Jan. 12, 1926. 1,569,709

E. H. BURRAGE

WASHING MACHINE

Filed May 14, 1923 2 Sheets-Sheet 1

Fig. 1.

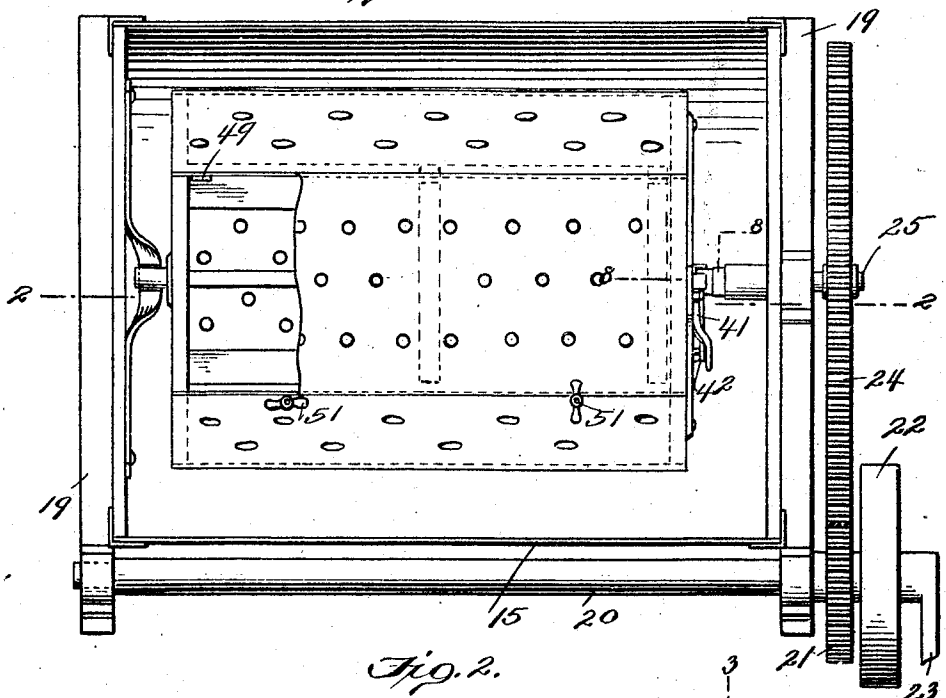
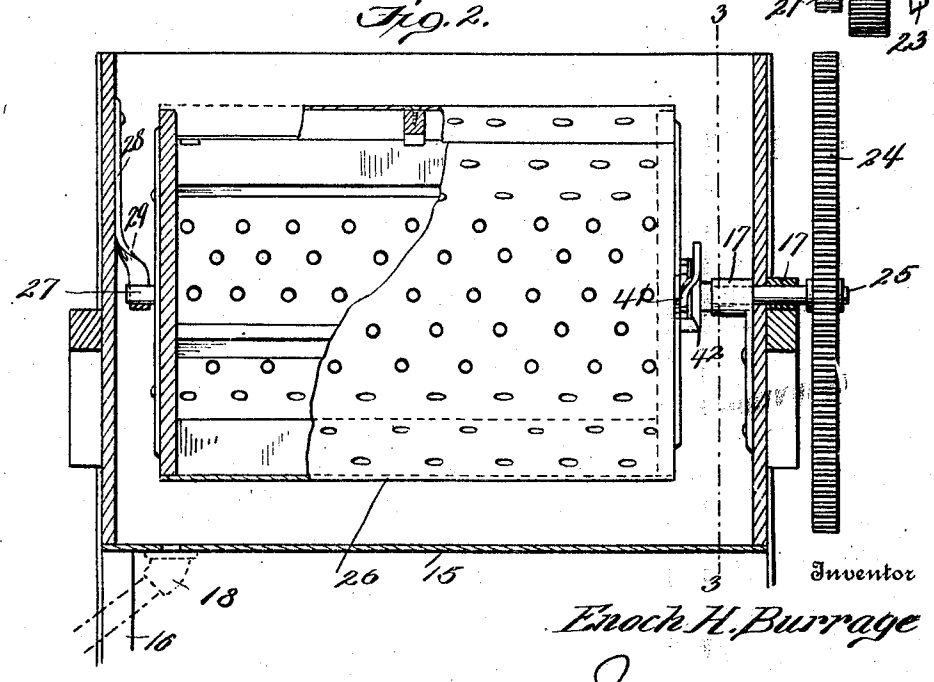


Fig. 2.



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Fig. 3.

