

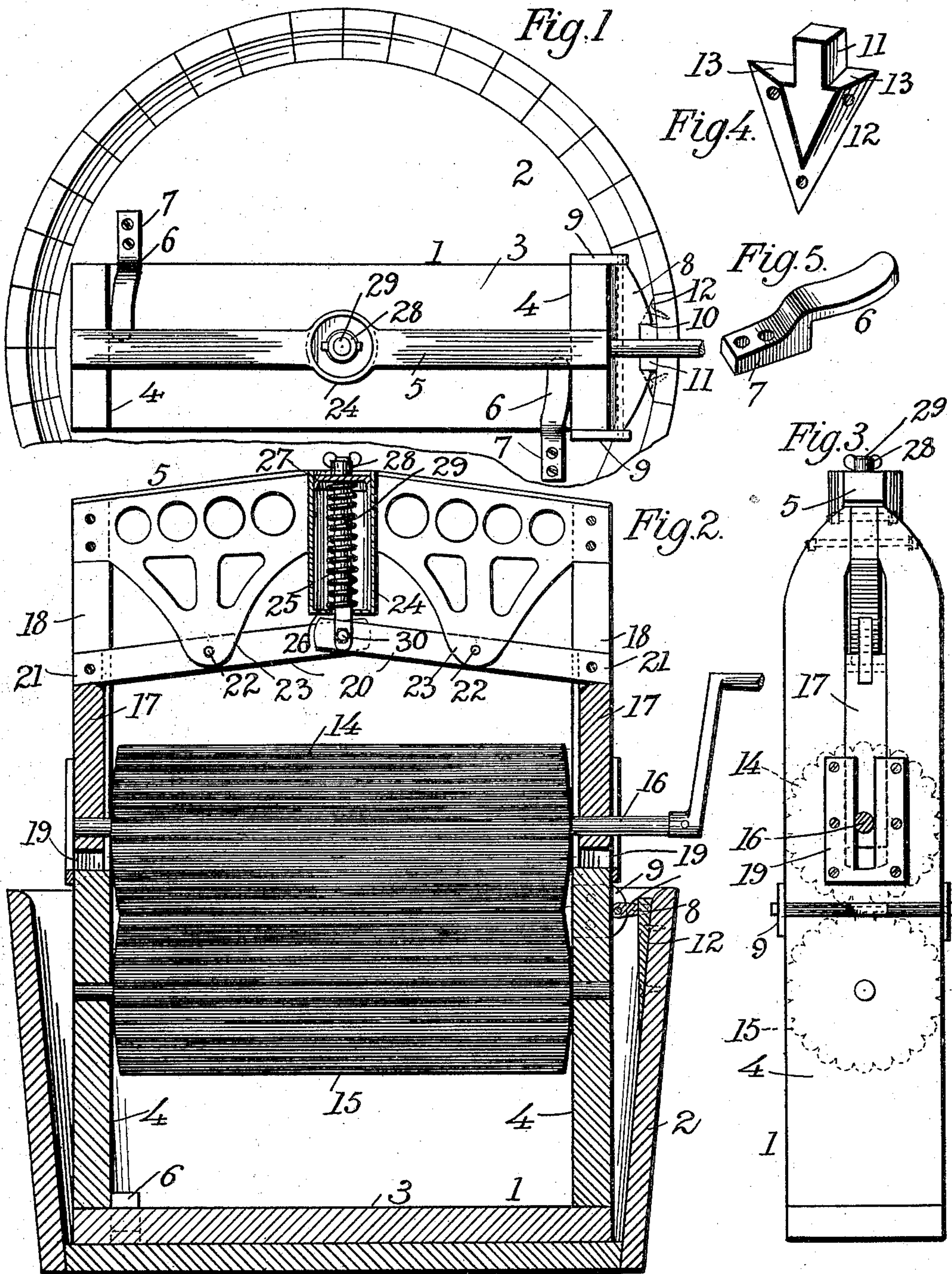
No. 690,907.

Patented Jan. 7, 1902.

O. L. JOHNSON.
WASHING MACHINE.

(Application filed Apr. 19, 1901.)

(No Model.)



Witnesses:

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UNITED STATES PATENT OFFICE.

OTIS L. JOHNSON, OF MILLS, PENNSYLVANIA, ASSIGNOR TO JOSEPH B. JOHNSON, OF MILLS, PENNSYLVANIA.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 690,907, dated January 7, 1902.

Application filed April 19, 1901. Serial No. 56,616. (No model.)

To all whom it may concern:

Be it known that I, OTIS L. JOHNSON, a citizen of the United States, residing at Mills, in the county of Potter and State of Pennsylvania, have invented a new and useful Washing-Machine, of which the following is a specification.

The invention relates to improvements in washing-machines.

10 The object of the present invention is to improve the construction of washing-machines and to provide a simple and comparatively inexpensive one, capable of enabling clothes to be rapidly and thoroughly washed.

