

No. 705,962.

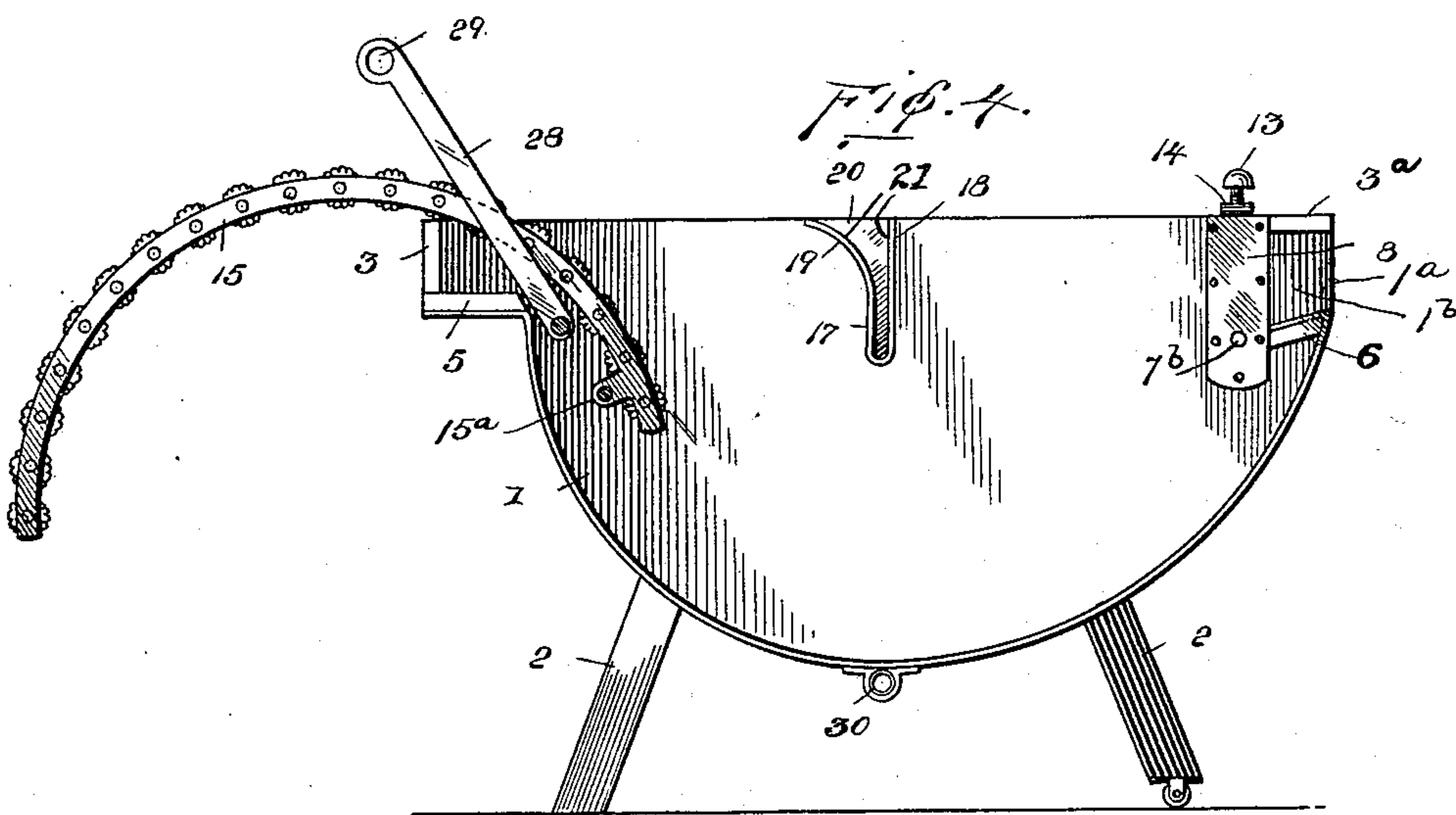
