

(No Model.)

2 Sheets—Sheet 1.

C. HAMMONS.
WASHING MACHINE.

No. 442,183.

Patented Dec. 9, 1890.

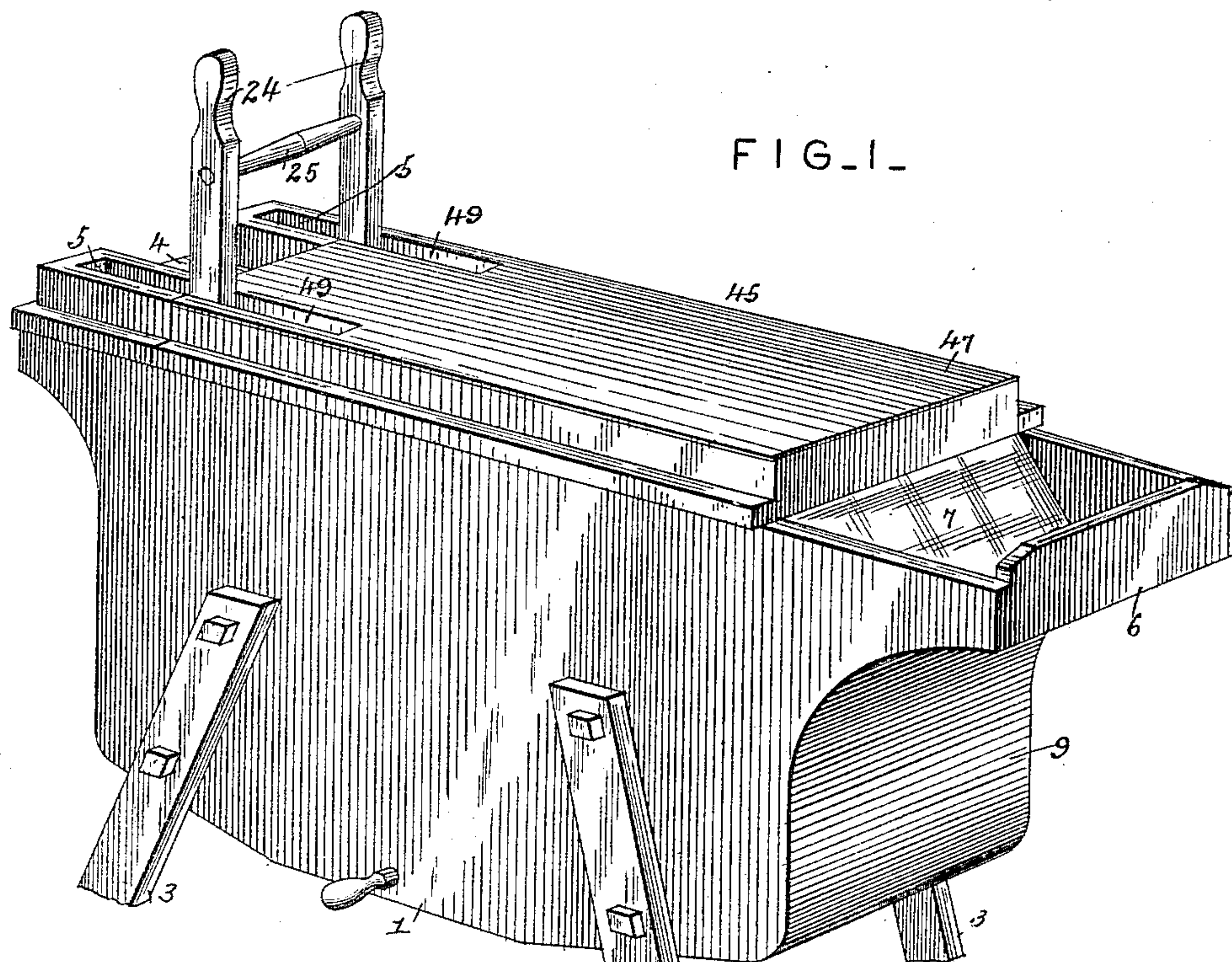


FIG. 1.

