

No. 703,088.

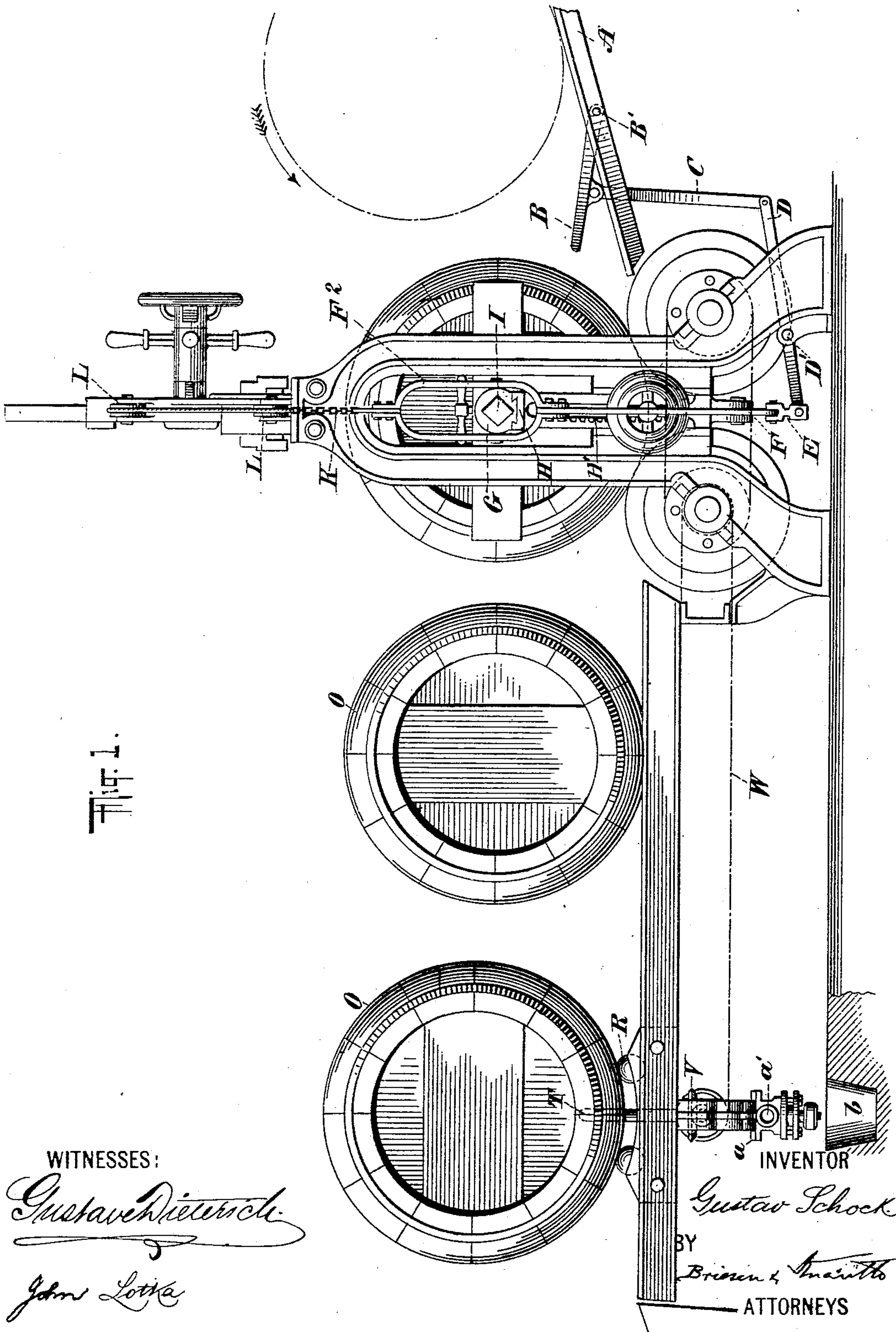
Patented June 24, 1902.

G. SCHOCK.
BARREL CLEANING MACHINE.

(Application filed Aug. 17, 1901.)

