No. 831,135. PATENTED SEPT. 18, 1906.

W. C. BARNARD.

CLOTHES WASHING OR CLEANING MACHINE.

APPLICATION FILED SEPT. 30, 1905.

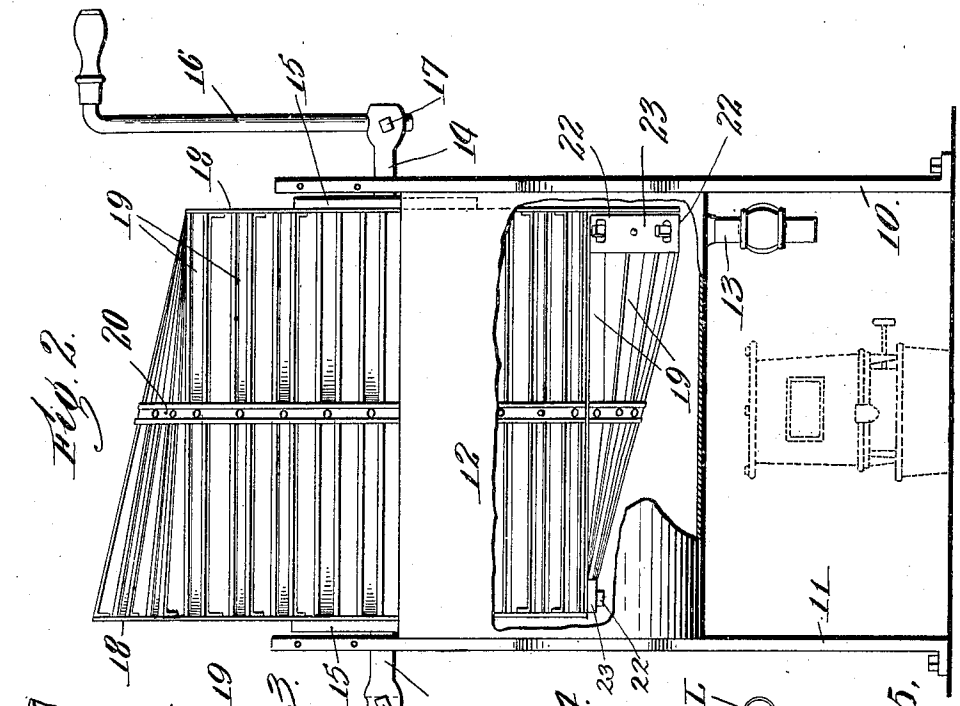

Fig. 2.

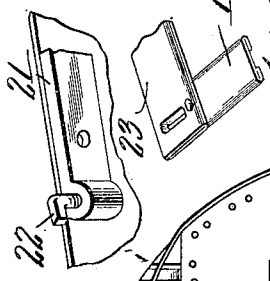

Fig. 3.

Fig. 4.

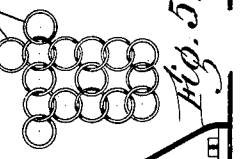

Fig. 5.



Fig. 1.

Witnesses:
C. F. Messer
E. M. Allen.

Inventor:
W. C. Barnard
By Attorneys
Southgate & Southgate

THE NORRIS PETERS CO., WASHINGTON, D. C.

# UNITED STATES PATENT OFFICE.

WILLIAM C. BARNARD, OF WORCESTER, MASSACHUSETTS.

## CLOTHES WASHING OR CLEANING MACHINE.

No. 831,135. Specification of Letters Patent. Patented Sept. 18, 1906.

Application filed September 30, 1905. Serial No. 280,748.

*To all whom it may concern:*

Be it known that I, WILLIAM C. BARNARD, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented a new and useful Clothes Washing or Cleaning Machine, of which the following is a specification.

This invention relates to that class of machines which employ revolving drums for containing clothes or material to be washed or cleaned.

The especial objects of this invention are to provide an improved construction of drum for machines of the class referred to and to combine the drum with devices for securing a scrubbing or beating action.

To these ends this invention consists of the machine for washing or cleaning clothes and of the combinations of parts therein, as hereinafter described and more particularly pointed out in the claims at the end of this specification.

