G. E. SHEPARD.

WASHING MACHINE.

APPLICATION FILED MAR. 10, 1916.

1,225,329.

Patented May 8, 1917.

2 SHEETS—SHEET 1.

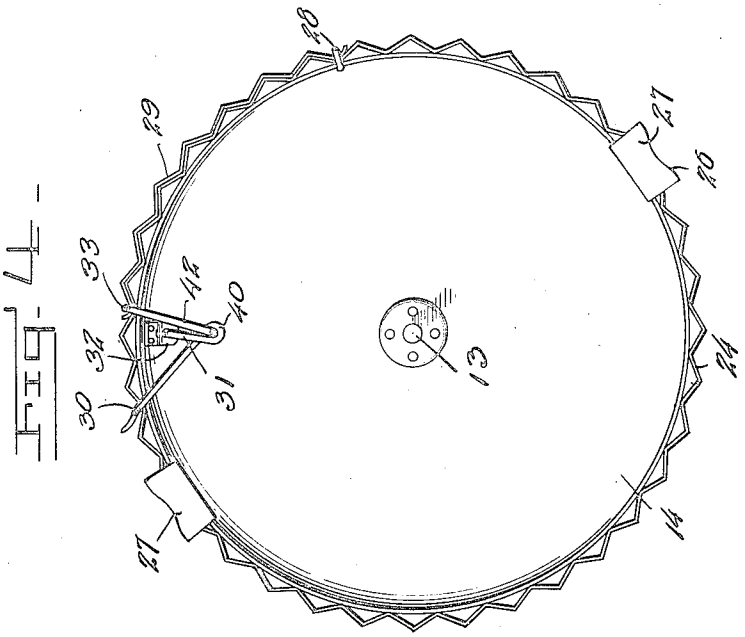


FIG. 4.

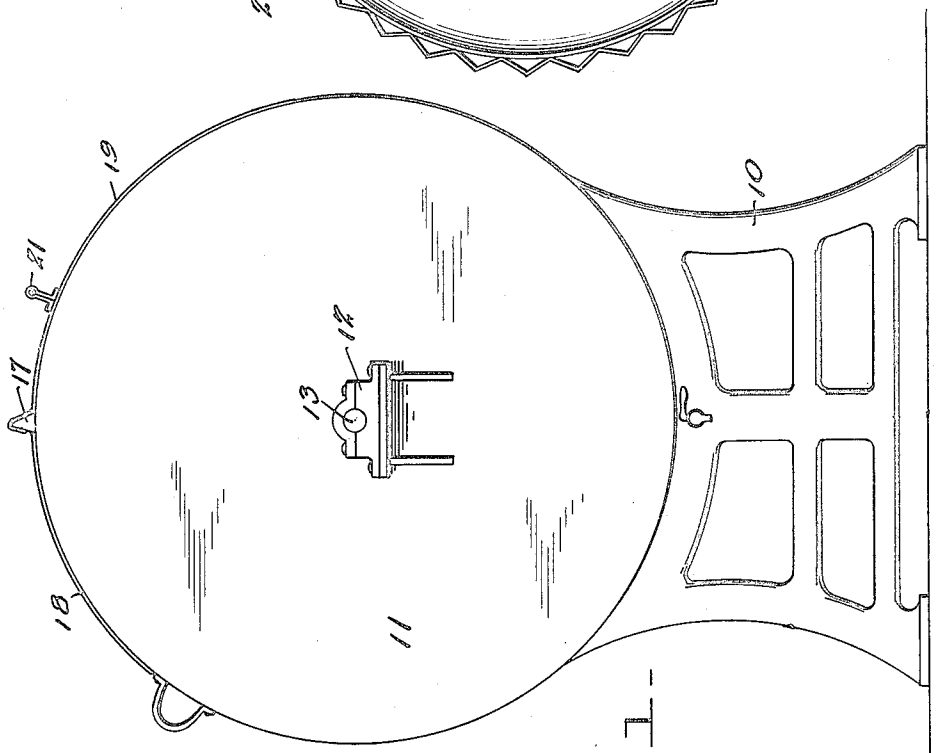


FIG. 1.

Witnesses,
C. A. Woodward
John Nielsen, Jr.