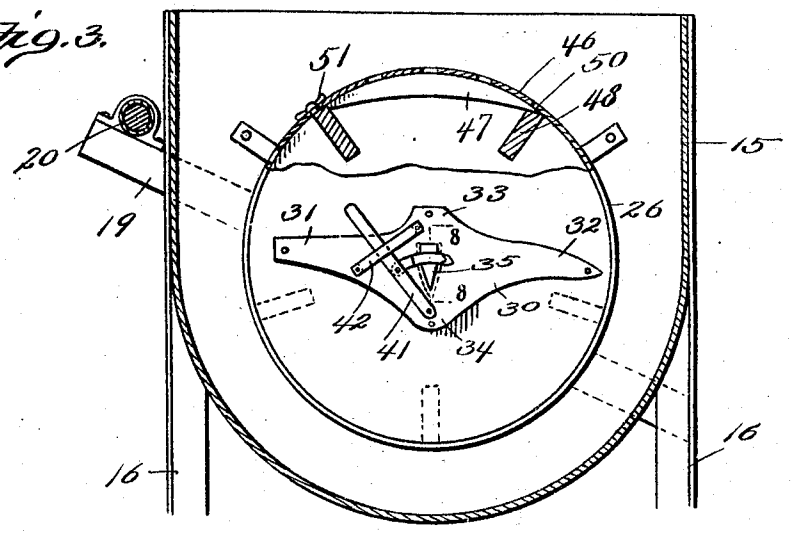


Fig. 4.

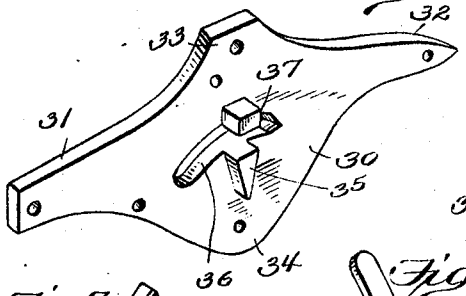


Fig. 5.

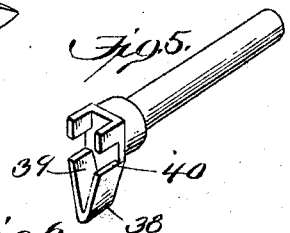


Fig. 8

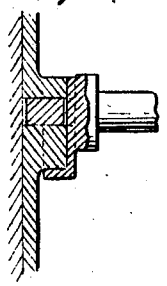


Fig. 7.



Fig. 6.

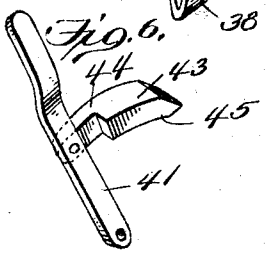
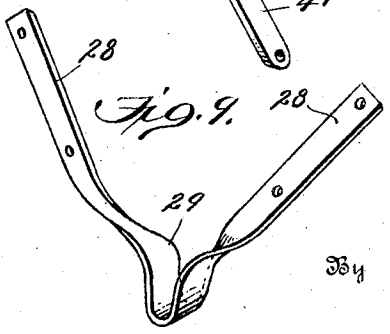


Fig. 9.



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Patented Jan. 12, 1926. 1,569,709

UNITED STATES PATENT OFFICE.

ENOCH H. BURRAGE, OF WINSTON-SALEM, NORTH CAROLINA.

WASHING MACHINE.

Application filed May 14, 1923. Serial No. 638,943.

To all whom it may concern:

Be it known that I, ENOCH H. BURRAGE, a citizen of the United States, residing at Winston-Salem, in the county of Forsyth and State of North Carolina, have invented new and useful Improvements in Washing Machines, of which the following is a specification.

The present invention relates to washing machines of the type in which there is a revoluble receptacle mounted in a tub or casing.

The principal object of the invention is to so mount a revoluble member in a fixed member that the said revoluble member may be readily removed from and replaced in the fixed member.

Other objects and advantages of the device will appear from the following specification and claims.

In the drawings:

Figure 1 is a top plan view of the washing machine showing the drum or clothes receptacle mounted within the tub or casing.

Figure 2 is a vertical section on the line 2—2, Figure 1 showing from a different point of view, the mounting of the drum within the casing.

Figure 3 is a section on the line 3—3, Figure 2, with the stub shaft removed, showing the means for removably connecting the drum to the stub shaft and also the mounting of the closure for the drum.

Figure 4 is a detail of one portion of the connection between the drum and the stub shaft.

Figure 5 shows the stub shaft and the portion thereof adapted to cooperate with the structure shown in Figure 4.

Figure 6 is a detail of the locking mechanism for locking the members shown in Figures 4 and 5 together.

Figure 7 is a bracket adapted to guide and limit the operation of the lever shown in Figure 6.

Figure 8 is a detail section on the line 8—8 Figure 1, showing the relation of the locking member to the plate shown in Figure 4 and to the cooperating member shown in Figure 5 when in locking position.

Figure 9 shows in detail the bearing bracket at the opposite end of the drum.

Referring to the drawings in detail:

15 is the casing or tub of the washing machine provided with the usual legs 16. 18 is a drain pipe leading from the bottom of the tub and 19 are brace members extending diagonally across the ends of the tub. The brace members preferably project beyond the front side of the tub to afford bearings for the shaft 20 on which is mounted the gear 21, the band wheel 22 and the handle 23. Meshing with the gear wheel 21 is a gear 24 mounted on a stub shaft 25 projecting through suitable bearings 17 in one end of the tub or casing. Within the tub is mounted a closed receptacle in the form of a drum 26, provided at one end with a trunnion 27 to support which there is provided a bearing on the bracket inside of the end of the casing opposite to that through which the stub shaft 25 projects. As shown, the bearing is in the form of a strip 28 having a loop 29 formed centrally therein which constitutes the bearing surface.

