Aug. 20, 1946. A. SCHELLENBERG 2,406,108

RINSE WRINGER

Filed May 15, 1941

Fig. 1.

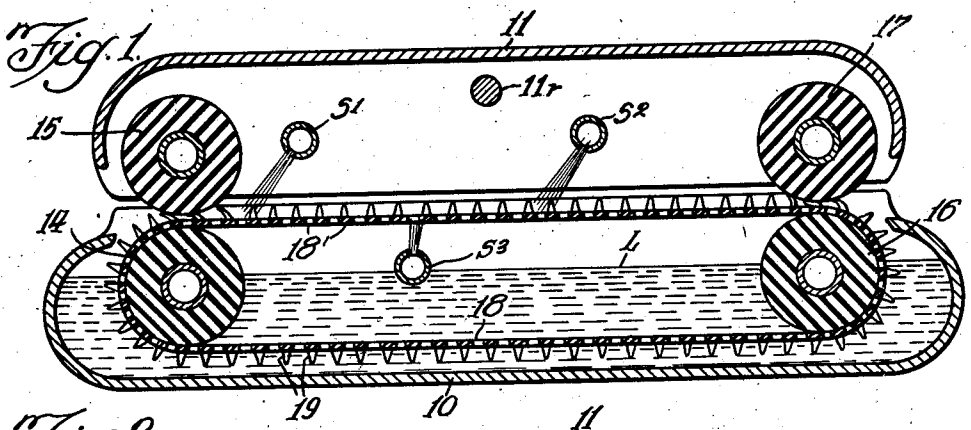
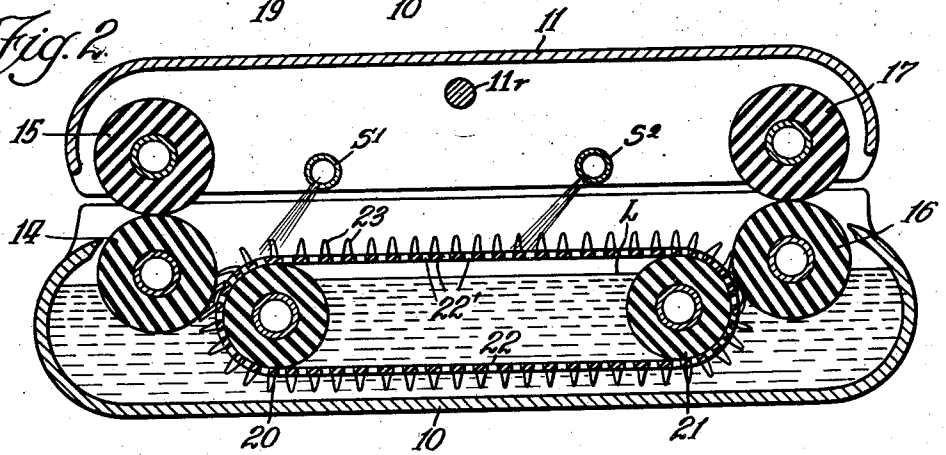


Fig. 2.



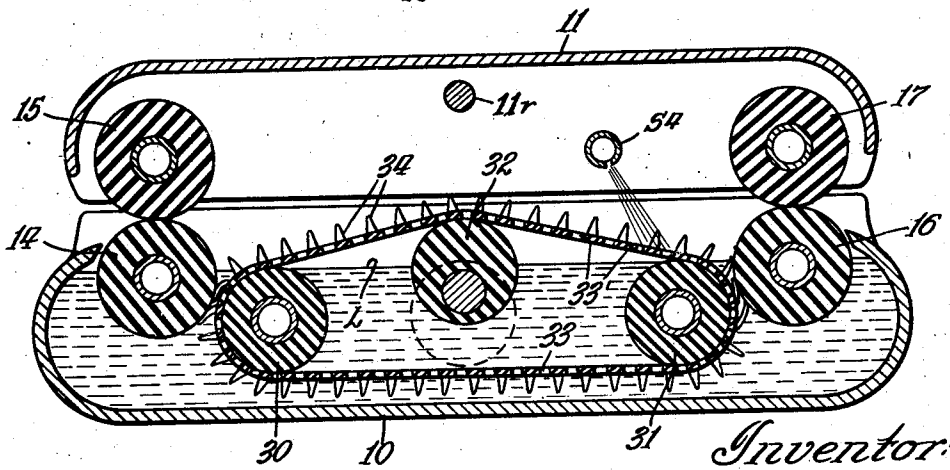


Fig. 3.

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RINSE WRINGER

Albert Schellenberg, Joliet, Ill.

Application May 15, 1941, Serial No. 393,521

6 Claims. (Cl. 68—22)

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This invention relates to wringers of the type used in connection with motor driven domestic washing machines, and particularly to that type of wringer wherein a rinsing operation is performed. This application is an improvement on the rinse wringer set forth in my co-pending application, No. 368,159, filed December 2, 1940, now Patent No. 2,358,256, granted September 12, 1944.

The particular object of the present invention is to provide improved conveyor and rinsing means in the rinse chamber of the wringer.

Other objects and benefits will be disclosed in the following descriptions and drawing, in which

Fig. 1 is a cross-sectional elevation view of a rinse wringer having a conveyor belt over the rolls and spray means to agitate and rinse the garments passing between the two sets of rolls.

Fig. 2 is a similar cross-sectional view showing a wringer having a conveyor between the two sets of rolls with spray means to agitate and rinse the garments as they are carried through the rinsing chamber.

