No. 703,360. Patented June 24, 1902.

J. WOERNDL.

WASHING MACHINE.

(Application filed Jan. 7, 1902.)

(No Model.) 2 Sheets—Sheet 1.

Fig 1

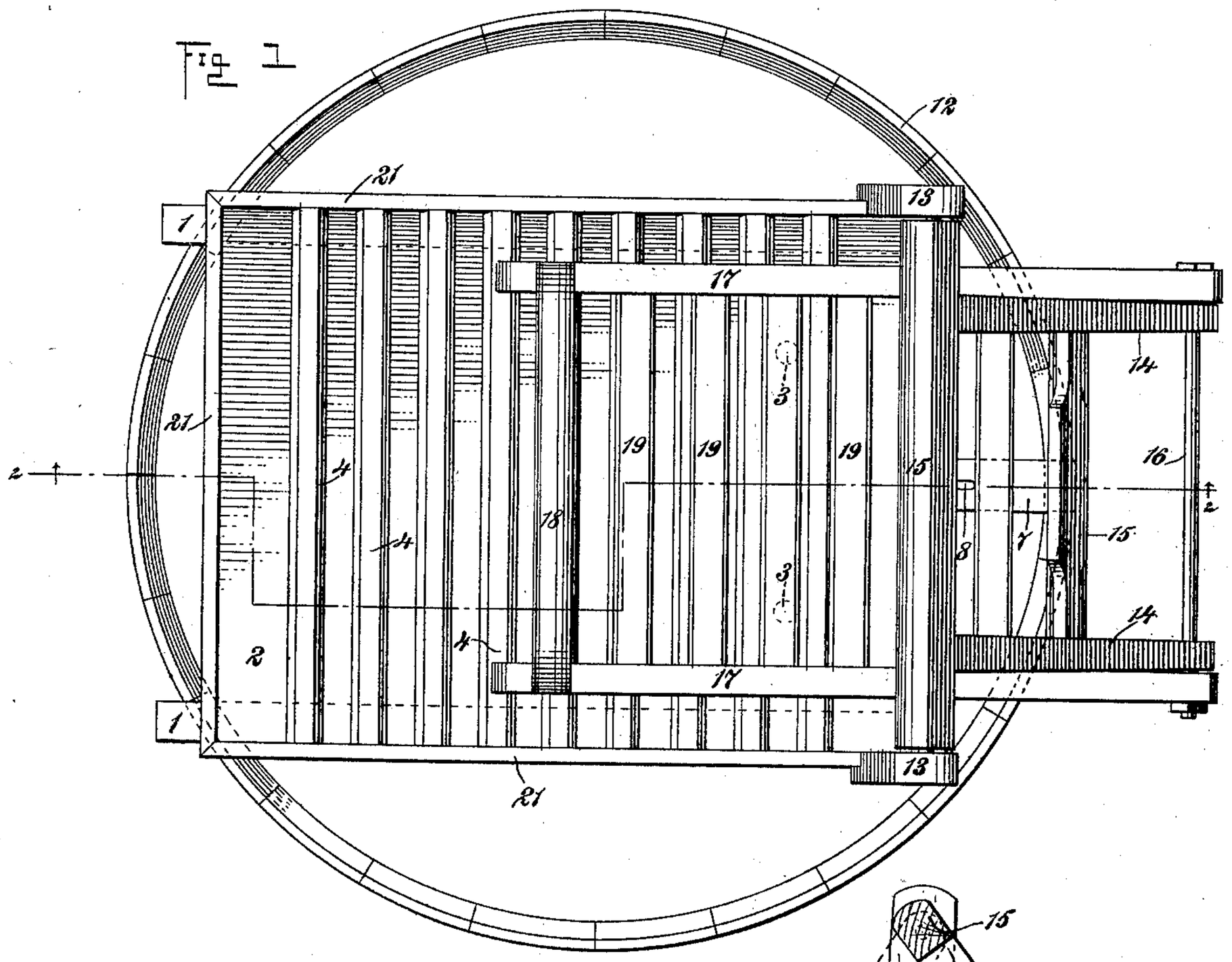

Fig 2

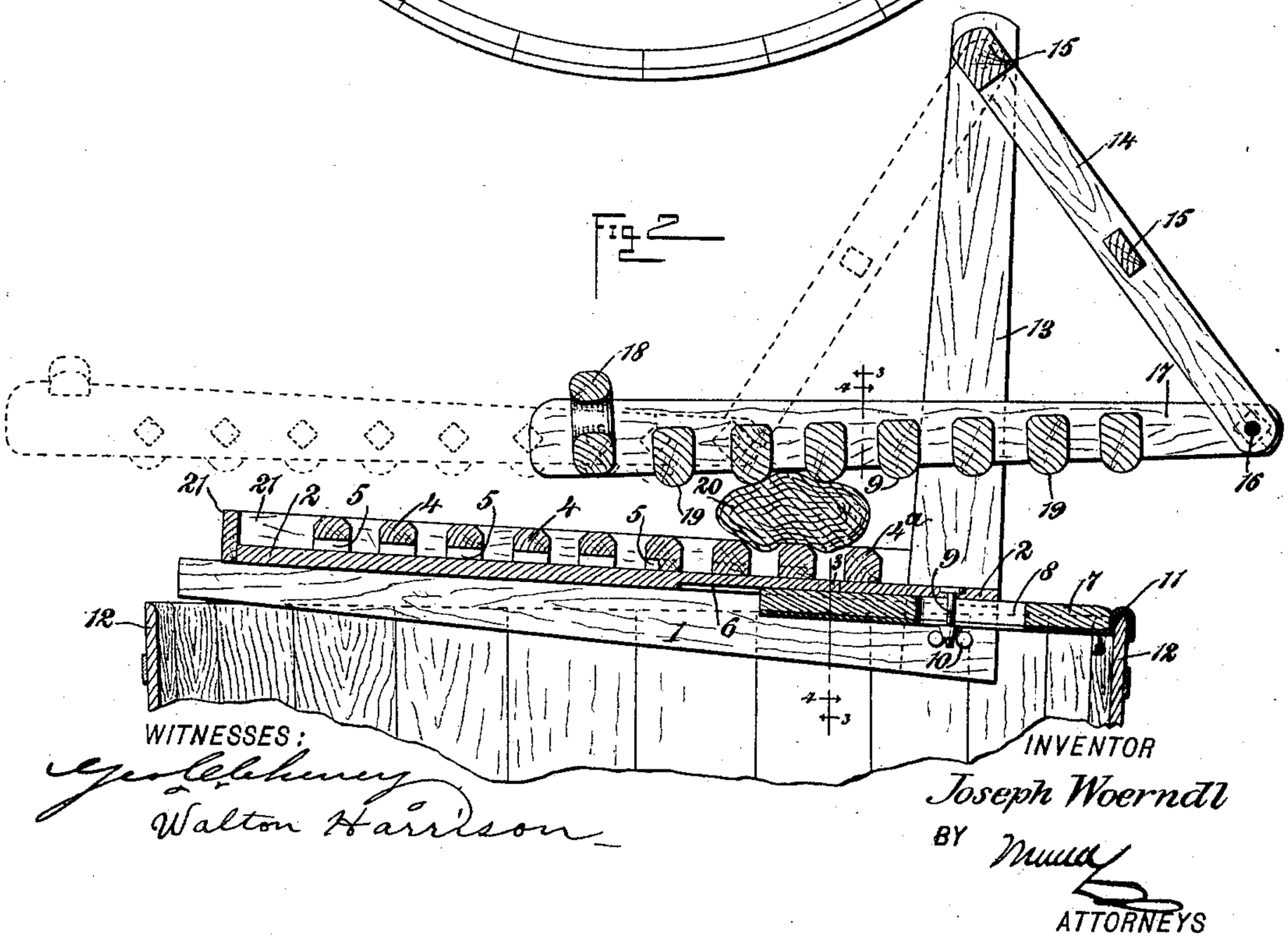

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FIG. 5

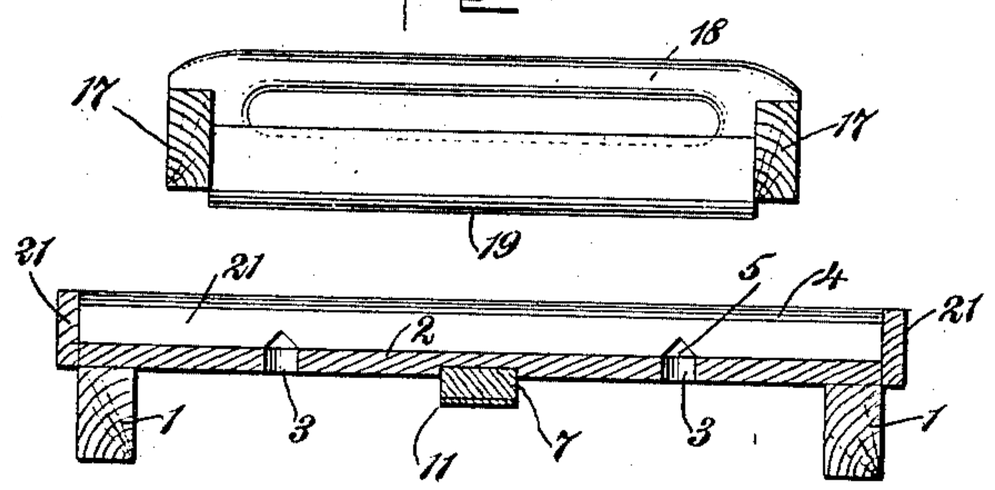
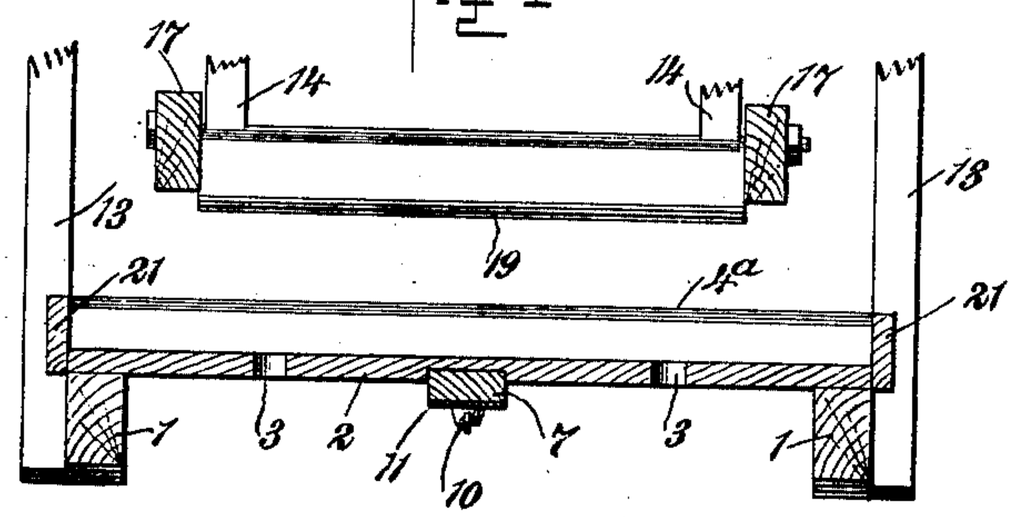


FIG. 4



WITNESSES:

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UNITED STATES PATENT OFFICE.

JOSEPH WOERNDL, OF FRANCES, WASHINGTON.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 703,360, dated June 24, 1902.

Application filed January 7, 1902. Serial No. 88,780. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH WOERNDL, a subject of the Emperor of Germany, residing at Frances, in the county of Pacific and State of Washington, have invented a new and Improved Washing-Machine, of which the following is a full, clear, and exact description.

My invention relates to washing-machines, more particularly of the type used upon the top of a washtub and which are operated without direct submersion in the water.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claim.

