

(No Model.)

2 Sheets—Sheet 1.

I. C. MONTFORT.
WASHING MACHINE.

No. 450,675.

Patented Apr. 21, 1891.

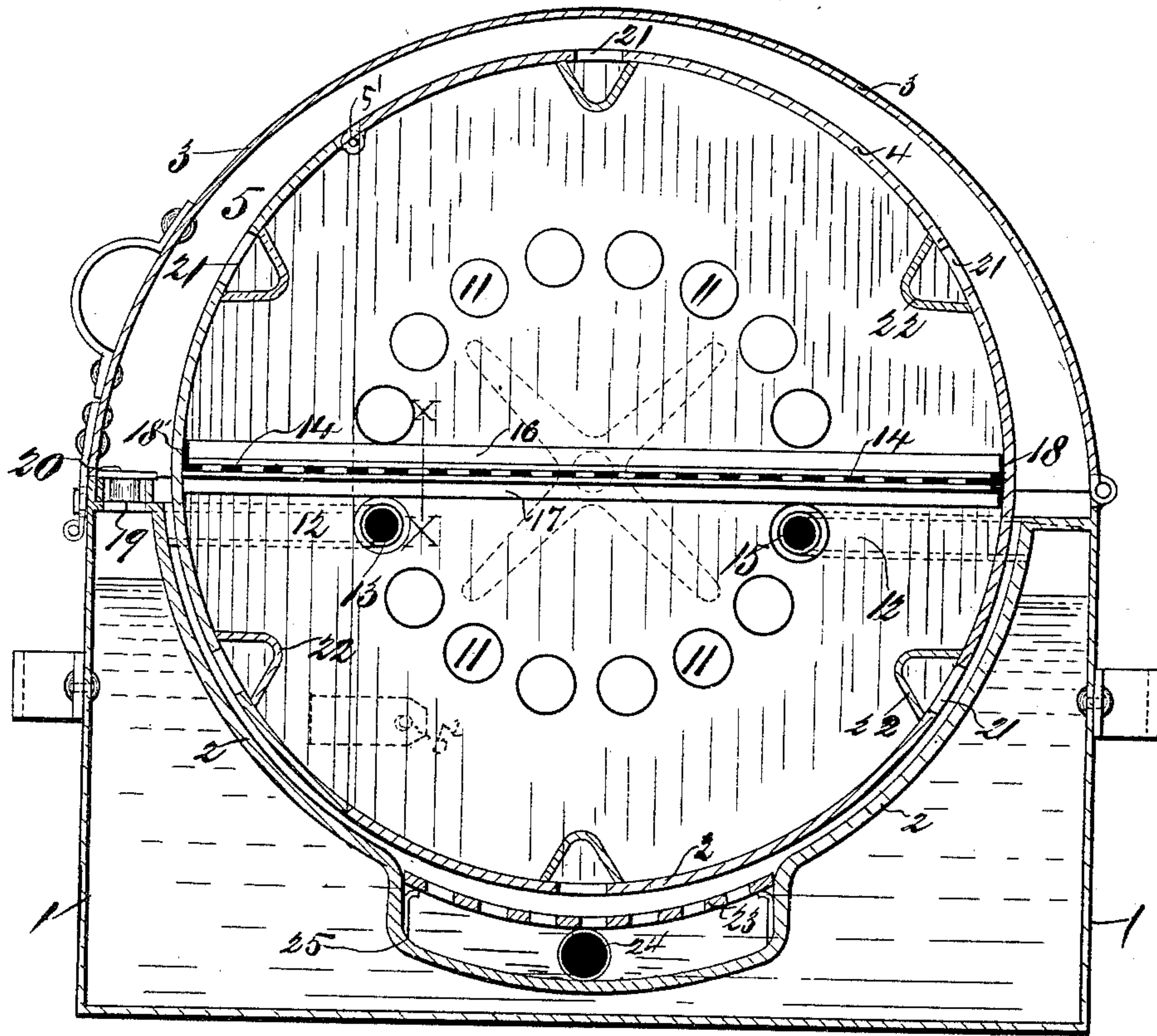