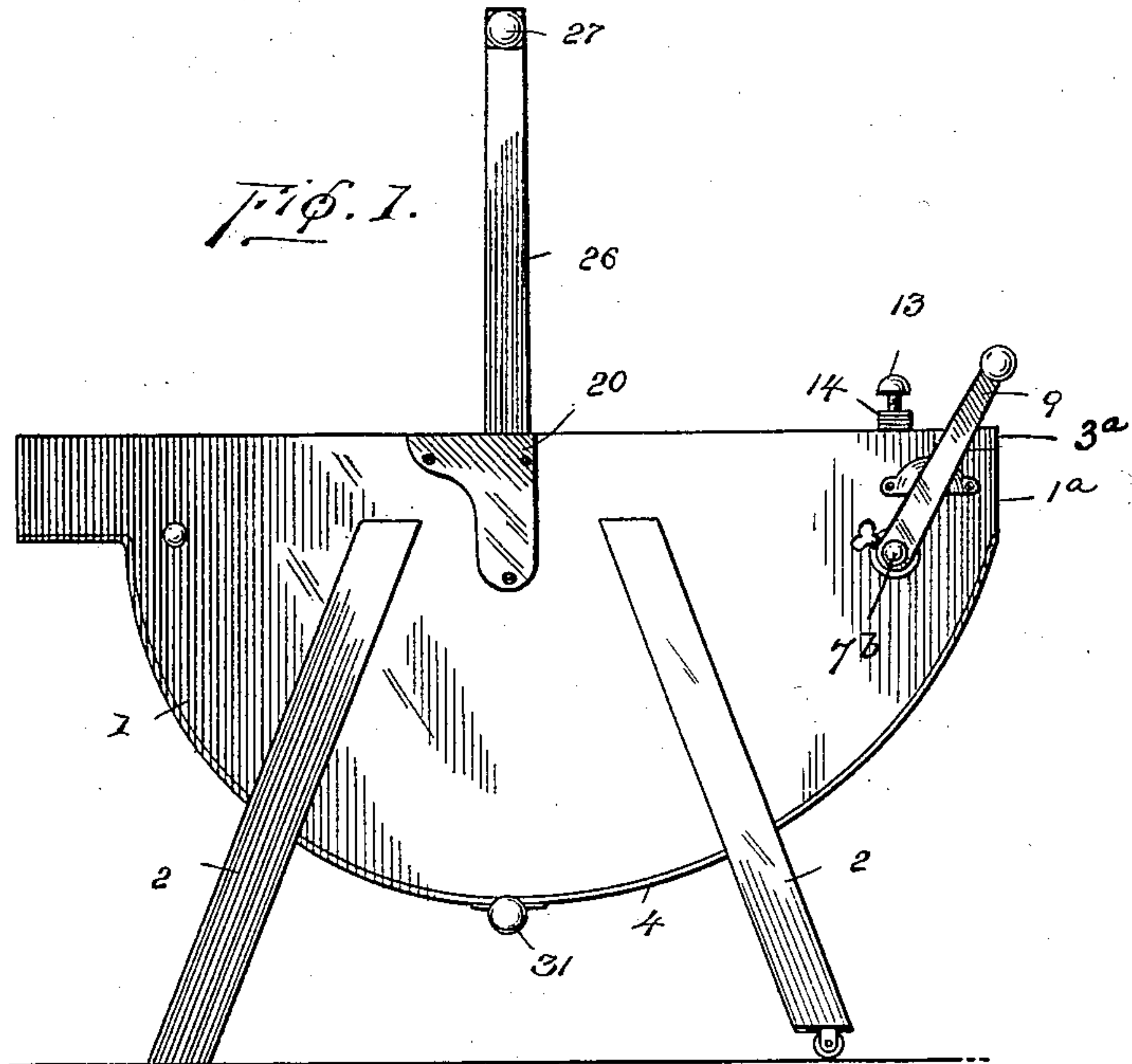
Patented July 29, 1902.

