2 Sheets—Sheet 1.

W. A. DUNCAN.

WASHING-MACHINE.

No. 175,950. Patented April 11, 1876.

Fig. 1

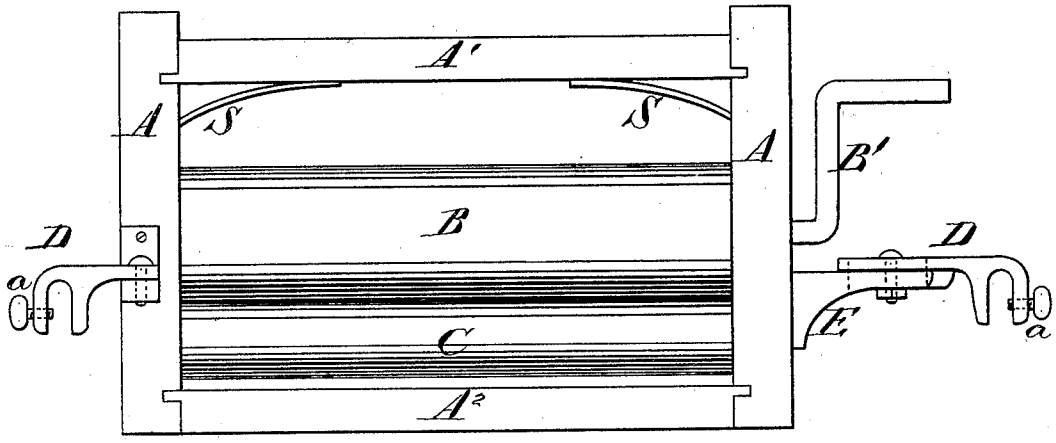


Fig. 2

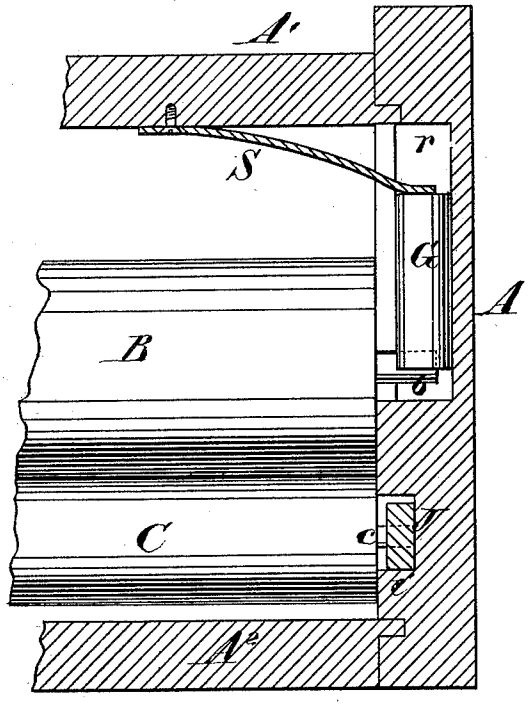
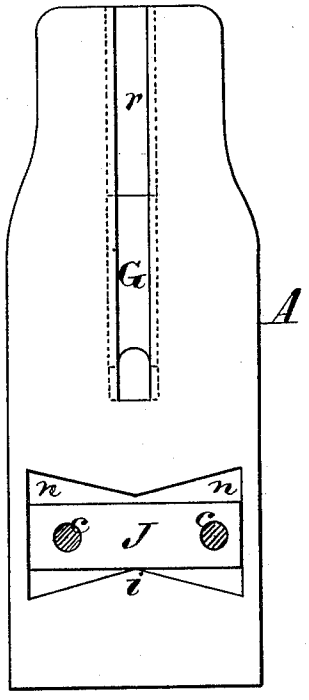


Fig. 3



WITNESSES

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2 Sheets—Sheet 2.

