

*J. Habermehl.*

*Washing Machine.*

*N<sup>o</sup> 102,255.*

*Patented Apr. 26, 1870.*

Fig 1.

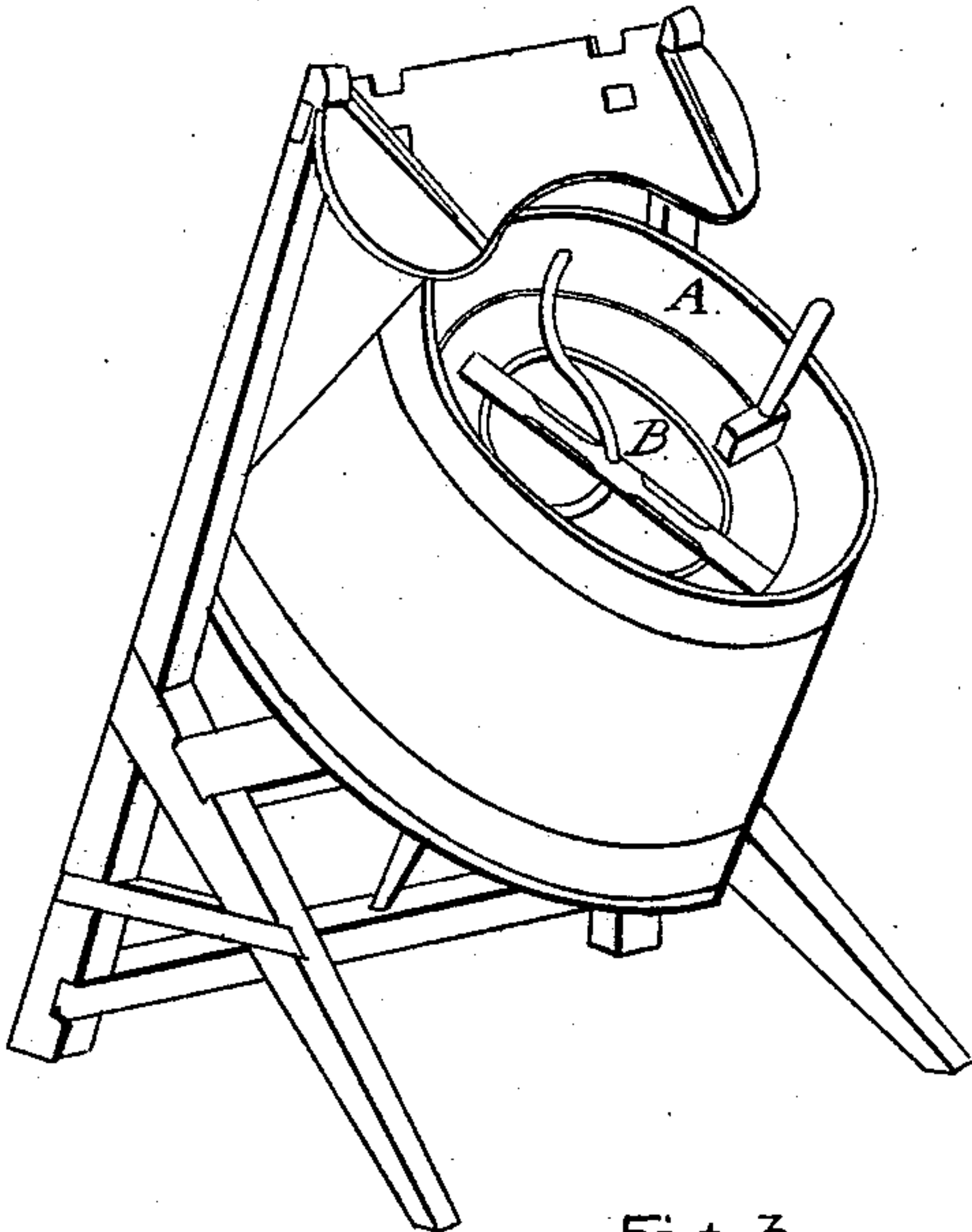


Fig. 2.