J. B. RENTZEL.  
WASHING MACHINE.

(Application filed Jan. 5, 1901.)

(No Model.)

3 Sheets—Sheet 1.



Inventor

*J. B. Rentzel,*

Witnesses  
*F. W. Bailey,*

*Herbert D. Lawson,*

By *Victor J. Evans* Attorney

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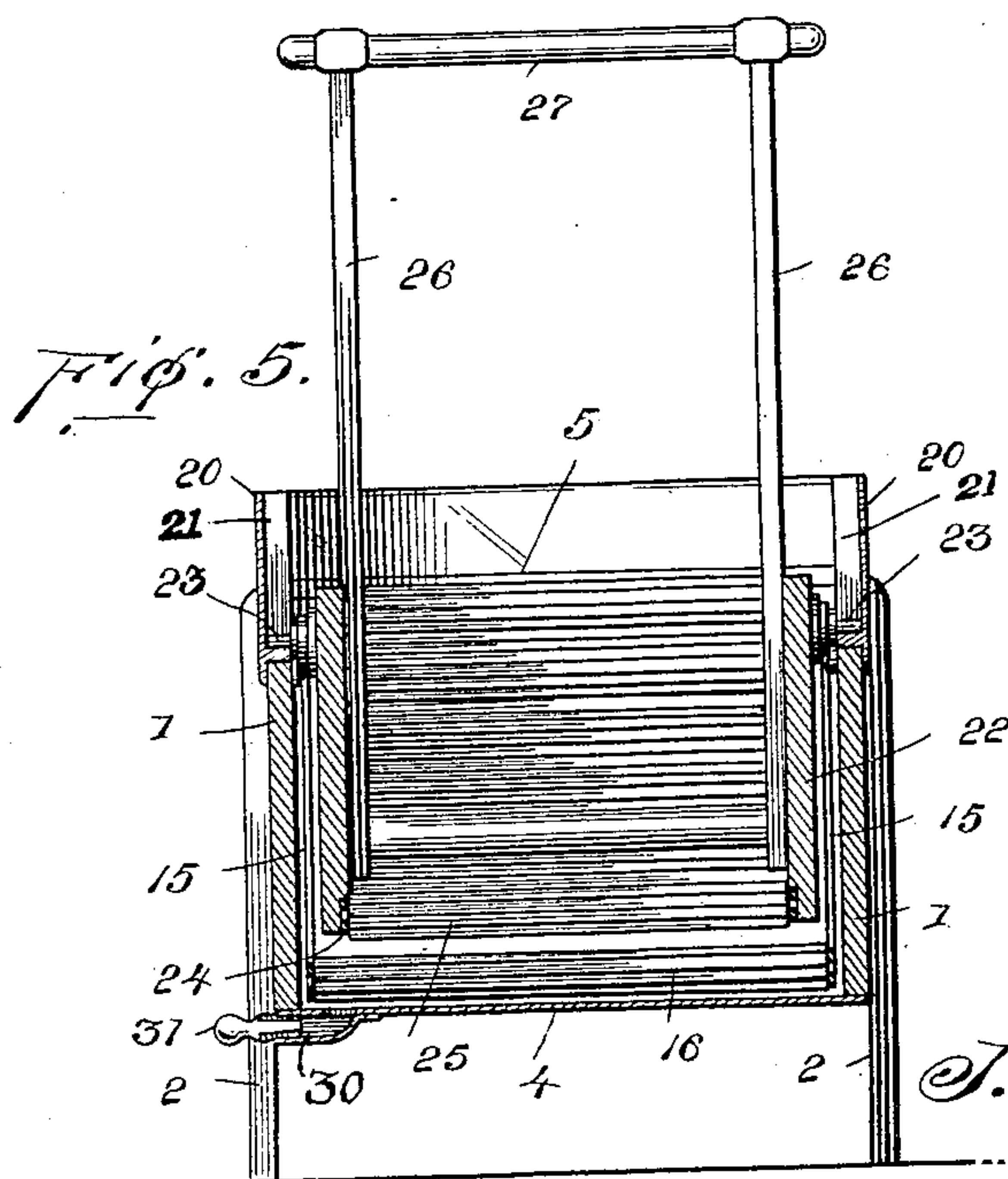
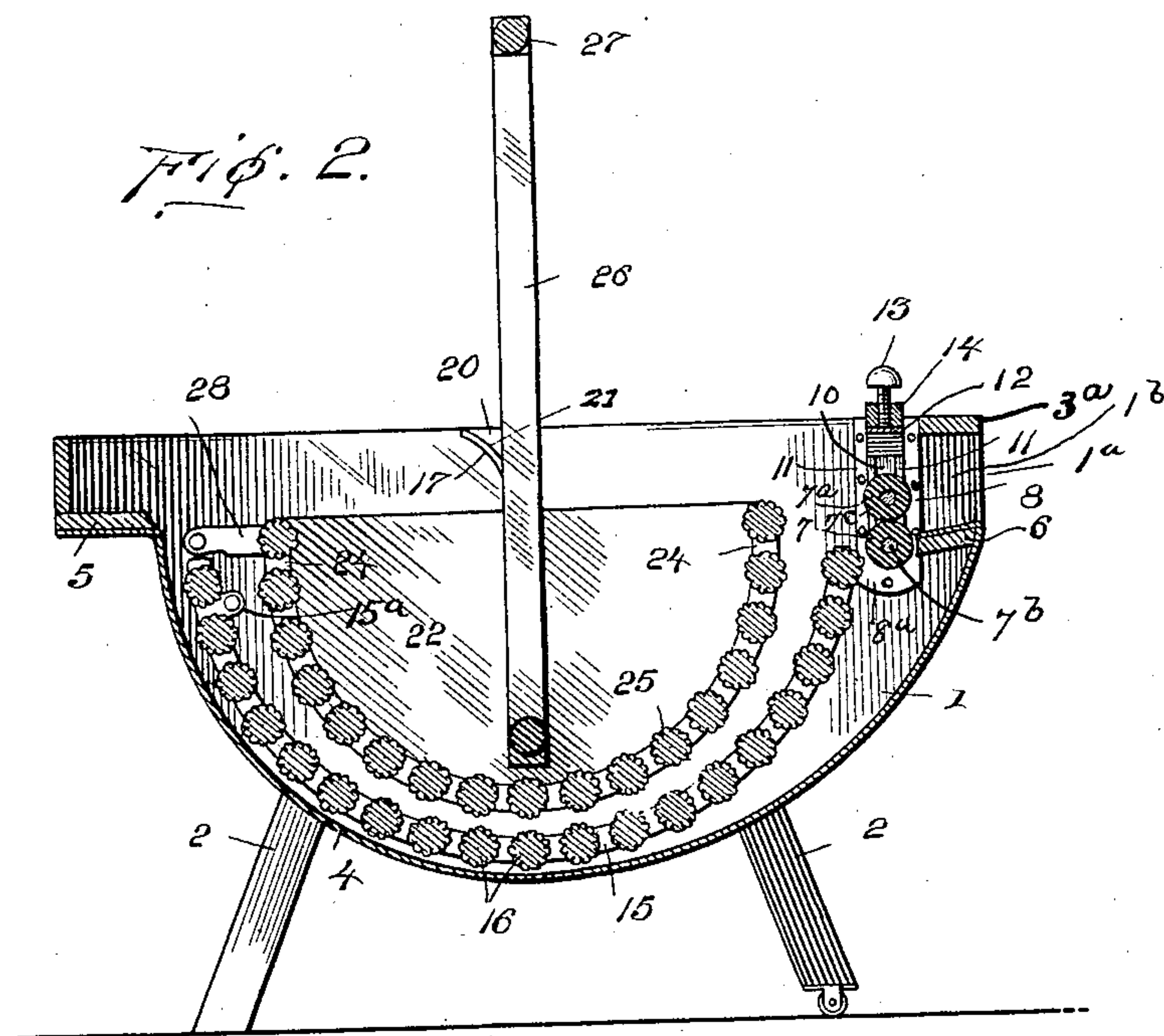
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3 Sheets—Sheet 2.



