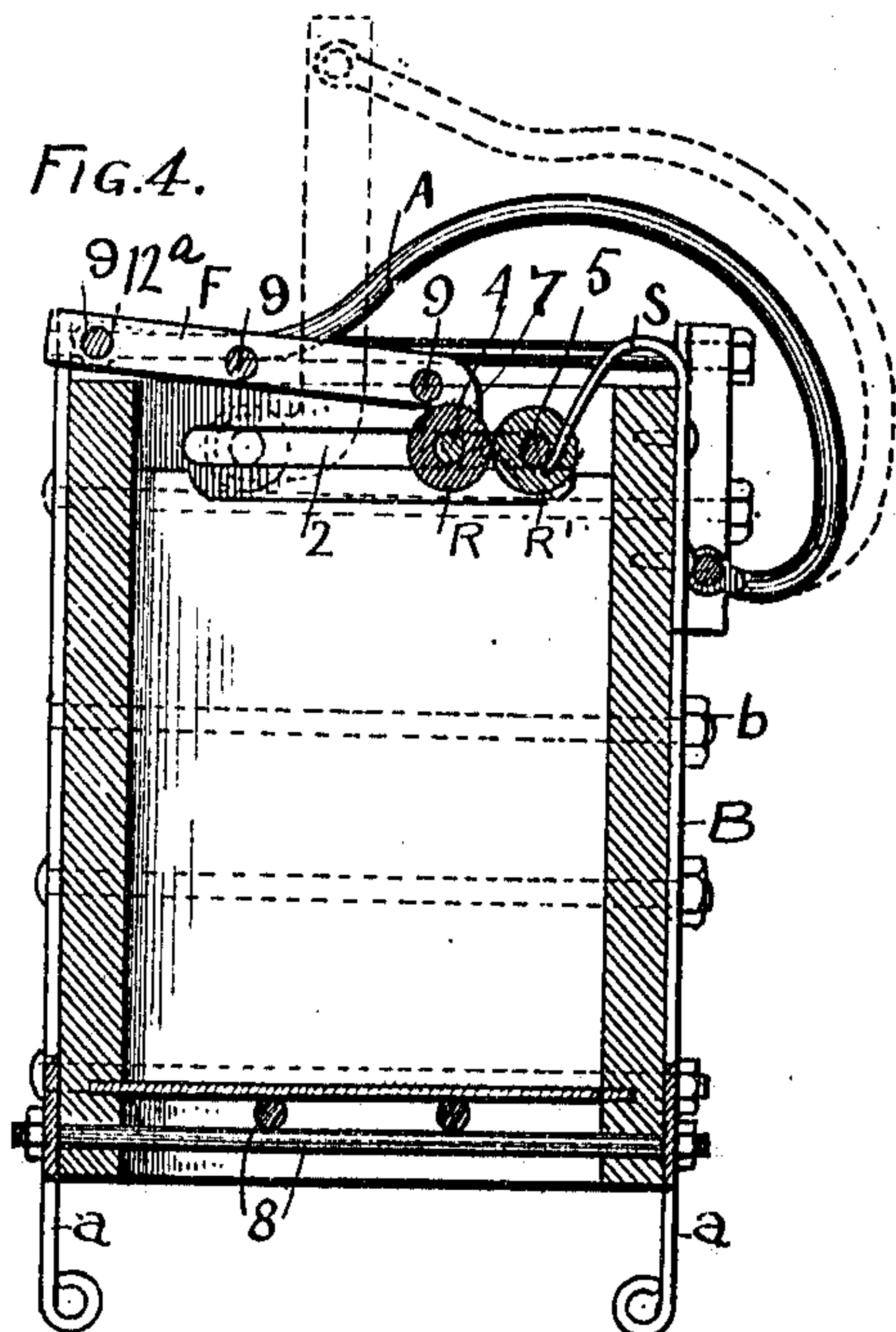
