No. 885,607. PATENTED APR. 21, 1908.

P. E. GOEHLE, Sr.

MOP WRINGER.

APPLICATION FILED APR. 26, 1907.

Fig. 1

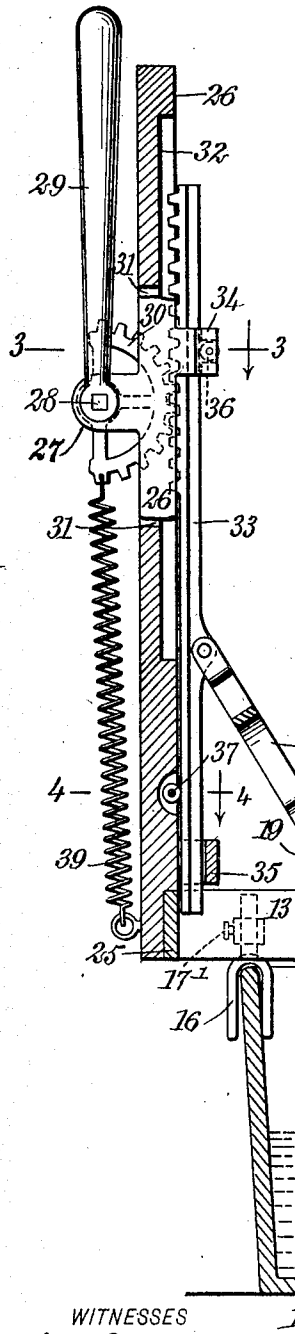


Fig. 3

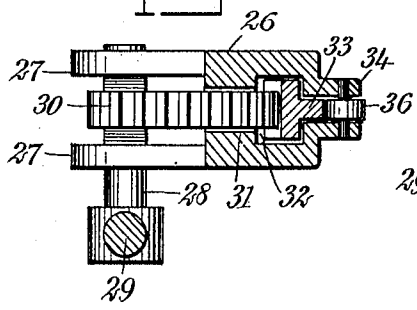


Fig. 4

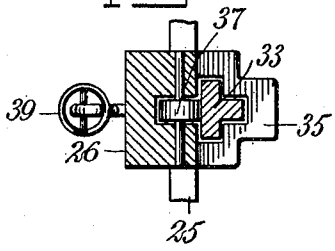


Fig. 5.

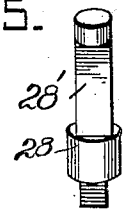
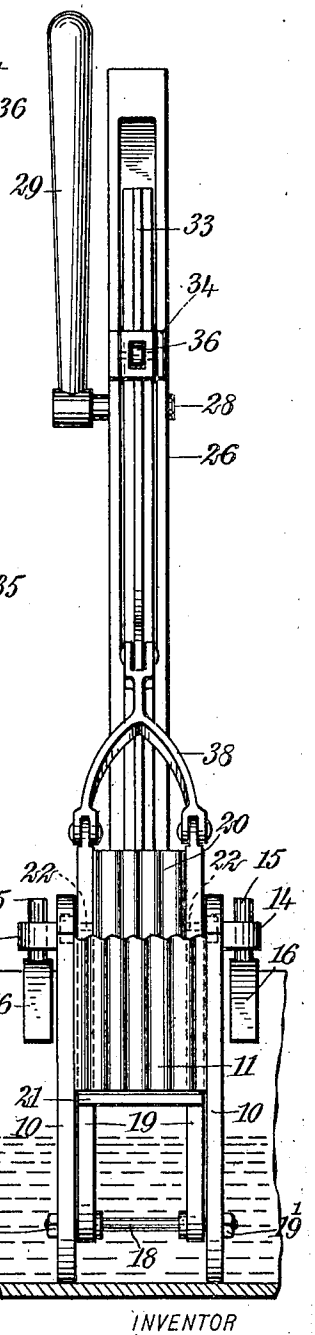


Fig. 2



WITNESSES

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MOP-WRINGER.

No. 885,607. Specification of Letters Patent. Patented April 21, 1908.

Application filed April 26, 1907. Serial No. 370,479.

To all whom it may concern:

Be it known that I, PAUL E. GOEHLE, Sr., a citizen of the United States, and a resident of Sault Ste. Marie, in the county of Chippewa and State of Michigan, have invented a new and Improved Mop-Wringer, of which the following is a full, clear, and exact description.

My invention relates to improvements in mop wringers, an object being to provide a machine that will effectually wring the water from a mop with a minimum expenditure of energy.

A further object is to provide adjustable means for applying the machine to a pail or other receptacle.

