

W. S. HAMILTON & J. R. WILLIAMS.

WASHING MACHINE.

APPLICATION FILED JAN. 23, 1908.

917,290.

Patented Apr. 6, 1909.

2 SHEETS—SHEET 1.

Fig. 2.

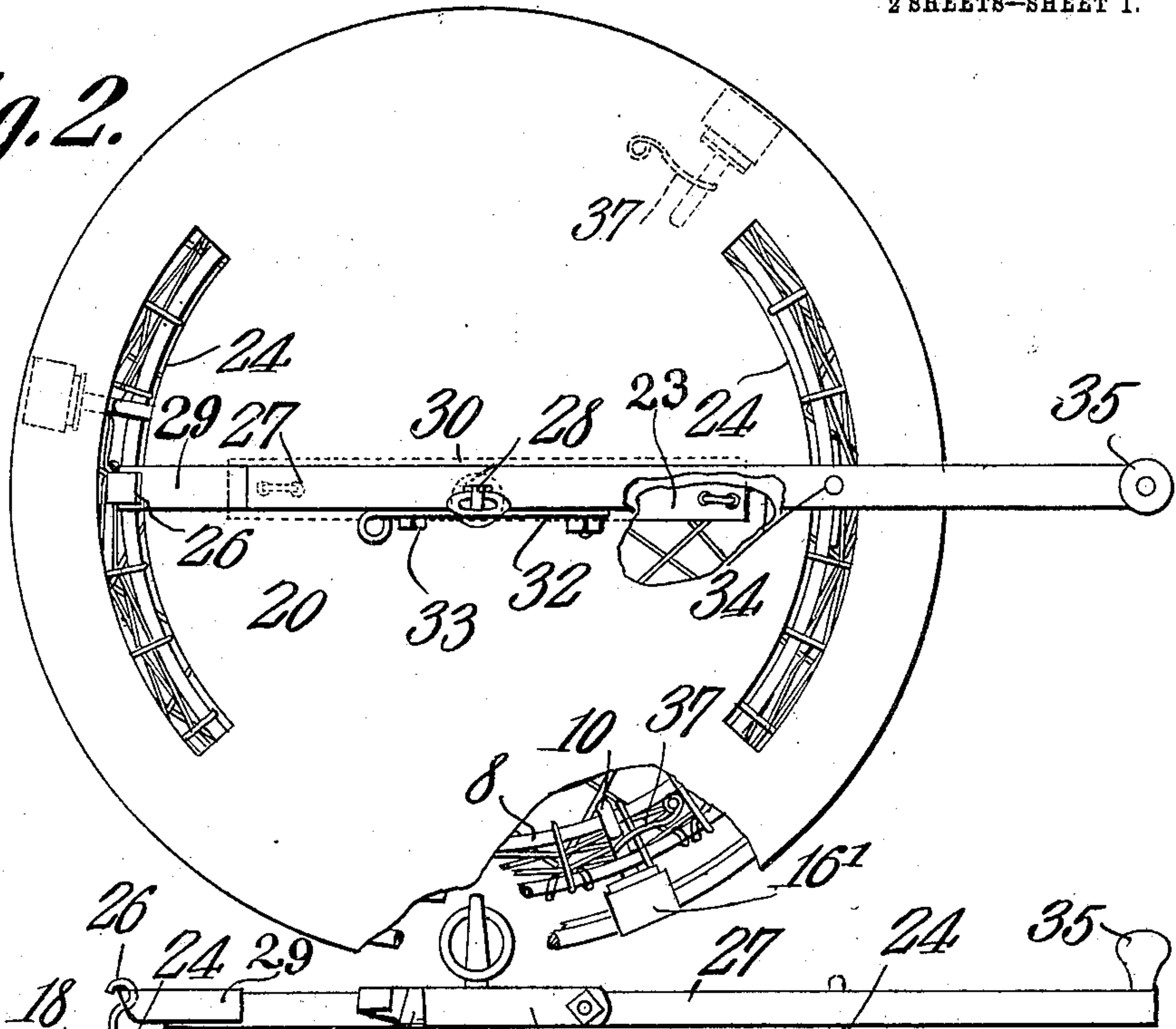
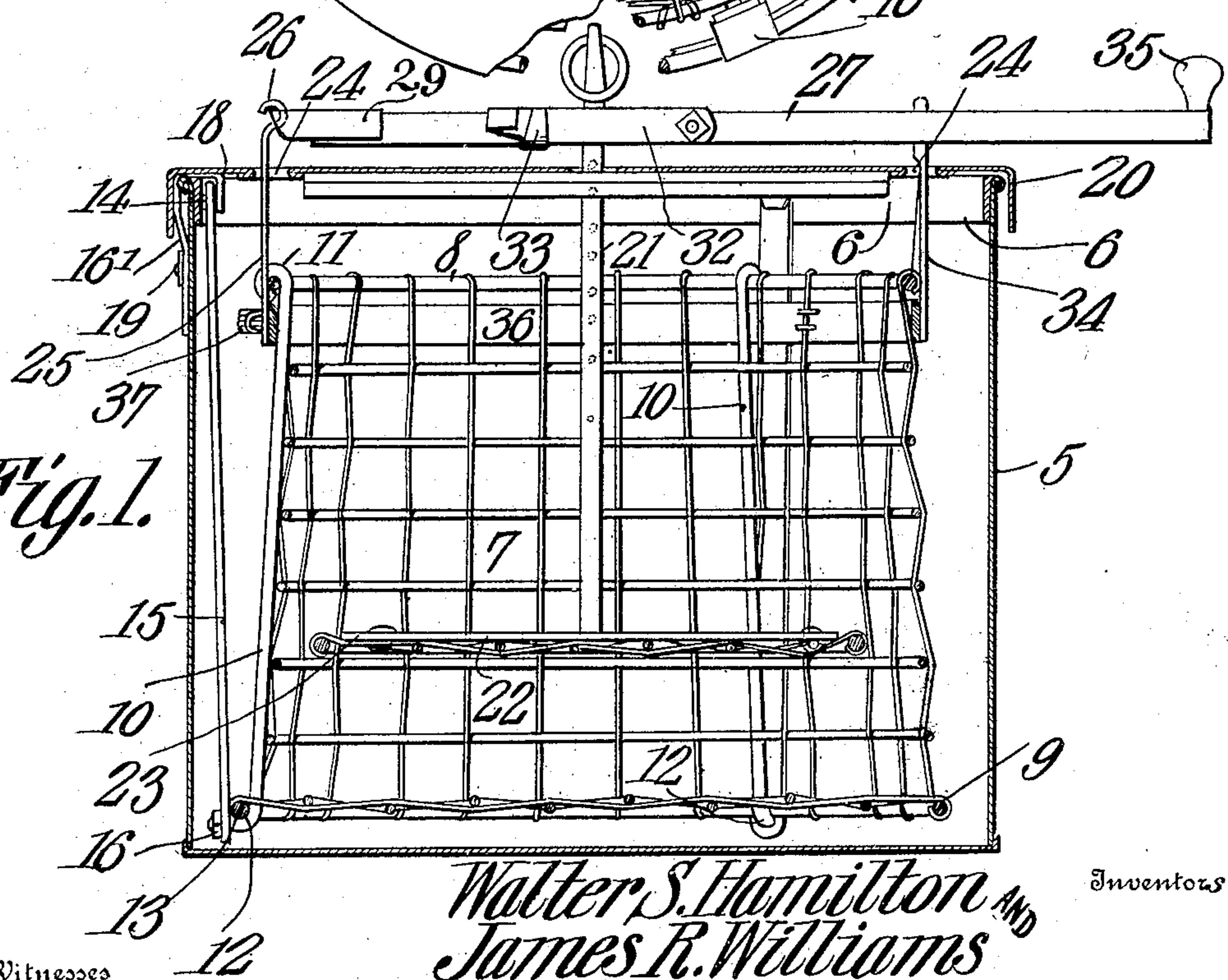


