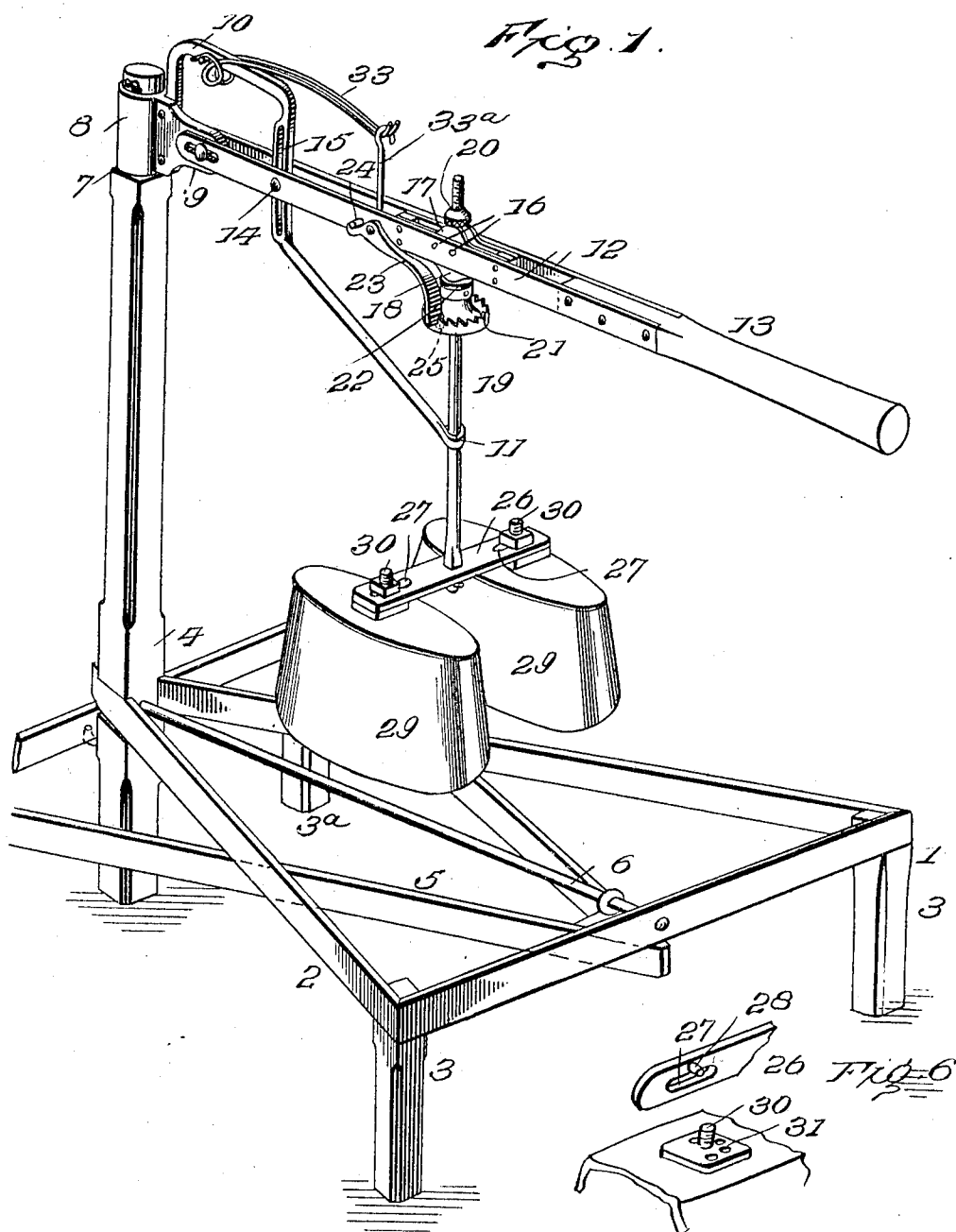


947,555.

W. R. KRAMER.
WASHING MACHINE.
APPLICATION FILED MAR. 5, 1908.

Patented Jan. 25, 1910.

2 SHEETS—SHEET 1.



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UNITED STATES PATENT OFFICE.

WILLIAM R. KRAMER, OF CELINA, OHIO.

WASHING-MACHINE.

947,555.