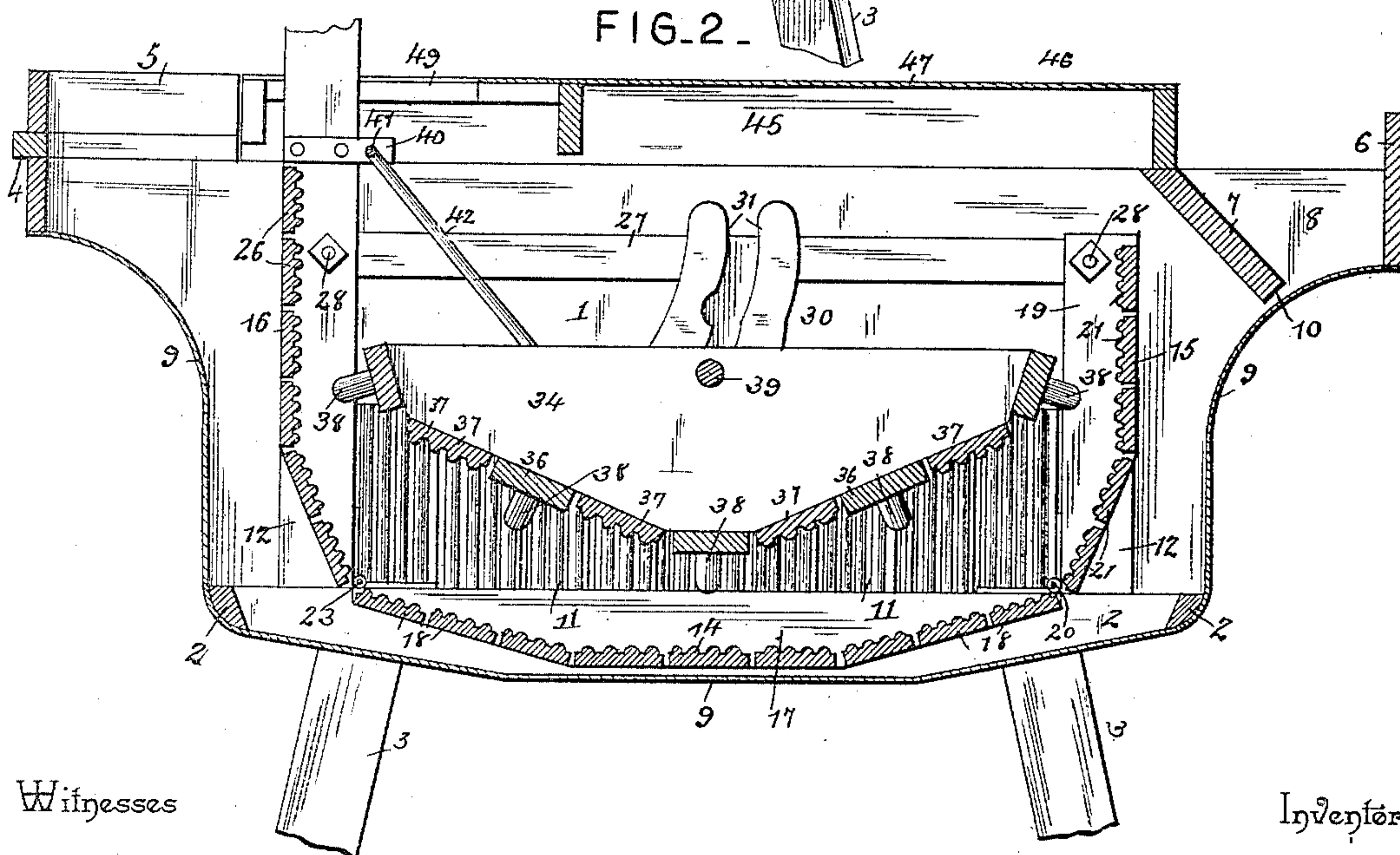


FIG. 2.