Fig 1

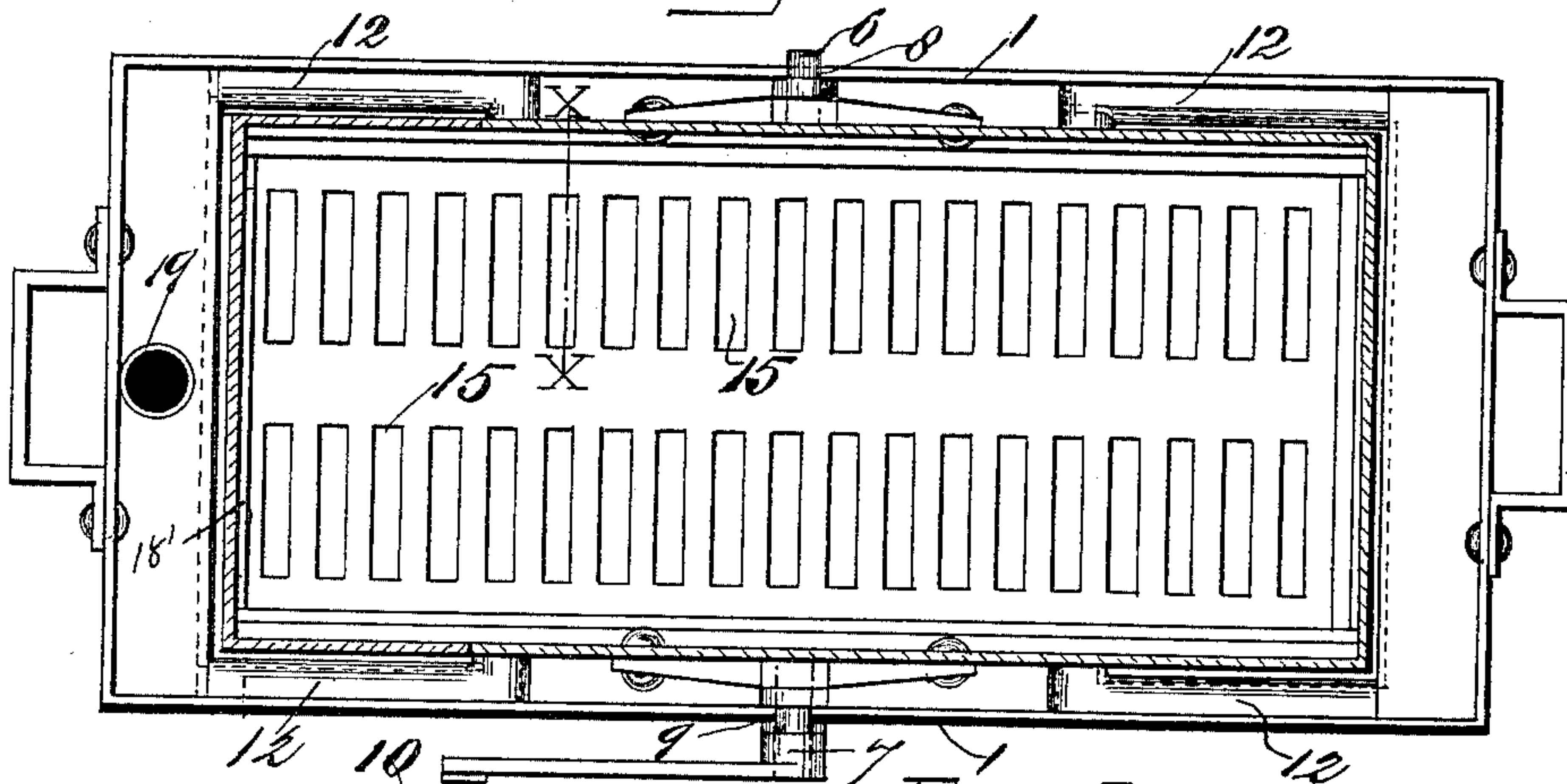


Fig 2

WITNESSES:
Paul Hough
John H. Stern

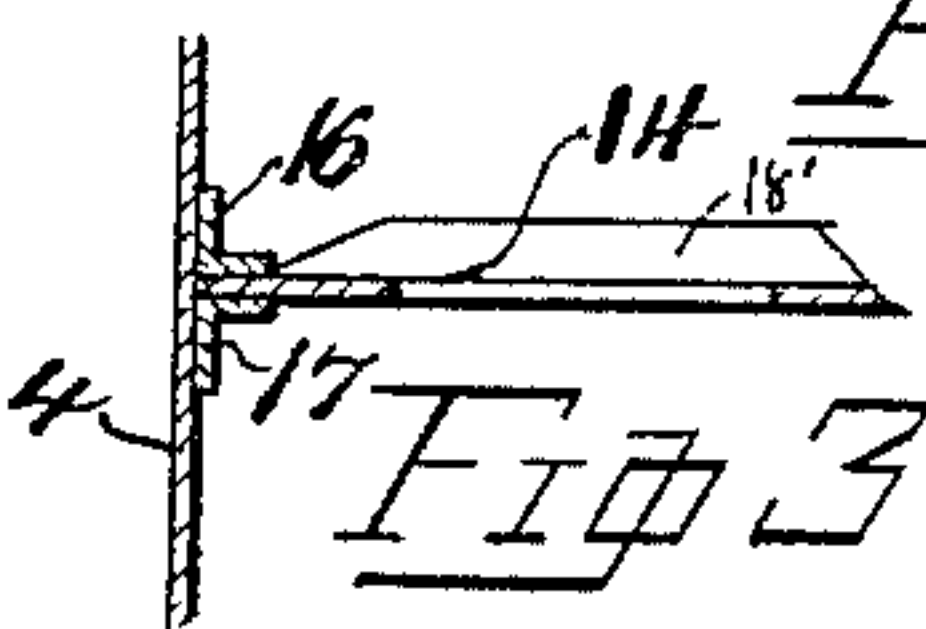


Fig 3

INVENTOR
