

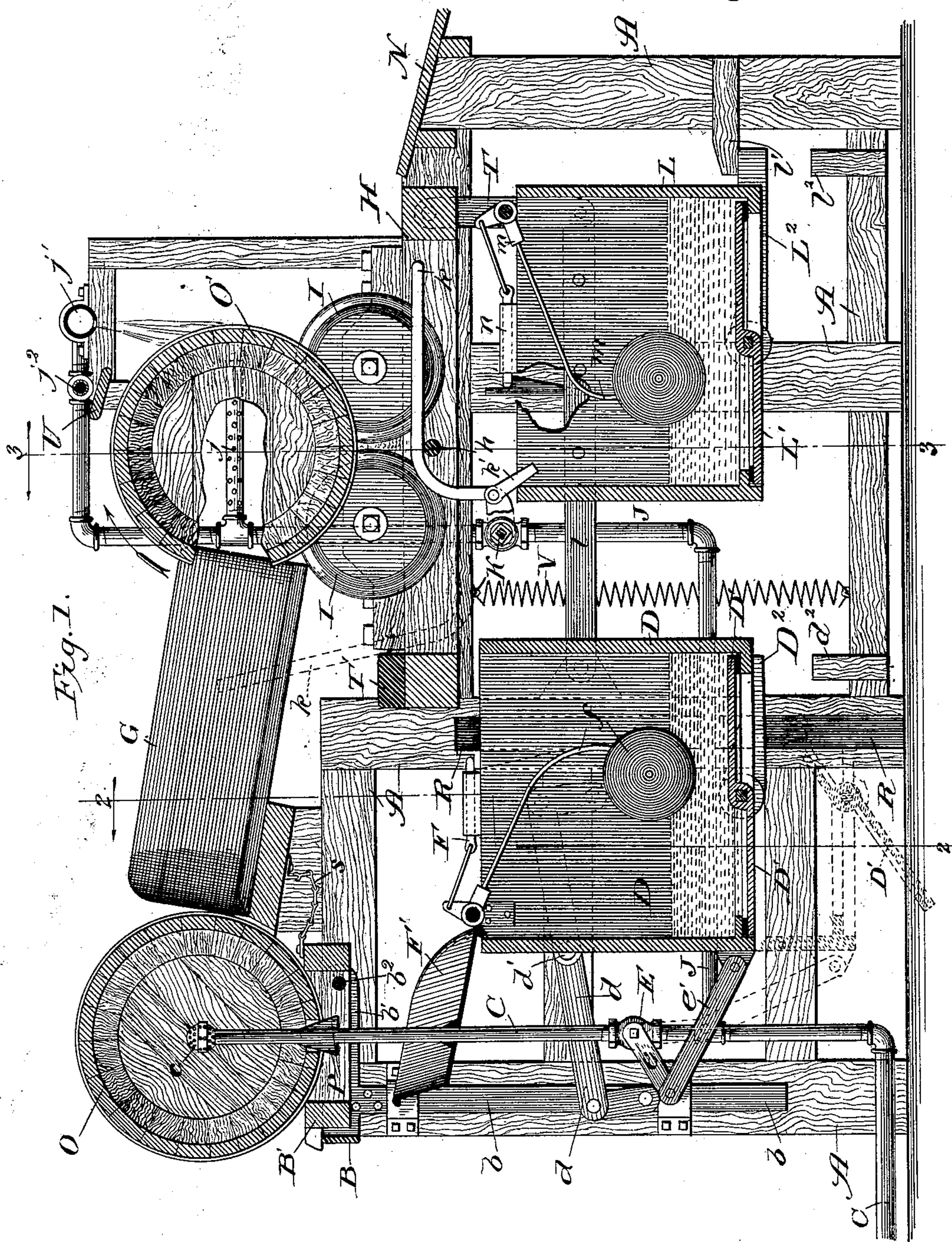
(No Model.)

2 Sheets—Sheet 1.

W. J. McLEOD.  
BARREL WASHING MACHINE.

No. 434,607.

Patented Aug. 19, 1890.



Witnesses:  
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(No Model.)

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Fig. 3.

