

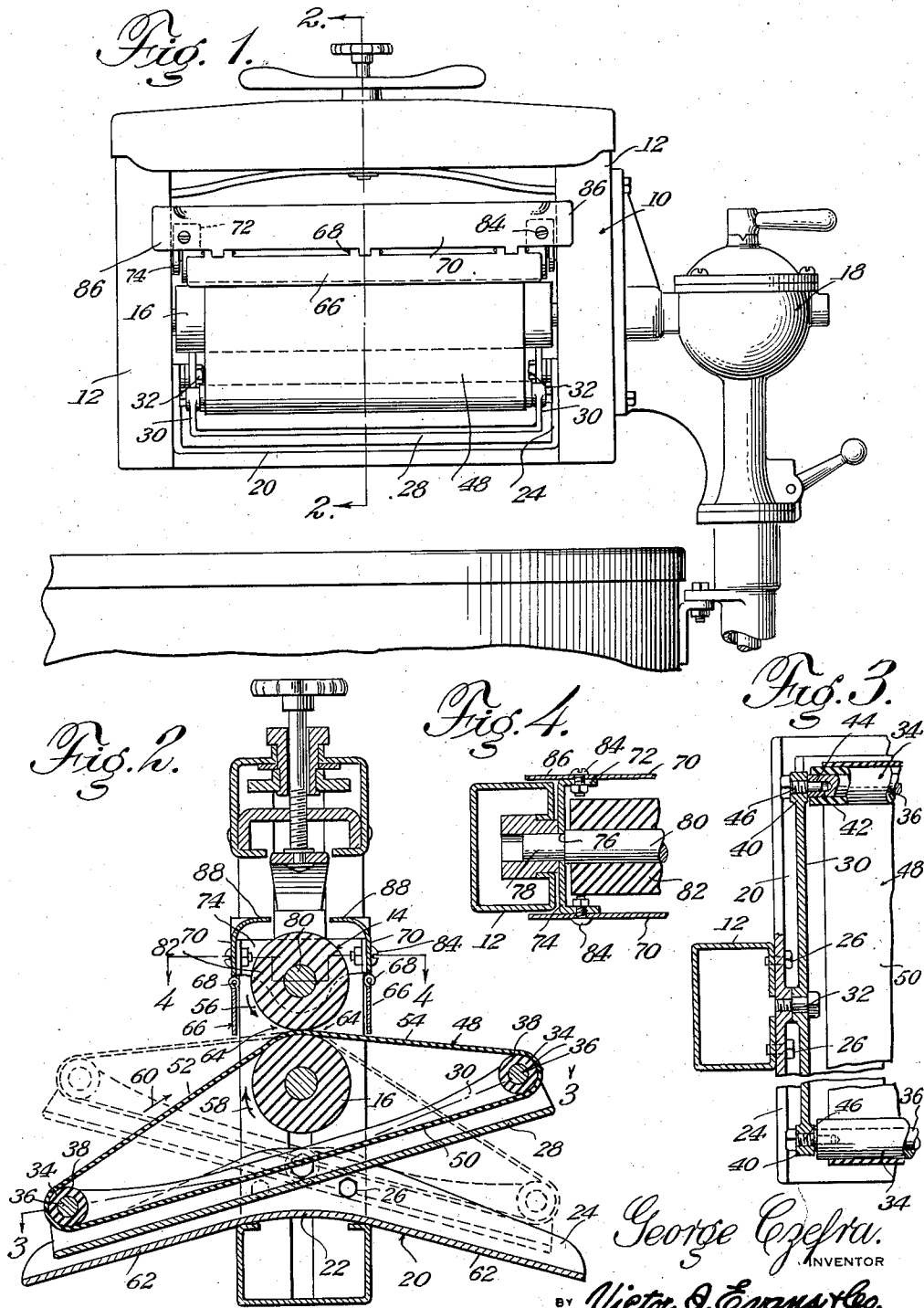
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WRINGER FEED

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WRINGER FEED

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1 Claim. (Cl. 68—264)

My invention relates to clothes wringers, and includes among its objects and advantages the provision of an improved safety device which may be operatively related to conventional wringers.

