

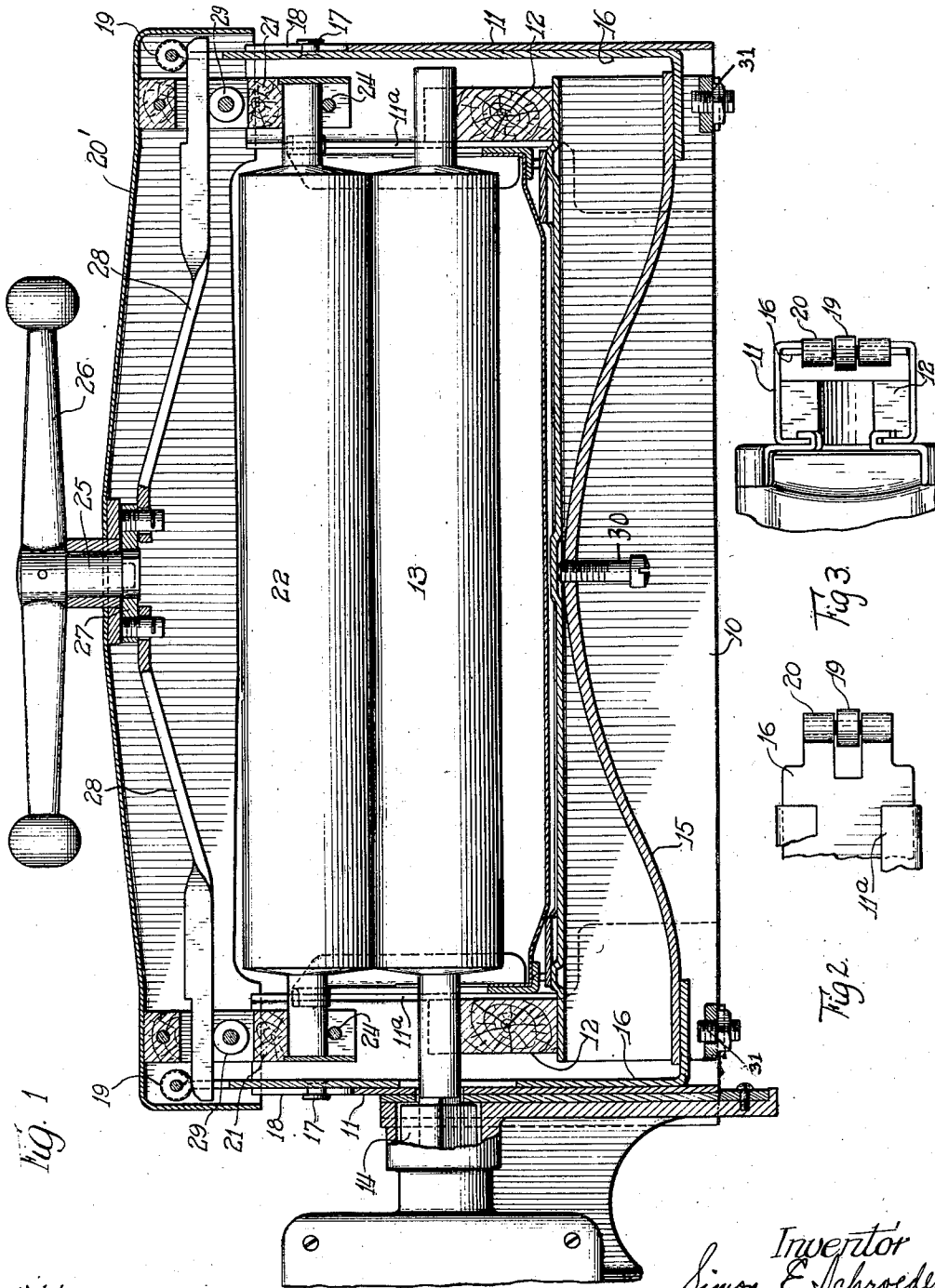
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S. E. SCHROEDER

WRINGER CONSTRUCTION

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Witness:
A. Burkhardt.

Inventor
Simon E. Schroeder
BY *left and left*
attys.

UNITED STATES PATENT OFFICE.

SIMON E. SCHROEDER, OF NEWTON, IOWA.

WRINGER CONSTRUCTION.

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This invention relates to improvements in wringers.

