

OSTON, MASS.
 YANKEE PAPER

G. E. HALL.
 WASHING MACHINE.
 APPLICATION FILED DEC 2, 1910.

1,008,458.

Patented Nov. 14, 1911.

Fig. 1

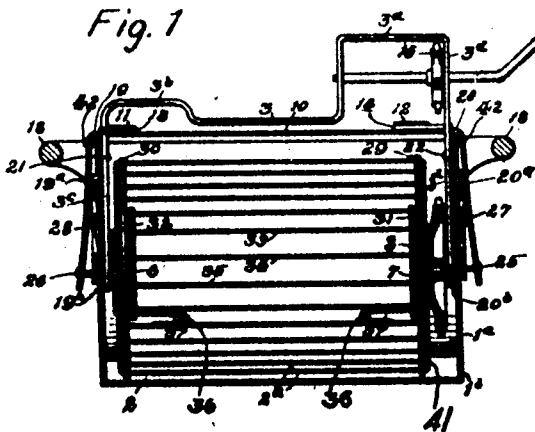


Fig. 2

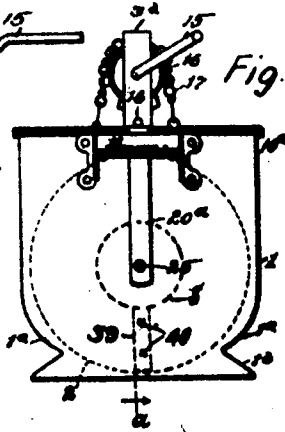


Fig. 3

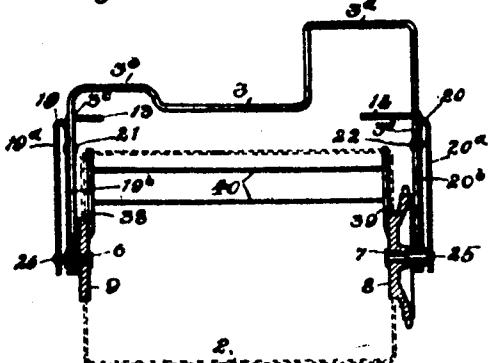


Fig. 4

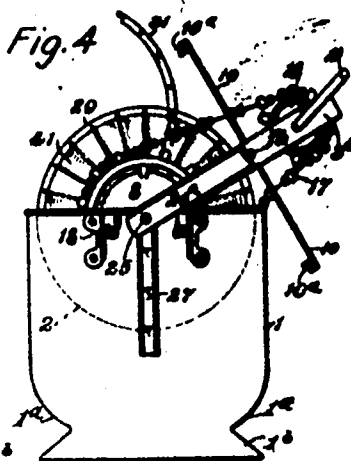


Fig. 6



Fig. 7



Fig. 5

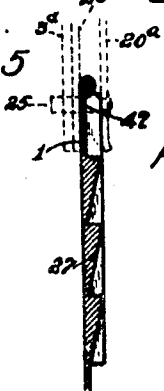


Fig. 8



Fig. 10



Fig. 9



WITNESSES:

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1,008,158. WASHING-MACHINE. GIDEON E. HALL, Bridgeport, Conn. Filed Dec. 2, 1910. Serial No. 595,176.

To all whom it may concern:

Be it known that I, GIDEON E. HALL, citizen of the United States, residing at Bridgeport, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Washing-Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to washing machines and particularly to that class comprising a boiler containing a rotary drum or clothes holding cage.

Referring to the drawings in which like figures of reference indicate like parts throughout the several views: Figure 1 represents a longitudinal central sectional view of the boiler and cage on line *a* of Fig. 2; Fig. 2 is an end elevation of the machine; Fig. 3 shows a dotted outline of the cage, sectional view of the heads of the cage, and broken view partly in section of the frame; Fig. 4 is an end elevation of the boiler showing the cage in its extreme elevated position; Fig. 5 is a detail sectional view of one of the cage supporting racks located on the ends of the boiler; Figs. 6, 7, 8 and 9 are broken detail views of the supporting parts of the frame; and Fig. 10 is a detail view of one of the cage door locking springs.

The sides of the boiler 1 have the lower inward curves 1^a conforming in a measure to the circular construction of the clothes holding cage 2, when said cage is lowered as shown at Figs. 1 and 2. The flaring foot 1^b is adapted to rest on a stove (not shown). The object of thus closing in the sides of the boiler near the bottom is to restrict the water area at that point thereby centralizing the steam and heat so as to force or direct it through the cage and thus prevent a large percentage escaping by the cage as it would do were the sides of the boiler straight.

3 is a frame having the front handle portion 3^a, and the rear and lower handle portion 3^b. All of the top of the frame, except the handle 3^a, is lower in order to allow said lower portion to pass under the "handy" or overhanging shelf (not shown), common to ordinary cooking stoves.

3^c and 3^d are downwardly projecting legs integral with the frame and have the holes 4 and 5, Figs. 6 and 7, at their lower ends by means of which they are journaled on the hubs 6 and 7 centrally located in the large sprocket wheel 8 and the plate 9 which serve as heads for the cage.

