Aug. 28, 1928.

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J. W. BERCAW

CENTRIFUGAL MACHINE

Filed Nov. 9, 1921

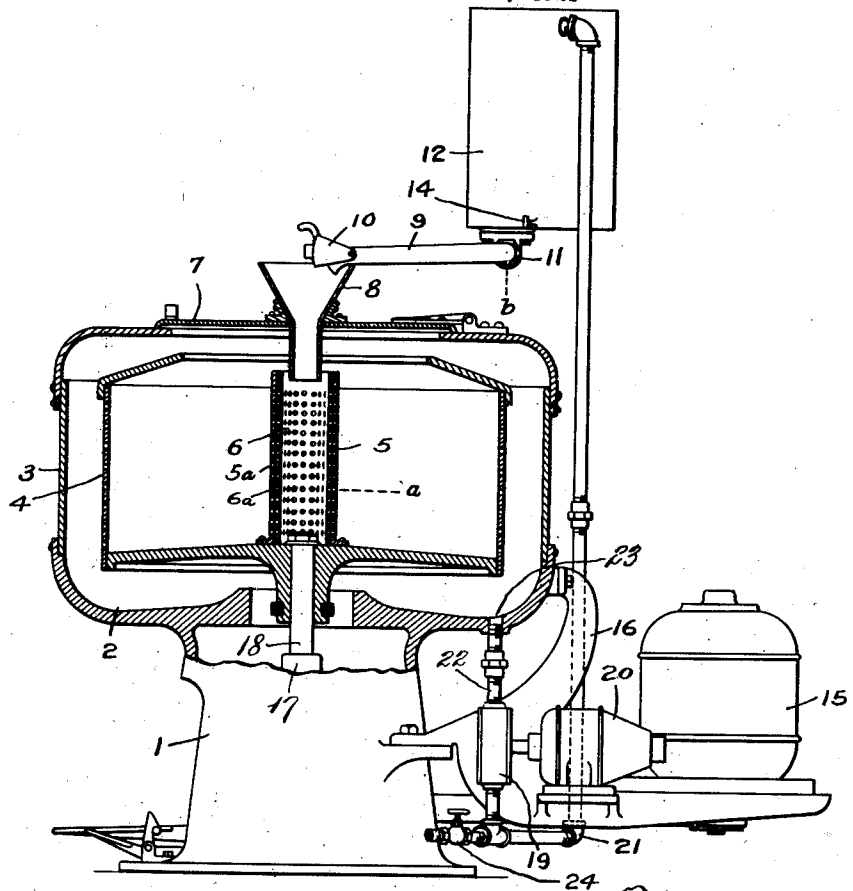


FIG. 1

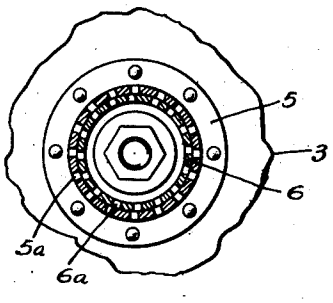


FIG. 2

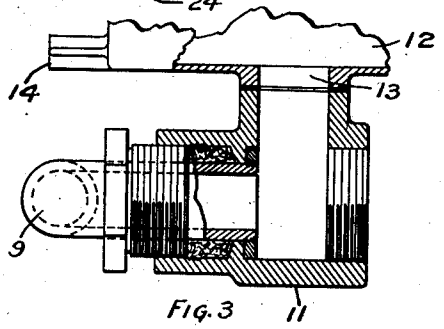


FIG. 3

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UNITED STATES PATENT OFFICE.

JOHN W. BERCAW, OF HAMILTON, OHIO, ASSIGNOR TO THE AMERICAN LAUNDRY MACHINERY COMPANY, OF NORWOOD, OHIO, A CORPORATION OF OHIO.

CENTRIFUGAL MACHINE.

Application filed November 9, 1921. Serial No. 514,055.

This invention relates to improvements in centrifugal machines adapted for use, for instance, in starching or dyeing clothes in laundries.

