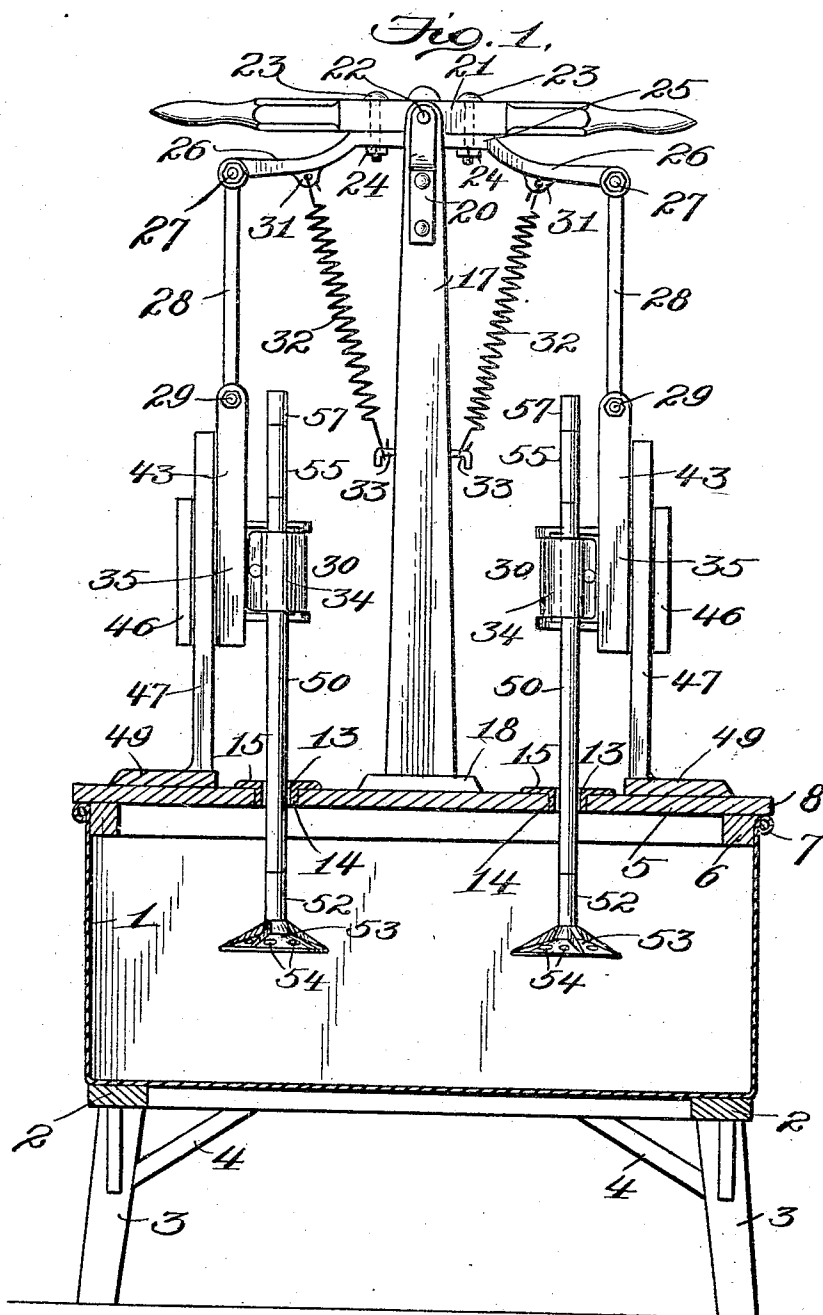


E. C. WARING.
 WASHING MACHINE.
 APPLICATION FILED MAR. 12, 1908.

943,581.

Patented Dec. 14, 1909.

2 SHEETS—SHEET 1.



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943,581.

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 2 SHEETS—SHEET 2.

Fig. 2.

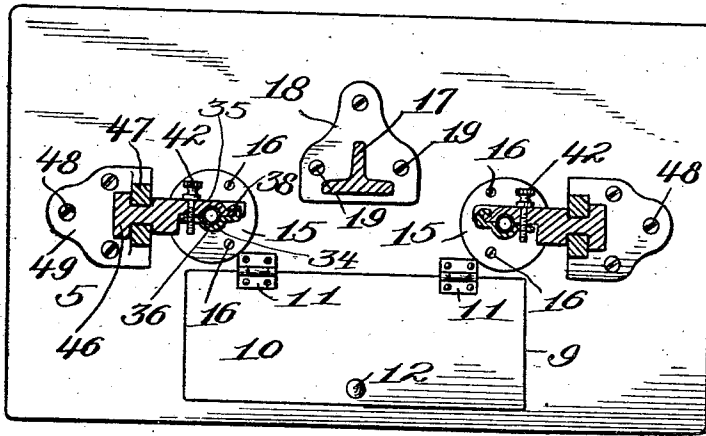


Fig. 5.

