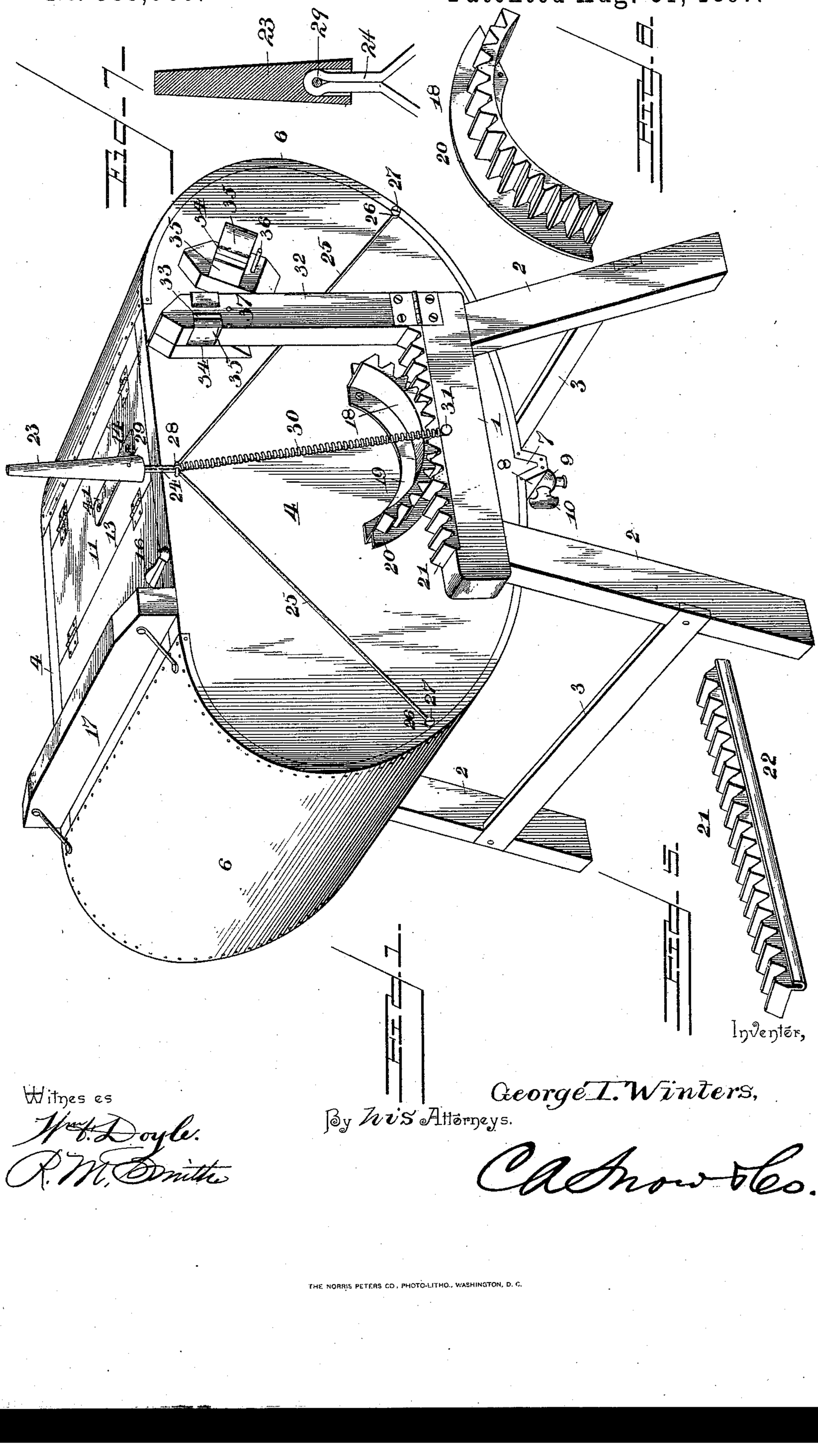
(No Model.) 2 Sheets—Sheet 1.

G. T. WINTERS.

WASHING MACHINE.

No. 589,059. Patented Aug. 31, 1897.



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(No Model.) 2 Sheets—Sheet 2.

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FIG. 2.

