R. P. WRIGHT.

AUTOMATIC PRESSURE ROLL RELEASE FOR CLOTHES WRINGERS.

APPLICATION FILED JAN. 12, 1917.

1,255,495. Patented Feb. 5, 1918.

Fig. 1.

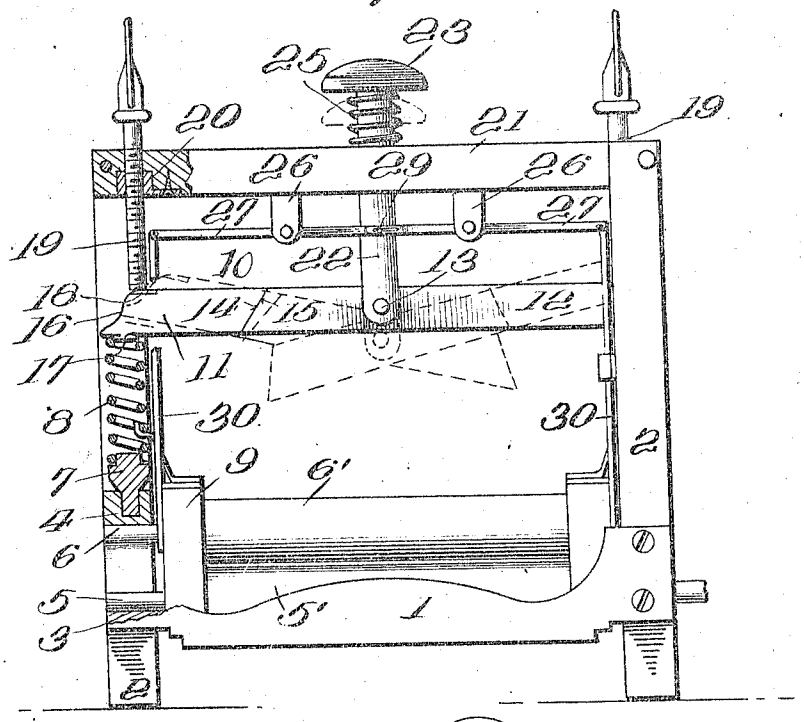
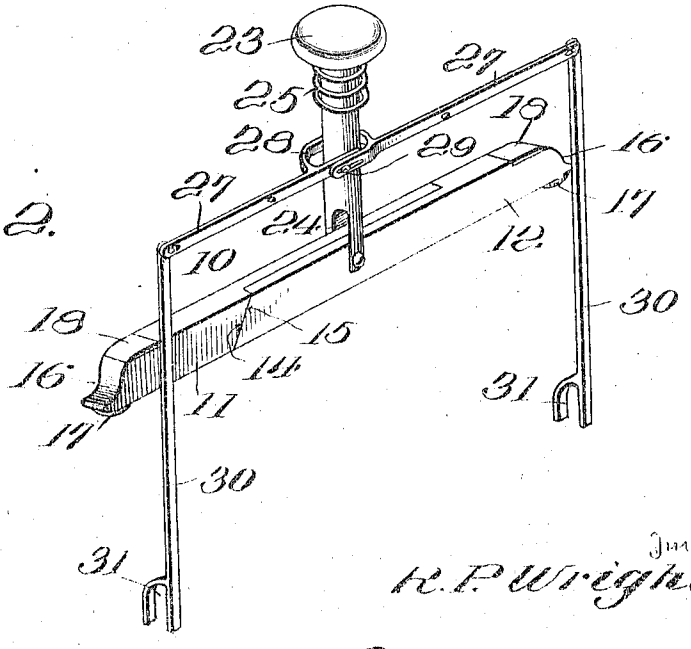


Fig. 2.



Witness
Floyd R Cornwall.
Esther Rosenberg

Inventor
R. P. Wright

By E. B. Stanley
Attorney

UNITED STATES PATENT OFFICE.

REA P. WRIGHT, OF WASHINGTON, DISTRICT OF COLUMBIA, ASSIGNOR TO JOHN FRANCIS HEMENWAY, OF NEW YORK, N. Y.

AUTOMATIC PRESSURE-ROLL RELEASE FOR CLOTHES-WRINGERS.

1,255,495. Specification of Letters Patent. Patented Feb. 5, 1918.

Application filed January 12, 1917. Serial No. 141,995.

To all whom it may concern:

Be it known that I, REA P. WRIGHT, a citizen of the United States, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Automatic Pressure-Roll Releases for Clothes-Wringers, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to certain new and useful improvements in pressure roll release for clothes wringers, the object being to provide a construction of pressure roll release in which the ordinary pressure bar now employed is formed of sections pivotally connected together in such a manner that the sections can be moved in respect to each other in order to move the ends of the bar out of engagement with the pressure screws, so as to release the pressure on the pressure rolls.