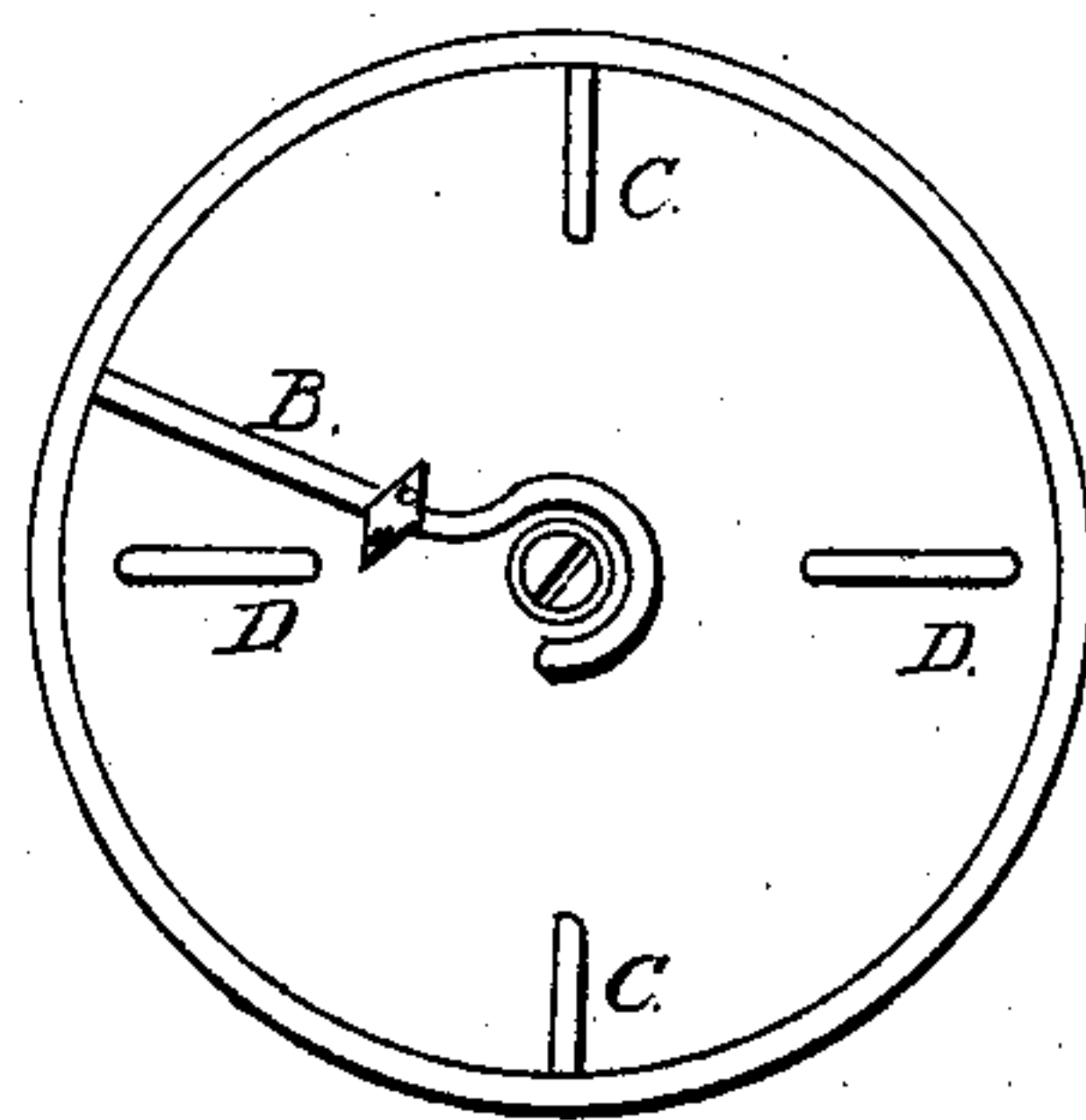