Fig. 1.



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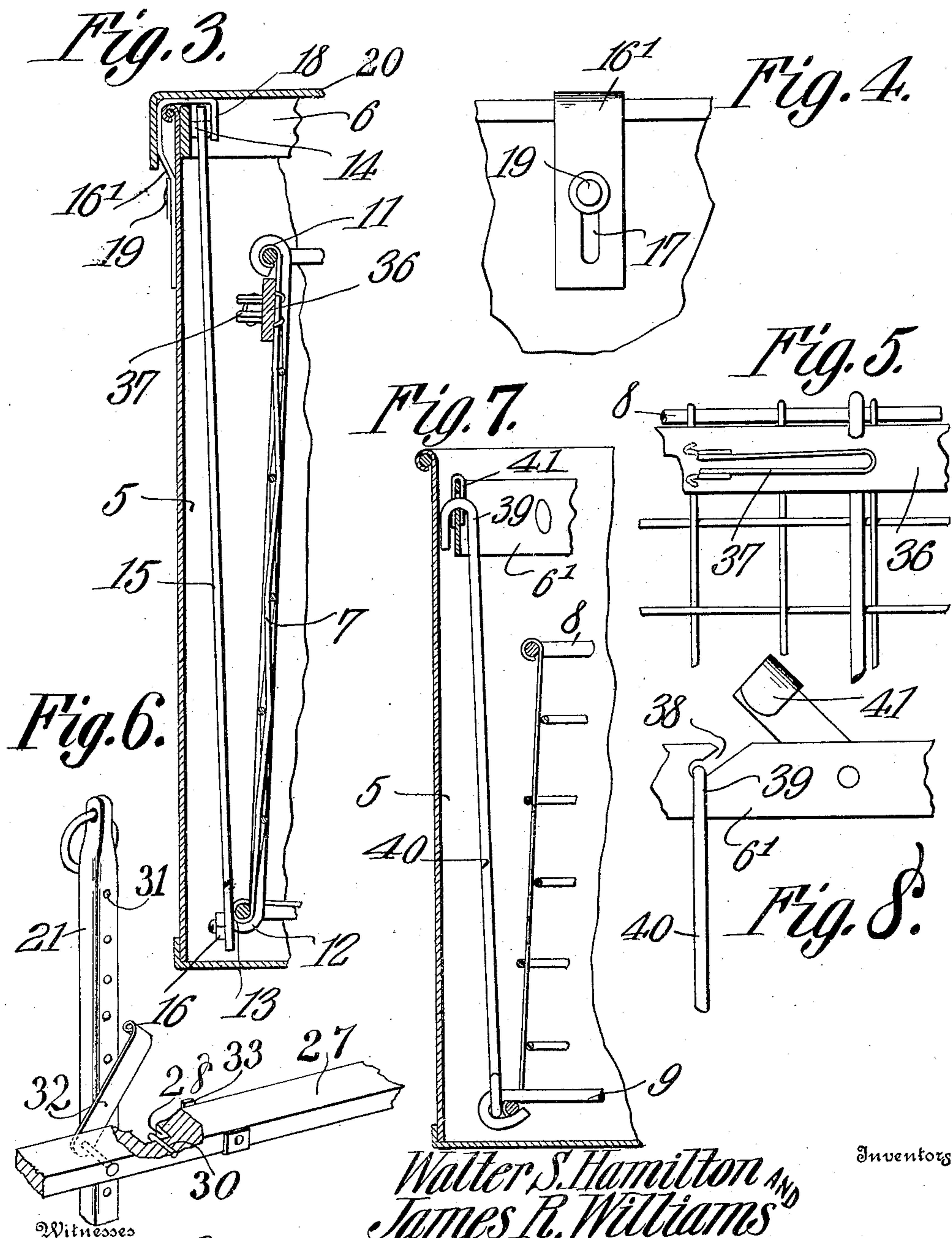
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UNITED STATES PATENT OFFICE.

WALTER SCOT HAMILTON AND JAMES ROZIER WILLIAMS, OF HOUSTON, TEXAS.

WASHING-MACHINE.

No. 917,290.

Specification of Letters Patent.

Patented April 6, 1909.

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To all whom it may concern:

Be it known that we, WALTER S. HAMILTON and JAMES R. WILLIAMS, citizens of the United States, residing at Houston, in the
5 county of Harris, State of Texas, have invented a new and useful Washing-Machine, of which the following is a specification.