Fig. 3 is still another similar cross-sectional view showing a wringer having a conveyor between two sets of rolls with an eccentric acting on the conveyor to agitate and rinse the garments, as will later be explained.

It will be understood that all wringers, shown somewhat diagrammatically in the foregoing drawing, employ the reversible gear head driving the rolls and conveyor, the safety pressure release for the upper frame, the clutch to stop operation of the rolls and conveyor when pressure is released, the rinse basin overflow, and generally all necessary mechanical structure shown in the aforesaid application, Serial No. 368,159, together with any necessary modifications of this structure as could be accomplished by skillful mechanics experienced in the art. It will be appreciated that the present application deals with detailed modifications of structure with the basic mechanism of the wringer remaining practically the same as shown in the aforesaid application, Serial No. 368,159.

Now referring to the drawing, I designate the lower frames by the numeral 10 and the upper frames by the numeral 11. A conventional cam bar for release of the upper frames is shown as 11r. This form of cam bar is clearly shown in Fig. 4 as numeral 19 coacting with latch members 20 and 21 in my aforementioned application, Serial No. 368,159, now issued as Patent No. 2,358,256 on September 12, 1944, and is completely described therein. The dual pairs of

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driving rolls are designated 14—15 and 16—17. The water level in the rinse chamber in each case is designated by the letter L.

Now referring to Fig. 1, I show a wringer having a belt 18 extending over the lower rolls 14, 16, and driven thereby. The belt in all cases is perforated by holes 18' to permit rinse water to be drained readily through the belt. In some cases I may desire to have rubber fingers 19 on the belt, which fingers will be proportioned and arranged to lift clothes as they come through the rolls, thus agitating and holding them upward on the belt to permit the rinse water from the spray tubes S1, S2 and S3 to effectively rinse the clothes thereon. It will be noted that the spray streams from the rinse tubes S1 and S2 are directed forwardly at an angle, which arrangement is desirable to agitate the clothes by resistance as they move toward the right on the belt and thus effect better rinsing. The sprays from nozzle spray tube S3 are directed vertically so that they may pass thru the perforations 18' and be directed on the bottom of the garments.

Now referring to Fig. 2, the conveyor belt is mounted on rolls 20—21 driven from the power gear head as explained in the previous patent referred to. The belt 22 has perforations 22' and rubber fingers 23 for more effectively rinsing garments, as explained above. Similarly, the spray tubes S1—S2 have nozzle openings directing sprays angularly forward to more effectively agitate and rinse the garments by resisting movement of the clothes.

Now referring to Fig. 3, the conveyor belt is again mounted between the dual pairs of rolls on the rolls 30—31 and the eccentric roller 32, all driven simultaneously from the power gear head. The resilient belt 33 has perforations 33' and may be equipped with the rubber fingers 34 for the same purpose as explained for Figs. 1 and 2. The nozzle openings in the tubes S4 are directed toward the rolls 16—17 as the garments pass out of the wringer to afford rinsing of the cleaned rinse water just before the clothes are finally wrung. It is not necessary in this case to use the spray to effect agitation because such agitation is effectively provided by the eccentric roller 32, which will effectively flap the belt 33 and the clothes up and down slightly below the water level L to agitate and douse the clothes by the movement from the eccentric roller 32.

Having thus described my invention, I claim:

1. In a rinse wringer, a rinsing chamber, a pair of intake rolls at one end of the rinsing chamber, a pair of discharge rolls at the opposite end of

the rinsing chamber, a conveyor belt in the rinse chamber between the dual pairs of rolls, an operable eccentric roller arranged for actuation against the upper run of said belt to oscillate the same vertically in the rinse chamber, and means to rinse garments carried on said belt.

2. In a rinse wringer, a rinsing chamber, an endless conveyor belt mounted in said rinsing chamber for moving garments therethrough, said belt being of non-rigid material and having the surface thereof perforated, and flexible fingers upstanding from the surface of said belt and integral therewith.

3. In a rinse wringer, a rinsing chamber, an endless conveyor belt mounted in said rinsing chamber for moving garments therethrough, said belt being of non-rigid material and having the surface thereof perforated, flexible fingers upstanding from the surface of said belt and integral therewith, and means for spraying rinsing water directly onto the garments carried by said belt.

4. In a rinse wringer, a rinsing chamber, squeezing rolls mounted at opposite sides of said rinsing chamber, an endless conveyor belt mounted in said rinsing chamber between said squeezing rolls for moving garments through the rinsing chamber, said belt being of non-rigid material and having outwardly extending flexible fingers on the surface thereof and integral therewith, said belt having the periphery of opposite end portions thereof arranged in pressure relation with the squeeze rolls, the flexible fingers yielding at the points of engagement therebetween.

5. In a rinse wringer, a lower frame having a rinsing chamber extending across the frame, an upper frame covering and locked over the lower frame by instantaneous release mechanism, coacting pressure rolls mounted on the inlet sides of the frames, coacting pressure rolls mounted on the outlet sides of the frames, and an endless conveyor belt having projecting resilient fingers extending across the rinse chamber between the rolls to lift and convey garments through the rinse chamber.

6. In a rinse wringer, a lower frame having a rinsing chamber extending across the frame, an upper frame covering and locked over the lower frame by instantaneous release mechanism, coacting pressure rolls mounted on the inlet sides of the frames, coacting pressure rolls mounted on the outlet sides of the frames, an endless conveyor belt having projecting resilient fingers extending across the rinse chamber between the rolls to lift and convey garments through the rinse chamber, and spray means to saturate and rinse garments as they are carried on the conveyor.

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