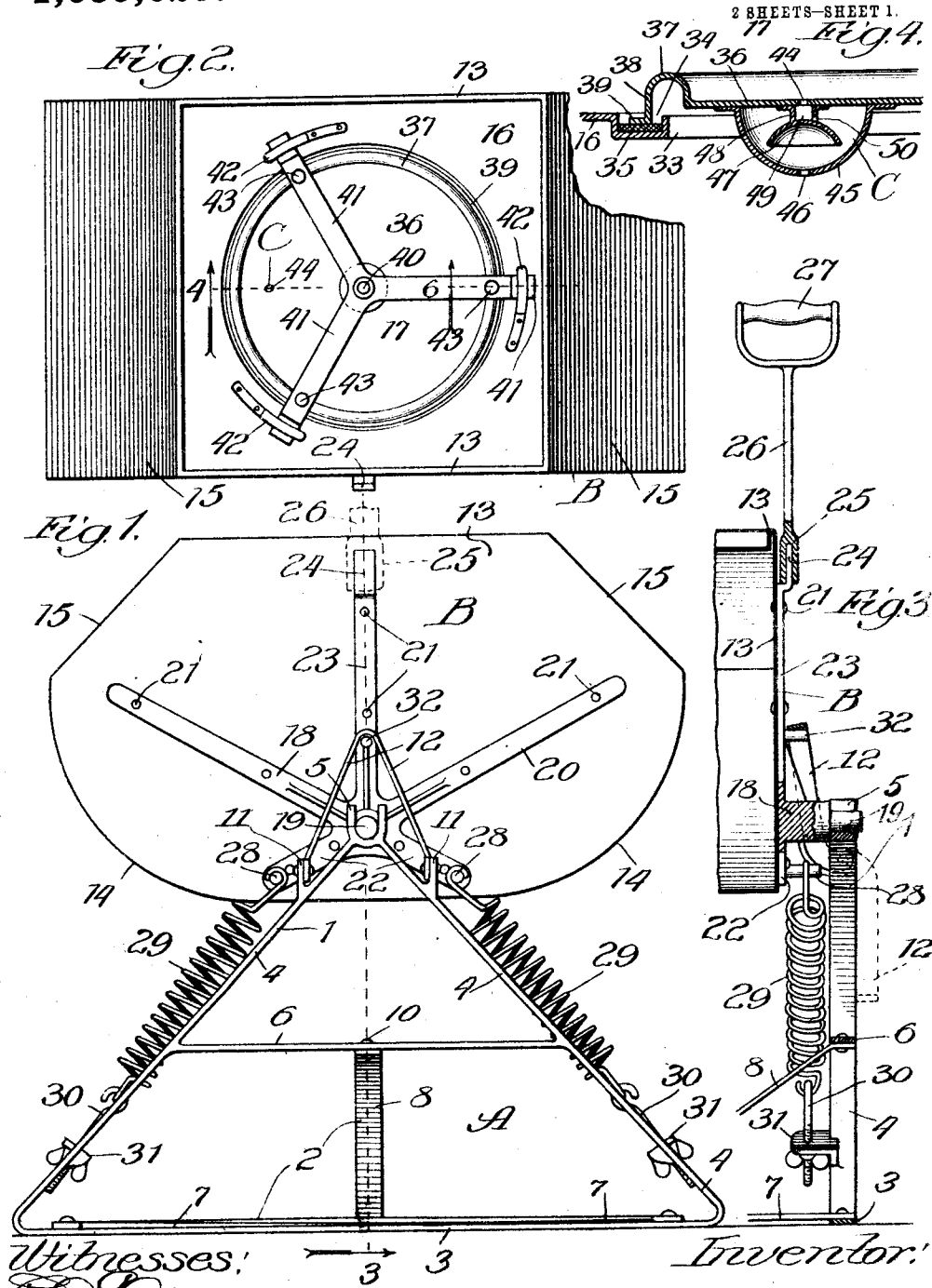


D. CAMERON.
 WASHING MACHINE.
 APPLICATION FILED FEB. 13, 1912.

1,059,029.