This invention relates to washing machines and has for its object to provide a strong,
10 durable and thoroughly efficient machine of this character in which the clothes holder or basket is suspended within the liquid containing vessel and mounted for oscillatory movement in a horizontal and vertical plane.

15 A further object is to provide a clothes holder or basket having a plurality of hangers pivoted thereto and pivotally connected with the liquid containing vessel, and means for locking the hangers against accidental
20 displacement.

A still further object of the invention is generally to improve this class of devices so as to increase their utility, durability and efficiency.

25 Further objects and advantages will appear in the following description, it being understood that various changes in form, proportions and minor details of construction may be resorted to within the scope of
30 the appended claims.

In the accompanying drawings forming a part of this specification: Figure 1 is a vertical sectional view of a washing machine constructed in accordance with my invention.
35 Fig. 2 is a top plan view of the same, a portion of the cover being broken away to show the interior arrangement of the several parts. Fig. 3 is an enlarged detail vertical sectional view of a portion of the containing vessel and
40 clothes holder. Fig. 4 is a detail side elevation showing the manner of mounting one of the shields or guards in position on the containing vessel. Fig. 5 is a detail side elevation of a portion of the clothes holder. Fig.
45 6 is a detail perspective view of a portion of the operating lever and the adjacent end of the follower rod showing the manner of locking the rod in adjusted position. Fig. 7 is a vertical sectional view illustrating a modified
50 form of the invention. Fig. 8 is a detail side elevation showing the manner of locking the hangers illustrated in Fig. 7 in position on the upper reinforcing band.

55 Similar numerals of reference indicate corresponding parts in all of the figures of the drawings.

The improved washing machine forming the subject matter of the present invention includes a containing vessel 5 preferably cylindrical in shape and having its interior walls
60 reinforced and strengthened by an annular band or ring 6 disposed at the upper edge or rim of the vessel, as shown.

Suspended within the vessel 5 is a clothes holder or basket 7, the latter being formed
65 of superposed frames 8 and 9 connected by woven mesh wires or other reticulated material so as to permit the water to come in contact with the clothes when the basket is oscillated.

70 Connecting the upper and lower frames of the clothes holder are vertical braces 10 preferably three in number, as shown, and each having one end thereof bent to form a hook
75 11 for engagement with the upper supporting frame 8 and its lower end extended beneath the adjacent frame 9 and thence extended laterally to form a bearing stud 12 the exterior walls of which are threaded at 13.

80 Extending inwardly from the reinforcing ring 6 are lateral lugs 14 upon which are pivotally mounted hangers 15 having their lower ends pivotally connected with adjacent studs 12 and locked in position on said studs
85 by clamping nuts 16 engaging the threaded ends of the studs, as shown.

As a means for preventing accidental displacement of the upper ends of the hangers
90 15 there are provided a plurality of vertically movable shields 16', each preferably formed of a single piece of metal having one end thereof provided with a longitudinally disposed slot 17 and its opposite end bent transversely across the rim of the containing vessel and provided with a depending lip 18
95 adapted to bear against the end of the adjacent lug 14. A screw, rivet or similar fastening device 19 projects from the exterior walls of the containing vessel 5 and extends within the slots 17 thereby to retain the guards or
100 shields 16' in position on the containing vessel at said hangers. It will thus be seen that by elevating the guard or shield 16' and thence tilting the same laterally the upper pivoted
105 end of the adjacent hanger may be exposed so that said hanger may be disengaged from the adjacent lug 14 when it is desired to remove the basket from the containing vessel.

The receptacle 5 is provided with a cover or closure 20 having a centrally disposed
110 opening formed therein for the reception of a rod 21 carrying a head or follower 22, which