(No Model.)

4 Sheets—Sheet 1.



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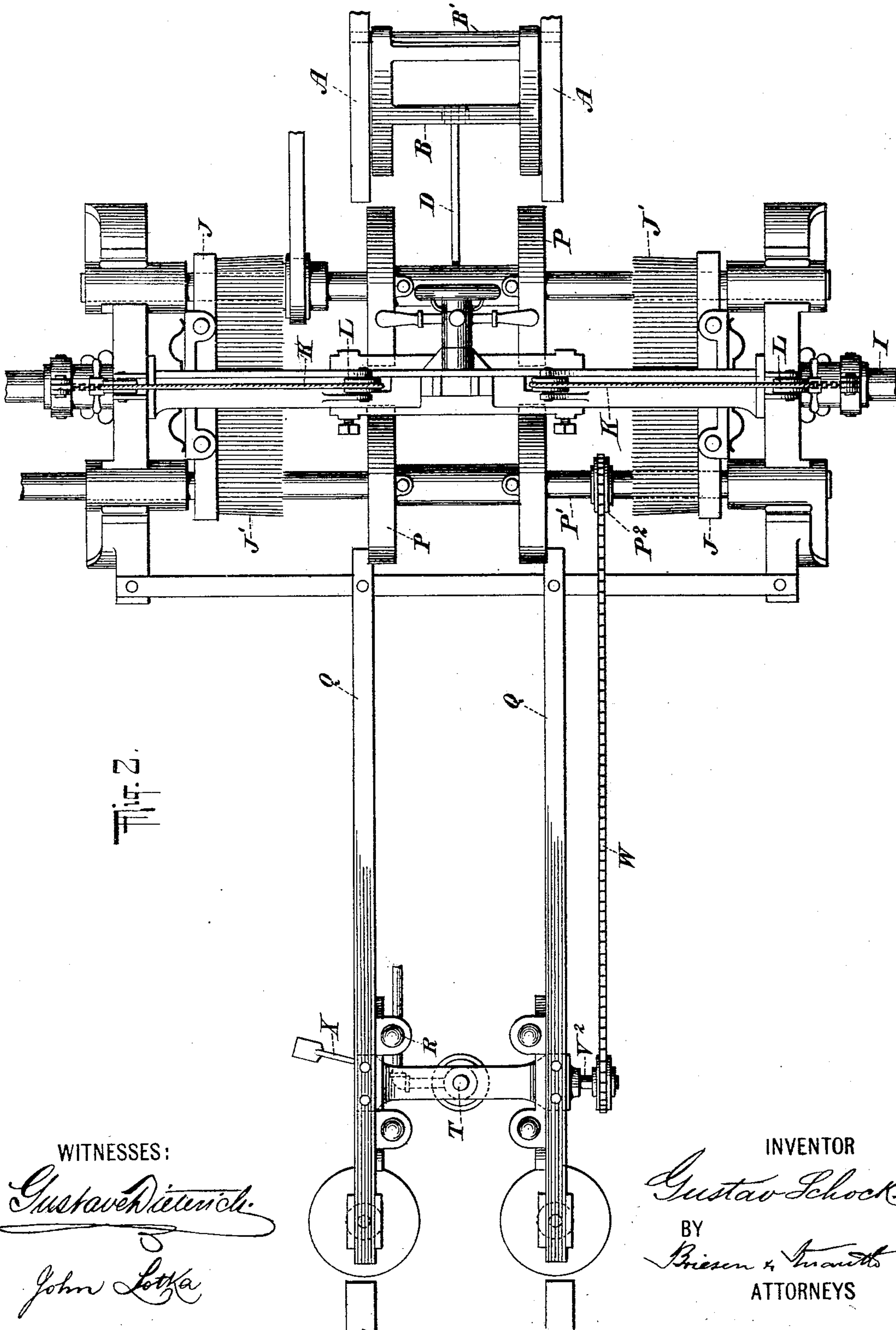
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Fig. 3.

