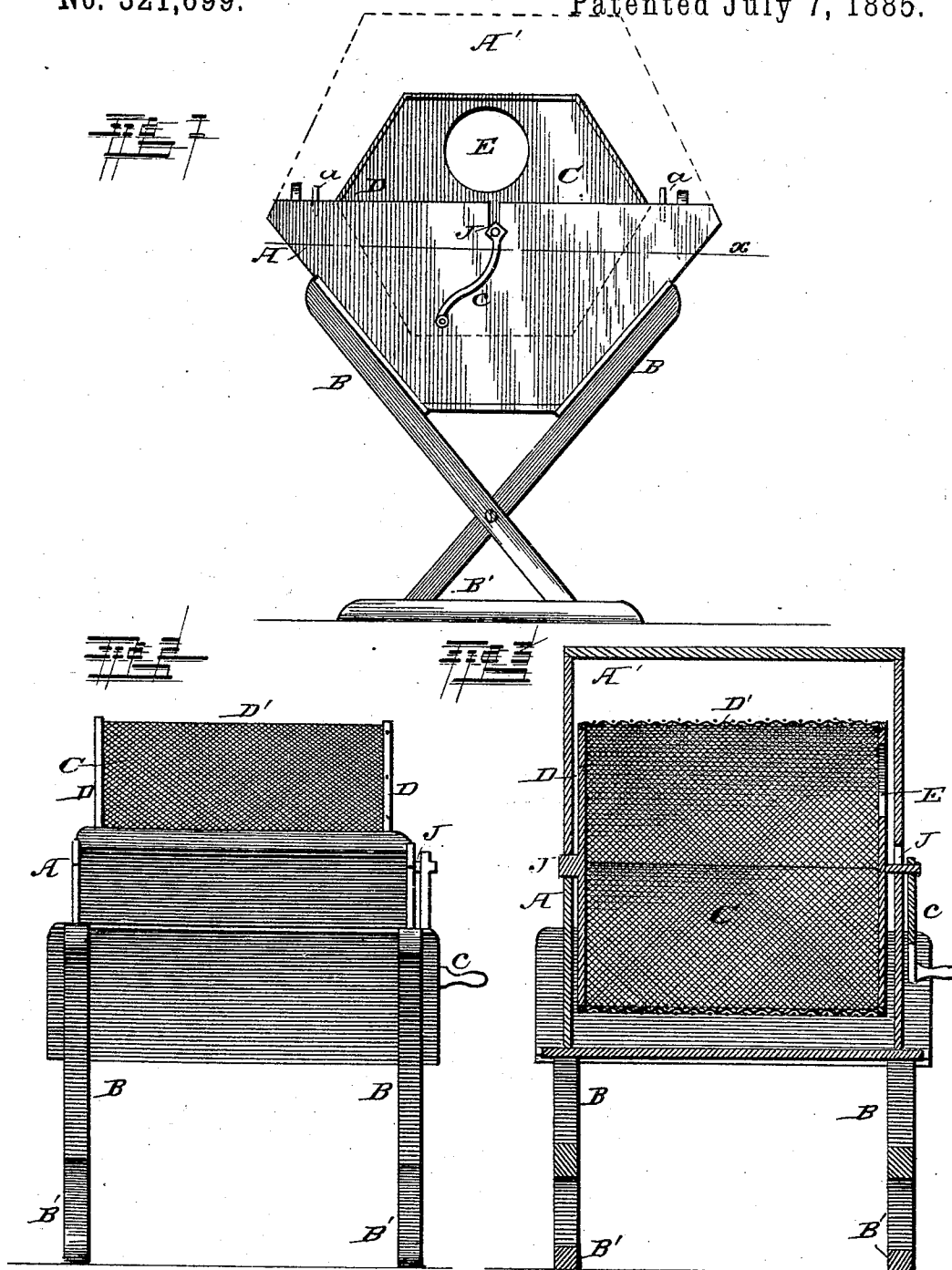


(No Model.)

A. F. EKMAN.  
WASHING MACHINE.

No. 321,699.

Patented July 7, 1885.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

AXEL F. EKMAN, OF AUSTIN, TEXAS.

## WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 321,699, dated July 7, 1885.

Application filed August 27, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, AXEL F. EKMAN, a citizen of the United States, residing at Austin, in the county of Travis and State of Texas, have invented certain new and useful Improvements in Washing-Machines, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to improvements in the class of washing-machines commonly known as "cylinder washing-machines," and has for its object the production of a machine which will operate thoroughly and expeditiously, and without injury to the fabric, while at the same time it is light and inexpensive in construction and simple in operation; and with these ends in view the invention consists in the novel combination and arrangement of parts, which will be hereinafter more fully described, and specifically set forth in the claim.

In the accompanying drawings, to which reference is made, and which fully illustrate my invention, Figure 1 is an end view of my invention, the top of the box shown in dotted lines. Fig. 2 is a side view of the same, and Fig. 3 is a sectional view.

A A' represent a tub or box of hexagonal form, divisible in the center horizontally, which is removably mounted upon and supported by a frame, B B B', the side parts, B B, of which are shaped like the letter X, and having bases B' resting on the floor or ground. The top A' of the box rests upon the lower portion, A, and is connected thereto by dowelpins *a*, and can be removed at pleasure; but in operation it envelops the drum which contains the clothes to be washed, and prevents the escape of water or odors and steam arising when hot water is used.

Within the box A, and journaled upon bearings J at its ends, is a hexagonal drum, C, which is rotated by a crank, *c*, at one end. The ends D of the drum are made of wood, sheet-iron, or other suitable material. They are hexagonal in form, and have at one end an opening, E, for putting in or taking out the clothes to be washed, and secured to these end pieces, D, is a galvanized netting or wire-cloth, D', which, with the ends D, completes the drum. The said drum being slightly smaller than the tub or box A, will afford sufficient space between to enable the latter

to be revolved freely upon its axis through the medium of the crank, as well as space for the necessary water and detergent. The drum C being of hexagonal shape and arranged to revolve in the suds-box A A', of similar shape but greater dimensions, the salient angles of the former as it is revolved in passing the re-entrant-angles and the sides of the latter will cause currents in the water, which will materially aid in cleansing the fabrics being washed in the drum. The suds-box A, with its cover or top A', are each three-sided, and when the top is placed upon the box they form a large hexagonal receptacle, within which the smaller hexagonal drum C revolves, causing currents.

It will be obvious from the foregoing description that all that is necessary for the operator to do is to fill the tub or box with sufficient water to rise to the level indicated by the dotted line *x* in Fig. 1, and add a modicum of soap, either solid or fluid, or other detergent, then introducing the clothes within the drum by the opening at the end, and rotating the crank, the friction of the fabrics against the angles of the wire meshing of the drum and against each other will cause a complete and thorough cleansing without tearing or abrasion.

I wish it to be understood that I reserve the right to vary the construction of my machine without departing from the spirit of my invention. The drum is not traversed by a shaft, but the journals J are attached to its ends and rest in bearings in the ends of box A.

Having thus fully described my invention, I claim—

The combination of the suds-box A, having a removable top, A', and connected by dowelpins *a* with the hexagonal drum C, whose angles in its revolution within the suds-box create cleansing-currents in the water, said drum having journals J J, exteriorly attached thereto, and an opening, E, at one end, the crank *c*, and the frame B B B', the suds-box resting on the X-shaped supports, but capable of being removed therefrom, all substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

Witnesses: AXEL F. EKMAN.

FRED CARLETON,  
J. H. COLLETT.