

A. Belcher,

Washing Machine.

No. 101,087.

Patented Mar. 22. 1870.

Figure 1.

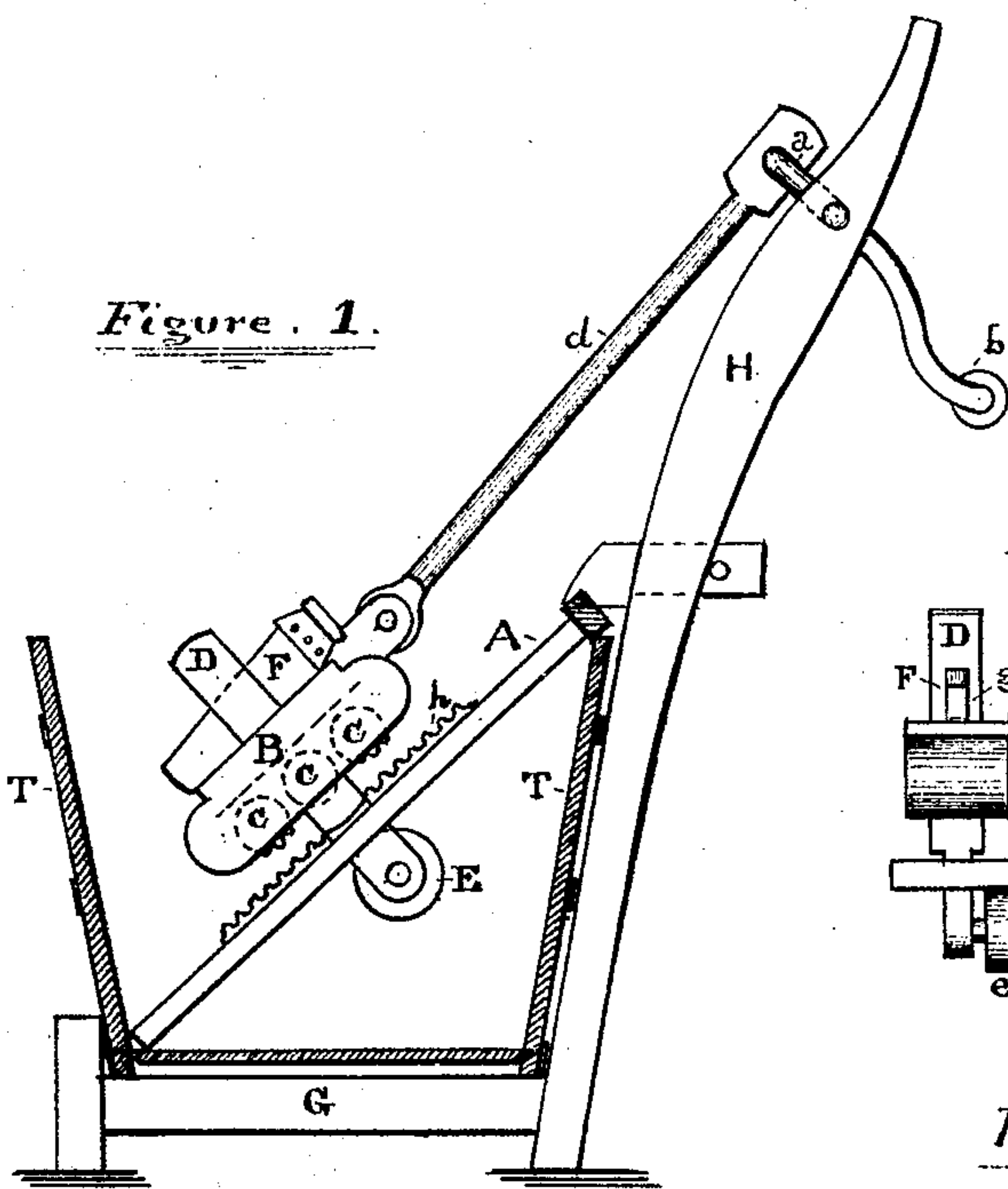


Figure 2.

