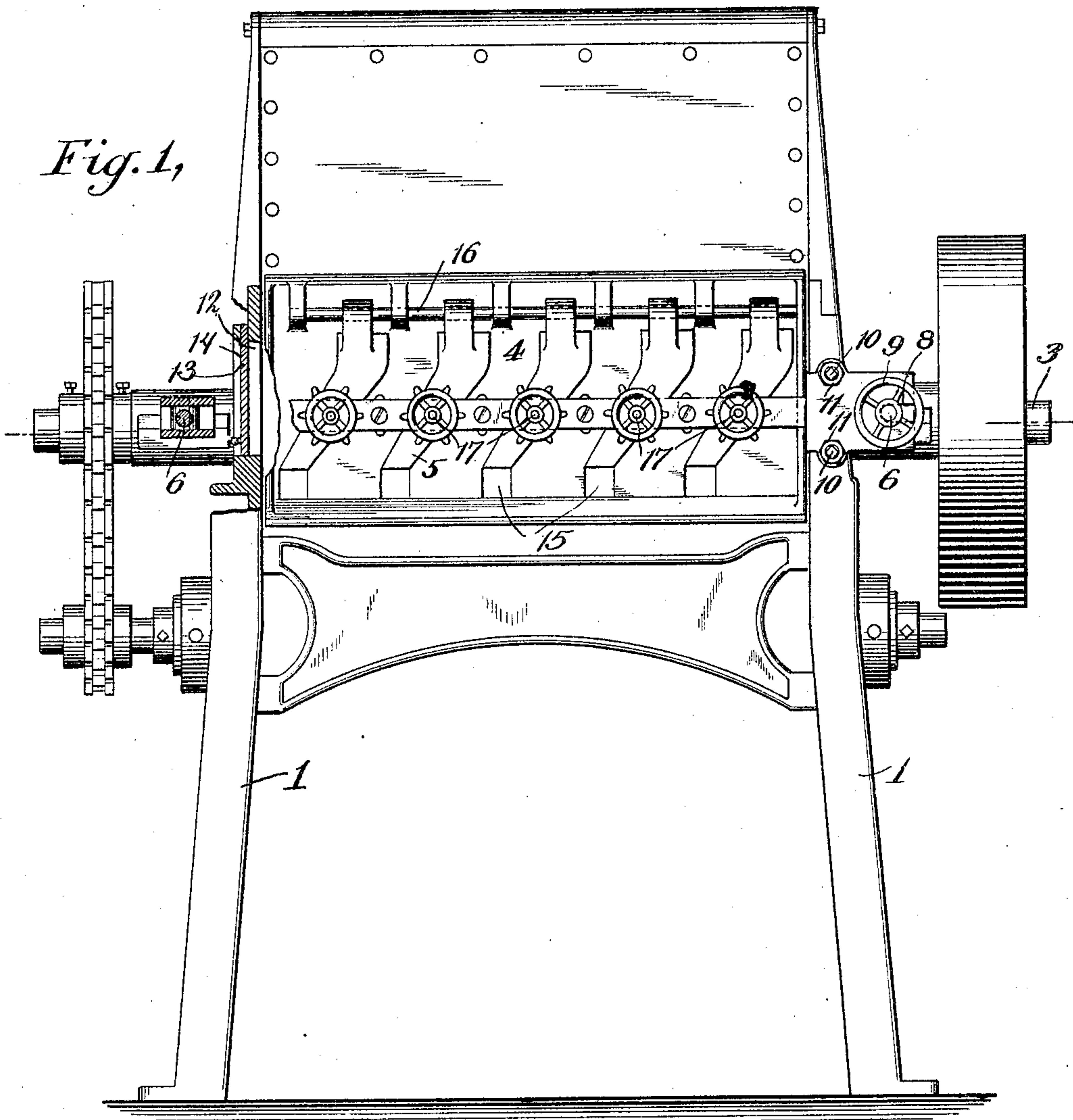


D. GORDON.  
PULPER.

APPLICATION FILED JAN. 10, 1905.

2 SHEETS—SHEET 1.

*Fig. 1,*



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INVENTOR

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PULPER.

APPLICATION FILED JAN. 10, 1905.

