2 Sheets—Sheet 1.

# E. M. CHAMNESS & J. T. VAUGHN.

## Washing-Machine.

No. 224,876. Patented Feb. 24, 1880.

Fig. 1.

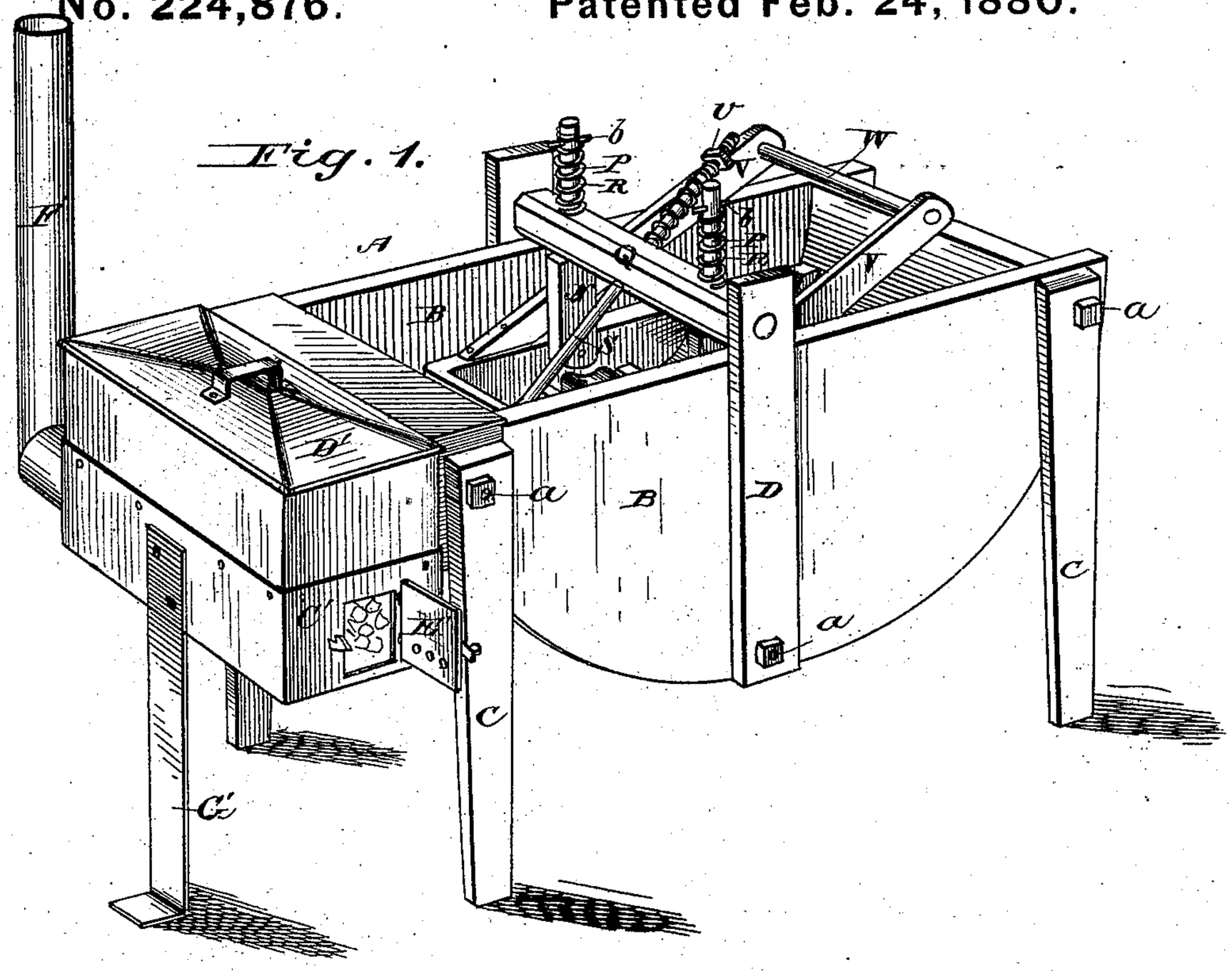
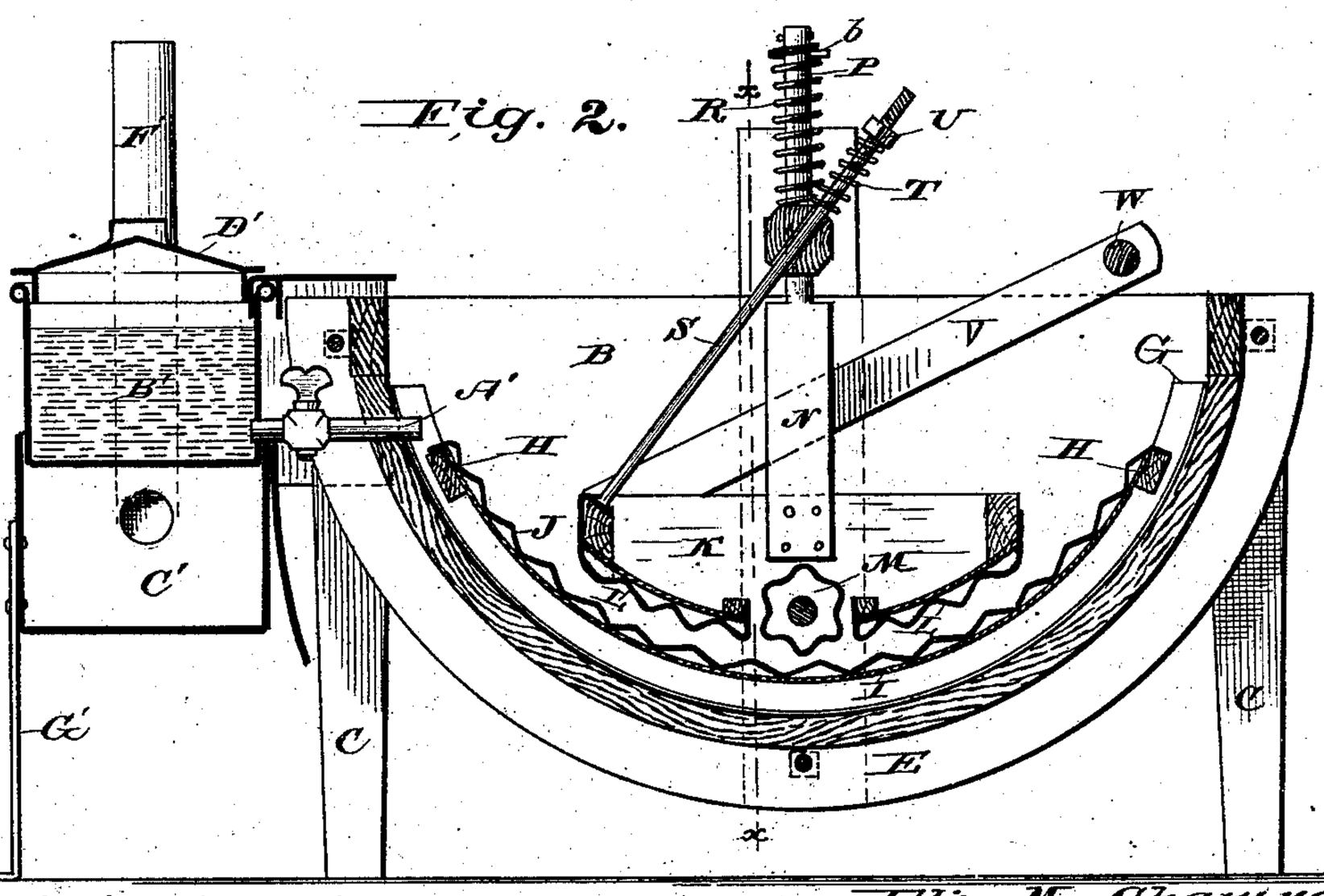