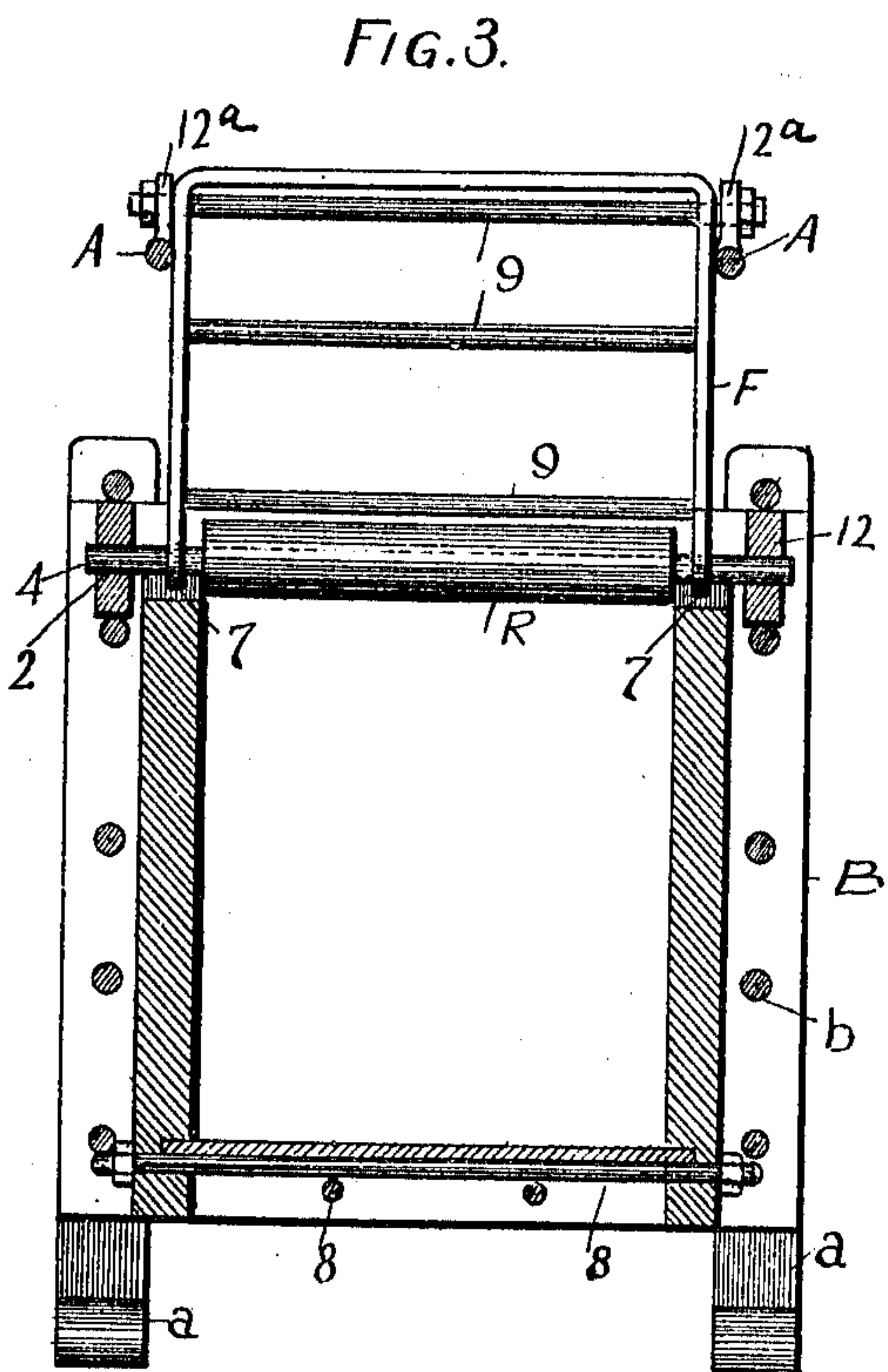