Witnesses

Inventor

Jas. S. McLaughlin

By his Attorneys,

Charles Hammons

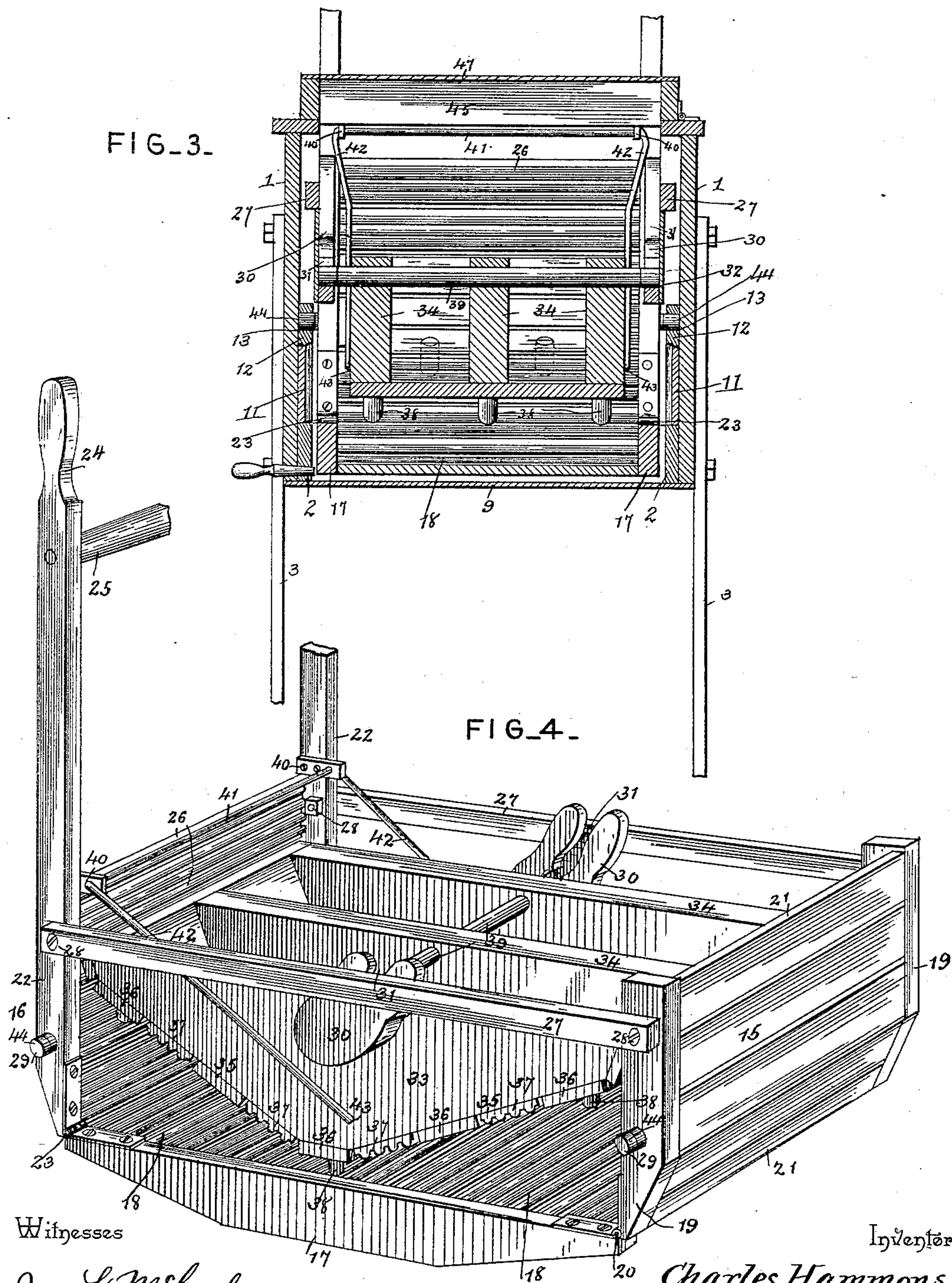
Wm. Bagger

C. A. Snow & Co.

2 Sheets—Sheet 2.

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Witnesses

Inventor

Jas. L. McClure

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By *his* Attorneys,

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UNITED STATES PATENT OFFICE.

CHARLES HAMMONS, OF SHELDON, ILLINOIS.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 442,183, dated December 9, 1890.

Application filed August 19, 1890. Serial No. 362,407. (No model.)

To all whom it may concern:

Be it known that I, CHARLES HAMMONS, a citizen of the United States, residing at Sheldon, in the county of Iroquois and State of Illinois, have invented a new and useful Washing-Machine, of which the following is a specification.

This invention has relation to washing-machines; and the objects in view are to provide a convenient, efficient, and easily-operated machine which will thoroughly manipulate the pieces subjected thereto and cleanse the same from all dirt.

Various other objects of the invention will hereinafter appear, and the novel features thereof will be particularly pointed out in the claims.

Referring to the drawings, Figure 1 is a perspective of a washing-machine constructed in accordance with my invention. Fig. 2 is a longitudinal vertical section. Fig. 3 is a transverse section. Fig. 4 is a perspective in detail of the rubbing mechanism.

Like numerals indicate like parts in all the figures of the drawings.

