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2,218,588

WRINGER MECHANISM

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2 Sheets-Sheet 2

Fig. 3.

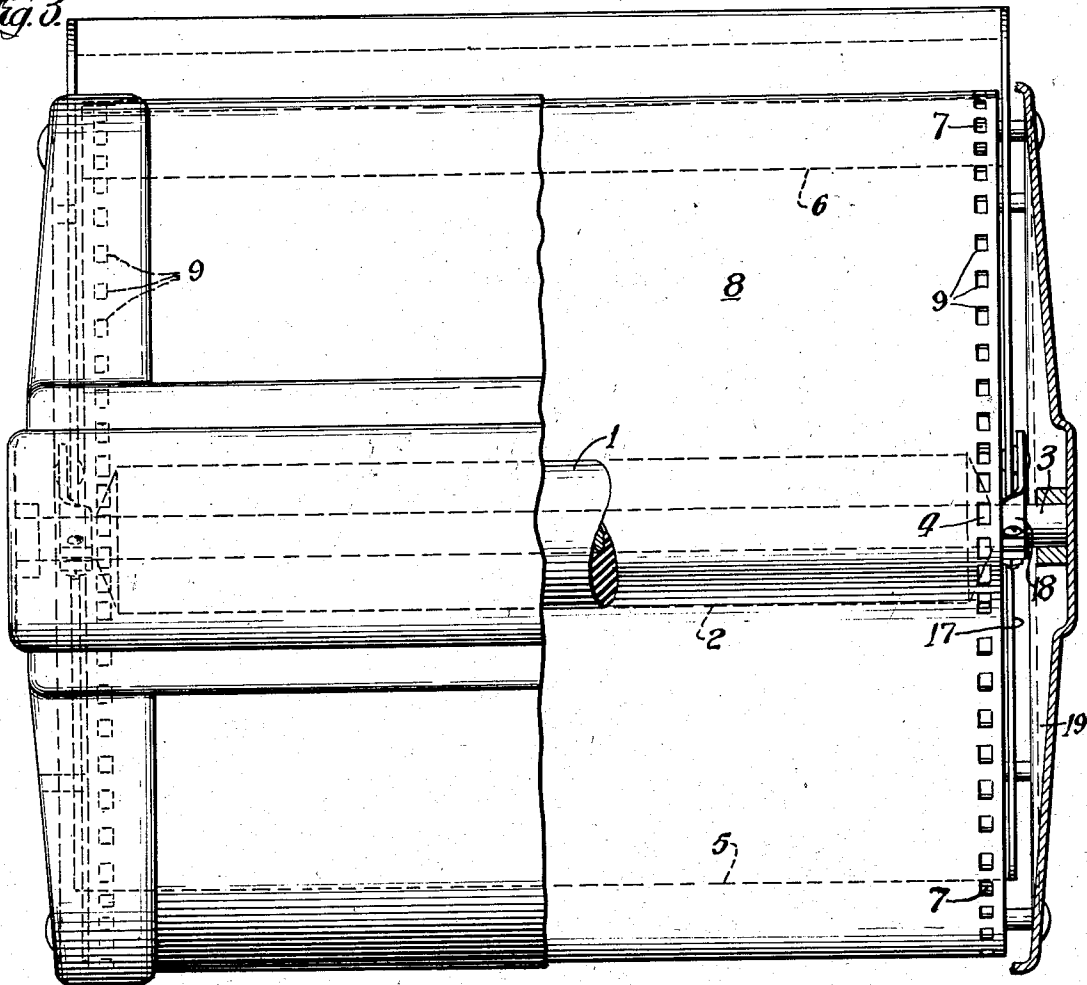


Fig. 4.