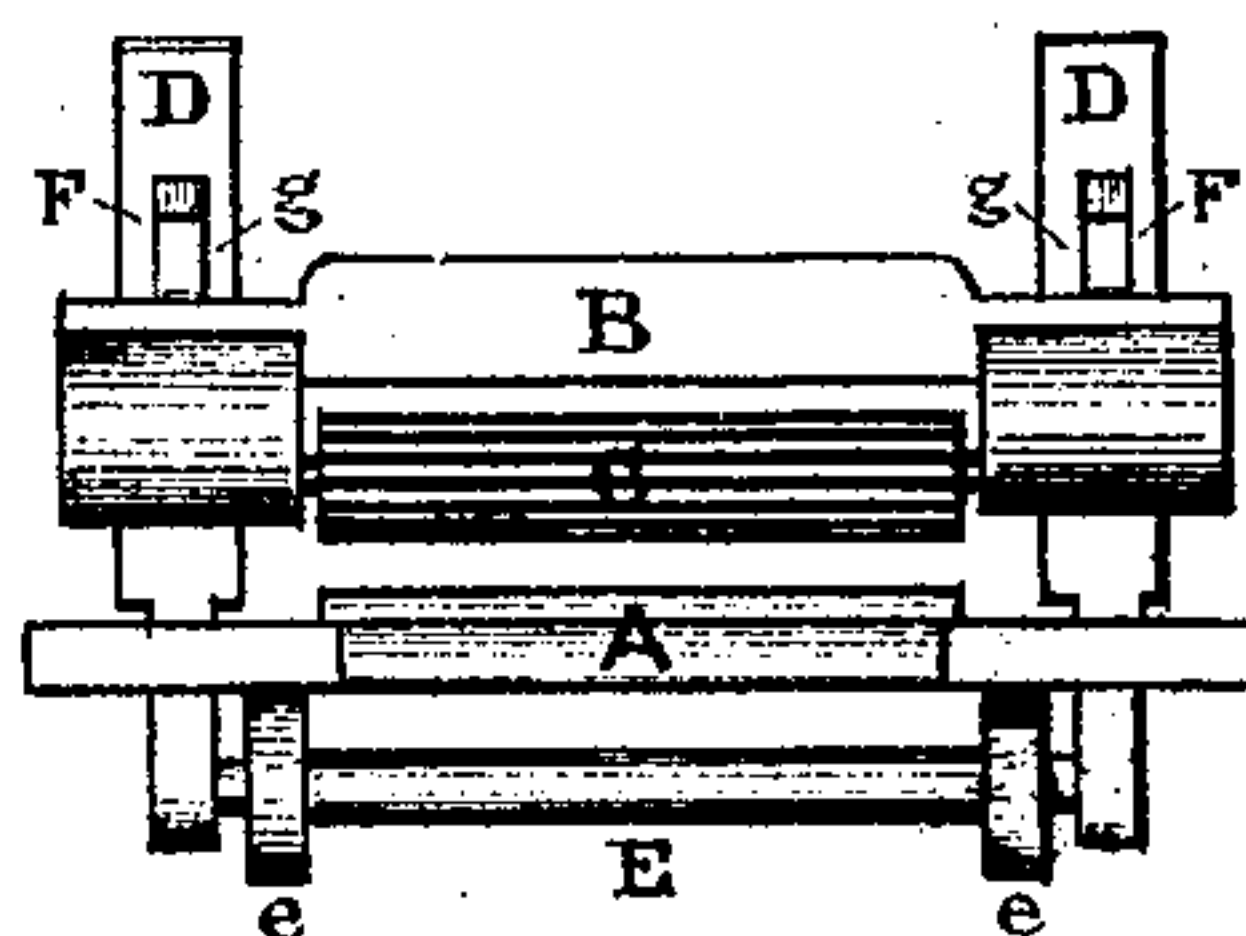