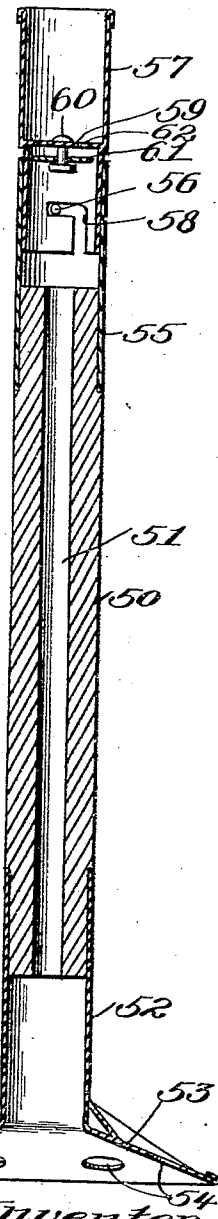


Fig. 4.

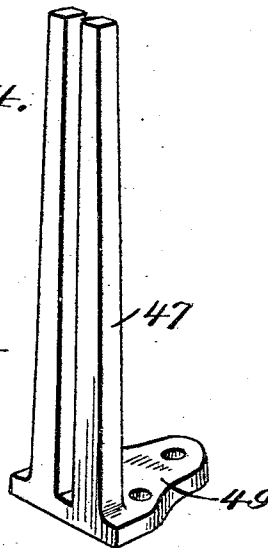


Fig. 3.

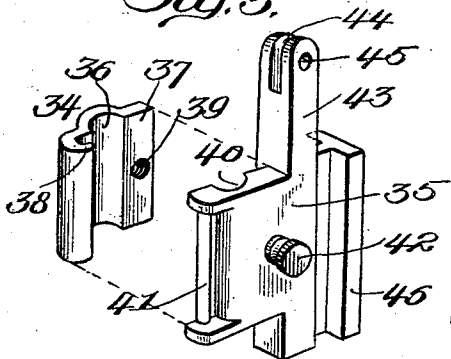
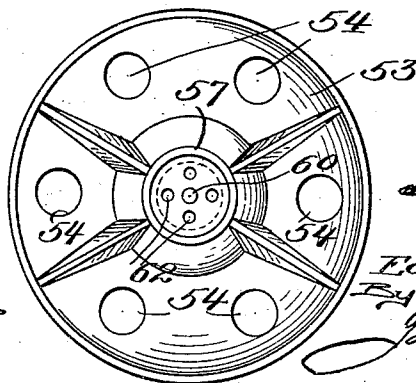


Fig. 6.



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UNITED STATES PATENT OFFICE.

EDWARD C. WARING, OF HUNTSVILLE, MISSOURI.

WASHING-MACHINE.

943,581.

Specification of Letters Patent.

Patented Dec. 14, 1909.

Application filed March 12, 1908. Serial No. 420,676.

To all whom it may concern:

Be it known that I, EDWARD C. WARING, a citizen of the United States, residing at Huntsville, in the county of Randolph and State of Missouri, have invented new and useful Improvements in Washing-Machines, of which the following is a specification.

This invention relates to washing machines and the object thereof is to provide a machine of such class with means in a manner as hereinafter set forth which is not only constructed to pound the clothes during the washing operation, thereby forcing water through the clothes, but also during such operation to force air through the clothes and this air-forcing action in connection with the pounding action assures of the thorough cleansing of the clothes.

Further objects of the invention are to provide a washing machine which shall be simple in its construction, strong, durable, efficient in its use, conveniently operated, readily set up, and comparatively inexpensive to manufacture.

With the foregoing and other objects in view, the invention consists of the novel construction, combination and arrangement of parts hereinafter more specifically described and illustrated in the accompanying drawings, wherein is shown the preferred embodiment of the invention, but it is to be understood that changes, variations and modifications can be resorted to which come within the scope of the claims hereunto appended.

In describing the invention in detail, reference is had to the accompanying drawings wherein like reference characters denote corresponding parts throughout the several views, and in which:—

Figure 1 is a sectional elevation of a washing machine in accordance with this invention. Fig. 2 is a plan view thereof, parts being shown in horizontal section, the plane of which extends through coupler elements to be described. Fig. 3 is a perspective view illustrating the slidable pounder coupling. Fig. 4 is a perspective view of the guide for the coupling. Fig. 5 is a vertical sectional view of the pounder, and Fig. 6 is a plan of the pounder.

Referring to the drawings in detail, 1 denotes the body portion of a receptacle having its bottom reinforced by the braces 2 to which are attached the supporting legs

3, brace members 4 being provided between the braces 2 and the supporting legs 3.

The cover of the receptacle is indicated by the reference character 5 and is formed with a rim 6 seated within the body portion 1, the latter at its top edges being formed with a bead 7 upon which engages the marginal portion 8 of the cover 5. The cover 5 is removably mounted upon the body portion 1 and is formed with a rectangular opening 9, a closure 10 being provided for said opening 9, the closure 10 being hinged as at 11 to the cover 5. The closure 10 in connection with the opening 9 provides means whereby access can be had to the receptacle when occasion so requires. A grip 12 is carried by the closure 10 whereby the said closure can be conveniently shifted when occasion so requires. The cover 5 is furthermore provided with a pair of openings 13 in each of which is arranged a bearing collar 14, the latter having a flange 15 at its top which extends upon the outer face of the cover 5. Hold-fast devices 16 extend through the flange 15 for securing the collar 14 fixedly to the cover 5.

