L. B. ELLIS.

MOP PAIL AND WRINGER.

APPLICATION FILED APR. 23, 1915.

1,148,490.

Patented July 27, 1915.

2 SHEETS—SHEET 1.

Fig. 1

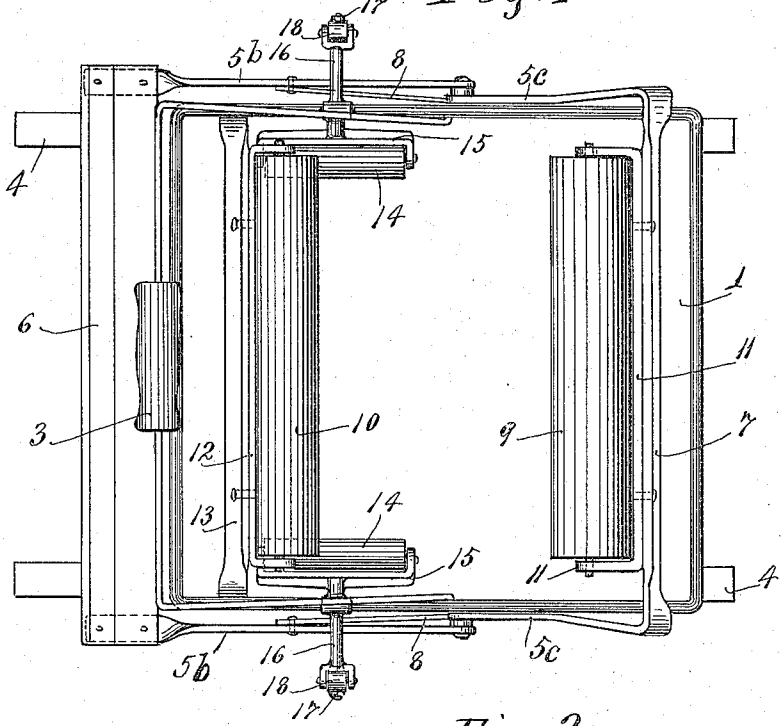
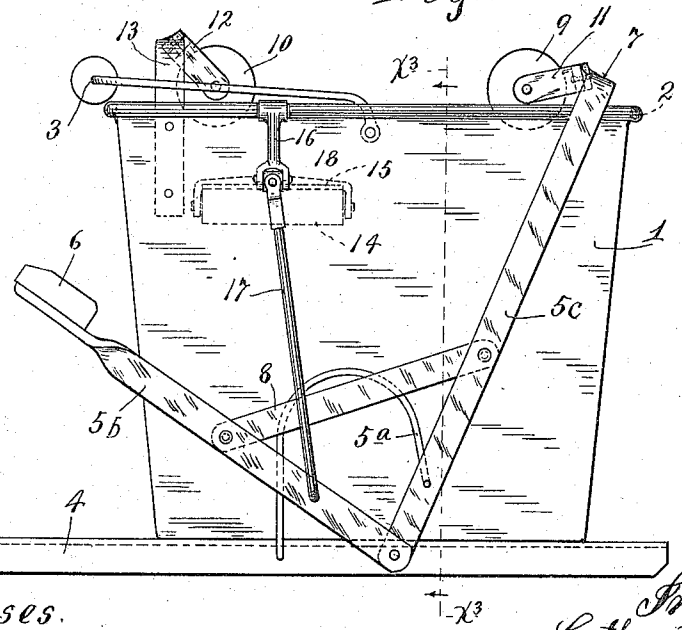


Fig. 2



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2 SHEETS—SHEET 2.