2 SHEETS—SHEET 2.

Fig. 3,

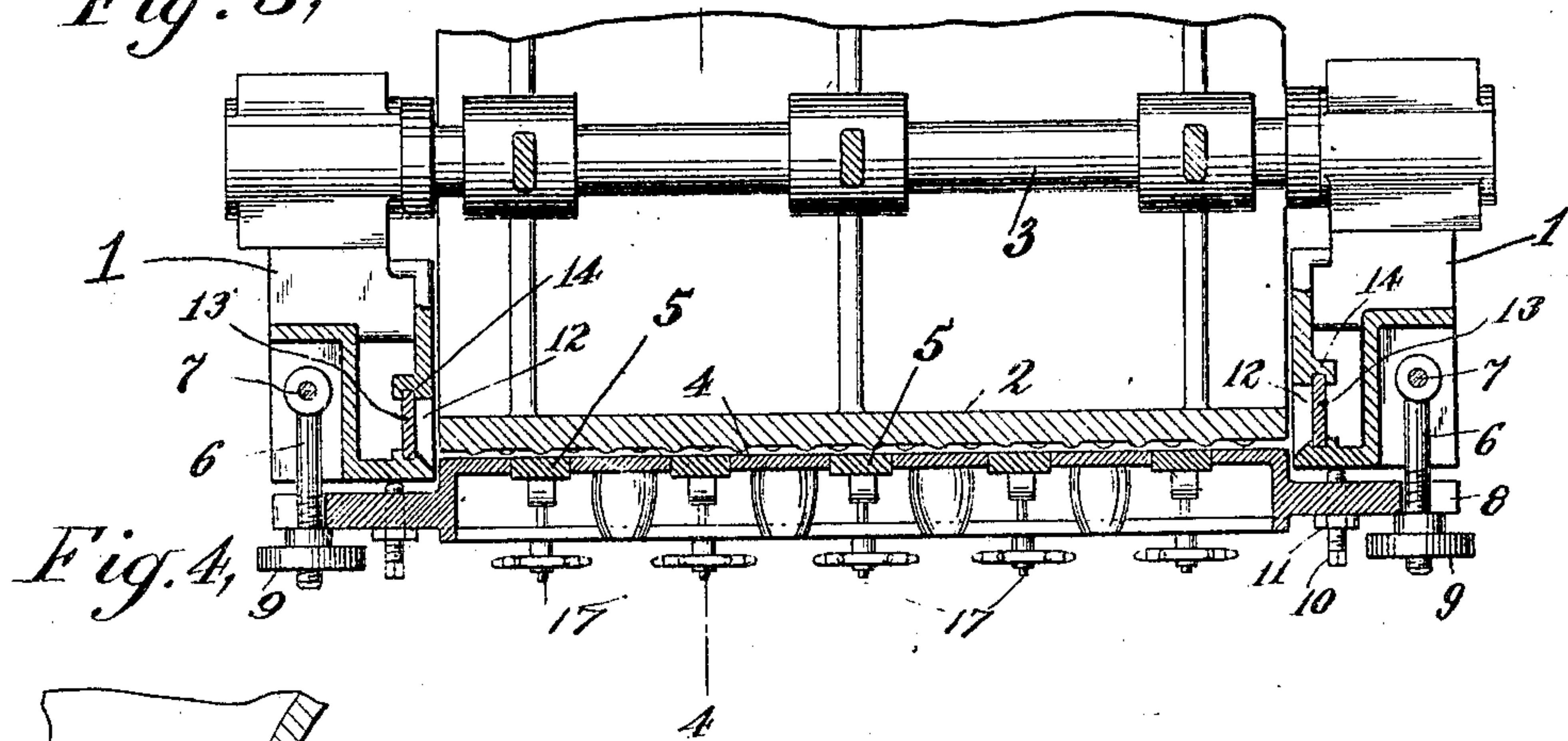


Fig. 4,

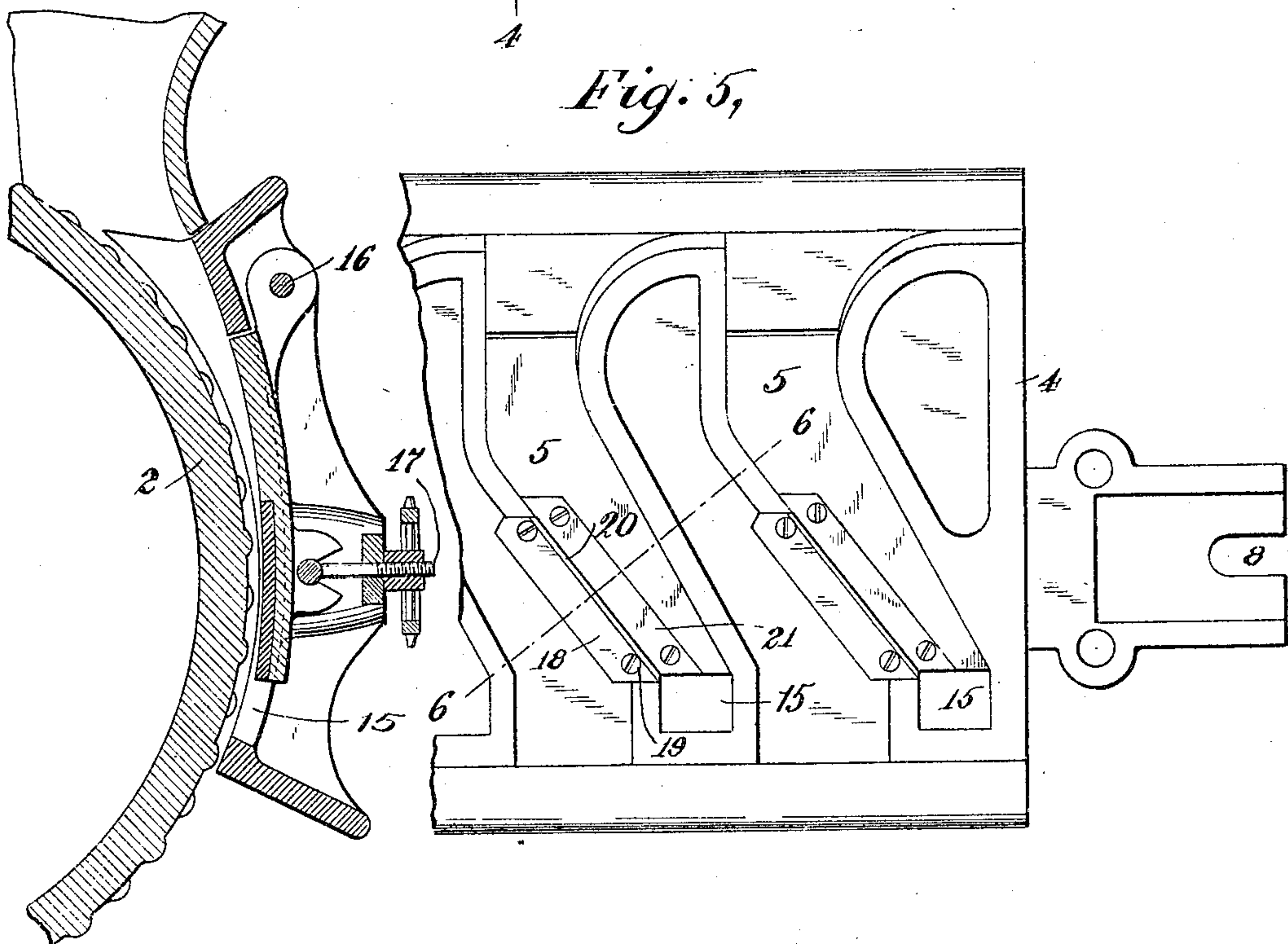


Fig. 5,

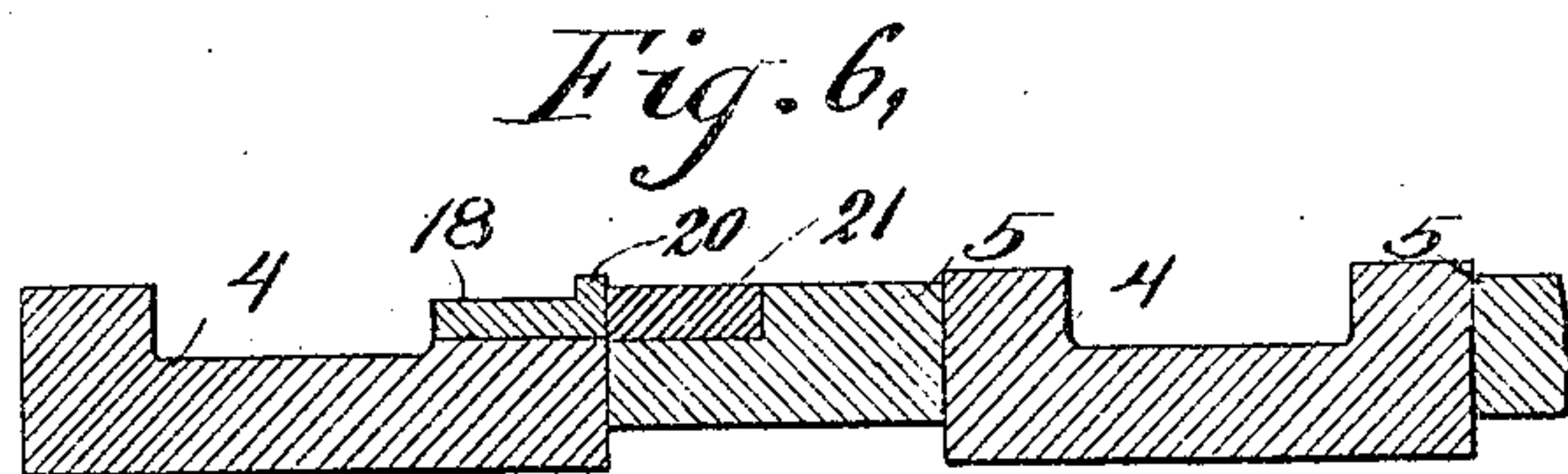


Fig. 6,

WITNESSES:

Harold Crocker  
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# UNITED STATES PATENT OFFICE.

DOUGLAS GORDON, OF WORCESTER, MASSACHUSETTS, ASSIGNOR TO  
MARCUS MASON & COMPANY, OF NEW YORK, N. Y., A CORPORA-  
TION OF NEW YORK.

## PULPER.

No. 804,395.

Specification of Letters Patent.

Patented Nov. 14, 1905.

Application filed January 10, 1905. Serial No. 240,455.

*To all whom it may concern:*

Be it known that I, DOUGLAS GORDON, a subject of the King of Great Britain, and a resident of Worcester, county of Worcester, State of Massachusetts, have invented certain new and useful Improvements in Pulpers, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof.

My invention relates to improvements in coffee-pulping machines; and it consists, first, in an improved means for adjusting the breast; second, in an opening provided with a sliding door, whereby certain portions of the interior of the machine may be viewed at will, and, third, in certain improved construction and arrangement of wearing-shoes employed in the breast and in the swinging plates or fingers therein. The improved means for adjusting the breast comprises adjusting-bolts