

(No Model.)

2 Sheets—Sheet 1.

U. & H. E. EBERHARDT.

BARREL CLEANING MACHINE.

No. 371,045.

Patented Oct. 4, 1887.

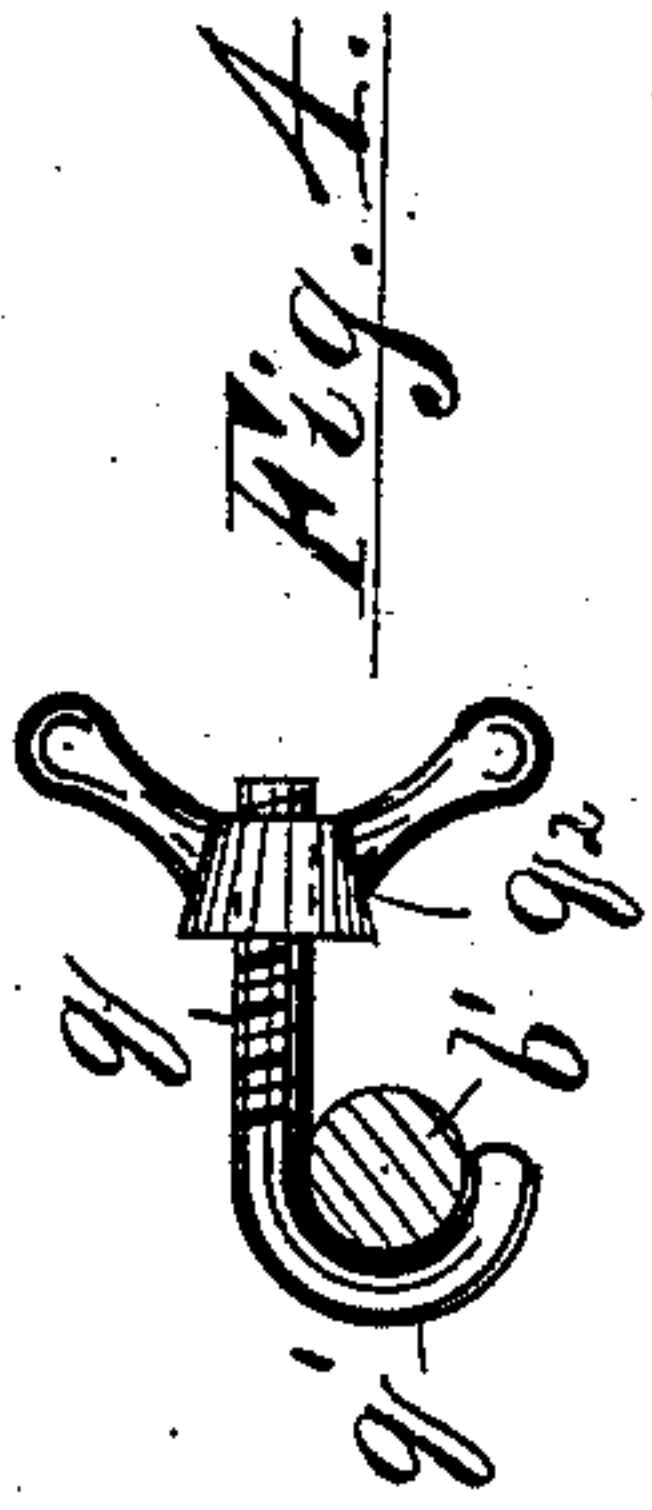


Fig. 3.

