W. H. WELCH.

MOP WRINGER.

APPLICATION FILED MAY 2, 1914.

1,128,083.

Patented Feb. 9, 1915.

2 SHEETS—SHEET 1.

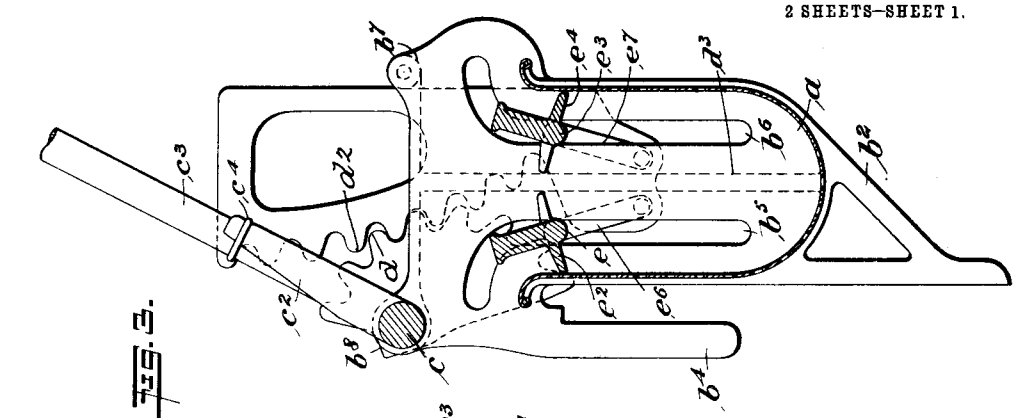


Fig. 3.

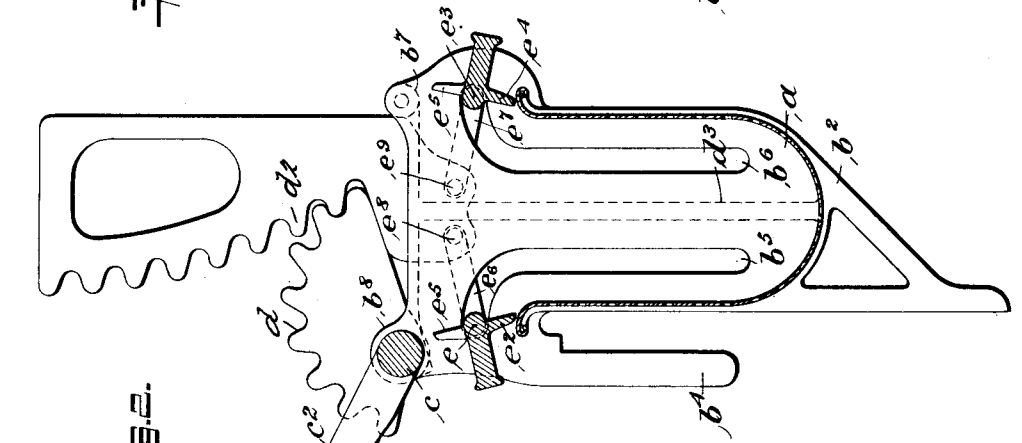


Fig. 2.

