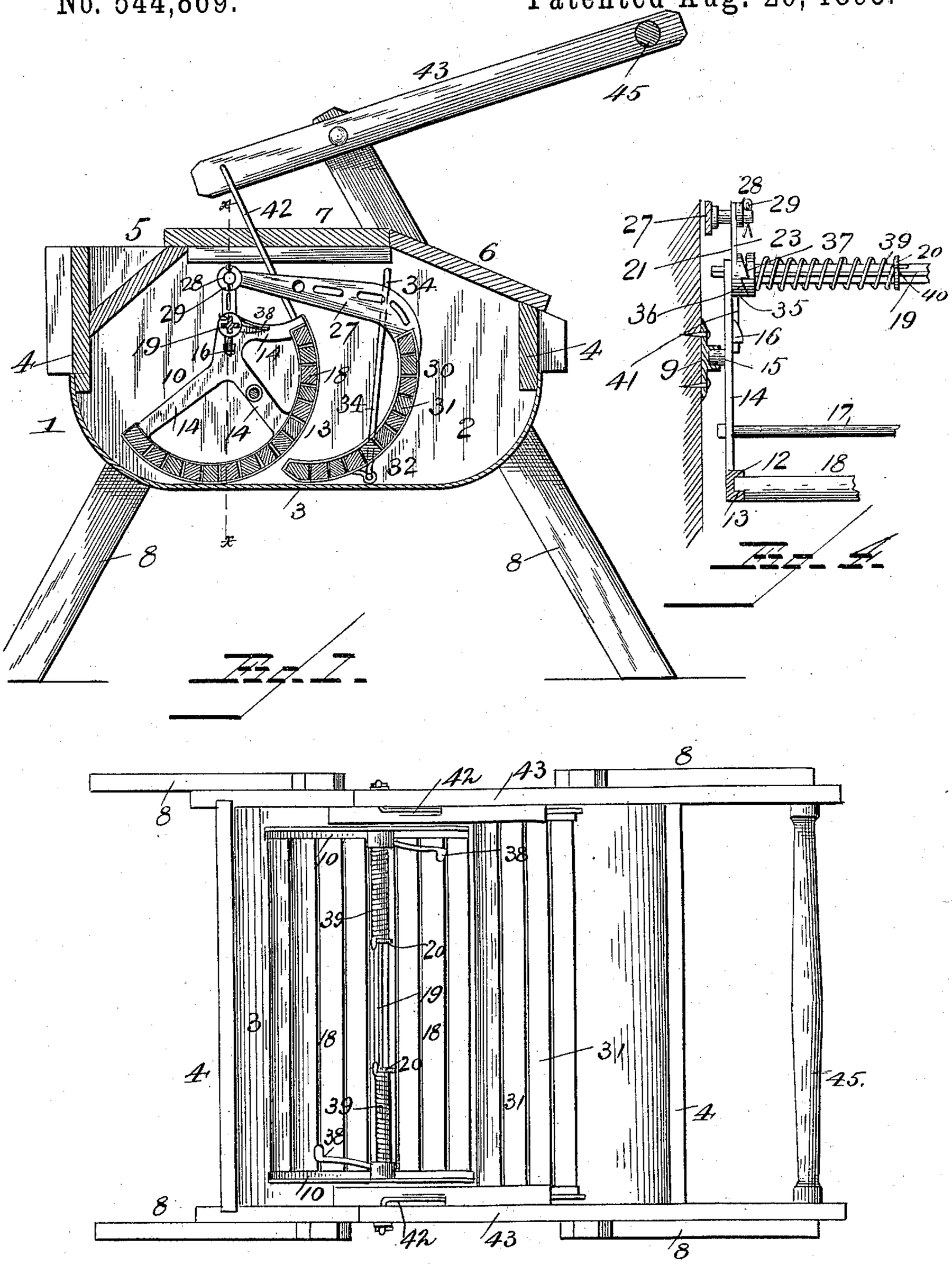
(No Model.) 2 Sheets—Sheet 1.

F. STROBEL.

WASHING MACHINE.

No. 544,869. Patented Aug. 20, 1895.



WITNESSES:
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(No Model.)