The above and additional objects are attained by means substantially such as are illustrated in the accompanying drawings forming a part of this specification in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a side elevation of my improved mop wringer, showing the machine largely in section; Fig. 2 is a front elevation of the mop wringer; Fig. 3 is a section of the mop wringer taken on line 3—3 of Fig. 1; Fig. 4 shows a section of the mop wringer taken on line 4—4 of Fig. 1, and Fig. 5 is a perspective view of a detail of the mop wringer.

My mop wringer comprises a compression box formed with two side walls 10 and a corrugated front wall 11. The side walls are preferably in form of sectors and are provided with openings 12. Formed at the upper end of each member 10 and projecting rearwardly is an extension 13. These extensions are each formed with an apertured lug 14 adapted to receive the shank 15 of a bifurcated member or yoke 16. These yokes are adapted to fit over the rim of a pail or other receptacle 17, in which it is desired to mount the compression box. Set screws 17′ threaded into the lugs 14 are adapted to engage the shanks 15 of the yokes and secure the shanks therein at any desired point, thus providing means for adjusting said compression box to various positions in the receptacle 17.

Mounted in the lower ends of the walls 10 is a shaft 18 preferably threaded at the ends to receive nuts 19′ which are screwed thereon against the walls 10. Journaled on the shaft 18 are two arms 19 which support a presser board 20. The latter serves as a swinging jaw between which and the wall 11 which serves as a fixed jaw, a mop may be wrung. The presser board 20 is formed with a corrugated surface adapted to fit into the corrugations of the fixed jaw 11 when it is moved into engagement with said jaw. Neither the presser board nor the corrugated wall 11 are extended to the full depth of the side walls 10, but both terminate at a suitable distance above the shaft 18. A rest plate 21 is secured to the arms 19 at the bottom of the jaw 20 and extends under the bottom of the jaw 11. Mounted on a pin 22 in each arm 19 is a roller 23, which is adapted to bear on the arcuate lower edge of a slot 24 formed in each side wall 10.

The extensions 13 of the side walls 10 are connected at their rear ends by a cross bar 25 on which is supported an upright frame member 26. At a convenient point intermediate of its length, this member is formed with a pair of rearwardly projecting lugs 27, in which a shaft 28 is journaled. A handle 29 is secured to the shaft at one end, outside of the lugs 27, while that portion of the shaft which lies between the lugs is flattened or squared, as shown at 28, Fig. 5 and a toothed sector 30 is fitted thereon. The toothed sector projects through a slot 31 into a recess 32 formed in the front face of the frame member 26. The sector gear 30 meshes with the teeth of the rack bar 33. Only a portion of the rack is formed with teeth and the latter project into the recess 32. The main body of the rack bar is T-shaped in cross section, being formed with a central flange on its forward face, as shown in Figs. 3 and 4. The rack bar is held in sliding engagement with the frame member 26 by means of a pair of bridges 34 and 35 which are formed on the frame 26 and fit over the rack bar 33. The bridge 34 which is located at a point near the sector gear carries a roller 36 adapted to bear against the flange of the rack bar and press the rack teeth into engagement with the teeth of the sector gear. The other bridge 35 is located near the lower end of the frame member 26 and serves as a guide for the lower end of the rack bar. A roller 37 is journaled in the bar 26 near the lower end thereof and bears against the rear face of the rack bar. The rack bar 33 is connected to the arms 19 by means of a forked link 38 so that when the rack is moved downward the presser board 20 will be swung toward the jaw 11. A tension spring 39 is fastened at

its lower end to the frame member 26 and its upper end is attached to the sector gear 30. The tension of this spring acting through the gear 30, a rack 33, and link 38, serves to return the presser board to its normal position after it has been swung toward the jaw 11.

In practice the mop wringer is applied to a pail or other receptacle by hooking the yokes 16 over the rim of the receptacle. If the receptacle is shallow the compression box may be elevated and secured at any desired height on the shanks 15 by means of the set screws 17'. Now, if it be desired to wring the water out of a mop, the latter is placed in the compression box and the handle 29 is drawn forward turning the sector gear 30 which, acting on the rack 33, swings the presser board 20 forward and thus wrings the mop between the jaws 20 and 11. The water is drained out of the compression box through the opening 12 and the space between the bottom of the jaw 11 and the rest plate 21. On releasing the handle the jaw 20 will swing back under the tension of spring 39.

