

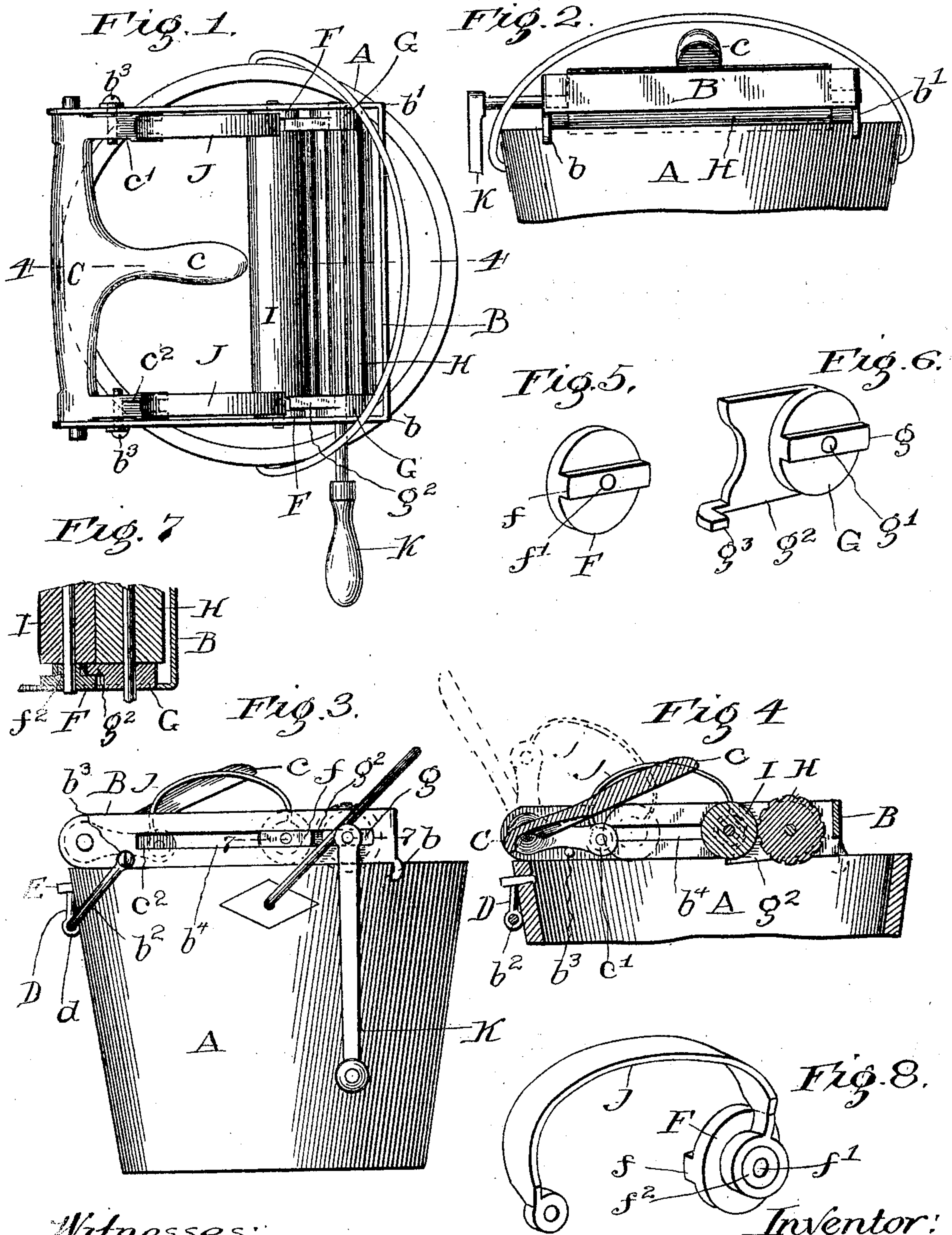
No. 799,345.

PATENTED SEPT. 12, 1905.

A. F. LIFVENDAHL.

MOP WRINGER.

APPLICATION FILED DEC. 5, 1904.



Witnesses:

K. M. Cornell

J. E. Sherry.

Inventor:

Axel Lifvendahl,
by Arthur Wiles & Sherry
Attys

UNITED STATES PATENT OFFICE.

AXEL F. LIFVENDAHL, OF CHICAGO, ILLINOIS.

MOP-WRINGER.

No. 799,345.

Specification of Letters Patent.

Patented Sept. 12, 1905.

Application filed December 5, 1904. Serial No. 235,435.

To all whom it may concern:

Be it known that I, AXEL F. LIFVENDAHL, a citizen of the United States of America, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Mop-Wringers, of which the following is a specification.

My invention relates to certain improvements in mop-wringers of the class that are intended for application to the pail containing the water used in mopping, and its purpose is to provide a more convenient device for readily and quickly attaching the entire apparatus to the pail and also for easily and firmly applying to the mop-wringing rollers the spring-pressure most desirable in devices of this class, as well as for quickly releasing this pressure and separating the rollers for the insertion of the mop.

To such ends my invention consists in certain novel characteristics, which will be fully illustrated and described in connection with the preferred form of my device and the essential features of which will be pointed out in the claims.

In the drawings furnished herewith, Figure 1 is a plan view of a mop-wringer applied to a pail. Fig. 2 is a front elevation of the same, the bottom of the pail being cut away. Fig. 3 is a complete side elevation. Fig. 4 is a vertical diametrical section in the line 4 4 of Fig. 1. Fig. 5 is a detail perspective of one of the sliding blocks in which the sliding roller is journaled. Fig. 6 is a similar perspective of one of the blocks in which the roller having a fixed axis is journaled. Fig. 7 is a broken detail horizontal section in the line 7 7 of Fig. 3, and Fig. 8 is a detail perspective of one of the roller-pressing springs and the sliding block to which one end of said spring is connected.

