Sept. 16, 1924.

1,508,400

C. G. KRONMILLER

WASHING MACHINE

Filed Jan. 17. 1921

2 Sheets-Sheet 1

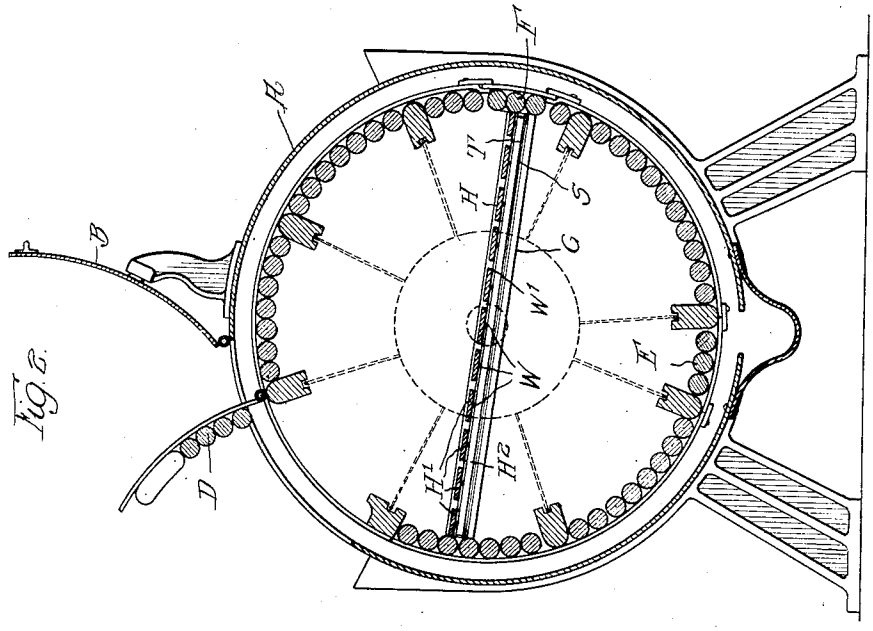


Fig. 2.

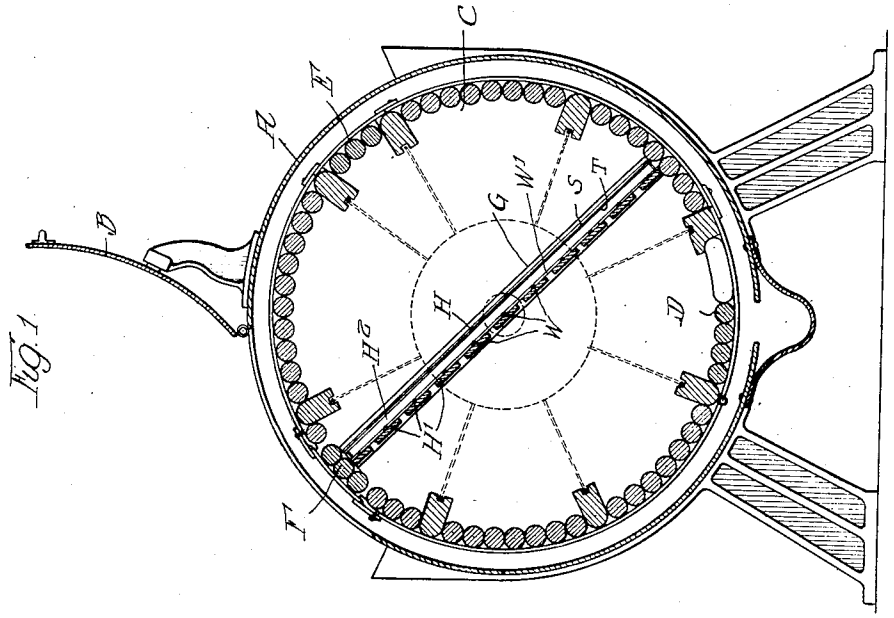


Fig. 1.