It will be noted that since the handle 29 must be drawn forward when conpressing or wringing a mop, there is no tendency to upset the pail to which the machine is attached. It will also be observed that a very powerful compression is made possible by the mechanism I employ. The member 38 is, in reality, a toggle link connecting the rack bar 33 and the presser plate 20, and the closer the jaw 20 approaches to the jaw 11, the more powerful the leverage becomes, thus permitting the mop to be thoroughly wrung. The backward thrust of the toggle on the rack bar is taken by the roller 37, thus reducing friction of the rack bar on the frame member to a minimum.

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

1. In a mop wringer, a frame, a fixed jaw in said frame, a movable jaw hinged to swing toward and from said fixed jaw, a rack mounted to slide in the planes of motion of said movable jaw but transversely to the direction of said motion, a toggle link connecting said rack with said movable jaw, a gear adapted to mesh with said rack, and means for rotating said gear.

2. In a mop wringer, a frame, a fixed jaw in said frame, a movable jaw hinged to swing toward and from said fixed jaw, a rack mounted to slide in the plane of motion of said movable jaw but transversely to the direction of said motion, a toggle link connecting said rack with said movable jaw, a gear adapted to mesh with said rack, means for rotating said gear, and a spring operating to return said movable jaw to inactive position away from said fixed jaw, and retain it normally in said inactive position.

3. In a mop wringer a compression box formed with apertured side walls and an end wall, the side walls having rearwardly projecting extensions at their upper ends, a presser plate mounted to swing toward and from said end wall, means for operating said presser plate, yoke pieces adapted to engage the rim of a receptacle and each having an upwardly extending shank, and apertured lugs on the outer faces of said extensions of the side walls and adjustable on the shanks of the yokes to raise or lower the compression box.

4. In a mop wringer a compression box, having its side walls provided at the upper end with rearwardly projecting extensions, an apertured lug formed on each of said extensions, a plurality of yoke members adapted to engage the rim of a receptacle, said yoke members being formed with upwardly extending shanks adapted respectively to enter the apertures in said lugs, and a set screw threaded into each of said lugs, said set screws being adapted to engage said shanks.

5. In a mop wringer a compression box formed with apertured side walls and with an end wall, a presser plate adapted to swing toward said end wall, an upright frame member secured to said compression box, a slide adapted to slide on said frame member said slide being formed with rack teeth, a gear sector mounted in said frame member and meshing with said teeth, means for operating said sector, a toggle link connecting said slide with said presser board, and a roller adapted to relieve friction between said slide and said frame member.

6. In a mop wringer a compression box formed with apertured side walls and with an end wall, a presser plate adapted to swing toward said end wall, an upright frame member secured to said compression box, a slide adapted to slide on said frame member said slide being formed with rack teeth, a gear sector mounted in said frame member and meshing with said teeth, means for operating said sector, a toggle link connecting said slide with said presser board, and a roller adapted to press said rack into engagement with said gear.

7. In a mop wringer a compression box formed with apertured side walls and with an end wall, a presser plate adapted to swing toward said end wall, an upright frame member secured to said compression box, a slide adapted to slide on said frame member said slide being formed with rack teeth, a gear sector mounted in said frame member and meshing with said teeth, means for operating said sector, a toggle link connecting said slide with said presser board, a roller adapted to relieve friction between said slide and said frame, and a second roller adapted to press said rack into engagement with said gear.

8. In a mop wringer a compression box

formed with apertured side walls and with an end wall, a presser plate adapted to swing toward said end wall, an upright frame member secured to said compression box, a slide adapted to slide on said frame member said slide being formed with rack teeth, a gear sector mounted in said frame member and meshing with said teeth, means for operating said sector, a toggle link connecting said slide with said presser board, a roller adapted to relieve friction between said slide and said frame, a second roller adapted to press said rack into engagement with said gear, and a spring serving to return said presser plate to inactive position after it has been swung toward said end wall and to hold said presser plate normally in said inactive position.

9. In a mop wringer a compression box formed with apertured side walls and with an end wall, a presser plate adapted to swing toward and from said end wall each of said side walls being formed with an arcuate surface, rollers mounted on said presser plate and adapted to engage said arcuate surfaces, an upright frame member secured to said compression box, a slide adapted to slide on said frame member said slide being formed with rack teeth, a gear sector mounted in said frame member and meshing with said teeth, means for operating said sector, a toggle link connecting said slide with said presser board, a roller adapted to relieve friction between said slide and said frame, a second roller adapted to press said rack into engagement with said gear, and a spring serving to return said presser plate to inactive position after it has been swung toward said end wall and to hold said presser plate normally in said inactive position.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

PAUL E. GOEHLE, Sr.

Witnesses:
James Kelleher,
Richard J. Nolan.