Specification of Letters Patent. Patented Jan. 25, 1910.

Application filed March 5, 1908. Serial No. 419,366.

To all whom it may concern:

Be it known that I, WILLIAM R. KRAMER, citizen of the United States, residing at Celina, in the county of Mercer and State of Ohio, have invented certain new and useful Improvements in Washing-Machines, of which the following is a specification.

This invention contemplates certain new and useful improvements in washing machines, and the object of the invention is an improved pounder-operating device by means of which the pounder may be conveniently operated with a minimum amount of power to effectually cleanse the garments, and which is arranged to automatically rotate the pounder upon the reciprocation thereof, and thus cause the latter to strike the garments at different points upon successive strokes.

With this and other objects in view that will more fully appear as the description proceeds, the invention consists in certain constructions and arrangements of the parts that I shall hereinafter fully describe and claim.

For a full understanding of the invention and the merits thereof, and to acquire a knowledge of the details of construction and the means for effecting the result, reference is to be had to the following description and accompanying drawings, in which:

Figure 1 is a perspective view of my improved washing machine; Fig. 2 is a side elevation thereof, with parts in section; Fig. 3 is a longitudinal section of one of the pounders. Fig. 4 is a transverse section thereof; Fig. 5 is a detail view, in perspective, of the stand, showing its auxiliary frame extended; and, Fig. 6 is a similar view, showing the adjustable connection of a pounder and the yoke.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

Referring to the drawings, the numeral 1 designates a stand which is adapted to support a tub containing garments designed to be washed by my improved washer, and which comprises a preferably triangular frame 2 and supporting legs 3 secured to the latter at the corners thereof, one of said legs being extended upwardly to form a standard 4. In the preferred construction of the stand, the latter is provided with an auxiliary triangular frame 5 which is pref-

erably lower than the frame 2, and which is supported at two corners by legs 3^a, the other corner of the frame having a sliding connection with a cross-bar 6 secured to the standard 4 and the opposite side of the frame 2. This auxiliary frame is adapted to be extended, as is permitted by its sliding connection with the cross-bar 6, and is designed to support an extra tub of water which may be desired for use during the process of washing.

The upper extremity of the standard 4 is reduced to form an upwardly facing shoulder 7, and a sleeve 8 is rotatably mounted on the reduced extremity and rests upon the shoulder 7, said sleeve being formed with an outstanding eye 9. An arm 10 is also carried by the sleeve, and extends above the eye, then outwardly horizontally, then downwardly, and finally in an inclined direction downwardly and outwardly from the post, said arm being formed at its lower extremity with an opening 11 extending there-through.

An actuating lever is connected to the sleeve 8, and is constructed in two spaced members 12 which are pivotally connected at one end of the eye 9, by a longitudinal slot and pin connection, as shown and to the other end of which is secured a handle 13. These spaced members extend on opposite sides of the downwardly projecting portion of the arm 10, and are provided with a transverse stud 14 that is slidably mounted in a substantially vertical slot 15 formed in such portion of the arm, which thus constitutes a guide and limits the swinging movement of the lever. Intermediate of their ends, the members 12 carry spaced pins 16, and are formed at their upper edges, contiguous to such pins, with corresponding upwardly disposed segmental ears 17, and at their lower edges with depending segmental lips 18.

A suspension rod 19 is pivotally mounted at its upper end between the spaced pins 16 and is adjustably supported in position by means of a thumb screw 20 mounted on its threaded upper extremity and bearing against the upturned ears 17, a ratchet wheel 21 being rigidly mounted on the rod below the actuating lever, and being formed with an upwardly extending hub portion that constitutes an upwardly facing shoulder 22. This shoulder is adapted to bear against the depending lips 18 to limit the independent

upward movement of the rod, a washer being preferably interposed between such shoulder and the depending lips. The ratchet wheel 21 is designed to be engaged by a pawl 23 which is pivotally connected to one of the members 12 of the lever, and which has its independent downward movement limited by a stop, 24 projecting from such member of the lever, said pawl being formed at its lower extremity with a lug 25 that is arranged to prevent any transverse movement of the pawl to permit the latter to be accidentally disengaged from the ratchet.

