

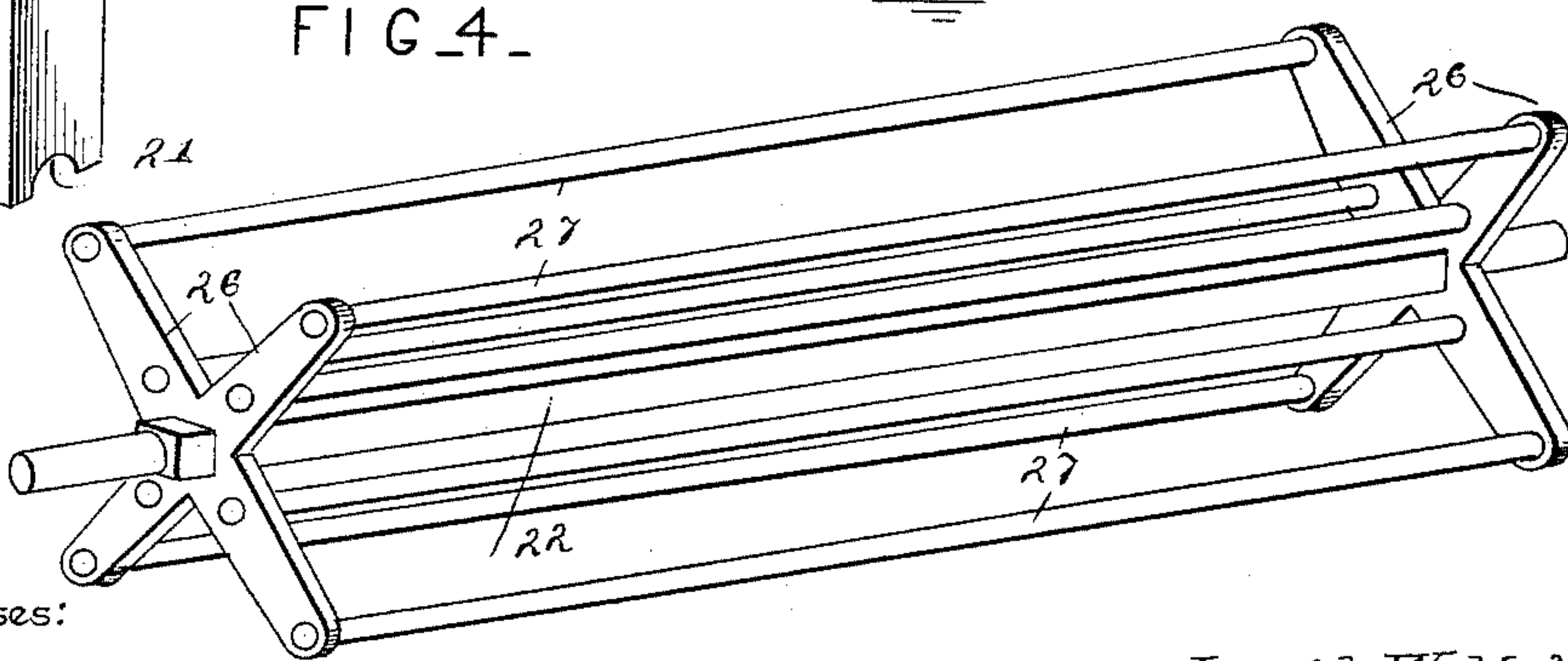
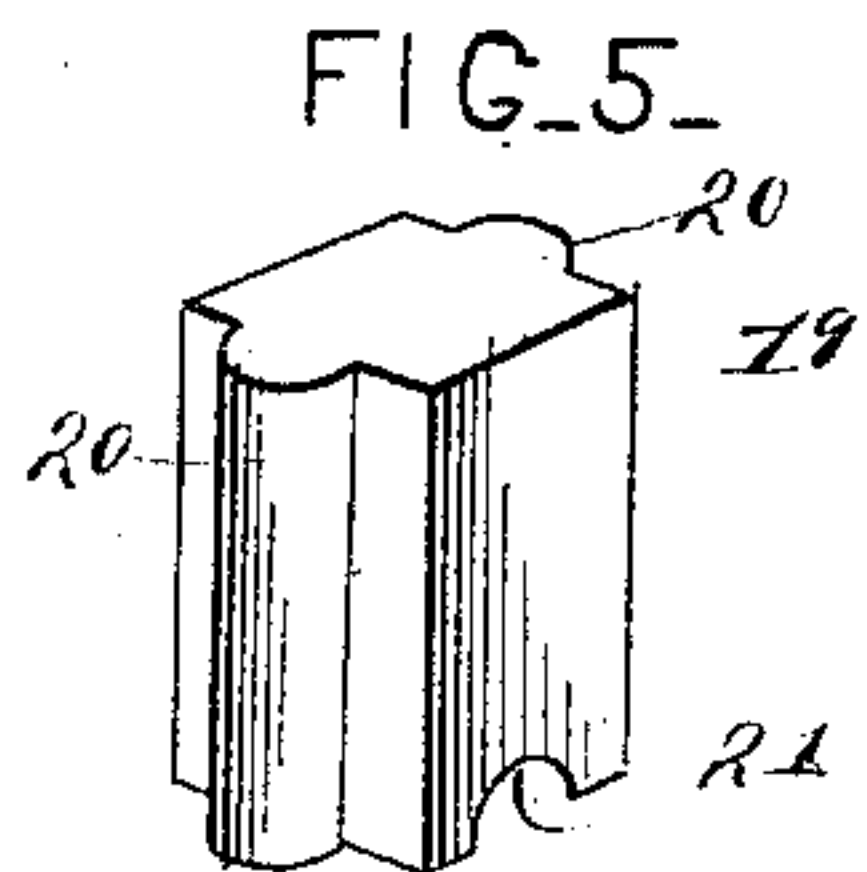
