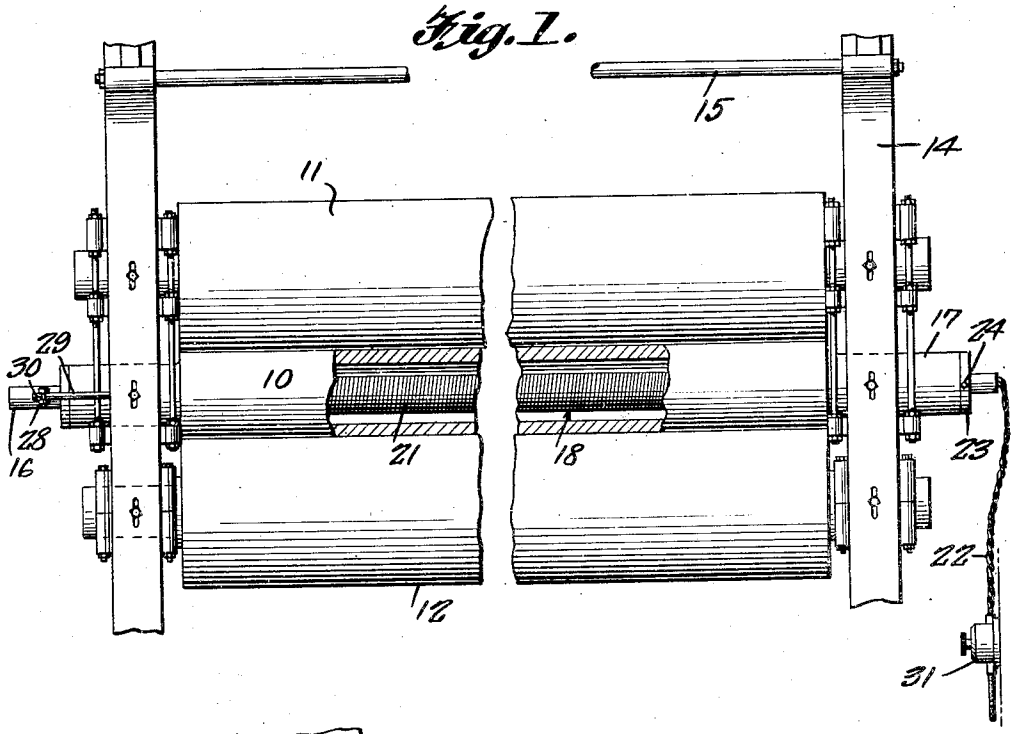
March 13, 1934. W. GIGLIOTTI 1,950,668

SCUTCHER CALENDERING ROLLER HEATER

Filed March 15, 1933 2 Sheets-Sheet 1

Fig. 1.



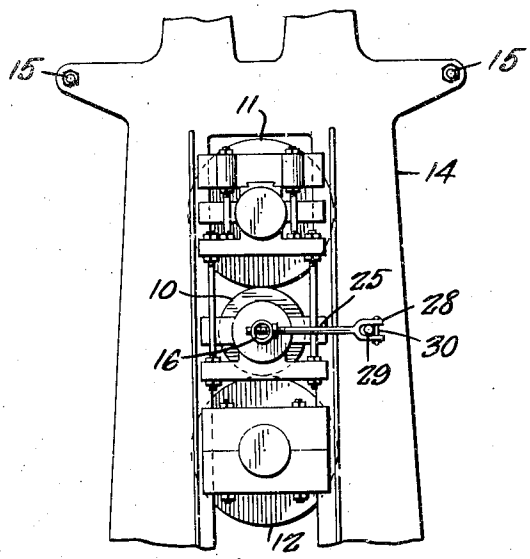


Fig. 2.