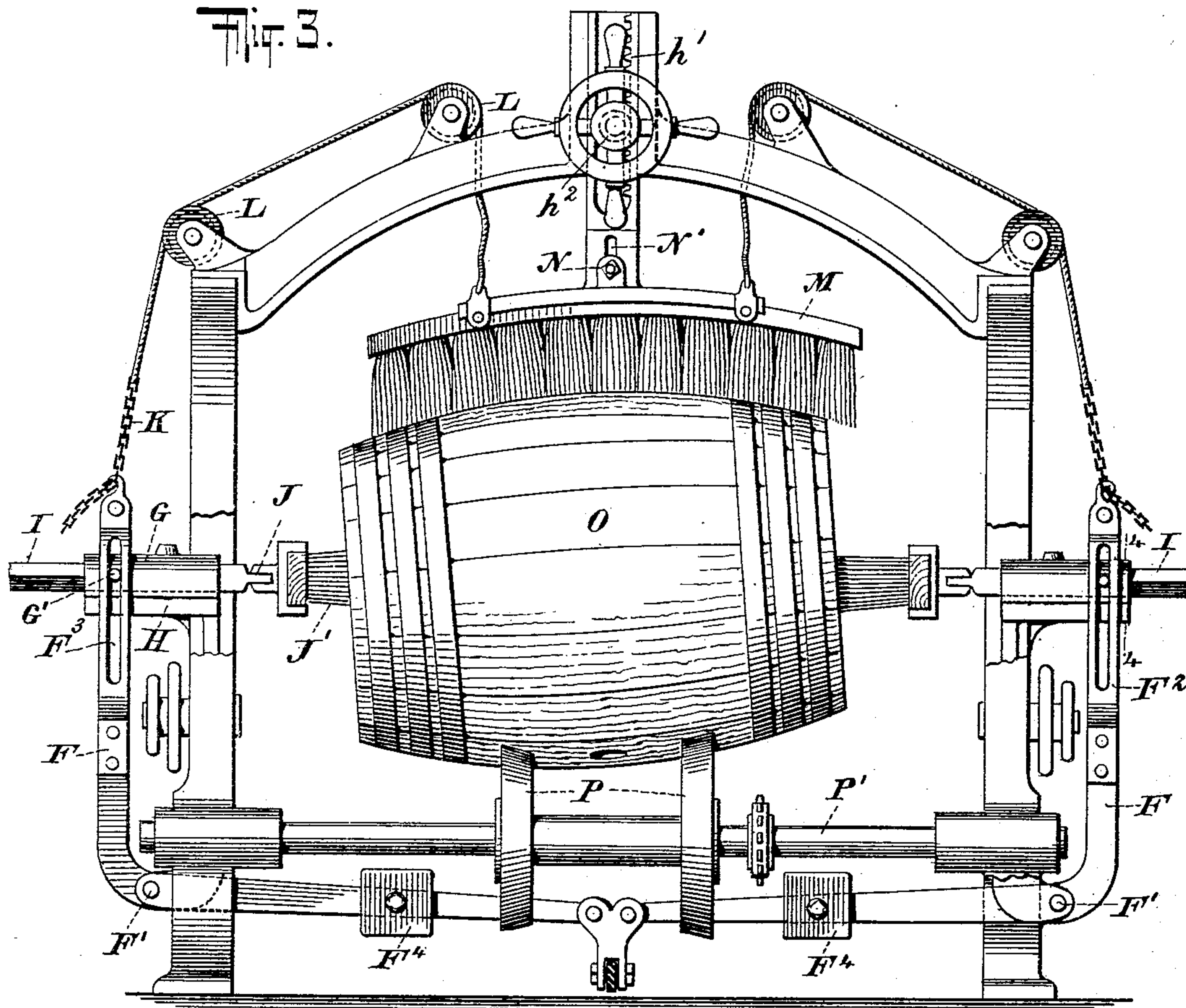