Inventor
G. E. Shepard,
H. S. Woodward
Attorney

G. E. SHEPARD.

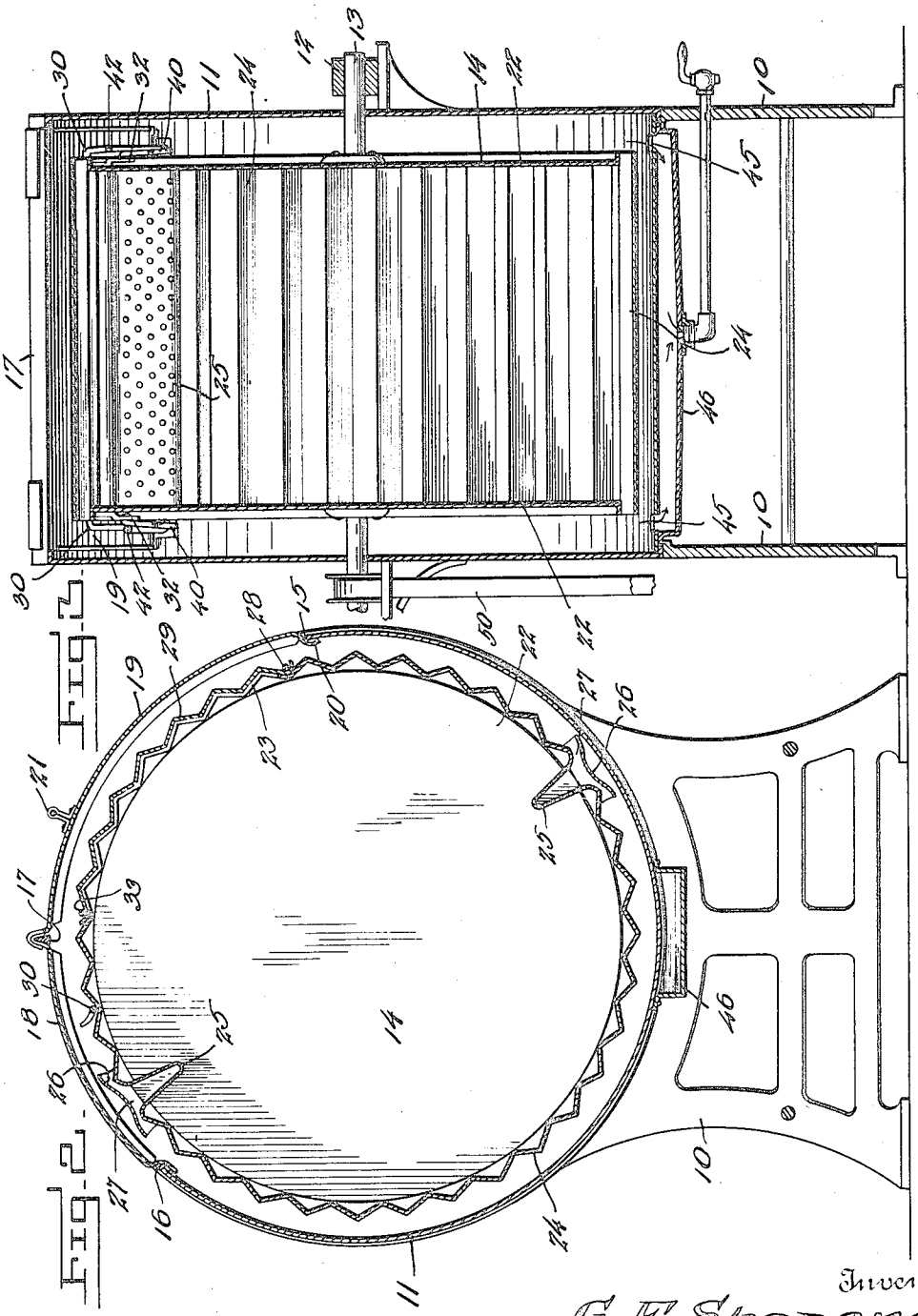
WASHING MACHINE.

APPLICATION FILED MAR. 10, 1916.

1,225,329.

Patented May 8, 1917.

2 SHEETS—SHEET 2.



Witnesses

L. L. Simmons.

Chas. Nielsen, Jr.,

Inventor

G. E. Shepard,

H. L. Woodward

Attorney

UNITED STATES PATENT OFFICE.

GUY E. SHEPARD, OF HARDWICK, VERMONT.

WASHING-MACHINE.

1,225,329. Specification of Letters Patent. Patented May 8, 1917.

Application filed March 10, 1916. Serial No. 83,287.

To all whom it may concern:

Be it known that I, GUY E. SHEPARD, a citizen of the United States, residing at Hardwick, in the county of Caledonia and State of Vermont, have invented certain new and useful Improvements in Washing-Machines, of which the following is a specification.

The invention has for an object to effect an improvement in such appliances whereby access to the interior of a rotating washing cylinder will be greatly facilitated. At the same time it is an object to give an efficient closure and fastening for such a cylinder. A further aim of the invention is to effect an improvement in the construction of the rotating cylinder, resulting in an improved function in the machine.

A still further improvement effected by the invention is the segregation of gritty particles from the washing chamber and the provision of simple means for effecting its removal and disposal.

Additional objects, advantages and features of invention will appear from the construction, arrangement and combination of parts hereinafter described and shown in the drawings, where,

Figure 1 is a side elevation of a machine constructed in accordance with my invention,

Fig. 2 is a vertical section thereof at right angles to the axis of the washing cylinder,

Fig. 3 is a similar view at right angles to Fig. 2,

Fig. 4 is a detail elevation of the washing cylinder.

There is illustrated a washing machine comprising the supporting frame work 10, carrying a stationary cylinder 11, which, may be of wood or metal, carrying suitable bearings as at 12, for instance, in which there are journaled trunnions 13 of a rotating cylinder 14.