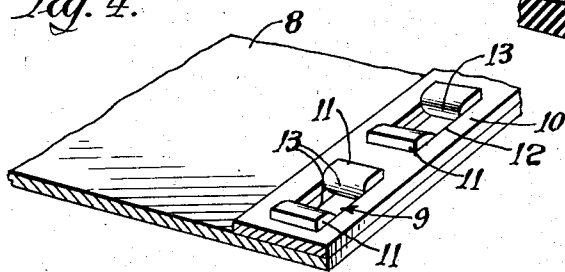
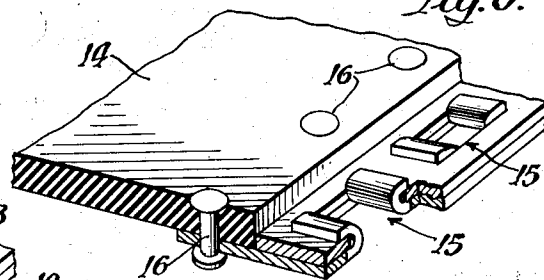


Fig. 5.



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WRINGER MECHANISM

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2 Claims. (Cl. 68—267)

The present invention relates to improvements in clothes wringers and has for its main object to provide a novel device of this character wherein the clothes are carried by a belt through the wringer rolls, said belt being trained over the lower wringer roll and underneath the upper or pressure roll. The main object of the invention is to provide a wringer of the type specified wherein the carrier belt is positively driven at the same or substantially the same speed as the surface speed of the lower roll and which, furthermore, is equipped with a very smooth and preferably polished surface such as would enable clothes carried thereby to slide thereon readily for purposes which will be hereinafter explained.

A further object of the invention is to provide a structure wherein the danger of tearing buttons off of clothes or breaking the buttons is appreciably minimized.

A suitable embodiment of the invention is illustrated in the accompanying drawings wherein:

Fig. 1 is a more or less diametric side elevation of a wringer constructed in accordance with the invention, parts thereof being shown in section;

Fig. 2 is a vertical transverse sectional view of the same taken on the line 2—2 of Fig. 1;

Fig. 3 is a top plan view of the same with parts broken away; and

Figs. 4 and 5 are fragmentary perspective sectional views showing modifications in construction of the carrier belt.

As shown in Fig. 1 the wringer comprises a conventional type of upper or pressure roll 1 and a lower roll 2 mounted upon the shaft 3, both said rolls being composed preferably of a resilient material such as is commonly used for wringer rolls.

Generally the lower roll only is driven, but the upper roll 1 may also be driven if desired, mechanisms for effecting the driving of either one or both of said rolls being common and practically conventional in this art.

Mounted upon the shaft 3 of the lower roll at opposite ends of said roll is a pair of sprocket wheels 4 which are rigid with the shaft 3. Disposed forwardly and rearwardly respectively, of the lower roll at a lower elevation and spaced therefrom I provide rolls 5 and 6 which are equipped at their ends with sprocket wheels 7.

A wide clothes carrying belt 8 equipped along its side edges with sprocket wheel engaging perforations 9, as shown in Fig. 3, is trained over the rolls 2, 5 and 6, said perforations 9 being

engaged with the several above designated sprocket wheels. The said sprocket wheel engaging means, designated 9 in Fig. 4, may consist of one or several strips of metal of a highly resilient type, equipped with said sprocket teeth receiving openings 9 at regular intervals. Preferably each side edge portion of the belt trained between the rollers 1 and 2 aforesaid, are reenforced by flat strips 10 of resilient metal as shown in Fig. 4, which are secured to the side edge portions of the belt per se by means of the overturned flanges 11 which are bent to extend through the openings 12 in the strips 8 and are folded over upon the same as shown in Fig. 4, thereby providing rounded flange formations 13 against which the teeth of the sprocket wheels exert their pressure. Provision is made for a slight relative longitudinal movement between the side edge portions of the main belt and the reenforcing strips 10 thereof in order that the structure may not be caused to buckle or be subjected to undue stresses.

Obviously the reenforcing strips 10 may be omitted, as shown in Fig. 3, and the sprocket wheel engaging means or perforations cut or punched out of the side edge portions of the single piece belt made of a resilient non-corrosive sheet metal such as thin stainless steel presenting an outer polished surface.

