

(No Model.)

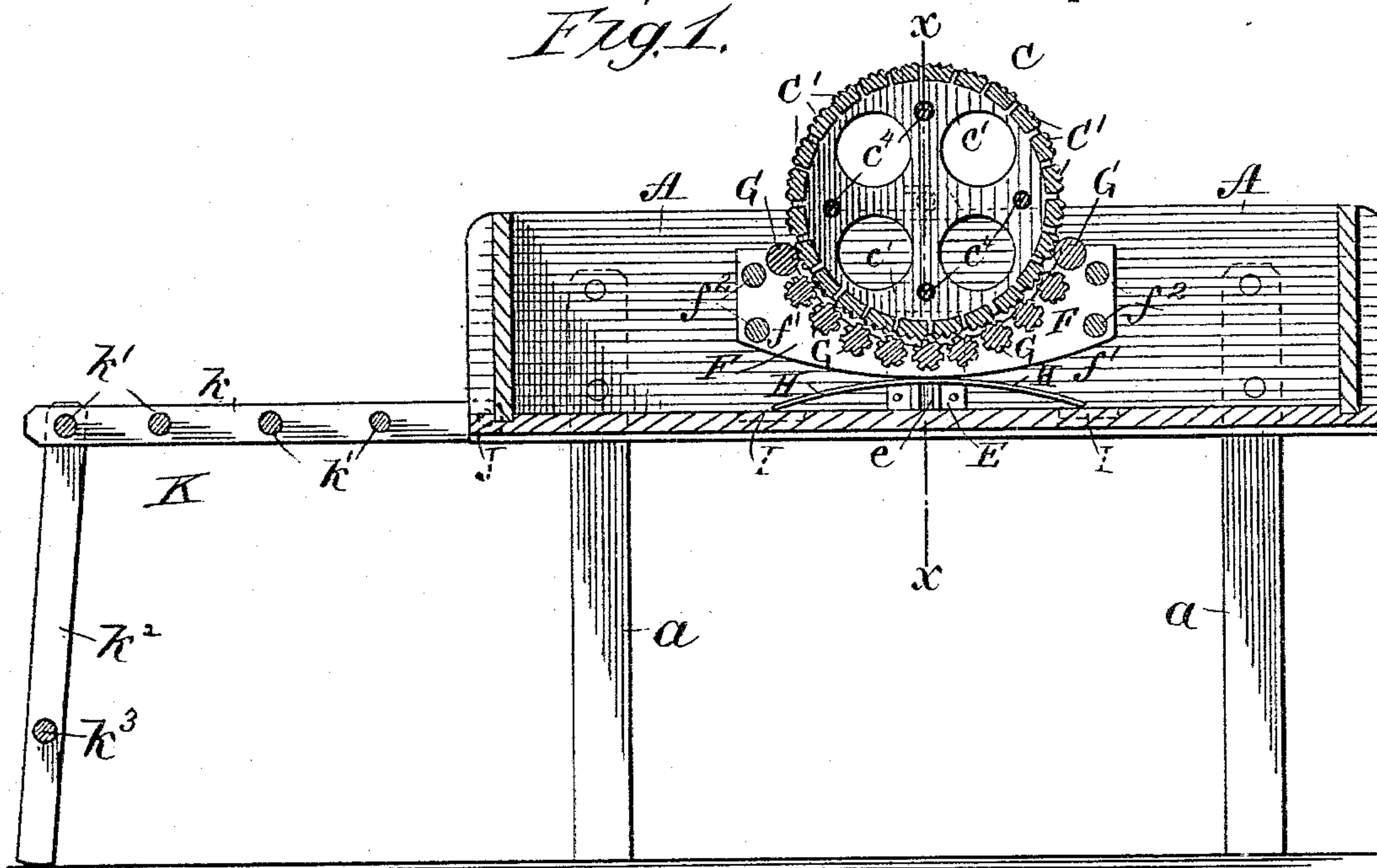
H. BAUERFEIND.

WASHING MACHINE.