1 designates the opposite sides of the washer, preferably formed of wood, and within the same at their lower ends there is secured a rectangular bottom frame 2. The suds-box is supported by the usual legs 3, and the two sides are connected at one end by a stationary portion 4 of the cover, having flanged slots or openings 5 near its opposite ends. The opposite ends of the suds-box are provided with a vertical board 6, adapted to receive a wringer, and to one side of the same with an inclined deflecting-board 7, combining with the board 6 to form an intermediate space 8, in which the pieces after being washed may be stored previous to wringing. The bottom and ends of the suds-box are formed by a sheet of galvanized iron 9, secured to the edges of the sides in any water-tight manner, said bottom being curved, as shown, as are also the ends, so as to direct the water thrown by the rubbing mechanism back into the suds-box without danger of an undue amount of splashing. Between the lower edge of the deflector 7 and the end wall a slight space 10 is left, so that the drippings from the pieces in the receptacle 8, together with the water

wrung therefrom by the wringer, may pass back to the suds-box.

At the upper edge of the rectangular frame 2, to which the bottom is secured, and securely fastened to the inner faces of the two sides 1 is a series of vertical grooved rubbing-strips 11, said strips being stationary, and at each end of each of said series is located a short vertical standard 12, having a curved open or half bearing 13.

The cage, which is removably mounted within the suds-box, comprises the bottom section 14 and opposite end sections 15 and 16. The bottom section consists of opposite longitudinal side bars 17, beveled or curved upon their under edges and connected by a series of transverse longitudinally-grooved rubbing-strips 18, located a slight distance apart. The outer end section 15 consists of a pair of vertical side strips 19, the outer edges of which, near their lower ends, are preferably curved or beveled, as shown, and hinged, as at 20, to the outer ends of the strips 17 of the bottom section, said strips 19 being connected by a series of transversely-disposed longitudinally-grooved and spaced-apart rubbing-strips 21. The inner end section 16 consists of a pair of vertical strips 22, having their outer edges near their lower ends beveled similar to the strips 19 and their inner edges hinged, as at 23, to the adjacent ends of the strips 17. The strips 22 are continued beyond the strips 19 to form handles 24, which are connected by a transverse rung 25. Below their handle portions 24 the strips 22 are connected by a series of transversely-disposed longitudinally-grooved and spaced-apart rubbing-strips 26.

The series of strips composing the bottom and end sections have plain outer faces, which are flush with the outer edges of the side strips, to which they are secured, so that the surfaces formed by the several series of rubbing-strips partake of the contour given the outer edges of the side strips. The upper ends of the side strips 19 are connected to opposite points of the strips 22 by means of connecting-rods 27, pivoted, as at 28, to the said strips. Now by swinging the strips 22 upon the hinges 23 a like motion will be imparted to the strips 19, and the beveled faces of the opposite end sections will be thrown into a

parallel plane, or substantially so, as the similar faces at the ends of the bottom section, as will be readily apparent. The outer sides of the strips 19 and 22 are each provided with short bearing-lugs 29, which lugs have removable bearings in the half-bearings 13 of the standards 12, located in the suds-box.

From the centers and inner sides of each of the connecting bars or rods 27 there depend hangers 30, which hangers have upon the inner sides or faces irregular or curved slots 31, terminating at their lower ends in bearings 32.

33 designates the rubbing-head, and the same consists of a series of parallel longitudinally-disposed bars 34, the under edges of which are beveled at each side of their centers in opposite directions, as at 35, and the series of bars connected by transverse strips. The transverse strips vary in their construction, each alternate strip 36 being corrugated or grooved throughout its length and the remaining strips 37 provided with projecting pegs 38. The strips 36 and 37 are spaced apart, as shown, and the entire head is pivotally mounted in the bearings 32 by means of a transverse shaft 39, which passes through the strips 34 and beyond the outer strips and takes movable bearing in the said bearings 32.

Above the rubbing-strips 26, connecting the side strips 22, there is located a pair of inwardly-disposed bearing-brackets 40, in which is journaled a transverse shaft 41, said shaft beyond the bearings 40 having its ends bent at a right angle to form connecting-arms 42, the lower ends of which terminate in bearings and take into openings 43, formed near the lower edges of the side bars 34, and therefore below the point of pivot of the head. The ends of the shaft 39, and also the bearing-lugs 29, are preferably protected by metallic ferrules 44.

To place the cage within the suds-box the handles are thrown back and the opposite end of the cage introduced into the box until the bearing-lugs take into the bearings 13, after which the handles are thrown in the opposite direction and that end inserted in the same manner.