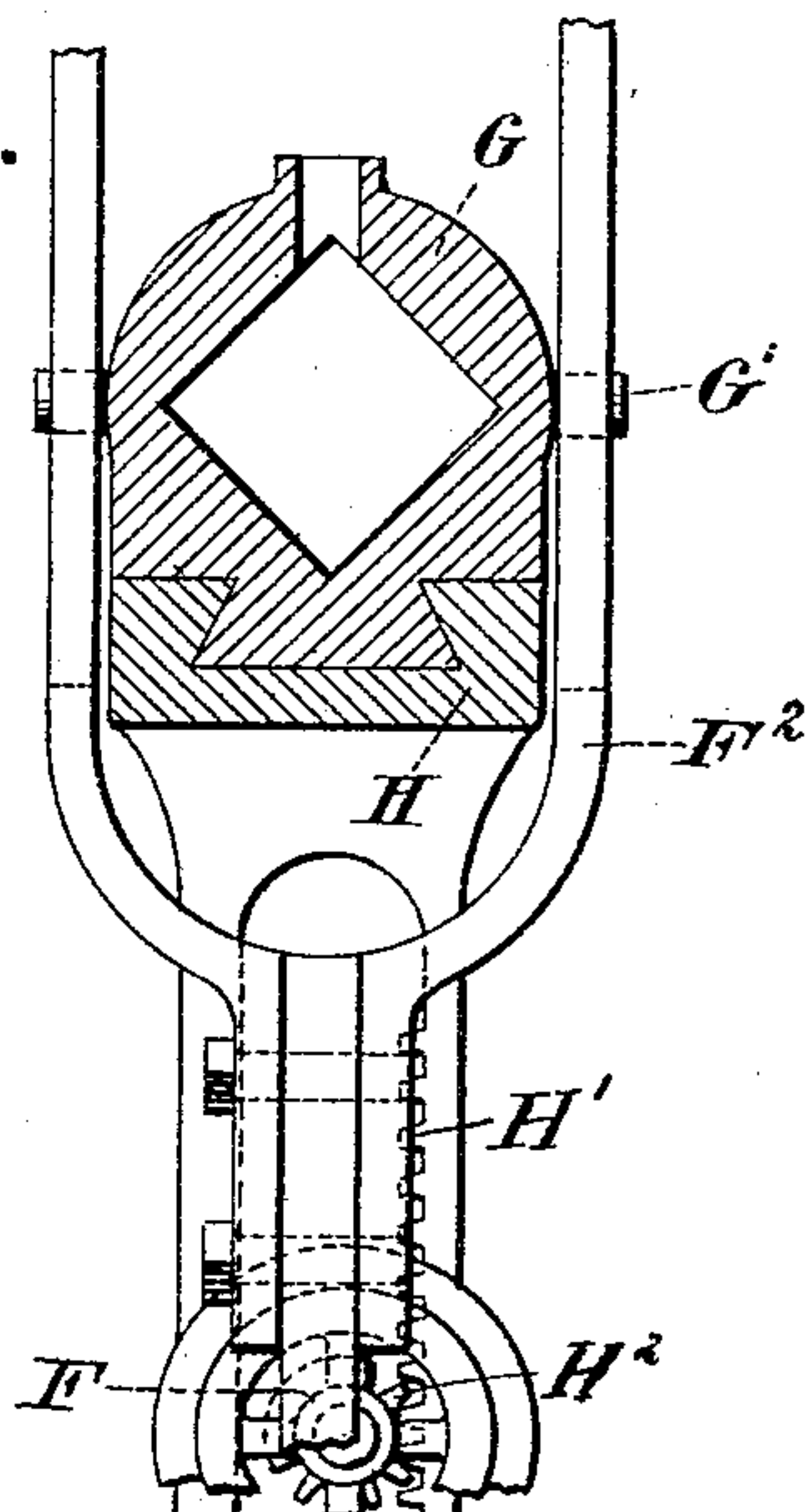