5 An object of my invention is to provide a safety wringer in which a clothes feeding attachment is associated with the pressure rolls of the wringer for bringing the clothes into pick-up relation therewith.

10 Another object is to provide a clothes feeding device for wringers in which an endless conveyor is utilized for carrying clothes into receiving relation with the wringer rolls and in which the conveyor or feeding device is operatively connected

15 with the wringer rolls for actuating purposes. A further object is to provide a wringer feed in the nature of an endless conveyor operatively connected with the wringer rolls for delivering clothes into receiving relation with the rolls and in which a water deflecting plate is associated

20 with the conveyor and so related to the wringer as to be adjustable to permit wringing from positions on either side of the wringer.

Another object is to provide a wringer feed including a clothes feeding element and guards associated with the wringer rolls in such manner as to protect the user from accidental injury as frequently happens in connection with ordinary clothes wringers when the fingers, hair, etc., are

30 caught between the rolls.

In the accompanying drawing:

Fig. 1 is an elevational view of a wringer embodying my invention;

35 Fig. 2 is a sectional view along the line 2—2 of Fig. 1;

Fig. 3 is a sectional view along the line 3—3 of Fig. 2; and

Fig. 4 is a sectional view along the line 4—4 of Fig. 2.

40 In the embodiment selected to illustrate my invention, I make use of a conventional wringer 10 which includes the two upright frame members 12 and wringer rolls 14 and 16. The rolls 14 and 16 as well as the wringer frame structure are conventional and well known in the art. According

45 to Fig. 1, the bottom roll 16 may be operatively connected with a power drive indicated generally at 18, but which forms no part of the present invention. Frame members 12 carry a water deflecting

50 plate 20 which slopes downwardly and outwardly from the central area 22 located directly underneath the roller assembly. Thus, the plate 20 is so designed as to deflect water squeezed from the

55 clothes by the rollers in either of two directions

depending upon the direction of rotation of the rolls. Such rolls may be rotated in either direction to permit wringing from either side of the device.

In Figs. 2 and 3, I illustrate the plate 20 as including side flanges 24 which are secured to the frame members 12 by bolts 26. Between the frame members 12 I mount a straight plate 28 which includes side flanges 30 pivotally connected on the bolts 32 threaded into the flanges 24 (see Fig. 3). Between the flanges 30, I mount two parallel rolls 34. These rolls may comprise shafts 36 provided with rubber covering 38 with the ends of the shafts terminating in close relation with the thickened areas 40 of the flanges 30. The shafts 36 are bored at 42 for loosely receiving the bearing shafts 44 comprising extensions of the bolts 46 having threaded relation with the areas 40. Shafts 36 rotate freely on the bearing shafts 44, but the rubber coverings 38 are fixedly connected with the shafts.

An endless belt or feeder 48 passes around the rolls 34 and between the wringer rolls 14 and 16. According to Fig. 2, the belt 48 is taut and its lower reach 50 is arranged in spaced relation with the plate 28. Belt 48 is pinched between the rolls 14 and 16 to be actuated thereby. I prefer to make the belt 48 of elastic material such as rubber. Rotation of the belt 48 continues so long as the rollers 14 and 16 are in operation, whether arranged in pressure relation according to Fig. 2 or when separated as when clothes are passing therebetween.

The pivot bolts 32 are located directly underneath the roll 16, while the rolls 34 are so positioned with respect to altitude as to cause the belt 48 to have two reaches 52 and 54 which are angularly related to the reach 50. The plate 28 may be pivoted about its axes 32 from the full line position to the dotted line position of Fig. 2. According to the full line position of Fig. 2, the wringer rolls 14 and 16 are being rotated in the direction of the arrows 56 and 58, at which time the reach 52 of the belt 48 travels in the direction of the arrow 60 for feeding clothes into pick-up relation with the rolls 14 and 16. With the parts adjusted according to Fig. 2, the plate 28 parallels the angular reach 62 of the plate 20 so that water wrung from the clothes in their passage through the rolls 14 and 16 will flow downwardly on the reach 52 as well as on the plate 28. While the plate 28 in combination with the belt 48 and its mounting is substantially balanced, the additional weight of wet clothes on the reach 52 is more than sufficient to hold the feed device in the full

line position of Fig. 2, whereby the parts are adjusted in drainage relation with respect to the rotation of the wringer rolls 14 and 16.