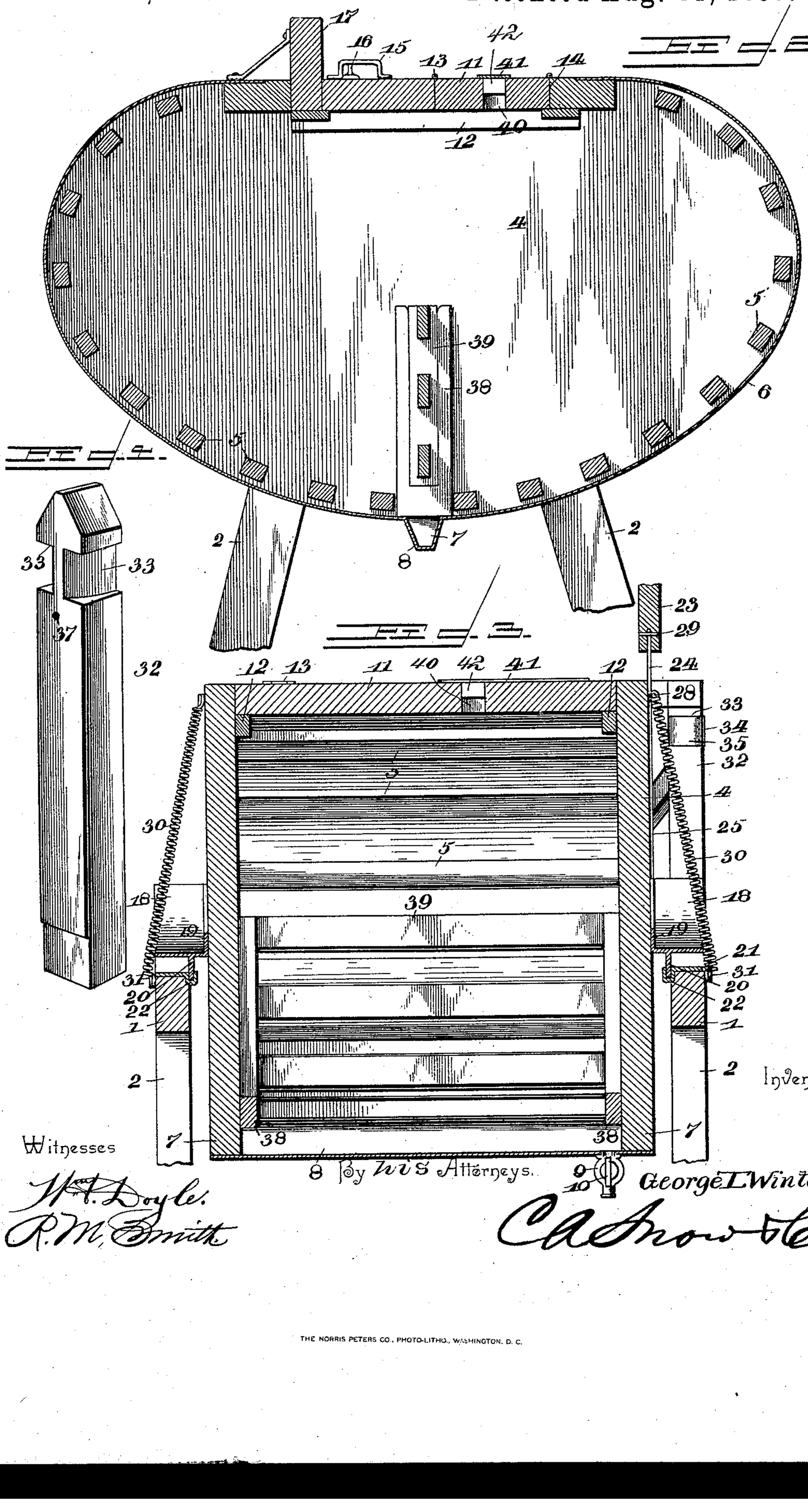

FIG. 4.

FIG. 3.

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UNITED STATES PATENT OFFICE.

GEORGE T. WINTERS, OF CAMERON, WEST VIRGINIA.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 589,059, dated August 31, 1897.

Application filed May 23, 1895. Serial No. 550,391. (No model.)

To all whom it may concern:

Be it known that I, GEORGE T. WINTERS, a citizen of the United States, residing at Cameron, in the county of Marshall and State of West Virginia, have invented a new and useful Washing-Machine, of which the following is a specification.

This invention relates to an improvement in washing-machines.

The object of the present invention is to simplify and improve the construction of devices of the character referred to and to provide a machine which shall comprise superior means for strengthening and bracing the body of the machine, which shall also comprise means for securely holding the body thereof at any desired angle, and other means for effectually preventing lateral or transverse movement of the said body.

A further object of the invention is to combine with the rocking body of the machine a retracting spring which will serve to limit the rocking movement thereof and materially assist in the operation of the device.

Other objects and advantages of the invention will appear in the course of the subjoined description.

In order to accomplish the objects above enumerated, the invention consists in certain novel features and details of construction and arrangement of parts, as hereinafter fully described, illustrated in the drawings, and pointed out in the claim.