Below the ratchet wheel, the rod 19 passes through the opening 11 in the arm, with its lower end protruding therefrom and carrying a yoke 26 which is perpendicular to and rigid with the rod, and is formed at its ends with slots 27 and depending prongs 28. Two pounders 29 are secured to the respective ends of the yoke by means of threaded stems 30 mounted in the slots 27, and held therein by nuts engaged with such stems. These pounders are formed in their upper ends with a plurality of sockets 31 which are arranged to receive the depending prongs 28 of the yoke to brace the pounders against any accidental movement after they have been secured by the stems and nuts in the desired adjusted relation. Each of these pounders is preferably divided into a plurality of air cells by means of perforated webs 32.

In order to sustain the actuating lever in a substantially horizontal position when not in use, and to raise the same to such position after the lever has been swung downwardly, a spring 33 is provided, and comprises a strip of spring wire which is doubled upon itself intermediate of its ends and passes beneath that portion of the arm 10 that is above the eye 9, the ends of said strip passing over outstanding projections carried by the arm 10, and being coiled in front of the said projections, as shown. The extremities of the strip are curved upwardly and engaged with the downwardly facing hooked extremity of the link 33^a, the lower extremity of said link being hooked around the same pin on which the pawl 23 is mounted, as indicated in dotted lines in Fig. 2.

In the practical use of my improved washing machine, the suspension rod 19 is reciprocated by means of the handle 13 to cause the pounders to strike the garments in the tub supported upon the frame 2 of the stand. Upon the downward movement of the actuating lever, the lower end of the rod 19 is swung outwardly so that the shoulder 22 bears against the outer ends of the depending lips 18, thus causing the pawls 23 to ride backwardly and drop into engagement with the next tooth of the ratchet. The upward movement of the handle returns

the rod to its normal position, and raises the pawl, which movement obviously advances the tooth with which the pawl is in engagement, and thus effects the partial rotation of the ratchet wheel. The movement of the ratchet wheel partially rotates the pounders 29, and thus causes the latter to strike the garments in the tub at a different point upon the next stroke of the actuating lever.

In the present instance, the ears 17 and lips 18 are formed at the upper and lower edges of two substantially duplicate strips which are separate from the spaced members 12 and are disposed at the opposing faces thereof with the ears and lips projecting beyond the corresponding edges of such members, as shown in Figs. 1 and 2. The spaced pins 16 pass through the strips and the members 12 and serve to assist in securing the former to the latter, while the strips are further held in proper spaced relation and against the spaced members 12 through the instrumentality of blocks interposed between the opposite ends of the strips, as shown, suitable fastening means being preferably passed through the strips, blocks and said members to maintain all the parts in position. It will be observed that in addition to their function just described, the blocks also tend to brace the spaced members 12.

Having thus described the invention, what I claim is:

A washing machine comprising a standard, a sleeve mounted on said standard and formed with an out-standing eye, an actuating lever having a longitudinal slot and pin connection at one end with said eye, and formed in spaced members, an arm secured to said sleeve, and embodying a portion extending outwardly therefrom in a horizontal direction, another portion extending downwardly from the outer end of the horizontal portion, such downwardly extending portion being formed with a slot, and an inclined downwardly and outwardly projecting portion extending from the lower end of the downwardly extending portion with an opening extending therethrough, the actuating lever being formed with a transverse stud mounted in the said slot and the horizontally extending portion of the arm being formed at opposite sides with outstanding projections, a spring embodying parallel members connected at one end by a cross bar, said members embracing and extending outwardly from opposite sides of the horizontal portion of the arm, and over the projections thereof with the cross bar extending underneath the arm back of said projections, a suspension rod extending between the spaced members of the actuating lever, the latter formed at their top and bottom edges with segmental ears and lips, a nut mounted upon the suspension rod and abut-

ting against the ears, a ratchet secured to
the suspension rod below the actuating lever,
and formed with a hub portion adapted to
bear against the segmental lips of the actuat-
5 ing lever, a pounder carried by said rod, a
pawl engaging said ratchet, a pin securing
said pawl to the actuating lever, and a link
having a lower hooked extremity engaging
said last named pin and an upper, down-

wardly facing hooked extremity engaging 10
the forwardly extending ends of the spring.

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

WILLIAM R. KRAMER. [L. s.]

Witnesses:

C. E. MARSH,
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