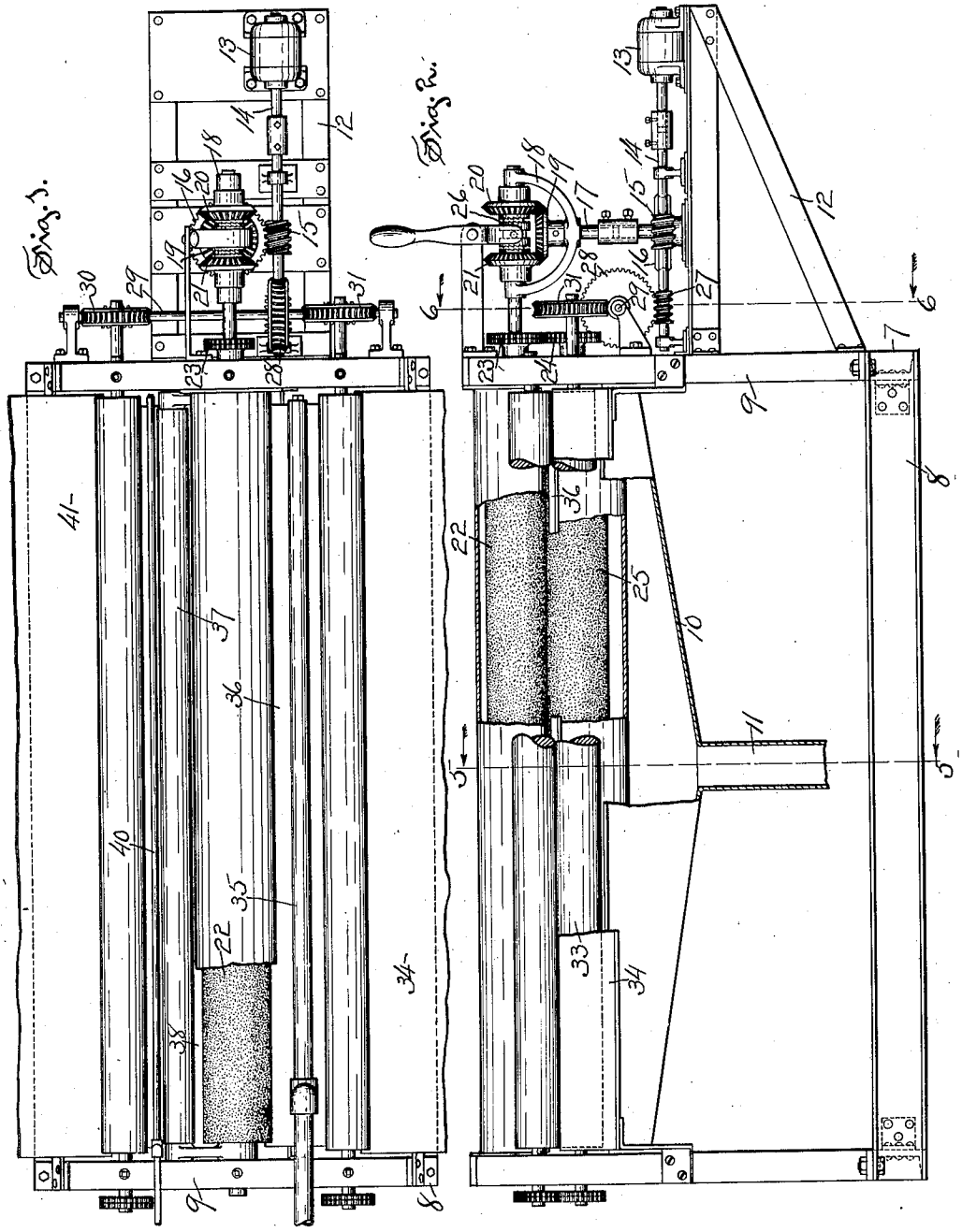
Oct. 22, 1929. W. V. HAAS 1,732,268

RUG WASHING MACHINE

Filed Oct. 27, 1926 2 Sheets-Sheet 1



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Fig. 3.