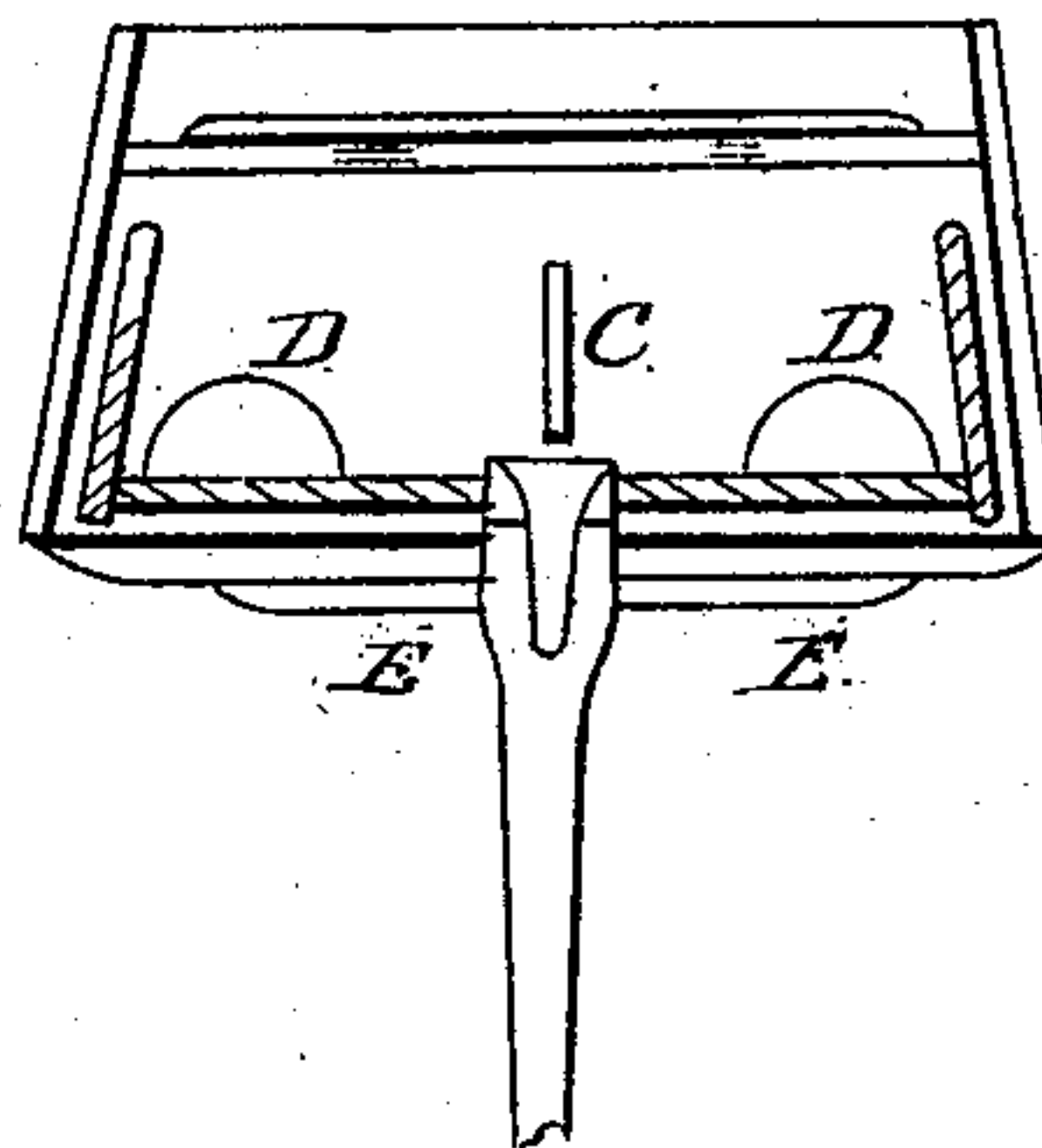
