

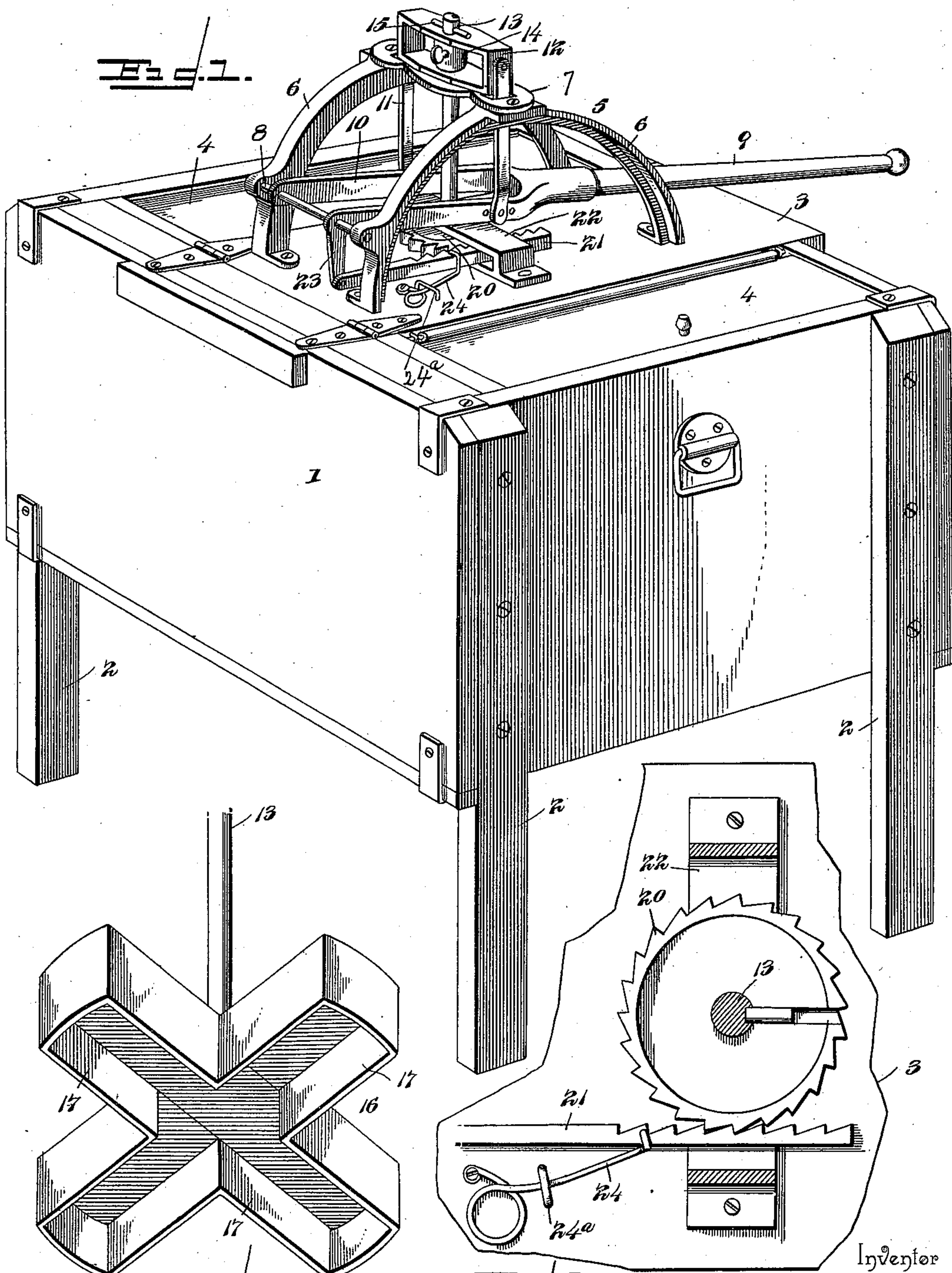
(No Model.)

2 Sheets—Sheet 1.

L. L. CHASE.
WASHING MACHINE.

No. 564,003.

Patented July 14, 1896.