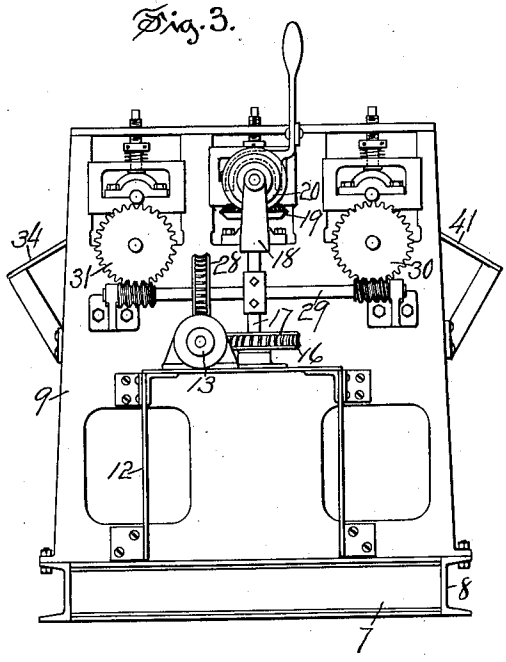


Fig. 4.

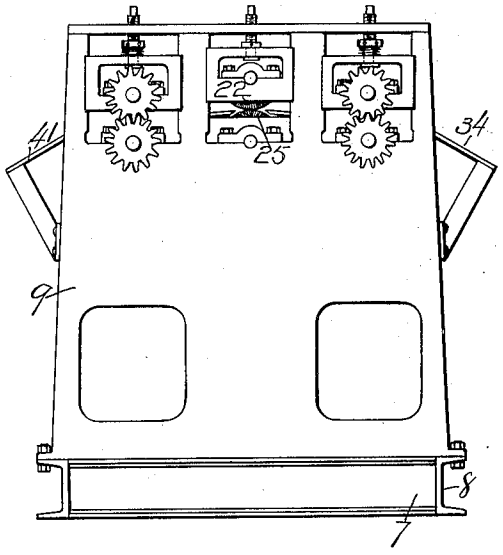


Fig. 5.

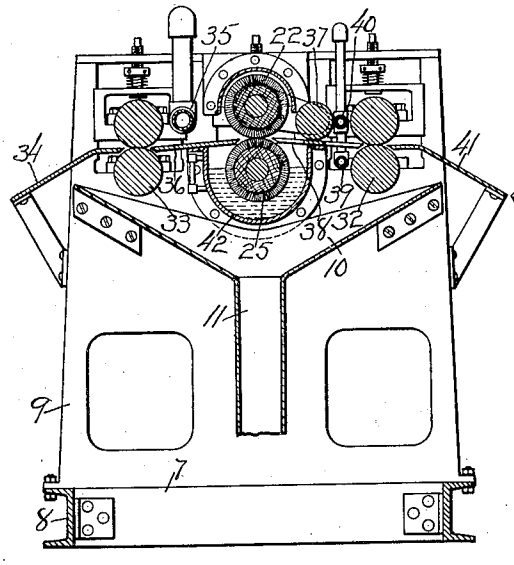
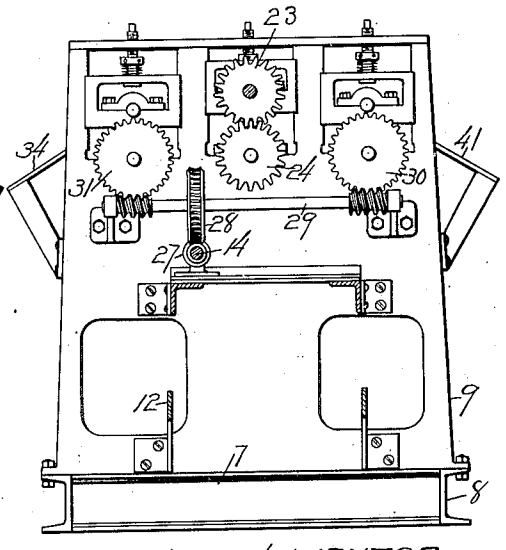


Fig. 6.