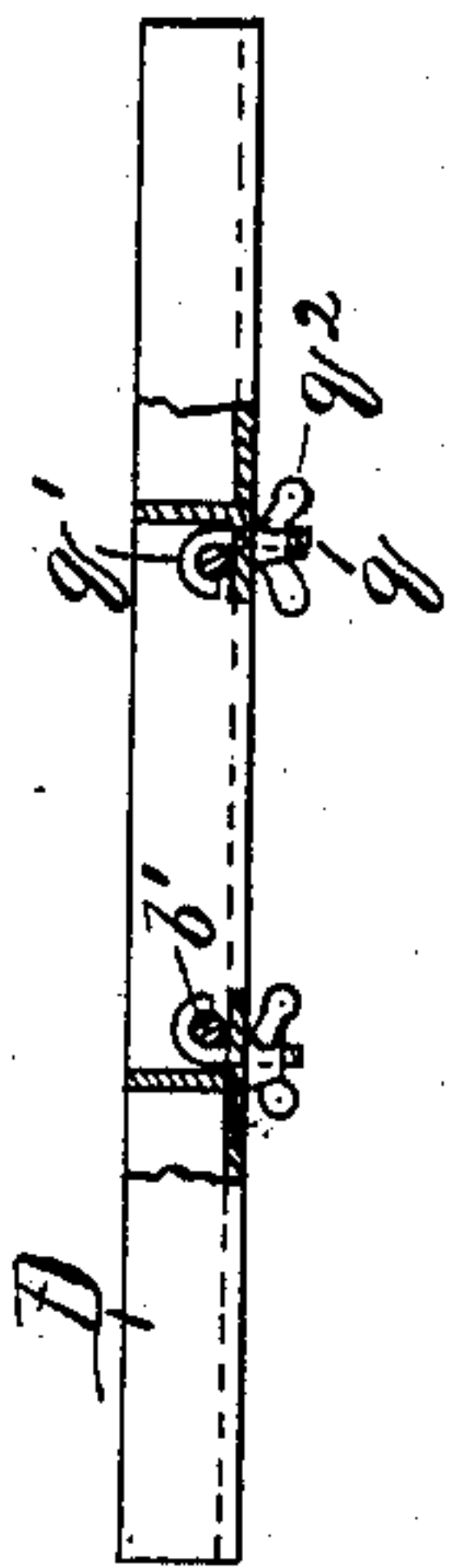


Fig. 2.