Secured to the upper face of the cover 5 is a standard 17. In this connection it will be stated that the standard is substantially T-shaped in cross section and at its lower end is formed with a flange 18 through which extend hold-fast devices 19 for rigidly securing the standard to the cover 5. Attached to the standard 17 near the top thereof is an arm 20, between the upper end of which and the upper end of the standard 17 is arranged an operating handle 21, the latter being pivotally connected to the arm 20 and standard 17 by means of the pin 22. The handle 21 is adapted to oscillate upon its pivot. Secured to the lower face of the handle 21 approximately centrally thereof and through the medium of the bolts 23 and nuts 24 is a coupling arm 25 having each side depending in a curvilinear manner as at 26. Each end of the coupling arm 25 has pivotally connected thereto as at 27 a link 28. The lower end of each of the links 28 has pivoted thereto as at 29 a pounder coupler referred to generally by the reference character 30. The coupling arm 26 is also connected to the standard 17 and in this connection it will be stated that the coupling arm 26 is formed with a pair of depending apertured lugs 31 to which are

attached the upper ends of the coil springs 32 while the lower ends of the said springs 32 are connected to the hooks 33 which project laterally from the standard 17. The function of the springs 32 is to return the handle 21 and coupling arm 26 to normal position.

Each of the pounder couplers 30 is formed of two sections 34, 35, the former being provided on its inner face with a semi-cylindrical groove 36, a flattened portion 37 and being furthermore provided at one side with a hook-shaped portion 38. The section 34 has also a screw-threaded opening 39. The section 35 has its inner face provided with a semi-cylindrical groove 40 and at one side with a bead 41, with which is adapted to engage the hook-shaped side 38 of the section 34. The section 35 carries a clamping screw 42 adapted to engage in the screw-threaded opening 39, whereby the sections of the pounder coupler are connected together. The section 35 has an upwardly extending arm 43 which is bifurcated as at 44 and apertured as at 45. The furcated end portion of the arm 43 receives the lower end of a link 28, the pivot pin 29 passing through the apertures 45. The section 35 has projecting laterally therefrom a T-shaped offset 46 which is adapted to slide in the vertically extending slotted guide 47, the latter being secured to the cover 5 by means of hold-fast devices 48 extending through a base 49 formed integral with said guide 47.

The machine is provided with a pair of pounders which reciprocate through the collars 14 and each of the pounders consists of a body portion 50 having an axial bore 51. To the lower end of the body portion 50 is secured a hollow cylindrical extension 52 which terminates in a conical enlargement 53 formed with openings 54. To the upper end of the body portion 50 is secured a cylindrical hollow extension 55 formed with an inwardly extending pin 56. Projecting into the extension 55 is a valve casing 57 having a bayonet slot 58 in which the pin 56 engages whereby said casing 57 can be connected to the extension 55. The casing 57 is formed with an apertured partition 59 carrying a headed pin 60 upon which is mounted a shiftable valve 61. The openings 62 in the partition 59 constitute air inlets which are closed by the valve 61 when the pounder moves downwardly but are

opened on the upward movement of the pounder. As shown each of the pounders has a coupler 30 clamped to its body portion 50, whereby the pounders are coupled with the links 28 so that during the oscillation of the handle 21 the pounders will be reciprocated alternately in opposite directions. On the downward movement of a pounder, the valve 61 is closed and the air is forced from the interior of the pounder through the clothes and on the upward movement of the pounder, the valve is open, hence the pounder will be again filled with air so that on the downward movement of the pounder the air will again be forced through the clothes.

The guides 47 in connection with the T-shaped off-sets 46 prevent any lateral movement of the pounders during the reciprocation thereof.

What I claim is:—

1. In a washing machine, in combination, a receptacle having a cover, a vertical standard projecting from the cover, an operating handle pivoted to the standard, a vertical guide standard projecting from the cover, a coupler element associated with the guide standard and movable vertically thereof, a link connecting the handle and said coupler element, a reciprocatory pounder and means for detachably clamping the pounder to the coupler element.

2. In a washing machine, in combination, a receptacle having a cover, a standard projecting upwardly therefrom and having a vertical guide slot, a coupler element having a T-shaped head, the web of which fits in the guide slot and having also a projecting clamping portion at one side of the head and which is formed with a vertical groove and a vertical bead, a clamping member having a hook-shaped portion for engagement with the bead and having also a vertical groove, a screw connecting the clamping portion and the clamping member, a pounder having a body portion which is clamped in the aforesaid grooves and means for reciprocating the coupler element and therewith the pounder.

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

EDWARD C. WARING.

Witnesses:

VANBUREN CALHOUN,
JOHN H. HAMMETT.