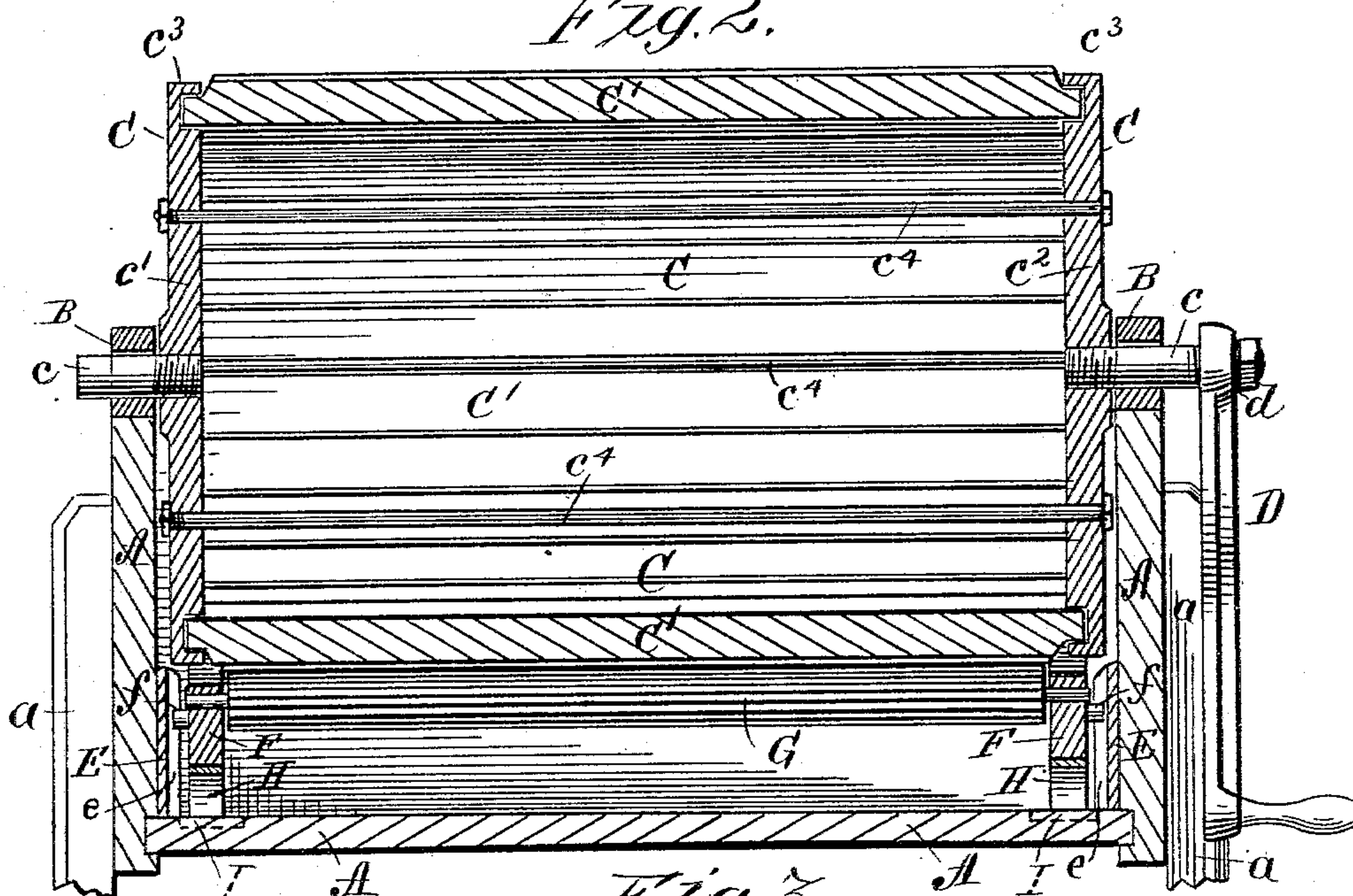
No. 369,495.