Another object of my invention is to provide a breakable pressure bar having an operating member connected thereto for breaking the bar centrally, said operating member being capable of being operated manually or automatically so that the pressure on the pressure rolls will be instantaneously released on the abnormal separation of the rolls, the manually operating means being provided for releasing the pressure in case of the automatic means failing to operate.

Another object of my invention is to provide a pressure release for clothes wringers which is exceedingly simple and cheap in construction and one in which the parts forming the release can be readily applied to a clothes wringer of the ordinary construction now in use.

Other and further objects and advantages of the invention will be hereinafter set forth and the novel features thereof defined by the appended claims.

In the accompanying drawings,

Figure 1 is a side elevation of a clothes wringer partly in section showing the application of my improved construction of breakable bar and releasing mechanism; and

Fig. 2 is a perspective view of the releasing mechanism detached.

Like numerals of reference refer to like parts in the several figures of the drawing.

In carrying out my invention I employ a frame 1 having slotted side bars 2 in which are mounted superposed bearings 3 and 4 carrying pressure roll shafts 5 and 6 as clearly shown in Fig. 1. The upper bearings 4 are provided with spring supports 7 carrying pressure springs 8. The pressure roll carrying shafts 5 and 6 are provided with pressure rolls 5′ and 6′ and meshing gears not shown inclosed by gear casings 9, said casings being spaced slightly from the side bars 2.

Mounted within the slotted side bars 2 of the wringer frame 1 is a sectional pressure bar 10 formed of two overlapping sections 11 and 12 pivotally connected together by a bolt 13. The sections 11 and 12 on the pressure bar 10 are provided with reduced portions forming oblique shoulders 14 adapted to be engaged by the oblique inner ends 15 of the sections 11 and 12 so as to prevent the sections from moving in respect to each other by the upward pressure on the pressure springs 8, and it will be seen that by this construction I have provided a breakable pressure bar formed of two sections so constructed and pivotally connected together that they are free to swing downwardly in one direction as shown in dotted lines in Fig. 1, but are prevented from moving in the opposite direction by the shoulders and ends of the sections of the bar. The outer ends of the sections 11 and 12 are reduced as shown at 16 and are provided with depending rounded lugs 17 adapted to fit within the pressure springs 8, the upper edges of the sections adjacent the reduced portions being provided with bearing plates 18 adapted to be engaged by pressure screws 19 mounted in threaded boxes 20 secured within a rigid top bar 21. The pressure screws normally rest on the outer edges of the bearing plates adjacent the reduced portions of the bar so that the pressure on the pressure rolls can be adjusted in the ordinary manner through the medium of the pressure bar and pressure springs.

When the central pressure is exerted on the breakable bar 10 the bearing plates 18 ride out from under the ends of the pressure screws 19 in order to allow the pressure springs to expand so as to release the pressure on the pressure rolls.

In order to provide means for breaking the pressure bar to release the pressure on the pressure rolls, I provide the rigid top bar 21 with a slidably mounted operating member 22 herein shown in the form of a

push button having a head 23 and a bifurcated lower end 24 which is adapted to embrace the sections 11 and 12 of the pressure bar 10, the furcations being apertured to receive the pivot 13 for pivotally connecting the operating member to the breakable bar so that when a downward pressure is exerted on the operating member 22 the sections of the pressure bar will be moved in respect to each other so as to throw the bar into the position as shown in dotted lines in Fig. 1 which draws the bearing plates out from under the pressure screws so as to bring the reduced portions of the bar in alinement with the pressure screws which allows the pressure springs to expand to release the pressure on the pressure rolls. The operating member 22 is held in position as shown in Fig. 1 by a lifting spring 25 surrounding the operating member above the top bar. Secured to the under side of the top bar 21 to each side of the operating member 22 is a depending bracket 26 in which is pivotally mounted a lever 27 having a fork at its inner end, the arms of which are slotted and are pivotally mounted on oppositely disposed studs 29 carried by the operating member 22 as clearly shown in Fig. 2, these levers 27 being so arranged that the forks formed at the inner ends thereof embrace the operating member 22 and are connected thereto in such a manner that when the outer ends of the levers are raised the inner ends will be forced downwardly so as to carry the operating member 22 downwardly so as to break the sectional pressure bar. Pivotally connected to the outer end of each lever 27 is a releasing member 30 which extends down along side of the side bars 2 of the wringer frame and is provided with a forked portion 31 which embraces the shaft 6 of the upper pressure roll 6′ and is normally held slightly above the shaft so as to allow the pressure rolls to separate in wringing clothes.