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UNITED STATES PATENT OFFICE

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RUG-WASHING MACHINE

Application filed October 27, 1926. Serial No. 144,619.

My invention relates to the class of machines employed for cleaning rugs, carpets, and other fabrics or materials, and an object of my invention, among others, is to provide a machine of this class that shall be simple in construction and particularly efficient in the results obtained thereby.

One form of a machine embodying my invention and in the construction and use of which the objects herein set out, as well as others, may be attained, is illustrated in the accompanying drawings, in which—

Figure 1 is top view of my improved machine with parts broken away to show construction.

Figure 2 is a view in front elevation of the machine with parts broken away to show construction.

Figure 3 is an end view looking at the right hand end of the machine as seen from Figures 1 and 2, some of the parts beyond being omitted for the sake of clearness.

Figure 4 is a view of the opposite end of the machine.

Figure 5 is a view in section on a plane denoted by the dotted line 5—5 of Figure 2.

Figure 6 is a view in section on a plane denoted by the dotted line 6—6 of Figure 2.

That form of the machine illustrated in the drawings herein embodies a frame comprising a base formed of end rails 7 and side rails 8 with ends 9 secured to and rising from the base, said ends being connected and suitably supported above the base by a trough 10 having an outlet 11. A bracket 12 is secured to one end of the machine and supports a driving mechanism therefor, such mechanism comprising a motor 13 suitably connected with a driving shaft 14 having a worm 15 in mesh with a worm wheel 16 secured to a connecting shaft 17 supported in any suitable manner by the bracket 12, and such support includes a yoke 18. A bevel gear 19 is secured to the shaft 17 and meshes with two direction bevel gears 20—21 secured to the shaft of an upper cleaning roll 22 operatively connected as by means of gears 23—24 with a lower cleaning roll 25, said cleaning rolls being of any suitable construction for cleaning purposes that may be required of the machine.

A reversing clutch member 26 is splined to the shaft of the cleaning roll 22, said member being adapted to be engaged with clutch members on the hub of the gears 20—21, whereby the oppositely rotating rolls 22—25 may be driven first in one direction and then in opposite directions, for a purpose to be hereinafter described. The shaft 14 has a second worm 27 meshing with a worm wheel 28 on a connecting shaft 29 mounted in bearings on brackets on one of the ends 9, and as shown in Figure 3 of the drawings. The shaft 29 has two worms meshing with worm wheels 30—31 secured to the shafts of underfeed rolls 32—33, each forming one of a pair of feed rolls, which pairs are mounted on opposite sides of the cleaning rolls 22—25.

A receiving table 34 is located in front of the pair of rolls including the roll 33, and a supply pipe 35 for a cleaning solution, as soap and water or a similar preparation, extends between said feed rolls and cleaning rolls for the purpose of supplying such solution to a rug or carpet passing from the rolls 33 across a table 36 to the cleaning rolls.

A squeeze roll 37 is located over a table 38 located between the cleaning rolls and the feed rolls comprising the roll 32, and tubes 39—40 are located in front of said feed rolls for the purpose of delivering a rinsing solution, as pure water, to a rug, carpet or like fabric passing to said feed rolls and from which said rug or carpet passes over a delivery table 41.

The roll 37 acts as a squeeze roll to eject the soapy water or other cleaning solution, after which the rug or carpet is subjected to the rinsing solution from the pipes 39—40 and it is then subjected to the action of the feed rolls, comprising the roll 32, which also act as wringers to squeeze as much of the liquid as possible from the fabric.

