

No. 758,085.

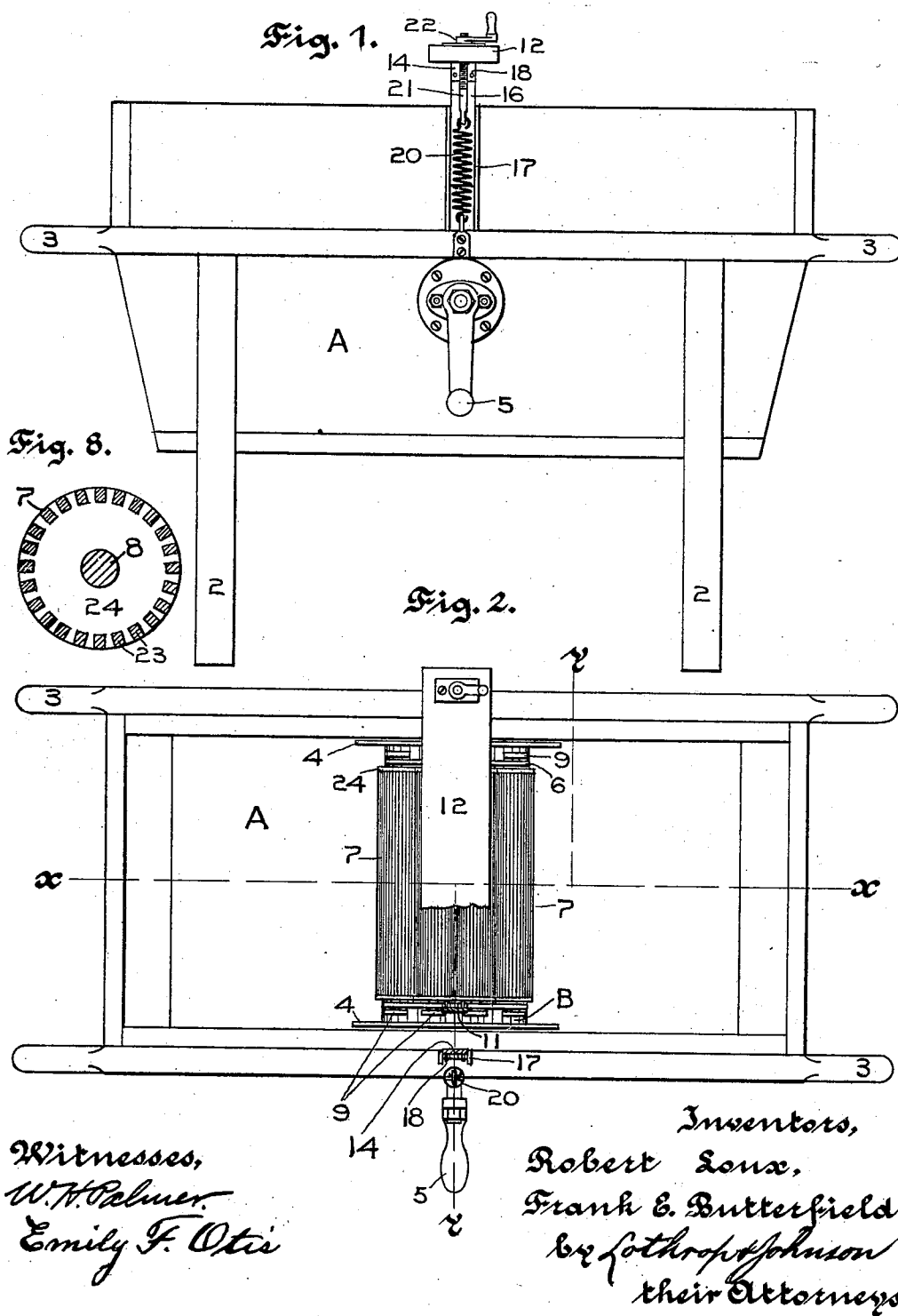
PATENTED APR. 26, 1904.

R. LOUX & F. E. BUTTERFIELD.
CLOTHES WASHING MACHINE.

APPLICATION FILED DEC. 7, 1903.

NO MODEL.

2 SHEETS—SHEET 1.



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2 SHEETS—SHEET 2.

Fig. 3.