Israel C. Montfort
BY
Thompson & Pells
ATTORNEY

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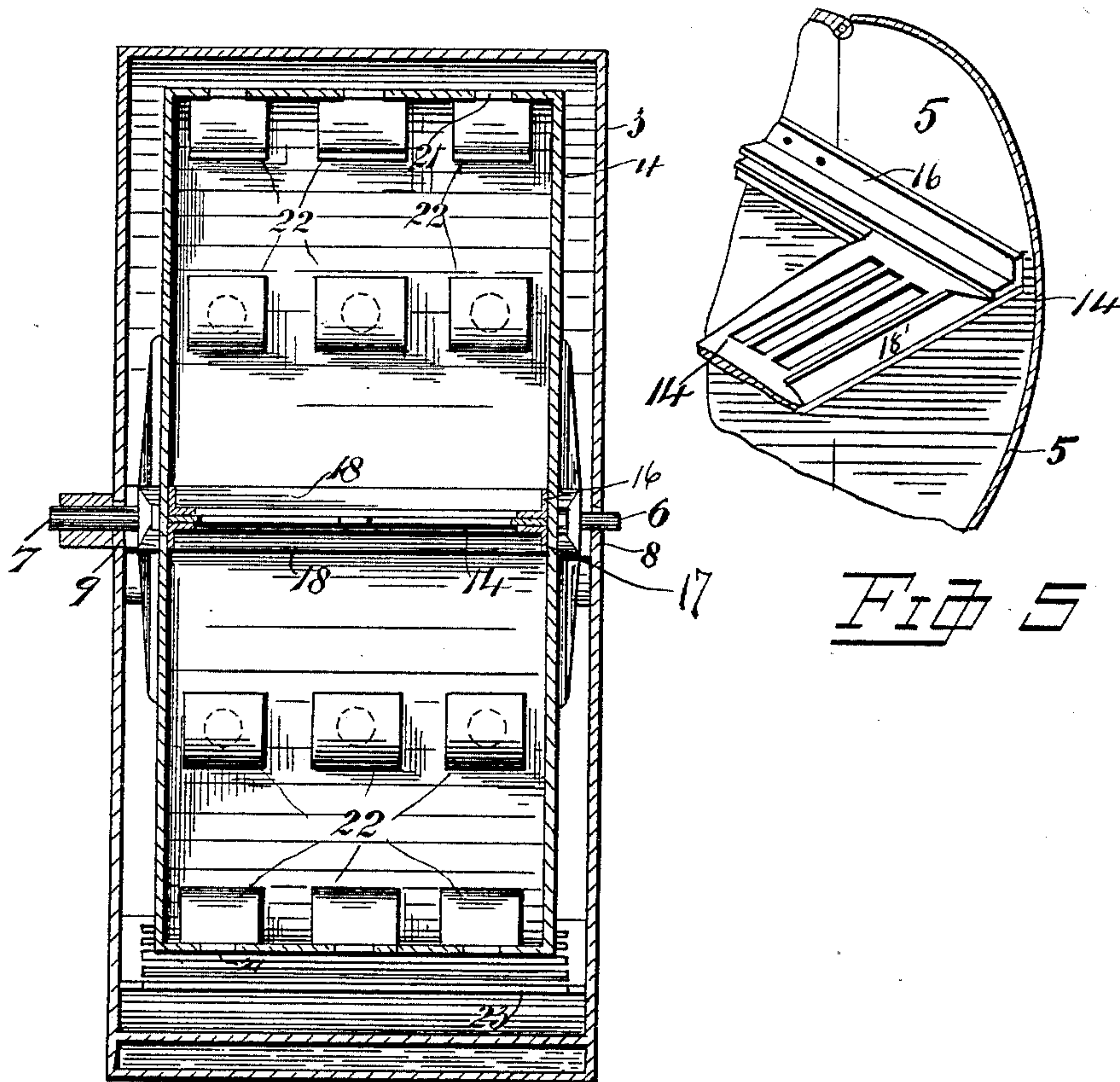


