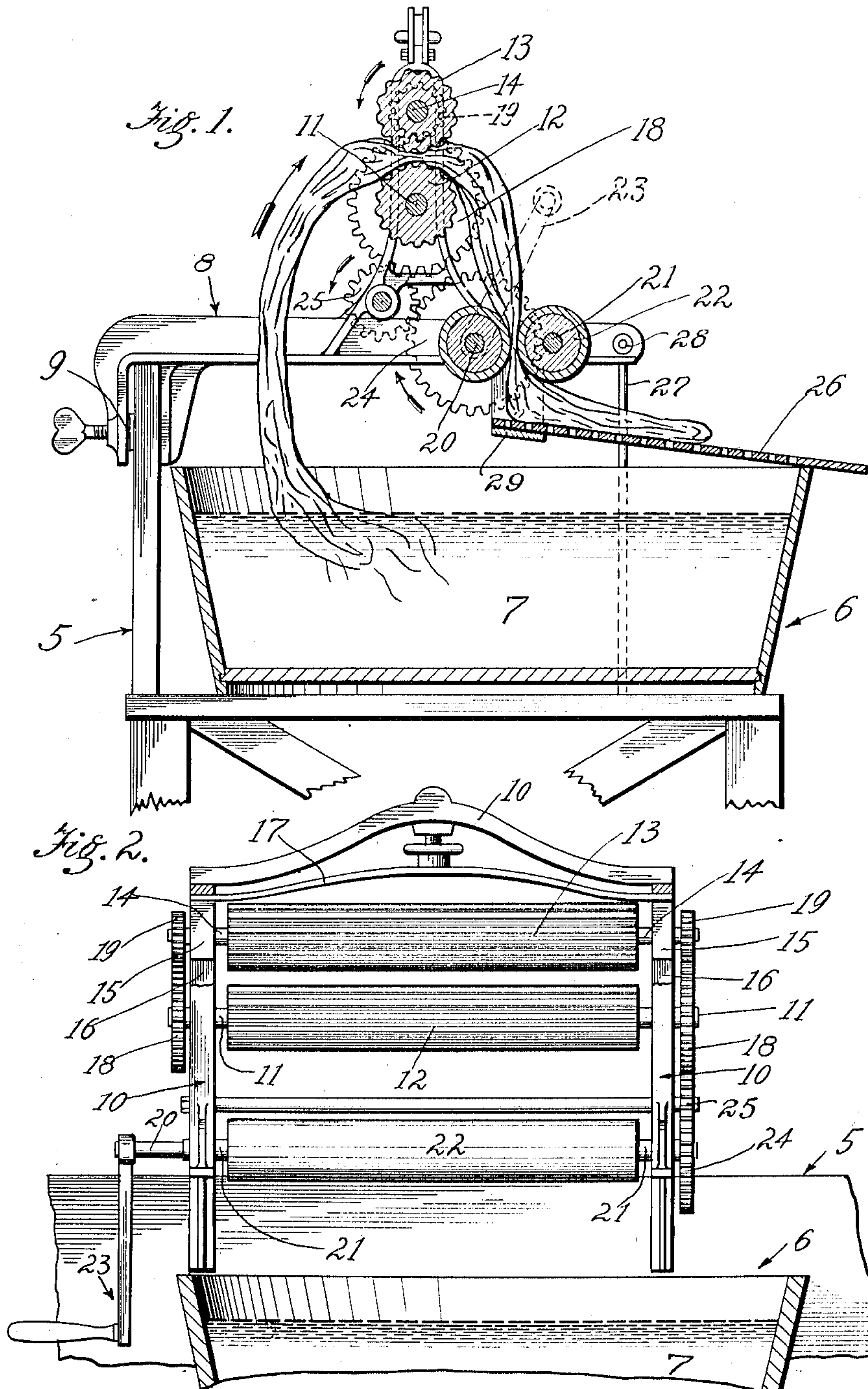


L. HARRIS.
 WASHING MACHINE.
 APPLICATION FILED AUG. 13, 1908.

969,952.

Patented Sept. 13, 1910.



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UNITED STATES PATENT OFFICE.

LYDIA HARRIS, OF EAST PASADENA, CALIFORNIA.

WASHING-MACHINE.

969,952.

Specification of Letters Patent. Patented Sept. 13, 1910.

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To all whom it may concern:

Be it known that I, LYDIA HARRIS, a citizen of the United States, residing at East Pasadena, in the county of Los Angeles and State of California, have invented new and useful Improvements in Washing-Machines, of which the following is a specification.