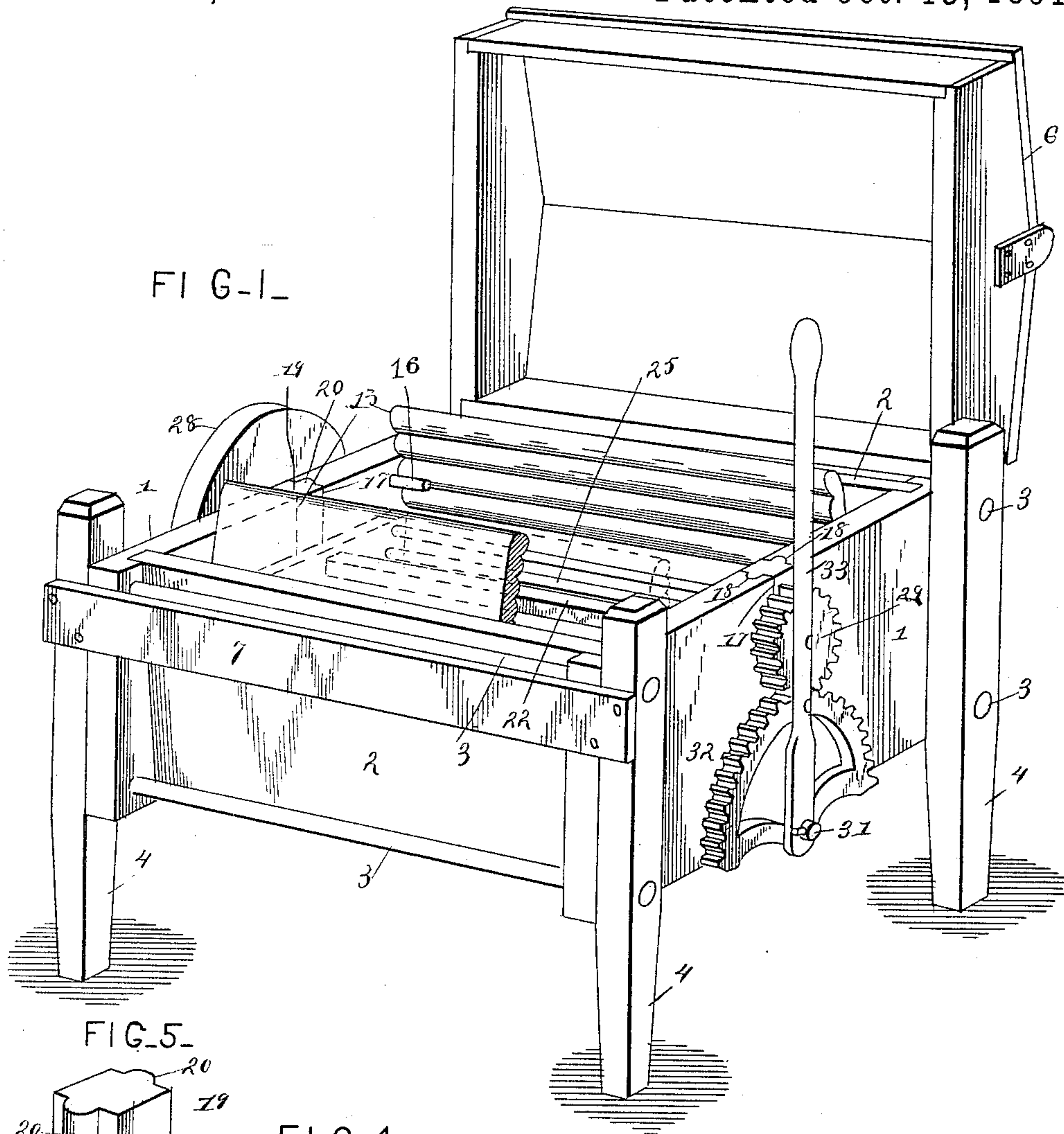
(No Model.)