When the pressure rolls are separated beyond the ordinary distance of travel in wringing clothes by the insertion of a foreign object, the releasing bars 30 are raised so as to rock the levers 27 on their pivots which forces the operating member 22 downwardly and breaks the pressure bar which instantaneously releases the pressure on the pressure rolls.

In the operation of my improved construction of automatic pressure release assuming that the parts are in the position as shown in full lines in Fig. 1 when a thick bunch of clothes is drawn between the pressure rolls 5′ and 6′ the upper pressure roll 6′ is moved upwardly beyond the ordinary distance of travel and raises the releasing bars 30 which forces the operating member 22 downwardly through the medium of the levers 27 and moves the sections of the breakable bar into the position as shown in dotted lines in Fig. 1 so as to move the ends of the breakable bar out of contact with the pressure screws which allows the pressure springs to expand and release the pressure on the pressure rolls. After the pressure has been released by unscrewing the pressure screws, the breakable bar can be moved back into its normal position. In case of the automatic releasing mechanism failing to work, the operator can readily strike the head of the operating member so as to break the pressure bar and release the pressure.

From the foregoing description it will be seen that I have provided a clothes wringer with an automatic pressure release in which a breakable pressure bar is substituted for the ordinary rigid bar now in use in clothes wringers of this character which is broken by an operating member by the abnormal separation of the pressure rolls so as to instantaneously release the pressure on the pressure rolls in case of a foreign object or an operator's hand being drawn between the same.

I claim:

1. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls, a sectional bar associated with said pressure means, an operating member having a connection with said sectional bar, and means actuated by the abnormal separation of said roll for actuating said operating member to move the sections of said bar in position to release said pressure means.

2. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls mounted therein, a sectional breakable bar associated with said pressure means, and an operating member for moving said sections in position to release said pressure means.

3. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls mounted therein, a sectional breakable bar associated with said pressure means, said bar being formed of sections movable in one direction in respect to each other, and an operating member having a connection with said breakable bar for moving said bar in position to release said pressure means.

4. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls mounted therein, a breakable bar associated with said pressure means, an operating member for breaking said bar to release said pressure means, and releasing members actuated by the abnormal separation of said pressure rolls having a connection with said operating member for automatically releasing the pressure on said pressure rolls.

5. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls mounted therein, a bar associated

with said pressure means formed of two sections pivotally connected together, movable in respect to each other in one direction, and an operating member having a connection with the central portion of said bar for moving the sections thereof in respect to each other for releasing said pressure means.

6. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls mounted therein, a breakable bar associated with said pressure means, an operating member mounted in said frame connected to said breakable bar, pivoted levers mounted in said frame having a connection with said operating member, and releasing members carried by said levers actuated by the abnormal separation of said pressure rolls for releasing said pressure means.

7. A clothes wringer, comprising a frame having pressure rolls mounted therein, pressure springs for said rolls, a sectional bar mounted on said springs, pressure screws engaging said bar, and an operating member connected to said bar for moving said bar in position to release said pressure means.

8. A clothes wringer, comprising a frame having superposed pressure rolls one of said rolls being movable in respect to the other, pressure springs for said movable roll, a sectional breakable bar mounted upon said springs, means engaging said bar for adjusting said pressure means, and an operating member connected to said breakable bar for moving the ends of said bar in position to release said pressure means.

9. A clothes wringer, comprising a frame having superposed pressure rolls one of said pressure rolls being movable in respect to the other roll, pressure springs for said movable roll, a bar mounted upon said pressure springs formed of sections pivotally connected together, an operating member connected to said bar, pressure screws engaging said bar for adjusting said pressure means, levers connected to said operating member, and releasing members actuated by the abnormal separation of said rolls connected to said levers for actuating said operating member to release said pressure means.

10. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls, retaining means for normally holding said pressure means in predetermined position, an operating member for releasing said retaining means, movable members connected to said operating member, and releasing members actuated by the abnormal separation of said pressure rolls having a connection with said movable members for actuating said operating member for releasing said pressure means.

11. A clothes wringer, comprising a frame having a fixed roll and a roll movable toward and away from the fixed roll, pressure springs for said movable roll, a sectional bar having reduced ends mounted on said springs, pressure screws engaging said bar adjacent the reduced ends thereof and an operating member engaging said sectional bar for moving the sections thereof in respect to each other for moving the ends of said bar out of engagement with said pressure screws.

12. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls, a breakable bar for normally holding said pressure means in predetermined position, means coöperating with said breakable bar for releasing said pressure means, and releasing members coöperating with said operating means on the abnormal separation of said rolls.

13. A clothes wringer, comprising a frame having a pair of superposed rolls one of said rolls being movable toward and away from the other roll, pressure springs for said movable roll, a sectional breakable bar mounted upon said springs, means engaging said bar for adjusting said pressure means, an operating member for breaking said bar, and means for actuating said operating member by the abnormal separation of said rolls for releasing said pressure means.