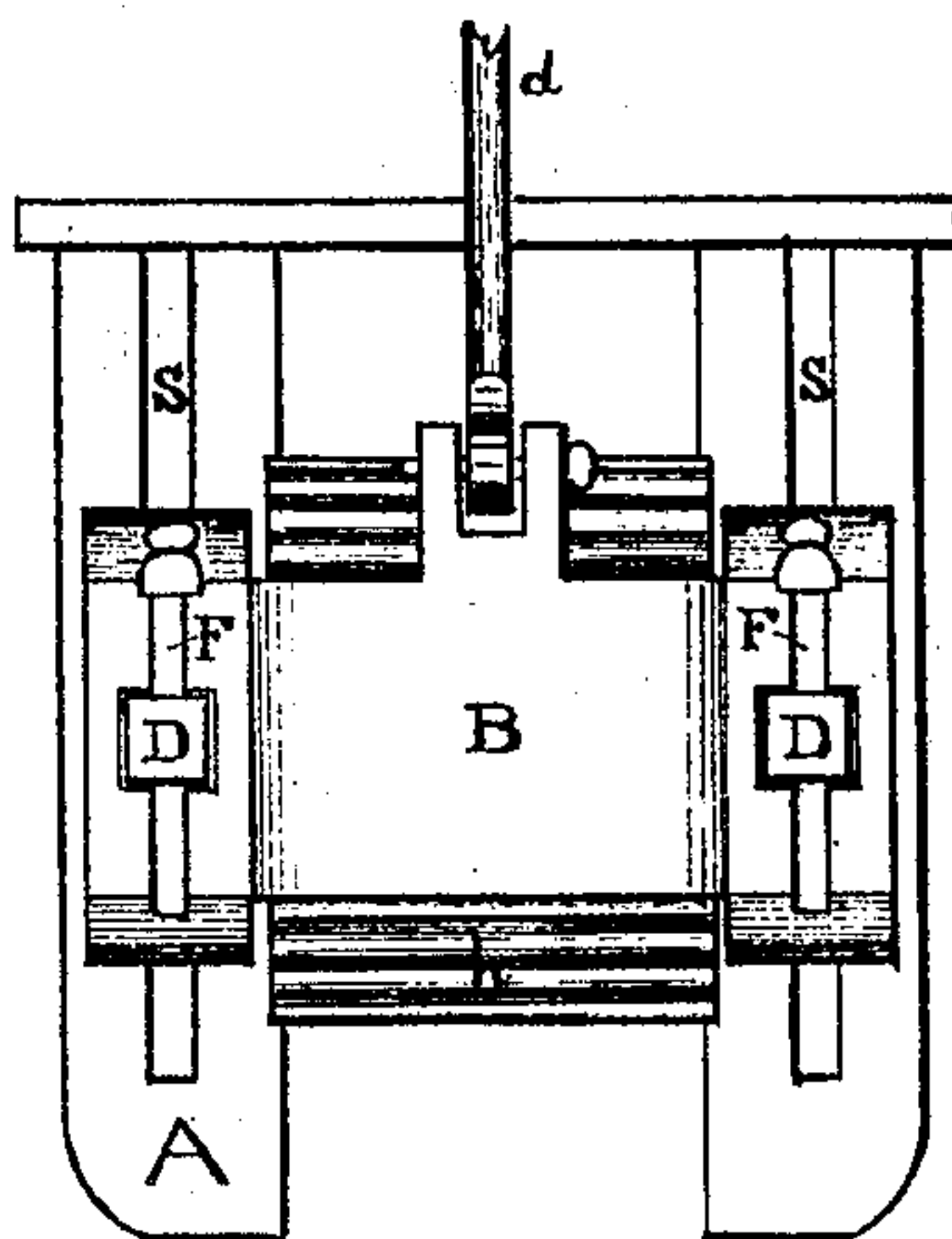