2 Sheets—Sheet 1.

J. W. HELDRETH & J. A. DIX.
WASHING MACHINE.

No. 460,965.

Patented Oct. 13, 1891.



Witnesses:

Geo. E. French

W. S. Duval

By their Attorneys,

C. A. Snow & Co.

Inventors,

Joseph W. Heldreth
James A. Dix

(No Model.)

2 Sheets—Sheet 2.

J. W. HELDRETH & J. A. DIX.
WASHING MACHINE.

No. 460,965.

Patented Oct. 13, 1891

FIG. 2.

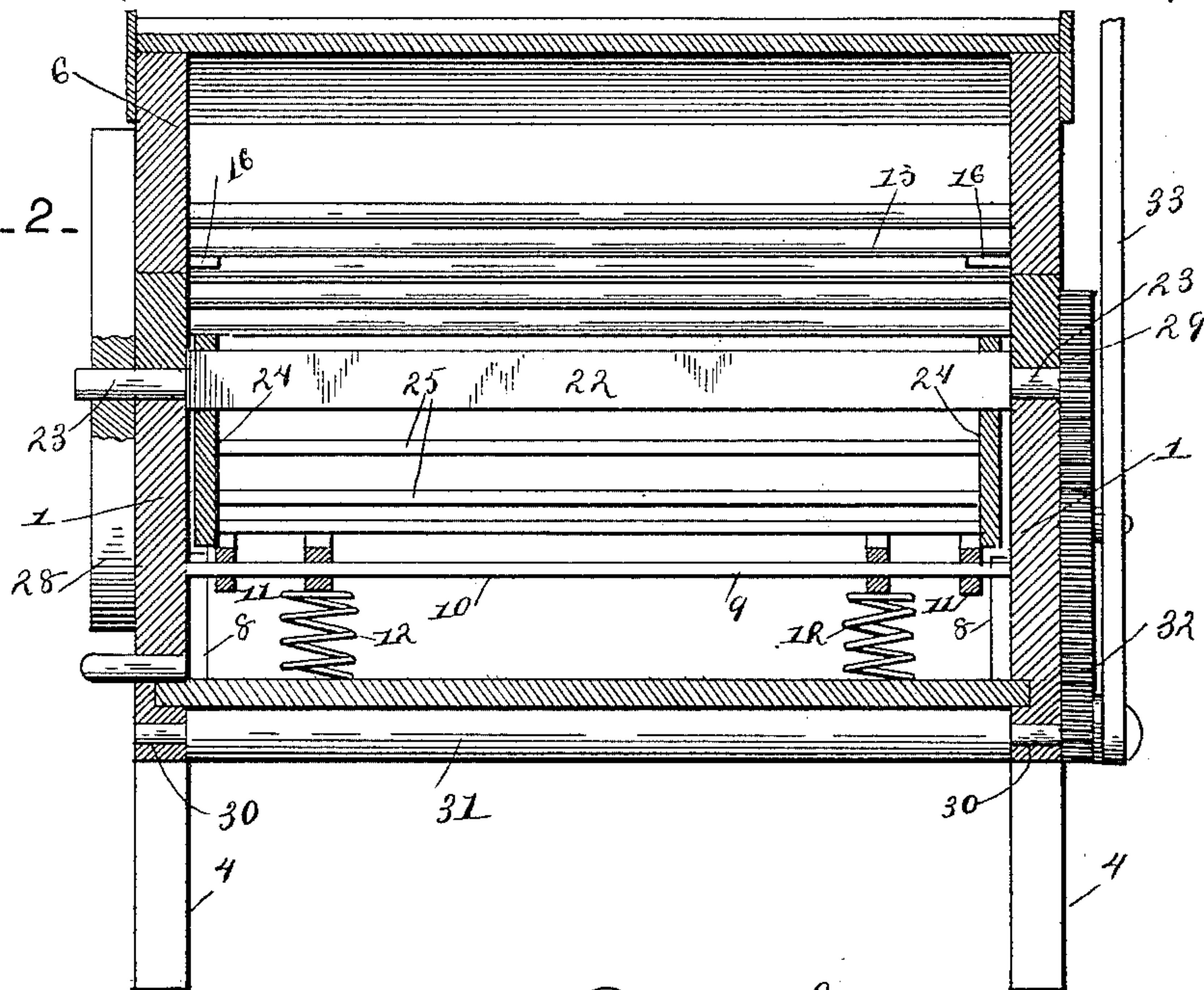
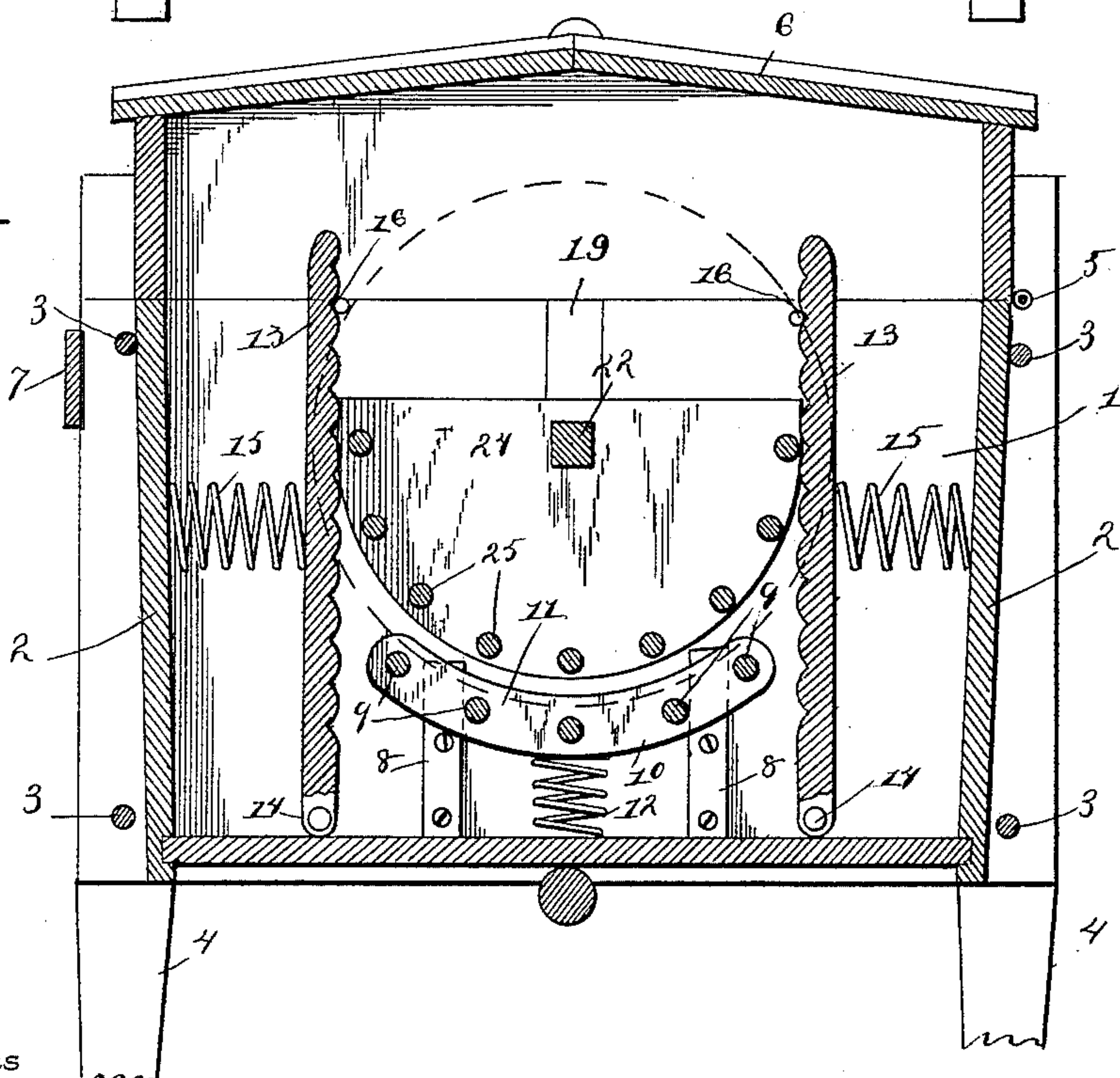