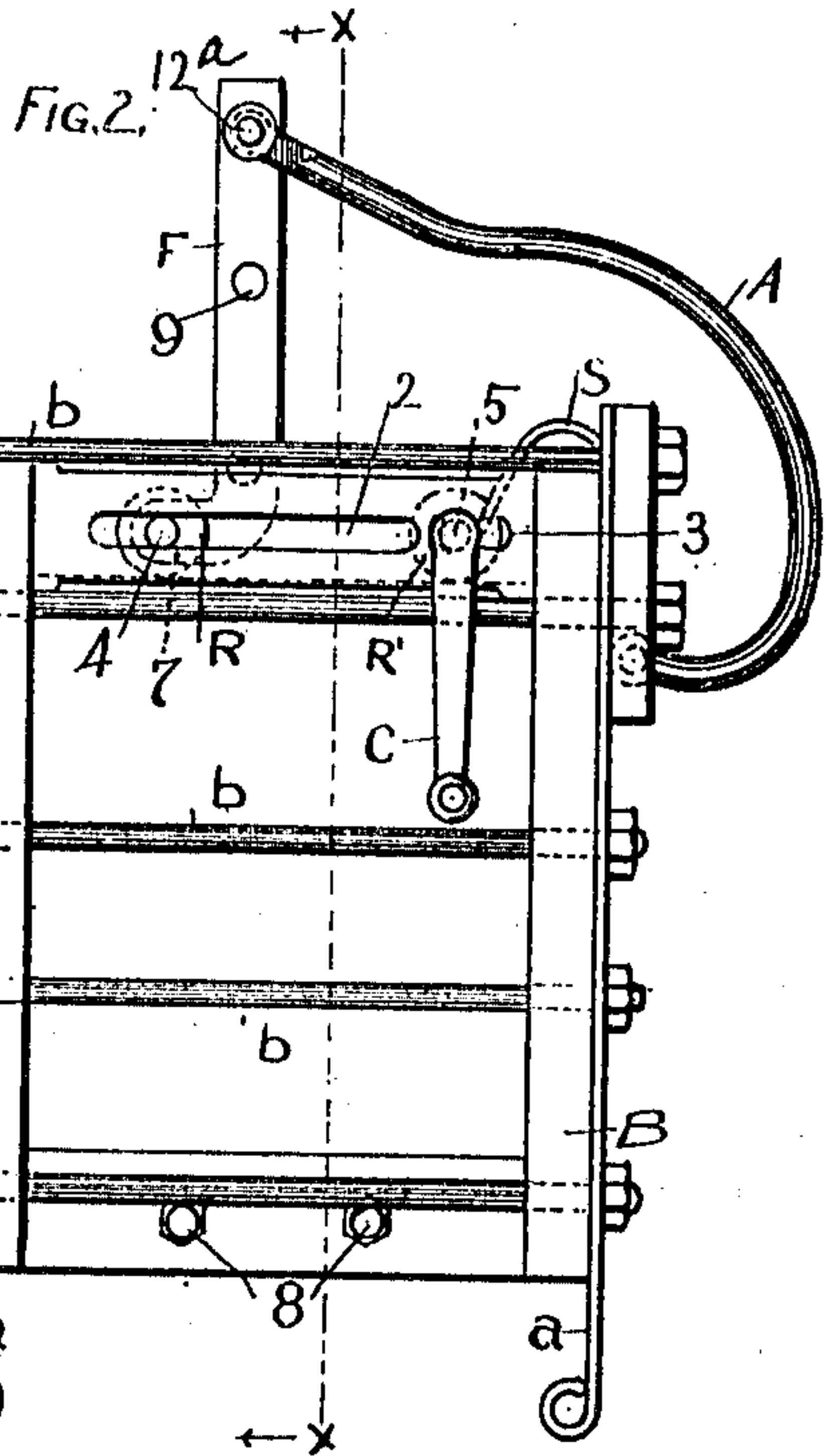