Fig. 3

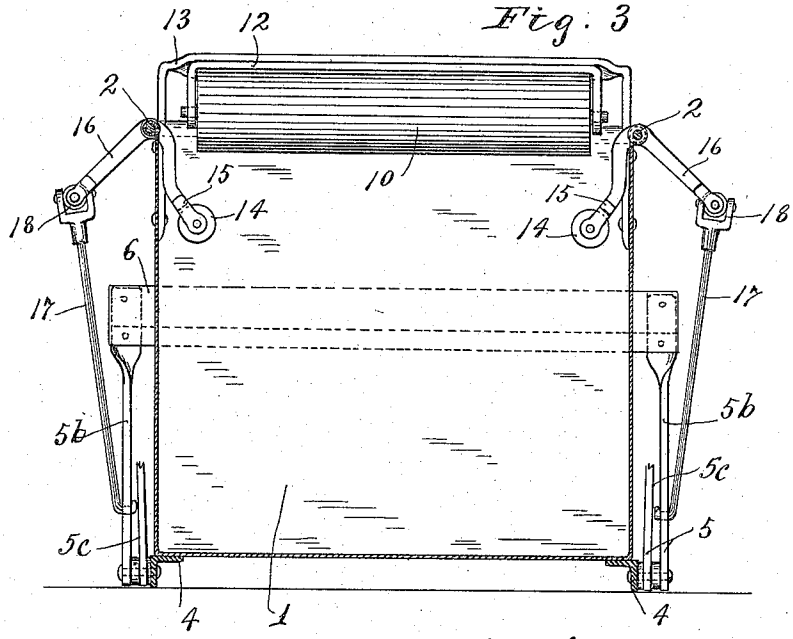
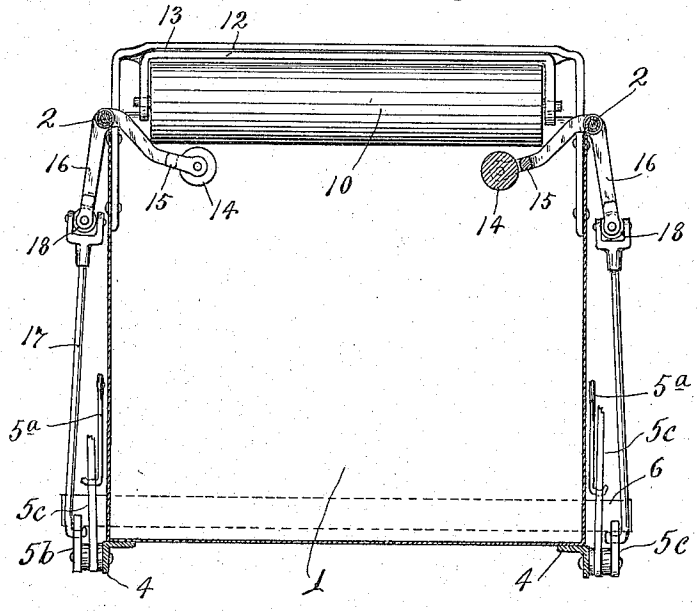


Fig. 4



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UNITED STATES PATENT OFFICE.

LUTHER B. ELLIS, OF MINNEAPOLIS, MINNESOTA.

MOP PAIL AND WRINGER.

1,148,490. Specification of Letters Patent. Patented July 27, 1915.

Application filed April 23, 1915. Serial No. 23,424.

To all whom it may concern:

Be it known that I, LUTHER B. ELLIS, a citizen of the United States, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Mop Pails and Wringers; and I do hereby declare the following to be a full, clear, and exact description of the invention, 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 mop wringers; and to this end, it consists of the novel devices and combinations of devices, hereinafter described and defined in the claims.

In the accompanying drawings, which illustrate the invention, like characters indicate like parts throughout the several views.

Referring to the drawings:—Figure 1 is a plan view of the improved mop wringer; Fig. 2 is a side elevation of the same; Fig. 3 is a vertical section, taken on the line x^3 x^3 of Fig. 2; and Fig. 4 is a view corresponding to Fig. 3 with the exception that certain parts are shown in different positions.

The numeral 1 indicates a rectangular scrub pail having upwardly diverging, front, rear and side walls, the upper edges of which are rolled and have mounted therein, a reinforcing rod 2. The pail 1 is supported on a pair of laterally spaced angle bars 4 and is held thereby against tipping, while a mop is being drawn between the wringing rollers. The horizontal flanges of the angle bars 4 are rigidly secured to the bottom of the pail 1, with their vertical flanges turned outward and downward, flush with the sides of the pail 1. These angle bars 4 extend considerably forward of the front wall of the pail 1 and they also extend beyond the rear wall thereof.

A pair of laterally spaced bell-crank levers 5 is fulcrumed, one to the vertical flange of each angle bar 4 at a point slightly rearward of a vertical line drawn through the overlying pivotal connection of the bail 3. Each bell-crank lever 5 comprises a relatively short arm 5^b and a relatively long arm 5^c. The short arms 5^b of the bell-crank levers 5 extend forwardly and upwardly beyond the front wall of the pail 1 and are rigidly connected by a foot bar 6. The long arms 5^c of the bell-crank levers 5 extend rearwardly and upwardly above the upper edge of the pail 1 and are rigidly connected by tie bars 7, integrally formed therewith. A tie bar 8 rigidly connects the arms 5^b and 5^c of each bell-crank lever 5.

