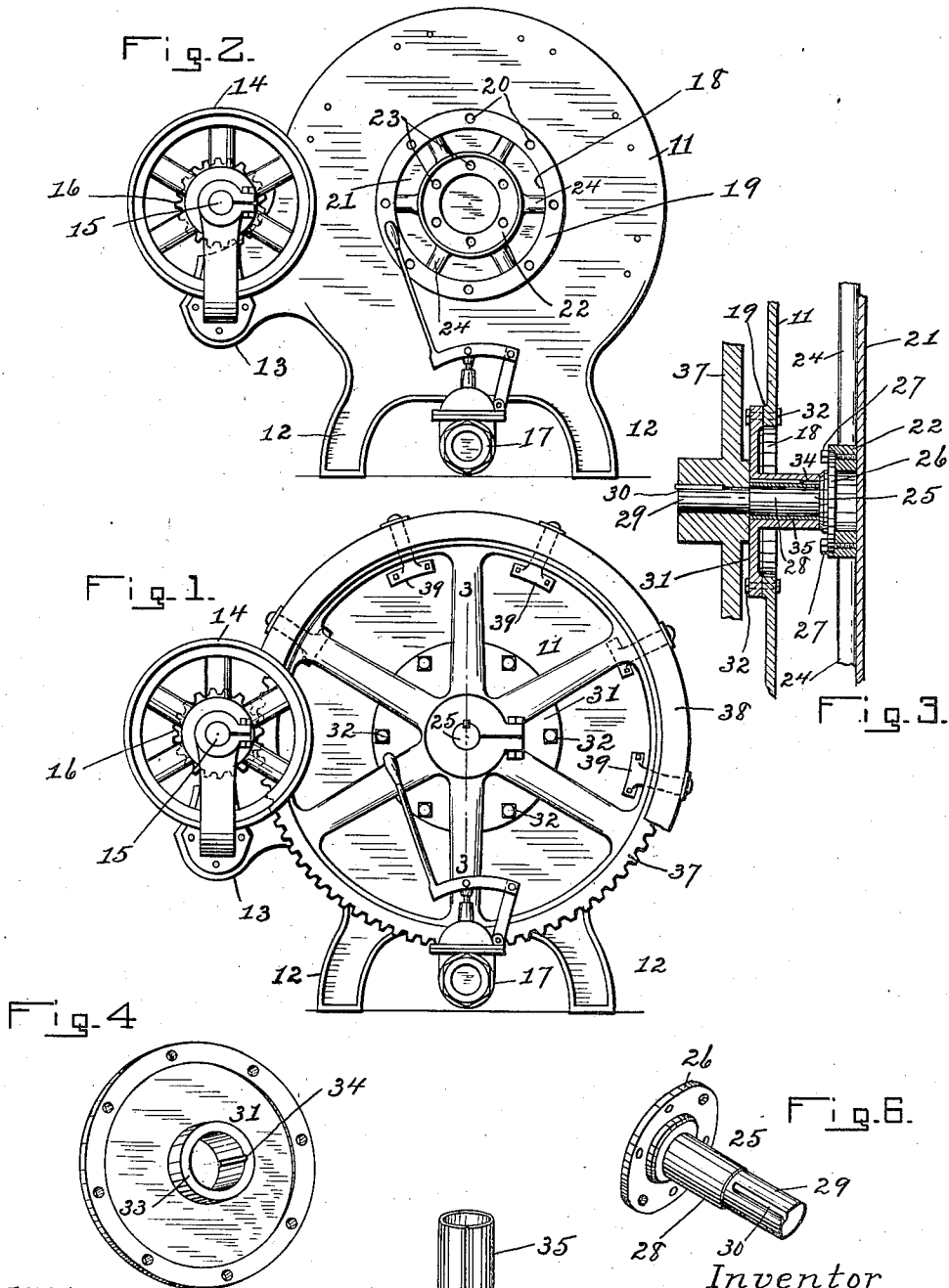


C. H. MATTICE.
WASHING MACHINE.
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1,122,969.

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UNITED STATES PATENT OFFICE.

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WASHING-MACHINE.

1,122,969.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, CHARLES H. MATTICE, a citizen of the United States, residing at Troy, Rensselaer county, New York, have invented certain new and useful Improvements in Washing-Machines, of which the following is a specification.

My invention relates to washing machines of the type which includes a stationary casing and a clothes-receiving cylinder rotatable therein, the cylinder being foraminous and the casing water-tight so as to hold the washing liquid.