Fig. 4.



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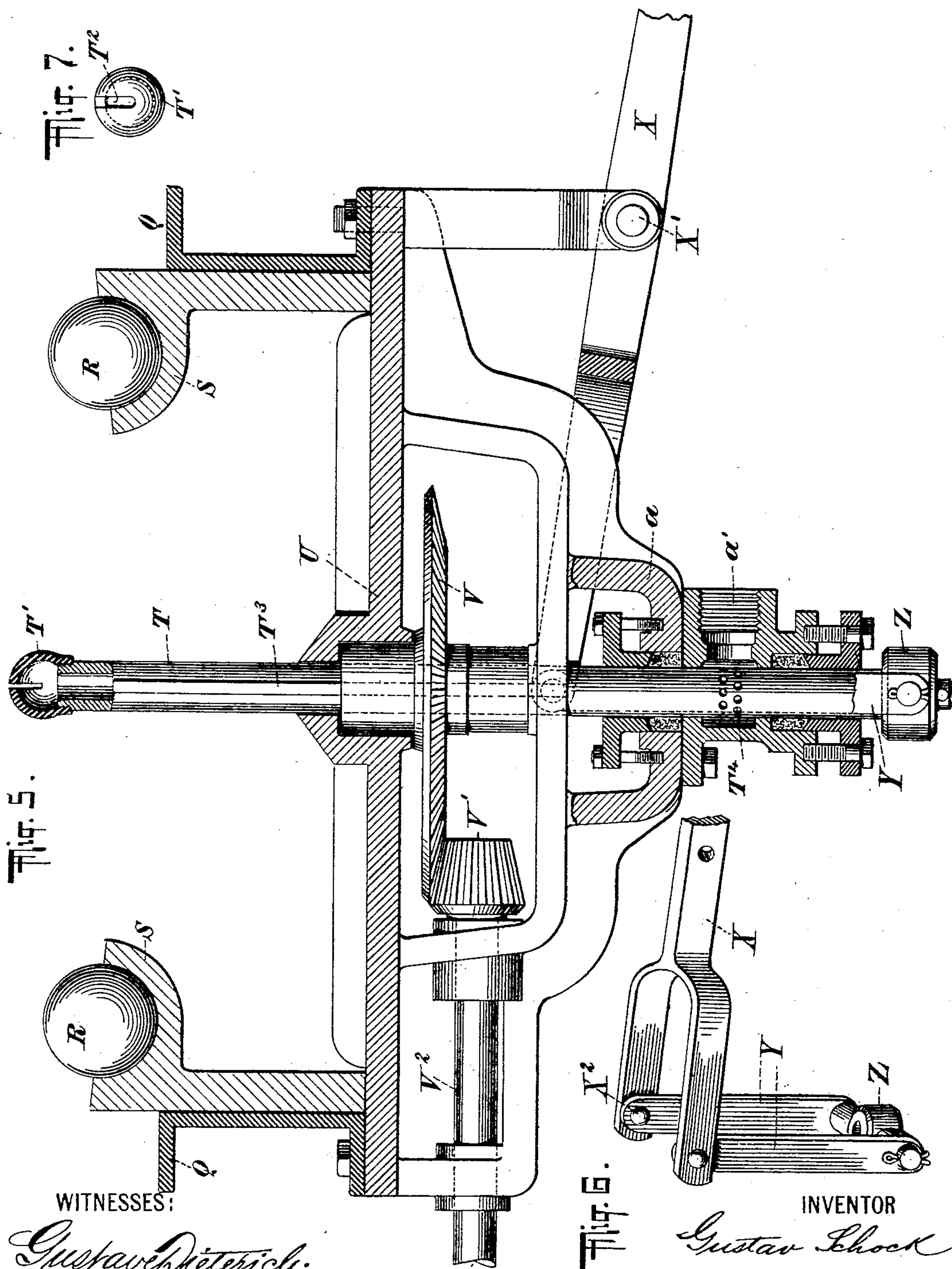
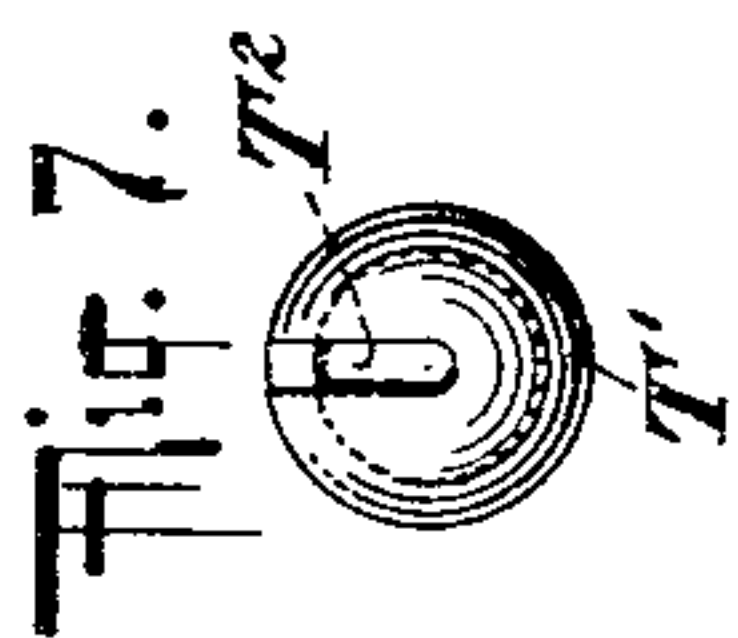