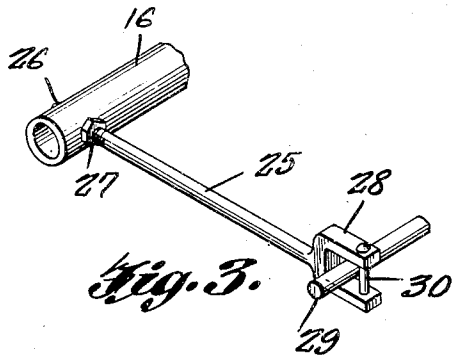


Fig. 3.

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Fig. 4.

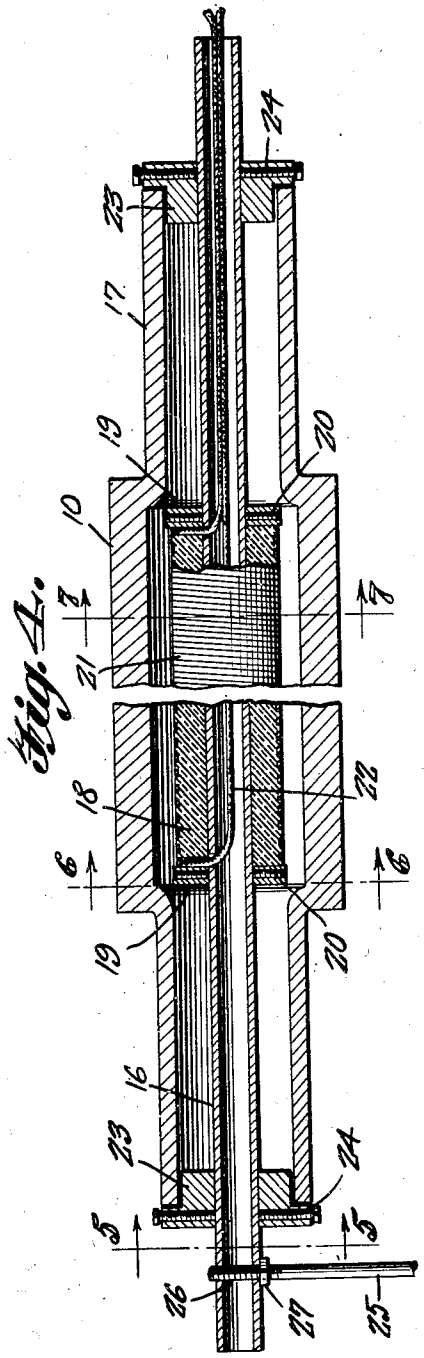


Fig. 7.

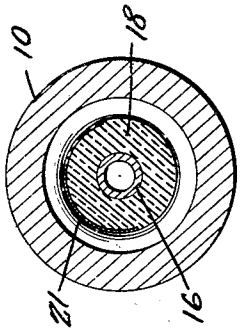


Fig. 6.

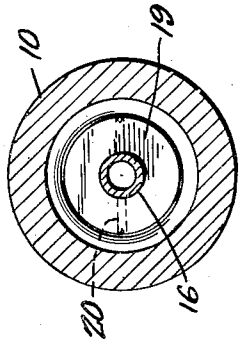
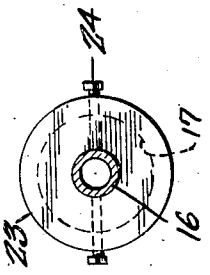


Fig. 5.



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Patented Mar. 13, 1934 1,950,668

UNITED STATES PATENT OFFICE

1,950,668

SCUTCHER CALENDERING ROLLER HEATER

William Gigliotti, North Adams, Mass.

Application March 15, 1933, Serial No. 660,924

1 Claim. (Cl. 219—19)

The object of the invention is to improve the construction of the calendering roll used on scutchers generally employed in the calendering rooms of textile mills, so that it may be possible to regulate with ease the heat applied to the roll; to provide a roll of the kind indicated in which the heating element is enclosed by the roll but the latter permitted free rotary movement around it without movement of any kind being imparted to the heater; and generally to provide a heater for such calendering rolls which is of simple form and susceptible of incorporation in conventional machines without modification of the latter.