so arranged that all adjustments thereof for moving the breast either forward or rearward may be made from the front of the machine. The mechanism comprises bolts secured to the framework and passing through the breast with adjusting-nuts at the front thereof and in other bolts threaded into the breast and bearing against the framework. The latter bolts have squared heads at the front of the breast, so that by screwing them in the breast will be forced outward, while by unscrewing them and screwing up the nuts on the first-mentioned bolts the breast will be forced inward. The openings for viewing certain portions of the interior of the machine comprise openings in the side frame located near the periphery of the revolving drum, whereby the adjustment of the breast with respect to the periphery of the cylinder may be accurately noted. Sliding doors are fitted to the said openings to prevent the escape of liquids or the material being treated. The wearing-shoes comprise hardened metal portions secured to the wearing edge of the fingers and to the adjacent edges of the breast-openings. The wearing-shoes on the breast proper have, preferably, a projecting rectangular rib at their extreme edge for two reasons: First, I have found that a wearing-shoe so constructed clears itself better than a wearing-surface of a uniform width throughout, and, second, when the said shoe becomes rounded at the edge from wear—as it will in

time—it is a much simpler matter to face off the smaller surface than it would be to face off a larger.

In order that my invention may be better understood, I will describe in detail with reference to the accompanying drawings a machine embodying my invention and will then point out the novel features in claims.

In the drawings, Figure 1 is a front view of a pulping-machine embodying my invention with a portion broken away at one side in order to show certain other parts. Fig. 2 is a detail view in side elevation, showing particularly the breast-adjusting means and one of the side windows or openings with its door in position closing same. Fig. 3 is a partial view in central horizontal section, showing the relationship of the breast to the cylinder, its adjusting means, and the side openings and doors therefor. Fig. 4 is a detail view in transverse section substantially upon the plane of the line 4 4 of the breast and a portion of the pulping-roller near the periphery thereof. Fig. 5 is a detail view looking toward the inside of the breast, showing two of the plates or fingers in position therein and showing particularly the wearing-shoes employed. Fig. 6 is a detail transverse sectional view of the same, the plane of section being upon the line 6 6 of Fig. 5.