Figure 3.



Witnesses,

Joseph Coelanel
John Woodburn

Inventor,

Alra Belcher

United States Patent Office.

ALVA BELCHER, OF DELHI, NEW YORK.

Letters Patent No. 101,087, dated March 22, 1870.

IMPROVED WASHING-MACHINE.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern :

Be it known that I, ALVA BELCHER, of Delhi, in the county of Delaware and State of New York, have invented certain Improvements in Washing-Machines, of which the following is a specification.

Nature and Objects of the Invention.

The first part of my invention relates to the adjustment of the distance between the rubbing or vibrating head and wash-board by means of an elastic wedge, or its equivalent, in such a manner that while the distance can be adjusted to accommodate thick or thin fabrics the pressure may yet be uniform, and increased or diminished at pleasure.

The second part of my invention relates to diminishing the friction of the machine by the use of a roller acting upon the under surface of the wash-board in such a manner that while it permits the free motion of the rubbing-head it yet allows considerable pressure of the same upon the clothes, without materially increasing the friction of the machine.

Description of the Drawings.

Figure 1 is a side view of a washing-machine embodying my invention, the tub being shown in section at T.

Figure 2 is an end view of the rubbing-head and wash-board combined with my improvements.

Figure 3 is a top view or plan of the same.

General Description.

A is the wash-board, provided with the usual corrugated surface, *h*.

On each side of the wash-board A a slot, *s*, is made, extending nearly the whole length of the frame, through which the lower ends of the guide-pins D D pass, and in which they slide.

B is a rubbing or vibrating head, provided with the usual fluted or corrugated rollers, *c c c*. It is also provided at each side with a slot or hole through which the guide-pins D D pass.

D D are guide-pins, the upper ends of which pass through the slots in the rubbing-head, the lower ends passing through the slots *s s* in the wash-board. The upper ends of the guide-pins are made larger than that part which passes through the slots *s s* in the wash-board, so that they may not drop through when the rubbing-head is lifted off. The upper ends of the

guide-pins D D are also each provided with a slot, *g*, through which the rubber wedges F F pass.

E is a roller provided at each end with a flange, *e*. The roller E is connected with and works between the lower ends of the guide-pins D D, the flanges *e e* pressing against and rolling on the under side of the wash-board A when in use, as shown in fig. 2.

F F are rubber wedges, which also act as springs. They pass through the slots *g g* in the upper ends of the guide-pins D D, and by their action give the required pressure during the process of washing, which pressure can be increased or diminished at pleasure, while at the same time sufficient spring is obtained to allow of the rubbing-head passing over a button or any inequality in the fabric, without injury to the article washed or the machine.

The machine can be placed in any common wash-tub, as shown in fig. 1, the tub being shown in section at T T. The tub is placed in a simple frame, G, at the back of which rises a standard, H. A crank, *a*, is attached to the top of the standard H, which crank is connected with the rubbing-head B by means of the pitman or connecting-rod *d*. By turning the handle *b* of the crank *a* the rubbing-head B is moved or vibrated up and down over the top of the wash-board A, or on the clothes inserted between them.

The advantages of this improvement are:

First, the machine can be used in connection with any ordinary wash-tub.

Second, the roller E lessens the friction, and consequently the power required to operate the machine.

Third, the rubber wedge-springs F F can be adjusted to give a light or heavy uniform pressure on either thick or thin fabrics, and do not rust and spoil the clothes like metallic springs.

What I claim as my invention and improvement in washing-machines, is—

The construction and arrangement of the elastic wedges F F and roller E, in combination with the guide-pins D D, rubbing-head B, and wash-board A, substantially as and for the purposes hereinbefore set forth.

ALVA BELCHER.

Witnesses:

JOSEPH EVELAND,
JOHN WOODBURN.