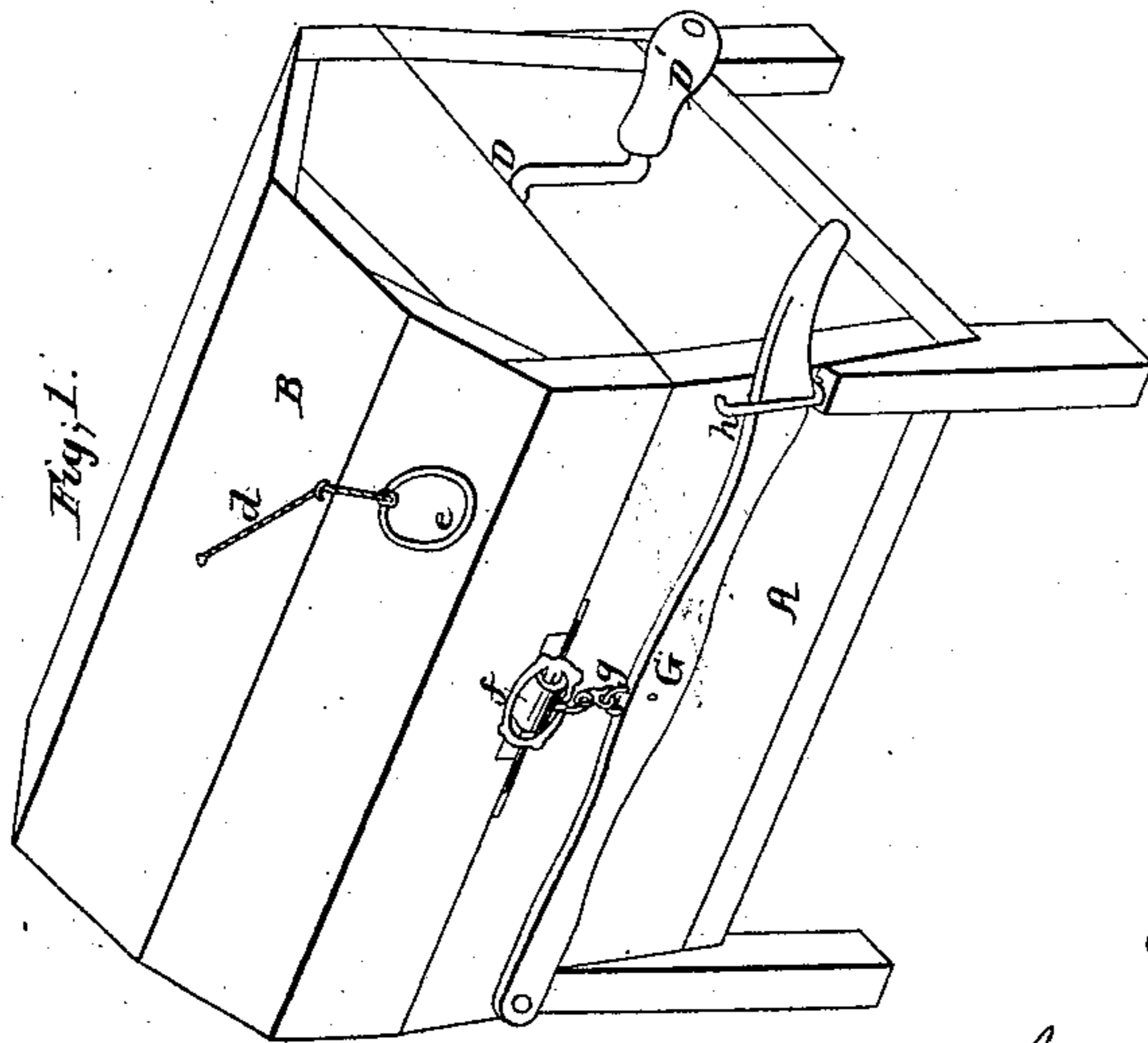
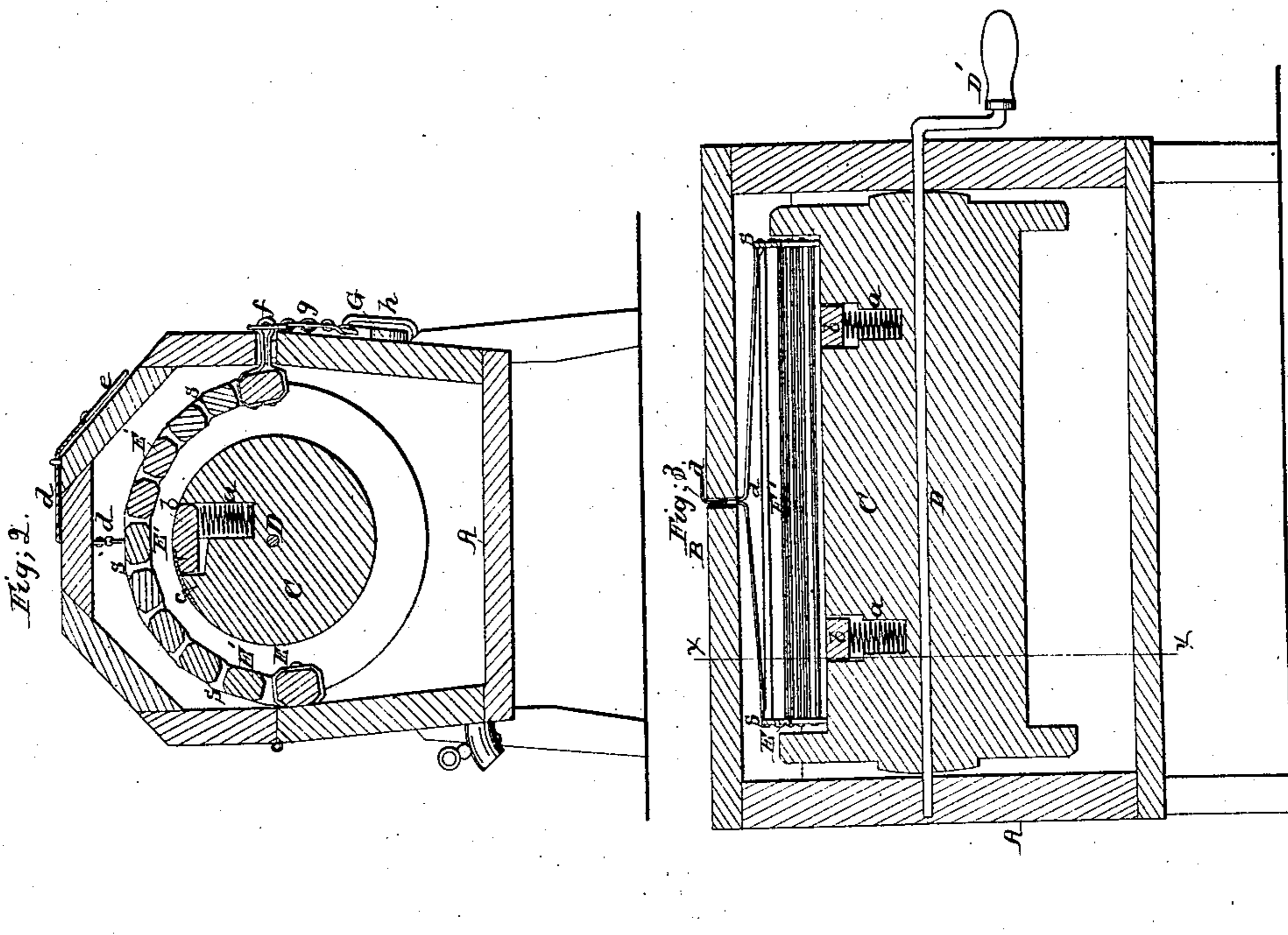