The object of my invention is to provide means for conveniently mounting the cylinder within the casing and for removing it therefrom, and for easily detaching, repairing and replacing such mounting means without removing the cylinder from the casing.

In the particular form of my device chosen for illustration, Figure 1 is an end elevation of the machine; Fig. 2 is a similar view with the working parts removed; Fig. 3 is a partial, vertical, longitudinal section on the plane 3—3, Fig. 1; Figs. 4, 5 and 6 show in perspective certain parts detached.

11 designates a head of the stationary casing mounted on integral feet 12 and carrying a bracket 13 for the usual driving pulleys 14, the shaft 15 of which also carries a pinion 16. It will of course be understood that the casing body, not shown, is provided with the usual door, extending its entire length, through which the washing cylinder may be inserted and removed.

17 is a valve for drawing off the washing liquid from the casing.

18 is a concentric aperture in head 11 surrounded by a flange 19 provided with bolt-holes 20.

21 is the head of the rotatable cylinder, shown as having a concentric flange 22 provided with bolt-holes 23 and with radial ribs 24.

25 is a trunnion having a flange 26 adapted to be secured by bolts 27 to flange 22, a cylindric portion 28 and a pulley-engaging portion 29 having a keyway 30.

31 is a closure plate for aperture 18 adapted to be secured by bolts 32 to flange 19 and having a concentric sleeve portion 33 in which is cut a keyway 34.

35 is a bushing sleeve, preferably of bronze or Babbitt metal, having an ex-

terior key seat 36, and being of a size to closely fill sleeve 33 and to fit over portion 28 of trunnion 25.

37 is a gear wheel adapted to be secured on portion 29 of trunnion 25 and to mesh with pinion 16 for rotating the cylinder.

38 is a gear cover supported on brackets 39 on head 11.

In Fig. 2 of the drawings I have shown the machine partially dismantled, the parts numbered 25 to 39 being removed, and the rotatable cylinder resting within casing 11. To assemble the machine for operation, trunnion 25 is bolted to flange 22 on cylinder head 21, see Fig. 3, the aperture 18 in casing head 11 being of ample size to permit this operation. Bushing 35 is then forced into cylindric portion 33 of closure plate 31 and secured from rotation therein by a key in seats 34, 36. Plate 31 is then slipped over portion 28 of trunnion 25 and the cylinder raised within casing 11 so as to bring bolt-holes 20 in flange 19 into alignment with the bolt-holes in plate 31, which is then secured in place by bolts 32. It is of course understood that the other end of the casing has an aperture corresponding to 18, that the other cylinder head is like head 21 shown, and that trunnion 25, plate 31 and bushing 35 are similarly duplicated, except that the trunnion need not have portion 29. Both ends of the cylinder being thus raised and mounted for rotation in the casing, gear 37 is keyed on to end 29 of trunnion 25 and gear cover 38 secured in place, see Fig. 1, by brackets 39. It is obvious that a reversal of these operations will dismantle the machine, so that any part worn by the rotative use of the machine, which part will always be the soft metal bushing 35, may be removed and replaced by a new one without removing the cylinder from the casing. In a low-ceiled room, this last is practically impossible, so that it is customary to unbolt the entire machine from the floor and tip it over on its side.

It being obvious that many mechanical alterations may be made in my device without departing from my invention, I do not wish to be limited as to its scope except by the subjoined claims.

What I claim is:

1. A washing machine including a casing having opposite heads each formed with

a central aperture; a cylinder rotatable within said casing and of greater diameter than either of said apertures; a trunnion detachably secured to each end of said cylinder within said casing; and a plate exteriorly and detachably securable to each of said heads to form a closure for the aperture and the sole bearing for the trunnion, whereby the removal of said trunnions and
10 said plates renders possible the bodily removal of said cylinder from said casing.

2. A washing machine including a casing having opposite heads each formed with a central aperture; a flanged trunnion bolted
15 to each end of said cylinder within said casing; and a plate of substantially greater diameter than the flange on said trunnion exteriorly and detachably securable to each

of said heads to form a closure for the aperture and the sole bearing for the trunnion. 20

3. In combination, a casing having a head formed with a central aperture; a rotatable part within said casing; a trunnion detachably secured to said rotatable part; a
25 plate detachably securable to said head to form a closure for said aperture and a bearing for said trunnion and formed with a central sleeve portion; and a bushing secured as against rotation in said sleeve and
30 inclosing said trunnion.

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Witnesses:

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