Fig 4

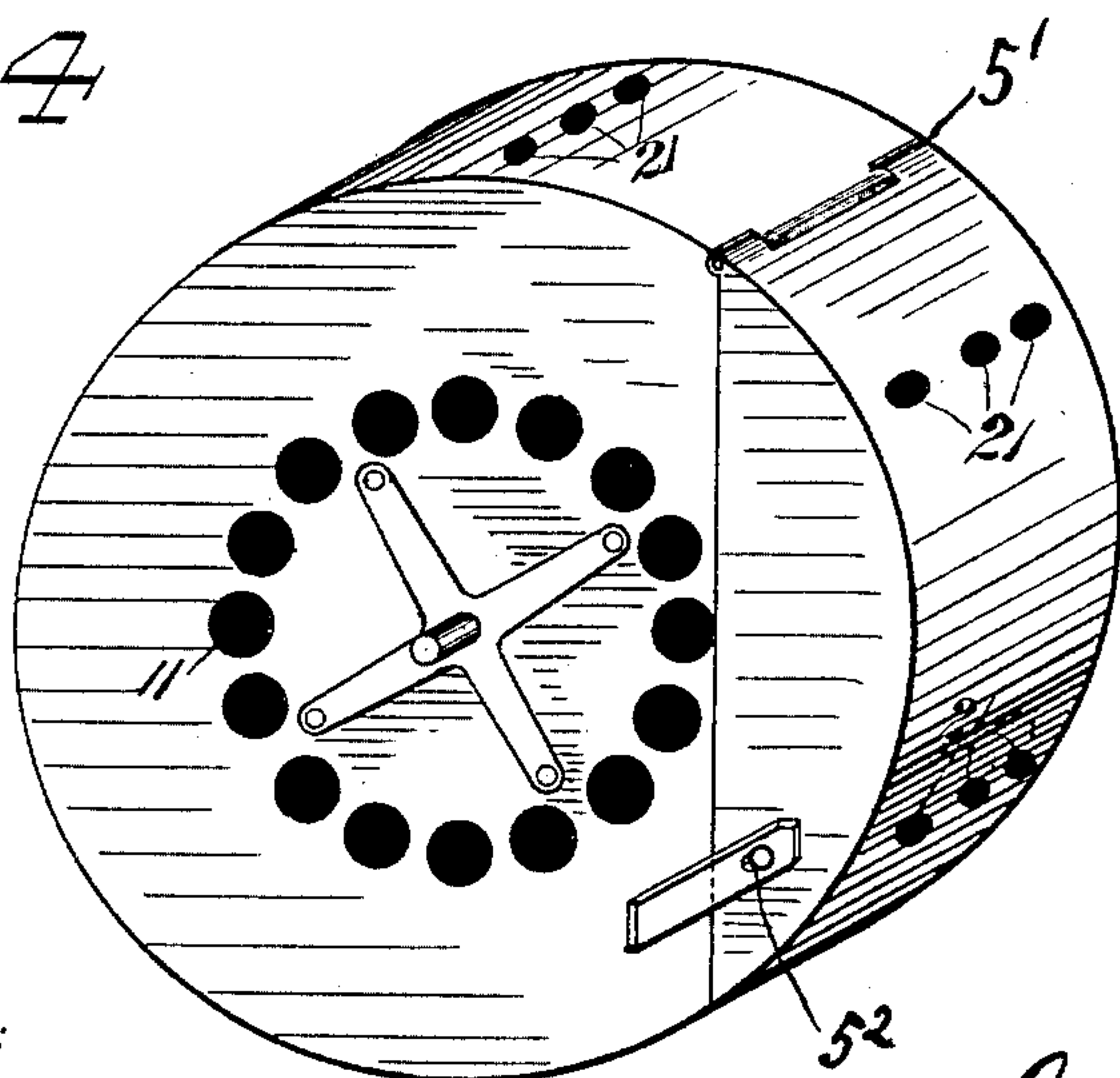


Fig 5

WITNESSES:

C. F. R. Hays

W. W. Deane

INVENTOR

Israel C. Montfort

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UNITED STATES PATENT OFFICE.

ISRAEL C. MONTFORT, OF LOUISVILLE, KENTUCKY.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 450,675, dated April 21, 1891.

Application filed August 21, 1890. Serial No. 362,647. (No model.)

To all whom it may concern:

Be it known that I, ISRAEL C. MONTFORT, a citizen of the United States, residing at Louisville, county of Jefferson, State of Kentucky, have invented new and useful Improvements in Steam Washing-Machines, of which the following is a specification.

My invention relates to improvements in steam washing-machines in which a revoluble cylinder containing the clothes to be washed is inclosed in a suitable boiler hereinafter more fully described.

The object of my invention is to provide means whereby the clothes are subjected alternately to immersion in the hot water and to the blowing action of the steam conducted from the boiler to and into the revoluble cylinder to, under, and through the clothes, thus thoroughly cleaning and disinfecting the latter.

In the accompanying drawings, Figure 1 is a sectional elevation of the washing-machine. Fig. 2 is a plan of the same with the lid or cover removed therefrom and showing the revoluble drum in section. Fig. 3 is a detail section of the "gateways" through the line X X. (See Figs. 1 and 2.) Fig. 4 is a transverse sectional elevation of my machine. Fig. 5 is a part sectional perspective view of the dividing gate of the revoluble cylinder or drum, and Fig. 6 is a perspective view of the revoluble drum.

Similar numbers refer to similar parts throughout the several views, in which—

1 designates the exterior boiler. 2 is its internal wall, and 3 is its hinged cover.

4 designates the drum. 5 is its cover hinged to the drum 4 by the hinge 5' and secured by the usual button-and-eye fastening 5". (Shown in dotted lines in Fig. 1.) 6 and 7 are its trunnions adapted to turn in their bearings 8 and 9, formed in the sides of the boiler 1, and 10 is its crank-handle for rotating the drum manually.

11 designates the steam-inlet openings formed in the ends of the drum 4 and arranged at a distance intermediate between its axis and its periphery.

12 designates the steam-supply pipes connected with the boiler 1 and having the steam-openings 13, opposite which the holes 11 of the drum 4 alternately coincide.