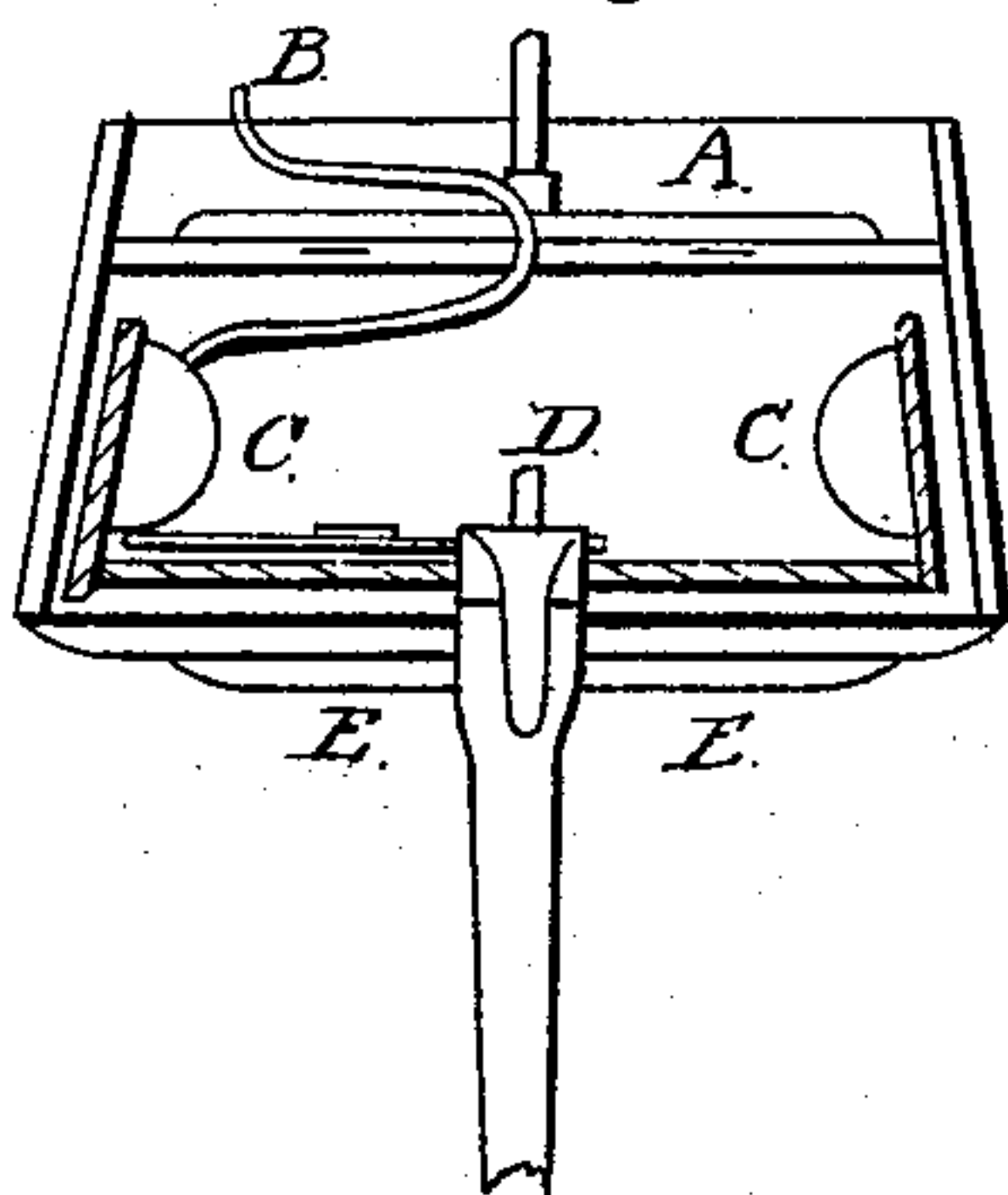


