Sept. 23, 1941. N. L. ETTEN 2,256,736

SAFETY CONTROL FOR WRINGERS

Filed Jan. 13, 1939

Fig. 1.

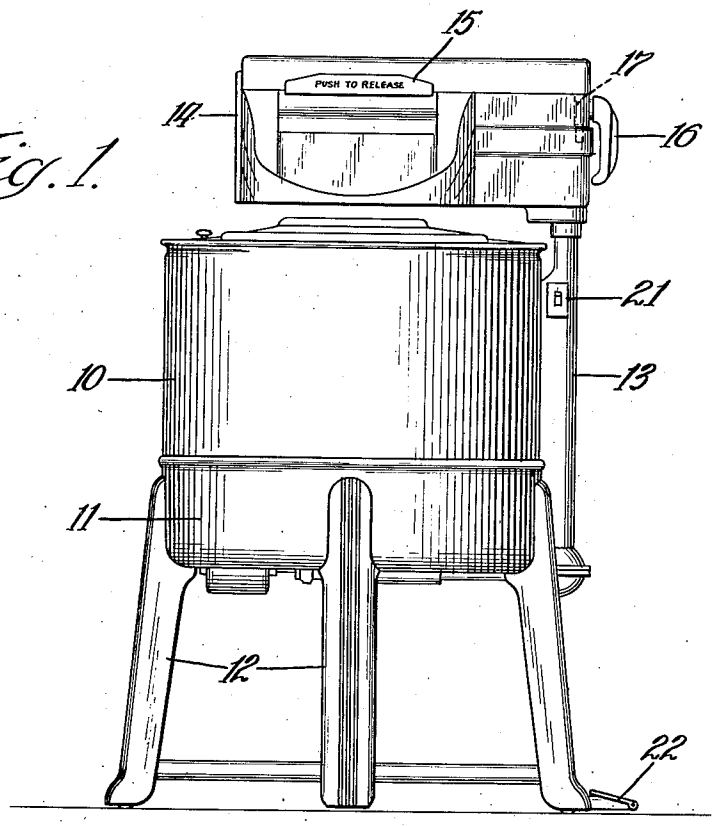


Fig. 2.

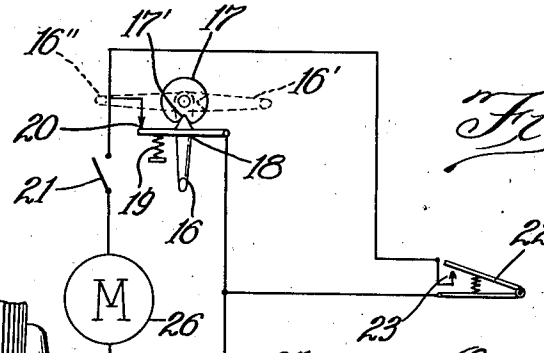
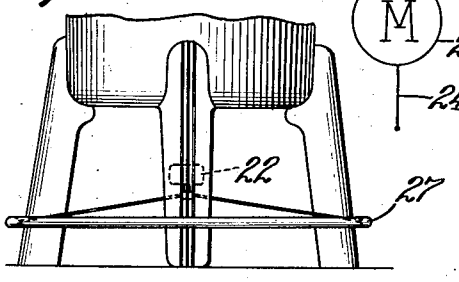


Fig. 3.



Inventor
Nicholas L. Etten
By Tefft + Tefft
Attys.

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SAFETY CONTROL FOR WRINGERS

Nicholas L. Etten, Waterloo, Iowa

Application January 13, 1939, Serial No. 250,689

1 Claim. (Cl. 192—129)

This invention relates to wringers for motor driven domestic washing machines and particularly to a safety device for such wringers.

Although wringers of this type are equipped with many kinds of safety devices, all of unquestionable merit, wringer accidents continue to occur with painful frequency. The reason for this is easy to discern: Women operators become excited and forget how to operate the safety device, and children, knowing nothing of safety devices, are caught playing with wringers.

The particular object of this invention is to provide means whereby the wringers on motor driven washers can only be operated when the operator definitely closes a conveniently operable switch of a type that requires definite purposed knowledge, but which will automatically be opened by natural reflex action of the operator in case of accident.

Another object is to provide a switch of the character described which can be enclosed within a conventional domestic washing machine wringer or omitted at the will of the manufacturer.

Other objects and benefits will be disclosed by the following descriptions and drawing in which:

Fig. 1 is an elevational view of a conventional domestic washer with my safety device shown somewhat diagrammatically;

Fig. 2 is a diagrammatic lay-out of the safety switch and wiring; and

Fig. 3 is an optional arrangement of foot control.

Now referring to Fig. 1, I show a conventional domestic washer with a tub 10 mounted on a base 11 and legs 12. A wringer support tube 13 supports a conventional wringer 14 which has a standard push bar release 15.

Rotation of the wringer rolls is controlled by a conventional wringer head and handles 16 in the usual manner,—forward or reverse rotation of the rolls and neutral or stopped position of the rolls.

Enclosed within the wringer head and attached to the shaft of the handle 16 is a cam 17, the function of which is best shown diagrammatically in Fig. 2. This cam 17 has a notch 17' controlling the operation of the switch through the arm 18 which is urged against the cam by the spring 19.

It will readily be appreciated that as the handle 16 is rotated to 16' for forward rotation of the rolls or 16'' for reverse rotation, the cam 17 will open the electric circuit 24—25 at the switch point 20. This electric circuit is further controlled by a conventional off and on switch 21.

With the handle 16 in either position 16' or 16'' the electric circuit 24—25 is broken and the motor 26 stops. However, if the operator places her foot on the foot switch 22, the circuit is closed at the point 23 and the motor 26 will again drive the wringer rolls.

This foot switch is conveniently located so that the operator may readily put her foot on it as she operates the wringer,—however, it requires a definite purposed action on her part to do this as the switch is located and adjusted to prevent casual operation. Therefore, in order to wring, the operator must continuously keep her foot on the foot switch 22. In case of accident her reflex action would naturally be to move and immediately her foot leaves the switch 22 the motor and wringer stop rotation and further dangerous operation ceases.

It will be obvious that with the motor stopped the washing action of the machine ceases and will not be resumed until the handle 16 is again placed in neutral position with the wringer rolls stopped. Therefore, it is impossible for a woman operator to leave the washer operating and the wringer rolls rotating—a condition responsible for many wringer accidents to children. This is an important feature of the device.

In Fig. 3 I show somewhat diagrammatically an optional arrangement whereby the switch 22 is controlled by a pivotal band 27 supported around the legs of the washer. This naturally would permit the operation of the switch 22 at any point around the tub 10. It will be noted that the band 27 is located somewhat high and requires a definite lift of the foot for operation.

There are many other arrangements for the operation of the switch 22. The band may be located higher to require a thigh or hip movement, or the switch might be controlled by a series of levers located at various points around the tub. However, this character of variation has no pertinent relation to my invention, and I do not desire to be limited by any specific structure.

I claim:

The combination with a power washer having a wringer, a motor for driving said wringer including a power source for said motor and means for operatively connecting and disconnecting said wringer with and from said motor, and means for automatically separating said motor from said power source when said connecting means are actuated to operatively connect said wringer with said motor, and manually operated means for reconnecting said motor with said power source independently of the said separating means, said manually operated means comprising a normally open electric switch, a shiftable band surrounding the lower portion of the washer and adapted to be shifted by contact with the foot of the operator, and connecting elements to close the normally open electric switch responsive to shifting movements of said band.

NICHOLAS L. ETTEN.