However, as shown in Fig. 5, a belt 14 of conventional rubber belting or other material surfaced with a resilient coating may be substituted for the steel belt 8 or disposed over the same. The said belt 14 is equipped along its side edges with sprocket wheel engaging means 15 secured thereto in any suitable manner as by means of rivets 16. The said means 15 may consist of a conventional sprocket chain suitably secured to said belt 14.

In the operation of the machine and assuming that the clothes are introduced to the left of the wringer rolls, the said belt 8 or 14 will carry the clothes to and through the wringer rolls in the customary manner. The all metal belt 8 with its sprocket teeth engaging formations 9 is preferable to any other type of belt for the reason that the clothes may slide upon the same and this has the effect of causing buttons fastened to the clothes to turn readily to a position wherein they will pass between the wringer rolls flatwise and will not be torn away or broken.

The said all metal belt will yield readily between its side edges to pressures due to the passage of both yielding and unyielding material therethrough.

As shown in Fig. 1 the wringer may be equipped with a drip pan 17 which is suspended from the shaft 3 by means of links 18 for swinging to either the full or dotted line position shown in Fig. 1, the shift of position in the instance illustrated being effected by hand. This is particularly important for metallic belts which have a strong tendency to permit water to run under the belt and drip off. The rolls 1, 2, 5 and 6, inclusive, hereinabove referred to are preferably confined between side plates 19, and the latter are equipped with arcuate slots 20 through which suitable projections of the side flanges of the drip pan 17 project, the slots 20 serving as stops for limiting the arcuate swing of said drip pan 17.

The essentially novel feature of the present invention resides in the provision of a resilient sheet metal belt and means for positively driving the same at substantially the same speed as the surface speed of the lower wringer roll and providing the belt composed of a non-corrosible metal with a very smooth or polished surface in order that it may function as hereinabove described.

Obviously the rolls 5 and 6 may be idle rolls except insofar as they are driven by the belt and/or the sprocket wheel engaging means with which said belt is equipped.

The belt 14, shown in Fig. 5, may as above stated, be composed of a resilient material such as rubber or may be composed of conventional rubber belting. When such belt is employed in place of the all metal belt, it is preferable that the upper roll 1 should be driven at a slightly greater surface speed than the speed of travel of the belt in order to neutralize the tendency of the resilient material of which the belt is composed, to creep backwardly from the direction of travel of said belt under the influence of the pressures exerted upon the same by material carried by said belt and engaged by the upper roll 1. Preferably the surface speed of the roll 1 if driven, should be from three to ten percent greater than

the speed of travel of the belt surface opposed thereto.

The last mentioned relative surface speeds may also be used in instances where the upper roll is driven and the all metal belt is employed. The lower roll 2 may also be composed of an unyielding material if desired.

While a smooth belt of a suitable sheet metal is above mentioned in the foregoing specification, it will be obvious, of course, that any other suitable material having similar characteristics may be substituted therefor.

Obviously the invention is capable of being variously embodied without departing from the spirit and intent thereof as defined in and by the appended claims.

I claim as my invention:

1. A clothes wringer comprising a pair of opposed wringer rolls, one of which is driven, a pair of sprocket wheels rigid with said driven roll, a pair of rolls disposed forwardly and rearwardly of and spaced from said driven roll, a belt composed of resilient sheet metal and equipped along its side edges with sprocket wheel engaging means trained over said driven roll and said last-named rolls and between the first-named rolls, and a tiltable drain board supported under said belt.
2. A clothes wringer comprising a pair of opposed wringer rolls, one of which is driven, a pair of sprocket wheels rigid with said driven roll, a pair of rolls disposed forwardly and rearwardly of and at a lower elevation than and spaced from said driven roll, sprocket wheels rigid with said last-named rolls and aligned with the first-named sprocket wheels, a belt composed of resilient sheet metal and equipped along its side edges with sprocket wheel engaging means trained over said driven roll and said last-named rolls and between the first-named rolls, and a tiltable drain board supported under said belt.

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