No. 819,687. PATENTED MAY 1, 1906.

G. R. BECKWITH & G. R. LAWRENCE.

MOP WRINGER.

APPLICATION FILED MAR. 14, 1905.

2 SHEETS—SHEET 1.

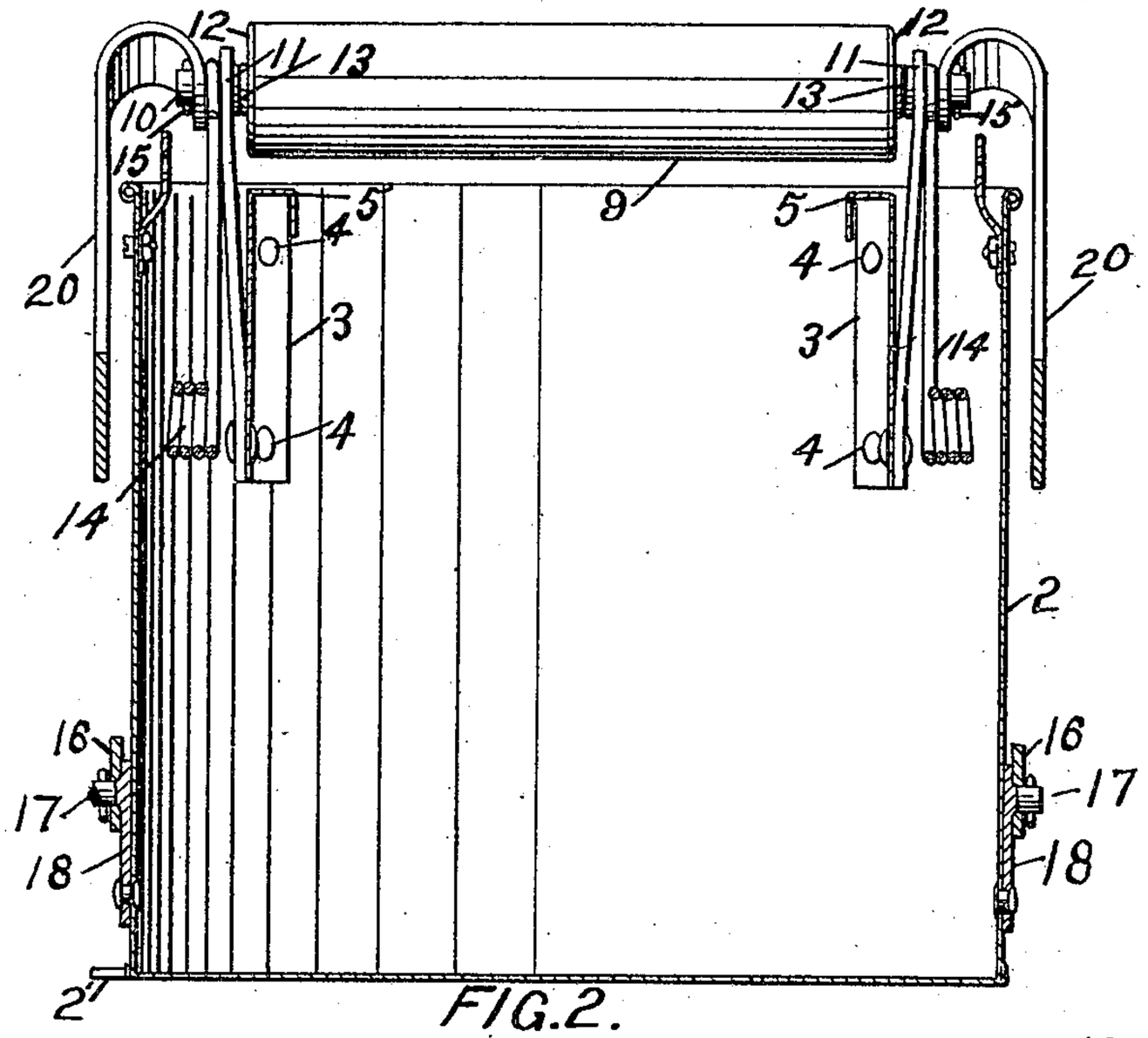

FIG. 2.

