June 9, 1931. H. HEMMERICH 1,809,122

FABRIC CLEANING MECHANISM

Filed Sept. 4, 1929

Fig. 1.

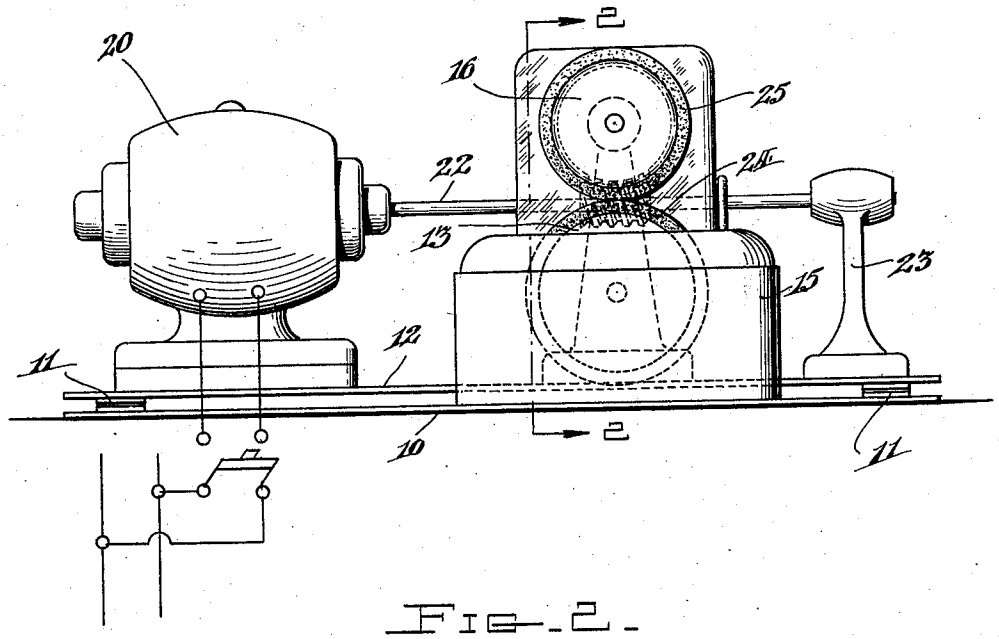
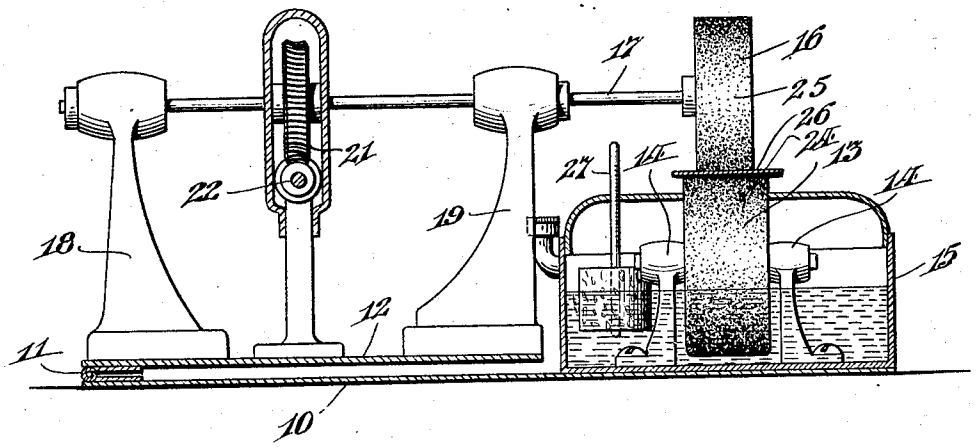


Fig. 2.



INVENTOR:
Hugo Hemmerich,
BY W. F. D. Mseward
ATTORNEYS.

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UNITED STATES PATENT OFFICE

HUGO HEMMERICH, OF WYOMISSING, PENNSYLVANIA, ASSIGNOR TO BERKSHIRE KNITTING MILLS, OF WYOMISSING, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA

FABRIC CLEANING MECHANISM

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The present invention relates to mechanism for cleaning fabrics or the like and particularly to those that clean by scrubbing or abrading action.

The improved mechanism is constructed so as to adapt it to the scrubbing of delicate fabrics, as for example silk stockings without danger of damaging the structure thereof and where desired to apply a cleaning substance thereto during the scrubbing action. In the present embodiment, the scrubbing action is accomplished by the provision of a pair of wheels or rollers mounted in superposed peripheral contact, one of the wheels being positively driven and the other wheel frictionally driven thereby. The upper wheel is mounted to rest by restricted gravity upon and in yielding contact with the lower one so as to accommodate itself to any undue pressure exerted by the fabric being cleaned as it passes between the wheels and the peripheries of the wheels are covered with yielding material which may be of an absorbent nature adapted to satisfactorily feed the cleaning material. One of the wheels may be mounted to extend or dip into a receptacle containing such cleaning substance and deliver the same to the fabric being cleaned and to the peripheral covering of the other wheel.