Patented Apr. 15, 1913.

2 SHEETS—SHEET 1.



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2 SHEETS—SHEET 2.

Fig. 5.

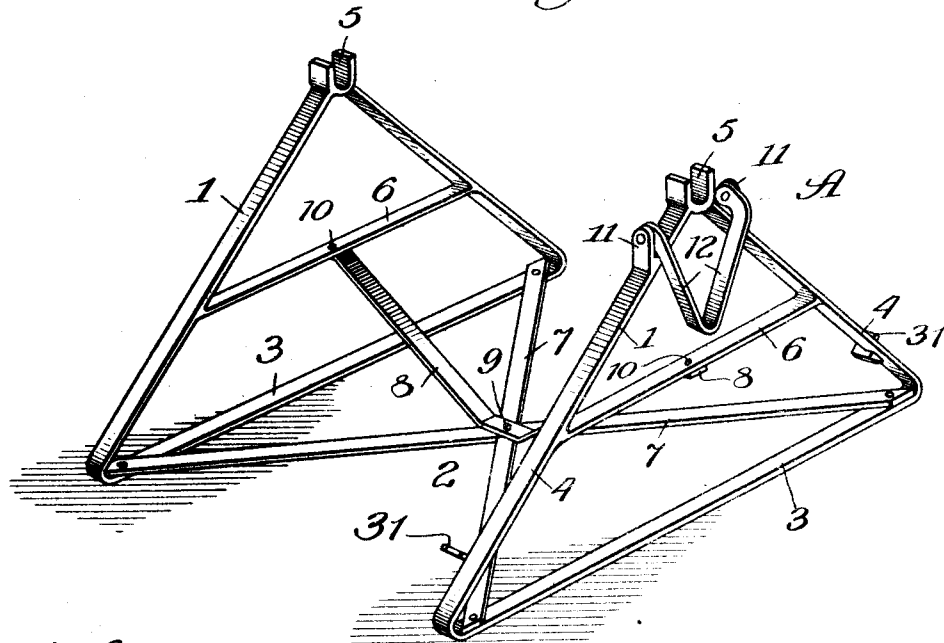


Fig. 6.

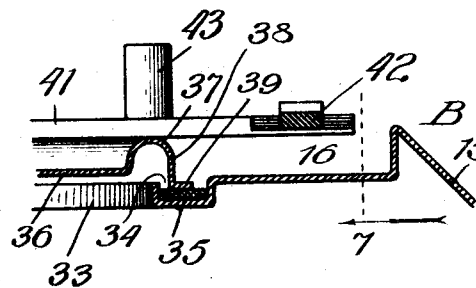


Fig. 7.

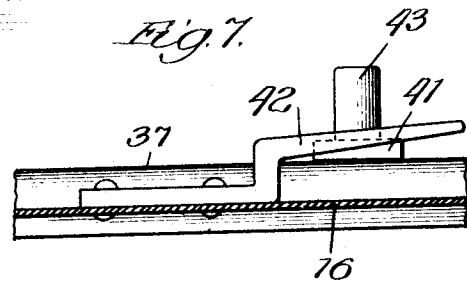
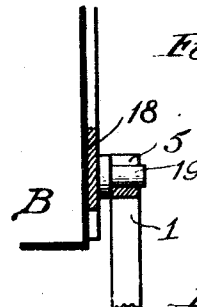


Fig. 8.



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UNITED STATES PATENT OFFICE.

DONALD CAMERON, OF CHICAGO, ILLINOIS.

WASHING-MACHINE.

1,059,C29.

Specification of Letters Patent.

Patented Apr. 15, 1913.

Application filed February 15, 1912. Serial No. 877,874.

To all whom it may concern:

Be it known that I, DONALD CAMERON, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Washing-Machines, of which the following is a specification.