latter extends within the basket 7 for contact with the clothes. The follower 22 comprises an annular band or ring covered by intersecting wires and reinforced and strengthened by a transverse bar 23 to which is secured the adjacent end of the rod 21. The cover 20 is formed with spaced segmental slots 24 one of which receives a standard 25 carried by the basket or clothes holder 7. The upper end of the standard 25 is provided with a laterally extending hook 26 to which is pivotally connected the adjacent end of an operating lever 27, there being a notch or recess 28 formed in the intermediate portion of the lever 27 for the reception of the rod 21, as shown. One end of the operating lever 27 is provided with a reinforcing plate or bracket 29 having an eye formed therein for the reception of the hook 26, the bill of the hook being open so as to permit the operating lever to be readily disengaged from said hook when it is desired to remove the cover of the liquid containing receptacle. Disposed at the notch 28 is a locking pin 30 which engages any one of a plurality of recesses or sockets 31 formed in the rod 21 so that the follower 22 may be supported at any desired elevation within the basket or holder 7. Pivotally mounted on the operating lever 27 near the notch 28 is a catch 32 the free end of which is adapted to engage a suitable keeper 33 secured to the bottom of the operating lever thereby to hold the pin in engagement with the adjacent socket 30 and thus prevent accidental displacement of the rod 21. Extending vertically from the basket 7 is a second standard 34 having its free end extended through the adjacent segmental slot 24 and provided with a reduced terminal which is seated within an opening in the operating lever 27, there being a finger piece or knob 35 extending vertically from the free end of the operating lever so that by grasping the knob 35 and moving the lever back and forth an oscillatory movement will be imparted to the clothes basket in both a horizontal and vertical direction. It will here be noted that the rod 21 and follower 22 are locked against vertical movement within the basket but are free to move with said basket vertically of the receptacle 5 when the handle 35 is operated.

The side walls of the basket 7 are preferably slightly inclined and are reinforced and strengthened by an annular band 36, which latter also forms a support for the standards 25 and 34, there being one or more spring clamping members 37 secured to the exterior walls of the band 36 and adapted to engage the hangers 15 and support the same in vertical position when removing the basket 7 from the receptacle 5.

In using the washing machine the clothes are placed in the basket or holder 7 and the follower 22 moved downwardly in engagement with the clothes and locked in adjusted

position by means of the pivoted catch 32. The operating lever 27 is then oscillated by manipulating the finger piece or knob 35 which oscillates the clothes holder within the liquid containing receptacle and at the same time reciprocates said holder in a vertical plane so as to cause the water to pass through the clothes and thoroughly wash the same.

Attention is here called to the fact that the guards or keepers 16' are locked in position on the liquid containing vessel by engagement with the top or cover thus rendering it practically impossible for the hangers to become disengaged from the pivots or lugs 14 during the washing operation.

In Fig. 8 of the drawings there is illustrated a modified form of the invention in which the reinforcing ring 6' which corresponds to the ring 6 in Fig. 1 of the drawings is formed with spaced recesses 38 the throats of which are inclined and open through the top of the ring for the reception of the hooked ends 39 of the hangers or suspension devices 40. The hooked ends 39 of the hangers are locked within the recesses 38 by means of pivoted latches 41 adapted to be swung downwardly to form closures for the throats of the adjacent recesses, thereby to prevent the hooked terminals of the hangers from working upwardly through the throats and becoming disengaged from the reinforcing ring during the washing operation.

The machine is comparatively simple in construction and thoroughly efficient in operation and may be manufactured and put on the market at a comparatively small cost.

Having thus described the invention what is claimed is:

1. A washing machine including a liquid containing vessel, a clothes holder suspended within the vessel and mounted for oscillation in a horizontal and vertical plane, a pivotal connection between the clothes holder and containing vessel, and means independent of said pivotal connection for oscillating the clothes holder.

2. A washing machine including a liquid containing vessel, a clothes holder suspended within the vessel and mounted for oscillation in a vertical and horizontal plane, hangers forming a pivotal connection between the clothes holder and liquid containing vessel, respectively, and means independent of the hangers for oscillating the clothes holder.

3. A washing machine including a liquid containing vessel, a clothes holder suspended within the vessel and mounted for oscillation in a horizontal and vertical plane, hangers forming a pivotal connection between the clothes holder and vessel, respectively, a follower arranged within the holder, and means for oscillating the clothes holder.

4. A washing machine including a liquid containing receptacle, a removable clothes

holder suspended within the receptacle and mounted for oscillation in a horizontal and vertical plane, lugs extending inwardly from the walls of the liquid containing receptacle, 5 hangers pivotally mounted on the lugs and pivotally connected with the lower end of the holder, a follower disposed within the clothes holder, means for oscillating the latter, and means carried by the clothes holder 10 and adapted to engage the hangers and support the latter in engagement with the holder when the holder is withdrawn from the liquid containing vessel.