The boiler cover 10 is provided with the housings 11 and 12 by means of which it is journaled on the pins 13 and 14 projecting from the frame. The ends 10^a of the cover are shaped (Fig. 4) to clasp the edge of the boiler and locate the frame in an upright position when the cage is at its lowest point.

15 is a crank handle journaled in the sides of the handle portion 3^a of the frame and it carries the small sprocket wheel 16 rotatably connected to the large sprocket wheel 8 by the chain 17.

18 are handles located at the top and at each end of the boiler.

19 and 20 are U-shaped cage supports having the outer legs 19^a and 20^a, and the inner legs 19^b and 20^b. The upper parts of these inner legs are secured to the legs of the frame by means of the rivets 21 and 22, while their lower ends, Figs. 8 and 9, have the holes 23 and 24 by means of which they are journaled on the hubs 6 and 7 similar to the lower ends of the frame previously described. The outer legs of these U-shaped supports carry at their ends the locating pins 25 and 26 adapted, in connection with the end racks 27 and 28 of the boiler, to locate the cage in its different vertical positions, and with the hubs 6 and 7 to locate the cage, with respect to sides of the boiler in its extreme upper position presently to be more fully described. The circular cage comprises the parallel wires 2^a which pass through the end rings 29 and 30, and are then centrally deflected with respect to the cage and their ends anchored in the cage heads. The cage door comprises the curved ends 31 and 32 in which are anchored the ends of the wires 33, 34 and 35. One end of these side pieces is journaled on one of the parallel wires of the cage, while their free ends are locked in the eye ends 36, Fig. 10, of the springs 37, when the door is closed.

38, 39 Fig. 3, are arms projecting from the cage heads and 40 are wires secured to these arms and located at one side of the center of the cage for the purpose, when the cage is rotated, to agitate or separate the clothes so

that the steam and hot water will be brought in contact with all parts of the contents of the cage.

41, Fig. 4, is a plate or web adapted to prevent the clothes protruding between the end wires of the cage and coming in contact with the chain.

The clothes are placed into the cage when said cage is elevated as shown at Fig. 4, then the cage is lowered into the position shown at Figs. 1 and 2, with the apex of the U-shaped supports resting on the top edge of the boiler while the pins 25 and 26 rest against the inclined face of the lower tooth of the racks as shown at Fig. 1. When in this position, the cage is occasionally turned

by means of the handle 15 to permit the hot water and steam to come in contact with all parts of the clothes as before mentioned, and when the clothes have been thus subjected to the cleansing effect of the steam and water for a sufficient length of time to produce the desired result, the cage is raised by means of the handle portions 3^a and 3^b so as to allow the pins 25 and 26 to consecutively and temporarily rest on the teeth of the racks 27 and 28 until the water has been drained from the clothes. When the clothes have thus been sufficiently drained, the cage is further lifted until the pins are opposite the locating holes 42, Fig. 1, Fig. 5 in the ends of the boiler, which holes will then be in alinement with the before mentioned holes in the parts 3^a, 3^b, 19^b and 20^b and the hubs 6 and 7, and when these several holes and hubs are in alinement the pins 25 and 26 will snap therein to form journals on which the entire frame work and cage may swing centrally with respect to the boiler and when in this position the cage is rotated until the cage door is uppermost and then the frame is swung rearwardly until the chain rests on the top edge of the boiler, as shown at Fig. 4, so as to effectually lock the cage against rotation while said cage is being emptied and refilled.

Having thus described my invention, what I claim is;

1. In a washing machine, a cylindrical cage, a boiler within which the cage is adapted to rotate, hubs in the ends of the cage, a supporting frame having two depending legs on which the cage is journaled, U-shaped frame supports whose inner legs are mounted on the hubs, and whose outer legs carry locating pins in axial alinement with the hubs, and racks on the outer ends of the boiler with which said pins are adapted to engage to form temporary supports for the cage at different points of its elevation.

2. In a washing machine, a cylindrical cage, a boiler within which the cage is adapted to rotate, hubs in the ends of the cage, a frame in which the cage is journaled, U-shaped supports secured to the frame and embracing the ends of the boiler and adapted to support the cage and frame when the cage is at its lowest position within the boiler, the inner legs of said U-shaped supports mounted on the hubs, racks on the ends of the boiler, locating pins on the outer legs of the U-shaped supports in axial alinement with the hubs and adapted to engage the racks and temporarily suspend the cage at different points between its extreme lower and upper positions, the ends of the boiler having holes in axial alinement with the hubs when the cage is at its highest point to permit the entrance of the pins into the hubs and thus centralize the cage and frame with respect to the boiler.

3. In a washing machine, a cylindrical cage, a boiler within which the cage is adapted to rotate, hubs in the ends of the cage, a supporting frame having two depending legs in which the hubs are journaled and handle portions of different heights, a cover journaled on said frame U-shaped frame supports whose inner legs are journaled on the hubs, and whose outer legs carry locating pins in axial alinement with the hubs, and racks on the outer ends of the boiler with which said pins are adapted to engage to form temporary supports for the cage at different points of its elevation.

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

GIDEON E. HALL.

Witnesses:

GEO. D. PHILLIPS,
JAMES FEELEY.