This invention relates to a simple form of washing machine in which the fabrics are cleansed and the liquid removed therefrom at a single operation.

In the usual washing machine now in extensive use the fabrics are taken from the machine after considerable manipulation thereof and then must be put through a subsequent operation to remove the washing liquid therefrom.

The present machine obviates the necessity of going through two distinct operations and enables the fabrics to be washed and freed of the washing liquid by a single operation.

The device as illustrated in the drawings has been designed for attachment to a wash tub or bench but it will be seen that it may be made in connection with or for application upon any other sort of washing apparatus.

In the accompanying drawings, forming a part of this specification:—Figure 1,— is a vertical section of the improved washing machine. Fig. 2,— is a front elevation of the same showing the tub in section and with certain parts removed.

In the drawings 5 designates a wash bench of usual construction and 6 a tub thereon containing cleansing liquid 7.

The washing machine is supported upon a base frame 8 which is provided with clamps 9, 9 so as to be detachably secured upon a tub or bench. Mounted on, and preferably forming an integral part of base frame 8, is a supporting frame 10 which is of the general configuration of clothes wringer frames. Mounted across frame 10 and journaled therein is a shaft 11 which carries a roller 12, preferably of rubber and having a corrugated surface as shown in Fig. 1. Directly above roller 12 a similar roller 13 is mounted on shaft 14 which is journaled in sliding bearings 15 working vertically in slots 16 in frame 10. An adjustable flat spring 17 presses downwardly upon bearing blocks 15 to keep roller 13 normally in engagement with roll 12 but to allow the rolls to be sep-

arated by any fabrics which may be passed between them.

On each end of shaft 11 a large gear 18 is mounted meshing with a smaller gear 19 upon each end of shaft 14. Thus roll 13 is rotated in an opposite direction and at a higher rate of speed so that, although both rolls pass the fabrics in the same direction through the machine, a rubbing action takes place between their corrugated surfaces. The amount of this rubbing action may be regulated by the relative sizes of the gears 18 and 19 while the pressure may be changed as desired by the regulation of spring 17.

Journaled in base frame 8 are two shafts 20 and 21 each provided with a wringer roll 22 after the usual construction of clothes wringers. Shaft 20 is provided with a crank handle 23 thereon by means of which it may be rotated and a gear 24 on its end meshes with an idler gear 25 which transmits motion to one of the large gears 18 upon shaft 11. By means of this gear train it will be seen that the different rolls rotate in the relative directions indicated by the arrows in Fig. 1.

The legs 27 are pivotally attached at the point 28 to the frame 8. These legs are adapted to extend downwardly and materially assist in steadying the machine during the operation thereof. The perforated board 26 is attached to the draining board spring loop 29 and is adapted to receive the clothes when they pass through the wringer rolls 22.

In using my improved washing machine the fabrics are first placed in the cleansing liquid 7 until they are thoroughly wetted and are then passed through the machine. Crank handle 23 is rotated in the direction indicated and the fabrics are thereby drawn through the machine between rolls 12 and 13, being simultaneously rubbed between the rolls to loosen the dirt in the fabrics so that it may easily be removed by the cleansing liquid. The fabrics then pass downwardly between wringer rolls 22 and onto drain board 26 which is preferably perforated to allow the liquid to pass back into the tub and leave the fabrics comparatively dry. If the fabrics are not excessively dirty one passage through the machine suffices for their thorough cleansing, but if necessary they may be passed through the machine several times.

From the foregoing it will be seen that I have provided a machine which is simple in

construction and which will efficiently perform the work described. By thoroughly removing the liquid from the fabrics each time they are passed through the machine, the dirt is thereby removed several times during the operation of washing so that the cleansing is much more thorough than in the usual case where the dirty liquid is only removed from the fabrics once at the completion of the washing operation.

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

A washing machine comprising a frame adapted to extend over a tub, clamps at one end of said frame whereby the frame may be attached to a stationary member so that the frame will be above the tub, supporting legs pivoted to the other end of the frame,

a pair of resilient corrugated rolls journaled in the frame, one of the rolls being movable toward the other, spring means to hold the rolls together, gear connection between the rolls to cause faster rotation of one roll than of the other, a pair of wringer rolls journaled on the frame, gear connection between the corrugated rolls and the wringer rolls, means on one of the rolls for normal rotation thereof, and a drain board supporting loop extending from the frame beneath said wringer rolls.

In witness that I claim the foregoing I have hereunto subscribed my name this 5th day of August, 1908.

LYDIA HARRIS.

Witnesses:

JAMES T. BARKELEW,
GLADYS HARRIS.