In the accompanying drawings, Figure 1 is a perspective view of a washing-machine constructed in accordance with this invention. Fig. 2 is a vertical longitudinal section through the same. Fig. 3 is a transverse vertical section through the machine. Fig. 4 is a detail perspective view of the hinged arm for supporting the body of the machine at the desired angle. Fig. 5 is a similar view of the rack-plate with which the segmental rack meshes. Fig. 6 is a similar view of one of the segmental racks attached to opposite sides of the body of the machine. Fig. 7 is a detail view showing the manner of detaching the handle.

Similar numerals of reference designate corresponding parts in the several figures of the drawings.

Referring to the drawings, a suitable supporting-stand is provided, comprising a pair of horizontal beams 1 and inclined legs 2 at opposite ends thereof, and also transversely-extending cross-bars or connecting-pieces 3, by means of which the beams 1 are spaced sufficiently apart to receive between them the body of the machine.

The body of the washing-machine comprises an oppositely-disposed pair of heads or side boards 4, which are substantially elliptical in form and are preferably of wood, although it will be apparent that other material may be employed. Arranged between the heads 4 and disposed around the greater portion of the outer edges or peripheries thereof are a number of rods or bars 5, of wood. These rods or bars extend transversely across between the heads 4 and into corresponding mortises or sockets in the inner faces of said heads. These rods or bars serve to materially strengthen the body of the machine, and also form what may be called a "fluted" surface, over which the clothes to be washed are rubbed by the action of the water when the machine is in operation.

6 designates a covering-plate, of zinc or other suitable material, which extends the greater portion of the distance around the edges of the head-boards 4 and also extends transversely across and connects said head-boards, as shown, being secured thereto in any preferred or convenient manner, so as to form a water-tight joint.

The head-boards are each provided on their lower edges and centrally thereof with downwardly-extending ears 7, and the zinc covering 6 is bent around said ears in such manner as to form a transversely-extending hollow rib 8, thus providing a groove or depression within the interior of the body of the machine, to which the water contained within said body is adapted to drain.

9 designates a faucet arranged in the base of said groove or depression and extending downwardly beneath the body of the machine, as shown, said faucet being provided with the usual valve and operating-handle 10, by means of which the water and suds draining into the groove or depression 8 may be drawn off in a manner that will be readily understood.

The faucet 9 may be connected with the

body of the machine in any manner so as to form a tight joint and prevent leakage.

11 designates the door of the machine, which is arranged centrally of the top thereof and adapted to be supported upon suitable cleats 12, secured to the inner faces of the heads 4. This door is made in two sections, which are hinged together, as indicated at 13, the door as a whole being hinged to the body, as indicated at 14.

15 represents a loop-handle for lifting the door, and 16 indicates an oppositely-disposed pair of buttons pivotally mounted upon the upper edges of the head-boards 4 and adapted to swing inward over the door 11 for holding the same closed while the machine is in operation. By this construction it will be apparent that one section of the door 11 may be thrown open for the purpose of examining the condition of the clothes being washed or for wringing out the same, or both of said sections may be thrown back to afford a large opening, through which the clothes may be introduced into the machine or removed thereof.

17 represents an upwardly-extending wringer-board, over which the clothes may be drawn as they are taken from the machine after having been washed.

18 designates a pair of segmental racks secured one upon each side board or head 4 of the machine-body. Each of said segmental racks comprises a flange 19, by means of which it is secured to the machine-body, and is also provided with an outwardly or downwardly extending peripheral flange 20, which extends beyond the outer edges or faces of the teeth of said segmental rack.

21 indicates a pair of rack plates or bars, one for each horizontal beam 1. One of said rack-plates is secured to the upper face of each horizontal beam 1, and in addition to the usual teeth said rack-plate is provided at its inner edge with a longitudinally-extending U-shaped flange 22, which is arranged in vertical alinement with the flange 20 of the segmental rack 18 and is adapted to receive said last-mentioned flange for supporting the machine-body against lateral movement. This construction not only serves to hold the teeth of the segmental racks and rack-plates in engagement, but also serves to effectually prevent lateral movement of the machine-body and also braces the upper portion of the supporting-stand.

The rocking of the body of the machine is effected by means of a handle 23, which is detachably secured to a metallic handle-frame. The handle-frame is preferably made from stout wire and comprises a central vertically-elongated loop portion 24, extending upwardly above the body of the churn, and it also comprises a pair of diverging arms or braces 25, which extend downwardly and outwardly and are connected at their ends by means of eyes 26 therein and suitable retaining-screws 27 to the head-boards 4 at or near the edges thereof, as shown. A staple 28 is driven over the base of the upwardly-extending loop portion 24 for supporting the handle-frame at this point. By this construction the handle-frame serves as an effective brace for the body of the machine and materially strengthens the same.