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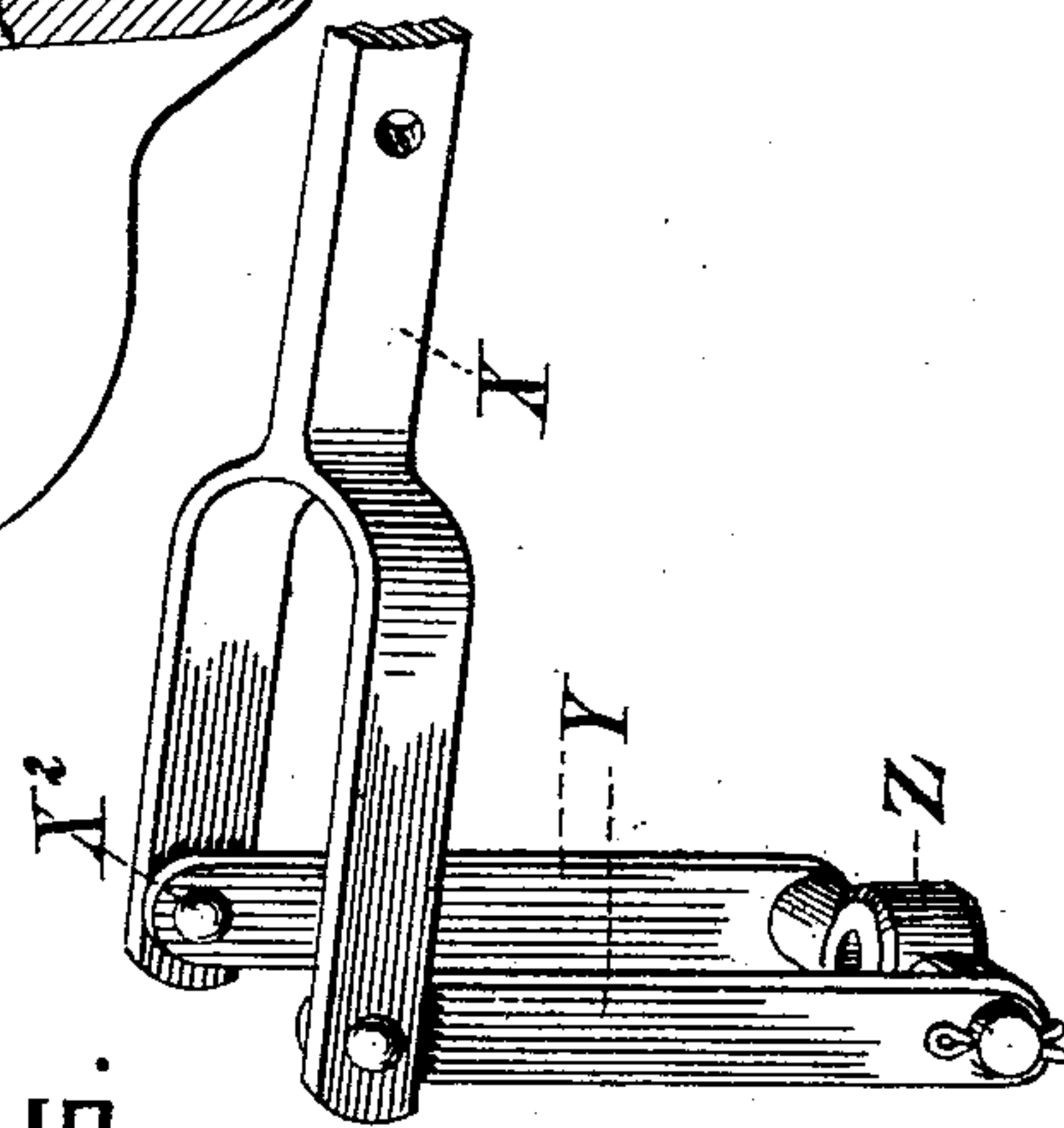
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Fig. 6.



