

(No Model.)

J. M. GROVER.
WASHING MACHINE.

No. 548,983.

Patented Oct. 29, 1895.

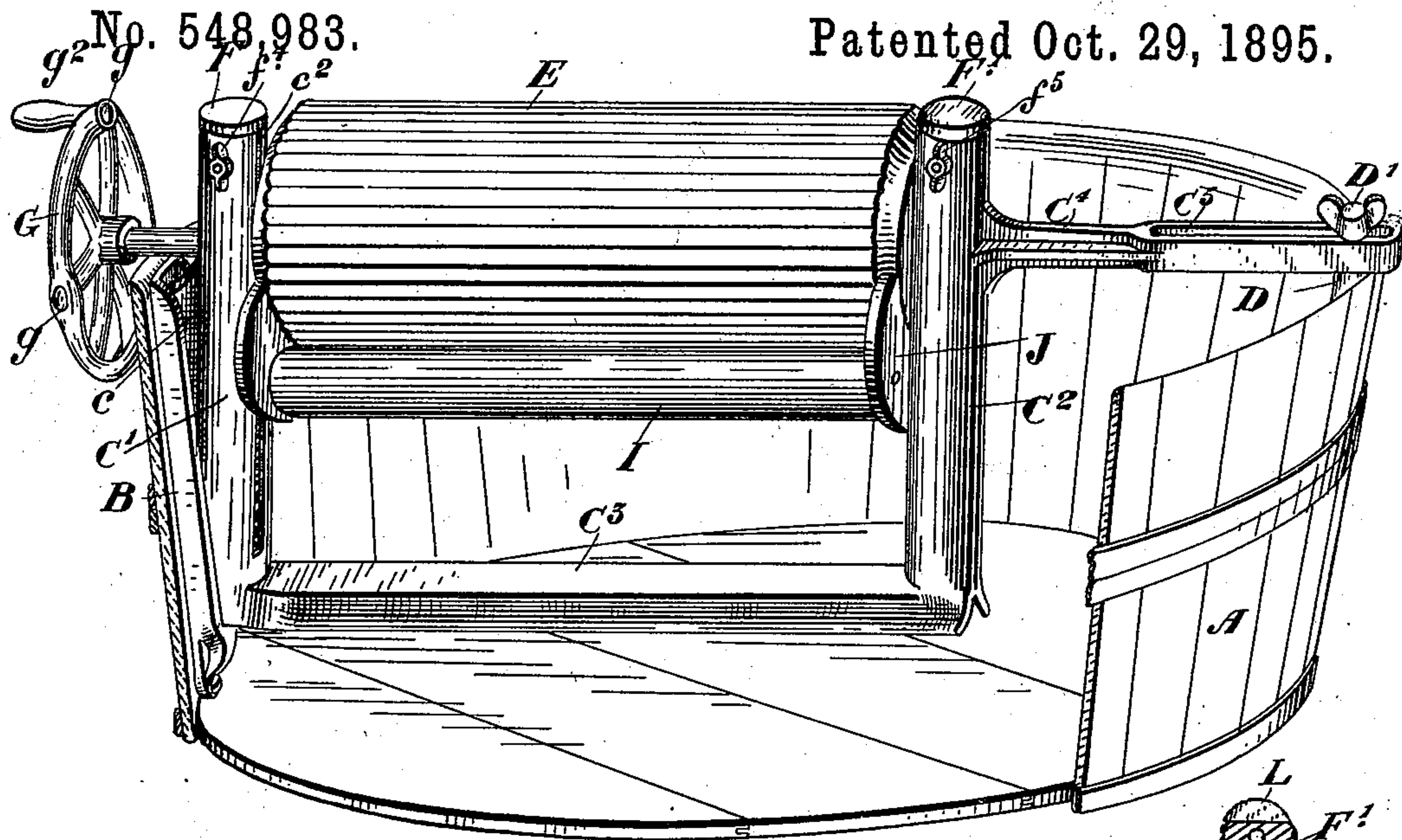


Fig. 1.