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*Fig. 1.*



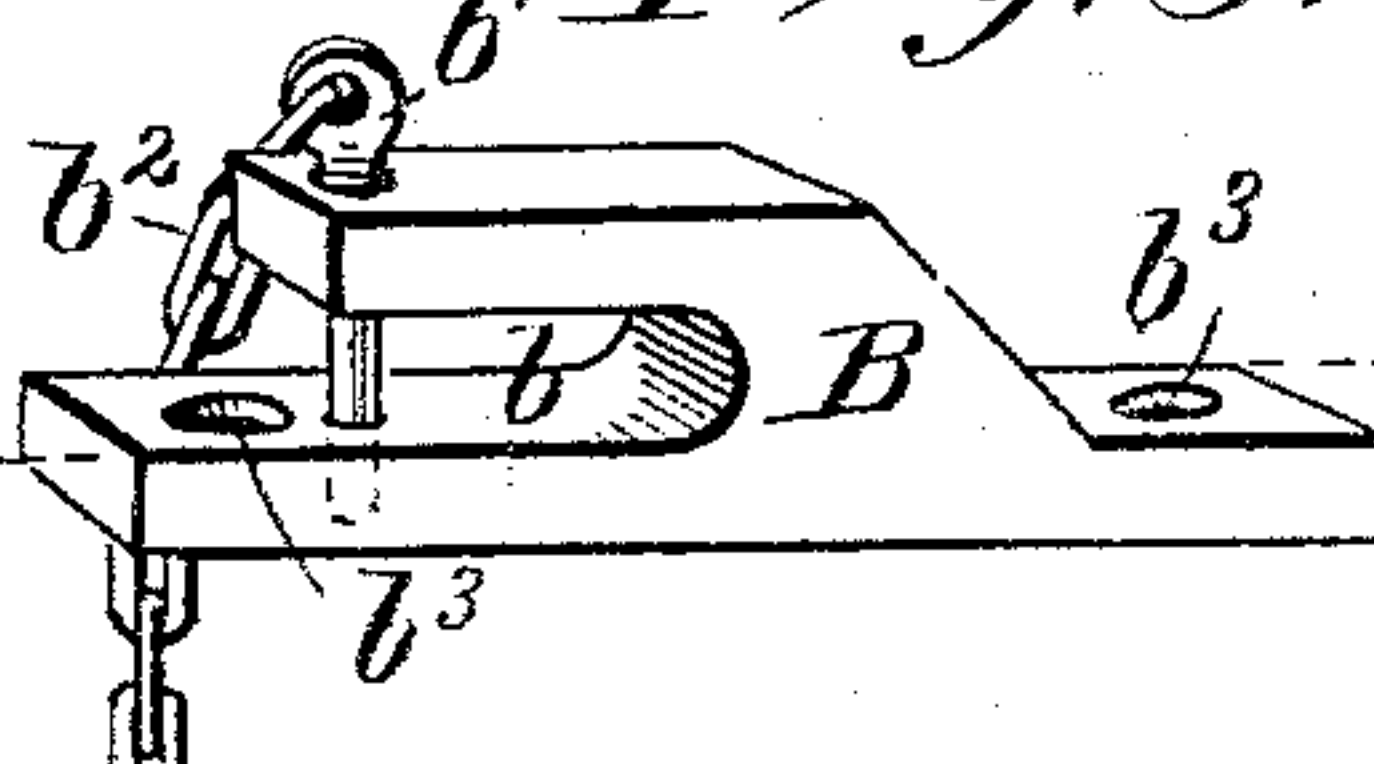
*Fig. 2.*



WITNESSES:

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*Fig. 3.*



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# UNITED STATES PATENT OFFICE.

HENRY BAUERFEIND, OF SHAWANO, WISCONSIN.

## WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 369,495, dated September 6, 1887.

Application filed June 2, 1886. Serial No. 203,908. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY BAUERFEIND, of Shawano, in the county of Shawano and State of Wisconsin, have invented a new and  
5 Improved Washing-Machine, of which the following is a full, clear, and exact description.

My invention relates to machines adapted for washing clothes, and has for its object to provide a simple, inexpensive, and efficient  
10 machine of this class, which may be operated easily to thoroughly wash the clothes with economy of time and labor and without injuring the clothes.

The invention consists in certain novel features of construction and combinations of parts of the washing-machine, all as herein-  
15 after fully described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate  
20 corresponding parts in all the figures.

Figure 1 is a vertical longitudinal sectional elevation of the washing-machine. Fig. 2 is a cross-sectional elevation of the machine, taken  
25 on the line  $x x$ , Fig. 1; and Fig. 3 is a perspective view of one of the bearings of the shaft of the main drum or washing-wheel of the machine.