2 Sheets—Sheet 2.

F. STROBEL.

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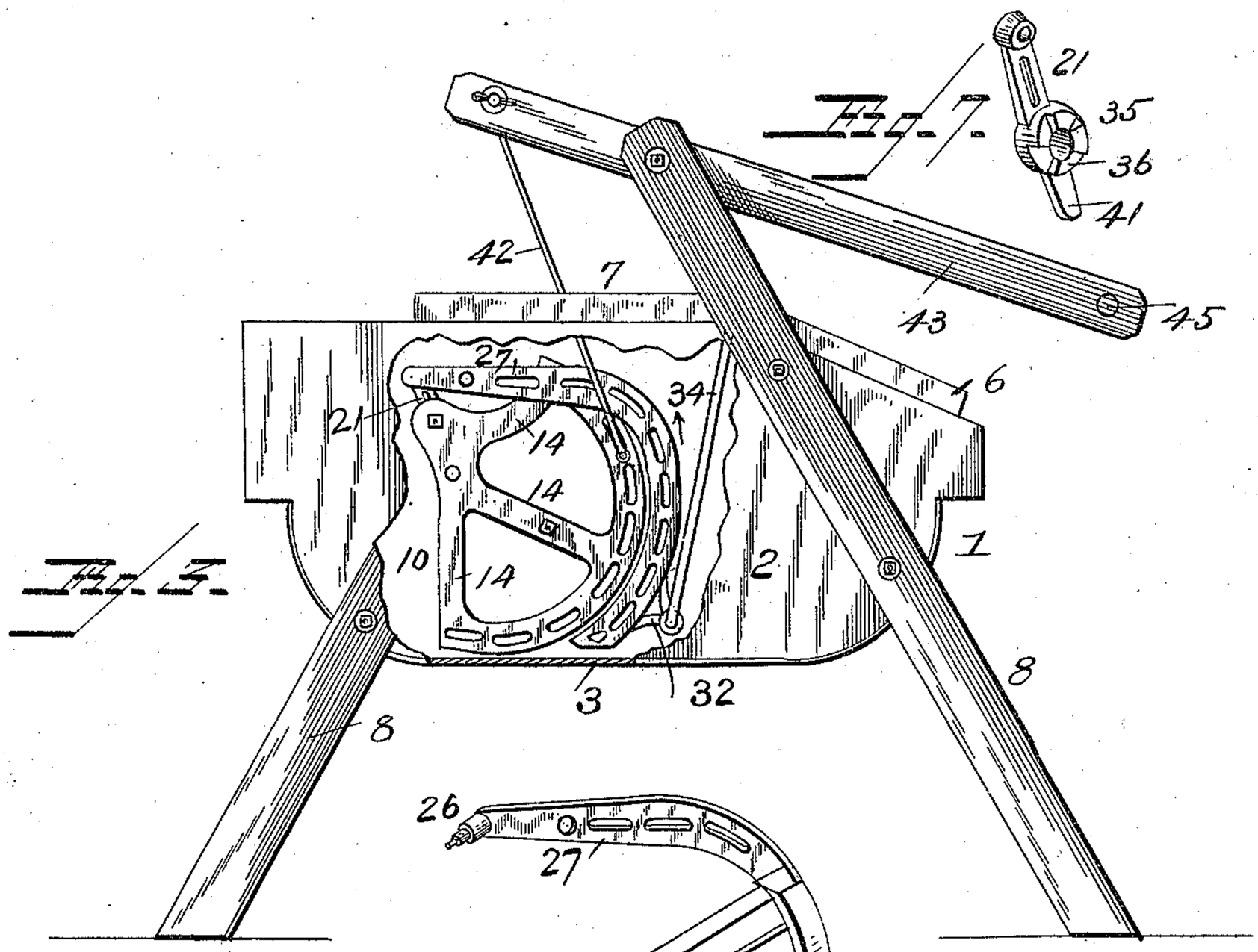
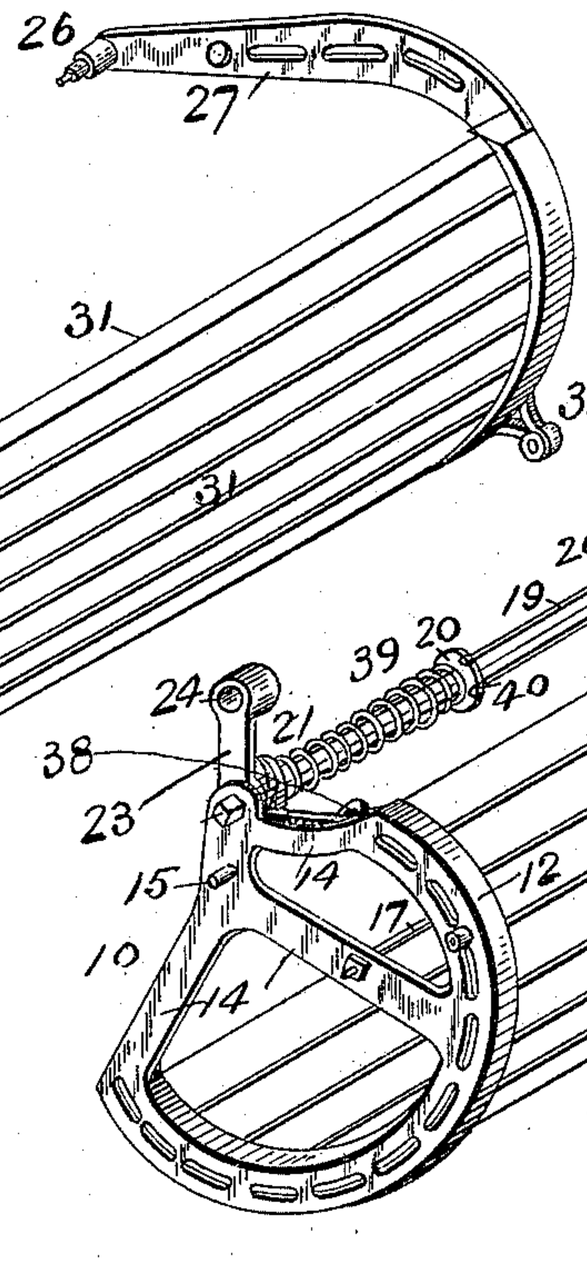