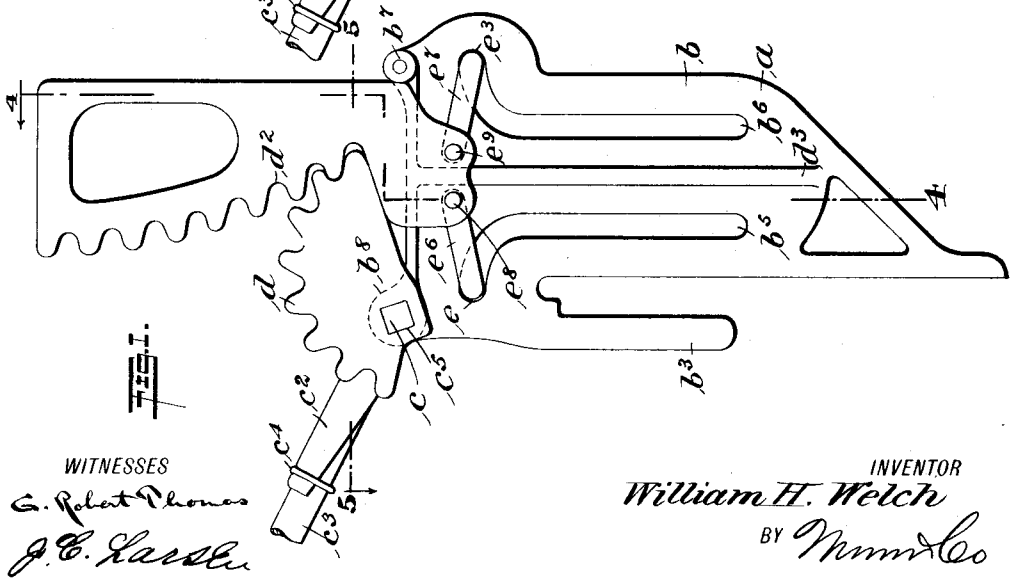


Fig. 1.

WITNESSES

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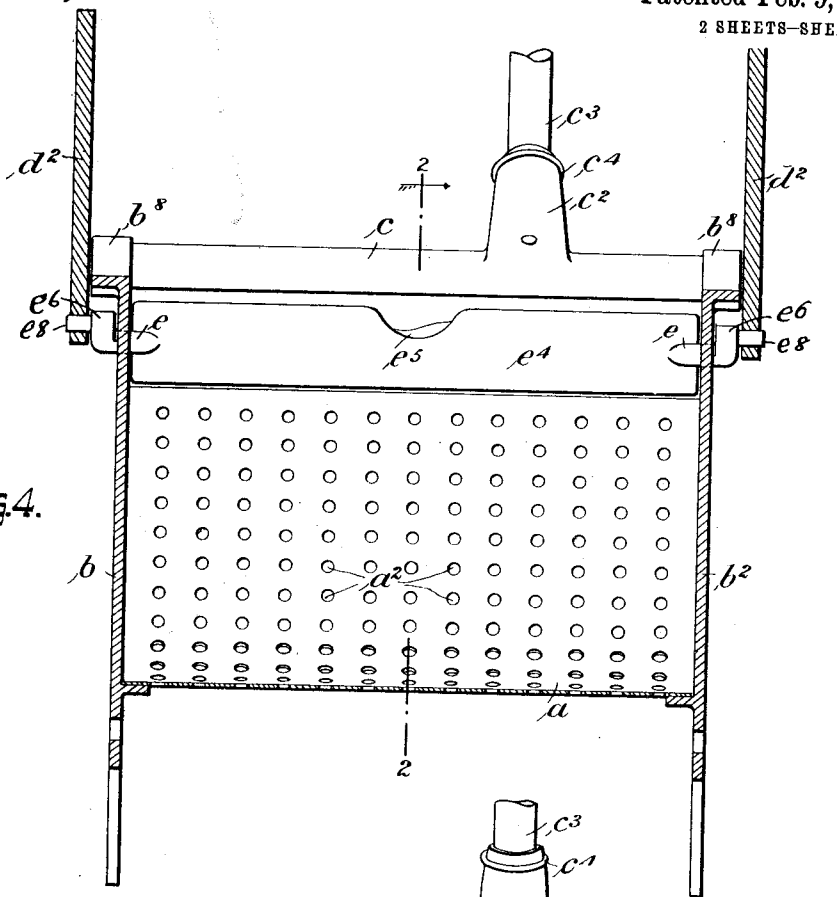


Fig. 4.