On the end of the drum adjacent stub shaft 25 is mounted a plate 30 having oppositely extending arms 31 and 32 and upwardly and downwardly projecting portions 33 and 34 by which the plate is attached to the drum in any suitable manner as by screws or nails. Projecting from the side of the plate is a polygonal lug 35, here shown to be in the shape of a wedge. The plate above the wedge-shaped lug is formed with an arcuate slot 36 and above said slot, in alinement with said wedge-shaped lug, is a flat sided lug 37. The inner end of the stub shaft 25 is provided with a housing member 38 having a socket 39 therein adapted to snugly receive both of the lugs 35 and 37. The walls of the housing 38 are provided with notches 40 in alinement with each other and adapted to lie in alinement with the space between the lugs 35 and 37 when the latter are received within the housing.

In order to prevent disconnection of the drum from the stub shaft either accidentally or otherwise, there is pivotally mounted upon the plate 30 a lever 41 which is guided and limited in its pivotal movement by a bracket 42 attached to the plate 30, and to the side of the lever adjacent the plate 30 is attached an arcuate bolt member 43 having a portion 44 adapted to ride in the slot 36 and also having an offset portion 45 projecting beyond the surface of the plate 30 and adapted to pass through the notches 40 and of the housing 38 between

the lugs 35 and 37 to lock the drum to the stub shaft.

The drum 26 is provided with a lid or closure member 46, arcuate in cross-section, having members 47 attached thereto and extending transversely of the closure. Within the drum are brace members 48, that adjacent one side of the opening in the drum having notches 49 formed therein to receive the projecting ends 50 of the member 47. At the opposite side the closure member is provided with an overhanging portion adapted to rest upon one of the brace members 48 and to be locked in position by the turn buttons 51.

From the foregoing description it will be apparent that my machine is so constructed that the drum may be readily mounted in or removed from the machine and may be locked to the stub shaft in a simple and effective manner. I have provided a simple bearing for the trunnion at the end of the drum opposite the stub shaft 25 and have provided a simple and effective means for removably attaching the closure to the drum.

Although I have shown my invention as attached to a particular type of washing machine, it will be understood that it may be used in connection with other forms of washing machines or under any other conditions where a similar arrangement of parts is desired. It is therefore to be understood that I am not to be limited in the scope of my invention, except as I shall be limited by the claims appended hereto.

What I claim is:

1. In a washing machine comprising a casing and a drum rotatable therein, a journal and bearing for said rotatable drum, comprising a plate secured to one end of said drum, said plate having a slot and a polygonal projection adjacent said slot, a stub shaft mounted for rotation in one end of the casing and having at one end a socket shaped to receive said polygonal projection, said socket having slots in its opposite walls in alinement with one another, and a locking member movable in the slot of said plate, projecting beyond the face of the latter, and movable in the slots of said socket above said projection.

2. In a washing machine comprising a casing and a drum rotatable therein, a journal and bearing for said rotatable drum, and comprising a plate secured to one end of said drum, said plate having a slot therein and a pair of projections extending from the face thereof on opposite sides of said slot, one of said projections being polygonal in cross-section, a stub shaft rotatably mounted in one end of the casing and having at one end a socket shaped to receive said polygonal projection, said socket having slots in its opposite walls in alinement with one another, and a locking member movable in the slot of said plate and projecting beyond the face of the latter, said locking member being movable into the slots of said socket between said projections.

3. In a washing machine having a casing and a revoluble drum therein, means for removably mounting the drum in said casing comprising means for rotatably supporting one end of the drum in the corresponding end of the casing, a pair of spaced lugs at the opposite end of the drum, a stub shaft projecting through the end of the casing adjacent the lugs having its end provided with a socket to receive said lugs, the walls of said socket having notches adapted to align with the space between said lugs when the latter are in place in the socket and a locking member adapted to be projected through said notches and between said lugs.

4. In a washing machine having a casing and a drum therein, said drum having rotatable connection at one end with the corresponding end of the casing, a pair of spaced lugs secured to the opposite end of the drum, a stub shaft rotatable in the end of the casing adjacent said lugs and having a socket at one end adapted to receive said lugs, the walls of said socket being notched in alignment with the space between said lugs, a locking member adapted to slide through said aligned notches and between said lugs, and a lever pivoted to the drum for actuating said locking member.

5. In a device of the character described, a casing and a revoluble drum therein, means detachably supporting the drum in the casing, comprising means for rotatably supporting one end of the drum at the corresponding end of the casing, a plate at the opposite end of the drum having a slot therein, lugs projecting from opposite sides of said slot, a stub shaft rotatable in the end of the casing opposite the plate and having a socket adapted to receive and conforming in shape with said lugs, the walls of said socket having cut away portions adapted to align with the slot between the lugs when the latter are received in said socket, and a bolt sliding in said slot and having an offset portion extending beyond the face of said plate.

In testimony whereof I have hereunto set my hand.

ENOCH H. BURRAGE.