Sept. 7, 1926. 1,599,203

B. W. BROCKETT

IRONING MACHINE

Filed April 3, 1922

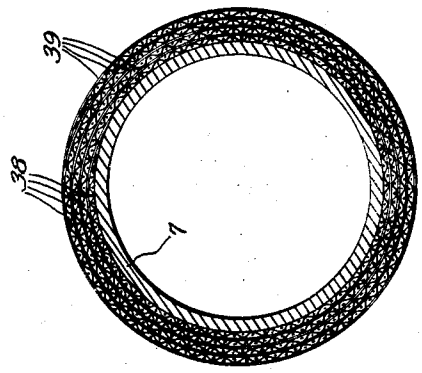


Fig. 2

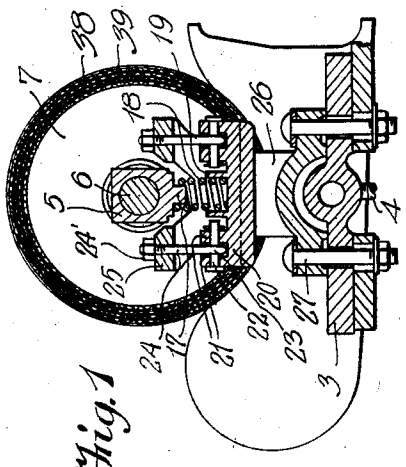


Fig. 1

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UNITED STATES PATENT OFFICE.

BLUFORD W. BROCKETT, OF CLEVELAND HEIGHTS, OHIO, ASSIGNOR TO THE AMERICAN LAUNDRY MACHINERY COMPANY, OF NORWOOD, OHIO, A CORPORATION OF OHIO.

IRONING MACHINE.

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This invention relates to an ironing machine of the same general type as is used for ironing flat work, this type of machine comprising a heated ironing bed and one or more padded presser rolls for advancing the work along the bed under pressure.

In the type of machine referred to, as at present constructed, the padding or covering on each roll is secured at its inner end to the roll and is wound thereabout to the desired thickness, the outer end being left free. As the outer surface of the covering is constantly caused by rotation of the rolls to frictionally engage the face of the ironing bed or the work thereon, it is caused to wind tighter and tighter about the roll, with the result that the covering soon becomes hard and unfit for proper ironing. The proper adjustment of the rolls with respect to the ironing bed is also destroyed by such winding of the covering since the diameter of the covered roll is reduced by such tightening of the covering.

It is therefore the object of this invention to provide a means for preventing such objectionable winding of the padding or covering about the rolls; more particularly, to provide means for increasing the tendency of the covering to overcome the friction or gripping action between the outer surface of the roll covering and the face of the ironing bed; or in other words, to increase the slip action between these two surfaces, thereby decreasing the danger of the covering being caused to wind.

Likewise it is the object of this invention to provide such a machine in which the pressure of the rolls upon the ironing bed can be increased without increasing the danger of the covering on the rolls wrapping or winding thereabout.

More particularly, it is the object of this invention to provide means for maintaining the convolutions of the covering in distended condition, the force of such means being equal to or greater than that of the frictional surface engagement between the covering and the ironing bed.

It is the further object of this invention to provide such distending means of such character as will yield sufficiently for the safe passage of buttons and the like; furthermore, to interpose such distending means between the convolutions of the covering, partly or entirely throughout the same; and, more particularly, to provide a metallic mesh or other suitable material as such distending means.

Other objects of the invention will be apparent from the following description and claims when considered together with the accompanying drawings.

Fig. 1 is an end view, partly in section through the roll trunnion and showing the invention applied to an ironing machine; and Fig. 2 is a detail cross section of a roll covered according to my invention.

The present invention is designed for use in connection with any type of ironing machine utilizing a padded roll whether the machine be one having heavy rolls pressed toward the work by springs, or whether the weight of the roll is counter-balanced by the lower springs which carry the weight of the roll and leave the ironing pressure to the upper springs entirely. These various types of machines are common and well known in the art.

In the arrangement shown in the drawings, the machine frame (not shown) supports a hollow ironing bed 3 which is adapted to be supplied with steam or other heating medium through the pipe 4, there being another pipe, not shown, for establishing circulation. This is a structure which is common to many types of flat work ironers. Mounted for vertical sliding movement in the frame are roll bearings 5 receiving the trunnions 6 of the roll 7. The guides are usually made with parallel sides and the bearings are square or rectangular so as to slide nicely in these guides. The sliding movement of the bearings is toward and from the bed.

Each bearing is provided with a downwardly extending spring pilot 17 adapted to engage in the lower pressure spring 18. In the case of each roll this pressure spring 18 nests in a socket 19 arranged in a spring yoke 20. This spring yoke on each side of the socket 19, is provided with a pair of ears 21 each receiving a pin 22 passing through an eye 23 of a lower spring adjusting bolt 24. As above indicated there are two of the adjusting bolts and the upper ends thereof are threaded and pass through lugs 25 forming a part of a bracket or support 26 secured to a stationary part such as the iron-

ing bed by means of bolts 27. Each of the bolts 24 is provided with a nut 24' to provide adjustment of the springs.

The present invention consists in associating with the presser roll covering of cloth or other suitable material a flexible body which will maintain the roll covering in proper distended condition so as to prevent tightening of the same about the roll and at the same time to permit safe passage of buttons and the like through the machine without breaking. As one form of illustration, I have here shown a continuous strip of metallic mesh 38 wound with the covering 39 in convolute form about the roll 7, the metallic mesh lying beneath the covering 39 throughout the convolutions. The inner end of each of the metallic mesh 38 and covering 39 is attached to the roll while the outer end of each is free.

As above explained, the slip action between the roll covering and the ironing bed, due to the flexibility of the metallic mesh, will prevent the outer end of the covering from binding against the ironing surface and accordingly increase the resistance of the covering to being wound tighter and tighter about the roll. At the same time the metallic mesh will "give" sufficiently to permit buttons and other irregularities to pass without injury. Furthermore, since the present form of covering does not have the same tendency to wind or wrap about the roll as in the case of the ordinary roll, it follows that with the present improvement greater pressure can be exerted upon the roll, there being an intimate relation, in the case of the ordinary roll, between the pressure upon the roll and the tendency of the covering to wrap or wind. Likewise, a roll covered according to the present invention can be operated for a considerably longer time than the ordinary roll without have to adjust the roll towards the ironing surface because of the decrease in diameter of the roll due to winding of the covering thereabout.

Having described my invention, I claim:

1. In an ironing machine, the combination of an ironing bed, a roll, a covering in layers on said roll, means having a tendency to unwind and interspersed between said layers for counteracting the winding tendency of the covering about the roll during the ironing operation, and means for rotating said roll.

2. In an ironing machine, the combination of an ironing bed, a roll, a covering in layers on said roll, means for rotating said roll, and means interspersed in said covering tending to resist winding of said covering about said roll during the ironing operation.

3. In an ironing machine, a presser roll, a convolute covering on said roll, and means cooperating with each of the successive layers of the covering to maintain the same in distended condition during rotative engagement with an ironing bed.

4. In an ironing machine, a presser roll, a convolute covering on said roll, and a spring like convolute wound in with the covering to maintain the same in distended condition during rotative engagement with an ironing bed.

5. In an ironing machine, a presser roll, a convolute covering on said roll, and a foraminous flexible medium wound in with said covering to maintain the same in distended condition during rotative engagement with an ironing bed.

In testimony whereof I hereby affix my signature.

BLUFORD W. BROCKETT.