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SAFETY WRINGER MECHANISM

Original Filed Jan. 14, 1924

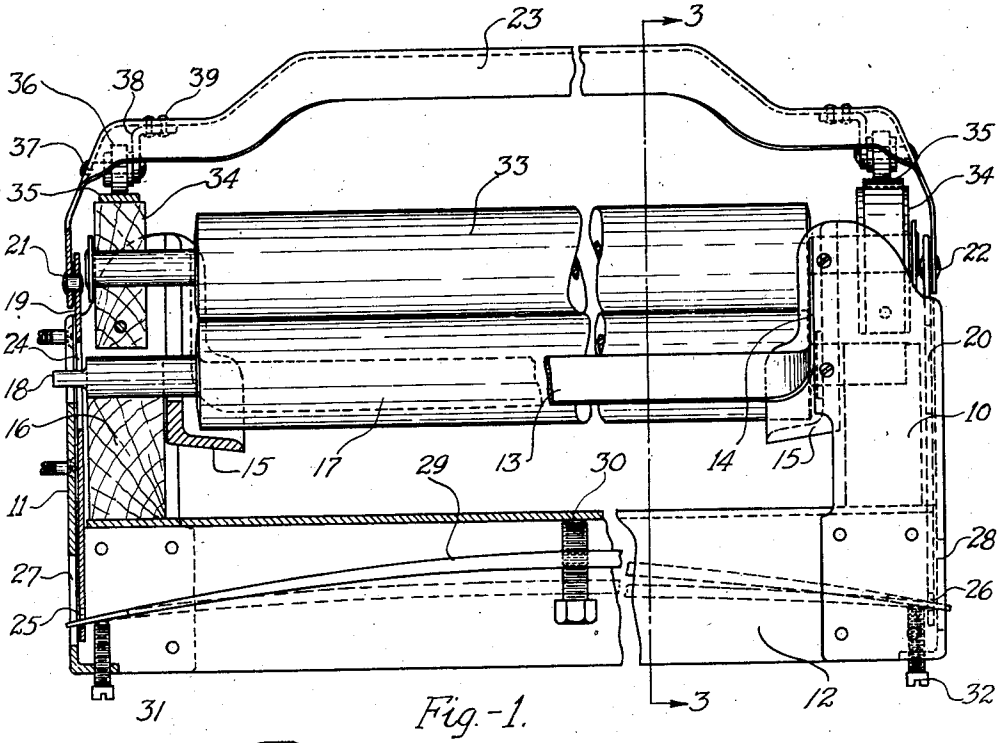


Fig.-1.

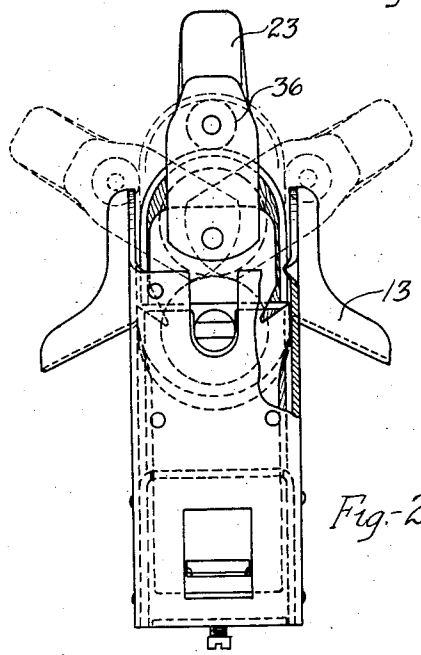


Fig.-2.

