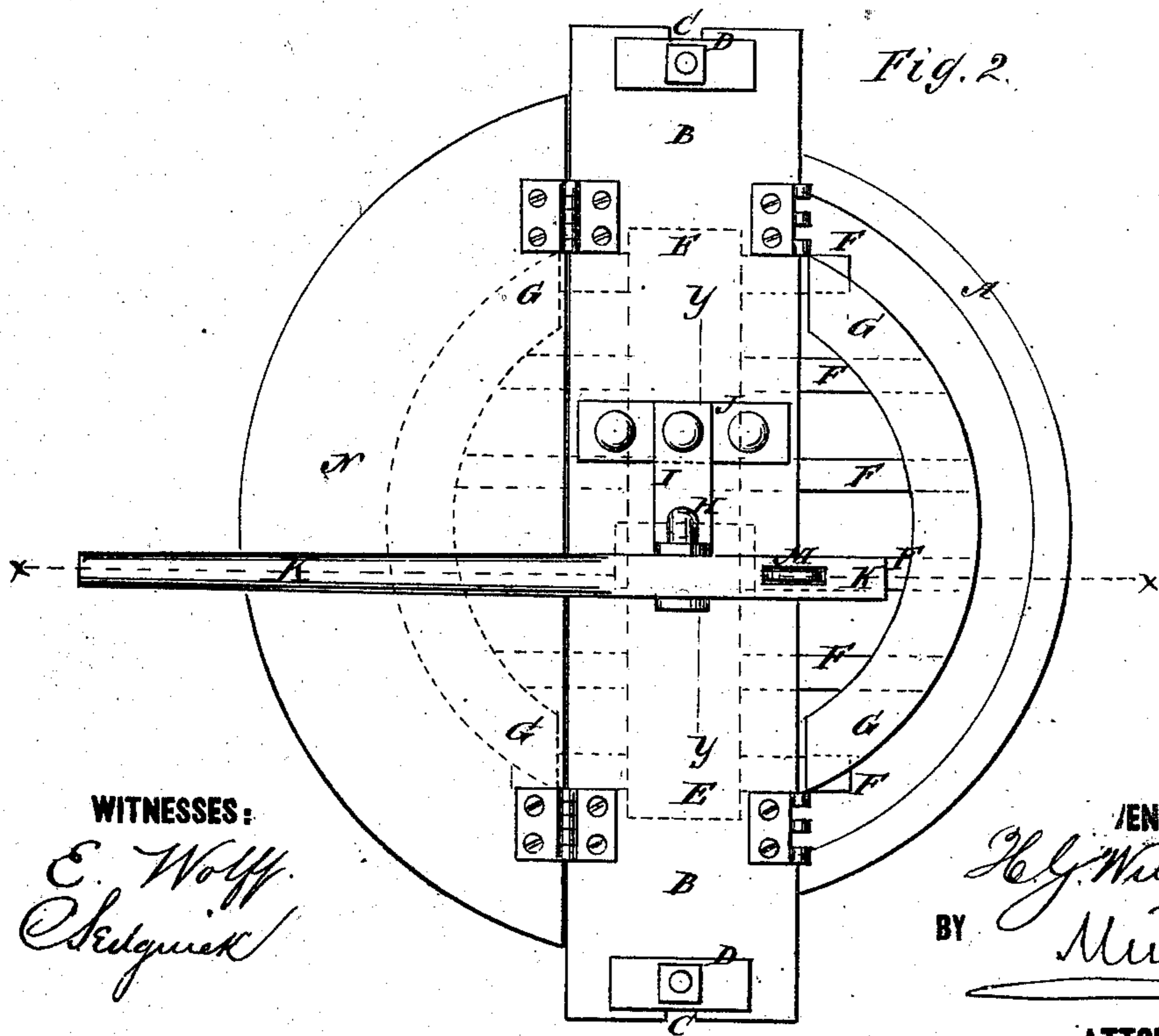
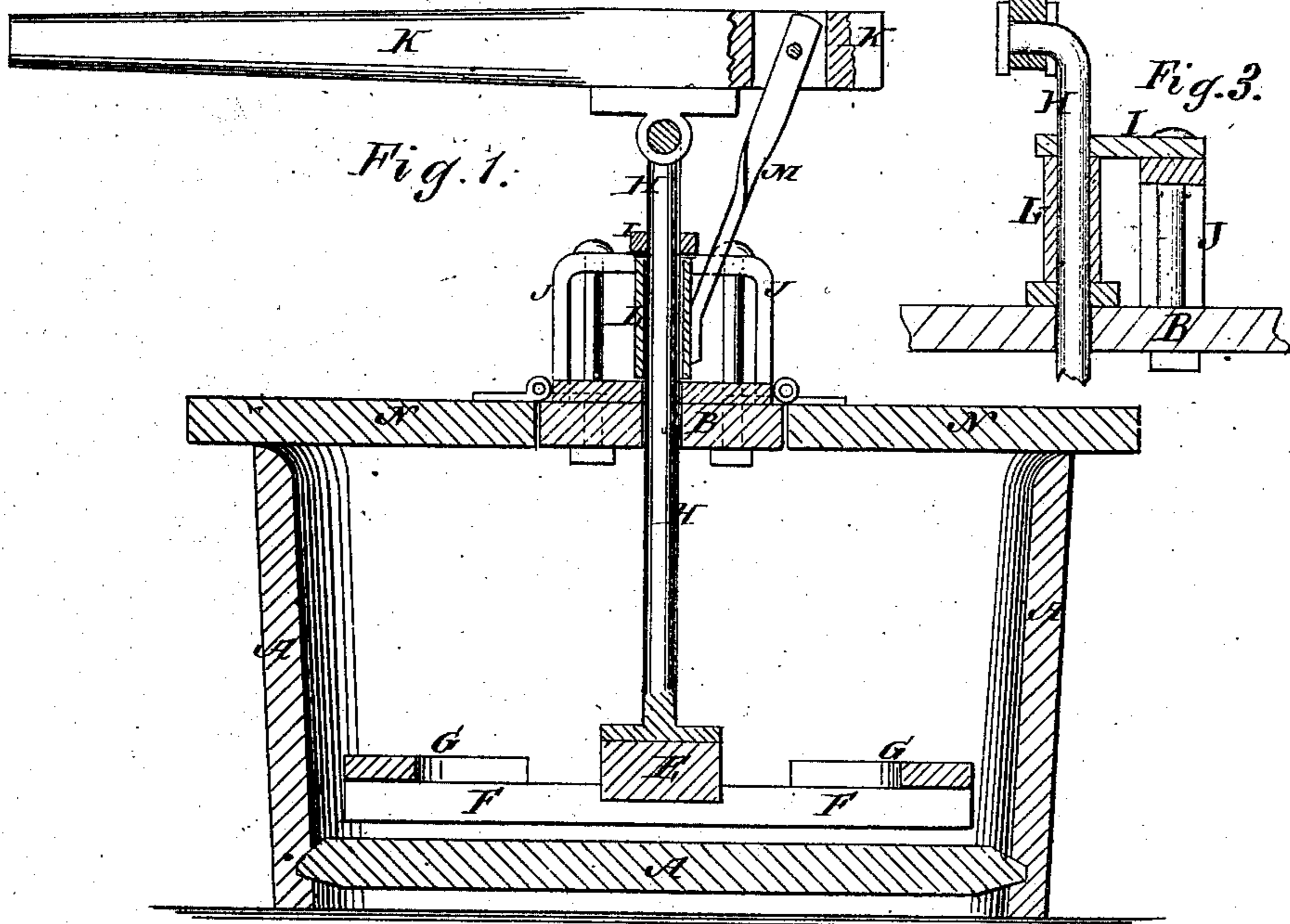