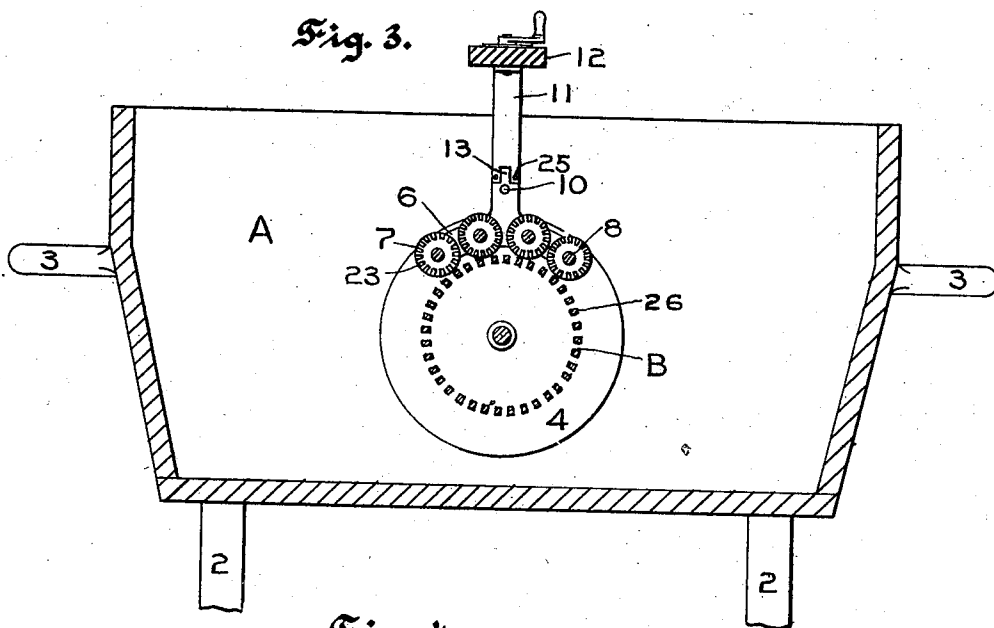


Fig. 4.

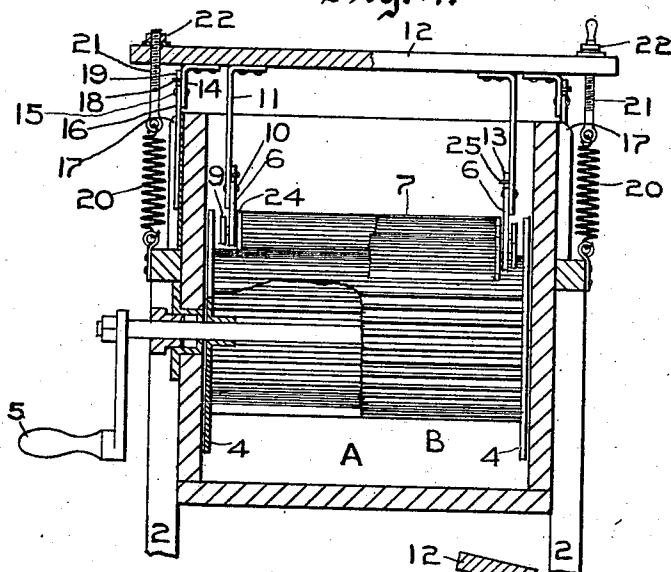


Fig. 5.

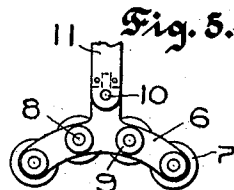


Fig. 6.

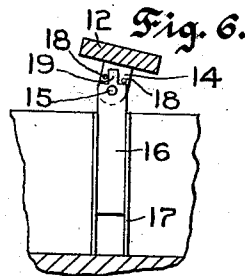
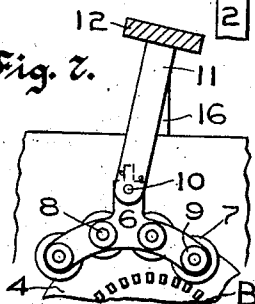


Fig. 7.



Witnesses,
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Frank E. Butterfield.
by J. A. Johnson
their Attorneys.

UNITED STATES PATENT OFFICE.

ROBERT LOUX AND FRANK E. BUTTERFIELD, OF ST. PAUL, MINNESOTA.

CLOTHES-WASHING MACHINE.

SPECIFICATION forming part of Letters Patent No. 758,085, dated April 26, 1904.

Application filed December 7, 1903. Serial No. 184,054. (No model.)

To all whom it may concern.

Be it known that we, ROBERT LOUX and FRANK E. BUTTERFIELD, citizens of the United States, residing at St. Paul, in the county of Ramsey and State of Minnesota, have invented certain new and useful Improvements in Clothes-Washing Machines, of which the following is a specification.

Our invention relates to improvements in clothes-washing machines, its object being particularly to provide a machine in which different characters of clothes may be thoroughly cleaned without injuring the fabric.

To this end our invention consists in the features of construction and combination hereinafter particularly described and claimed.

In the accompanying drawings, forming part of this specification, Figure 1 is a side elevation of our machine. Fig. 2 is a plan view of the same partially broken away. Fig. 3 is a section on line *x x* of Fig. 2. Fig. 4 is a section on line *y y* of Fig. 2. Figs. 5, 6, and 7 are details showing the supporting means for the auxiliary rolls, and Fig. 8 is a detail of one of said rolls.