5. A washing machine including a liquid 15 containing receptacle, a clothes holder suspended within the receptacle and mounted for oscillation in a horizontal and vertical plane, hangers forming a pivotal connection between the clothes holder and liquid con- 20 taining vessel, vertically movable shields forming housings for the upper pivoted ends of the hangers, a follower disposed within the clothes holder, and an operating lever for oscillating said holder.

25 6. A washing machine including a liquid containing vessel having its upper portion reinforced by an annular band, lugs extending laterally from the band, a clothes holder suspended within the liquid containing ves- 30 sel, hangers pivotally mounted on the lugs and pivotally connected with the lower end of the clothes holder, shields slidably mounted on the exterior walls of the vessel and provided with depending lips adapted to 35 cover the inner ends of the lugs for preventing accidental displacement of the hangers, a follower disposed within the clothes holder, and means for oscillating the latter.

7. A washing machine including a liquid 40 containing vessel, a cover having segmental slots formed therein, a clothes holder suspended within the vessel, hangers forming a pivotal connection between the clothes holder and liquid containing receptacle, a 45 standard secured to the clothes holder and extending through one of the segmental slots in the cover and provided with a terminal hook, an operating lever having a recess formed in one end thereof for engagement 50 with the hook, a second standard secured to the holder and extending through the adjacent segmental slot for engagement with the operating lever, a rod piercing the operating lever and provided with a terminal head dis- 55 posed within the clothes holder, said lever being movable back and forth in a horizontal plane thereby to operate the clothes holder.

8. A washing machine including a liquid 60 containing vessel, a clothes holder suspended within the vessel and provided with a reinforcing ring, hangers forming a pivotal connection between the clothes holder and ves- sel, a cover having spaced segmental slots formed therein, standards secured to the 65 reinforcing ring and projecting vertically

through the adjacent slots in the cover, one of said standards being provided with a hooked terminal and the other with a reduced portion, an operating lever pivotally 70 connected with the hooked terminal of one of the standards and having an opening formed therein for the reception of the reduced portion of the opposite standard, and a rod piercing the operating lever and pro- 75 vided with a terminal head disposed within the clothes holder.

9. A washing machine including a liquid containing vessel, a clothes holder suspended within the vessel and comprising spaced 80 frames, vertical braces connecting said frames and each having one end thereof provided with a hook for engagement with the upper frame and its lower end extended be- 85 neath the lower frame and provided with a laterally extending bearing boss, lugs extending inwardly from the vessel, hangers pivotally connected with the bearing bosses and pivotally mounted on the lugs for suspending the clothes holder within the vessel, a fol- 90 lower disposed within the holder, shields mounted for vertical movement on the vessel and provided with depending lips adapted to cover the adjacent ends of the lugs, a cover bearing against the shields for locking the 95 latter against accidental displacement, and an operating lever connected with the fol- lower and clothes holder for oscillating the latter.

10. A washing machine including a liquid containing vessel, a clothes holder suspended 100 within the vessel and mounted for oscillation in a horizontal and vertical plane, a cover having spaced segmental slots formed there- in, spaced standards secured to the clothes holder and extended through the slots, one 105 of said standards being provided with a hooked terminal and the other with a reduced portion, a rod projecting through the cover and having its lower end provided with a follower, said rod being formed with spaced 110 recesses, an operating lever pivotally connected with the hooked terminal of one of the standards and having a notch formed therein for the reception of the rod, a pin seated at said notch and adapted to engage 115 the recesses in the rod, and a latch pivotally mounted on the operating lever and extending transversely across the rod at said notch, said operating lever having also an opening for the reception of the reduced end of the 120 standard.

In testimony that we claim the foregoing as our own, we have hereto affixed our signatures in the presence of two witnesses.

WALTER SCOT HAMILTON.
JAMES ROZIER WILLIAMS.

Witnesses:

J. A. GORDON,
A. W. MCKINNEY, Jr.