14. A clothes wringer, comprising a frame having a fixed roll and a roll movable away and toward the fixed rolls, pressure springs for the movable roll, a sectional breakable bar mounted upon said springs formed of two sections pivotally connected together and capable of being moved in one direction only, pressure screws engaging said bar, and means for moving the sections of said bar in respect to each other to release said pressure means.

15. A clothes wringer, comprising a frame having a fixed roll and a roll movable away and toward the fixed rolls, pressure springs for the movable roll, a sectional breakable bar mounted upon said springs formed of two sections pivotally connected together and capable of being moved in one direction only, pressure screws engaging said bar, and means actuated by the abnormal separation of said pressure rolls for breaking said bar to release said pressure means.

16. A clothes wringer, comprising a frame having a fixed roll mounted therein, a coöperating roll movable toward and away from the fixed roll, pressure springs mounted upon said movable roll, a sectional breakable bar mounted upon the springs having reduced ends, the sections of said bar being pivotally connected together and capable of being moved in respect to one another in one direction only, means engaging said bar adjacent the reduced ends for adjusting said pressure springs, and means actuated by the abnormal separation of said pressure rolls for moving the sections of said bar in respect

to each other for releasing said pressure means.

17. A clothes wringer, comprising a frame having a pair of superposed rolls mounted therein, one of said rolls being movable toward and away from the other roll, pressure springs for said movable roll, a transverse breakable bar mounted upon said springs having reduced ends, pressure screws engaging said bar adjacent the reduced ends, an operating member connected to the central portion of said bar, levers connected to said operating member, and releasing members connected to said levers actuated by the abnormal separation of said rolls.

18. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls mounted therein, a sectional bar associated with said pressure means, said bar being formed of sections pivotally connected together, and movable in respect to each other in one direction only, and a spring returned operating member connected to said bar for moving said sections in respect to each other to release said pressure means.

19. A clothes wringer, comprising a frame having a fixed roll mounted therein, a cooperating roll mounted in said frame and movable toward and away from the fixed roll, means for maintaining tension upon the movable roll, a sectional breakable bar associated with said tension means, an operating member for moving the sections of said bar in respect to each other to release said tension means, and means actuated by the abnormal separation of said pressure rolls for actuating said operating member.

20. A clothes wringer, comprising a frame having a pair of superposed rolls mounted therein, pressure springs for said rolls, a sectional bar mounted upon said springs formed of two sections movable in respect to each other, pressure screws engaging said bar, a spring supported operating member connected to said bar for moving the sections in respect to each other to release said pressure means, pivoted levers connected to said operating member, and releasing members connected to said levers actuated by the separation of said rolls.

21. A clothes wringer, comprising a frame having a pair of superposed pressure rolls mounted therein, pressure springs for said rolls, a bar mounted upon said springs formed of two overlapping sections pivotally connected together, movable in respect to each other in one direction, said bar having reduced ends, pressure screws engaging the said bar adjacent the reduced ends, and means actuated by the abnormal separation of said pressure rolls having a connection with said operating member.

22. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls, means for normally holding said pressure means in predetermined position, an operating member for actuating said retaining means, movable members connected to said operating member, and releasing members actuated by the abnormal separation of said rolls having a connection with said movable members for actuating said operating member for releasing said pressure means.

23. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls, a retaining bar associated with said pressure means for normally holding said pressure means in predetermined position, an operating member mounted to engage said bar for moving said bar in position to release said pressure means, and means actuated by the abnormal separation of said rolls coöperating with said operating member for releasing said pressure means.

24. A clothes wringer, comprising a frame having pressure rolls and pressure means for said rolls mounted therein, means for normally holding said pressure means in predetermined position, an operating member for actuating said retaining means, pivoted levers mounted on the frame of said wringer having a connection with said operating member, and releasing members connected to the free ends of said levers arranged in the path of travel of one of said pressure rolls and adapted to be operated thereby on the abnormal separation thereof for actuating said operating member for releasing said pressure means.

25. A clothes wringer having a rigid frame including side bars and cross bars pressure rolls and pressure means for said rolls mounted within said frame, means for normally holding said pressure means in predetermined position, an operating member slidably mounted within the upper cross bar of said frame for actuating said pressure retaining means, pivoted levers mounted on said cross bar having a connection with said operating member, releasing members slidably mounted on the side bars of said frame having a connection with the free ends of said levers, said releasing members being actuated by the abnormal separation of said rolls for actuating said operating member for releasing said pressure means.

In testimony whereof I hereunto affix my signature in the presence of a witness.

REA P. WRIGHT.

Witness:
N. CURTIS LAMMOND.