Fig. 2.




Attest:
H. L. Pennie.
A. W. Lowry

Eli M. Chamness.
John T. Vaughn.
Inventors.

By. N. C. Abbot. Atty.

2 Sheets—Sheet 2.

# E. M. CHAMNESS & J. T. VAUGHN.

## Washing-Machine.

No. 224,876. Patented Feb. 24, 1880.

*Fig. 3.*

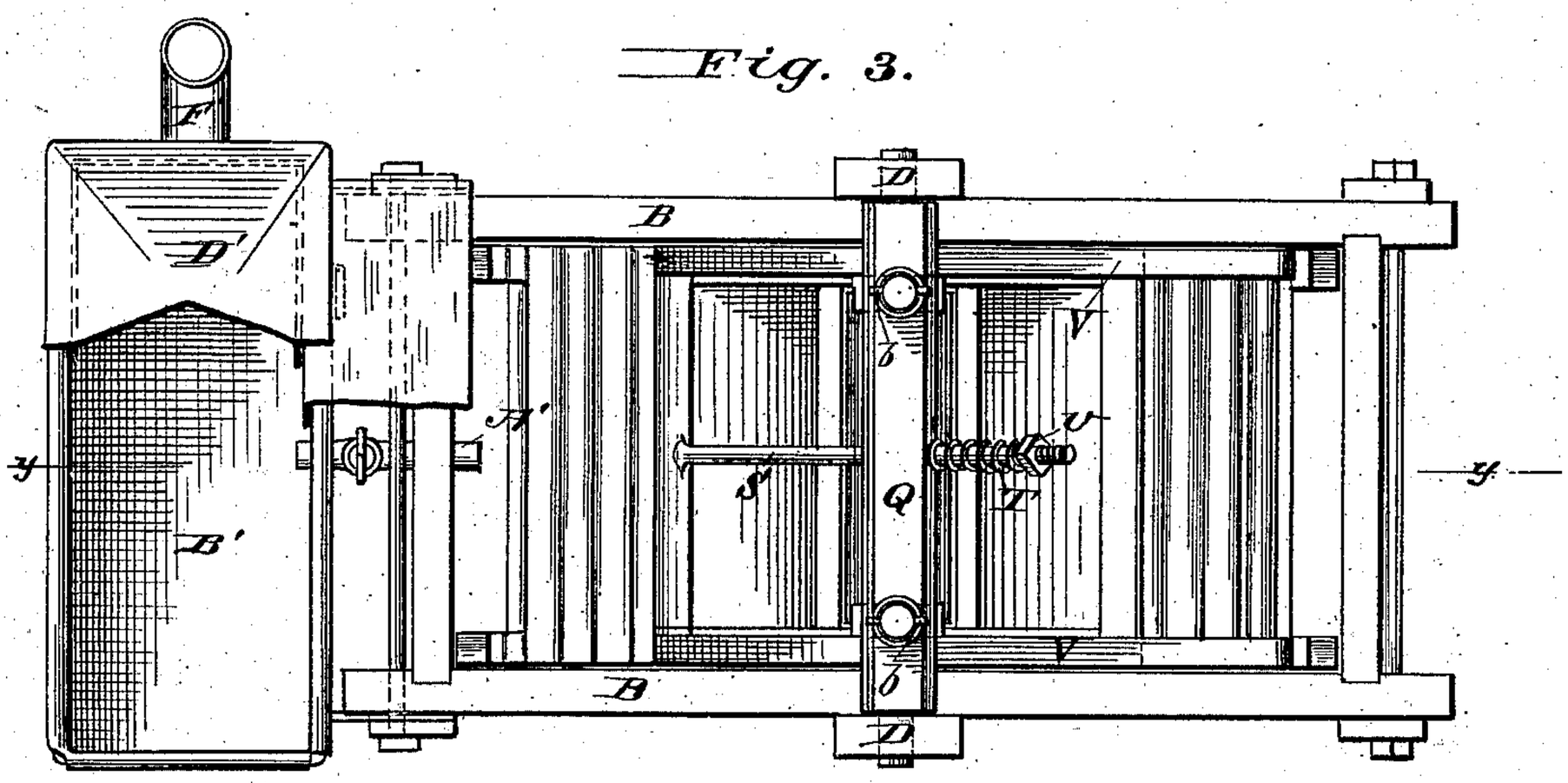
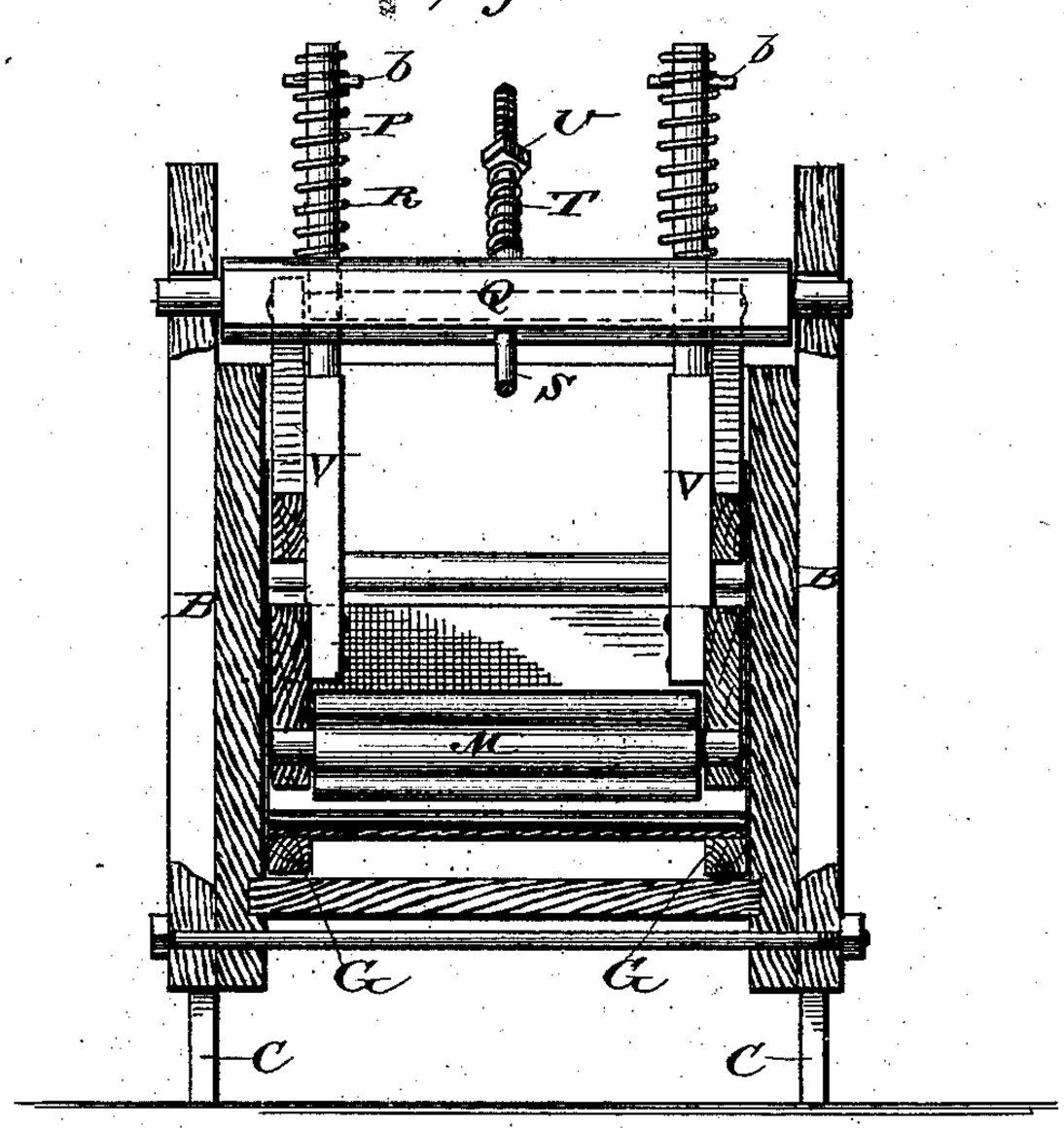