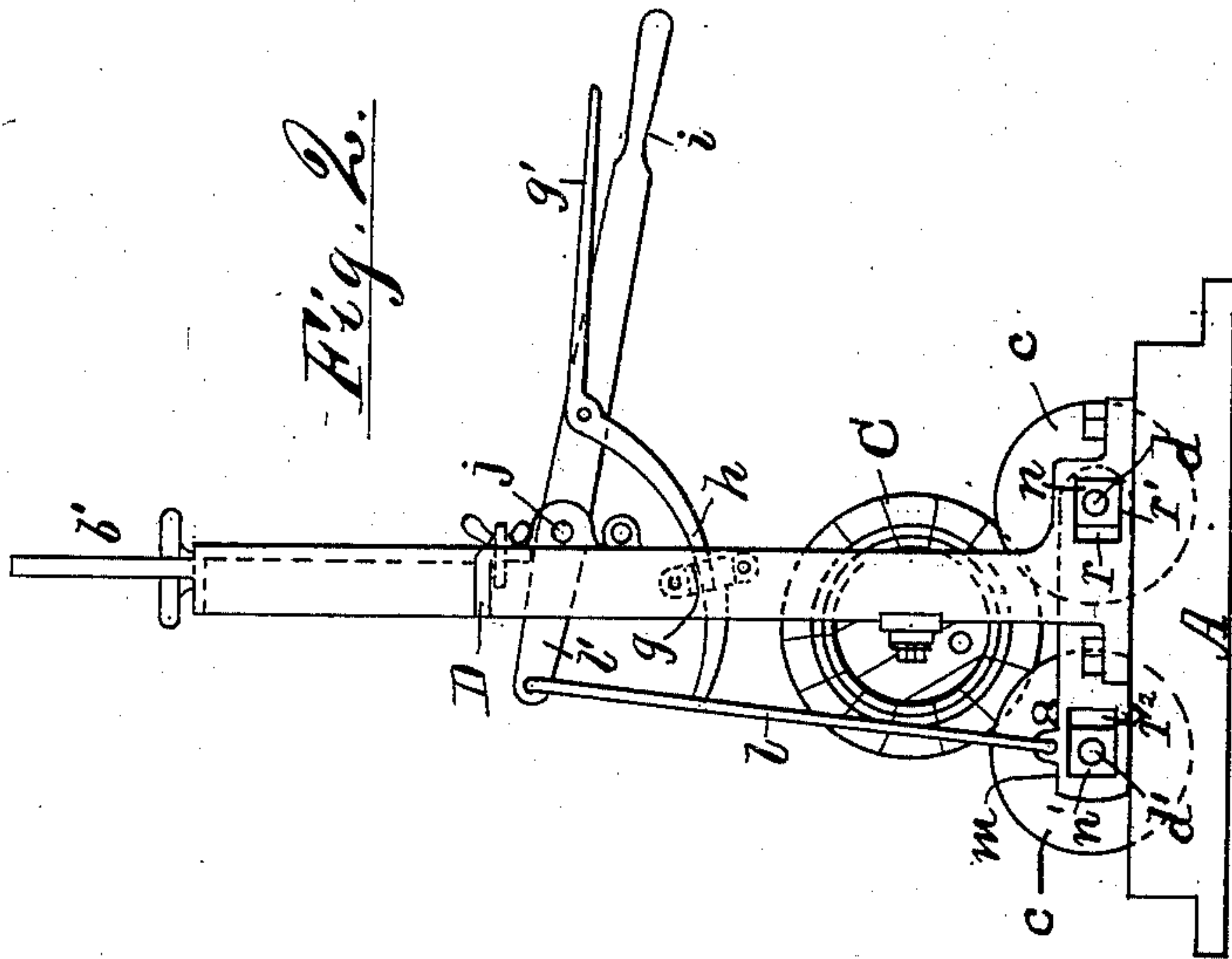
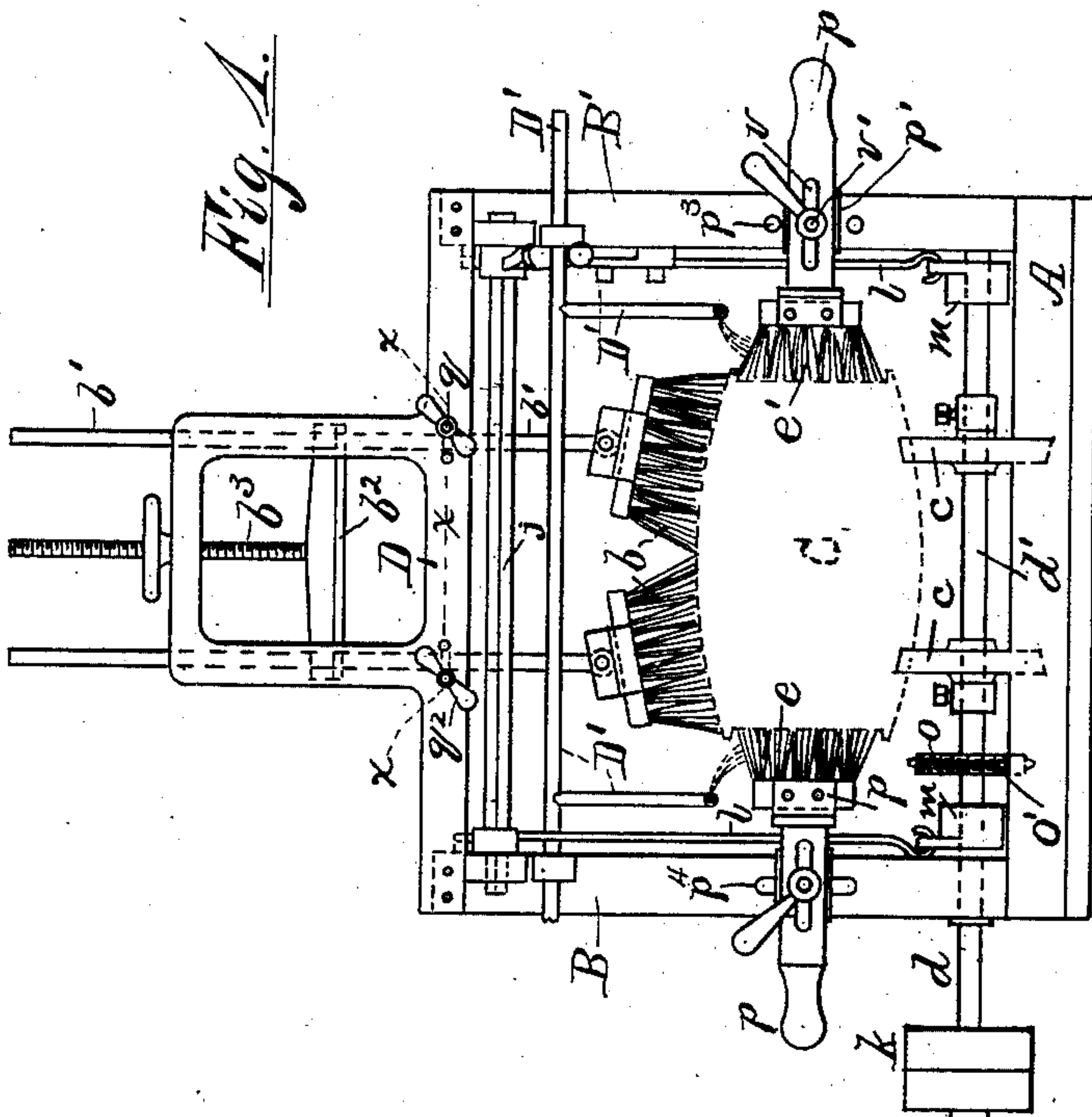