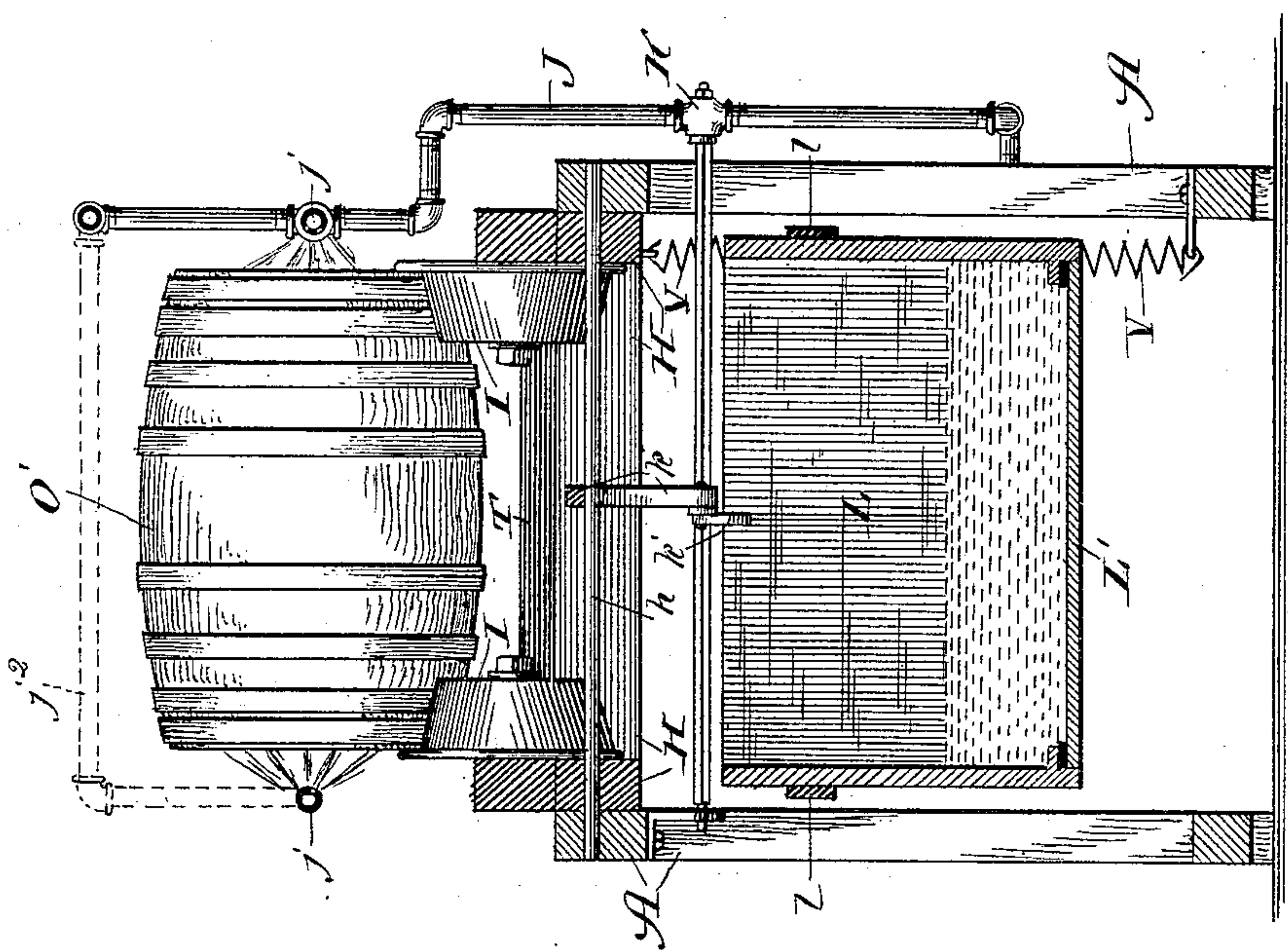