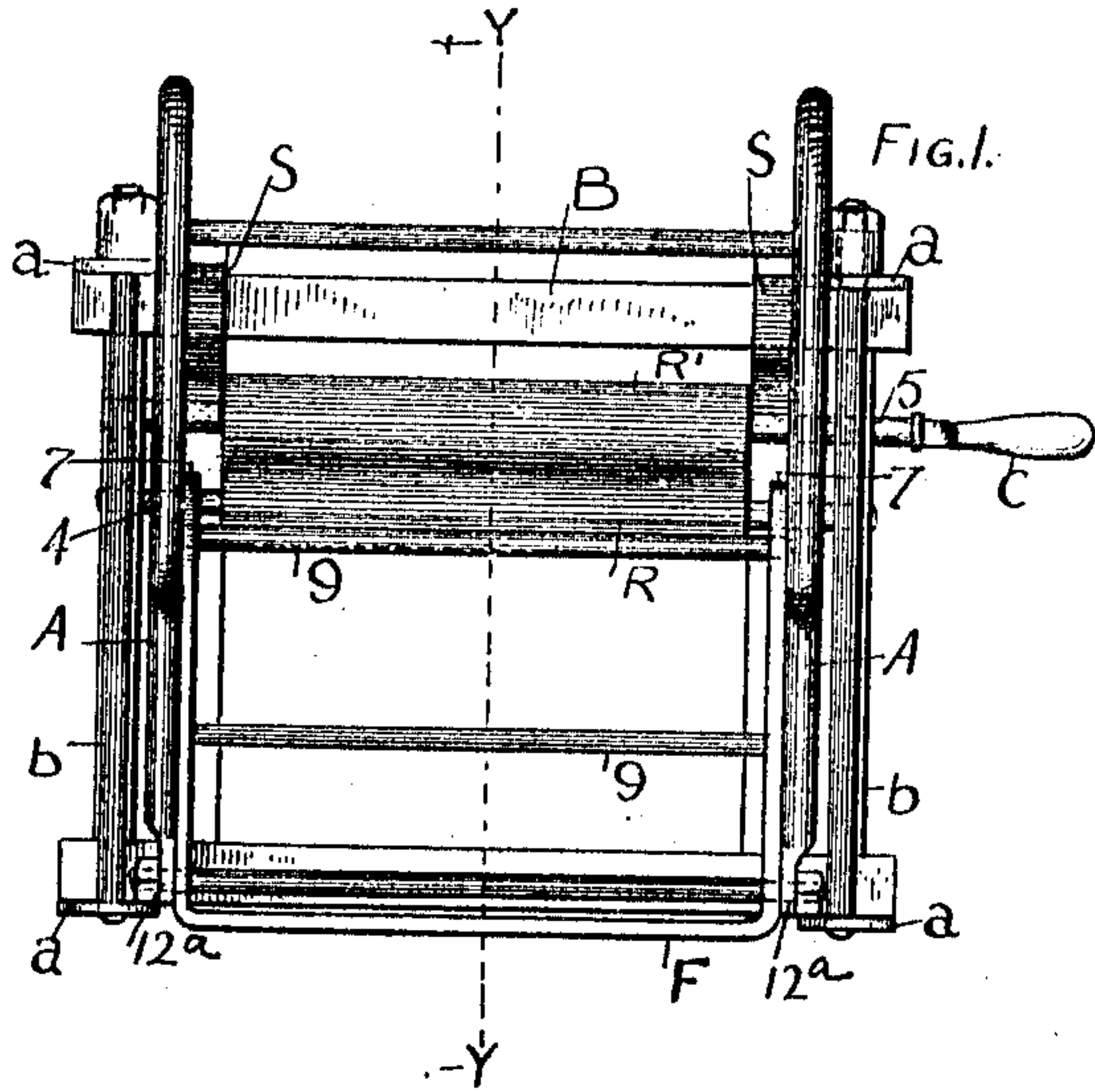