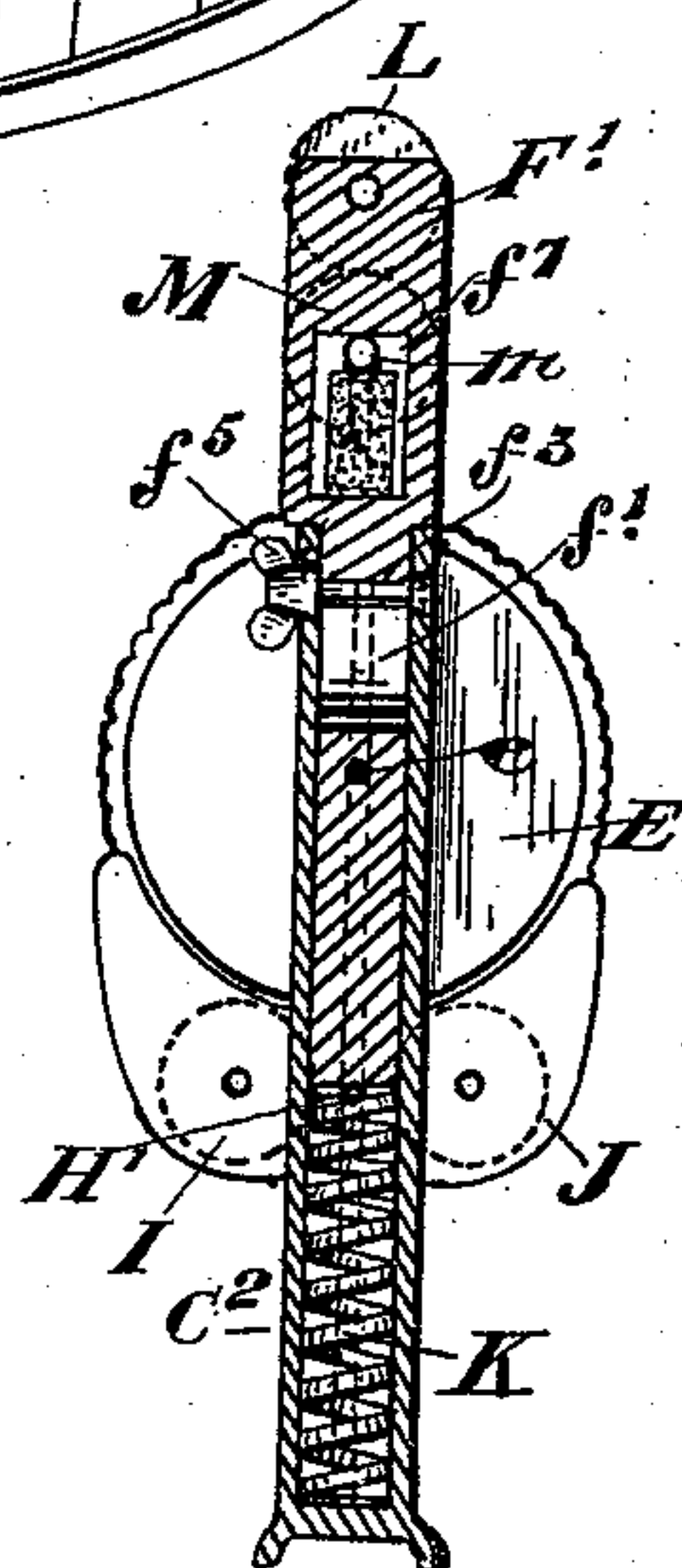


Fig. 3

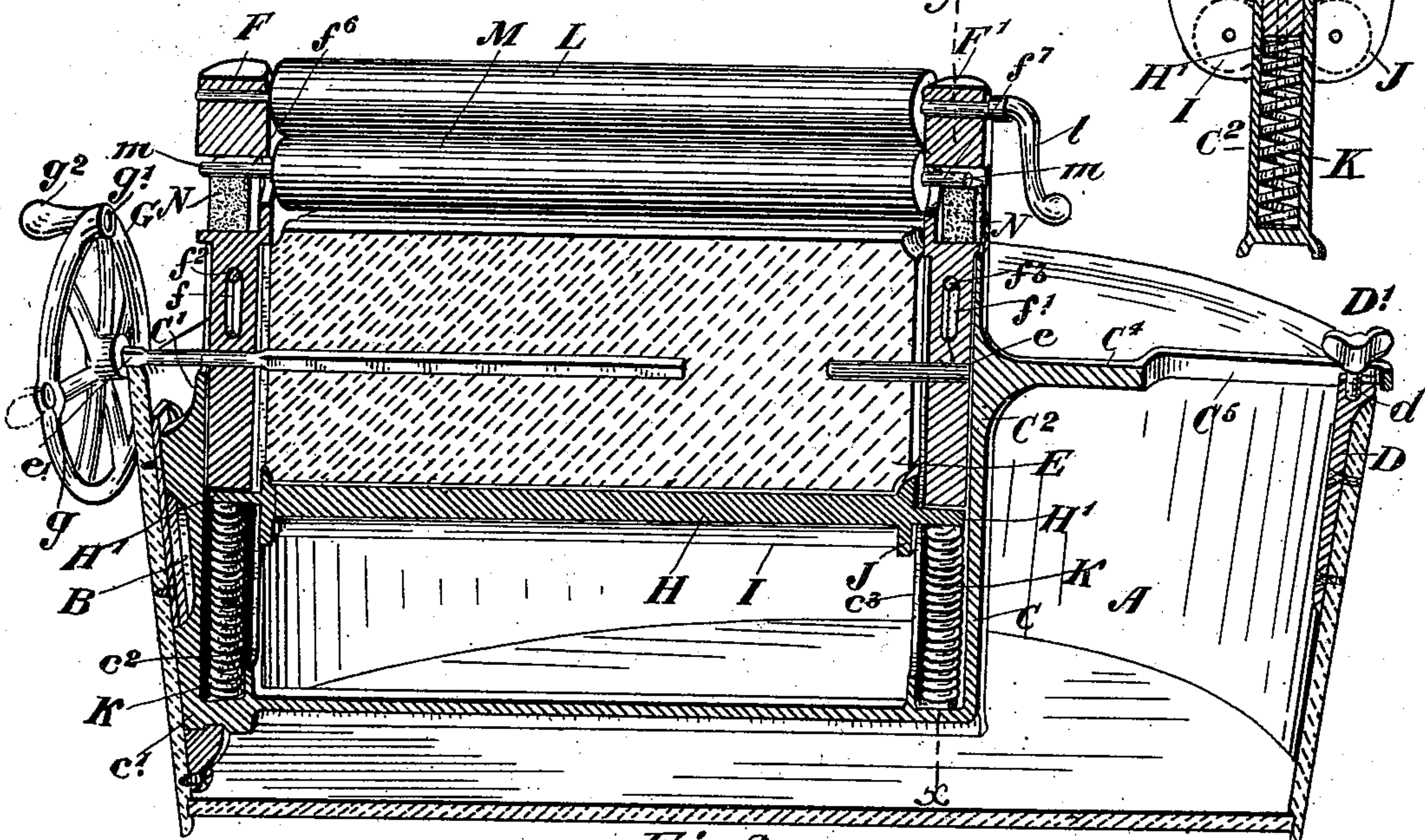


Fig. 2.

Witnesses
A. L. Young
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UNITED STATES PATENT OFFICE.

JOHNSON MAITLAND GROVER, OF WINNIPEG, ASSIGNOR OF ONE-HALF TO
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WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 548,983, dated October 29, 1895.

Application filed August 4, 1894. Serial No. 519,482. (No model.)

To all whom it may concern:

Be it known that I, JOHNSON MAITLAND GROVER, publisher, of Winnipeg, in the county of Selkirk, in the Province of Manitoba, Canada, have invented certain new and useful Improvements in Washing-Machines, of which the following is a specification.

My invention relates to improvements in washing-machines patented to me in Canada under No. 6,520 on the 7th of September, 1876; and the object of the present invention is to provide a washer of simple and compact form, in which the parts may be readily taken apart, if desired, and which may be readily adjusted to suit the various sizes of tubs and in which the upper roller may be adjusted in relation to the rubbing-frame according to the tension it is desired to exert upon such roller or the class of clothes it is intended to wash; and it consists, essentially, in forming the bearing-standards of the roller and rubbing-frame tubular, connected together by a cross-bar and designed to be supported at one end by a bracket in the tub and at the other by a slotted arm extending outwardly and held in position by a suitable thumb-screw screwed onto a bracket near the top of the tub, a hand-wheel being provided for rotating the roller, the springs being arranged at the bottom of the tubular frame to press against the reduced end of the rubbing-frame, and the machine being otherwise constructed as hereinafter more particularly explained.

Figure 1 is a perspective view of a washtub with a portion broken away, so as to exhibit the general arrangement and construction of my washing-machine. Fig. 2 is a longitudinal section through the washer, showing, also, a wringing attachment. Fig. 3 is a cross-section through the line xy , Fig. 2.

In the drawings like letters of reference indicate corresponding parts in each figure.

