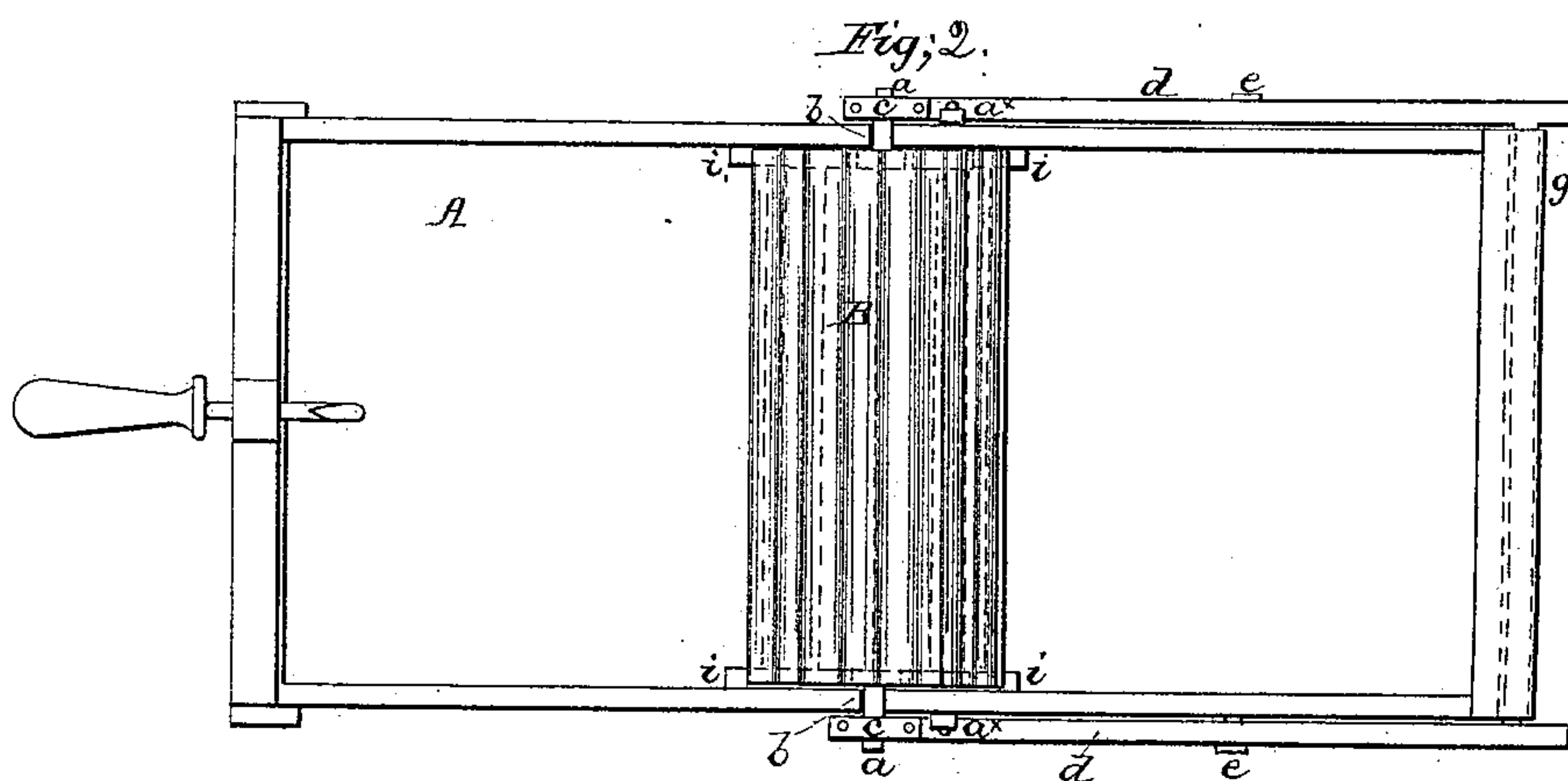
