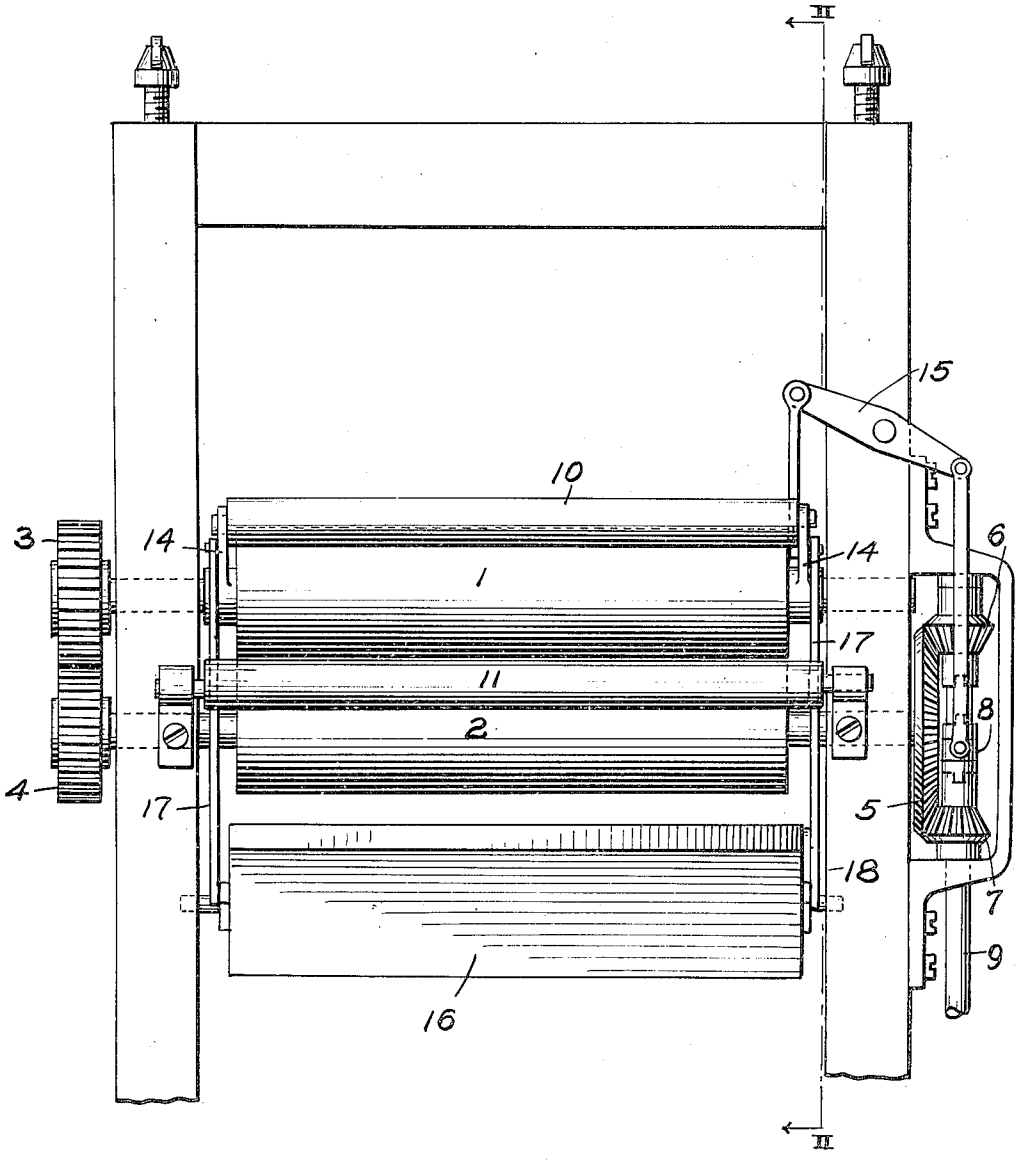
Jan. 1, 1924 1,479,495

H. H. BRADFORD

CLOTHES WRINGER

Filed Feb. 16, 1922 2 Sheets-Sheet 1

FIG. I.