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MOP WRINGER.  
APPLICATION FILED JULY 5, 1910.

978,257.

Patented Dec. 13, 1910.



ATTEST  
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# UNITED STATES PATENT OFFICE.

JOHANN ZIEBUR, OF CLEVELAND, OHIO.

MOP-WRINGER.

978,257.

Specification of Letters Patent.

Patented Dec. 13, 1910.

Application filed July 5, 1910. Serial No. 570,270.

*To all whom it may concern:*

Be it known that I, JOHANN ZIEBUR, citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Mop-Wringers, of which the following is a specification.

My invention relates to mop wringers, and the invention consists in the construction and combination of parts substantially as shown and described and particularly pointed out in the claim.

In the accompanying drawings, Figure 1 is a plan view of the wringer, and Fig. 2 is a side elevation thereof. Fig. 3 is a sectional elevation on line  $x-x$ , Fig. 2, and Fig. 4 is a sectional elevation on line  $y-y$ , Fig. 1.

As thus shown, B represents the body or box of the wringer, which is of the nature of a receptacle for water and has an open top except as the wringer mechanism occupies the same and suitable supports or legs at its bottom with or without casters. In this instance side straps  $a$  are extended and form legs and tie rods  $b$  bind said straps and body together.

The two wringer rolls or rollers R and R' are mounted in horizontal slots 2 and 3 respectively in the bars 12 at the top of box B, the slots 2 being of such length as to permit roll R to be moved bodily away from roll R' fully one-half the width of the box front to rear so as to afford easy and abundant room for introducing the mop cloth between the rolls, while roller R' has a limited play in shorter slots 3. The said rollers have spindles or shafts 4 and 5 respectively extending into their respective slots 2 and 3, and the roller R slides back and forth on its spindle in slots 2 in opening and closing said roll in respect to roll R'. The rolls are shown open in full lines in Figs. 2 and 3, while the full lines, Figs. 1 and 4 show the same as closed, or rather, roll R closed against roll R'. The roll R' is yieldably supported in the short slots 3, and the movement of the roll need be only slight because the springs S are strong and set up a powerful resistance to or against the counter-action of roll R when the said rolls are at work. Relatively the spring resistance of the two rolls should be and in fact is equalized or balanced, or at least approximately, and so that both sets of springs shall

be under tension about alike at the same time.

The roller R is mounted in a tilting rigid outer frame F which has outwardly curved or right angled lower extremities 7 through which it is pivoted on roll shaft 4. The said shaft 4 extends through said ends into said slots 2. Several cross bars 9 unite the sides of rigid frame F, and said frame is pivotally connected at the upper portion of its sides with the forward end of curved spring arms A. These arms are rigidly fixed at their rear ends upon the rear of box B above its middle portion and extend thence in compound curvature to the front with more or less bowed formation and are pivoted at 12<sup>a</sup> to the said frame F. Normally said bowed springs hold the frame up relatively as seen in full lines Fig. 2 at which time the rollers are open, and the strength of the springs is such that when the said frame and roller R are thrown into working position, Fig. 4, the said roller is effectually by the operator placed under heavy spring tension and cannot escape except as it is relieved by hand. Then also the bow or bend of said arms affords all the spring or yield that roller R requires and which works against the counter springs S.

A crank handle C is provided on shaft 5 of roller R' for operating the wringer. In operation the rollers or rolls are first separated and the mop or mop cloth is inserted between them. Then the roller R is moved back in its guide slots 2 until it engages the said cloth. In doing this the frame F assumes approximately the position shown in full lines Fig. 4 and the springs A are so related to said frame and so constructed that they exert a sufficient downward pressure upon said frame to hold it down as against all possible resistance in the rolls and with a very strong spring in the bows of said arms. This makes both braces and springs out of the arms A, and also a sustaining support for frame F at other times. When pressed clear down substantially as shown in full lines Fig. 4, the axes of the rollers come practically into dead center lines but both rollers remain under spring tension. The frame F being pivoted on arms A as shown it can be swung back and forth with upper rod 9 as its pivot, and the position of roller R is easily controlled. It will be noticed also in Fig. 2 that the spring arms A ter-



minate about midway over the slots 2 in the bars 12. This of course causes a constant lift tendency in said arms as to said roll and frame and hence the pivot point of said  
5 frame on said arms accommodates itself to the straight slot movement of roll R back and forth. But still it would be and is a swinging center for roll R, and this is material in the operation of the machine.

10 At the bottom of the vessel there are tie rods 8 which bind it together. These are screw rods with nuts and said rods take through the frame work at the bottom run across at right angles between the four sides  
15 and serve to tighten up the sides when necessary.

It will be seen that the roller shafts 4 and 5 are of a length to engage in the bars 12 having slots 2 and 3 wholly outside the top  
20 of the vessel, so that the rollers R and R' are of a length equal to the full inside width of the vessel. The vessel frame is preferably built with metallic straps *a* extending

vertically at its corners and along two opposite sides of its bottom through which several of the tie rods 8 are engaged. 25

What I claim is:

A rectangular receiving vessel, front and rear wringer rolls slidably mounted in respect to each other at the top of said vessel, a roll operating frame having its inner ends bent downward at right angles and pivotally engaged with the ends of the front roller, bow springs extending over said vessel connected at their front ends with the  
30 upper and outer portions of said frame and at their rear ends with the rear and top of said vessel, and springs bearing against the ends of the rear roll. 35

In testimony whereof I affix my signature 40 in presence of two witnesses.

JOHANN ZIEBUR.

Witnesses:

E. M. FISHER,  
R. B. MOSER.