15 The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claim hereto appended.

20 In the drawings, Figure 1 is a plan view of a washing-machine constructed in accordance with this invention. Fig. 2 is a vertical sectional view. Fig. 3 is an end elevation. Fig. 4 is a detail view of the keeper. Fig. 5 is a detail view of one of the clamps.

25 Like numerals of reference designate corresponding parts in all the figures of the drawings.

1 designates an approximately rectangular frame designed to be mounted in an upright position within a washtub 2 and composed of a bottom cross-piece 3, sides 4, and a top cross-piece 5, connecting the upper ends of the sides, as clearly shown in Fig. 2. The tub is provided at its bottom with reversely-arranged clamps 6, located at opposite sides of the bottom and consisting of reversely-arranged rigid jaws offset from the bottom of the tub and projecting horizontally from body portions 7, which are perforated for the reception of screws or other suitable fastening devices for securing the clamps to the tub. The frame is interlocked with the clamps by arranging it on the bottom of the tub between the said clamps and partially rotating it to carry the bottom cross-piece 3 beneath the jaws. The opposite edges of the bottom cross-piece abut against the body portions of the clamps, and the frame is locked in such engagement by means of a pivoted latch 8,

mounted between a pair of projecting plates 9 and provided with a recess 10, arranged to receive a central vertical lug 11 of a keeper 12. The projecting portions of the plates are perforated to form ears, and the latter support a pintle which passes through the latch. The pintle is disposed horizontally, and the keeper, which consists of a triangular body, is secured to one side of the tub and extends laterally beyond the lug 11 to form support- ing-shoulders 13 to receive the latch. When the latch is swung downward into engagement with the lug of the keeper, the frame is held against rotation and is securely held in engagement with the clamps.

65 The washing mechanism consists of upper and lower corrugated rolls 14 and 15, the upper roll being yieldingly mounted to permit clothes and other fabrics of different thicknesses and buttons and the like to pass through the washing mechanism without injury. The lower roll is journaled in suitable bearings of the sides of the frame, as clearly shown in Fig. 2, and the upper roll is mounted on the shaft 16, journaled in bearings of vertically-movable slides 17 and provided at one end with a crank-handle by means of which the washing-machine is operated. The ends of the rolls are rounded, and their central portions abut against the sides of the frame, as clearly shown in Fig. 2.

75 The slides 17 are arranged in vertical slots 18 of the upper portions of the sides of the frame and are retained in place by exterior plates 19, the upper roll 14, and levers 20, which are pivoted at their outer ends 21 in slots or bifurcations of the upper ends of the slides. The plates 19, which are secured to the outer faces of the sides of the frame, are approximately U-shaped and overlap the slides, the projecting portions of the plates forming flanges, as clearly indicated in Fig. 3 of the drawings. The levers are fulcrumed between their ends by pivots 22 on depending portions 23 of the top cross-piece, which is secured at its ends to the upper terminals of the sides of the frame. The top cross-piece is provided with a central cylindrical casing 24, disposed vertically and receiving a coiled spring 25, which is seated upon a bottom 100

flange 26 of the casing and which is engaged
by a cap 27. The cap 27 is engaged by a
thumb-nut 28 of a threaded rod or stem 29,
pivoted at its lower end by a bolt 30 or other
5 suitable fastening device to the inner ends of
the levers. The rod or stem extends through
the coiled spring, and the latter acting upon
the cap tends to force the rod or stem upward.
When the slides move upward by reason of
10 any upward movement of the upper roll, the
spring is compressed, and the said spring when
free to move will expand and return the up-
per roll to its normal position. The inner end
of the levers are provided with perforations
15 or openings of sufficient size to permit the
necessary play of the parts, and the slides are
capable of a limited lateral movement suffi-
cient for this purpose, but the outer ends of
the levers may be slotted, if desired. The con-
20 nection between the slides causes the ends of
the roll to move vertically uniformly, and the
pressure may be readily regulated by the
thumb-nut, which is arranged at the upper
end of the threaded stem.
25 It will be seen that the washing-machine is
simple and inexpensive in construction, that
it is adapted to be arranged in a washtub,

and that it is capable of enabling clothes to
be rapidly and thoroughly washed.

What I claim is—

The combination of a frame provided at its
top with a vertical tubular casing depending
from the center of the top of the frame having
a bottom flange, said frame being provided
at opposite sides with ways, slides mounted in
30 the ways, upper and lower rolls mounted, re-
spectively, on the slides and on the sides of
the frame, levers fulcrumed between their
ends and pivoted at their outer ends to the
slides, a stem pivotally connected at its lower
40 end to the inner ends of the levers and extend-
ing through the bottom of the casing and pro-
vided with a nut, a coiled spring arranged
within the casing, and a cap disposed on the
stem and engaging the coiled spring, and 45
adapted to be adjusted by the nut, substan-
tially as described.

In testimony that I claim the foregoing as
my own I have hereto affixed my signature
in the presence of two witnesses.

OTIS L. JOHNSON.

Witnesses:

J. B. JOHNSON,
ART S. BURT.