Washing Machine.

N^o 76,850,

Patented Apr. 14, 1868.



Witnesses;
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United States Patent Office.

EDWARD T. TINCH, OF SALEM, INDIANA, ASSIGNOR TO HIMSELF AND
GEORGE R. HARRIS, OF THE SAME PLACE.

Letters Patent No. 76,850, dated April 14, 1868.

IMPROVEMENT IN 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, EDWARD T. TINCH, of Salem, in the county of Washington, and State of Indiana, have invented a new and improved Washing-Machine; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a perspective view of the machine complete, showing the lever for depressing the flexible concave, and the cord for raising this concave.

Figure 2 is a transverse section through the machine, taken in the vertical plane indicated by red line *x* in fig. 3.

Figure 3 is a longitudinal section, taken in a vertical plane through the centre of the machine.

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

This invention relates to certain novel improvements on that class of washing-machines wherein the cleansing is performed by means of a rotary rubber operating in conjunction with a movable concave of rollers.

The nature of my invention consists in a horizontally arranged flanged drum, constructed with or without a corrugated or ribbed surface, and provided with latches for fastening the articles to be washed, in combination with a flexible concave of rollers or rolling-bars, and a contrivance by which this concave can be forcibly depressed upon the articles which are upon the said drum, during the rotation of the latter, as will be hereinafter explained.