Fig. 1.



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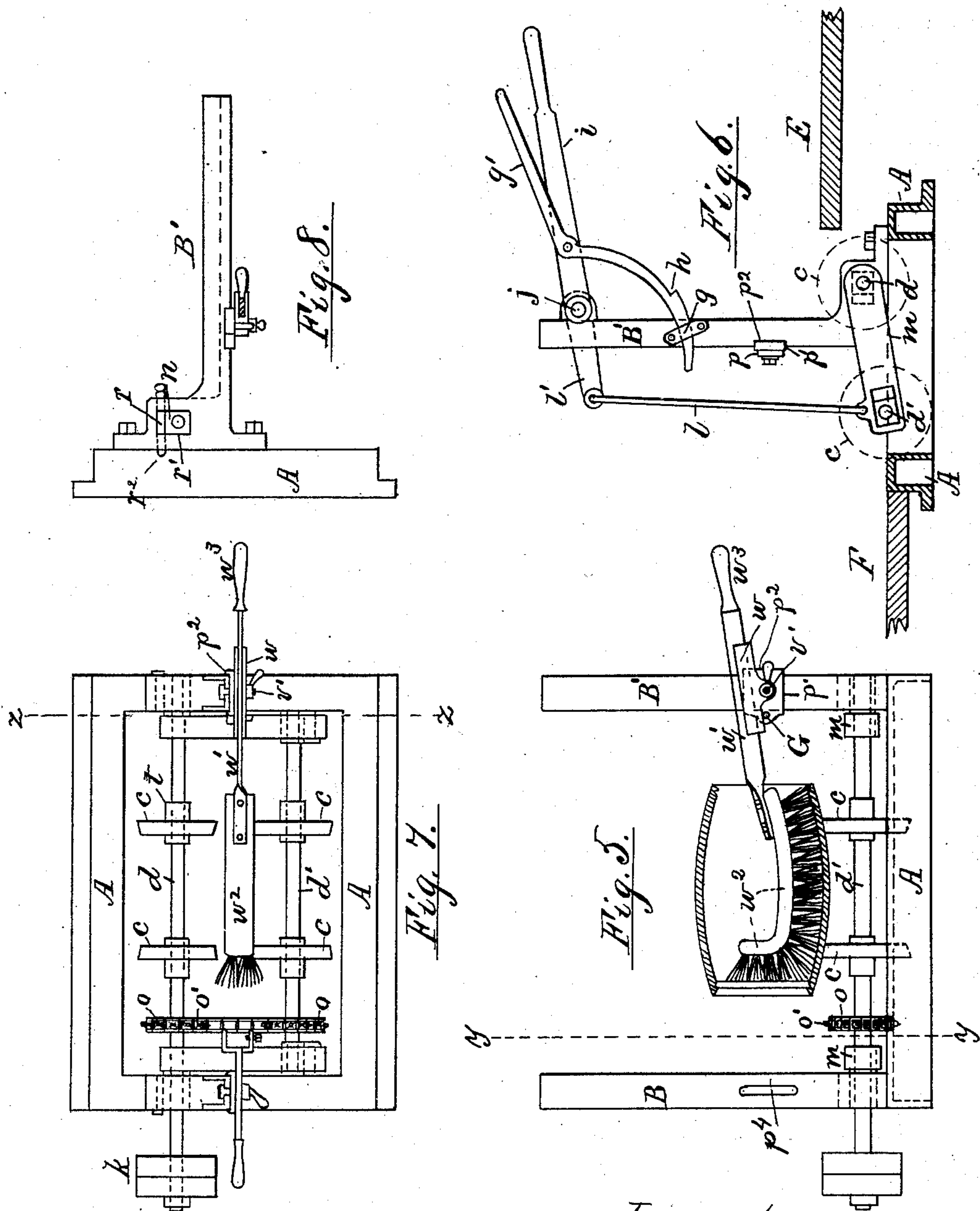
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# UNITED STATES PATENT OFFICE.