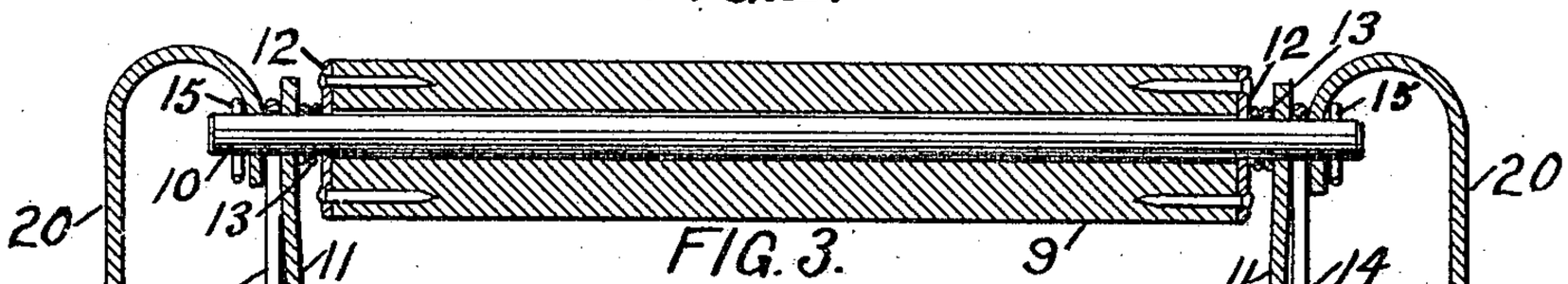

FIG. 3.

