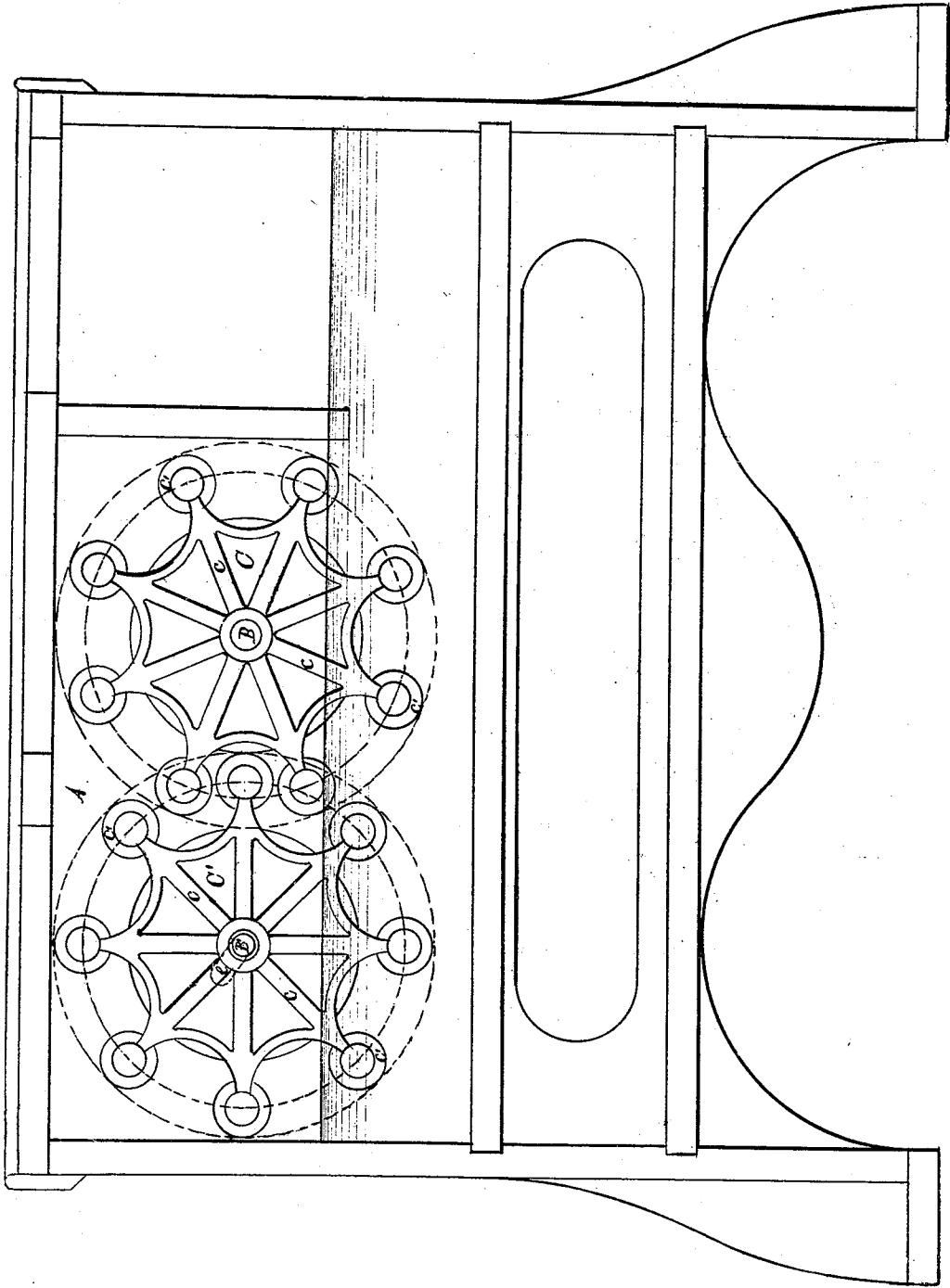


C. Dean,

Washing Machine.

No. 101,592.

Patented Apr. 5. 1870.



Witness.
Geo. E. Proctor
C. O. Brown

Inventor
Cyrus Dean.

United States Patent Office.

CYRUS DEAN, OF BUFFALO, NEW YORK.

Letters Patent No. 101,592, dated April 5, 1870.

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, CYRUS DEAN, of Buffalo, in the State of New York, have invented a new and useful Improvement in 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 accompanying drawings and letters of reference marked thereon making a part of this specification, in which—

Figure 1 is a longitudinal vertical section.

This invention has for its object the washing of clothes, by attrition, between two revolving surfaces which do not clamp the fabrics, but permit them to be held fast at any point, so that the dirtier parts may receive more washing, and so that the fabric may be drawn out from the machine at any time.

To enable those skilled in the art to make and use my invention, I now proceed to describe its construction and operation.

Similar letters in the drawings refer to like parts.

The invention consists of a pair of wooden rollers, loosely placed upon axles, and extending crosswise of the receptacle or tub, each roller being surrounded by a concentric series of smaller rollers, also loosely placed upon axles, and the two larger rollers being so located, with respect to each other, that each of the smaller rollers of the one passes between the two adjacent smaller rollers of the other as the cylinders revolve, and thus a zigzag direction is given to the fabrics passing between them, and such fabrics are thoroughly rubbed, and may be held fast, or drawn out from between the smaller rollers, by reason of the looseness with which the latter and the cylinders are placed upon their shafts.

In the drawings—

A is the tub or receptacle.

B B' are two shafts placed crosswise of the tub, one, B, passing through the sides thereof, so as to be capable of none but a rotary motion, and the other, B', being supported in movable standards placed

against the sides of the tub, and resting upon its bottom, and capable of being drawn backward or forward, so as to vary the distance between the rotary rubbers, and accommodate different thicknesses of cloth.

On each shaft B B' is loosely placed a wooden cylinder, C C', and, in arms *e* projecting radially from the shafts at each end of the cylinders, is supported loosely on axles a series of smaller rollers, *c*, of wood or rubber, surrounding and concentric with the cylinders, and at a little distance from the surface of the latter.

The cylinders C C' are located so near each other that, when they are rotated, each smaller roller, *c*, passes between the two adjacent rollers of the opposite cylinder.

This arrangement gives the fabric a zigzag direction between the rollers, where it may be held by one hand while the other turns the crank, and be thrown back and forth, and be subject to as much attrition at any particular part as may be necessary in order to cleanse it, and be drawn out when washed enough, the rollers and cylinders being, by reason of the looseness of their connection with their axles, capable of revolving in a contrary direction therefrom.

The ends of the shaft B' are placed in inclined grooves *e* in the standards *b*, so that the cylinder C' and its rollers may yield to the sudden pressure of some unusually thick part of the fabric, and return again by their own weight.

What I claim as new, and desire to secure by Letters Patent, is—

The cylinders C C', loosely placed upon their axles, and each provided with a concentric series of rollers, *c*, also loosely placed upon their axles, combined and arranged as and for the purpose described.

CYRUS DEAN.

Witnesses:

C. O. BROWN,
E. JULIUS.