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

Figure 1 is a plan view showing my device as applied to a tub. Fig. 2 is a fragmentary section of the same on the line 2 2 of Fig. 1 looking in direction of the arrows. Fig. 3 is a sectional detail upon the line 3 3 of Fig. 2, showing the oscillating hand-frame and the rigid frame; and Fig. 4 is a somewhat similar fragmentary section taken on the line 4 4 of Fig. 2 looking in direction of the arrows.

Two parallel base-bars 1 are rigidly secured beneath a board 2, the said board being provided with drainage-apertures 3 and with transverse ribs 4, secured rigidly upon its top surface. These transverse ribs are provided with V-shaped drain-holes 5 for the purpose of conducting the water which may drain from the clothing down to the drainage-apertures 3, whence it flows into the tub. The under side of the board is provided with a groove 6, into which is loosely fitted an adjusting-rod 7, provided with a slot 8. A screw 9 is rigidly secured to the board and projects downward through the slot 8, so as to be engaged by the thumb-screw 10. By means of this thumb-screw the adjusting-rod may be locked in any desired position within the limits allowed by the length of the slot 8. A hook 11 can thus be adjusted within reasonable limits relatively to the general position of the board. The tub is shown at 12, and its upper edge is normally engaged by the hook 11, thus holding the entire device firmly in position, as indicated more particularly in Fig. 2.

Standards 13 are rigidly secured to the base-bars 1 and project above the top of the tub, as shown in Fig. 2. Oscillating arms 14 are secured to a cross-bar 15, which is pivoted to the standards 13. The lower ends of these oscillating arms are pivoted at 16 to the hand-frame 17, which is provided with a handle 18 and with transverse ribs 19, shaped as shown in Fig. 2 and rigidly secured in position.

The clothing to be washed is represented at 20.

The board 2 is surrounded by the narrow strips 21 and the end rib 4^a for the purpose of preventing the water escaping in improper directions.

The operation of my device is as follows: The clothes to be washed are wet, spread out, and rubbed with soap, and then bundled up and placed in position, as indicated in Fig. 2. The hand-frame 17 being now actuated by means of the handle 18, the clothing is rolled forward and backward, the internal surfaces rubbing against each other with a gentle friction, thus loosening the dirt and causing the same to mingle with the water. With a little skill the clothing can thus be effectually washed, and the pressure applied by the hand-frame may be varied by rolling the ball of clothing into different positions. The washing process thus takes place above the water in the tub, the clothes operated upon being wet, but not submerged. Of course more or less of the water will constantly escape while the clothes are being manipulated, and this water flows through the V-shaped drain-holes 5 and the drain-apertures 3 into the tub, as above described.

The leverage exerted by the hand-frame upon the clothing can be varied at will by manipulating the clothing to the front or the back of the tub, as may be desired. It is necessary that all of the ribs should be rigid in order to prevent any sliding or rolling motion of the ribs relatively to the clothes. The idea is that the clothes are rolled bodily and are washed by the friction of the inner surfaces of the cloth each upon the other and by the friction of the ribs upon the outer surface of

the cloth. It will be observed, therefore, that by means of the adjustable member 7, provided with the slot 8 and the hook 11, together with the clamping-bolt 9 and thumb-nut 10, the board can be adjusted to fit any tub.

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

A washing-machine, comprising a scrub-board adapted to engage the edge of a tub, and provided upon its under side with a longitudinal groove, an oscillating rubber adjacent to said scrub-board, a longitudinal board partially buried within said groove, said board being provided with a longitudinal slot disposed parallel to the general direction of said groove, and also provided with a longitudinal flat plate extending throughout the entire length of said board, and provided at its extremity with a hook for engaging the edge of a tub, said hook being bent upward so that the top edge of the scrub-board is substantially level with the top edge of the tub, and a thumb-screw engaging said slot and also engaging a scrub-board for the purpose of clamping said longitudinal board within said groove, the arrangement being such that said longitudinal board is held in proper alinement by said groove and said thumb-screw.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOSEPH WOERNDL.

Witnesses:
LOUIS CHRISTEN,
GREGOR VETTER.