FIG. 3.



Witnesses

Geo. C. French

W. S. Duval

By their Attorneys,

C. A. Snow & Co.

Inventors

Joseph W. Heldreth

James A. Dix

UNITED STATES PATENT OFFICE.

JOSEPH WINTER HELDRETH AND JAMES AMOS DIX, OF RURAL RETREAT,
VIRGINIA.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 460,965, dated October 13, 1891.

Application filed March 14, 1891. Serial No. 385,079. (No model.)

To all whom it may concern:

Be it known that we, JOSEPH WINTER HELDRETH and JAMES AMOS DIX, citizens of the United States, residing at Rural Retreat, in the county of Wythe and State of Virginia, have invented a new and useful Washing-Machine, of which the following is a specification.

Our invention relates to improvements in washing-machines of that class known as "oscillating;" and the objects of the invention are to provide a cheap and simple machine, durable, easily accessible for the purpose of immersing and removing the articles, and easily operated.

Various other objects of the invention will appear in the following description, and the novel features thereof will be particularly pointed out in the claim.

Referring to the drawings, Figure 1 is a perspective of a washing-machine constructed in accordance with our invention, the lid being raised. Fig. 2 is a longitudinal section. Fig. 3 is a transverse section. Fig. 4 is a detail in perspective of a washing-cylinder that may be employed when the machine is used for washing heavy articles. Fig. 5 is a detail in perspective of one of the filling-blocks.