Witnesses  
*G. W. Soley,*

*Hubert D. Lawson*

Inventor  
*J. B. Rentzel,*  
By *Victor J. Evans* Attorney

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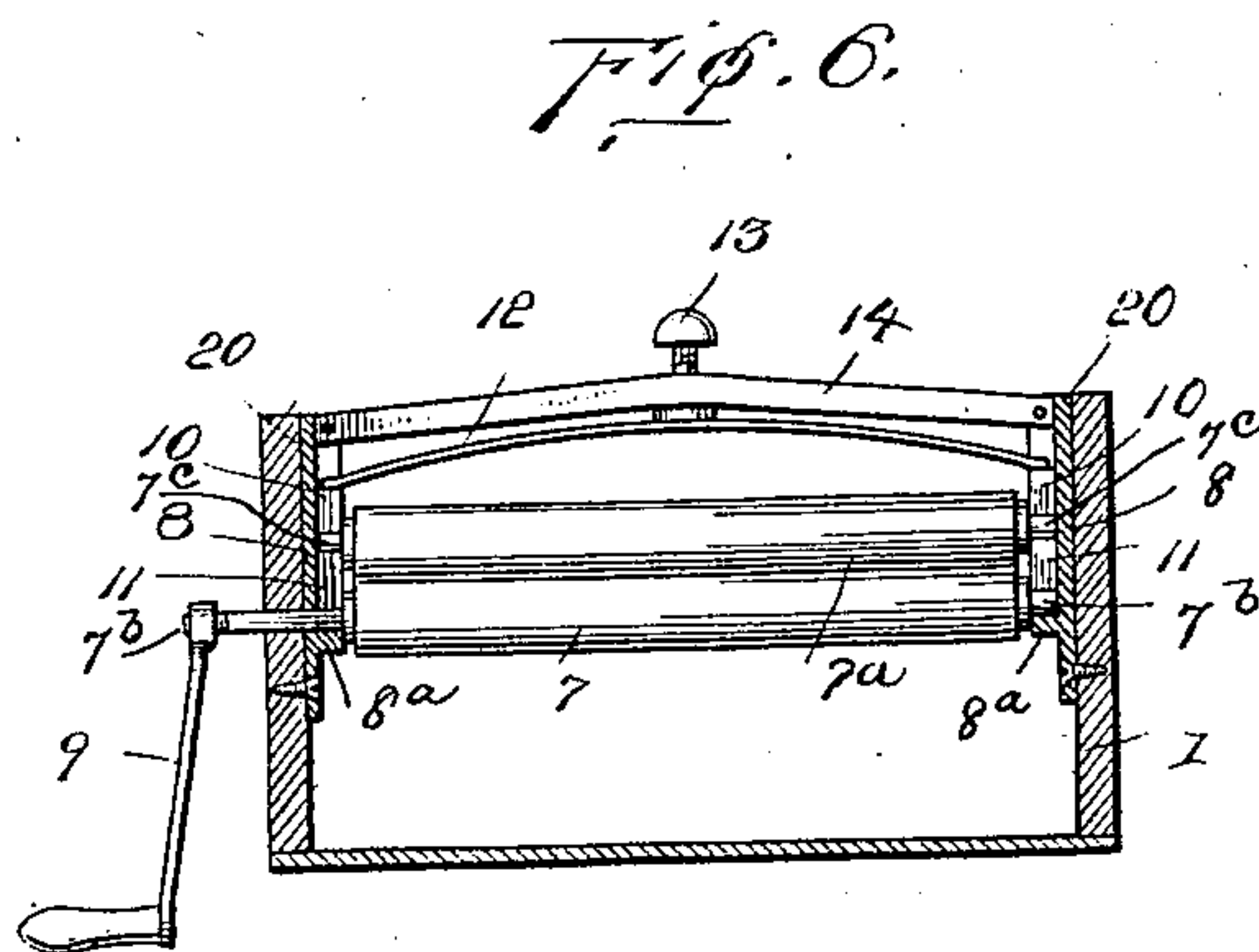
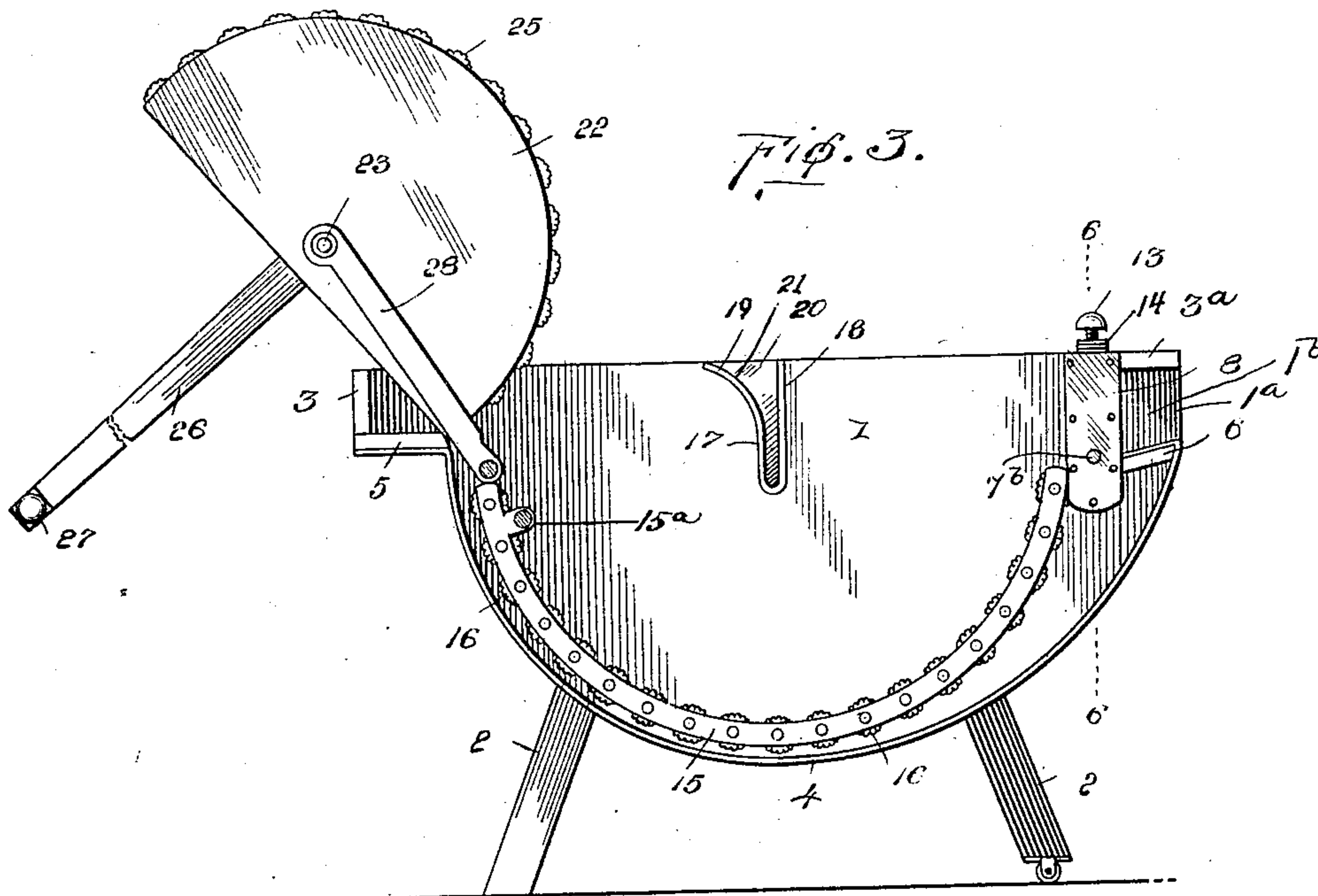
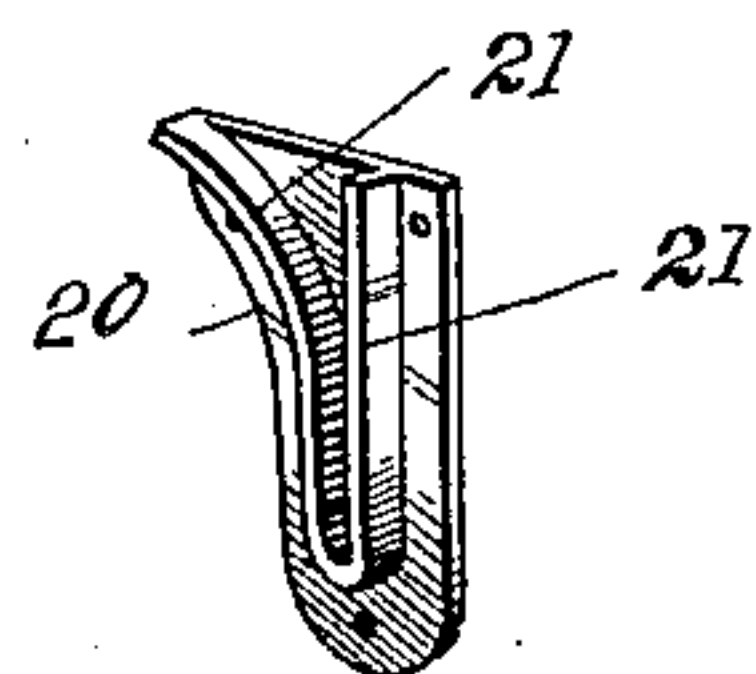