The invention has special reference to devices serviceable to effect relative tensioning between wringer rolls and to provide quick release of said tension relation.

The invention lies principally in the manner of associating operating parts, whereby the act of joining framing parts of the wringer will operate directly to effect tensioning of the rolls, and similarly, release of engagement between said framing parts will relieve such tension without danger of wringer parts being wholly detached from the wringer frame under the stress accompanying such release.

Another object of the invention is to provide for the removal of the upper roll member with the removal of a detachable head or upper frame member.

The invention also includes special cam acting connector means as between the main and a top frame member that will operate to produce tension between rolls.

Other features of invention reside in the detail structure of operating parts and the relative relationing of the parts to produce the results sought, all of which will be more particularly described.

Fig. 1 shows in vertical section the structure and relative arrangement of parts of the wringer and its association with a driving head adapted to be connected with a washing machine structure (not shown).

Fig. 2 is a detail view showing the upper end portion of a wringer side frame member and a connector member.

Fig. 3 is a top view of the same subject matter disclosed in Fig. 2.

The nature of the invention will be most quickly understood by immediate reference to the drawings. Let it be understood that in the embodiment of the disclosure herein, there is a wringer frame made up of a base, channel portion 10 and end frame members 11, which latter are slotted at their inner sides so as to provide the opposite flanges 11^a. Roller bearings 12 are mounted in the side frame members for support of the lower roller 13, the shaft of which extends at one end through a suitable opening in the side frame member for engagement with a driving member such as the socket connection 14, which is actuated from a suitable source. A spring 15 is mounted in the base member

and cooperates at its ends with vertically slidable connectors 16, which are positioned against the outer walls of the said frame member and retained by the headed rivets 17, which slide in slots 18. The connectors are slotted at their upper ends and carry rollers 19. The upper ends of the connectors are furcated and fashioned into ferrules 20 for supporting a pin upon which roller 19 is journaled. The wringer head frame 20' is adapted to fit over the upper ends of the side frame members 11 and house the projecting portions of the connectors 16. The head carries the upper bearings 21, in which is journaled the pressure roller 22, the same being held in bearings by the pins 24. A stub shaft 25 is journaled at the top of the head 20' for rotation by means of the crank 26 and carries at its lower end a toggle link 27. To the toggle link are pivotally connected the connector links 28, which extend laterally through the head member, and through slots in bearings 21 in which said links are supported on rollers 29. When the head is positioned on the frame, the shaft of roller 22 is received in the slots of the side frame members so that the pressure roller may contact the roller 13 and have the necessary freedom of vertical movement. The connecting links 28 align with the slots in the upper ends of the connectors 16 so that upon rotation of the stub shaft 25 the connecting links will be moved outwardly and their cam fashioned outer ends will be projected under the rollers 19. The wedging action thus exerted on the rollers 19 will cam the connectors 16 upwardly and stress the spring 15, the reaction of which is transmitted through the connectors and connecting links 28 to the upper bearings 21 and the pressure roller 22 so as to press the latter into co-operation with the roller 13, under yielding pressure. By rotation of shaft 25, the connecting links 28 may be retracted from engagement with the rollers 19 and the head thereby freed to permit its complete removal, together with the pressure roller 22 from the frame. The roller 13 likewise may be removed from the frame by lifting it through the side frames at such an inclination that the end of the shaft may be withdrawn from the socket 14. 30 is a screw member operating in a threaded opening in spring bar 15 and may be turned to increase or diminish the tensional activity of said

spring. 31 are stops having engagement with threaded openings in base member 10 and may be set for adjustment purposes.

The assembling of the wringer parts is very simple. Spring bar 15 is disposed with-
ing base member 10, with its outer ends bearing upon the inturned end portions of connector bars 16, which latter are normally seated upon stop members 31. The screw
30 is adjustable to produce the desired tensional activity of spring bar 15. Roller 13 is entered within the frame, with its left hand end in interlocked engagement with driving member 14. Roller 22 and top
15 framing member 20' constituting a unit structure, are adapted to be connected with the main frame by simply entering the roller and causing the top frame member to over-
lie the upper end of the side members of the main frame, and thereupon locking arms
28 are adapted to be projected outwardly through the action of hand lever 26 to cause the outer cam fashioned ends of said levers to enter the slots in the upper ends of con-
25 nector members 16, under resistance of roller member 19, which action serves to project said rollers and the connector members upwardly, thereby effecting an interlock between the side and top framing members and
30 at the same time flexing spring member 15 upwardly to induce tension between rollers 13 and 22.