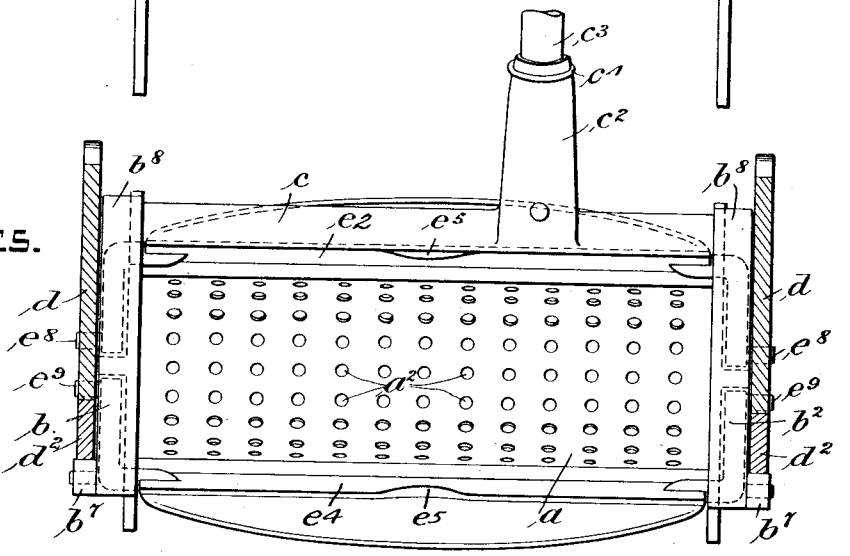


Fig. 5.

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WILLIAM HENRY WELCH, OF ALBA, MICHIGAN.

MOP-WRINGER.

1,128,083. Specification of Letters Patent. Patented Feb. 9, 1915.

Application filed May 2, 1914. Serial No. 835,854.

To all whom it may concern:

Be it known that I, WILLIAM H. WELCH, a citizen of the United States, and resident of Alba, in the county of Antrim and State of Michigan, have invented certain new and useful Improvements in Mop-Wringers, of which the following is a specification.

My invention relates to means for forcing water out of mops, and the main object is to accomplish this result by squeezing the entire mop at one time, rather than by drawing the same between rollers, or by twisting the same, whereby no injury occurs to the mop.

A further object is to squeeze said mop between a fixed receiver and means moved toward the same at gradually decreasing speed but increasing power, whereby the greatest force is exerted when the water has been almost entirely squeezed therefrom.

A further object is to so guide the squeezing means, outwardly of the receiver, as to remove them entirely out of the way; and further objects are to provide such devices which are simple in construction, installation, and use, which are composed of but few parts not likely to get out of order to require repair, and which are comparatively inexpensive.

My invention is fully set forth in the following specification, of which the accompanying drawings form a part, in which the same reference characters are used to designate the same parts in each of the views, and in which:—

Figure 1 is a side elevation of a mop wringer constructed in accordance with my present invention; Fig. 2 is a section taken on the line 2—2 of Fig. 4, with the parts in inoperative position; Fig. 3 is a similar view with the parts in operative position; Fig. 4 is a section taken approximately on the line 4—4 of Fig. 1; and Fig. 5 is a section taken approximately on the line 5—5 of Fig. 1.

In the drawings forming a part of this application I have shown a mop receiver a semi-cylindrical at its bottom and having parallel sides and ends, and being perforated, as shown at a^2, the perforated portion being preferably made of sheet metal whereas the ends b and b^2 are preferably castings or stampings.

The end b is provided with a downwardly directed lug b^3 and the end b^2 with a similar lug b^4 adapted to engage the outer side of a pail or other water receptacle, and each of the ends is provided with two slots b^5 and b^6 parallel for the greater part of their lengths and outwardly curved at the upper parts thereof, said ends also being provided with a roller b^7, each, and with an upwardly directed lug b^8 serving as bearings for a horizontally arranged shaft c.

The shaft c has a projection c^2 intermediate the ends thereof which is hollow to receive a handle c^3, a ring c^4 being employed to retain the handle in position, and the ends of said shaft, outside of the receiver a, are angularly formed, as shown at c^5, Fig. 1, for engagement with eccentric gears d, one at each end of said shaft.

Slidably arranged in the slots b^5 of the end members b and b^2 are stub-shafts e carrying a plate or leaf member e^2, and in the slots b^6 of the end members are slidably arranged stub-shafts e^3 which carry a leaf member e^4, the leaf members extending, when in the parallel portion of the slots, to each side thereof whereby the two leaf members substantially cover the space between the front and rear walls of the receiver a, and said leaf members are cut away on their inner edges, as shown at e^5 for a reason later pointed out.