H. G. WILLIAMS.
Washing-Machines.

No. 158,770.

Patented Jan. 12, 1875.



WITNESSES:
E. Wolff.
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UNITED STATES PATENT OFFICE.

HORACE G. WILLIAMS, OF HAMILTON, IOWA.

IMPROVEMENT IN WASHING-MACHINES.

Specification forming part of Letters Patent No. 158,770, dated January 12, 1875; application filed June 13, 1874.

To all whom it may concern:

Be it known that I, HORACE G. WILLIAMS, of Hamilton, in the county of Marion and State of Iowa, have invented a new and useful Improvement in Washing-Machine, of which the following is a specification:

Figure 1 is a vertical section of my improved machine, taken through the line *x x*, Fig. 2. Fig. 2 is a top view of the same, part of the cover being removed. Fig. 3 is a detail sectional view on line *y y* of Fig. 2.

Similar letters of reference indicate corresponding parts.

The object of my invention is to provide an improved washing-machine, to be attached to ordinary washing-tubs; and it consists in the peculiar construction and arrangement of the devices for operating a vertically-moving and horizontally-oscillating plunger.

A represents an ordinary wash-tub, across the middle part of the top of which is placed a bar, B. The ends of the bar B that rest upon the edge of the tub A are slotted to receive the bolts C attached to the tub A, and upon which the said cross-bar B is secured by hand nuts and washers D, so that the said cross-bar and its attachments can be readily detached from the tub when desired. E F G is the presser or rubber, which is made of such a size as to readily enter the tub A. E is a cross-bar, to the lower side of which are attached a number of parallel bars, F, of such lengths that their ends may reach to, or nearly to, the sides of the tub A. To the upper sides of the ends of the bars F are attached two curved bars, G, or sections of a rim, to prevent the clothes from getting over the ends of the bars F. To the center of the bar E is rigidly attached the lower end of a shaft, H, which passes up through a hole in the cross-bar B, and through a hole in the guide-arm I, formed upon or attached to the bracket or standard J, attached to the bar B a little at one side of its center. The upper end of the shaft H is bent at right angles to pass through

a socket attached to the lower side of the lever K, to hinge the end of the said shaft to the said lever. Upon the upper part of the shaft H is placed a sleeve, L, the upper end of which rests against the guide-arm I, and its lower end rests upon the bar B, or upon a plate attached to said bar B. To the sleeve L is rigidly attached, or upon it is formed, an arm, M, which projects outward and upward, and to the outer end of which is pivoted the end of the lever K. The sleeve L and arm M thus serve as a fulcrum to the said lever, so that, by raising the free end of the lever, the presser E F G may be raised from the bottom of the tub A, the shaft sliding freely through the sleeve at the same time that it turns with it. To the sides of the cross-bar B are hinged the parts of the cover N.

In using the machine the clothes are placed upon the bottom of the tub A, a sufficient quantity of soap and water are put in, and the free end of the lever K is worked up and down, which alternately presses the water out of the clothes, and allows them to again become saturated. As the lever K is being worked up and down it is, at the same time, moved to one or the other side, so that the presser E F G may strike the clothes each time in a new place.

By this construction the clothes can be washed quickly and thoroughly.

I do not claim a vertical shaft or rod and a lever so combined with a rubber or ribbed disk that it may be vibrated, and also raised vertically, within the tub; but

I claim—

The combination of the standard J, sleeve L, guide-arm I, and fulcrum-bar M with the lever K and vertical shaft H, attached to the presser, all constructed and arranged substantially as and for the purpose described.

HORACE G. WILLIAMS.

Witnesses:

EDGAR C. WYMAN,
ERNEST H. WEST.