The wringer parts having been assembled in the manner above described, striking lever
35 26 will occupy the position shown in Fig. 1 and the wringer portion may be carried forward until it is desired that the tensioned relationship of the roller members be terminated or to accommodate the removal of
40 the top framing member, thereupon by a simple stroke upon either arm member 26, locking members 28 will be withdrawn from engagement with connector members 16, thereby relieving the tension and permitting
45 the top framing member, together with roll 22 to be entirely removed from the main wringer frame.

What I claim is:

1. In a wringer, in combination, a frame
50 comprising telescoping base and head members, wringer rolls non-yieldably supported in each frame member, a bar spring in the base frame member, connector members engaging the ends of said spring, latch means
55 on the head for engagement with and lengthwise projection into the connector members, and quick release means for actuating the latch means to effect frame interlock and co-incident tensional relation between the rolls.

2. In a wringer, a frame comprising tele-
60 scoping base and head members having a right line movement, tensioning means in the base, latch means on the head, means connected to said tensioning means for engage-
65 ment by said latch means to effect tension

relation between the roller members of said frame, and quick release means for actuating said latch means, said latch means constituting the sole interlock between the base and head members.

3. In a wringer, in combination, a frame
70 comprising base and head members relatively movable in a right line direction, a roller member in each frame member, resiliently
75 active means in said frame to effect tension of the rolls, including cam-acting interlatch connection means between the resilient means and the head, and quick release means for
80 actuating said latch means, said interlock connection constituting the sole connecting means between the base and head.

4. In a wringer, in combination, a frame
85 comprising relatively movable base and head members, roller members supported in each frame member, a bar spring in the base member, latch means in the head member fashion-
90 ed at its outer ends with cam faces, connector members engaging at one end with the spring, the opposed ends being provided with slots and with roller members at the
95 upper ends of said slots and quick release means for actuating the latch means for movement into and out of the slots in the connector members.

5. In a wringer, in combination, a frame
95 comprising relatively separable base and head members, a roller in the base member, hanger members in the head having open entry ways at their lower extremities, a
100 roller shaft supported in said open ways, removable means positioned transversely of said ways for supporting said roll shaft in the hangers and means for connecting said
105 head and frame and biasing said head toward said frame.

6. In a wringer, in combination, a frame
110 comprising relatively movable base and head members, rolls supported in each of said members, a bar spring in the base member, connector members engaging the outer ends
115 of said spring, latch means in the head for releasable engagement with the connector members and adjustable stop members in the base for limiting the downward movement of the spring and connector members.

7. In a wringer, the combination of a
120 frame comprising relatively separable base and head members, a roller in the base member, hanger members in the head having bearings therein, a roller shaft removably
125 supportable in said bearings and abutment portions on said bearings for the ends of the roller shaft to prevent axial displacement of said shaft.

8. In a wringer, in combination, a frame
130 comprising relatively movable base and head members, rolls supported in each of said members, a bar spring in the base member, connector members engaging the outer ends
135 of said spring, latch means in the head for

releasable engagement with the connector members, adjustable stop members in the base for limiting the downward movement of the spring and connector members, and means for tensioning the spring in conjunction with the connector members.

9. In a wringer, a frame including a channeled bottom member and channeled side members, a roll mounted in said frame, a bar spring mounted in the channel of said bottom member, connectors extending vertically in the channels of the side members and connected at their lower ends to the free ends of the spring and having catch portions at their upper ends, a head member separable from said frame, a roll supported in said head member, latch members mounted on said head member and means on said head member for moving said latch members into latching engagement to cause the rolls to be yieldingly pressed toward each other.

10. In a wringer, a frame including a

channeled bottom member and channeled side members, bearings mounted in the channels in said side members, a roller supported in said bearings, a bar spring mounted in the channel of said bottom member, vertically extending connectors mounted in the channels of the side members and connected at their lower ends to the free ends of the bar spring and having catch portions at their upper ends, a channeled head, bearings projecting downwardly from said head and telescoping the channels of the side members, a roller supported in said bearings, reciprocable latch bars mounted in the channels of said head and movable into latching engagement with said catch portions to effect a pressure between said rollers, and means mounted on said head for operating said latch bars.

In testimony whereof I have hereunto subscribed my name.

SIMON E. SCHROEDER.