INVENTOR

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UNITED STATES PATENT OFFICE.

GUSTAV SCHOCK, OF NEW YORK, N. Y.

BARREL-CLEANING MACHINE.

SPECIFICATION forming part of Letters Patent No. 703,088, dated June 24, 1902.

Application filed August 17, 1901. Serial No. 72,327. (No model.)

To all whom it may concern:

Be it known that I, GUSTAV SCHOCK, a citizen of the United States, residing in the borough of Manhattan, city, county, and State of New York, have invented certain new and useful Improvements in Barrel-Cleaning Machines, of which the following is a specification.

My invention relates to machines for cleaning barrels, and particularly to that class in which the outside of the barrel is first cleaned by brushes and then the inside is sprayed with water or other cleaning liquid.

The object of my present invention is to provide means for securing an automatic movement of the brushes upon the arrival of the barrels at the place where the brushes are to perform their work, so that the brushes will spread apart to allow the barrels to be received between them and will then move inward against the barrel to effectively clean the same.

The invention will be fully described hereinafter and the features of novelty pointed out in the appended claims.

Reference is to be had to the accompanying drawings, in which—

Figure 1 is a side elevation of a barrel-cleaning plant constructed according to my invention. Fig. 2 is a plan view thereof. Fig. 3 is an end view. Fig. 4 is a detail sectional elevation on the line 4 4 of Fig. 3. Fig. 5 is a sectional elevation of the spraying mechanism. Fig. 6 is a perspective view of part of the lever which serves to move the spray-head, and Fig. 7 is a plan of the spray-head.

A indicates a runway on which the barrels roll down to the cleaning-machine proper. At the lower end of this runway is arranged a depressible plate or frame B, which, for instance, is pivoted at B', and which through the medium of a link C and a lever D, fulcrumed at D', is connected with a head E. This head also has pivotal connections with some play with the inner ends of levers F, fulcrumed at F' and provided at their upper ends with forked portions F², each of which has a longitudinal slot F³. These slots are engaged by pins G' upon slides G, movable upon guides H, adjustable vertically upon the frame by means of racks H' and pinions H². Each of the slides is hollow and receives

the stem I of a brush-holder J, carrying a brush J' at its inner end. Normally the slides G and stems I are rigidly connected, so that they will move in unison. It is, however, possible to adjust the stem I within the slide G, thus setting the machine for barrels of different sizes.