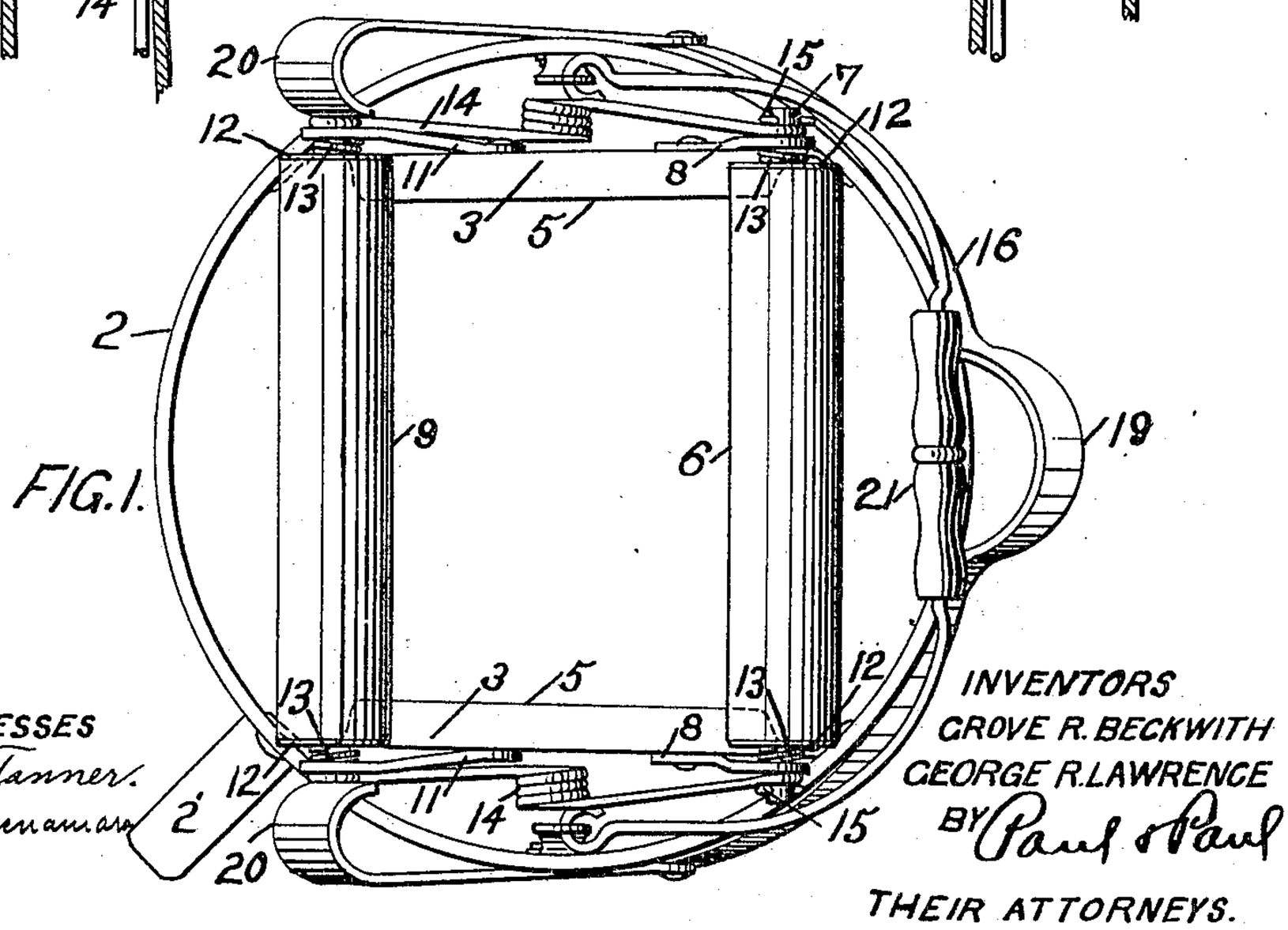

FIG. 1.

WITNESSES
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C. Macnamara.

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2 SHEETS—SHEET 2.