Fig. 7.



Inventor

J. B. Rentzel,

Witnesses:

J. W. Riley,

Hubert D. Lawson

By

Victor J. Evans,

Attorney



# UNITED STATES PATENT OFFICE.

JOHN B. RENTZEL, OF MANCHESTER, PENNSYLVANIA.

## WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 705,962, dated July 29, 1902.

Application filed January 5, 1901. Serial No. 42,239. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN B. RENTZEL, a citizen of the United States, residing at Manchester, in the county of York and State of Pennsylvania, have invented new and useful Improvements in Washing-Machines, of which the following is a specification.

This invention has relation to improvements in washing-machines; and it consists in the construction and arrangement of parts, as will be hereinafter described and more particularly pointed out in the claim.

In the accompanying drawings, Figure 1 is a side elevation of a washing-machine embodying my invention. Fig. 2 is a longitudinal vertical section of the same. Fig. 3 is a side elevation, one side of the tub being omitted, showing the reciprocating rubber turned out of the tub. Fig. 4 is a side elevation, one side of the tub and the reciprocating rubber being omitted and showing the inner rubber in the position which it assumes when the tub is to be cleaned. Fig. 5 is a transverse vertical section of Fig. 1. Fig. 6 is a section on the line 6 6 of Fig. 3. Fig. 7 is a detail perspective view of one of the castings which serve as bearings for the reciprocating rubber.

Referring to the drawings, the numeral 1 is the tub, preferably semicylindrical in form and supported in any suitable manner, as by means of legs 2. The tub is preferably constructed of semicircular side pieces 3 and 3<sup>a</sup> and provided with a bottom 4, of zinc or other similar material. A horizontal shelf is arranged between the sides of the tub, adjacent to one end thereof, and is for the purpose of receiving soap or other similar material, and an inwardly-inclined draining-shelf 6 is arranged adjacent to the opposite end and is in alinement with the pass between two rollers 7 and 7<sup>a</sup> of the wringer. The lower one of these rollers is journaled within castings or plates 8, which are secured to the inner faces of the sides of the tub, adjacent to the shelf 6, and is provided with a crank 9, whereby the same may be readily revolved.

The upper roller 7<sup>a</sup> has its shaft 7<sup>b</sup> journaled within blocks 10, which are slidably mounted between guides 11, extending inward from the plates 8 and forming vertical extensions of the lower shaft-bearings 8<sup>a</sup>. A bow-

spring 12 bears at opposite ends upon these blocks 10, and the center thereof is adapted to be contracted by the end of a tension-screw 13, which is mounted within a preferably metallic cross-strip 14, secured at its ends between and to the guides 11 of the plates. It will thus be seen that by turning the screw 13 downward the spring 12 will bear upon the blocks and force the upper roller down on the lower one, thereby regulating the pressure upon the clothes between them.

A semicylindrical stationary rubber is mounted within the tub, and this rubber comprises two similar semicircular strips 15, which are formed with lugs or ears 15<sup>a</sup>, whereby they are pivoted at one end to the inner surfaces of the sides of the tub, while their opposite ends are adapted, when they are in a lowered position, to contact with the inner edges of the plates 8 of the wringer, by which they are supported at points slightly removed from the bottom of the tub. Between these strips are journaled longitudinally-grooved rollers 16, which are supported out of contact with the bottom of the tub by the strips 15, before referred to.

