

(Model.)

W. H. RICHARDSON.

WASHING MACHINE.

No. 330,154.

Patented Nov. 10, 1885.

Fig. 2.

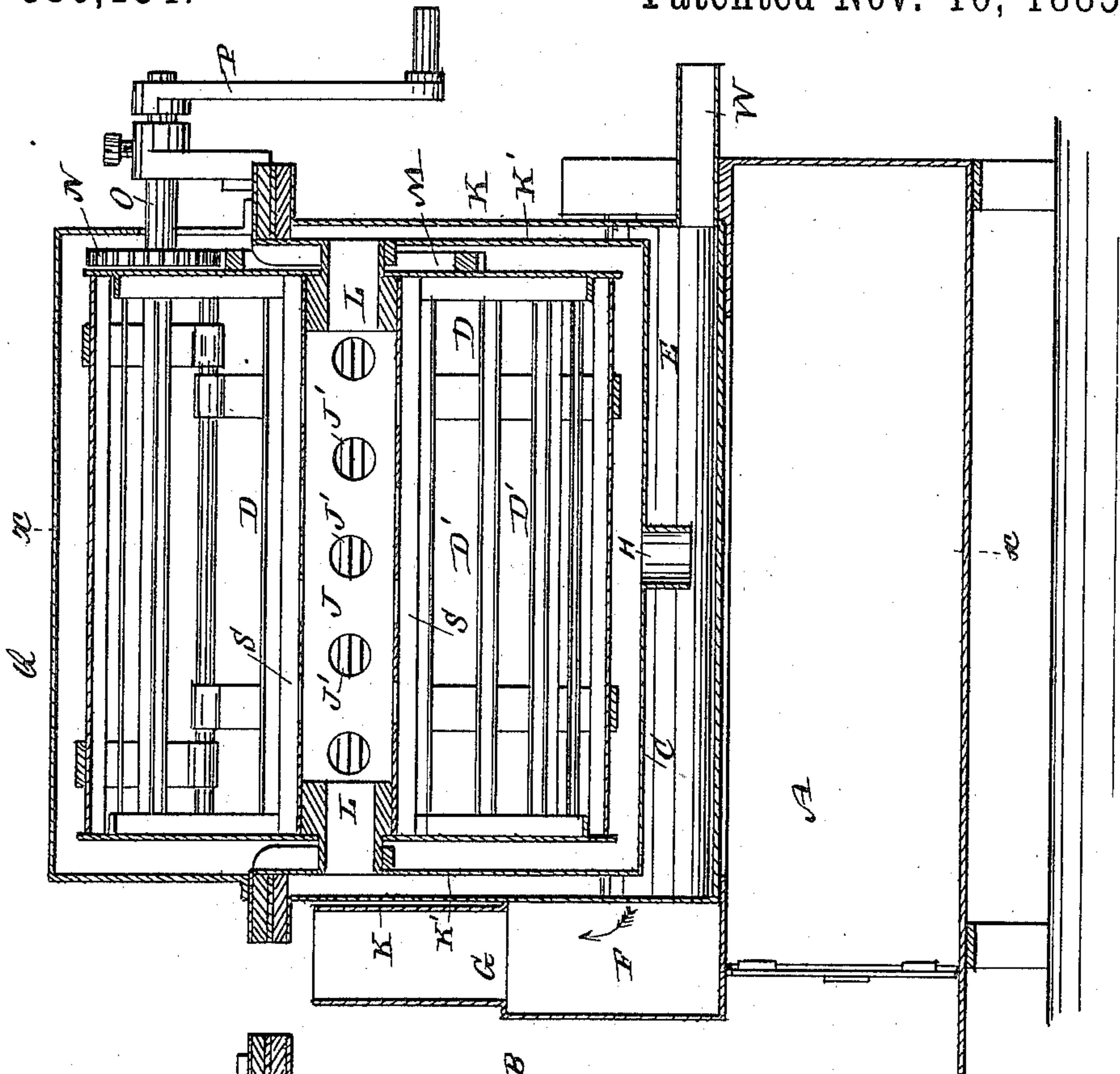
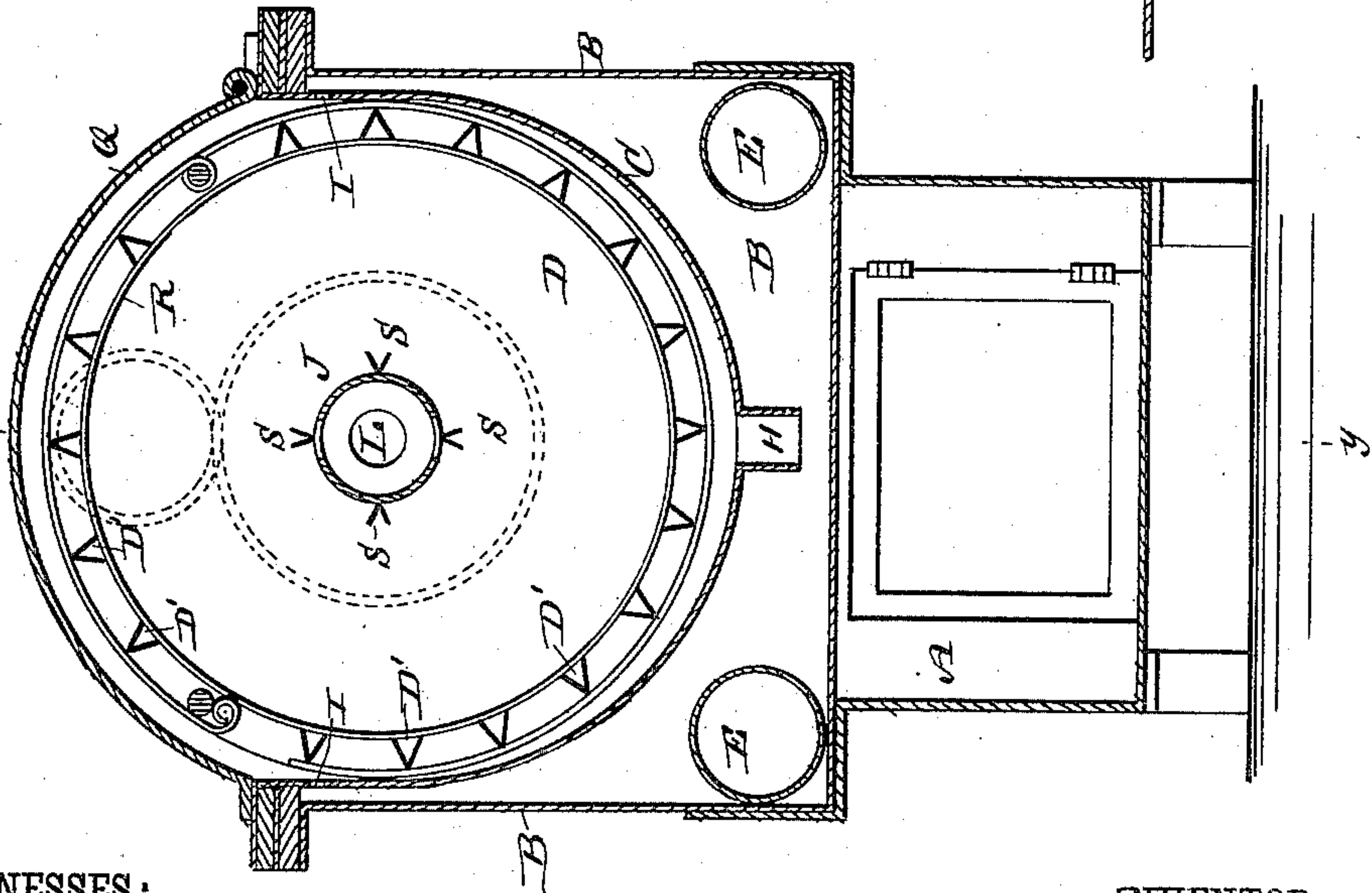