The box or tub A, in which the clothes and washing-fluid are to be placed, is preferably  
30 rectangular in form, and is supported on suitable legs,  $a$ , at convenient height.

In bearings B, fixed to the top of opposite sides of the box A, the journals  $c c$  of the main  
35 drum C are fitted, said journals being slipped into open slots  $b$  of the bearings and confined therein by pins  $b'$ , which are connected by chains  $b^2$  to the box A, to prevent loss of the pins. The bearings B are held to the box A  
40 by screws passed through holes  $b^3$  in the bearings. (See Fig. 3.) To one of the journals  $c$  a crank, D, is held by a nut,  $d$ , and so that the drum C may be turned in either direction by the crank.

The drum C consists of two metal ends or heads,  $c' c^2$ , which are provided with recesses or sockets  $c^3$ , in which fit the opposite ends of the corrugated wood blocks or staves  $C'$ , which  
45 form the periphery of the drum and constitute the upper clothes-rubber of the machine. The drum-heads  $c' c^2$  are held firmly to the ends of the blocks  $C'$  by bolts  $c^4$ , which pass through

the inside of the drum and bind all parts of the drum securely together.

To the opposite sides of the box A, next its  
55 bottom and immediately under the journals  $c$  of the drum C, there are fixed a couple of plates, E E, which have vertical slots or grooves  $e e$ , in which fit loosely the pins  $f f$ , which are fixed in the opposite side pieces,  $f' f'$ ,  
60 of a frame, F, along the top of which there are journaled a series of rollers, G, which describe a curved line at their peripheries conforming about to the periphery of the main drum or wheel C, as shown clearly in Fig. 1. The end  
65 rollers, G, of the series are preferably plain, and the faces of the intermediate rollers are corrugated lengthwise. The sides  $f' f'$  of the frame F are tied to each other by rounds or cross-bars  $f^2$ , preferably two at each end of the  
70 frame, and which allow the rollers G to rotate freely between the sides of the frame. To the lower edges of the sides  $f' f'$  of the frame F are fixed the central parts of bowed or arched plate-springs H H, the opposite ends of which  
75 rest and work freely on metal wear-plates I I, fixed to the bottom of the box A. With this construction the roller-frame F G will be held by the guide-pins  $f f$  directly under the drum C, and the rollers will be allowed to yield  
80 freely by the springs H, to accommodate a greater or lesser quantity of clothes passed between the drum and roller-frame to be washed.

To one end of the box A there is pivoted at  
85 J the side-bars,  $k k$ , of a bench, K, the top of which consists, preferably, of cross-rods  $k'$ , fixed in the bars  $k$ . Legs  $k^2$ , connected by a round,  $k^3$ , support the outer end of the bench, which forms a substantial support for a tub or  
90 basket, in which the clothes may be placed while soaking, or for bluing, or when wrung out ready for drying.

The operation is as follows: A suitable quantity of clothes placed in the water or suds in the box A will be entered between the main  
95 drum or wheel C and the rollers G, and the crank D will be turned to cause the clothes to be carried almost through between the drum and lower rubbing-rollers, whereupon the motion of the crank and drum will be reversed to  
100 carry the clothes back again to their starting-point, and the motion of the crank and drum will be reversed to carry the clothes forward again between the drum and lower rollers, and



this alternate backward and forward motion will be given the clothes between the drum and rollers until the dirt is rubbed or washed from the clothes, and the crank will then be turned  
5 either way until the washed clothes are discharged from between the drum and rollers into the box A.

This machine does its work quickly and thoroughly, and is effective in washing light  
10 or heavy fabrics, and will not tear the clothes.

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

A washing-machine comprising the tub or  
15 vessel A, the drum C, journaled in the tub and having parallel straight ribs, the plates E on

the inner opposite sides of the tub, having vertical grooves *e* in alignment with the axis of the drum, the rocking frame F, the series of parallel rollers G, journaled in the sides *f' f'* 20 of the frame approximately concentric with the drum, pins *f* on the outer faces of the said sides, at the centers thereof, and the bowed springs H, resting at their ends on the bottom of the tub and engaging the lower edges of the 25 sides *f' f'* with their central parts, whereby the frame F is allowed a vertical and a rocking movement, substantially as set forth.

HENRY BAUERFEIND.

Witnesses:

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