Angular trunnion-housings 17 are formed within the upper edges of the sides of the tub, at the center thereof, and each of these trunnion-housings is provided with a vertical wall 18 and a curved wall 19. These trunnion-housings are preferably formed by cutting away the sides of the tub, so that recesses of the desired shape are formed within the edges of the sides, and then by inserting a housing-casting 20, which is secured to the outer face of each side in any suitable manner, as by means of screws, and is provided with ribs 21, forming the walls 18 and 19, which are adapted to rest within the recesses and prevent wear upon the walls thereof. Mounted within the tub, above the stationary rubber, is a substantially semicylindrical reciprocating rubber 22, having trunnions 23 extending therefrom, the ends of which are adapted to normally bear within the trunnion-housings 17, said housings serving to limit the downward movement of the trunnions and to support the rubber 22 out of contact with the stationary rubber. The rubber 22 is preferably formed of semicircular side pieces having rabbets on their inner faces, adjacent to



the curved edges thereof, said rabbets being adapted to receive semicircular strips 24, which are secured therein in any suitable manner. Longitudinally-grooved rollers 25  
5 are journaled at opposite ends within these strips. Standards 26 extend upward from the center of each of the side pieces of the rubber 22 and are connected by a handle-bar 27. By means of this handle-bar said rubber  
10 22 may be readily rocked upon its bearings when in position within the tub.

Connecting-links 28 are pivoted to the inner faces of the sides of the tub at points adjacent to the inner ends of the stationary rubber, and the remaining ends of these connecting-links are provided with eyes 29, which  
15 are adapted to extend over the trunnions 23 of the reciprocating rubber.

A suitable outlet 30 is arranged within the  
20 bottom 4 of the tub, and this is provided with a suitable closure, as a plug 31.

When it is desired to clean the machine, the reciprocating rubber 22 is drawn upward, the connecting-links 28 serving to swing the same  
25 toward one end of the machine as said rubber is raised. When the limit of the upward movement of the rubber has been reached, the same will rest upon the shelf 5 of the tub, and the links 28 may then be moved laterally  
30 until they are removed from the trunnions 23. As the rubber 22 is then detached from the rest of the machine, it can, as is obvious, be readily removed. The stationary rubber may then be swung upward on its pivot and  
35 access obtained to the bottom of the tub for the purpose of cleaning, &c. The fixed rubber is then swung back into its normal position, and the device is ready for use. Clothes are placed upon the stationary rubber, and  
40 the reciprocating rubber 22 is put in position thereon after the eyes 29 of the strips 28 have been placed into engagement with the trunnions 23. After water has been poured into

the tub the rubber 22 may be reciprocated back and forth, the rollers 25 thereof traveling  
45 upon the clothes during the backward-and-forward movement of the rubber. By providing longitudinally-extending grooves within these rollers the same will not slip upon the clothes, and thereby tear or injure them.  
50 Moreover, by providing rollers upon the stationary rubber the friction upon these portions of the clothes which contact therewith will be reduced to a minimum. By referring to the drawings it will be seen that the pass  
55 between the rollers of the wringer is in close proximity to one of the ends of the stationary rubber, and the clothes can therefore after the same have been washed be readily placed  
60 between the rollers and projected outward upon the shelf 6. Between the wringer-shelf 6 and the cross-strips 3 thereabove is located the discharge-opening 1<sup>a</sup> for the clothes.

Having thus described the invention, what  
65 is claimed as new is—

In a washing-machine, the combination with the semicylindrical tub having an extended end, a semicylindrical stationary rubber pivoted at one end to the sides of the tub and adapted to rest upon the extended end when  
70 thrown out of engagement with the tub, the angular bearing-plates secured to the sides of the tub having one portion vertical and the other outwardly curved, links having their outer ends pivoted to the sides of the tub and  
75 their inner end provided with eyes, of a semicylindrical reciprocating rubber having trunnions detachably connected to the eyes of the links and adapted to rest in the bearing-plates,  
80 substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN B. RENTZEL.

Witnesses:

L. A. BEAR,  
W. Z. BURGARD.