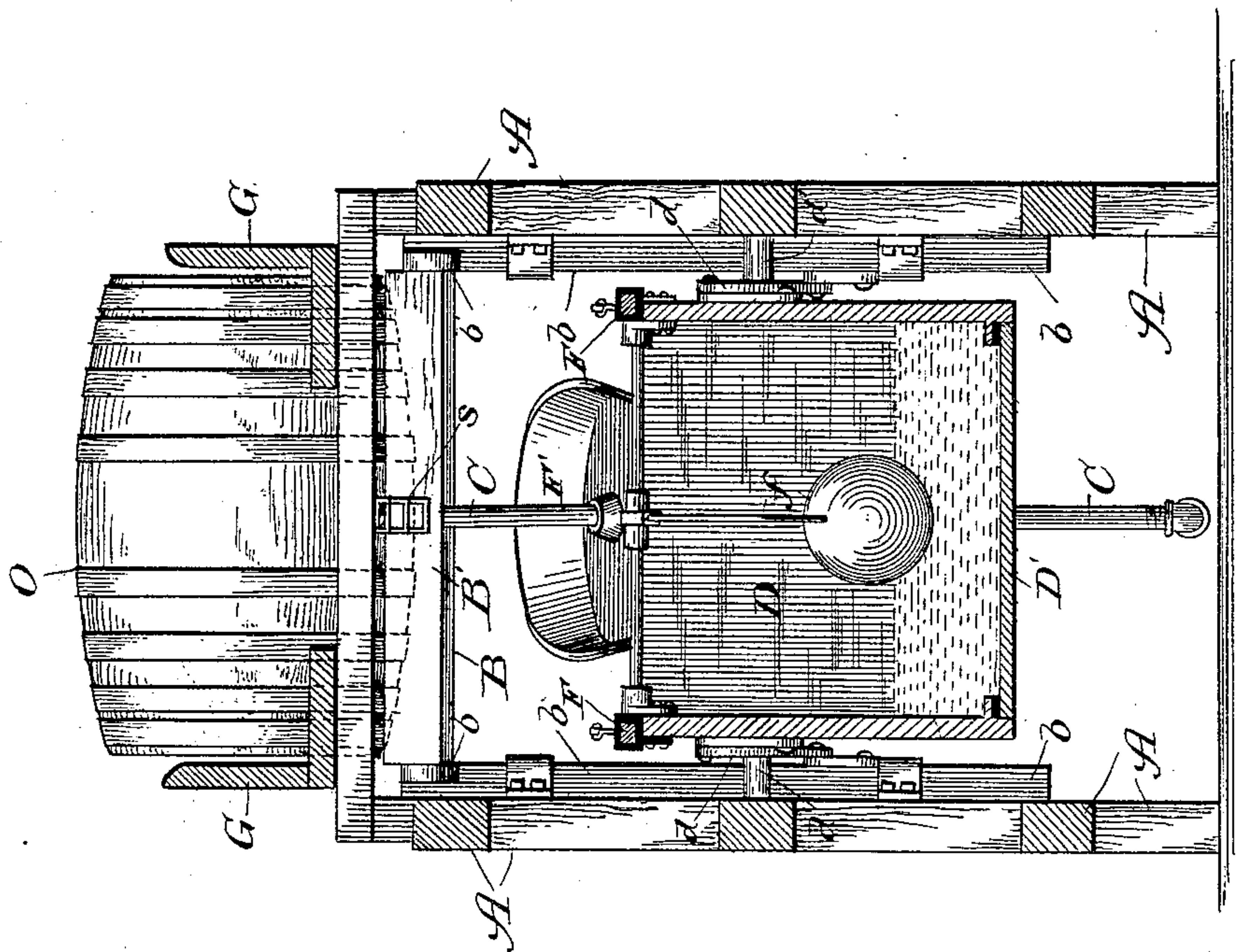