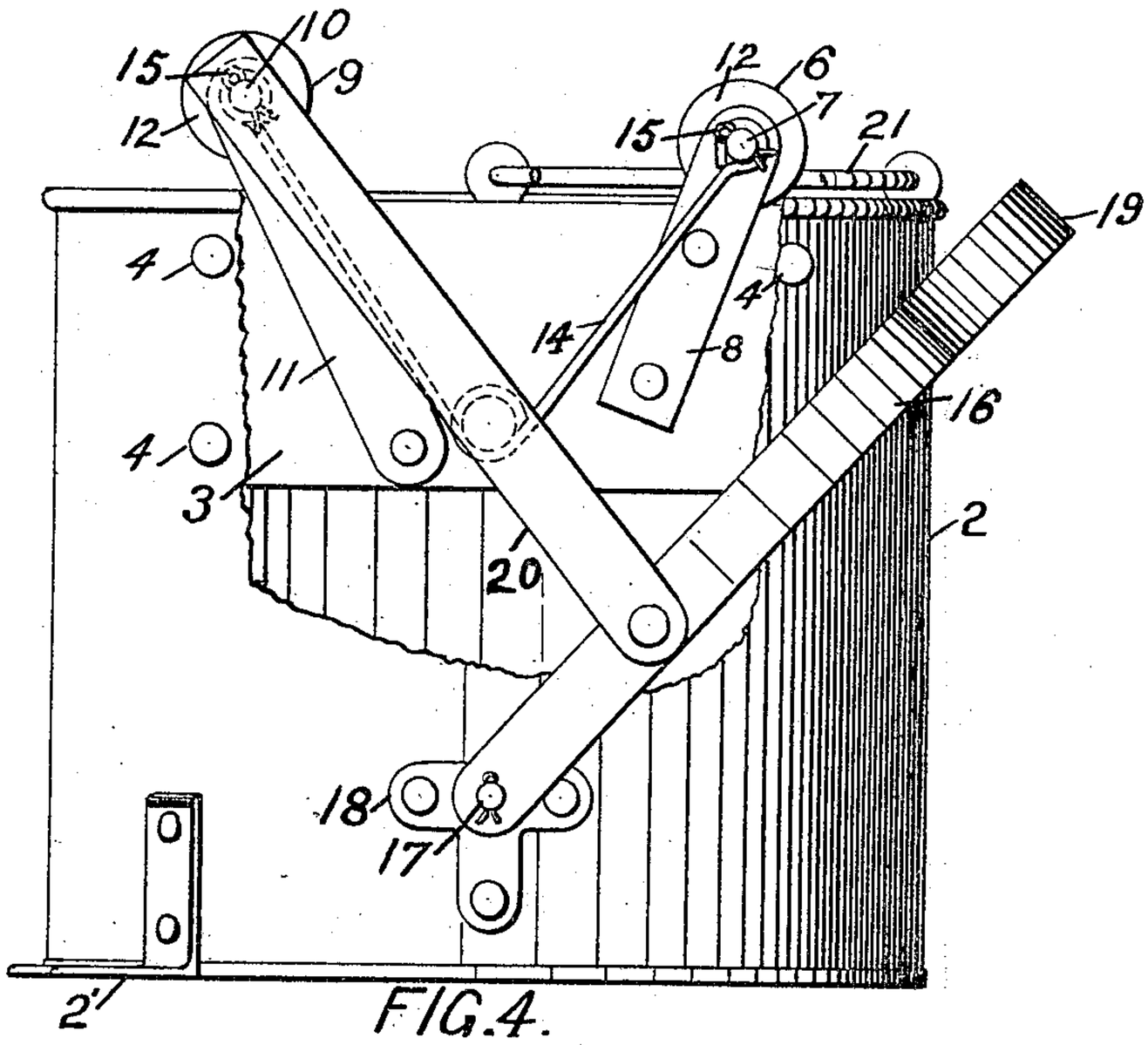

FIG. 4.