My invention relates particularly to washing-machines of the oscillating type; and my primary object is to provide a machine of this character of improved general construction.

The invention is illustrated in its preferred embodiment in the accompanying drawings, in which—

Figure 1 represents an elevational view of a washing-machine constructed in accordance with my invention, the handle being shown brokenly; Fig. 2, a broken plan view of the tub or body of the machine; Fig. 3, a broken vertical section taken, as indicated, at line 3 of Fig. 1; Fig. 4, a broken vertical section taken, as indicated, at line 4 of Fig. 2; Fig. 5, a perspective view of the frame employed; Fig. 6, a broken vertical section taken, as indicated, at line 6 of Fig. 2; Fig. 7, a broken view taken, as indicated, at line 7 of Fig. 6; and Fig. 8, a broken vertical section similar to Fig. 3, but taken at the other end of the machine.

In the construction illustrated, A represents a frame; and B, an oscillatory tub or body having horizontal trunnions pivoted on the frame.

In the preferred construction, the frame A preferably comprises triangular end-standards 1 joined by connecting members 2. Each end-standard 1 comprises a base-member 3 and inclined members 4 which form the sides of the triangle and support a trunnion-bearing 5 at their junction or apex. An intermediate connecting member 6 joins the members 4. The connecting-brace-members 2 comprise a pair of diagonally-extending bars 7 which cross each other at their centers and have their ends connected with the end-portions of the base-members 3. A bent brace-member or bar 8 has its intermediate portion joined to the bar 7 by a rivet 9 and has its end portions joined to the members 6 by rivets 10. Thus, the end-standards are braced in a horizontal plane by the bars 7 and in a vertical plane by the bent brace-member 8, it being understood that the member 8 has inclined portions which extend from the junction of the

bar 7 to the intermediate portions of the members 6. The end-standards 1 may be formed of cast-metal; and in the casting operation it is preferred to provide one of the end-standards with lugs or ears 11, the lugs being disposed on opposite sides of the bearing 5 and carried by the inclined members 4. To the lugs 11 are pivotally joined the extremities of the arms of a triangular loop or member 12, which will serve, when in the position shown in Fig. 1, to maintain the body B in an upright position.

The body B may be formed of sheet-metal or of any suitable material. Said body is of somewhat oval form, viewed at an end. It has flat ends 13, a curved bottom 14, which is extended to meet the inclined overhanging portions 15, and a flat top 16 to which is applied a removable closure 17.

The body B is equipped at the lower portions of the outer surfaces of its end-members 13 with castings or metal members 18 which are provided with outturned trunnions 19, which rest in the U-shaped bearings 5. The casting 18 at one end of the machine has upper arms 20 securely fastened to the corresponding end-member 13, as by means of rivets 21, and has lower arms 22 securely fastened to the end-member by rivets, as shown. This casting 18 also has a centrally disposed vertical arm 23 riveted to the end-member 13 and rising to near the top thereof, where it is provided with an offset tongue or bracket 24, upon which is fitted the socket 25 of a removable handle which has a vertically-disposed shank 26 and a handle-portion 27. Thus, the handle may be removed at will. The arms 22 are provided near their free extremities with outturned studs 28 to which are attached the upper ends of heavy coil springs 29 whose lower ends are connected to eye-bolts 30 which are adjustably secured to brackets or eyes 31 carried by standard-members 4, which brackets 31 may be cast integrally with the members 4. The arm 23 is equipped some distance above the trunnion 19 with an outwardly extending stud 32, with which the apex or loop end of the member 12 is adapted to engage, as shown in Fig. 1, when it is desired to lock the body or tub B in the position shown in Fig. 1.

The top 16, which is preferably formed of sheet metal, is provided with a central opening 33, encircled by a groove 34 in which is a gasket 35. The groove 34 is preferably

formed by striking the metal downwardly to form a box-form corrugation, thus providing the annular groove or gasket-seat and at the same time flanging the metal to stiffen it.