ULRICH EBERHARDT AND HENRY E. EBERHARDT, OF NEWARK,  
NEW JERSEY.

## BARREL-CLEANING MACHINE.

SPECIFICATION forming part of Letters Patent No. 371,045, dated October 4, 1887.

Application filed August 16, 1886. Serial No. 211,060. (No model.)

*To all whom it may concern:*

Be it known that we, ULRICH EBERHARDT and HENRY E. EBERHARDT, citizens of the United States, residing at Newark, Essex  
5 county, New Jersey, have invented certain new and useful Improvements in Barrel-Cleaning Machines, fully described and represented in the following specification and the accompanying drawings, forming a part of the same.

10 The object of this invention is to remove the casks from the machine more readily when cleaned, to operate upon either the inner or outer sides of the cask, and to cheapen the construction.

15 In the drawings, Figure 1 is a side view, and Fig. 2 an end view, of the apparatus. Fig. 3 is a section of the top cross-head on line *xx* in Fig. 1, with the clamps not in section. Fig. 4 is a detached view of one of the clamps enlarged. Fig. 5 is a side view of part of the  
20 frame, with a cask in section and an internal brush applied. Fig. 6 is an inside view of one of the stanchions and its attachments, the bed-plate being shown in section on line *yy* in Fig. 5. Fig. 7 is a plan of the parts shown in Fig. 5; and Fig. 8 is an inside view of the right-hand stanchion of Fig. 5, with the bed and the brush-handle in section on line *zz* in Fig. 7.

30 In Fig. 1 the barrel or cask is indicated merely in dotted lines, and the cleaning-brushes are all fully shown; but the cask is shown in full lines in Fig. 2 and the brushes are omitted. The cask *C* is supported upon four india-rubber wheels, *c*, mounted upon two parallel  
35 shafts, and the upper brushes, *b b*, and the end brushes, *e e'*, are made adjustable to fit closely to the cask. This construction is an ordinary one; but heretofore the casks have been removed from the machine by various means  
40 other than those shown and described herein. In our invention one of the roll-shafts is made movable, and is lowered to permit the rolling of the barrel or cask readily from the india-rubber rolls or wheels.

45 *A* is the bed, and *B B'* are stanchions supporting the end brushes, *e e'*, and carrying a cross-head, *D*, to sustain the upper or side brushes, *b b*.

*d d'* are the wheel-shafts, one being journaled 50 in boxes *n n* in the feet of the stanchions, and the other, *d'*, in the ends of movable arms *m m*, which are pivoted upon the shaft *d*.