Fig. 2.



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# UNITED STATES PATENT OFFICE.

WILLIAM J. MCLEOD, OF CHICAGO, ILLINOIS.

## BARREL-WASHING MACHINE.

SPECIFICATION forming part of Letters Patent No. 434,607, dated August 19, 1890.

Application filed December 24, 1889. Serial No. 334,853. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM J. MCLEOD, a citizen of the United States, residing at Chicago, Illinois, have invented a new and useful Improvement in Barrel-Washing Machines, of which the following is a specification.

The object of my invention is to construct a machine wherein the barrels, &c., are washed internally and externally by means of jets of water thrown against the barrel under a considerable pressure; and my invention consists in the features and details of construction hereinafter described and claimed.

In the drawings, Figure 1 is a vertical longitudinal section of my improved washing-machine; and Figs. 2 and 3, vertical cross-sections thereof on lines 2 and 3, respectively, of Fig. 1, looking in the direction of the arrows.

A is the frame of the machine; B, a frame capable of moving up and down in the machine; B', a tilting platform journaled in such frame; C, a water-pipe provided with a rose *c*; D, a water box or bucket; *d*, one of the levers by which it is supported, and which is pivoted to the frame at *d'*; D', the bottom of the bucket operated by means of a lever D<sup>2</sup>; *d*<sup>2</sup>, one of the stops against which the lever D<sup>2</sup> strikes; E, a cock in the pipe C; *e*, the handle of such cock; *e'*, a lever connecting the handle *e* to the bucket D; F, one of the locks or catches by which the bucket is held in a raised position; *f*, a ball-float connected with such catch; F', a water-chute; G, a chute or trough through which the barrels are carried from one part of the machine to the other; H, a rocking frame pivoted to the frame of the machine at *h*; I I, friction-rollers mounted in such frame; J, a water-pipe having perforated branches *j j'*; K, a cock in such pipe; *k k'*, a compound lever for operating such cock; L, a water bucket or box; *l*, one of the levers or arms in which such bucket is supported; L', the movable bottom thereof; L<sup>2</sup>, a lever by which it is operated; *l'* *l*<sup>2</sup>, stops against which the lever strikes; *n*, one of the spring-catches for holding the bucket in a raised position connected with a ball-float *m*; N, an inclined platform down which the barrels are discharged, and O O' two barrels.

The frame A of this machine may be made of wood or of any other suitable material and of any suitable dimensions and shape, its

purpose being merely to support the various operating parts of the machine. In the front or left-hand end of this machine I place the sliding frame B. This consists of two bars *b*—one at each side of the machine—sliding in guides attached to the frame-work of the machine. Integral with or attached to the upper ends of these bars is attached a horizontal frame-work B, and in this is pivoted at the point *b*<sup>2</sup> the tilting platform B', which rises and falls with the rest of the frame, and also tilts in such frame about its pivot. This platform is made of the proper size to receive the barrel to be washed, as shown in the drawings.

I next provide the water-pipe C. This enters, preferably, at the bottom of the machine, then turns and runs vertically upward, as shown, and is provided at its upper end with a revolving nozzle or rose *c*. The pipe should extend far enough upward to come about to the internal center of the barrel as the latter rests on the platform B'. This water-pipe is provided with a cock E, which is operated in a manner hereinafter to be described. It is also preferably provided with one or more wing-shaped projections P.

I next construct the water bucket or box D. This may be made of any suitable material and of any dimensions necessary to enable it to operate in a manner hereinafter set forth. This box slides up and down in guides on ways R, one at each side of the frame. It is supported by means of two arms *d*, pivoted to the frame-work at *d'*, fastened at one end to the side of the box, connected at the other end by means of a short lever or bar to the sliding bar *b*. The bottom D' of the box D is mounted upon a shaft adapted to be operated by means of the lever D<sup>2</sup> in the manner hereinafter to be set forth. I then construct the spring-catches F. One of these is preferably attached to each side of the bucket D and operates to hold it in a raised position. These catches are connected by means of suitable links and rods to the axis of the ball-float *f*.

I next connect the water-bucket to the handle of the cock E in the water-pipe by means of a suitable lever *e'*. The chute F' is placed beneath the rocking frame B' to receive the water as it falls from the barrel being washed and discharge it into the bucket D. The tilting platform B' is connected to the frame of



the machine by a chain S to insure its rocking or tilting at the proper moment.

I next construct the chute or inclined plane G, down which the barrels roll in passing from the frame B to the frame H. This chute should of course be of the proper size to receive the barrel being washed and guide it during its passage from one frame to the other.

I then construct of any suitable material the platform H, which is pivoted to the frame of the machine by means of a shaft *h*. In the platform are mounted the anti-friction rollers I, of which there are preferably two at each side of the machine, and which are of suitable size and placed in the proper position to receive the barrel to be washed.