INVENTOR

Herbert H. Bradford
by Christy and Christy
his attorneys

WITNESSES

J. Hebal Bradley.

Frances J. Tomassone

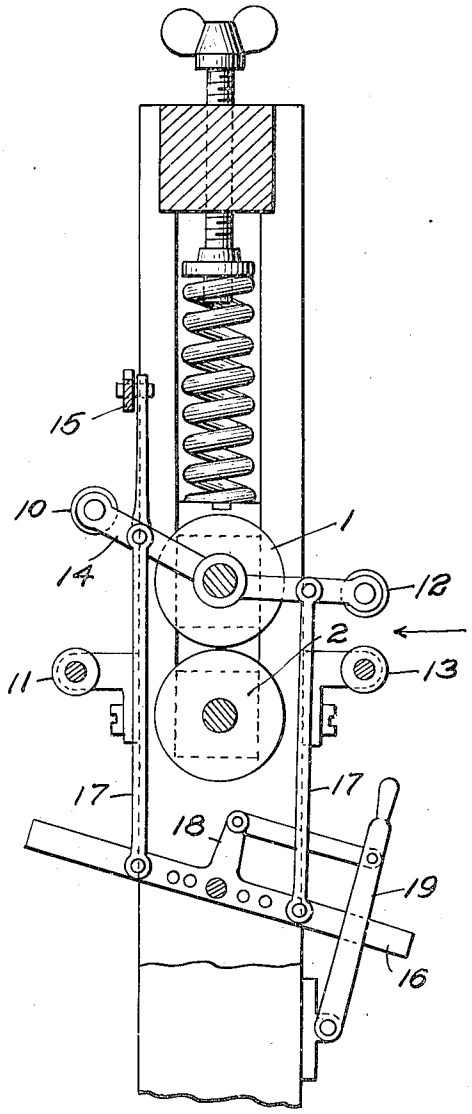
Jan. 1, 1924 1,479,495

H. H. BRADFORD

CLOTHES WRINGER

Filed Feb. 16. 1922 2 Sheets-Sheet 2

FIG. II.



WITNESSES

J. Herbert Bradley.

Frank J. Tomasson

INVENTOR

Herbert H. Bradford

by Christy and Christy

his attorneys

Patented Jan. 1, 1924. 1,479,495

UNITED STATES PATENT OFFICE.

HERBERT H. BRADFORD, OF PITTSBURGH, PENNSYLVANIA.

CLOTHES WRINGER.

Application filed February 16, 1922. Serial No. 536,885.

To all whom it may concern:

Be it known that I, HERBERT H. BRADFORD, residing at Pittsburgh, in the county of Allegheny and State of Pennsylvania, a citizen of the United States, have invented or discovered certain new and useful Improvements in Clothes Wringers, of which improvements the following is a specification.

My invention consists in a safety attachment for a power-driven wringer, for wringing clothes in process of being washed. Power driven wringers are dangerous because in operation an attendant is busy with his hands on the intake side of the wringer, feeding in the clothes, and he may through inattention allow his hand as it follows along with the advancing clothes to be entrained and crushed in the roll pass.

In the accompanying drawings Fig. I is a view in side elevation of a power-driven wringer into the structure of which my present invention is built; Fig. II is a view in vertical section, on the plane indicated by the line II—II, Fig. I.

The wringer includes the cooperating rolls 1 and 2, mounted to rotate oppositely and in unison, as by the interconnecting pinions 3, 4 upon their shafts. One of the two rolls is power driven. In this case the power-driven roll is the lower roll 2. It carries on its shaft a bevelled gear wheel 5. With the gear wheel 5 two bevelled gear wheels 6 and 7 are in mesh and, as one or the other of the gear wheels 6 and 7 is through clutch 8 integrated with a power-driven shaft 9, the rolls of the wringer are turned in one direction or the other.