Fig. 1.



WITNESSES:

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WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 330,154, dated November 10, 1885.

Application filed May 12, 1885. Serial No. 165,210. (Model.)

To all whom it may concern:

Be it known that I, WILLIAM H. RICHARDSON, of Mexia, in the county of Limestone and State of Texas, have invented a new and Improved Washing-Machine, of which the following is a full, clear, and exact description.

The invention consists in the combination, with a furnace, of a box on the same, a semicircularly-curved top on the box, and a revolving cylindrical cage, which has an apertured tubular shaft having hollow trunnions on its ends.

The invention also consists in parts and details and combinations of the same, as will be fully set forth hereinafter.

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

Figure 1 is a cross-sectional elevation of my improved washing-machine on the line *x x*, Fig. 2. Fig. 2 is a longitudinal sectional elevation of the same on the line *y y* of Fig. 1.

On a furnace, A, a metal box or steam-generator, B, is secured, the top C of which is curved downward on a semicircular line to receive a cylindrical cage, D, constructed of two end pieces connected by longitudinal bars D'. The smoke and other products of combustion pass from the furnace through two flues, E, passed longitudinally through the box at the bottom, and into a smoke-box, F, connected with the stove-pipe G. A neck, H, projects downward from the lowest part of the curved top C into the hollow or cavity of the box, and side apertures, I, are provided in the top C of the box, near the top edge. The cylindrical cage D has a tubular shaft, J, having numerous openings, J', and two hollow or tubular end trunnions, L, journaled on the inner ends, K', of the box B, between which inner end walls, K', and the outer end walls, K, a steam-space is formed. The top edge of the top C and the outer side walls of the box B and the inner and outer end walls, K K', of the box B are securely united at the top, so as to form a steam-tight box or steam-chamber. On one end trunnion, L, a cog-wheel, M, is molded, which engages with a cog-wheel, N, on a shaft, O, having a crank-handle, P. A suitable curved cover, Q, is hinged to the top of the box B. Inverted-V-shaped ribs S are se-

cured longitudinally on the outer surface of the tubular shaft J, and the bars forming the cylindrical cage D are also V-shaped in cross-section. The said cage is provided with a hinged gate, R. An outlet-pipe, W, is provided to draw off the water from the box or generator B.

The operation is as follows: The water is admitted into the box or generator and is heated and converted into steam by the fire in the furnace below it, and by the hot gases, smoke, &c., passing through the flues E. The hot water passes up through the neck H in the lower part of the space occupied by the cage D. The steam issues through the apertures I into the cage, and the steam and hot water pass up in the space between the partitions K K' into the tubular shaft J, and through the apertures J' in the same into the interior of the cage D. A thorough circulation of the hot water is thus kept up in the machine.

The cage is revolved by means of the cog-wheels N and M, whereby the clothes are thrown about in the cage and dipped into the boiling water and raised out of it alternately. The ribs S on the tubular shaft J assist in throwing the clothes about.

The V-shaped ribs D act as buckets, and receive the water and let it drop upon the clothes.

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

1. In a washing-machine, the combination, with the furnace A, of the box B, having the semicircularly-curved top C, of the cylindrical cage D, and the flues E in the box, substantially as herein shown and described.

2. In a washing-machine, the combination, with the furnace A, of the box B, having the curved top C and the double end walls, K K', the cylindrical cage D, and the hollow shaft J, which is in communication with the compartments between the end walls, K K', of the box B, substantially as herein shown and described.

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Witnesses:

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