*Fig. 4.*




Attest:
H. L. Perrine.
A. M. Long.

Eli M. Chamness.
John T. Vaughn.
Inventors.

By. A. A. Abbott.
Atty.

# UNITED STATES PATENT OFFICE.

ELI M. CHAMNESS AND JOHN T. VAUGHN, OF ALEXANDRIA, INDIANA.

## WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 224,876, dated February 24, 1880.

Application filed September 24, 1879.

*To all whom it may concern:*

Be it known that we, ELI M. CHAMNESS and JOHN T. VAUGHN, of Alexandria, in the county of Madison and State of Indiana, have invented certain new and useful Improvements in Washing-Machines; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification, in which—

Figure 1 is a perspective of the machine; Fig. 2, a longitudinal section through *y y* of Fig. 3; Fig. 3, a plan view; Fig. 4, a cross-section through *x x* of Fig. 2.

Our invention relates to reciprocating rubber washing-machines; and it consists in the construction and combination of parts hereinafter more particularly specified.

In the accompanying drawings, the letter A indicates the body of the machine, made of two circular side pieces, B, bolted together by rods *a* crosswise therethrough, two of them passing through the legs C, and the third through the bars D and the lower part of the body A. This body has a bottom, E, made usually of wood, which is steamed and bent so as to form the segment of a circle, thereby forming end pieces for the body, and is secured between the sides thereof. In the bottom of the tub thus formed there is placed a rubber-bed, consisting of a frame made of two curved bars, G, and end pieces, H, held together by any suitable means, and having a board, I, glued, tacked, or otherwise secured across the same, and a corrugated zinc or other metallic plate, J, riveted or otherwise fastened to the same, the whole being put together so that the corrugated plate will constitute the lower concave rubbing-surface of the machine. This rubber-bed is set within the tub, and can be lifted therefrom so as to be cleaned whenever necessary.

The top rubber, K, consists of a rectangular frame having a closed bottom, with a transverse opening therein near the middle thereof, extending from side to side, and over the closed portion there are placed corrugated plates L L, of zinc or other suitable metal, so as to form a convex rubbing-surface, the plates being fastened to the frame by brads or other suitable means. In the opening left in the bottom of this rubber there is journaled a roller, M, of corrugated sheet metal, it having a core of wood or metal, the ends of which have their bearings in the sides of the frame. This central roller is provided in order that the top rubber may work more lightly and not be so apt to tear or wear the clothes. To the sides of this top rubber there are secured two uprights, N, shouldered, and having rods P at their upper ends, which rods pass through a rock-bar, Q, journaled in the bars D. Spiral springs R are coiled around these rods, and pins *b* are passed through the rods and coil of the spring, so that by turning the springs to the right or left the rods, and with them the rubber, will be raised or lowered, whereby the rubber is adjusted so as to be accommodated to the quantity of clothes in the tub. The vertical adjustment of this rubber is further controlled by means of a rod, S, passed through the rock-bar Q, one end of it being secured in any suitable manner to the end of the rubber K, while around that portion of it which projects above the rock-bar Q there is placed a coiled spring, T, the expansion or contraction of which is controlled by a nut, U, working on the threaded end of rod S. By compressing this spring the rubber can be elevated, and by letting it expand the rubber can be lowered.

The rubber is operated by means of a handle composed of the bars V and W, the bars V being bolted to the rubber's frame.

Water is admitted into the tub through a stop-cock pipe, A′, leading from a boiler, B′, which, together with the furnace C′, may be secured to the washing-machine by means of flanges or in any other suitable way.

The boiler B′ is usually made of zinc and is constructed so as to set within the furnace C′ and be removed therefrom, and is provided with a removable cover, D′.

The furnace is usually made of sheet metal and provided with a door, E′, a fire-box, and an escape-flue, F′, and is supported by the leg G′ and the devices which secure it to the body of the washing-machine.

By the above means the washing can be quickly at any time supplied with warm water and the clothes lifted direct from the boiler B′ into the tub.

The whole device can be constructed at a small cost, and is very effective in operation.

Having described our invention, what we claim is—

1. The combination of the rubber K, vertically-movable uprights N, rock-bar Q and rod S, spring T, and nut U, substantially as shown and described.

2. The combination of the rubber K, uprights N, rods P and spiral springs R, rock-bar Q, inclined brace-rod S, spring T, and nut U, substantially as described.

In testimony that we claim the foregoing we have hereunto set our hands this 17th day of September, 1879.

ELI M. CHAMNESS.
JOHN T. VAUGHN.

Witnesses:
R. H. HANNAH,
CALEB C. PERDIEW.