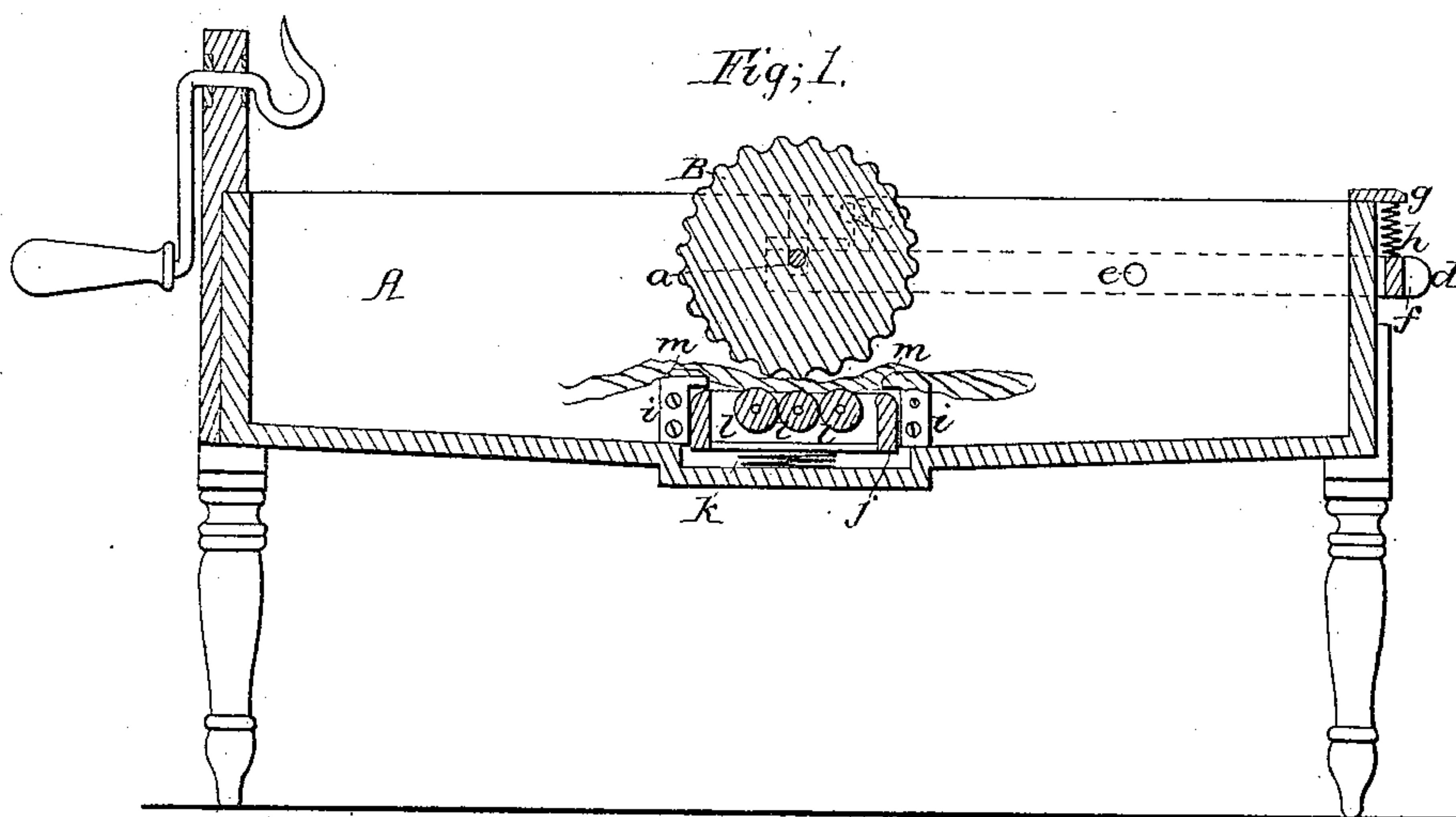