The stationary cylinder is formed with an opening extending for approximately one-third of its circumference having a lower edge 15 at the customary height, the opening extending over the top of the cylinder a distance as at 16. Across this opening directly over the axis of the cylinder a cross bar 17 is mounted, supporting doors 18 and 19 respectively. The door 18 closes that part of the opening from the bar to the upper edge of the opening indicated at 16, while the door 19 closes the remainder of the opening. These doors are made removable, each having a lap piece 20 engaging over respective edges of the casing opening, and having their inner edge portions bent outwardly and thence inwardly to engage snugly over the bar 17, which is set outwardly of the cylinder a little. The inner portions of these doors overlap at the point of support by the bar. A suitable handle 21 is provided on the door 19, by which it may be easily manipulated.

The cylinder 14 comprises two circular heads 22, to which the trunnions 13 are secured in any suitable way. Upon the edges of these heads corrugated metal 24 is secured, extending across the space between the heads so as to inclose it except for an opening 23 of suitable size, the corrugations extending transversely. At diametrically opposite points the metal 24 is cut and bent to form ribs 25 or flanges, extending some distance inwardly of the edges of the heads 22, the flanges having narrow, rounded inner edges, but a space of sufficient proportions, being left within each flange throughout, for the functions to be indicated. The flanges and the metal 24 for a short distance on each side is apertured, and mounted outwardly of the flanges 25 there are transverse plates 26 extending the full width of the cylinder, their intermediate portions being inclined inwardly toward the space within the flanges and being spaced from the metal 24 to allow ready passage of water beneath the plates 26 into the flanges 25 under rotation of the cylinder 14. The plates 26 are supported at each end by plates 27, which close the spaces thereunder at the sides of the cylinder. The metal 24 is extended across the edges of the heads 22, and is secured thereto by soldering or otherwise at the points where the inwardly extending corrugations engage the edges of the heads.

Adjacent one edge of the opening 23 a cross bar 28 is mounted on the cylinder 14, parallel to said edge of the opening, and a door 29 is provided, formed of metal corrugated in the same way as the metal 24, and having one edge portion inserted beneath the bar 28 and curved outwardly so that it will not become disengaged until the door has been swung outwardly a distance. The opposite edge of the door 29 projects slightly beyond the opposite edge of the opening 23, where is is slightly recurved. A fastener for this edge of the door is provided, con-

sisting of a yoke 30 having crank arms 31 pivoted at each side of the casing on a small plate 32 having a portion offset outwardly and the extremities of the crank portions turned inwardly and engaged in the opening for pivotal support of the yoke. A simple bail 33 is also provided, the extremities of which are pivotally connected to the yoke 30 eccentrically of the crank pivots, in the present instance the yoke being formed of heavy wire, an eye 40 being formed at the base of the crank portion 31 at each side, the bail being formed of similar material, adapted to set snugly across the edge of the door 29 thereadjacent, arms 42 extending inwardly of each side of the cylinder and having their extremities bent laterally so as to engage pivotally in the eyes 40. The plates 32 are located just beyond the portion of the door with which the door engages, and the length of the arms 42 is such that when the bail is engaged with the door the arms will at their inner ends fall within the arms of the eyes 40 as the crank arms 31 move on their pivots. The bight of the yoke 30 is so located with respect to the crank arms 31 that it will engage the perimeter of the cylinder 14 immediately after the crank arms and arms 42 of the bail have passed beyond dead center under engagement of the bail with the door 24 by movement of the yoke 30 outwardly from the door. This engaged position is illustrated in Fig. 4.

The stationary cylinder is formed at its bottom with two short slots 45 immediately adjacent respective edges of the cylinder 14, and extending circumferentially, a collecting box 46 being mounted on the stationary cylinder thereunder, with which a drain connection is made, as at 47, this connection also being adaptable to use in supplying water and other elements used in the machine, by such familiar connections as are well known in the art for the purpose.

The rotating cylinder may be operated in any well known way, a pulley and belt being shown at 50, which may be driven in any desired way.

It is to be noted that the slots provided in the bottom of the casing afford considerable time for particles to settle therethrough, which might not pass into the trough if an ordinary foraminate floor or screen were provided in the casing over the trough. Also, a slow current is set up in the fluid beneath and adjacent the slots, tending to carry material settling therethrough into more quiet bodies of fluid between the slots, and by draining off a small quantity of fluid from time to time, the cleansing fluid in the machine is kept fairly clean, small quantities of fresh fluid being added from time to time as the foul matter is drained away.

What is claimed:

1. In a washing machine, a stationary liquid holding casing, a rotatable apertured container, said casing having a plurality of narrow slots therein at the lower part alined with the direction of rotation of the cylinder, a transverse trough on the casing beneath and around the slots and extending considerably beyond the superficial area of the slots, and an outlet connection on the trough.

2. In a washing machine, a stationary casing, a rotatable open work container therein, said casing having adjacent each side at the lower part a slot alined with the direction of rotation of said container, a trough on the casing beneath said slot and drain connections with the trough intermediately of the slots.

In testimony whereof I have affixed my signature in presence of two witnesses.

GUY E. SHEPARD.

Witnesses:
WALTER A. DUTTON,
MELVIN Y. MARSE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents. Washington, D. C."