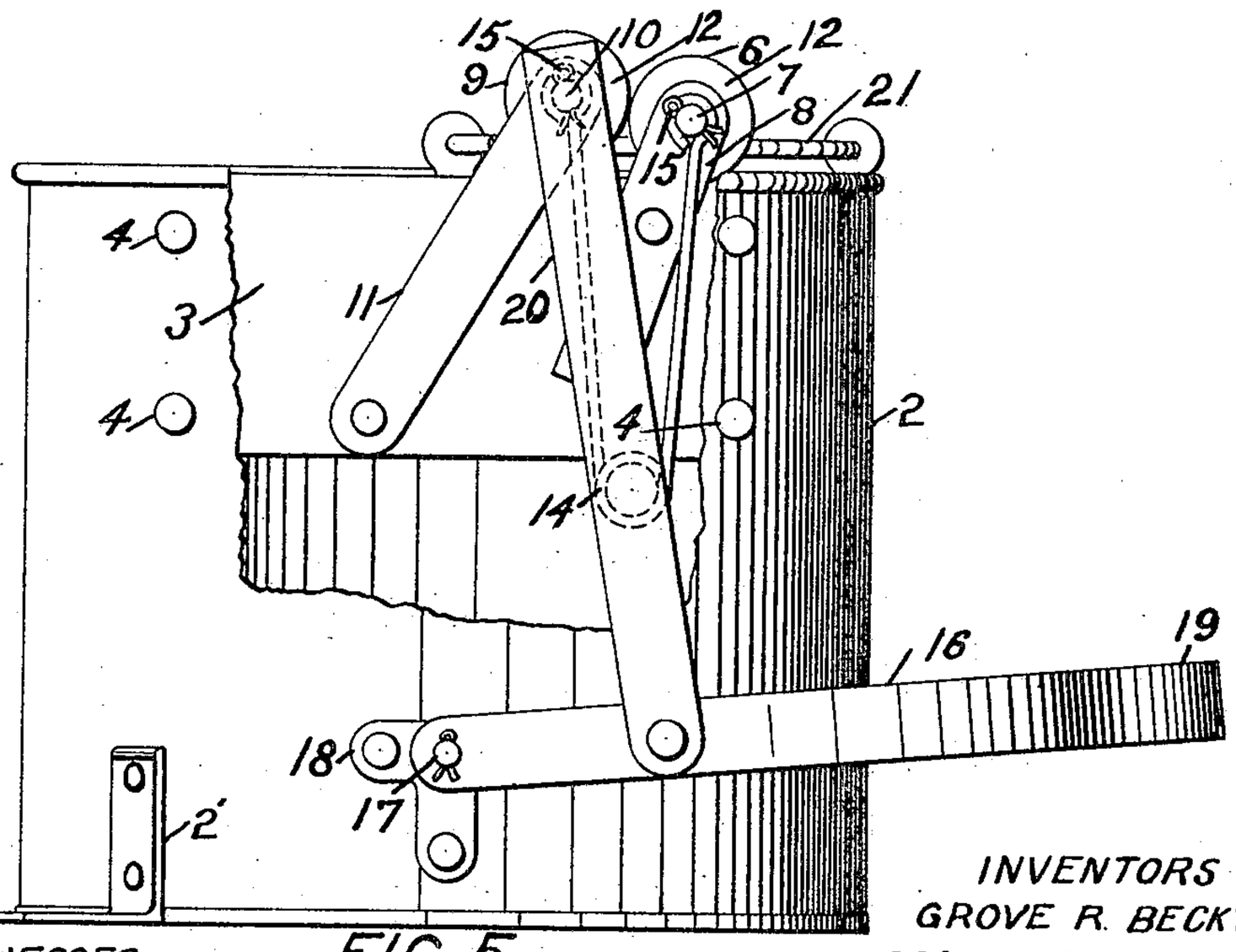

FIG. 5.

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UNITED STATES PATENT OFFICE.

GROVE R. BECKWITH AND GEORGE R. LAWRENCE, OF MINNEAPOLIS, MINNESOTA, ASSIGNORS TO HERBERT F. WILLIAMS, OF MINNEAPOLIS, MINNESOTA.

MOP-WRINGER.

No. 819,687. Specification of Letters Patent. Patented May 1, 1906.

Application filed March 14, 1905. Serial No. 249,997.

To all whom it may concern:

Be it known that we, GROVE R. BECKWITH and GEORGE R. LAWRENCE, of Minneapolis, Hennepin county, Minnesota, have invented certain new and useful Improvements in Mop-Wringers, of which the following is a specification.

Our invention relates to mop-wringers adapted to be attached to a pail; and the object of the invention is to provide a wringer by means of which the mop can be subjected to a very great pressure for the purpose of wringing the water therefrom.

A further object is to provide a wringer of strong and durable construction and one that is very simple and positive in its action and cannot easily get out of order.

The invention consists generally in various constructions and combinations, all as hereinafter described, and particularly pointed out in the claims.

In the accompanying drawings, forming part of this specification, Figure 1 is a plan view of a pail with a wringer attached thereto and embodying our invention. Fig. 2 is a vertical section of the pail, showing the manner of securing the wringer thereon. Fig. 3 is a detail showing the manner of supporting the oscillating roll. Fig. 4 is a side elevation of the pail, showing the wringer device in its normal open position. Fig. 5 is a similar view showing the wringer in its closed position and the rolls adapted to wring out the mop.