When wringing clothes from the opposite side of the wringer, the plate 28 is pivoted to the dotted line position of Fig. 2, at which time the angularity of the belt and the plate 28 is changed to provide drainage for the water wrung from the clothes. In utilizing rubber for the belt 48, water flows freely therefrom and any stretch imparted to the belt because of variable thickness of material passing between the rolls 14 and 16 is taken up immediately upon passage of the material through the wringer. According to the arrangement of Fig. 2, very little stretch is imparted to the belt. In pinching the belt between the wringer rolls, positive action is imparted thereto which insures effective delivery of the material to the wringer rolls. Material is delivered into pick-up relation with the wringer rolls by merely dropping the material upon the belt 48. In this way, small articles may be effectively delivered to the wringer rolls without the aid of the hand or other instrumentality. At the same time, the belt operates in an effective manner on large goods. Because of the angular reaches 52 and 54, I attain large throats 64 which facilitate entrance of the material to be wrung.

In addition to the wringer feed so far described, I provide additional protection in the nature of two plates 66 which are located on opposite sides of the roll 14 and terminate in close relation with the reaches 52 and 54 of the belt 48. Plates 66 are hingedly connected at 68 with plates 70 attached to the flanges 72 of cross plates 74 which are bored at 76 for loosely receiving the ends 78 of the shaft 80 upon which the resilient body 82 of the roll 40 is secured. Plates 70 are secured to the flanges 72 by bolts 84 and the ends of the plates extend partly across the frame members 12 as at 86 for guiding purposes. In connecting the cross plates 74 with the shaft ends 78, the cross plates will move up and down with the roll 14, thus adjusting the hinged plate 68 to accommodate material of variable thickness. Plate 70 may be bent inwardly to extend partly over the roll 14 as at 88, in Fig. 2. While the shaft ends 78 rotate within the openings 76 in the cross plates, the latter are re-

strained from relative pivotal movement because of the overlapping relation between the extensions 86 and the frame members 12.

Hinged plates 66 are of such width as to make it impossible for the hand to be inserted between the wringer rolls 14 and 16. However, the plates move about their axes in contact with the goods to be wrung so as to permit the goods to be brought into pressure relation with the wringer rolls.

My invention embodies a wringer feed so designed as to be capable of association with wringers of conventional design and the feed in addition to delivering goods to the wringer rolls is so related thereto as to eliminate the necessity for an additional drive. The wringer feed includes effective drainage for water wrung from the material passing through the wringer rolls and is so designed as to accommodate the feed of clothes from either direction. Hinged plates 66 embody an additional protective feature which co-operates with the wringer feed in such a manner as to prevent accidents such as are incident to unprotected wringer rolls of conventional design.

Without further elaboration, the foregoing will so fully explain my invention that others may, by applying current knowledge, readily adapt the same for use under various conditions of service.

I claim:

In combination, a supporting frame, a pair of wringer rolls arranged in pressure relation and rotatably journaled in said frame, one of said wringer rolls including a shaft projecting beyond the ends of the wringer roll, a plate pivotally connected with said frame, rollers carried by said plate, an endless feed belt passing about said rolls and between the wringer rolls to be driven thereby, a plate supporting frame movably related to said first frame, and plates hinged to said hinge supporting frame on opposite sides of one of said wringer rolls, said plate supporting frame having openings for the reception of said shaft and being provided with guide means co-operable on said first frame to restrain the plate supporting frame from rotation about a horizontal axis.

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