Fig. 4.



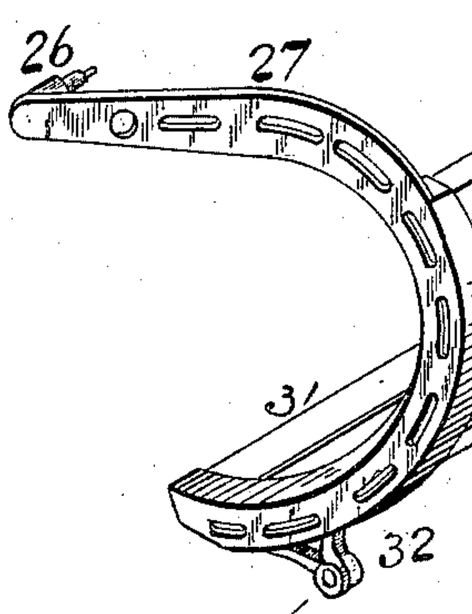


Fig. 6.

Fig. 5.

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UNITED STATES PATENT OFFICE.

FREDERICK STROBEL, OF MARION, OHIO.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 544,869, dated August 20, 1895.

Application filed January 16, 1895. Serial No. 535,143. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK STROBEL, a citizen of the United States, and a resident of Marion, in the county of Marion and State of Ohio, have invented certain new and useful Improvements in Washing-Machines; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to washing-machines; and its object is to provide an improved construction of the same which shall possess superior advantages with respect to efficiency in use.

The invention consists in the novel construction and combination of parts hereinafter fully described and claimed.

In the accompanying drawings, Figure 1 is a central longitudinal section of a washing-machine constructed in accordance with my invention. Fig. 2 is a plan view, the removable top and the inclined top boards being removed. Fig. 3 is a side elevation, partly broken away, showing the movable rub-board drawn toward the oscillating rub-board for compressing the clothes therebetween. Fig. 4 is a detail elevation of the clutch mechanism and coiled spring at one side of the suds-box. Fig. 5 is a perspective view of the oscillating rub-board. Fig. 6 is a detail perspective view of the rub-board. Fig. 7 is a detail perspective view of one of the clutch-levers.

In the said drawings the reference-numeral 1 designates the suds-box comprising the sides 2, rounded or curved at each end, to which is secured the bottom 3, of galvanized iron or other material.

The numeral 4 designates the end boards, 5 and 6 inclined front and rear top boards, and 7 a removable top or cover.

The numerals 8 8 designate the supporting-legs to which the suds-box is bolted, the front legs projecting up above the top of the suds-box, forming extensions to which the operating levers hereinafter described are pivoted.