Enmeshed with the gears d are vertically slidable racks d^2 guided in said movement by ribs d^3 on the outer surfaces of the end members b and b^2 and being also guided, anti-frictionally, by the rollers b^7. In immovable connection with the stub-shafts e, outside both ends of the receiver a, are crank-arms e^6, and in similar connection with the stub-shafts e^3 are crank-arms e^7, said crank-arms, at each end of the receiver, being inwardly directed and being in pivotal connection with the lower end of the rack d^2, as shown at e^8 and e^9, whereby said arms are moved in the movement of said rack, this arrangement being the same at both ends of the receiver.

When it is desired to squeeze a mop it is placed in the receiver with the mop handle vertically arranged in the center of the device, after which the handle c^3 is moved upwardly, this revolving the gear d and thereby moving the rack d^2 downwardly. In this downward movement of the rack d^2 the arms e^6 and e^7 are first carried through an arc of a circle, after which they are carried along by the rack d^2, this initial movement of the said arms revolving the leaf members

e^2 and e^4 correspondingly, and in the continued downward movement of the rack d^2 the stub-shafts slide along the curved portions of the slots b^5 and b^6 until the parallel portions thereof are reached, at which time the arms are substantially vertical and the leaf members substantially horizontal and beginning to bear on the mop, and further upward movement of the handle c^3 forces the leaf members against the mop and the water is squeezed therefrom, escaping through the perforations of the receiver into the pail upon which my device is arranged, the cut away portions of the leaf members encircling the mop handle. When the mop is sufficiently squeezed, downward movement of the handle c^3 carries the leaf members into the initial positions shown in Fig. 2, ready for another operation, and the mop may be removed.

My invention is very simple in construction and very efficient in use and, with a reservation to myself of all such changes in and modifications of the same as may come within the scope of the following claims, what I claim as new, and desire to secure by Letters Patent, is:—

1. A mop wringer, comprising a perforated mop receiver, two movable presser leaf members therein, an arm immovably attached to each end of each of said members, a handle, and means connected therewith for actuating said arms to move said members into operative positions.

2. A mop wringer, comprising a perforated mop receiver, two movable presser leaf members, the ends of said receiver being provided with slots for guiding the ends of said members, an arm immovably attached to each end of each member, a handle, and means connected therewith for actuating said arms to move said members into operative positions.

3. A mop wringer, comprising a perforated mop receiver, two movable presser leaf members therein, the ends of said receiver being provided with slots for guiding the ends of said members, the slots in each end of said receiver being parallel for a portion of their lengths and being outwardly curved at the upper ends thereof to guide said members out of said receiver, an arm immovably attached to each end of each member, a handle, and means connected therewith for actuating said arms to move said members into operative positions.

4. A mop wringer, comprising a perforated receiver, two movable presser leaf members therein and provided, each, with an immovable arm on each end thereof, a shaft, a handle thereon, and means on said shaft for actuating said arms to move said members into operative positions, said receiver ends being provided with guiding slots for said members.

5. A mop wringer, comprising a perforated receiver, two movable presser leaf members therein provided, each, with an immovable arm at each end thereof, a shaft, a handle thereon, and means connected with said shaft for actuating said arms to move said members into operative positions, said members being cut away centrally of adjacent edges to clear a mop handle, and said receiver ends being provided with guiding slots for said members.

6. A mop wringer, comprising a perforated receiver, two movable presser leaf members therein provided, each, with an arm at each end thereof, a shaft, a handle thereon, a segment gear at each end of said shaft, and means operable by said gears for actuating said arms to move said members into operative positions, said receiver ends being provided with guiding slots for said members.

7. A mop wringer, comprising a perforated receiver, two movable presser leaf members therein provided, each, with end arms, a shaft, a handle thereon, a segment gear on said shaft, at each end thereof, a rack in mesh with said gear, at each end of said receiver, means for guiding said racks vertically of said receiver, and pivots connecting said racks with corresponding member arms whereby said arms are actuated to move said members into operative positions, said receiver ends being provided with guiding slots for said members, and the radii of successive teeth of said gears being decreased where engaged with said rack in the downward movement of the latter, to correspondingly increase the power, the teeth of said racks being correspondingly formed.

In testimony whereof I claim the foregoing as my invention I have signed my name in presence of the subscribing witnesses.

WILIAM HENRY WELCH.

Witnesses:

ROLLA C. BENNETT,

F. M. MYERS.

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