Referring to the drawings, A represents an ordinary pail in which water is carried for use in mopping and upon which it is desirable to place the mop-wringer to wring the water from the mop as the latter is withdrawn from the pail. Upon the top of this pail is a frame B, shown in the form of three sides of a rectangle, the missing side being supplied by a rocking bar C, worked by a handle c on its middle portion and having arms c' c'' at its opposite ends. The frame is provided with lugs b b' , projecting downward over the edge of the pail and engaging the inclined sides thereof, and at the opposite end of the frame is a bail b^2 , pivoted by means of its opposite ends at b^3 to the frame

and having upon its intermediate portion a pin D, pivoted at d to the bail and bearing at its opposite end upon a pin or nail E, secured to the pail. These parts are so arranged that in placing the frame upon the pail the bail b^2 is swung downward and slightly sprung out of shape until it passes the plane of its frame-pivot and the pin E upon the pail, the action being that of a toggle-lever and the result being to lock the frame upon the pail in such a manner that its removal or displacement requires the springing of the parts to an extent not likely to be caused by any of the ordinary strains. The opposite sides of the frame are slotted at b^4 , and in these slots are guided two sets of blocks, one set being such as the block shown in Fig. 5 and being adapted to slide back and forth in the slots, and the other set being such as the one shown in Fig. 6 and being placed in the ends of the slots and designed to remain normally in this position. The block of Fig. 5 is lettered F and has a lateral rib f fitted to the slot and a central perforation f' to receive the spindle of the roller. The block G of Fig. 6 is provided with a rib g , similar to that of F, and with a central perforation g' , and also with a laterally-extending plate g^2 , provided with a lug g^3 , adapted to engage the under side of the frame. In the ordinary position of the wringing-rollers during the wringing operation the plates g^2 of the blocks G extend from one roller to the other and prevent the water from spurting sidewise out of the pail.

An ordinary corrugated roller H is journaled between the blocks G, and a second roller I is journaled between the blocks F. The latter are provided with inwardly-extending bosses f'' , (see Fig. 8,) encircled by one end of a stout spring J, the other end of which is pivoted to one of the arms c' c'' . The latter arms are arranged to rest upon the pins b^3 when thrown toward the pail to bring the rollers together, as seen in Figs. 1, 3, and 4, and these pins are so arranged as to permit the pivots between the arms c' c'' and the springs J to pass below the plane of the axis of the sliding roller and of the rocking bar C, making the device self-locking. The springs J and the arms to which they are pivoted are also so proportioned as to bring the desired spring-pressure upon the mop when the parts are in the position shown in the drawings.

The application of the mop-wringer to the pail has already been described. The operation of wringing the mop is performed by

swinging the handle *c* upward and away from the pail until the rollers are widely separated, so that the mop may be passed between them into the pail. In withdrawing the mop it is
 5 lifted sufficiently to bring the mop-holder above the rollers, and the handle *c* then is thrown toward the pail and downward, bringing the sliding roller up against the mop and clamping the latter against the two rollers.
 10 In this connection the spring *J* automatically compensates for any difference in the thickness in the mop-swab and exerts the desired pressure upon the latter regardless of ordinary variations in the same. The corrugated
 15 roller is then turned, by means of a handle *K*, in a right-handed direction, passing the mop upward and wringing the water therefrom in the manner of the ordinary wringer.

The device described is simple and efficient
 20 in operation and shape and durable in construction. Certain features of improvement are independent of the exact form or arrangement of the device, and I therefore do not intend to limit my invention, except as clearly
 25 set forth in the following claims.

I claim as new and desire to secure by Letters Patent—

1. In a mop-wringer, the combination with a pail having a stop, of a frame adapted to
 30 rest upon the top of said pail, and a lock comprising two parts pivoted together, the free end of one being pivoted to the frame, and the free end of the other being adapted to bear upon the stop and said parts being con-
 35 structed and arranged to swing down below the plane of the stop and the frame-pivots to automatically lock the frame upon the pail.

2. In a mop-wringer, the combination with a pail having a stop, of a wringer-frame
 40 adapted to rest upon the top of the pail, a bail pivoted at its opposite ends to the frame, and

a pin pivoted upon the middle portion of said bail and adapted to bear by means of its free end upon said stop, the parts being so arranged that the pivot between the pin and the bail
 45 swings below the plane of the stop and the frame-pivots.

3. In a mop-wringer, the combination with a frame and a pair of rollers, one of which is arranged to slide with relation to the others,
 50 of a toggle device pivoted to the sliding roller and to the frame, one portion of which is a yielding spring adapted to apply the proper degree of compression to the mop, regardless of ordinary variations in the thickness of the
 55 latter.

4. In a mop-wringer, the combination with a frame and a pair of wringing-rollers, one of which is arranged to slide laterally toward or
 60 from the other, of a rocking bar or lever having a spring connection with the sliding roller and swinging past the dead-center between it and the roller to automatically lock the parts in place.

5. In a mop-wringer, the combination with
 65 the frame, the wringing-rollers and the device for separating and bringing the latter together, of the sliding blocks in which the rollers are journaled and which are themselves guided in the frame, and plates extending
 70 along the ends of the two rollers to prevent the water from spurting laterally from the pail.

In witness whereof I have signed the above application for Letters Patent, at Chicago, in
 75 the county of Cook and State of Illinois, this 30th day of November, A. D. 1904.

AXEL F. LIFVENDAHL.

Witnesses:

CHAS. O. SHERVEY,
 K. M. CORNWALL.