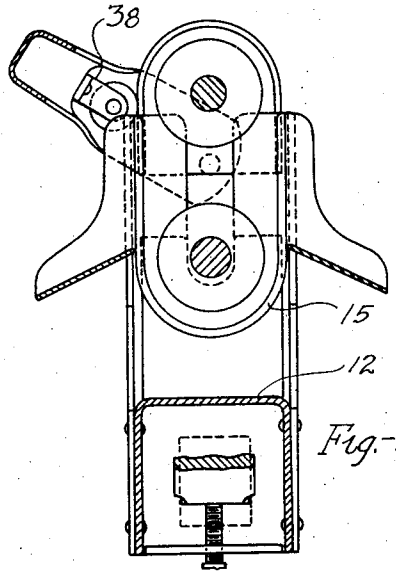


Fig.-3.

Witnesses
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UNITED STATES PATENT OFFICE.

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SAFETY WRINGER MECHANISM.

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My invention relates mainly to wringer mechanism and more particularly to a safety wringer mechanism.

The object of my invention is in the provision of a safety wringer having a quick release mechanism adapted to relieve the pressure from the upper wringer roll and also to re-set said roll again in operative position without further adjustment of the pressure means.

Other objects of my invention will appear in the following specification taken in connection with the annexed drawings in which:

Fig. 1 is a side elevation of my wringer, portions thereof being shown partially in section for a more detailed disclosure.

Fig. 2 is an end elevation of my device, showing the quick release member in several of its positions.

Fig. 3 is a sectional view taken on the line 3—3 of Figure 1.

Referring to the specification, I have shown a base portion of the wringer made up of the following parts.

End portions 10 and 11 are of stamped metal, shaped or fashioned to receive the bearings for the lower roll, said end portions being either connected in a positive manner to a lower frame or base 12 formed of stamped metal shaped in a manner, not only to provide a substantial connecting means with the conventional washing machine but also to house therein a tensioning spring, later to be described.

This base plate 12 as clearly seen in Figure 1, provides the connection between the ends 10 and 11, which as a whole make up the main frame portion of the wringer.

Attached at each end to the end plates 10 and 11 are two transversely positioned guard members 13, which lie adjacent the lower roll.

It may be seen at this time that the upwardly projecting ends 14 of these guard members are fashioned in such manner as to prevent any garment passing through the wringer from being caught in any manner in the bearings or drive portions thereof.

The above is a well known construction and co-operates with the inwardly projecting portions 15 on the end plates to assist the entrance and ejection of clothes from the wringer.

Two wooden bearings 16 are housed within the end portions, abutting at their lower sides the top of the base plate 12. These formal bearing members support the projecting ends of the lower wringer roll 17.

This lower wringer roll is power driven in the usual manner from the washing machine through the connection 18.

An auxiliary frame member co-operating with the main frame portion is made up of the following portions. At either side of the wringer at 19 and 20 are shown flat metal pieces, slidable within the ends 10 and 11 and projecting substantially to the lower end of the base plate 12.

This second set of end plates has pivotal engagement as at 21 and 22 with a transversely extending handle or quick release member 23.

So far we have described merely an auxiliary frame portion slidable within the main frame portion. The end plate 20 of said auxiliary frame portion has no operative relation particularly with the projecting ends of the wringer rolls, however, the opposite plate 19 has an extended slot 24, permitting the projection of the drive connection 18 therethrough.

Adjacent the lower ends of both end plates 19 and 20 are formed transverse slots 25 and 26. These slots open into the larger apertures 27 and 28 formed in the end portions 10 and 11 of the main frame. The only connection between the main frame portion and the auxiliary frame lies in a transversely extending flat spring 29, housed within the angularly shaped base 12, said spring having its projecting ends projecting through the slots 25 and 26 of the auxiliary frame, as well as through the apertures 27 and 28 of the main frame.

A spring tensioning screw is shown at 30 abutting the upper side of the base plate 12.

Again there is shown threaded at either side in the lower ends of the end portions 10 and 11, the screw members 31 and 32 which are adapted to regulate the positioning of the auxiliary frame and flat spring 29 with relation to the main frame portion.