I next provide the water-pipe J. This pipe is preferably led off from the pipe C, runs along horizontally, then turns and runs vertically upward at the side of the machine, as shown. It is provided with a perforated branch or arm *j*, which extends along at the end of the barrel, and another branch *j'* running across the machine above the barrel and provided with perforations along its under side. These perforations are preferably made in two rows, the holes in one row alternating with those in the other, thus enabling the holes to be placed near enough together to insure the washing of the entire surface of the barrel. There should be a branch *j* at each end of the barrel, and this may be provided by having a pipe J at each side of the machine, or by running a pipe from the connection *j*<sup>2</sup> across the machine and down on the other side, where it is provided with a perforated arm substantially opposite to the arm *j*.

I next construct the water bucket or box L substantially like bucket D, heretofore described. This bucket is supported in arms *l*, one at either side of the machine, and pivoted to the machine at their left-hand ends, as shown. The rocking bottom of this box L', the catches, and ball-float *m m* are substantially like those described in reference to the box D. This box L is connected to the frame H by means of links or bars T, so that as the box falls it rocks the frame downward with it, a weight T' being provided to restore the frame to its former position when the water contained in the bucket is discharged, and which is preferably assisted by a spring V. The pipe J is provided with a cock K, which is operated by means of the lever *k k'*, as hereinafter described.

I also provide a bar U to prevent the barrel from rolling off of the friction-rollers while the frame H is in its normal position, and an inclined platform or chute N, down which the barrel is discharged as it leaves the machine.

The operation of the machine is as follows:  
A barrel to be washed is placed upon the platform B' with its bung-hole over the upper end of the pipe C. The weight of the barrel forces

the frame B downward. As this frame descends, it acts by means of its connection with the lever *d* to raise the water-bucket D into the position shown in the drawings (its former position being indicated by dotted lines.) As the bucket D rises, it operates by means of the lever *e'* to open the cock E. This allows the water to pass up through the pipe C and be discharged through the rose *c* into the interior of the barrel. The perforations in this rose are in the form of tangents of a very small circle concentric with the circumference of the rose, so that as the water is discharged it revolves or rotates the rose, thus insuring the washing of every part of the interior of the barrel. The water flows down the inside of the barrel, passes out of the bung-hole and falling into the spout F' is discharged thereby into the bucket D. When this bucket D has first been raised, the spring-catches *f* engage with recesses made in the frame and hold the box in its elevated position. Now as the water is discharged into it the ball-float gradually rises, and through its connection with these spring-catches releases them and the bucket falls, for although originally lighter than the barrel it has now become heavier by the addition of the water. As the bucket D goes down, the platform is carried up by means of the lever D'. The forward (right hand) end of the platform can only rise as far as permitted by the chain S, so that as the frame B is forced upward the platform will rock about its pivot, tipping sufficiently to discharge the barrel into the chute G, down which it rolls into the second frame. Just before the bucket reaches its lowest position (indicated by dotted lines) the lever D<sup>2</sup> strikes against the stop *d*<sup>2</sup>, and the bottom of the bucket is revolved upon its axis, allowing the water to escape. When the bucket rises, the lever strikes against a similar stop (not shown) and the bottom closes. As the barrel rolls down the chute G, it strikes against the lever *k* and forces it from the position shown in dotted lines into that shown in solid lines, opening by this means the cock K in the second water-pipe J. The barrel is received upon the friction-rollers I I, and is prevented from rolling beyond them by the bar or arm U. The cock in the pipe J being opened, water is discharged against the ends of the barrel through the branches *j* and against the sides of the barrel by means of the branch *j'*. This branch is so placed that the water discharged from it impinges, as shown, against the barrel on the right-hand side of its center, forcing it to rotate in the direction of the arrows, thus insuring a complete washing of the outside of the barrel. The water as it falls from the barrel is caught in the box L, which box is held in its normal raised position by means of the spring-catches M. As the water rises in the bucket, it raises the ball-float and disengages these catches. The bucket then descends, and by means of its connection with the platform H tilts the rearward (right-hand)



end thereof downward, discharging the barrel down the inclined plane N. As the bucket L descends, its bottom L' is opened by means of the lever L<sup>2</sup> striking against the stop l<sup>2</sup>, and as soon as the water is discharged the weight T and spring V restore the platform H to its former position, raising the bucket, which is then held as before by means of the catches n. As the bucket L rises, it strikes against the part k' of the lever k and restores it to its former position, closing the cock K, and the lever L<sup>2</sup> strikes against the stop l', closing the bottom of the bucket.