The invention further consists in combining with a rotary drum and flexible concave of rolling-bars, constructed and operated as will be hereinafter described, certain means whereby the said concave can be depressed with any required degree of force, and, when desired, raised free from the articles around said drum, so as to allow the articles to be wound around the drum in opposite directions, for alternately rubbing and cleansing both sides of them, as will be hereinafter shown.

To enable others skilled in the art to understand my invention, I will describe its construction and operation.

In the accompanying drawings, A represents a rectangular wash-box, of suitable capacity, which is mounted upon legs, and provided with a three-sided cover, B. This cover B is hinged to the box A, and may be provided with a suitable fastening for holding it down in place.

Within this wash-box is a flanged drum, C, through which passes a shaft, D, that is supported upon the top of the lower section of the box by suitable bearings thereon. This shaft passes through the longitudinal axis of the drum C, and carries on one end a crank, D', by means of which the drum can be rotated either toward the right hand or the left.

Holes are made in the periphery of the drum, C, a suitable depth, to receive helical springs *a a*, and latching-pieces *b b*, against which latter the springs press outwardly. These latching-pieces *b b* are hinged at *c*, and their free ends abut against the ends of the recesses, into which they fit in such manner that, by inserting the corner or edges of articles to be cleansed into the said recesses, the latches will hold these articles firmly enough to allow them to be wound around the drum C, forward and backward, during the process of washing. It will be seen that the latches *b b* do not project beyond the periphery of the drum C, and consequently do not interrupt the unbroken smooth surface of this drum.

These fastenings, or their equivalents, serve a very important purpose in my improved machine, in that they afford a simple and speedy means for attaching articles to the periphery of the drum, preparatory to the process of washing, so that during this process the articles may be alternately wound upon and unwound from the drum, for the purpose of rubbing both sides without handling them.

To one side of the box A, a rubbing-bar, E, is attached, and to this rubbing-bar a number of rubbing-bars, E', are fastened, by flexible strips S S, so as to form a concave of rolling bars, which possesses flexibility sufficient to accommodate itself to articles wound upon the cylindrical drum C. This concave is nearly equal in

length to the distance between the flanges upon the drum C, so as to work between them, as shown in fig. 3. The drum is constructed with flanges, for the purpose of preventing articles wound upon it from working off at its ends and getting between the ends and the wash-box. The flanges allow the articles to be wound upon and unwound from the drum with the cover shut, and they also admit of any desired degree of pressure being applied to the articles by the concave rubber, without causing the articles to work out of place.

The concave rubber is suspended from the top, B, of the wash-box by means of a rope, *d*, which passes through said top, and has a ring, *e*, attached to its outer end. By means of this rope the concave can be raised free from the drum C, at pleasure, without raising the top or cover B.

The flexible concave of rollers is carried over the drum C, and its free end is provided with a staple or strap, *f*, which passes through an opening made through the wash-box, and has fastened to it, by a hook or other attachment, a chain, *g*. This chain is attached to a lever, G, which is applied on the outside of the box A, and guided by a staple, *h*, shown in figs. 1 and 2.

The lever G is used to forcibly draw down the concave upon the articles wound upon the drum C, to rub them with more or less force, and the cord or rope *d* serves to raise this concave free from the drum.

To operate the machine above described, the box A is nearly filled with water and soap, and the articles to be cleansed attached to the drum C by means of the latches *b b*. The drum is then turned in one direction, and the articles wound upon it, after which, or during which, the concave is brought down forcibly upon them, which will rub and cleanse them on one side. The concave is then raised, and the drum turned in an opposite direction, which will unwind the articles from it and wind them up again in an opposite direction, thereby exposing new surfaces to be rubbed. The concave is again depressed, and the same operation repeated as before stated.

I prefer to make the rollers composing the flexible concave, of an octangular or polygonal shape in cross-section, so the angles thus formed will afford a better rubbing-surface than cylindrical rollers would.

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

1. The flanged drum C, provided with latches *b b*, and combined with a flexible concave of rolling or rubbing-bars E', and a device for forcibly depressing this concave, substantially as described.
2. The combination of a lifting-cord, *a*, with a flexible concave, a rotary flanged drum, C, and a device for depressing the concave upon the articles being washed, substantially as described.
3. The construction of the drum C with flanges upon its ends, and also with spring-latches *b b*, for the purposes and in the manner substantially as described.

EDWARD T. TINCH.

Witnesses:

J. M. TAYLOR,

W. T. ASTON.