The accompanying drawings illustrate an embodiment of the invention, the novel features of which are particularly pointed out in the appended claims.

Fig. 1 is a side elevation of the mechanism illustrating the relation of the elements.

Fig. 2 is a section on line 2—2 of Fig. 1 further illustrating this relationship.

Referring now to the drawings in detail. 10 designates a stationary base to which is secured as by hinges 11, a movable base plate 12 affording a support for certain of the scrubbing mechanism as will presently be set forth.

The scrubbing mechanism of the machine comprises a lower wheel 13 journaled to supports 14 within a receptacle 15 secured to the stationary base 10 and cooperating with the lower wheel is a second wheel 16, which is secured to a shaft 17 journaled to supports 18 and 19 which are carried by the movable base plate 12, so that said wheel 16 is positioned to yieldingly rest by gravity upon the wheel 13, in superposed peripheral contact therewith; the overhanging weight upon the base plate 12, beyond the hinged connection of the latter, as indicated, providing a definitely limited gravity pressure upon the lower wheel.

One of the wheels, in the present case the upper wheel 16, is positively driven by a suitable motive power, and the other wheel is frictionally driven through the peripheral contact between the wheels. In the present showing a motor 20 is provided to this end, which may be mounted as shown upon the plate 12, in order to increase the pressure exerted by the upper wheel on the periphery of the lower wheel. Driving connection between the motor and the wheel driven thereby is effected by the worm and worm wheel connection 21 between the drive shaft 22 of the motor and the shaft 17 on which the wheel 16 is mounted; shaft 22, extending from the motor and being journaled at its opposite end in the support 23.

By the yielding relation of the wheels thus provided likelihood of damage to the fabric being cleaned is minimized and in order to further minimize this danger, the scrubbing wheels 13 and 16 may be one or both peripherally covered with yielding material as at 24 and 25 and this material may be of an absorbent nature as felt, where the cleaning material is of a fluid nature as is frequently the case.

The arrangement of the drive mechanism upon the base plate 12 and the positioning of the hinges 11 are such as to cause the desired pressure to be exerted on a strip of fabric 26 being treated and to this end it will be noted, the hinges are arranged along one edge of the base plate while the wheel 16 is spaced a considerable distance from this hinged edge.

Where the cleaning material used is liquid a suitable gauge 27 may be provided having a stem extending from the receptacle 15 and a float attached thereto and resting on the liquid.

In the operation of the machine herein dis-

closed the strip of fabric 26 as a stocking may be fed between the contacting peripheries of the wheels; and are drawn therebetween by the rotation of the wheels. This movement of the fabric is permitted to continue until the soiled portions or the spots which it is desired to eradicate have passed therebetween, whereupon the fabric is drawn back by the operator until the matter to be eradicated is passed in the opposite direction between the wheels; the upper wheel yielding under undue pressure between the wheels due to the hinged connection of the base plate with the base thus avoiding undue abrasion or tearing of the fabric being treated.

During this operation it will be noted that the positively driven wheel 16 is constantly driven in one direction and will therefore exert a scrubbing action on the fabric being treated when the same is reversed; these operations being repeated until the desired result is obtained.

In the meantime cleaning material is carried up from the receptacle 15 and delivered to the fabric by the wheel 13, and may be of any suitable character according to the nature of the stain or other matter desired to be removed.

It will be apparent from the above disclosure, that the invention may be varied as to details and other embodiments thereof may be developed by those skilled in the art to which the invention appertains. I desire, therefore, to be limited in the nature and application of my invention, only by the prior art and the scope of the appended claims.

What I claim is:

1. A fabric-cleaning mechanism comprising a fixedly mounted freely rotatable cleaning wheel, and a movable motor-carrying base plate upon which a coacting driven wheel is rotatively mounted so as to be yieldingly pressed by gravity into cooperation with said freely rotatable wheel.

2. A fabric-cleaning mechanism comprising a fixed base, a cleaning-material container thereon having mounted therein a freely rotatable projecting cleaning wheel, a motor base plate pivoted at one end to said fixed base, and a coacting cleaning wheel and motor mechanism for rotating the same mounted upon said pivoted base plate; said coacting wheel being cooperatively pressed by gravity toward the first wheel.

In testimony whereof I affix my signature.

HUGO HEMMERICH.