As will be evident, the two parts of the machine operate independently of each other, so that two barrels may be washed at once, one upon the platform B and the other upon the platform H. A barrel, after being washed on the first platform, passes onto the second and a new one takes its place upon the platform B. By the time this latter barrel is washed and ready to be passed onto the second platform the barrel thereon will have been washed and discharged and the platform, &c., brought back into position to receive the second barrel, and so on.

I have described one form in which my invention can be made, and which I have found by experiment gives satisfactory results; but it will be understood that I do not intend to limit myself to the exact device herein shown, inasmuch as various changes may be made without departing from the spirit of my invention.

The machine may be made in any size desired to adapt it to the barrels to be washed, and the sides of the chute G and the rollers I I may be capable of sidewise adjustment to enable them to receive a longer or shorter barrel or keg.

I claim—

1. In a barrel-washing machine, the combination of a sliding and tilting platform to receive and hold the barrel, and means for injecting water into such barrel, substantially as described.

2. In a barrel-washing machine, the combination of a sliding and tilting platform to receive the barrel, and means for raising and tilting such platform to discharge the barrel, substantially as described.

3. In a barrel-washing machine, the combination of a platform for receiving the barrel, means for injecting water into such barrel, and means for automatically raising the platform, discharging the barrel, and stopping the water-supply, substantially as described.

4. In a barrel-washing machine, the combination of the frame B, carrying platform B', levers d d, connected to such frame, and bucket D, supported by such levers, whereby when the frame is depressed by the weight of a barrel the bucket is raised, and as the bucket falls the frame and platform are raised to discharge the barrel, substantially as described.

5. In a barrel-washing machine, the combination of a tilting platform to receive the barrel, means for forcing water against the exterior of such barrel, and means whereby the water-supply is cut off and the platform tilted to discharge the barrel, substantially as described.

6. In a barrel-washing machine, the combination of the platform H, pipe J, lever k, and bucket L, substantially as described.

7. In a barrel-washing machine, the combination of the frame B, tilting platform B', mounted in such frame, pipe C, having rose c to introduce water into such barrel, chute F' and bucket D, connected to the frame B, and the cock E, whereby as the frame is depressed by the weight of a barrel the bucket rises and opens cock E, and as the bucket falls through the weight of the water it receives the cock is closed and the platform raised to discharge the barrel, substantially as described.

8. In a barrel-washing machine, the combination of a sliding tilting platform to receive and hold a barrel, means for supplying water to the interior of such barrel, means for automatically cutting off the water-supply and raising the platform to discharge the barrel into a chute, a tilting platform to receive the barrel as it passes from such chute, means for supplying water to the exterior of such barrel, and means for starting and stopping the flow of water and tilting the platform to discharge the barrel from the machine, substantially as described.

9. In a barrel-washing machine, the combination of the frame B, platforms B' and H, pipes C and J, buckets D and L, levers d, k, and e, chutes F' and G, and weight T, substantially as described.

10. In a barrel-washing machine, the combination of the bucket D, having revolving bottom D', and lever D<sup>2</sup>, whereby the bottom is opened as the bucket falls and closed as it rises, substantially as described.

11. In a barrel-washing machine, the combination of frame B, platform B', bucket D, levers d d, and chain S, whereby the platform is tilted as it rises, substantially as described.

12. In a barrel-washing machine, the bucket D, provided with catches, whereby as the float rises the catches are released and the bucket allowed to descend, substantially as described.

13. In a barrel-washing machine, the lever k, attached to the cock in pipe J and adapted to be moved in one direction by a barrel passing down the chute G and in the other by the bucket L as it rises, whereby the cock in pipe J is opened or closed, substantially as described.

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