In the accompanying drawing, Figure 1 is an end view, partly broken away, of a machine constructed according to this invention. Fig. 2 is a side view thereof, partly broken away. Fig. 3 is a detail perspective view of part of the left side of the removable cover and the means for fastening the same, and Figs. 4 and 5 are detail views of two kinds of devices for producing the desired scrubbing or rubbing action.

In that class of machines to which this invention relates when the drum or cylinder is turned centrifugal action will tend to hold the clothing or other material to be washed so that the same will be simply carried around with the periphery of the drum. To overcome this objection, I have provided a drum consisting, essentially, of two segmental disk-shaped heads which have their peripheries connected by cross-bars. The flattened or segmental parts of the drum-heads are arranged on relatively opposite sides of the axis, and I have found that by adopting this construction the clothing instead of simply being carried around with the periphery of the drum will also be shifted and rolled laterally, so as to produce a scrubbing or rubbing action, which will efficiently produce the desired cleaning. In addition to this, in order to get a more complete rubbing or scrubbing action I preferably employ metal balls and pieces of chain-cloth, which will hasten the action when rolled around in contact with the clothing.

Referring to the accompanying drawings and in detail, a machine constructed according to this invention, as herein illustrated, comprises the side frames or uprights 10 and 11. Fastened in and secured between the side frames 10 and 11 is a segmental trough 12. Near one side the segmental trough is preferably provided with an outlet-pipe 13, controlled by a hand-valve in the ordinary manner, and, if desired, the water contained in the trough 12 may be kept warm by a lamp stove or other heater, as shown by dotted lines in Fig. 2. Journaled in the side frames 10 and 11 are shafts 14, each of which is provided with a spider or branching arms 15, carrying one of the drum-heads 18. Each of the shafts 14 is bored transversely to receive the crank-handle 16, which may be fastened therein by a set-screw 17.

The plates or disks 18, which form the heads of the drum, are of segmental shape or are flattened along one edge. Connecting the drum-heads 18 are cross-bars 19. The cross-bars 19 are preferably made of sheet metal with crimped-over edges, and the ends of the cross-bars are bent in to form foot-pieces, which are riveted or otherwise secured substantially at the periphery of the drum-heads. A center band 20 is preferably employed for stiffening and reinforcing the cross-bars 19 near the center of the construction.

By arranging the flattened parts of the drum-heads on relatively opposite sides of the axis of the drum it will be seen that I have provided a form of drum which will first dip into the full depth of the trough at one side, then to the full depth of the trough for its entire width, and then to the full depth of the trough at the other side of the trough, and that the clothing or other material to be cleansed will not only be carried around with the periphery of the drum, but will also be rolled sidewise and thoroughly scoured. The clothing may be put into and taken out of the drum through a removable section or door. For this purpose I have provided small holding-pieces 21, which are secured to the drum-heads and have fastening-buttons 22 threaded therein. The door or removable section comprises cross-pieces 23, which are slotted to receive the fastening-buttons and which are connected by cross-bars

19. This section or door can be removed by turning the heads 22 so that they will pass through the slots in the door. These connections may be located at both ends of the door.

To increase the scrubbing or scouring action, I employ metal balls 24 and pieces of chain-cloth or linkwork L, as shown in Figs. 4 and 5, which are put into the drum.

In the particular construction which I have herein illustrated I have shown a machine particularly adapted for wetting and washing the clothing. It is to be understood, however, that by the particular construction designed by me I am enabled to provide a dusting or cleaning effect which may be secured without the use of water and without the wetting of the clothing, if desired.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In a machine of the class described, a pivotally-supported drum comprising two disks each having a flattened portion, said flattened portions being located at opposite sides of the axis on which the drum is pivoted, the disks being otherwise circular, and cross-bars extending from one disk to the other, said cross-bars constituting a portion of a cylinder except at the flattened portions of the disks.

2. In a machine of the class described, the combination of a drum consisting of two segmental disk-shaped heads having their flattened parts on relatively opposite sides of their axis, and cross-bars connecting the peripheries of said drum, with a movable section which can be opened to allow access to the inside of the drum, and means for pivotally supporting the drum.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

WILLIAM C. BARNARD.

Witnesses:
PHILIP W. SOUTHGATE,
MARY E. REGAN.