W. H. Tambling,
Washing Machine.

N^o 19,315.

Patented Feb 9, 1858.



UNITED STATES PATENT OFFICE.

W. H. TAMBLING, OF BERLIN, WISCONSIN.

WASHING-MACHINE.

Specification of Letters Patent No. 19,315, dated February 9, 1858.

To all whom it may concern:

Be it known that I, W. H. TAMBLING, of Berlin, in the county of Marquette and State of Wisconsin, have invented a new and useful Improvement in Clothes-Washing Machines; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a longitudinal vertical section of my improvement, the plane of section being through the center. Fig. 2 is a plan or top view of the same.

Similar letters of reference indicate corresponding parts in the two figures.

My invention consists in the employment or use of a rotating fluted or corrugated cylinder and an elastic or yielding frame, provided with rollers; the axis of the fluted or corrugated cylinder being fitted in an elastic or yielding and adjustable frame, as will be hereinafter fully shown and described.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents a rectangular box, in which a fluted or corrugated cylinder B is placed transversely. The axis (a) of this cylinder passes through vertical slots (b) in the sides of the box A; said axis being fitted in bearings (c) at the ends of levers (d) which are pivoted one at each side of the box A; (e) representing the pivots, or fulcrum pins of said levers.

The outer ends of the levers (d) (d), are connected by a bar (f), between which and a ledge (g) on the upper edge of the end of the box A, spiral springs (h) are placed. On each side of the box A, a batten (a*) is secured, which battens, when turned downward, prevent the levers (d) from vibrating, and consequently render the bearings (c), of the axis (a), of the cylinder B, permanent or fixed.

At the bottom of the box A, and at about its center, a rectangular frame C is placed. This frame is fitted between guides (i), secured to the inner surfaces of the sides of the box; and a recess or small chamber (j) is formed at the center of the bottom of the box, over which the frame C is placed and works; said recess or chamber having spiral springs (k) placed in it, on which springs the frame C rests. Within the frame C,

three rollers (l), (l), (l), are placed longitudinally; said rollers being allowed to rotate within the frame. The rollers have smooth peripheries; and they are shown clearly in Fig. 1.

The upper ends of the guides (i) have projections (m) on their inner sides; said projections serving as stops, and preventing the springs (k) from throwing the frame C upward from between the guides (i); see Fig. 1.

The cylinder B is fluted or corrugated longitudinally, and its periphery is in contact with the center roller (l), when no article of clothing is interposed between the said roller (l) and cylinder B.

A requisite quantity of suds is placed within the box A, and also the clothes, which are shown in red; and the cylinder B is operated back and forth, or has a reciprocating rotating motion given to it. The clothes, consequently, are drawn back and forth between the cylinder B and the rollers (l) in the frame C, and are thus subjected to the requisite pressure and friction in order to thoroughly cleanse them from dirt.

When fine clothes are to be washed, the buttons (a*), at the outer sides of the box A, are turned so as to prevent the levers (d) from vibrating or moving; and consequently the rollers (l) alone vibrate or yield; the bearings of the axis (a), of the cylinder B, being fixed. This is necessary when fine clothes are to be washed, as large quantities are not put in the box A, and they are generally short pieces; and consequently the layer of fine clothes that is operated back and forth, between the cylinder and rollers, is quite thin compared with the layer of thick clothes; and therefore the elasticity of the frame C and rollers (l) is sufficient. But when heavy clothes are to be washed, a greater degree of elasticity is required, and the buttons (a*) are then turned so as to allow the levers (d) to vibrate; and consequently, the bearings of the axis (a) of the cylinder B, will be rendered elastic or yielding, and the cylinder B, is therefore allowed to yield or "give," as well as the rollers (l). Heavy clothes pass through or between the cylinder B, and rollers (l), in layers of quite unequal thickness; and as the layers of heavy clothes are much thicker than those of thin or fine clothes, a greater degree of elasticity is required, or the rubbing surfaces require to be more elastic or yielding,

in order to compensate for the varying thicknesses of the layer.

5 The advantage, therefore, of my improvement consists in having the bearings of the axis of the cylinder B, so arranged that they may be made either permanent or yielding; so that a greater or less degree of play may be given to the rubbing surfaces, by having either one or both of said surfaces elastic
10 or yielding; and so that the machine may thus be adapted to the washing of both fine and heavy or coarse clothes.

I do not claim the employment or use of corrugated and plain cylinders or rollers in
15 washing machines, for they have been previously used;—neither do I claim placing said rollers in elastic or yielding bearings, irrespective of the arrangement herein

shown, whereby the bearings of the cylinder B may be rendered either elastic or per- 20 manent, as desired; but,

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is:—

The combination of the corrugated or 25 fluted cylinder, B, and elastic or yielding frame, C, provided with rollers, (l), when the bearings (c) of the axis (a), of the cylinder, B, are fitted in an elastic or yielding and adjustable frame, and the whole ar- 30 ranged as shown, for the purpose set forth.

W. H. TAMBLING.

Witnesses:

J. F. BUCKLEY,
S. F. COHEN.