Witnesses
E. H. Stewart
J. F. Riley

By *his* Attorneys,

Lee L Chase

C. A. Snow & Co.

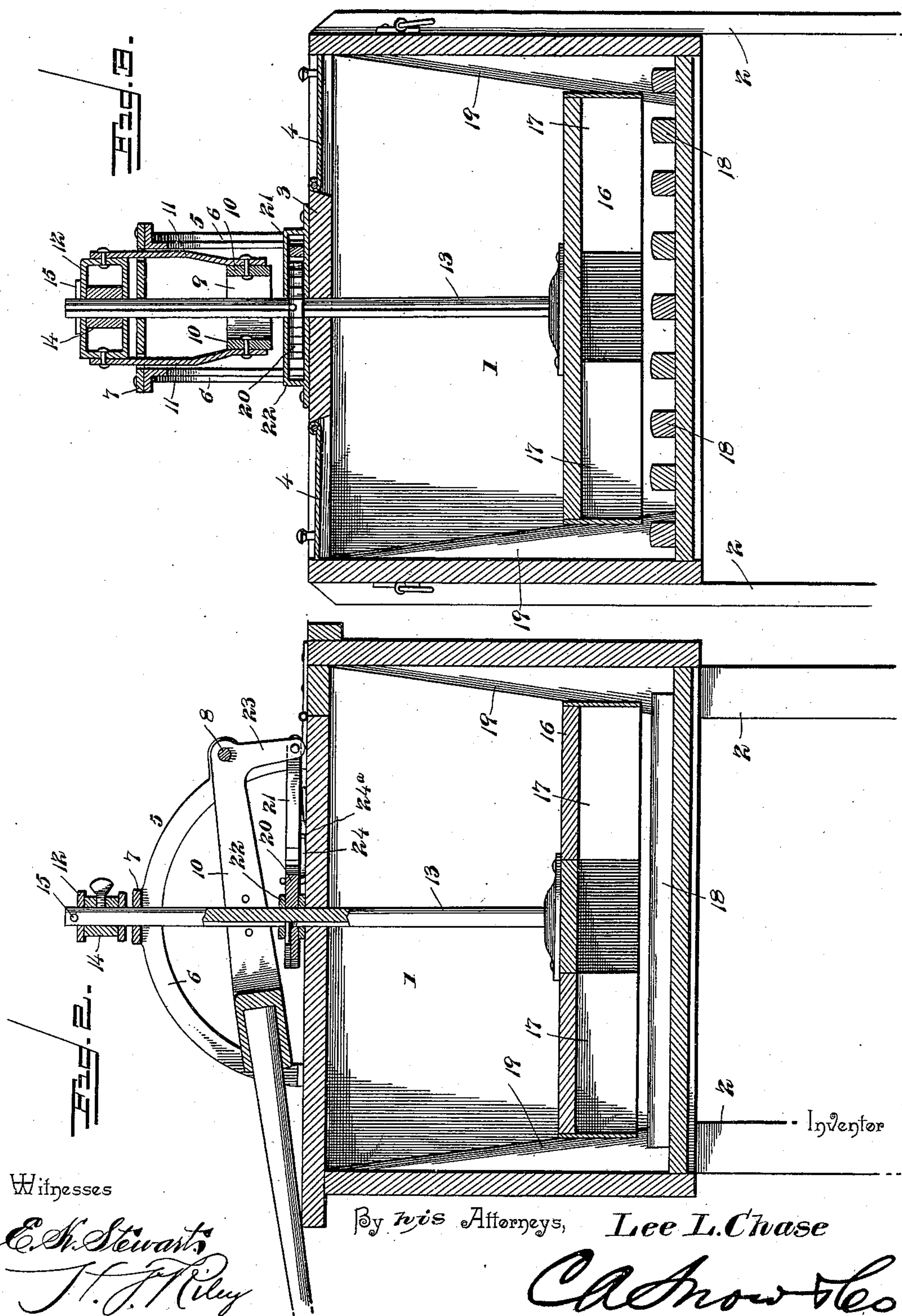
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WASHING MACHINE.

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Patented July 14, 1896.



UNITED STATES PATENT OFFICE.

LEE L. CHASE, OF SANDY HILL, NEW YORK, ASSIGNOR TO THE STAR
SUCTION WASHER COMPANY, OF SAME PLACE.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 564,003, dated July 14, 1896.

Application filed November 30, 1895. Serial No. 570,655. (No model.)

To all whom it may concern:

Be it known that I, LEE L. CHASE, a citizen of the United States, residing at Sandy Hill, in the county of Washington and State of New York, 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, inexpensive, and efficient one which will be capable of easy operation and which will be adapted to wash clothes rapidly and thoroughly without injuring the fabrics.

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 claims hereto appended.

20 In the drawings, Figure 1 is a perspective view of a washing-machine constructed in accordance with this invention. Fig. 2 is a vertical sectional view taken longitudinally of the operating-lever. Fig. 3 is a similar view taken transversely thereof. Fig. 4 is a detail sectional view illustrating the construction and manner of mounting the ratchet-wheel and the rack-bar. Fig. 5 is a detail perspective view of the plunger.

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

35 1 designates a washing-machine body constructed in any suitable manner, and having legs 2, and provided with a top 3 hinged at the back of the body and adapted to swing upward and provided with sections or lids 4, hinged at their inner longitudinal edges, and arranged to swing laterally in opening, and adapted when open to rest against a centrally-disposed bearing-bracket 5. These lids or hinged sections enable the clothes to be conveniently introduced into the washing-machine without raising the entire top of the body and the operating mechanism thereon.