The objects of this invention are to provide centrifugal means for distributing starch, dye or the like to the work to be treated, with simple and improved means for varying the capacity of discharge of said distributing 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 a view partly in section and partly in elevation of a machine embodying my invention; Fig. 2 is a transverse sectional view taken on the plane indicated by the letter "a" on Fig. 1; and Fig. 3 is a detail view of the swivel connection for the supply pipe.

The base 1 of the machine supports a circular trough 2 upon which is mounted the curb 3 within which is rotatably mounted the perforated work receiving basket or container 4. Within the central portion of said perforated basket 4 there is arranged a distributing container 5, the cylindrical wall of which, with its perforations 5^a, being secured to the base portion of the work container 4 by any suitable means. A sleeve 6 provided with a plurality of perforations 6^a fits within the distributing container 5 and is adapted for rotatable adjustment therein so as to vary the size of the distributing passages 5^a 6^a through said sleeve and the wall of said distributing container as clearly appears in Fig. 2 of the drawings. A cover 7 is provided upon the top of curb 3 to close the opening therethrough and extending through the cover 7 is a funnel 8 which is adapted to feed into the container 5 material such as starch, dye or the like which is supplied through the pipe 9. Such feeding is controlled by the valve 10 on the discharging end of the pipe 9, this pipe having a swivel connection at 11 with the feed opening 13 provided in the bottom of the storage or supply tank 12. Thus the pipe 9 is adapted to be swung out of the way when not in use and can rest against the stop 14 provided upon the lower part of the tank 12. The basket 4 is rotated by means of the motor 15 which is mounted upon the bracket 16 on the frame or base portion of the machine. Driving connection from the motor 15 to the basket 4 is provided by means of the pulley 17 on the spindle 18 upon which the basket 4 is mounted. The geared pump 19 which is operated by the motor 20, also suitably mounted upon the bracket 16, is adapted to force the excess starch, dye, or the like from the channel 2 into the opening 23 and thence into pipe 21 which leads to the top of the supply tank 12. A valve 24 controls a discharge from the lower portion of the circulating system just now referred to.

The materials to be treated, that is to be starched, dyed or the like, are placed in the basket and the starch may be placed directly in the distributing container 5 or can be fed thereinto from supply tank 12 into the pipe 9 to the funnel 8 upon opening the valve 10 of said pipe. That is, starch can be placed in the container 5 either before the operation of the machine or during such operation. Then upon starting the motor 15 so as to rotate the basket 4 the container 5 containing the starch will also be rotated and by centrifugal force the starch will be forced out through the distributing passages 5^a, 6^a so as to saturate the clothing or other work contained within the basket. Any excess starch or dye will likewise be thrown out through the openings in the side walls of the container 4 and will drain out through the trough opening 23 into the pipe 22 to be pumped up through the pipe 21 to the storage tank 12 to be used over again.

When it is desired to clean the device, tank 12 is filled with water which is then flushed through the same circuit as just now recited for the starch or dye and when finally the device has been thoroughly cleaned the water can be drained out through the valve 24.

What I claim is:

1. A device of the character described comprising a container for the work to be treated, a smaller foraminous distributing container centrally mounted within said work container and of a height corresponding to the depth of the outer work container, means for rotating said inner container as the outer one rotates, and means for uniformly varying the foraminous characteristic of said distributing member thereby

producing uniform radial discharge of the treating medium throughout the height of the batch.

2. A device of the character described as in claim 1 wherein the distributing member is uniformly perforated throughout its height and circumference, and adjusting means is provided for uniformly varying the size of all said perforations in said distributing member.

3. A device of the character described as in claim 1 wherein the distributing member is carried by the outer container and is provided with perforations uniform in size throughout its height and circumference, and an adjusting sleeve provided with perforations like in number and arrangement to that of the distributing member and adapted for movement relative to said distributing member to uniformly vary the effective size of the perforations in said distributing member.

In testimony whereof I hereby affix my signature.

JOHN W. BERCAW.