Witness:
R. Burkhardt.

Inventor:
Carl G. Kronmiller,
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Fig. 4.

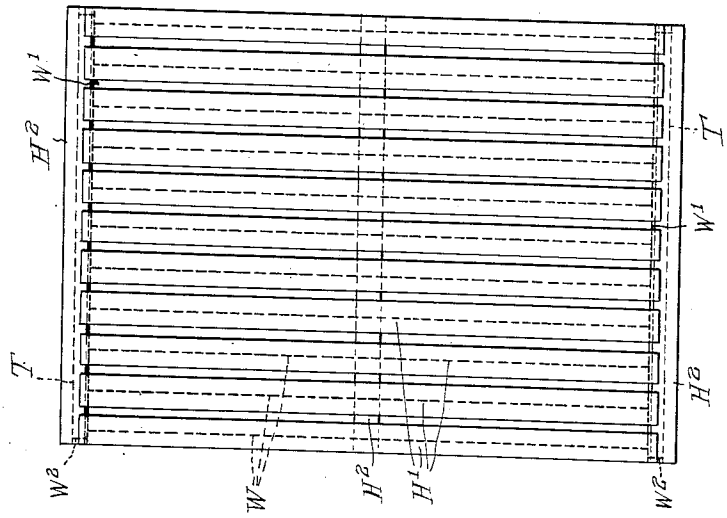
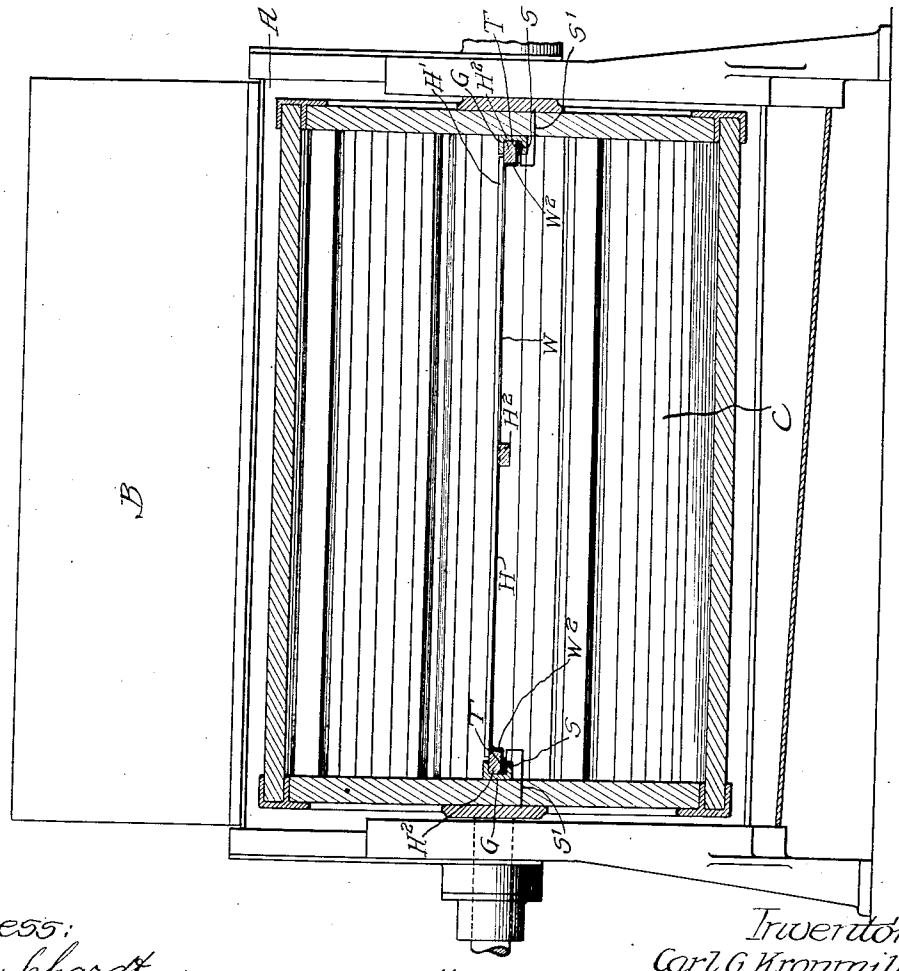


Fig. 3.