A is the washtub, which is provided with a channel-bracket B, into which fit the lugs c c' at one side of the frame C.

C' C^2 are the tubular standards of the frame C, which are connected together at the bottom by the cross-bar C^3 .

C^4 is an arm extending outwardly from the tubular standard C^2 and having a slot C^5 .

D is a bracket secured to the inside of the

washtub and having a reduced upper threaded end d , which extends through the slot C^5 in the arm C^4 .

D' is a thumb-screw, which is screwed in the top of the end d and is designed to hold the arm rigidly in position by pressing against the top of the arm C^4 .

It will be seen that on account of the length of the slot C^5 in the arm C^4 the washer may be readily adjusted to tubs of different sizes or diameters. It will therefore be understood that each tub would have to be provided with a bracket such as B and a bracket D.

E is the corrugated upper roller, which is provided at one end with a round spindle e and at the other end with a spindle e' , which is square at its inner end, where it fits into the roller. The standards C' C^2 have slots c^2 c^3 , respectively, at the inside, which slots extend from near the bottom to the top of the standard.

F F' are cylindrical bearing-blocks, which fit into the tubular standards C' C^2 . The spindle e , at one end of the roller E, extends into the cylindrical bearing-block F', and the round end of the spindle e' extends through the cylindrical bearing-block F. The outer end of the spindle e' is square and has secured to it the hand-wheel G, which has a hole g made in the periphery and a hole g' made through the wheel near the periphery, into either of which may be inserted the handle g^2 . By means of this hand-wheel G the roller E may be turned around by using the handle at the side of the wheel or extending radially out from the periphery.

H is the rubbing-frame, and I the feed-rollers. The rubbing-frame H and feed-rollers I are secured at each end in the crescent-shaped end boards J.

H' are pivot-pins extending out from the end boards through the slots c^2 and c^3 into the tubular or hollow standards C' C^2 .

K are spiral springs extending between the bottom of the standards C' C^2 and the pins H'. By means of these springs K it will be seen that the frame H, with its feed-rollers, is maintained close up to the feed-roller E in such a manner that such rubbing-frame and feed-rollers are permitted of a vertical movement in order to allow of clothes of dif-

ferent classes, such as linen or light clothes or blankets and heavy clothes, being readily put through the machine. In order to make a further provision in this respect, I slot the
 5 cylindrical bearing-blocks $F F'$ at $f f'$, as indicated in Figs. 2 and 3, and pass through such slots from the outside of the hollow standards the screw-pins $f^2 f^3$, which I provide with thumb-nuts $f^4 f^5$, the shank of each
 10 of which extends through a hole in the hollow standards, so that it may be screwed home against the cylindrical bearing-blocks, and thereby securely hold such bearings in any position to which they may be vertically ad-
 15 justed.

It will be noticed by reference to Figs. 2 and 3 that I make the upper portion of the blocks F' of greater diameter than the lower and much greater height than I do in Fig. 1. In
 20 the first figure my machine is simply to be used as a washer, but in the last two figures I have provided a wringing attachment, which I shall now describe. L and M are the wringing-rollers, which are made of any suitable
 25 material. The upper roller L is rigidly journaled in the top of the blocks F and F' , one end being provided with a handle l . The spindles m of the roller M extend through the slots f^6 and f^7 , made in the standards F and
 30 F' , respectively.

N are rubber springs or cushions, upon which the spindles m of the rollers M are supported. These cushions are designed to force the roller

M normally upwardly against the roller L . By this means I provide a wringing attachment very convenient and ready for operation
 35 as part of my washer.

From this description it will be seen that I provide a very simple washer, which, if any of the parts get out of order, may be readily
 40 taken apart and repaired. It will also be understood that I am able to use springs K of more than usual strength, as I am enabled by the screw-pins f^2 and f^3 , extending through the slots f and f' in the blocks F and F' , to
 45 provide any desired degree of pressure of the rubbing-frame H against the roller E .

The washer may be very readily detached from the tub and removed to tubs of more or less diameter with very little trouble.
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What I claim as my invention is—

In combination in a supporting frame for washing and wringing rolls, the standards, the vertically movable blocks thereon having
 55 extensions above the upper ends of the standards, and having upper and lower bearings for the wringer and washing rolls respectively, said blocks being slotted in the portions lying within the standards and the laterally
 60 extending clamping means arranged to hold the blocks in any adjusted position.

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Witnesses:

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