

(No Model.)

2 Sheets—Sheet 1.

A. H. HAFFER.
MOP WRINGER.

No. 480,192.

Patented Aug. 2, 1892.

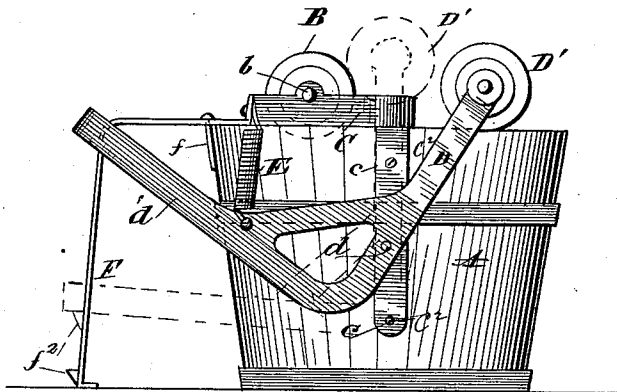


Fig. 1.

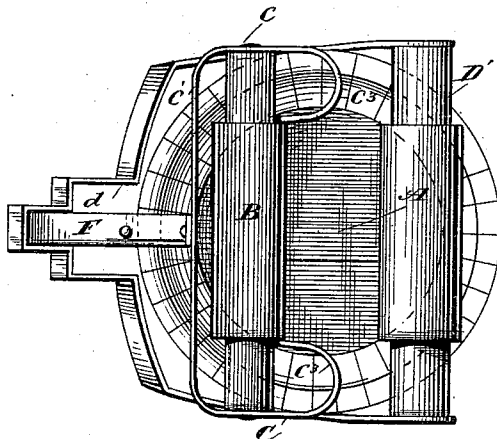


Fig. 2.

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(No Model.)

A. H. HAFER.
MOP WRINGER.

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Fig. 3.

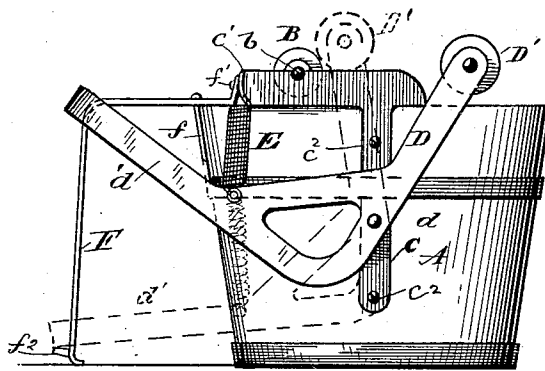
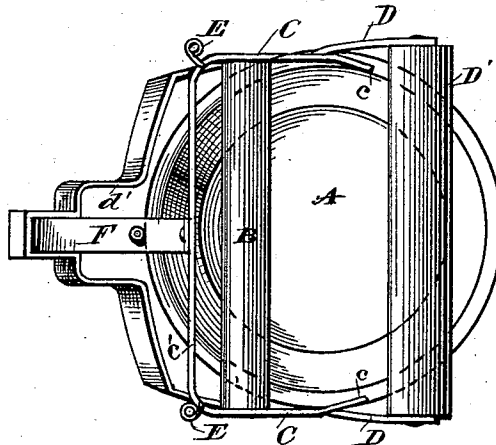


Fig. 4.



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UNITED STATES PATENT OFFICE.

ALFRED H. HAFER, OF CLEVELAND, OHIO.

MOP-WRINGER.

SPECIFICATION forming part of Letters Patent No. 480,192, dated August 2, 1892.

Application filed October 19, 1891. Serial No. 409,180. (No model.)

To all whom it may concern:

Be it known that I, ALFRED H. HAFER, a citizen of the United States, and a resident of Cleveland, county of Cuyahoga, State of Ohio, have invented certain new and useful Improvements in Mop-Wringers, of which I hereby declare the following to be a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in portable mop-wringers adapted to mount upon pails, and its objects are to provide a powerful leverage to force the wringing-rollers into contact and also to so place the portions which become in tension when the mop is withdrawn that a direct resistance will be obtained and there will be no danger of overturning the pail and water.

My invention consists in the use of a stationary roller secured near one edge of the pail and a movable roller secured to a powerful lever pivoted upon the sides of the pail, and in the details of construction and arrangement as herein described, shown in the accompanying drawings, and more specifically set forth in the claims.

In the accompanying drawings, Figure 1 is a side elevation of a bucket with the improved wringer attached. Fig. 2 is a plan of the bucket and attached wringer. Fig. 3 shows a preferable form of rollers in elevation. Fig. 4 is a plan of same.

In the drawings, A is the bucket.

B is a roller mounted horizontally across the top of the bucket upon the metal strap C, which rests upon the edge of the bucket at the extremities *c* and connects the two bearings for the roller by a strap C', crossing the side of the bucket at one side of the roller. A vertical continuation of the strap C on either side of the bucket is secured by one or more screws C² to the bucket.

D is a long bell-crank lever pivoted near the central portion of the bucket upon the strap C on either side. The arms of the bell-crank extend upwardly, and in the extremity of the shorter arm is pivoted the roller D', somewhat larger than the roller B, while the longer arm projects outside of the bucket and

is connected from one side to the other by the foot-tread *d'*, by which it is operated. Springs E, connecting the lever D and strap C in front of the pivoted point *d*, return the lever when depressed. A prop F, attached at *f* to the bucket and at *f'* to the strap C', serves to take the outward thrust of the bucket when pulling the mop between the rollers and prevent upsetting it.

It will readily be seen that a very high degree of positive pressure can be obtained by use of the lever D and pressure of the foot placed upon the tread *d'*, while the position of the stationary roller B is such that all pull upon the mop when under pressure in the rollers is directly transmitted to the tread and offset F by the weight of the foot, so that a perfect equilibrium is maintained when in use. In addition to this the enlarged size of one of the rollers D' gives an additional radial leverage in withdrawing the mop, while the smaller roller B receives the pressure and drains the mop.

The advantages of the device are obvious in the improved pressure and perfect balance of the parts, as well as in the simplicity and slight initial cost of the parts.

In Fig. 2 in dotted lines is shown a modified form, where the diameters of both rollers are enlarged. The side strap C is extended at C³ rearwardly in front of the roller B on each side to serve as a guide to the mop in entering the rollers, and the extremities of the extensions C³ abut against the enlarged ends of the rollers.

In Fig. 1, *f*² is a stop to prevent excessive pressure upon the rollers.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a mop-wringer, a stationary roller secured to a removable support near the edge of a bucket, a movable roller mounted upon the shorter arm of a foot-lever, also secured to said removable support and adapted to be brought into engagement with the stationary roller by the movement of the lever, and a projecting prop secured to said support in close proximity to the pedal extremity of the lever, substantially as described.

2. In a mop-wringer, vertical straps detach-
ably secured to the side of a bucket and con-
nected above the pail by a horizontal strap
resting therein, bearings on side extensions
5 of said strap to support a roller, and angular
extensions of the said strap extending in-
wardly toward the roller and separating an

enlarged central portion of the roller from
end extremities of lesser diameter, substan-
tially as described.

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