A wringing roller 9 is carried by the bell-crank lever 5 for coöperation with a relatively fixed wringing roller 10 journaled on the pail 1. Both wringing rollers 9 and 10 are journaled to the prongs of yoke like brackets 11 and 12 respectively. The bracket 11 is rigidly secured to the tie bar 7 and the bracket 12 is rigidly secured to a yoke like bracket 13, the ends of which are extended within the pail 1 and rigidly secured to the side walls thereof, as best shown in Fig. 2.

Yoke like springs 5^a anchored to the vertical flanges of the angle bars 4 and the long arms of the bell-crank levers 5 tend to separate the wringing rollers 9 and 10 and yieldingly hold the wringing roller 9 in a position, as shown in Figs. 1, 2 and 3. Obviously, by stepping on the foot bar 6, the bell-crank levers 5 are rocked to carry the wringing roller 9 into wringing engagement with the roller 10.

A pair of coöperating contracting rollers 14 is provided for guiding the mop between the wringing rollers 9 and 10 and prevent the edge portions thereof from squeezing or extending beyond the ends of said rollers, thus leaving portions of the mop from which the water is not thoroughly wrung. They also prevent the edge portions of the mop from winding in the journals of the rollers 9 and 10. These contracting or guiding rollers 14 extend transversely of and between the wringing rollers 9 and 10 when in their wringing position and are journaled to and between fork like heads 15 rigidly secured to the inwardly projecting short arms of a pair of bell-crank levers 16. The bell-crank levers 16 are fulcrumed on the reinforcing wire 2, for movement toward and from each other, longitudinally of the wringing rollers 9 and 10 and are mounted in notches, cut in the upper edge of the pail to expose said reinforcing wire. The long or outwardly projecting ends of the bell-crank levers 16 are connected by rods 17 to the bell-crank levers 5. Knuckle joints 18 connect the upper ends of the rod 17 to the bell-crank levers 16 and the lower

ends of said rods are pivotally secured to the short arms of the bell-crank levers 5.

As the bell-crank levers 5 are rocked to move the wringing roller 9 onto the wringing roller 10, the bell-crank levers 16 are simultaneously rocked through the rod connections 17 to move the contraction rollers 14 toward each other. This inward movement of the contracting rollers 14 also produces a squeezing action on the edge portions of the mop to assist in removing the water therefrom.

Without the use of the contracting rollers 14, water remaining in the edge portions of the mop will be thrown about the room during the mopping of the floor, thereby making it difficult to thoroughly dry the floor.

It is important to note that the two wringing rollers 9 and 10 are mounted to move into and out of contact with each other so that they squeeze the mop into a thin flat formation, while the so-called contracting rollers 14 are simply arranged for very limited movements in the vicinity of the ends of the said wringing rollers.

What I claim is:—

1. The combination with a pail, of a pair of coöperating wringing rollers, means moving one of the said wringing rollers substantially into and out of contact with the other, and a pair of guide rollers offset vertically from said wringing rollers, and movable supports for said guide rollers holding the same always remotely separated and in the vicinity of the ends of the coöperating wringing rollers.

2. The combination with a pail, of a pair of coöperating wringing rollers, means moving one of the said wringing rollers substantially into and out of contact with the other, a pair of guide rollers offset vertically from said wringing rollers, movable supports for said guide rollers holding the same always remotely separated and in the vicinity of the ends of the coöperating wringing rollers, and roller operating connections arranged to cause the said guide rollers to slightly approach each other when the said wringing rollers are moved approximately into contact, and to impart simultaneous receding movements to the said rollers.

3. The combination with a pail, of a pair of laterally spaced foot actuated bell-crank levers fulcrumed on the pail, a pair of cooperating wringing rollers, one journaled on the pail and the other on the bell-crank levers, a second pair of bell-crank levers fulcrumed on the pail for movements transversely of the foot actuated bell-crank levers and having journaled thereon, contracting rollers, and operating connection between the two pairs of bell-crank levers.

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

LUTHER B. ELLIS.

Witnesses:
ERA E. KÖNIG,
HARRY D. KILGORE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."