45 designates the hinged cover, which is formed of a rectangular frame 46, of wood, covered by a sheet 47 of galvanized iron. The cover is provided at one end with opposite slots 49, which form a continuation of the flanged slots 5 of the cover-section 4. This completes the description of the washer. In practice the cover is thrown open, the handles of the cage being thrown toward the end to permit the cover to be thus opened, and the rubbing-head swung back upon the handles, after which a sufficient quantity of water is introduced into the suds-box. The handles are then thrown to about a vertical position, after which the brackets may be removed from the hangers 30. The pieces to be washed are now placed in the cage, the sides of the cage being formed by the stationary corrugated rubbers 11. The rubbing-head is now reinserted

into the cage and the cover closed. It now simply remains to oscillate the handles back and forth, and in so doing the end pieces or sections of the cage are rocked upon their pivots, as will be apparent, and thrown first toward and away from the end walls of the suds-box and at an acute and an obtuse angle to the bottom of the cage. As the handles move back and forth the connecting-bars and their brackets are likewise reciprocated and carry with them the rubbing-head. The rubbing-head being pivoted above its connection with the handles, said head is not only reciprocated, but rocked, and in an opposite direction to the movements of the end sections of the cage, so that the clothing will be caught by the projecting pegs and corrugations of the rubbing-head and carried up and down and over the bottom of the cage, which acts as a corrugated wash-board. At the same time the water is forced from end to end of the suds-box and from the bottom to the top of the same and over into the cage, so that all portions of the pieces of clothes within the cage are manipulated and come in contact with the various currents of water, and thus dirt is dislodged and softened, ready to be thoroughly eradicated by the gentle though efficient agitation and rubbing given them by the mechanism described.

Having described my invention, what I claim is—

1. In a washing-machine, the combination, with the suds-box provided at opposite sides and upon its interior with bearings, of a cage consisting of a bottom and opposite end sections hinged together, said end sections having bearing-lugs taking in the bearings afore-said, a rubbing-head mounted in the cage, and rods pivotally connecting said head with one of the end sections, substantially as specified.

2. In a washing-machine, the combination, with the suds-box provided at each side with a series of rubbing-strips and at the ends of the series with vertical standards having bearings, of a cage comprising a bottom and opposite end sections hinged together, said end sections having bearings removably mounted in the bearing-standards, rods connecting pivotally said end sections, a bearing-bracket depending from the rods, a rubbing-head pivoted in the brackets, and rods connecting one of said sections with the rubbing-head below its bearings, substantially as specified.

3. In a washing-machine, the combination, with a suds-box and a cage comprising a bottom and opposite end sections hinged to the bottom, of a rubbing-head pivoted within the cage and means for swinging said cage and for rocking the rubbing-head in directions opposite to the simultaneous movements of the end sections of the cage, substantially as specified.

4. In a washing-machine, the combination, with a suds-box and a cage mounted for movement therein and consisting of opposite end

and a central bottom section hinged to the lower ends of the end sections, of a rubbing-head mounted for rocking in said cage and having oppositely-inclined lower faces and means for rocking the cage and the head, substantially as specified.

5. In a washing-machine, the combination, with the suds-box, of the cage removably supported for movement therein and comprising a bottom and opposite end sections hinged to the bottom, connecting-bars pivotally connecting the upper ends of the end sections and having depending bearing-hangers, and bearing-hangers, substantially as specified.

6. In a washing-machine, the combination, with the suds-box and the opposite pairs of bearing-standards, of the cage comprising a bottom and opposite end sections, said sections having opposite side strips and transverse rubbing-strips grooved upon their inner faces and arranged a slight distance apart, bearing-lugs extending from the side strips of the end sections and taking in the bearing-standards of the suds-box, bars pivotally connecting the side strips of the end sections and provided with depending hangers having irregular slots terminating in bearings, a rubbing-head comprising a series of longitudinal

bars arranged parallel to each other, connected by a transverse shaft having removable bearings in the slots, and connected upon their under sides with a series of rubbing-strips, brackets secured to the side strips of one of the end sections, and a transverse shaft journaled in the brackets and beyond said brackets, having its ends bent and pivotally connected to the strips of the head below their bearings in the cage, substantially as specified.

7. In a washing-machine, the combination, with the suds-box having bearings, of a cage composed of a central bottom and opposite end sections, one of which is extended to form operating-handles, hinges connecting the end sections with the bottom section, a rubbing-head pivotally mounted between the end sections, and rods leading from the extended end section and pivotally connected to the rubbing-head below its bearing, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

CHARLES HAMMONS.

Witnesses:

GEORGE GOOSEY,
WILLIAM BURTON.