W. A. DUNCAN.

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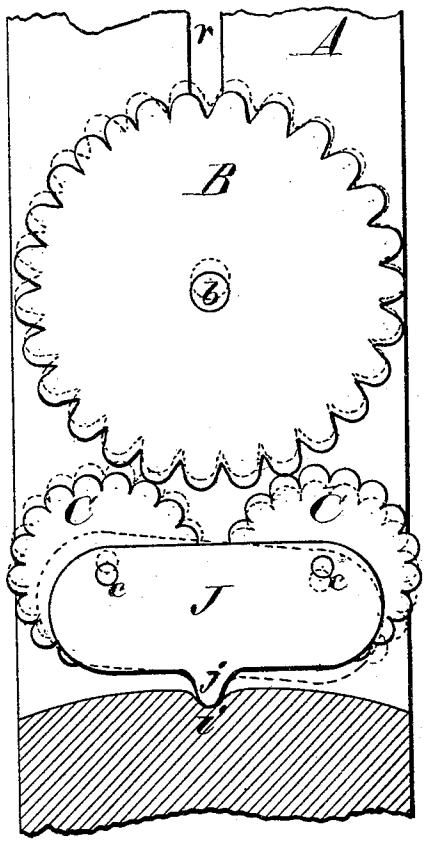
Fig. 4



WITNESSES

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UNITED STATES PATENT OFFICE.

WILLIAM A. DUNCAN, OF SYRACUSE, NEW YORK.

IMPROVEMENT IN WASHING-MACHINES.

Specification forming part of Letters Patent No. **175,950**, dated April 11, 1876; application filed February 19, 1876.

To all whom it may concern:

Be it known that I, WILLIAM A. DUNCAN, of Syracuse, in the county of Onondaga and State of New York, have invented a new and valuable Improvement in Washing-Machines; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a front view of my washing-machine, and Fig. 2 is a vertical sectional detail view thereof. Fig. 3 is an end view of the same, and Fig. 4 is a detail view.

This invention has relation to that class of washing-machines which are designed for being clamped to a common tub, and which are constructed with rollers between which the fabrics are passed for the purpose of cleansing them.

The nature of my invention consists in journaling the ends of the two lower roller-shafts in rocking plates, in combination with a large upper roller which is held down by means of springs, whereby a more thorough rolling, rubbing, and squeezing action on the fabrics is obtained, as will be hereinafter explained.

The frame of the machine is composed of two uprights, A A, united by horizontal bars A^1 A^2, as shown in Fig. 1 of the annexed drawings. B designates a large roller, which I prefer to corrugate, as shown in Fig. 4. The shaft *b* is received in slots *r*, and on one end is a crank, B′, by which roller B is turned. This roller is held down by means of springs S S, which are secured to the bar A^1, and which press on blocks G applied to the ends of shaft *b*. The large roller is thus allowed to rise and accommodate itself to the varying thicknesses of articles passed below it. C C are twin rollers, which are, preferably, corrugated, and which have shafts *c c*, whose bearings are in rockers J.

Fig. 3 shows the rockers loosely applied in double dovetail recesses *n*, made in the uprights A A. These rockers oscillate upon angles *i* and allow the rollers C C to accommodate themselves to the fabrics passed between them and the roller B—that is to say, when one of the rollers C is depressed the opposite roller will be raised and press the fabric forcibly against the large roller B.

Instead of sustaining the rockers J upon the knife-edge bearings *i*, (shown in Fig. 3,) teats *j* may be formed on the rockers and grooves *i′* made in the shoulders formed inside of the standards A, as illustrated in Fig. 4. This will allow a free rocking motion of the bearers J, and in some cases will be preferable to the bearings *i*.

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

The lower rollers C C, journaled in the rocking plates J, in combination with the large upper roller B, which is held down by means of springs S S, as described.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

WILLIAM A. DUNCAN.

Witnesses:

HORACE H. WALPOLE,

H. F. DOW.