45 The centrally-disposed bearing-bracket 5 is composed of two substantially semicircular or arched sides 6, arranged parallel and connected by a central cross-piece 7, located at

the top of the sides; and the sides are also connected at the back of the bracket by a transverse pivot 8, on which is fulcrumed an operating-lever 9. The operating-lever is located 55 between the curved sides of the bracket and is provided with a forked rear portion having parallel sides 10, which are adjustably connected with the lower terminals of a pair of upwardly-extending link-bars 11 pivoted at 60 their upper ends to a substantially rectangular loop or frame 12, and operating through openings of the cross-piece 7.

A vertically-disposed shaft 13 passes through the top of the washing-machine body 65 and the cross-piece 7 of the bearing-bracket, and is swiveled to the rectangular frame or loop 12, and when the operating-lever is oscillated the shaft will be vertically reciprocated. A collar 14 is clamped to the shaft 13 by a set-screw and is located within the frame 12, and a key 15 passes through a perforation of the shaft and is located above the frame or loop. A plunger or clothes-pounder 16 is fixed to the lower end of the shaft, and is preferably composed of four arms arranged at right angles and radiating from the shaft and provided with depending sides 17, constructed of sheet metal or other suitable material and forming an inverted receptacle, which is adapted to 80 force air and water through the clothes to clean them. In order to facilitate the operation of the clothes-pounder or plunger, the bottom of the washing-machine body is provided on its upper face with a series of parallel ribs 18 85 adapted to hold the clothes above the surface of the bottom and to form grooves or gutters. When a rectangular washing-machine body is employed, bars 19 are preferably arranged at the corners thereof to prevent the clothes from 90 collecting at these points.

The plunger has a straight downward movement, but in its upward movement it is partially rotated in order to change its position so as to operate on all portions of the clothes, 95 and also to agitate the clothes being washed, so as to subject them thoroughly to the action of the washing-machine, and this is accomplished by means of a ratchet-wheel 20, which is keyed to the shaft, and a reciprocating rack-bar 21, which is actuated by the operating-lever. The ratchet-wheel 20 is pro- 100

vided with a suitable key and the shaft is longitudinally grooved for the reception of the same, whereby the ratchet-wheel, which is mounted in a suitable bearing 22, is adapted, 5 when rotated, to produce a corresponding rotation of the shaft and the plunger or clothes-pounder without interfering with the vertical reciprocation of the same. One side of the forked portion of the operating-lever is provided with a depending arm 23, and the rack- 10 bar has its rear end pivoted to the depending arm 2, and it is engaged by a spring 24, which holds the teeth of the rack-bar in engagement with the ratchet-wheel. The spring is preferably provided at one end with a loop or 15 coil. It is arranged in a guide 24^a, and it has at its engaging end a substantially L-shaped arm for embracing the rack-bar. The rack-bar is provided at its inner side with a series 20 of teeth beveled at the rear side, and the bearing 22 consists of a rectangular loop having a central perforation for the passage of the shaft, the rack-bar being arranged at one end of the loop and being guided by the 25 same.

It will be seen that the washing-machine is simple and comparatively inexpensive in construction, that it is capable of thoroughly and rapidly washing clothes without injuring 30 them, and that it may be conveniently operated.

What I claim is—

1. In a washing-machine, the combination 35 of a body, a bearing-bracket mounted thereon, a vertical shaft arranged in the bearing-bracket and carrying a plunger or pounder, a loop or frame located above the bearing-bracket and swiveled to the shaft, an operating-lever fulcrumed on the bearing-bracket

and provided with a depending arm, a link 40 connecting the loop or frame with the operating-lever, a ratchet-wheel arranged at the base of the bracket and connected with and adapted to rotate the shaft, and a rack-bar 45 connected with the arm of the lever and meshing with the ratchet-wheel, substantially as and for the purpose described.

2. In a washing-machine, the combination of a body, a bearing-bracket composed of opposite sides and a top piece connecting the 50 sides, a vertical shaft carrying a plunger and arranged in the bracket, a substantially rectangular loop or frame located above the bracket and having the upper end of the shaft swiveled to it, an operating-lever having a 55 forked rear portion and straddling the shaft and fulcrumed on the bearing-bracket and provided at one side with a depending arm, link-bars extending upward from the sides of the forked portion of the operating-lever and 60 passing through openings of the cross-piece of the bracket and connected to the frame or loop, a rack-bar pivoted to the arm of the operating-lever and meshing with the ratchet-wheel, a spring 24 arranged on the upper face of the 65 cover of the washing-machine body, provided at one end with a loop, and having an L-shaped arm at its other end for engaging the rack-bar and holding the same in engagement with the ratchet-wheel, and the keeper 24^a receiving the spring, substantially as described. 70

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

LEE L. CHASE.

Witnesses:

WILLIAM J. TOWNSEND,
H. S. HIGLEY.