The wheels *c* are secured to the shafts *d d'*, and the shafts are connected by sprocket- 55 wheels *o* and a chain, *o'*, the shaft *d* being extended beyond the bed and rotated by a pulley, *k*.

The ends of the arms *m* are sustained by links *l* and cranks *l'*, affixed to a shaft, *j*, secured 60 across the tops of the stanchions, and the shaft is provided with a handle, *i*, to move it, and with a latch, *h*, to hold it in the required position. The latch has a hooked end fitted to a stop, *g*, upon the stanchion *B'*, and a 65 handle, *g'*, adjacent to the handle *i*. When locked, as in Fig. 2, the latch sustains the cranks *l'*, so that the shaft *d'* is on a level with the shaft *d*, and the barrel is then retained  
70 upon the wheels, as seen in the figure; but when the latch is released the arms fall, as shown in Fig. 6, and the cask may then be easily rolled out of the machine.

The floor may be constructed of different levels at opposite sides of the machine, as 75 shown at *E* and *F* in Fig. 6, to facilitate the admission and removal of the casks. When the supporting-wheels, which are preferably made of rubber, become worn down to a  
80 smaller diameter, it is desirable to draw the shafts *d* and *d'* closer together to sustain the cask at the desired level, and this we effect by making movable shaft-boxes in the arms and in the frame and shifting them toward one another.

85 *n* are the boxes in the frame, and *n'* the boxes in the ends of the arms *m*, and *r* is a block fitted by the side of the box in each slot *r'*, in which the box is held. The blocks are shown in the outer ends of the slots in Figs. 2 and 6, 90 and the shafts thus separated to the greatest degree; but in Figs. 7 and 8 the blocks are shown in the inner ends of the slots and the boxes and shafts crowded together thereby. The boxes, when shifted in the slots, may be 95 held therein by loose keys *r''*, dropped edge-wise through holes in the arm or stanchion behind the box, or by any other suitable means.



Our improvement in the end brushes,  $e\ e'$ , consists in fitting their holders  $p$  to the face of a block or seat,  $p'$ , fastened movably to the face of the stanchion. The holders are slotted at  $v$  to embrace a bolt,  $v'$ , which passes through the holder, the seat, and the stanchion. This construction is clearly shown in Fig. 7, at the left side, where one of the holders without the brush is shown thus secured. The seat is furnished with ribs  $p^2$  at the edges to guide it on the face of the stanchion, and the latter is provided with a slot,  $p^4$ , as shown in Fig. 5, or with a series of holes, as  $p^3$ . The seat may thus be shifted vertically and the holder endwise, and the brush thus be quickly adjusted and secured by a single bolt in any required position.

The upper brushes,  $b\ b$ , are secured to rods  $b'$ , and adjusted vertically by a cross-bar,  $b^2$ , and screw  $b^3$  in the usual manner.

Our improvement in this part of the machine consists in fitting clamps of particular construction to the rods  $b$ , to prevent such rods from loosening and to hold the brushes steadily when in use.

The clamp consists of a bolt,  $q$ , constructed with a hook,  $q'$ , at the inner end, to embrace the rod  $b'$ , and its end extended through the cross-head D and provided with a hand-nut,  $q^2$ . The clamp-nut  $q^2$  is slackened when adjusting the brushes  $b\ b$  and tightened while they are in use, and the rods  $b'$  are thus firmly secured in the frame, when adjusted, by the screw  $b^3$ .

In Fig. 5 is shown an attachment interchangeable with one of the end brushes,  $e'$ , to operate upon the interior of the cask with one head removed.

The seat  $p'$  is provided with a grooved brush-holder,  $w$ , pivoted upon the bolt  $v'$ , and adapted to sustain a sliding bar,  $w'$ , which carries a brush,  $w^2$ , upon its inner end, and is provided with a handle,  $w^3$ , at its outer end to manipulate the brush inside the cask. The brush is fitted both to the side and end of the cask, so as to clean the head and staves simultaneously, and when the work is done may be readily withdrawn by sliding the bar  $w'$  outward and lifting it from the holder  $w$ . A stop-pin, G, is shown fitted to the seat beneath the inner end of the holder, to prevent it from tipping on the bolt  $v'$ .