14 designates the removable separating-partition of the drum, provided with the perforations 15 and loosely fitting in and adapted to slide between the angle-irons 16 and 17, secured (by soldering or riveting) to the inner surface of the ends of the drum 4 and supported at its end opposite the lid 5 by the angle-irons 18, secured to the inner concave surface of said drum and re-enforced at its opposite end by the flat iron 18', extending along a portion of the end of said partition and secured to the inner concave surface of said lid 5 in any suitable manner. (See Figs. 3 and 5.)

19 designates the boiler-supply opening through which the water is introduced, and 20 is a suitable stopper for the same.

21 designates the drum inlet and outlet openings for permitting the free flow of the washing-water into the lower half of the drum 6 and the escape of the steam, condensed steam, and the washing-water from the upper half of the same. Said holes may be circular in form of any convenient diameter and arranged in rows of four or more in a line transverse with the periphery of said cylinder. Over each of the openings 21 are secured the inner guards 22, with their ends open and of a length sufficient to cover or equal to the diameter of each of the said perforations which I employ for the purpose of preventing the clogging up of the peripheral holes with the clothes.

23 designates the gate which I use for the purpose of breaking the flow or current of the washing-water produced by the constant rotation of the drum 4, thus permitting the weightier particles of the dirt removed from the clothes to deposit in the depressed bottom 25 of the inner wall of the boiler, and 24 is a suitable outlet-opening through which the dirty-water deposit is removed.

The operation of the machine is as follows: Water is first introduced into the boiler 1 through the opening 19, and the plug 20 is inserted firmly therein. The cylinder 4 is revolved till the lid 5 is above and clear of the tank 1, thus permitting the catches 5" to be readily disengaged and the lid to be opened and giving access to the two compartments or halves of the drum 4. The clothes to be washed are then introduced into and inclosed

in the two compartments of the drum 4, formed by the removable separating-partition 14, after which the drum-cover 5 is closed and secured. The boiler or outer cover 3 is also closed and heat is applied to the bottom thereof till and while the steam is generated therein. The steam from the boiler 1 is conveyed by the pipes 12 into the drum 4 and through the holes 11, formed in the end thereof. The steam passes through the gate 14 to and through the clothes resting thereon and in the upper compartment of the said drum. At the same time the opposite compartment and consequently the clothes confined therein are submerged in the warm washing-water confined in the space above the concave wall 2, in which the cylinder or drum 4 rotates. The said washing-water, passing through the peripheral openings 21 into the lower half of the drum, is immediately absorbed by the clothes confined therein, said clothes having been partially dried previous to their immersion by the blowing action of the steam. Thus by subjecting the clothes alternately to immersion in the washing-water and to the blowing action of the steam all dirt and foreign matter adhering thereto is effectually removed therefrom without subjecting the said clothes to severe rubbing and wear.

I am aware that previous to my invention steam washing-machines having rotating drums inclosed in a casing or boiler, into which revolving drum steam and water are introduced for the purpose of cleaning the clothes, have been used. This I do not claim, broadly; but

What I do claim as my invention, and desire to cover by Letters Patent, is—

1. In a steam washing-machine, the combination, with a revolving drum and a boiler for inclosing said drum, of a suitable perforated removable partition dividing said drum into clothes-compartments, the periphery of the drum provided with a series of water inlet and outlet openings, interior guards over said openings, the ends of the drum having the steam-inlet openings intermediate between the axis and the periphery thereof, and suitable steam-inlet pipes communicating with the latter holes of the drum, substantially as described.

2. In a steam washing-machine, the combination, with a revolving drum and a suitable steam-generating boiler for inclosing said drum, of a suitable perforated removable partition dividing said drum into clothes-compartments, the side angle-irons secured to said drum and supporting said partition, the periphery of the drum having a series of water inlet and outlet openings, interior guards over said openings, the ends of the drum having the steam-inlet openings intermediate between the axis and the periphery thereof, through which the steam is admitted under and through the partition to and through the clothes, and suitable steam-supply pipes communicating with the latter holes, substantially as shown and described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

ISRAEL C. MONTFORT.

Witnesses:

CHAS. G. HULSEWEDE,
PATRICK CURTIS.