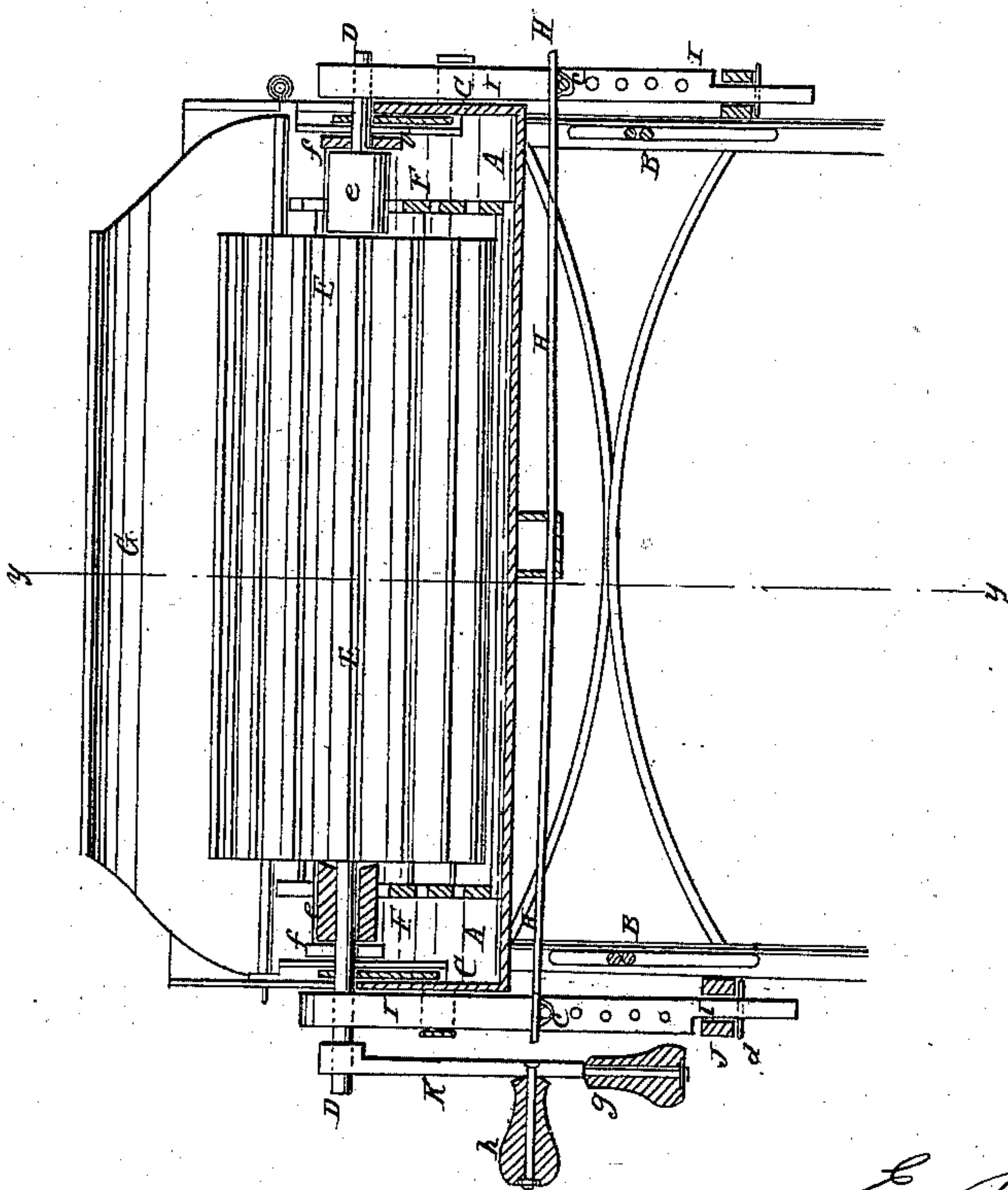