Fig. 3.

Sectional View Fig. 4.



Witnesses:

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Inventor:

*John Habermehl*



# United States Patent Office.

JOHN HABERMEHL, OF ALLEGHENY, PENNSYLVANIA.

*Letters Patent No. 102,255, dated April 26, 1870.*

## IMPROVED WASHING-MACHINE.

The Schedule referred to in these Letters Patent and making part of the same

Be it known that I, JOHN HABERMEHL, of the city of Allegheny, and State of Pennsylvania, have invented a new and useful Improvement in Washing-Machines; and I do hereby declare that the following is a clear, exact, and full description of the same, which will enable others skilled in the art to make and use it, reference being had to the accompanying drawings forming part of this specification.

This invention is an improvement on the washing-machine of which Letters Patent were granted me on the 11th day of January, A. D. 1870, No. 98,763, to which reference is had.

The improvement consists principally upon two main points, one of which is in relation to a rim on top of the tub to catch the suds as it comes from the wringer, or as it gushes out from the sides of the lid when the machine is in motion; and the other main point is in relation to constructing the inside of the tub in such a manner that the current will circulate more freely and the clothes remain more separated and scattered than in the tub of the patent referred to.

Figure 1 is a perspective view of my improved tub, showing the rim on top of the same, and the form or shape of the tub.

Figure 2 is a horizontal section of fig. 1, showing how the blocks or projections which cause the motion of the fluid are placed in relation to each other, so as to produce the best result.

Figures 3 and 4 are vertical sections of the tub, fig. 1, showing how the blocks or projections are placed on the bottom and sides of the tub, and how the tub is supported by the rod or spindle upon which the tub revolves, and also showing how this "inclined arrangement" may be, if desired, carried out in a tub remaining stationary while the inside revolves.

The construction of the rim is shown in figs. 1 and 3, letter A, and consists, simply, in placing the head of the tub at such a distance from the top as to obtain a rim or a projecting surface around the head of the tub, of sufficient depth to catch and collect the suds for the purposes named. The tub is also contracted at the top to make the rim incline inward in the manner shown by said fig. 1. This rim or projection is highly important for a revolving tub standing inclined. Upon a little reflection it will be observed that hot water, containing soap, and being lashed and dashed about in a violent manner, will create much suds and foam, which will gush out from the sides of the lid, which, without this rim, would fly and scatter in all directions. To do without this rim the tub would have to be so high or deep that the same would be very inconvenient to handle, and the strain or leverage would be too great upon the spindle and frame by which the tub is supported. Thus, by this

arrangement, I am enabled to make a shallow tub relieving the spindle and frame of much strain, and avoid the nuisance of the water and suds scattering in all directions.

The other main point of my improvement is fully shown in figs. 2, 3, and 4. Fig. 3 shows how letter C of fig. 2 is placed on the side of the tub, and fig. 4 shows how letter D of fig. 2 is placed on the bottom of the tub. It will be observed that these projections or blocks are so placed that the current can circulate around them. Letter C does not reach the bottom of the tub by some inches, so that the current can pass underneath it, and the block, letter D, is likewise placed some inches from the side of the tub, to let the current pass between letter D and the side of the tub.

By reason of placing these blocks or projections in the manner described, a large proportion of the fluid is not conveyed upward when the tub is in motion, but will run back near the side of the tub, thereby producing a counter current, so to speak. By this arrangement the clothes will not have such a tendency to roll together into a lump, but will remain more distributed over the bottom of the tub, so as to expose a larger surface of the clothes to the current than by my other invention referred to.

These blocks will perform best when half round, or like a semicircle, with a smooth surface, so that the clothes will glide and move freely, which will create a swift motion of the current.

The spindle, which is fastened to the bottom of the tub, the lower end of which is shown in fig. 1, and a vertical section of the same is shown in figs. 3 and 4, is inserted or welded to a double cross, or a number of arms, as shown by letter E, which ought to be fastened firmly to the tub with screws or bolts, and the said spindle and arms ought to be made out of the best quality of horseshoe iron, or any strong material, and the frame upon which the tub revolves must likewise be made strong to stand the heavy strain to which the same are subject.

Fig. 3 shows how this "inclined arrangement" may be carried out in a tub remaining stationary while the inside revolves.

A shallow tub, dish, or round disk is placed upon the bottom of the tub standing still, and the inner arrangement is made to revolve upon a pivot at the center, as shown in fig. 3, and is turned by means of a rod, which enters at the center at the top of the tub, as shown by letter B, figs. 1 and 3, running from the center of the tub to the side of the same, and passing down the side to bottom of the inside arrangement, almost in the shape of a square angle, and fastened to the bottom with screws, or in any manner. If this rod was run straight down in a bee-line in the middle

of the tub to the bottom, the clothes would link around it owing to the tub standing inclined.

The cheapest and the most durable way to carry out this "inclined arrangement" is to attach the blocks described to the tub, as shown in fig. 1.

Although the foregoing-described manner of placing those blocks or projections will produce the best result, yet I do not limit myself to their precise form, number, or the precise manner of placing them. Any irregular surface, or any projections placed at the bottom or sides of the tub, will create a current when the

tub is in motion, and even an oval tub or a square box will produce a current.

What I claim, as my improvement in washing-machines, is—

"The inclined arrangement of the tub," in combination with the rim A, rod B, blocks C and D, as shown and described.

JOHN HABERMEHL.

Witnesses:

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