Witness:
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Patented Sept. 16, 1924. 1,508,400

UNITED STATES PATENT OFFICE.

CARL G. KRONMILLER, OF CHICAGO, ILLINOIS, ASSIGNOR TO TROY LAUNDRY MACHINERY CO. LTD., OF CHICAGO, ILLINOIS, A CORPORATION OF NEW YORK.

WASHING MACHINE.

Application filed January 17, 1921. Serial No. 437,695.

To all whom it may concern:

Be it known that I, CARL G. KRONMILLER, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Washing Machines, of which the following is a specification.

This invention relates to machines for washing clothing or other goods, and particularly to means embodied in such a machine for catching a load of goods and raising it to a level above the cleaning fluid so that the goods will quickly drain and can be more promptly removed from the machine.

The object of the invention is to provide an improved construction of unloading shelf serving this purpose.

It has heretofore been the practice to introduce an unloading shelf into a rotary cylinder of a washing machine and to support it in a diametric position therein so that when the cylinder is revolved the load of goods will be picked up by the shelf and held above the level of the cleansing fluid, where they may drain preliminarily to removing them from the machine. Such unloading shelves, however, have generally been introduced through one of the existing doors of the cylinder and have required the manipulation of special means for securing them in place.

The present invention provides a special opening in the cylindrical wall of the cylinder through which to introduce the unloading shelf, which opening is developed by rendering removable a relatively narrow panel of such cylindrical wall. Within the cylinder, and in registry with the special opening thus provided, are located slide tracks or guides adapted to receive the shelf by the mere act of sliding it edgewise through the opening, and adapted to confine the shelf (when so introduced) against displacement during the revolution of the cylinder; the removable panel being returned to its position in the cylindrical wall and serving, through the medium of releasable catches, to hold the shelf against withdrawal.

The development of static electricity in a washing machine, and particularly in a machine used for the so-called purpose of dry cleaning, has long been recognized, and it is a practice to wire non-conducting parts of the apparatus in order to connect them with the conducting parts of the frame or mechanism, in other words, to "ground" such portions of the machine in order to prevent the accumulation of static charge which might otherwise ignite inflammable ingredients of the washing fluid in case of sparks incident to a discharge through the body of the operative. The present invention provides an advantageous method of wiring the unloading shelf against the accumulation of static electricity and insuring, automatically, the grounding of the shelf by the mere act of introducing it into the cylinder. This is accomplished by distributing through the slats, battens, or other elements of the shelf, suitable wires sufficient to conduct away any electricity that may be generated, and introducing, as a portion of the grounding circuit, contacts upon the shelf which are connected up with the several collecting wires, and contacts upon the supporting and confining guides which are connected up with the iron frame or other grounded portion of the machine.

In the accompanying drawings—

Figures 1 and 2 are transverse sections of a machine in which the subject-matter of the present invention is embodied, the cylinder being shown in two positions, namely, the position at which the unloading shelf may be introduced into the cylinder, and the position in which the shelf sustains the load of the goods above the level of the fluid and within convenient reach from the door through which they are removed.

Figure 3 is a vertical axial section of the machine showing the relation of the unloading shelf to the guides in which it is supported, and the electrical connection through which accumulation of static electricity is avoided; and

Figure 4 is a plan view of the unloading shelf removed from the machine.