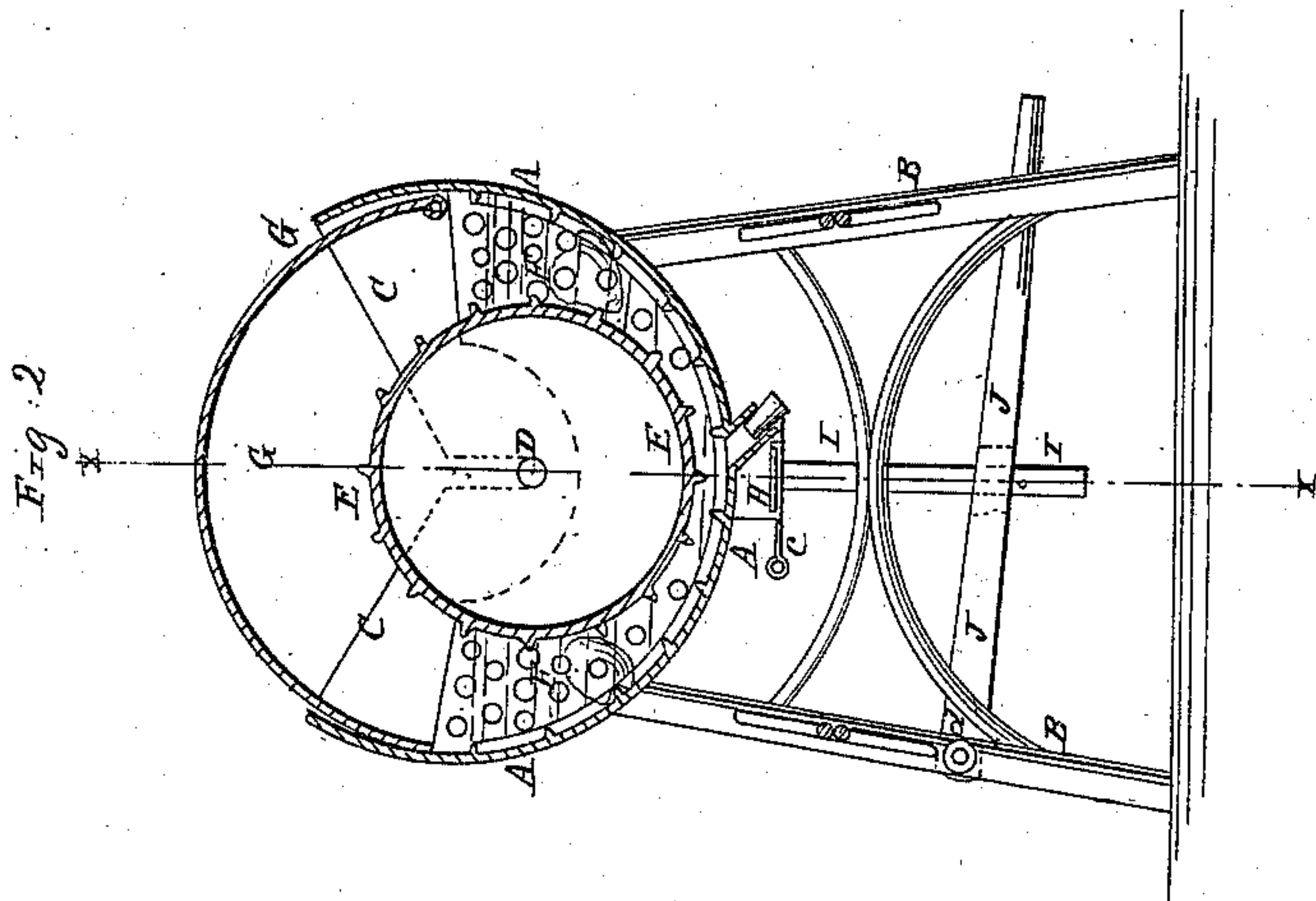