It will be noticed that the fixtures for washing the exterior and interior of the barrel are applied by means of holders which fit interchangeably to the movable seat  $p'$ , and that either of them may be substituted for the other by removing the bolt  $v'$  and exchanging the brush-holder  $w$  for the holder  $p$ . After the exterior of the head has been cleaned by the brush  $e$  or  $e'$ , one of the heads may be removed, and the interior may then be cleaned by applying the brush  $w^2$ . The construction which makes these fixtures interchangeable consists in the combination, with the vertically-slotted

stanchion B', of the movable seat  $p'$  and the bolt  $v'$ , adapted not only to clamp the movable seat  $p'$  to the stanchion, but to also clamp either of the brush-holders to the seat, as may be preferred.

A water-pipe, D', is shown affixed to the stanchions to supply water to the brushes; but this forms no part of our invention.

We are aware that it is not new in a barrel-painting machine having its driving-shaft directly over the center of the barrel to pivot shafts by means of movable arms upon each side of the barrel, such shafts being provided with rollers to confine said barrel while the paint is being applied and to spread the paint when applied to the barrel; but we are not aware that a cask-scrubbing machine has ever been made having two shafts provided with rollers for supporting the same, one being pivoted to the other and adapted, when lowered, to roll the cask out of the machine over itself. We therefore disclaim the former construction.

Having thus set forth the improvements we have made, what we claim herein is—

1. The combination, in a cask-scrubbing machine, of two parallel shafts, each carrying rollers for supporting and rotating the cask, one of such shafts being pivoted by means of arms to the other and otherwise connected thereto by means of gearing, the movable shaft being adapted, when lowered, to depress one side of the cask to roll it out of the machine over the said shaft, substantially as set forth.

2. In a cask-scrubbing-machine, the combination, with the bed A, stanchions B B', and shaft  $d$ , journaled in movable boxes  $n$  upon the frame, of the arms  $m$ , provided with slot  $r'$  and boxes  $n'$ , the shaft  $d'$ , journaled in said boxes, wheels  $c$  upon said shafts, to carry the cask, blocks  $r$ , fitted to the slot  $r'$ , to adjust the boxes therein, shaft  $j$ , carrying cranks  $l'$ , linked to the arms  $m$ , and handle  $i$ , provided with latch  $h$ , the whole arranged and operated as and for the purpose set forth.

3. In a cask-scrubbing machine, the combination, with means for rotating the barrel, of the bed A, stanchions B B', erected upon the same, and movable seats  $p'$ , having brush-holders held adjustable thereon by bolts  $v'$ , the stanchions sustaining the seats and brush-holders adjacent to the cask-heads, and the seats being each adjustable vertically with the brush-holders by means of the single clamping-bolt  $v'$ , as and for the purpose set forth.

4. In a cask-scrubbing machine, the combination, with means for rotating the barrel, of the bed A, stanchions B B', supporting the seats  $p'$  and brush-holders  $p$ , the cross-head D, carrying the upper brushes upon rods  $b'$ , and the clamps consisting in the bolts  $q$ , provided with the hook  $q'$ , and hand-nut  $q^2$ , as and for the purpose set forth.

5. In a cask-scrubbing machine, the combination, with means for rotating the barrel, of



the bed A, stanchions B B', erected upon the same, the movable seat  $p'$  upon one of the stanchions, the brush-holder  $w$ , sustained thereon, and the movable bar  $w'$ , provided with  
5 brush  $w^2$ , fitted to the interior of the barrel or cask, and having handle  $w^3$  to manipulate the brush, substantially as shown and described.

In testimony whereof we have hereunto set

our hands in the presence of two subscribing witnesses.

ULRICH EBERHARDT.  
HENRY E. EBERHARDT.

Witnesses:

FRED L. EBERHARDT,  
THOS. S. CRANE.