The upper ends of the levers F are connected with chains K or other flexible connections, which pass over pulleys L and to the brush M, which has a loose connection with the frame by means of a pin N and a slot N', so that the brush may move up and down and may also swing transversely on the pin N as a pivot, it being understood that this top brush M remains in contact with the side of the barrel simply by its weight. The normal lowermost position of the brush M can be adjusted according to the size of the barrel to be treated by means of the chain K, which can be connected with the upper ends of the levers F at different points or links. Further, a rack h' and pinion h² may be employed to adjust the top brush M. The barrel O while being brushed rests on rotary supports P on shafts P', one of which is driven in any suitable manner. It will be understood that as the barrel runs down the incline or runway A it will in passing over the frame B depress the latter and through the connections of said frame with the brushes J' and M cause these brushes to move outwardly, so that the brushes will not be in the way of the barrel as it takes its place on the supports P. Of course the weight of the upper brush M, assisted by the counterweight F⁴ on the levers F, restores the brushes to their inner position, and thus brings them against the barrel, cleaning the latter effectively while it is being rotated. After the barrel has been cleaned by the brushes it is allowed to pass onto a track or runway Q and finally comes to rest on a suitable support, such as balls R, contained in sockets S. Centrally with respect to these balls is located a nozzle T, provided at its upper end with a head T', having a slot T², extending to one side only, as shown in Fig. 7. This nozzle is movable up and down in a stationary frame or bar U and is caused to turn therein by means of a rib or feather T³, fitting a corresponding groove of a gear-wheel V, which is journaled in the bar U, but can-

not move up or down. This gear-wheel V engages a bevel-pinion V' on a shaft V², which is driven in any suitable manner—as, for instance, by means of a chain W, leading to a sprocket P² on the shaft P'. The nozzle T may be moved up and down by means of a lever X, fulcrumed at X' and connected at X² with two links Y, the lower ends of which are pivotally connected with a socket Z, receiving the lower end of the nozzle T. The nozzle is mounted to slide in a stuffing-box *a*, which is stationary and which is connected, as at *a'*, with a water-supply. Perforations T⁴ are so arranged that when the said nozzle is raised the perforations will open into a space communicating with the inlet *a'*. When, however, the lever X is dropped, the perforations T⁴ will come below the central chamber of the stuffing-box *a*, and thus the supply of water or other liquid will be cut off from the head T'. It will be understood that the nozzle rotates continuously, but no water is discharged from it until the head T' has been raised a certain distance, and it will be understood that if the head T' fails to strike the bung-hole of the barrel the said head will be unable to rise sufficiently to allow the liquid to be discharged. I thus prevent any spilling of the liquid and all danger of scalding the operator. In Fig. 5 the head T' has been shown relatively too low, its proper position being correctly indicated in Fig. 1. By giving the discharge-slot T² the one-sided arrangement shown in Fig. 7 a powerful stream will be discharged against one side of the barrel at a time, and as the nozzle rotates the stream will be directed successively to all points of the barrel. To gather the liquid which escapes from the barrel, I may provide a pit or receptacle *b*, centrally below the nozzle T, as indicated in Fig. 1.

I claim as my invention—

1. The combination of a frame, guides mounted to move up and down for adjust-

ment, brush-carrying slides movable in and out on said guides, and operating-levers having vertical slots receiving projections on said slides. 45

2. In a cleaning-machine, the combination of a frame, cleaning devices movable inward or outward on said frame, an operating member adapted to be engaged by the articles to be cleaned prior to their arrival at the cleaning devices, and a connection from said operating member to the cleaning devices to throw them outward before the articles arrive between them. 55

3. The combination of a runway, a depressible operating member adjacent thereto, a frame, movable brushes connected with said operating member and a support for the article. 60

4. The combination of a frame, brushes movable transversely of said frame, a rocking operating member located in the path of the articles to be cleaned and a connection from said operating member to the brushes. 65

5. The combination of a frame, a brush movable inward and outward on the frame and also capable of a pivotal or swinging movement relatively thereto, an operating member arranged in the path of the articles to be cleaned and a connection from the operating member to the said brush. 70

6. The combination of the frame and the support for the articles to be cleaned with brushes movable horizontally at the opposite sides of said frame, a top brush movable vertically and also capable of a swinging movement, a connection from the side brushes to the top brush and an operating member located in the path of the articles to be cleaned and connected with the side brushes. 80

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Witnesses:

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