E. Beckwith,

Washing Machine

N^o 68,155.

Patented Aug 27, 1867.



Witnesses:

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E. BECKWITH, OF SOUTH PASS, ILLINOIS.

Letters Patent No. 68,155, dated August 27, 1867.

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, E. BECKWITH, of South Pass, Union county, Illinois, have invented a new and improved Washing Machine; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a vertical longitudinal section of my improved washing machine, the plane of section being indicated by the line *x x*, fig. 2.

Figure 2 is a vertical cross-section of the same, the plane of section being indicated by the line *y y*, fig. 1. Similar letters of reference indicate corresponding parts.

This invention relates to a new washing machine, which is adapted for washing coarse as well as fine articles in a very effectual and satisfactory manner. The machine is particularly intended to wash the articles when the same are rolled into a cylindrical form, and is made in shape of a cylindrical shell, within which a roller is eccentrically arranged, so that between the corrugated surfaces of the shell and roller the articles to be washed are thoroughly rolled and pressed.

A represents the section of a stationary horizontal cylinder fastened to four legs, B, which are framed together, as shown. A head, C, is arranged in each end of the cylinder, the outline of which is in shape of a sector. A vertical slot is arranged in the centre of each head C to receive the axle D of the roller E. On the inside of each cylinder-head, close to the same, and covering the slot, are vertical sliding-pieces or guides *a*, which form the bearings for the axle D of roller E, and which also prevent the escape of suds from the cylinder. On the inside of the hollow cylinder A, between the heads C, are stationary semicircular partitions F as high as half the diameter of the cylinder A, in each of which partitions a semicircular piece is cut out to allow the rise and fall of the axle D. These partitions F are perforated with holes, through which the suds are to escape into the chambers formed between the partitions and the cylinder heads. These partitions keep the cylindrical fabric under the roll E in place, and prevent it from moving longitudinally. The cylinder A is fluted longitudinally between the partitions, although it may be made smooth if desired. The upper portion of the cylinder A is removable, being made in the form of a bent plate or bonnet, G, as shown, which covers the washing-chamber, so that, while washing, the suds will be prevented from escaping. This bonnet may be hinged to the cylinder. Underneath the hollow cylinder A, at a point half its length, is fastened a spring, H, which is longer than the cylinder A, the ends of which spring are mortised or bifurcated to receive and hold each a rod, I, which connects each end of the axle D of the roller E with the spring. The rods I are provided with a number of holes, and are fastened to the spring by means of pins *c*, as is clearly shown in fig. 1. The roller can thus be set higher or lower as the capacity of the machine is to be increased or made less. These rods I also connect at the lower ends with levers J, one end of which is fastened to the leg B by a pin, *d*, for fulcrum. These levers serve to elevate or depress the roller E when desired. The roller E is made solid or hollow, as may be desired. Its axle is parallel but eccentric with the axis of the cylinder A, being arranged below the latter, as is clearly shown in fig. 2. The axle D is hung in the sliding bearings *a*. The roller is only as long as the space between the partitions E, and is prevented from sliding lengthwise by two wooden thimbles or washers, *e*, which are arranged between the heads C and partitions F. A small rubber or other elastic ring, *f*, may be interposed between the thimble and the plate *a*, to prevent the wedging of the parts, when one end of the axle B should be raised or lowered more than the other end. On the periphery of roller E, longitudinally and parallel to each other, are fastened strips or bars of wood or metal of suitable diameter and distance apart to engage the cylindrical fabric, and to carry it around. Between the roller E and shell A the cylindrically-arranged fabric is thoroughly rolled and pressed, but not rubbed. For operating this machine I have arranged a crank, which has an extension, *g*, of the main lever at right angles with and above the projection *h*, known as the handle. This extension has on it a knob or ball of wood, rotary or stationary, for the greater convenience of bringing the one hand to the assistance of the other when on the "centre," as it is called.

To operate the machine, the operator stands on one end of the machine and oscillates the crank. This machine is equally well adapted to warm or hot suds. If the hot be preferred, no cover is needed to confine the steam. No injury whatever is done the fabric or buttons in this machine. Its operation is new, novel,

speedy, and effectual. The fabrics are worked in a cylindrical mass (as shown by red lines in fig. 2) between cylindrical surfaces, of which the one is eccentric to the other, and between which a narrow passage or throat is formed, where the washing is done by rolling and squeezing.

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

1. The manner herein shown and described of hanging the roller E in sliding bearings *a*, between which it is held by the thimbles *e e* and rubber washers *f f*, substantially as herein shown and described.

2. The cylindrical or partly cylindrical wash-tub A, when provided with slotted head-pieces C and perforated partitions F, in combination with the up-and-down adjustable oscillating or revolving roller E, all made and operating substantially as herein shown and described.

E. BECKWITH.

Witnesses:

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