The type of coffee-pulping machine to which I have shown my invention as applied is that shown in United States Patent No. 550,834, to Marcus Mason, dated December 3, 1895. Generally this class of machine comprises a supporting-frame 1, a pulping-cylinder 2, mounted upon a shaft 3, suitably journaled in the said frame, and an adjustable breast 4, arranged adjacent to the periphery of the pulping-cylinder 2 and provided with adjustable plates or fingers 5. For the purpose of adjusting the breast I have provided swinging bolts 6, pivoted at 7 upon the framework 1 and passing through open slots 8 in the ends of the breast 4. The said bolts are screw-threaded at their free ends and are provided with adjusting-nuts 9, fitted thereto. The breast is provided with adjusting-bolts 10, screw-threaded and fitted to correspondingly screw-threaded openings in the said breast, the ends of the bolts adapted to bear against the framework 1, as will be readily seen by reference to Figs. 2 and 3 of the drawings.



Locking-nuts 11 are preferably provided, so that the adjusting-bolts may be locked in any position in which they are adjusted.

From the foregoing it will be readily seen 5 that to move the breast outward the nuts 9 upon the swinging bolts 6 may be unscrewed and the locking-nuts 11 upon the bolts 10 backed up, when the bolts 10 may be screwed up, thereby forcing the breast outward as is 10 desired. When sufficiently adjusted, the locking-nuts 11 and the nuts 9 upon the bolts 6 may be screwed up to engagement with the breast to lock the parts in their position. To 15 move the breast inward, the bolts 10 must be unscrewed and the nuts 9 then screwed up to the desired amount. By this means it will be seen that the breast may be readily and quickly adjusted by an attendant standing in front of 20 the machine without it being necessary for said attendant to pass to the rear of the machine, as has been common heretofore. More accurate and rapid adjustment is thereby possible.

In order that the condition existing between 25 the periphery of the pulping-roller and the rear of the breast may be viewed, I have provided the framework with openings at 12 12 and have supplied the said openings with sliding doors 13, fitted in guideways 14, whereby 30 the said openings may be securely closed during the normal operation of the machine to prevent water and material operated upon from passing through same.

The breast 4 is provided with the usual 35 openings 15 for receiving the swinging plates or fingers 5, said swinging plates or fingers pivoted to the breast at 16 and adjustable toward and away from the periphery of the pulping-roller by means of adjusting-screws 40 17. Located at the operating edges of the openings 15 are wearing-shoes 18, secured in place by flush-head screws 19. In cross-section, as clearly shown in Fig. 6, the edge 20 projects in rib-like form, so that the immediate 45 wearing-surface is raised from the remaining portion of the said shoe 18. The result of this is that the shoe will clear itself better than if there were no raised surface, any tendency to clog being prevented. Further, when 50 the shoe becomes worn and rounded at the edge there is but a very small surface to face off instead of the entire surface, as there

would be if the face were a plane surface. I have also provided the pivoted plates or fingers 5 with wearing-shoes 21. These may 55 conveniently be rectangular in cross-section with a plane outer surface, because there is less tendency to wear the edge into rounded form, and, further, almost no tendency of the material to wedge or jam at this point. 60

It will be obvious that the foregoing is but one embodiment of my invention and that the same is capable of many and varied modifications within the spirit and scope of my invention, and, further, that certain parts may be 65 employed in connection with other parts of different construction. Hence I do not desire to be limited only to the precise details of construction and combination of parts herein.

What I claim is— 70

1. In a coffee-pulping machine, the combination with a pulping-cylinder and means for supporting same, comprising side frames, of a breast supported by said side frames, and means for adjusting same, comprising swing- 75 ing bolts pivotally connected to said side frames, and engaging open-ended slotted portions of said breast, said bolts provided with nuts at the exterior of said breast, and other bolts tapped into said breast and engaging said 80 side frames, said bolts adjustable from the exterior of said breast, substantially as described.

2. In a coffee-pulping machine, the combination with a pulping-roller and a breast, of fingers or plates pivotally supported in said 85 breast, adjacent surfaces of said fingers or plates and the breast provided with removable and replaceable wearing-shoes.

3. In a coffee-pulping machine, the combination with a pulping-cylinder and a breast, 90 said breast provided with openings angularly disposed with respect to the said pulping-cylinder, of removable and replaceable wearing-shoes fitted to the wearing edges of the breast adjacent said openings, said wearing-shoes 95 having a rib-like projection immediately adjacent to their wearing edges.

In witness whereof I have hereunto set my hand this 3d day of January, 1905.

DOUGLAS GORDON.

Witnesses:

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LYMAN S. ANDREWS, Jr.