In the operation of the device the clutch member 26 is engaged with that gear 20 or 21 to cause rotation of the cleaning rolls in a direction to feed the fabric toward the rolls comprising the roll 32, the peripheral speed of the cleaning rolls, however, being somewhat

greater than that of the fabric, so that a scrubbing action is imparted by the rolls to the fabric. The cleaning solution is applied to the fabric from the pipe 35 and after passing the cleaning rolls the fabric passes between the table 38 and squeeze roll 37 thereby removing a large portion of the cleaning solution. Rinsing solution is then applied to the fabric from the pipes 39—40, and such fabric passing between the rolls including the roll 32 is subjected to a wringing action to remove all of the moisture that is practical.

At the same time, after the fabric has been engaged by the rolls, including the roll 32, and before such fabric is released from the rolls including the roll 33, the clutch member 26 is shifted to reverse the movement of the cleaning rolls so that instead of promoting the feed of the fabric through the machine such cleaning rolls will oppose such feed, with a result that after the fabric has been freed from the action of the feed rolls including the roll 33 a tension will be preserved on the fabric and it will be maintained taut until after it is freed from the cleaning rolls.

A vat 42 is located under the roll 25 to contain a cleaning fluid, as soap and water, within which said roll is partially submerged, one surface of the fabric being thus supplied with the cleaning fluid from the supply pipe 35 and the under surface being supplied from said vat.

In accordance with the provisions of the patent statutes I have described the principles of operation of my invention, together with the device which I now consider to represent the best embodiment thereof; but I desire to have it understood that the device shown is only illustrative and that the invention may be carried out by other means and applied to uses other than those above set out.

I claim—

1. A fabric cleaning machine including a frame, a pair of cleaning rolls rotatably mounted in the frame, means for feeding a fabric to and for moving it away from said rolls, and means for reversing the direction of rotation of said rolls.

2. A fabric cleaning machine including a frame, a pair of cleaning rolls rotatably mounted in the frame, pairs of feed rolls rotatably mounted on opposite sides of the cleaning rolls to feed a fabric to and to remove it from said cleaning rolls, and means for reversing the direction of rotation of said cleaning rolls.

3. A fabric cleaning machine including a frame, a pair of cleaning rolls rotatably mounted in the frame, means for feeding a fabric to said rolls, a stationary table to receive said fabric from said cleaning rolls, a squeeze roll pressing against said table, means to supply a rinsing fluid to the fabric after it passes the squeeze roll, and a pair of wringing and feed rolls to move the fabric from the cleaning rolls.

4. A fabric cleaning machine including a frame, a pair of cleaning rolls rotatably mounted in the frame, means for feeding a fabric to said rolls, a stationary table to receive said fabric from the cleaning rolls, a squeeze roll pressing against said table, means to supply a rinsing fluid to the fabric after it passes the squeeze roll, a pair of wringing and feed rolls to move fabrics away from the cleaning rolls, and means for reversing the direction of rotation of the cleaning rolls.

5. A fabric cleaning machine including a frame, a pair of cleaning rolls rotatably mounted in the frame for passage of a fabric between them, means for feeding a fabric to and for moving it away from said rolls in a continuous forward direction, and means for reversing the direction of rotation of said cleaning rolls.

6. A fabric cleaning machine including a frame, a pair of cleaning rolls rotatably mounted in the frame for passage of a fabric between them, means for feeding a fabric to and for moving it away from said rolls, and means for maintaining a tension on said fabric after it has passed from both of said first pair of feed rolls.

7. A fabric cleaning machine including a frame, a pair of cleaning rolls rotatably mounted in the frame for passage of a fabric between them, means for feeding a fabric to and for moving it away from said rolls, and means for obtaining a reverse action of both of said cleaning rolls on said fabric while moving the fabric continuously in a forward direction.

8. A fabric cleaning machine including a frame, a pair of cleaning rolls rotatably mounted in the frame for simultaneous action on a fabric passed between them, means for feeding a fabric to and for moving it away from said rolls, and means for obtaining a reverse action of said cleaning rolls on said fabric in its passage between said feeding means and said rolls.

WILLIAM V. HAAS.