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

Our suds-box consists of the opposite end walls 1, into which are let the opposite side walls 2, whereby the ends of the end walls extend beyond the external surfaces of the side walls. At intervals said end walls are connected by tie-rods 3, which rods also pass through pairs of legs 4, said legs having their upper ends extending above the edges of the side walls and end wall. To the rear edge of the suds-box there is hinged, as at 5, a lid 6 of the usual construction. The two front legs of the box are connected by a longitudinally-disposed wringer-bar 7. To the inner surfaces of each of the end walls are secured short vertical strips 8, which receive at opposite sides longitudinal bars 9, which are comprised in a lower rubbing-frame 10. The rubbing-frame 10 consists of a series of longitudinal bars 9, heretofore mentioned, and are connected near their ends by concaved trans-

verse perforated connecting-bars 11. This frame 10 thus constructed is readily removable from the suds-box and is maintained in position by the guides and yieldingly supported by a series of coiled springs 12, located upon the bottom of the suds-box.

13 designates side rubbers, which are simply partitions having their inner faces longitudinally corrugated, as shown, and provided at their opposite sides, near their lower ends, with trunnions 14, which are journaled in the end walls of the suds-box. Coiled springs 15 are interposed between the side walls of the box and the outer faces of the side rubbers and force the latter against stops 16, extending from the end walls, which prevent the side rubbers from passing beyond a vertical position. In the upper edges of the end walls are formed open bearings 17, the opposite side walls of which are provided with guide-grooves 18. Filling bearing-blocks 19, having opposite ribs 20, are inserted in the bearing-recesses and are provided upon their under sides with grooves 21, which combine with the bottoms of the recesses 17 to form cylindrical bearings, which may be opened and closed by the removal and the insertion of the filling-blocks.

A shaft 22, the major length of which is square in cross-section, has its ends reduced to form cylindrical bearings or journals 23, which take bearing in the bearing-recesses of the suds-box. Between its bearings the shaft is provided with opposite semicircular heads 24, which are connected by a curved series of connecting-rods 25, thereby constituting an oscillating rubber to co-operate with the bottom and two side rubbers.

The oscillating rubber herein described may be removed from the shaft, and in lieu of the same the rubber shown in Fig. 4 may be employed, which latter consists of opposite cross-bars 26, connected by rods 27.

Whichever rubber is employed the shaft of the same is provided at one end beyond its bearing with a fly-wheel 28 and at its opposite end beyond its bearing with a small cog or gear 29. Bearings 30 are located upon the under side of the suds-box, and a shaft 31 is mounted for oscillation therein, and upon said shaft, at one end thereof, there is fixed

upon the same a large segmental master-gear 32, operated by means of a handle 33, made fast to the shaft and gear, said master-gear serving as a means for communicating motion to the small gear 29.

In operation for ordinary purposes we employ the oscillating rubber illustrated in Fig. 1, while for heavy cases, such as quilts, counterpanes, blankets, &c., we employ the rubber illustrated in Fig. 4. The articles to be washed are ordinarily introduced between the side rubbers and the oscillating rubber, the former being readily pushed back, so as to permit of the insertion of the articles. A suitable quantity of water being placed in the suds-box and the lid closed, the washer is in condition for operation, which is accomplished simply by a back-and-forth movement or oscillation of the operating-lever.

Having described our invention, what we claim is—

The combination, with the suds-box provided with the opposite vertical guides and

the coiled springs located upon the bottom of the box, the lower rubbing-frame yieldingly mounted upon the springs and having recesses for the reception of the guides, a pair of opposite longitudinally-corrugated partitions having formed at their opposite sides, near their lower ends, trunnions journaled in the end walls of the box, and springs interposed between the side walls of the box and the partitions, of a shaft journaled for rotation in bearings formed in the end walls of the box, means for operating the shaft, and a movable rubber mounted thereon, substantially as specified.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in presence of two witnesses.

JOSEPH WINTER HELDRETH.
JAMES AMOS DIX.

Witnesses:

WM. B. FOSTER,
D. B. HOILMAN.