Secured to the inner side of the sides 2 of the suds-box are bearings 9, in which are journaled segment-plates 10 10, each consisting of a curved or semicircular rim 12, having a series of rectangular recesses 13 therein and radial arms 14 14 14. On its outer side each of these segment-plates is formed with a journal 15, which seats in said brackets, and on its inner sides is formed with a lug 16, for a purpose hereinafter explained. These segment-plates are connected together by a cross-rod 17, and are provided with a number of rub-bars 18, the ends of which are squared and inserted in the recesses 13 of the segment-plates. These plates and bars form the oscillating rub-board. Secured to the said segment-plates is a transverse bar 19, having collars 20 between its ends, and each end of said bar is squared to fit in corresponding apertures in the segment-plates to prevent it from rotating. On this bar, near each end, is journaled a clutch-lever 21. The upper arms 23 of these clutch-levers are formed with apertures 24, in which are journaled studs 26 on the upper end of curved arms 27, washers 28 and cotter-pins 29 serving to hold the studs in the apertures. These curved arms, on their inner sides, are formed with rectangular recesses 30, in which are seated the ends of the transverse rub-boards 31, which, in connection therewith, form the movable rub-board. These arms, near their lower ends, are formed with lugs 32, in which are journaled the lower ends of downwardly-depending bars 34, the upper ends of which are bent outwardly and journaled in the sides of the suds-box.

The clutch-levers 21 are provided with hubs 35, which on their inner faces are formed with a series of ratchets or clutches 36, with which engages a clutch 37 on a lever 38, also journaled on bar 19. Coiled upon this shaft are strong coiled springs 39, one end of each of which bears against the levers 38, near the outer ends thereof, while the other ends are engaged with notches 40 in the collars 20. By rotating these levers so that the clutches thereof will engage with different clutches on the hubs of the levers 21, the tension of the springs can be regulated. The short arms 41 of the clutch-levers 21 bear against the lugs 16 of the segment-plates, which lugs serve as stops for the levers.

Pivoted to the rims of the segment-plates

are upwardly-extending rods 42, the upper ends of which are pivoted to operating-levers 43, pivoted in the extensions of the front legs of the suds box. The opposite ends of these levers are connected by a cross-bar 45.

The operation is as follows: A suitable quantity of water or suds is placed in the suds-box and the clothes to be washed inserted between the rub-boards. The operator now grasps the bar 45 and bears down upon the same, elevating the opposite ends of the levers 43 and through the medium of the rods 42 rotating the rub-board connected therewith in the direction of the arrows seen in Fig. 3. At the same time the clutch-levers 21 will be correspondingly rotated, the tension of the coiled springs causing their lower ends to be pressed up against the lugs 16 on the segment-plates. As these levers move they carry the curved arms 27 with them, swinging the rub-board forward and compressing the clothes between the same and the rub-board previously mentioned, causing a rubbing as well as a squeezing action to be given to the clothes. If the quantity or bulk of clothes between the rub-boards should be such as to render the pressure exerted by the rub-boards liable to break or injure the machine, the tension of the coiled springs will be overcome, allowing the clutch-levers to turn or rotate, so that the movable rub-board will give or recede away from the other rub-board. Of course it will be understood that the coiled springs must be regulated so that their tension will be overcome when a certain pressure is exerted by the rub-boards. This can be accomplished by the levers 38. It will be noticed that the movable rub-board as it moves forward also turns upon its journals, so that the upper ends of the rub-boards are contracted somewhat faster than the lower ends, thus insuring perfect squeezing and rubbing of the clothes. Upon a reverse movement of the operating-levers the pivoted rub-board oscillates in the opposite direction and the movable rub-board moves away or recedes therefrom.

Having thus described my invention, what I claim is—

In a washing machine, the combination with the suds-box, of the oscillating rub-board journaled therein comprising the segment plates and transverse rub-boards, the transverse bar secured to said plates, the clutch-levers journaled on said bar, the lower ends of which abut against lugs in said segment plates, the movable rub-boards pivotally connected with the upper ends of said levers, the levers journaled on said bar and having a clutch, the coiled springs connected at one end with said bar and the other end bearing against said last-mentioned levers, and means for actuating the rub boards, substantially as described.

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

FREDERICK STROBEL.

Witnesses:

F. J. KELLEHER,

GEO. B. SCOFIELD.