With this object in view, the invention consists in a construction and combination of parts of which a preferred embodiment is illustrated in the accompanying drawings but to which embodiment the invention is not to be restricted. Continued use in practice may dictate certain changes or alterations and the right is claimed to make any which fall within the scope of the annexed claim.

In the drawings:

Figure 1 is an elevational view, partly broken away, of a portion of the frame and rolls of a scutcher showing the invention applied in operative position therein.

Figure 2 is an end elevational view of the structure of Figure 1.

Figure 3 is a detail perspective view of one end of the heater support and the means for retaining it against angular or turning movement.

Figure 4 is a longitudinal diametrical sectional view of a calendering roll with the invention mounted therein.

Figures 5, 6 and 7 are sectional views on the planes indicated by the lines 5—5, 6—6 and 7—7 respectively of Figure 4.

The conventional scutcher embodies the calendering roll 10 interposed between the upper and lower special rolls 11 and 12, all being mounted in bearings in side frames 14 which are suitably connected, as by cross rods 15 to combine them into a unitary structure.

The calendering roll 10 in operation is subjected to heat to be imparted by it to goods passing between it and the special rolls 11 and 12. It is essential that the roll 10 rotate, but it is preferable that the heating means be retained against rotation. There is, therefore, provided an arbor 16 which is preferably tubular in form, this arbor extending centrally through the roll 10 and through the journals 17 thereof, the journals being hollow, as is the case with the roll. Disposed upon the arbor and within the zone bounded by the ends of the roll proper, is a core 18 of insulating and heat resisting material. To preclude axial movement of this core on the arbor there are provided collars 19 secured to the arbor by set screws 20, these collars being disposed at opposite ends of the core and against the latter to prevent any movement of the core. Wound on the core is a heating coil 21, preferably of chrome wire, and its terminals are connected with the conductors 22 which are carried through the arbor and at one end thereof to a source of supply.

The roll 10 is supported on its journals 17 and in order that the arbor may be held axially in the roll, there are provided stepped collars 23 secured to the arbor by set screws 24 but adjacent the ends of the journals 17 of the roll 10, the shouldered portions of the collars abutting the ends of the journals. The reduced portions of the collars entering the ends of the roll journals thus maintain the arbor in axial coincidence with the roller and the shouldered portions preclude any axial movement of the arbor.

To provide against angular or turning movement of the arbor, the latter is equipped with an arm 25 threaded diametrically through the arbor at one end as indicated at 26 and locked in such engagement by a lock nut 27. The remote end of the arm is bifurcated as indicated at 28 and this bifurcated extremity straddles a stud 29 set in the outer face of one of the side frames 14. A pin 30 spans the arms of the bifurcated extremity of the arm 25, thus converting the bifurcated portion into a loop embracing the stud.

The heating coil 21 is electrically energized and, by the provision of the variable heat control, such as indicated at 31, various degrees of heat may be secured, this being transmitted to the roll 10 which, under such conditions, performs its calendering function in conjunction with the rolls 11 and 12. The collars 23 maintain the concentric relation of the arbor and its attendant coil and the roll 10, as well as serving to secure the arbor against axial movement. The arm 25 secures the arbor against angular or turning movement.

The heating equipment is easily removed for replacement or repair by loosening the collars 23, and the arbor and the coil and its core may be readily slipped out of the roll in a direction axially of the latter.

The invention having been described, what is claimed as new and useful is:

In combination with the calendering roll of a scutcher, said roll being hollow, of an arbor extending axially through the roll, a heating coil carried by the arbor, means for mounting the arbor in the roll, said means comprising stepped collars secured on the arbor having reduced portions entering the extremities of the roll and shoulders abutting the ends of the latter, and an arm extending radially from the arbor, the scutcher having a side frame provided with a member engaging said arm to preclude angular or turning movement of the same.

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