The detachable handle 23 is provided with a vertical socket in its lower end, which receives the upwardly-extending portion of the handle-frame, and said handle is held in place by means of a pin 29, passing through the handle and engaging the handle-frame.

30 represents a spiral spring which is provided with hooked ends, adapting it to be engaged with and interposed between the staple 28 and a pin 31 or other suitable device secured to the horizontal beam 1 of the supporting-stand. A pair of spiral springs 30, which are located outside of the rack-bars, converge upwardly, being disposed at an inclination. As the machine-body is rocked the springs 30 will always exert their tension to return said body to its normal or horizontal position, as shown in the drawings. In rocking the body as the latter approaches the end of its movement the springs will be elongated or stretched and will not only serve to limit the end movement of the body, but will materially assist in the return movement thereof. The springs operate to hold the teeth of the segmental racks in mesh with the teeth of the horizontal rack-bars and also to retain the depending curved flanges 20 in the grooves formed by the U-shaped flanges 22.

32 designates a prop or arm which is hinged to one end of one of the horizontal beams 1 and provided at its free end with a pair of inclined notches disposed in opposite sides thereof. The notches indicated at 33 are arranged in such manner that the inner face of the prop or arm 32 adjacent to said notches will be wider than the forward face thereof. The converging faces formed by the notches are straight, and when the arm is in a vertical position the upper and lower shoulders of the notches are horizontal.

34 indicate spring clips or catches which are secured to the outer face of one of the head-boards 4 and are of such shape that they are adapted to receive and embrace the prop or arm 32 within the inclined notches 33 therein. Each of said clips 34 comprises a central perforated portion, by means of which it is secured to the body of the machine, and also comprises a pair of converging arms 35, the outer ends of which are made to diverge, as shown, in order to form a flaring mouth for facilitating the engagement of the arm or prop 32 therewith.

The oppositely-inclined or angularly-disposed notches 33 form an outwardly-tapered portion, and the arm is adapted, when swung upward against the washing-machine body and out and away from the same, to be engaged and released automatically by the spring catches or clips. These clips are disposed at suitable points, such as will enable

the body of the machine to be tilted to any desired angle for the purpose of introducing the clothes into the machine or for removing the same therefrom and wringing them over the board 17 after the operation of washing has been completed. The upper and lower shoulders which are formed by the notches engage the arms of the spring-clip and prevent the washing-machine body from rocking upward or downward.

In addition to the spring-clips 34, suitable pins 36 are provided, one for and beneath each clip and adapted to engage a perforation 37 in the prop or arm 32. The pins will serve to assist in supporting the body of the machine at the desired angle and remove considerable of the vertical strain from the spring-clip 34.

Secured to the inner faces of the headboards 4 is a pair of groove-cleats 38, the same being adapted to receive a cream-break 39, composed of vertical end strips and interposed horizontal slats extending across between said end strips, as indicated in Fig. 3. This construction will enable the cream-break to be removed from the machine or placed therein, as desired, thus adapting the machine to be used as a churn.

When employed as a churn, it is necessary to have a vent at the top of the churn-body, and this I accomplish by forming a perforation 40 through one of the door-sections 11 and placing a stopper 42 of any desired material therein. Said stopper is supported by means of a flat leaf-spring 41, attached to the top thereof at one end, the opposite end of said spring being secured to the door-section in which said perforation is formed. The stopper may thus be lifted from the perforation 40 and swung to one side when desired, and when in place within the perforation is held snugly therein by the downward pressure of said spring, thus preventing its accidental displacement.

The advantages of the washing-machine contemplated in this invention having been set out in the course of the description hereinabove given, it will not be necessary to enlarge further thereon.

It will be apparent that various changes in the form, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

Having thus described the invention, what is claimed as new, and desired to be secured by Letters Patent, is—

In a washing-machine, the combination of a supporting-stand, a rocking body mounted thereon, an arm hinged to the stand at one end thereof, adapted to be arranged in a vertical position and provided near its upper or free end with oppositely-disposed notches forming straight outwardly-converging inner walls and providing upper and lower horizontal shoulders, and a spring-clip 34 constructed of a single piece of resilient metal, centrally secured to the body and consisting of a pair of horizontally-disposed outwardly-extending arms 35, inwardly bent between their ends to form shoulders for engaging the said notches and having outwardly-bent terminals forming a flaring mouth, said arms being adapted to engage and release the bar automatically as the latter is swung inward and outward, and engaging the upper and lower shoulders of the notches, when the bar is in a vertical position to lock the washing-machine body against upward or downward movement, substantially as described.

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

GEORGE T. WINTERS.

Witnesses:
G. W. HILL,
D. W. GILLESPIE.