A represents the shell of a cylinder washing machine having a door B affording access to the interior thereof, and C represents a cylinder trunnioned within the shell A to adapt it to revolve therein, constructed with a door D through which to introduce and remove goods to be cleansed, and adapted to confine a load of goods and agitate them by its rotation within the shell. The cylinder may also be provided with a so-called clean-out door E, preferably at a

point in the circumference of the cylinder remote from the main door D. Located at another point in the circumference of the cylinder, and at the end of a diameter which will lie substantially horizontal when the door D is accessible to the operative, is a removable panel F, and extending substantially diametrically from the opening provided by the removal of said panel are guide rails or tracks G adapted to receive an unloading shelf H and hold the latter in position to present the load above the level of the cleansing fluid and within convenient reach from the door D when the cylinder is in position to permit said door to open. Panel F is secured in position, preferably as a part of the cylindrical wall of the cylinder, through means of latches F′, and when so secured will prevent the unloading shelf H from moving outwardly in the guides G. Said guides and the opposite wall of the cylinder confine the unloading shelf in all other directions. It will thus be seen that by the described means the cylinder is provided with an unloading shelf accurately positioned within the cylinder, with a minimum expenditure of time and maximum security by the mere act of removing the panel F, sliding the shelf in place, and returning the panel to position.

In order to wire the unloading shelf H for the discharge of static electricity, each of its slats H′ is provided with a wire W, and each of its battens H^2 is provided with a wire W′ connected to the wires W through branch conductors W^2, which may be additional wires, rivets which hold the parts of the shelf together, or other suitable parts of conducting material; and the unloading shelf H is automatically grounded by the act of introducing it into its guides G by providing on the under faces of the battens H^2 terminals T of copper or other suitable material in position to lie upon the strip S located along one of the opposing faces of the guide G, and which strips are connected in some suitable manner, as, for instance, by wires S′ to the trunnion X or other conveniently available metal part of the machine through which discharge may take place to the external frame.

I claim:

1. A washing machine comprising a cylinder, an unloading shelf within said cylinder, static discharge wiring incorporated with said shelf, and means for grounding said wiring upon the machine when the shelf is in position in the machine.

2. A washing machine comprising a cylinder, an unloading shelf for said cylinder, supports carried by the machine and adapted to receive said shelf, static discharge wiring incorporated in said shelf, and grounding connections carried by said supports automatically entering into circuit with said wiring by the introduction of the shelf into the machine.

3. A washing machine having an unloading shelf, guides mounted in said machine and constructed to permit the shelf to slide into engagement therewith, contacts of conducting material carried by said guides and suitably grounded upon the machine, and static discharge wiring incorporated in said shelf and having terminals in position to impinge upon said guide contacts when the shelf is introduced into the guides.

4. In a cylinder washing machine, a revolving cylinder having a door through which to pass goods to be cleaned, an unloading shelf, and means for supporting the unloading shelf in the cylinder comprising a pair of guides, static discharge conducting means incorporated with said shelf, conducting means upon said guides adapted to contact with said first mentioned conducting means, and means for grounding said conducting means.

5. A cylinder washing machine including a revolving cylinder having a door through which to pass goods to be cleaned, an unloading shelf, and means for supporting said unloading shelf in the cylinder comprising guides, said cylinder being provided with a removable part in the wall thereof in alignment with said guides, said shelf being provided with discharge wiring, means being provided for automatically grounding said wiring on the machine when said shelf is introduced into said guides.

6. A washing machine comprising a cylinder, a removable unloading shelf within said cylinder, static discharge wiring incorporated with said shelf, a door for said cylinder, means for holding said shelf in position regardless of the position of said door and means for grounding said wiring upon said machine when said shelf is in position in said machine.

7. A cylinder washing machine including a revolving cylinder having a door through which to pass goods to be cleaned, an unloading shelf, and means for removably supporting said shelf in said cylinder comprising guides, said cylinder being provided with a removable part in the wall thereof in alignment with said guides, for holding said shelf in position regardless of the position of said door, said shelf being provided with discharge wiring, means being provided for automatically grounding said wiring on said machine when said shelf is introduced into said guides.

Signed at Chicago, Illinois, this 7th day of January, 1921.

CARL G. KRONMILLER.