The removable closure 17 preferably comprises a sheet-metal disk 36, having its peripheral portion struck up to form an annular bead 37, from which depends a flange 38 which has its lower edge-portion bent outwardly to afford a bearing or annular flange 39 which rests on the gasket 35. To the central portion of the disk 36 is joined, by a pivot 40, a three-arm locking member or spider 41,—the free extremities of the arms of which project beyond the closure and over the plate 16, being adapted to pass beneath the cams 42 with which the upper surface of the plate 16 is equipped. The arms of the member 41 are equipped with studs or handles 43, by means of which the member may be turned to unlock the closure.

The upper part of the tub or body B is equipped with a pressure-relieving device C, adapted to permit gases to pass from the tub and at the same time to prevent liquid or suds being blown out. This device is preferably mounted in or on the closure 17, as illustrated. It comprises a duct or passage 44 through the plate 36; a dished or half-spherical housing or member 45 attached to the lower surface of the plate 36, and provided with a duct or passage 46 disposed beneath the duct 44; and a bell or shield 47 located within the housing 45 and guarding the passage 44. The bell 47 is carried by a shank 48 which is hollow or provided with a passage 49, and the shank 48 has a lateral passage or small duct 50 through which the interior of the housing 45 is in communication with the passage 49 and thus with the duct 44. It will be understood that gases may pass through the passage 46 into the housing 45 and thence through the passages 50 and 49 and the outlet duct 44. The shield 47 will serve to deflect any liquid or suds which may enter the housing 45, so that the same will drain back into the tub.

In the operation of the machine the body is oscillated through the medium of the handle 26, the device 12 being disengaged and thrown back to the position shown by dotted lines in Fig. 3. In this operation, the coil springs 29 are alternately placed under tension, and thus aid in the operation of the machine. In the beginning of the washing operation, gas is generated, and the pressure is relieved by the device C.

The improved machine is simple in construction, may be cheaply manufactured and may be operated with great ease. It is particularly adapted for family purposes where

a more expensive power-actuated machine is not available or is not desired.

The foregoing detailed description has been given for clearness of understanding only, and no undue limitation should be understood therefrom.

What I regard as new, and desire to secure by Letters Patent, is—

1. The combination of a frame comprising suitably connected end-standards, an oscillating body equipped at its ends with combined spring-attaching and trunnion-carrying members comprising a horizontally disposed trunnion adapted to be journaled in the upper portion of said end-standards and a series of radially-extending arms one of which is equipped with a locking stud, and a locking member pivoted on one of said end standards and adapted to engage said locking stud.

2. The combination with a frame comprising suitably connected end-standards equipped adjacent their upper ends with locking means receiving lugs, an oscillating body equipped with combined spring-attaching and trunnion-carrying members comprising a horizontally disposed trunnion and a series of radially extending arms, said trunnions being journaled in the upper portion of said end-standards, recoil springs having their upper ends attached to the ends of oppositely disposed radial members of said spring-attaching and trunnion carrying member, means for actuating said body, a locking stud carried by one of said radial members of said spring-attaching and trunnion-carrying member, and a loop-form locking member having the extremity of its arms pivotally connected with the lugs in the corresponding end-standard and adapted to be turned upwardly to take over the locking stud on the arm of the spring-attaching and trunnion-carrying member to lock the oscillating body against movement.

3. The combination with a frame, of an oscillatory hollow body, said body having a cover-portion provided with a vent-passage, a bell-shaped shield having a hollow shank attached to said cover-portion registering with said passage, said shank having a lateral inlet above said shield.

4. The combination with a frame of an oscillatory hollow body equipped at its upper portion with a closure provided with a vent comprising an internal housing provided with a vent-passage and an outlet-port from said housing and a shield within said housing, and above said vent-passage.

DONALD CAMERON.

In presence of—

R. A. RAYMOND,
A. U. THORIEN.