In the drawings, 2 represents a pail or bucket of any suitable material and size, herein shown as made of metal and provided with a foot-piece 2′, whereon the operator places his foot preparatory to using the wringing mechanism. Within the pail we provide two plates 3, parallel substantially with each other and having their ends secured to the pail-walls by any suitable means, as rivets 4. These plates are provided on their upper edges with inwardly-turned lips or flanges 5, which serve to stiffen and brace the plates and also act as guards to prevent the mop from working out between the ends of the rollers. 6 is a stationary roller having a shaft 7 mounted in bearings in the upper ends of straps 8, that are bolted to the plates 3 and hold the said roller rigidly in place at the top of the pail. The oscillating roller 9 has a shaft 10 mounted in the upper ends of straps 11, pivoted at their lower ends on the plates 3 and adapted to swing back and forth toward and from the fixed roller 6. The shafts 7 and 10 extend entirely through the rollers, and plates 12, provided at each end of said rollers, have bearings on said shafts. A space is provided between each shaft and its roller for the purpose of reducing friction, and thereby increasing the efficiency of the device. Coil-springs 13 are provided on said shafts between the plates 12 and the fixed and movable straps 8 and 11 and serve to center the rollers on the shafts. Springs 14 have their ends bent about said shafts and normally tend to hold them in their separated positions. Cotter-pins 15 are provided in the ends of the shafts to hold the springs and the operating-arms in place thereon. The mop having been inserted between the rolls, some means must be provided for moving the oscillating roller toward the fixed one and squeezing the water out of the mop. We therefore provide a bail 16, pivotally supported on studs 17, mounted on plates 18, secured to the wall of the pail and having a looped portion 19 to receive the foot of the operator and also adapted to be grasped by the fingers when it is desired to tilt the pail and empty its contents. The bail 16 is pivotally connected by arms 20 with the shaft 10, and these arms are pivoted on the bail sufficiently near the stud 17 to provide considerable leverage on the roll when pressure is applied to the bail to operate the device. The upper ends of the arms 20 are inwardly turned, as shown in Figs. 1 and 2, and overhang the top of the pail a sufficient distance to receive the ends of the shaft 10 and cause the same to swing toward the fixed roller when the bail 16 is depressed. The depression of the bail and the movement of the oscillating roller toward the other one will put the springs 14 under tension to return the oscillating roller to its normal position when the wringing operation is completed. A lifting-bail 21 is preferably provided, by means of which the pail and wringer can be conveniently carried from place to place. The device herein described is extremely simple in construction and very strong and durable. It is composed of but few parts and can be manufactured at a comparatively small expense.

The straps 11 act as guides for the oscillat-

ing roller and will hold it at all times in proper alinement with respect to the fixed roller, so that when the two come together their surfaces will be equidistant from each other at all points and the wringing operation can be perfectly performed.

We claim as our invention—

1. The combination, with a pail, of plates secured thereon, and having inwardly-turned upper edges, a roller mounted in fixed bearings on said plates, a second roller mounted in pivoted bearings on said plates, the ends of said rollers extending outwardly beyond the inwardly-turned edges of said plates, springs for normally holding said rollers apart, and a lever mechanism for operating said pivoted roller.

2. The combination with a pail, of plates provided therein and secured to the walls thereof, a roller mounted in fixed bearings on said plates, straps pivoted at their lower ends on said plates, a second roller carried by the upper ends of said straps and adapted to move toward and from said fixed roller when said straps are oscillated, springs interposed between the walls of said pail and plates and adapted to hold said straps and said second roller away from said first-named roller, a pivoted bail, and arms pivotally connected at their lower ends to said bail near its pivot and having inwardly-turned upper ends connected with said straps and said second-named roller, substantially as described.

3. The combination with a pail, of parallel plates provided therein and secured to the walls of the pail, a roller mounted in fixed bearings on said plates, straps pivoted at their lower ends near the lower edges of said plates and projecting above the upper edges thereof, a second roller carried by said straps, springs having their ends connected respectively with the axes of said rollers and having a looped portion intermediate to their ends depending between said plates and the wall of said pail and protected thereby, a bail pivoted on said pail near the bottom thereof, and arms pivotally connected at their lower ends to said bail and attached at their upper ends to said straps whereby when said bail is depressed said second-named roller will be moved against the tension of said springs toward said first-named roller, substantially as described.

In witness whereof we have hereunto set our hands this 8th day of September, 1904.

GROVE R. BECKWITH.
GEORGE R. LAWRENCE.

In presence of—
RICHARD PAUL,
C. MACNAMARA.