A removable upper wringer roll 33 has its projecting ends mounted in the wooden bearings 34. Due to the frictional engagement of the upper and lower rolls the above mentioned bearings 34 are not permitted to have engagement with the upper ends of the bearings 16. This frictional mounting of the upper and lower rolls is a conventional structure.

Metal strips 35 overlie the rounded upper

portions of the bearings 34 and provide guide ways for the small roller member 36 on the release arm 23. The rollers 36 are mounted in the quick release arm in the following manner:

Bearings 37 have one of their ends engaging the outer side of the quick release arm and their opposite ends supported in brackets 38 positively connected to the arm 23 as at 39.

The operation of my device is as follows: normally the quick release handle 23 lies directly over and in the same plane as the wringer rolls, and when in this operative position through the rollers 36 applying pressure to the bearings 34, force the upper roll 33 toward the power roll 17. Pressure between the rolls is produced because of the fact that the auxiliary frame portion, of which the quick release handle is a part, has a tensioned relation to the main frame, this due to the mounting of the transverse spring 29. In other words, it is the peculiar mounting of the transverse spring in the base 12 and its engagement with the projecting ends of the auxiliary frame member that produces the tensioned mounting of the roll members.

In Figure 2 the various positions of the release handle are shown, and it is clearly seen in said figure that the handle 23 may be thrown to either side of the wringer, to release the tension on the upper roll, the actual release being of the flat tension spring 29, the ends of which drop down due to the lowering of the auxiliary frame.

The setting of the upper roll is accomplished by merely forcing the release handle again to its position above the roll, this being possible due to the cam-like action of the rollers 36 on the rounded portions 34.

What I claim is:

1. In a device of the class described, a main frame having a power roll mounted therein, an auxiliary frame slidably mounted on said main frame, a transversely extending flat spring mounted on said main frame and having its ends connected with the auxiliary frame, an upper wringer roll having bearings mounted in said main frame and a quick release arm pivotally connected with the auxiliary frame on an axis parallel with the axes of the rolls having means engaging the bearings of the upper roll and maintain said roll in pressure relation to the lower roll, said arm being swingable on its axis to engage and disengage said means and bearings.

2. In a device of the class described, a main frame, a lower roll mounted therein, an auxiliary frame slidable on the main frame and including bar members and a bail member pivoted to said bar members on an axis parallel with the roll, an upper wringer roll mounted in the main frame and movable relatively to the lower roll, a bar spring mounted in said frame and connected at its opposite ends to the auxiliary frame, means connected to the upper roll normally engaged by the bail member for holding the rolls in pressure relation through the tensioning of the spring, said bail member being swingable on its pivot to release the tension of the spring and thereby the pressure between the rolls.

3. In a device of the class described, a main frame having a power roll therein, an upper wringer roll overlying said power roll, bearings in which said upper wringer roll is mounted and having rounded upper end surfaces, an auxiliary frame slidable within the main frame, a transversely extending flat spring located in the base portion of the main frame, and engaging at its outer ends the auxiliary frame, and a swingable quick release member pivotally mounted upon the auxiliary frame and having seating members thereon adapted to engage and seat in connection with the rounded bearings of the upper wringer roll in a manner to normally hold said rolls pressed together.

4. In a device of the class described, in combination, a main frame, a roller therein, a bar spring supported in the frame below the roller, a second roller member, supporting members therefor movably and removably supported relatively to the main frame, side bars slidable on the main frame and connected with the ends of the spring, and a bail member pivoted to the side bars on an axis parallel with the axes of the rolls and swingable into and out of engagement with the supports for the upper roll.

5. In a wringer, a main frame, a roll and a bar spring supported in the frame, a second roll having bearings movably positioned in the frame, releasable interlocking means for said spring and rolls including slidable bar members connected with the opposite ends of the spring, and a swingable member pivoted to the bar members in the plane of the axes of the rolls and engageable with the movable bearings to effect said interlocking and apply force to the movable roll.

In testimony whereof I affix my signature.

SIMON E. SCHROEDER.