The safety attachment consists of two pairs of guard rollers, 10, 11 and 12, 13, a pair on either side of the wringer and adapted to cooperate in the manner presently to be described opposite the pass between the wringer rolls 1, 2. One roller of each pair, the lower rollers 11 and 13, are idle rollers carried in fixed supports. They extend parallel with and stand substantially on a level with and are spaced at equal and moderate intervals from the lower wringer roll 2 and on opposite sides of roll 2, and over them the clothes pass, at times in one direction, at times in the other, as they approach and leave the wringer rolls. The cooperating upper rollers of the two pairs, the rollers 10 and 12, together with opposite beams 14, 14 in which the rollers are idly journaled constitute a frame, pivoted at a convenient point; for example, on the axle of the upper wringer roll 1. The rollers 10 and 12 carried in and forming part of this frame extend in parallelism opposite their companion rollers 11 and 13. The frame may swing on its pivoted support bringing one of the rollers (the roller 12 as seen in Fig. II) into cooperative position with its companion roller (13) while the other roller (10) stands remote from its companion roller (11). When the frame stands in the position shown in Fig. II, it is the pair of rollers 12 and 13 on the right which constitute an effective guard to the wringer rolls and the pass between them. The direction of entrainment is then that indicated by the arrow. The attendant manipulating the clothes as they approach the roll pass will be guarded from the danger of having his hand caught and crushed. The pair of rollers on the delivery side of the wringer stand apart, and offer no obstruction to free access to the wringer rolls and to the clothes as they emerge from the roll pass. When the direction of turning of the wringer is reversed and the direction of advance of the clothes is reversed, the frame is shifted, and roller 10 comes into that cooperative position relative to its companion roller 11 which in Fig. II roller 12 occupies relatively to roller 13, and at the same time roller 12 recedes to remote position.

Guards of this nature are old. My invention consists in interconnecting mechanically the double swinging guard described with the reversing mechanism of the wringer, to the end that no carelessness nor inattention on the part of attendants can allow it to come about, that the wringer rolls are on their intake side unguarded. To that end the rocking frame of the guard described above and the clutch 8 are interconnected, as through the rocking beam 15, to which the parts named are linked. As shown, the wringer is being driven through gear wheel 7, and roller 12 is guarding the roll pass on the right-hand side (Fig. II); when clutch 8 is shifted and the drive is effected through gear wheel 6, the direction of turning of the wringer rolls will be reversed, and automatically roller 10 will come to position, guarding the roll pass on the left-hand side.

With attention directed to Fig. II it may be remarked that in case an attendant stand-

ing on the right hand side of the apparatus were engaged in manipulating the clothes as they entered the wringer, and if by accident or in consequence of inattention the attendant's hands should advance with the clothes under roller 12, the roller would thereby be raised, the frame shifted, the clutch opened, and the power driven wringer rolls would come to rest before injury could be done.

A drip board 16 is shown, and as the direction of turning of the wringer is reversed this drip board should be reversed in its slanting position, so that it shall incline in direction opposite that of the advance of the clothes. Provision is made to that end which will be understood on considering Fig. II. Drip board 16 is linked to one or both of beams 14, to the end that as the guard roller frame swings the drip board too will swing.

The whole coordination of parts (of clutch, guard roll frame, and drip board) may be swung as a unit from one to the other of its two operating positions, from a single hand lever 19, which in this instance is conveniently linked to an arm 18 extending from the axle of the drip board.

I claim as my invention:

In a power-driven wringer the combination, with a pair of wringer rolls and means for rotating them alternately in opposite directions, of a safety attachment consisting of two pairs of guard rollers arranged pair by pair on opposite sides of the wringer rolls, above and below the roll-pass, the lower of each pair of guard rollers being borne in a fixed support and the upper in a movable support, and the movable rollers of the two pairs being integrated and movable in alternation to cooperating position with respect to its stationary companion, and means for shifting the movable guard roller in coordination with reversal of the wringer rolls.

In testimony whereof I have hereunto set my hand.

HERBERT H. BRADFORD.

Witnesses:

BAYARD H. CHRISTY,

ALICE A. TRILL.