In the drawings, A represents a clothes-receptacle provided with feet 2 and lifting-handles 3. Having journal-support in the receptacle is a roll B, made up of a series of interspaced spring-bars 26, secured at their ends in disks 4, which extend outwardly sufficiently to cause flanges upon the ends of said roll. The roll B is provided with a suitable actuating-handle 5. Slidably supported above the ends of the roll B are frames 6, conforming to the periphery of said roll and forming journal-support for a series of auxiliary rolls 7. Upon the ends of the shafts 8 of the rolls 7 are secured disks 9. The frames 6 have pivotal support 10 upon straps 11, the upper ends of said straps being secured to the under side of a cross-bar 12. The movement of the frames 6 upon their pivots 10 is limited by pins 25, carried by the straps 11 and between which extend lugs 13, carried by the frames 6. The cross-bar 12 is slidably connected with the sides of the receptacle by straps 14, secured to the under side of said cross-bar and having pivotal connection 15 with bars 16, slidable

in guides 17 upon the outer sides of the receptacle. Movement of the bar 12 upon its supporting-pivots 15 is limited by means of pins 18, carried by the straps 14, and with which engage lugs 19, carried by the bars 16. The auxiliary rolls 7 are held against the clothes between them and the main roll B with the desired pressure by means of springs 20, connected at their lower ends with the outer sides of the receptacle and at their upper ends with threaded rods 21, extending through the ends of the cross-bar and provided with adjusting-nuts 22.

In order to assist in carrying out the objects of our invention, the auxiliary rolls 7 are made up of a series of interspaced spring-bars 23, connecting the end plates 24 of the rollers.

In use the water and clothes being placed in the receptacle, the clothes will be guided between the auxiliary rolls and the main roll, the handle 5 being turned to rotate the rolls and clean the intermediate clothes. In order to compensate for unevenness and bunching in the fabric, the auxiliary rolls may move horizontally in the operation of the machine, as illustrated in Figs. 6 and 7. This is accomplished by means of the pivotal connection between the cross-bar 12 and supporting-slides 16 and between the frames of the auxiliary rolls and their supporting-straps 11. As illustrated in Figs. 6 and 7, the cross-bar will tilt in one direction, while the frames will turn on their pivots in the opposite directions, thus allowing the frames to move in a substantially horizontal line and holding one of the end auxiliary rolls in contact with the main roll. The spring character of the interspaced bars which make up the main and auxiliary rolls, together with the above-described movement of said rolls and also the spring support for the cross-bar 12, compensate for all different thicknesses of fabric, as well as unevenness and bunching of the clothes, thereby preventing injury to the same. The flange 4 upon the main roll, together with the disks 8 upon the ends of the auxiliary rolls, will prevent the cloth winding about said rolls.

Having now described our invention, what

we claim as new, and desire to secure by Letters Patent, is—

1. In a washing-machine, the combination, with a clothes-receptacle, of a main roll journaled therein, a series of auxiliary rolls journaled in frames arranged above said main roll, a cross-bar arranged above said frames, straps secured to said cross-bar and pivotally supporting said frame, retractile springs connecting said cross-bar with the clothes-receptacle below, guides vertically slidable upon the sides of said receptacle, and a pivotal connection between said guides and cross-bar.

2. In a washing-machine, the combination, with a clothes-receptacle, and a main roll journaled therein, a series of auxiliary rolls slidably supported above said main roll, spring means for holding said auxiliary rolls in contact with said main roll, and flanges carried by the ends of said main roll, said flanges extending outwardly parallel with the ends of said auxiliary rolls and to a point beyond the axes of said auxiliary rolls.

3. In a washing-machine, the combination with a clothes-receptacle, of a main roll therein, a series of auxiliary rolls journaled in frames arranged above said main roll, a cross-bar supported above said receptacle, straps secured to said cross-bar and pivotally supporting said frames, stops limiting the movement of said frames upon their pivots, retractile springs connecting said cross-bar with said receptacle, bars slidable upon the sides of said receptacle, and pivotally connected to said cross-bar, and stops limiting the move-

ment of said cross-bar upon its supporting-pivots.

4. In a washing-machine, the combination with a clothes-receptacle, of a main roll journaled therein, a series of auxiliary rolls journaled in frames arranged above said main roll, a cross-bar arranged above said receptacle, downwardly-extending straps secured to said cross-bar and pivotally secured to said frame, retractile springs connecting said cross-bar and said receptacle, and slides supported upon the sides of said receptacle and pivotally connected with said cross-bar.

5. In a washing-machine, the combination with a clothes-receptacle, of a main roll journaled therein, a series of auxiliary rolls journaled in frames arranged above said main roll, disks secured upon the ends of said auxiliary rolls outside their frames, flanges upon the ends of said main roll extending outwardly beyond said disks, a cross-bar arranged above said receptacle, straps secured to said receptacle and pivotally supporting said frames, retractile springs connecting said cross-bar with said receptacle, and slides supported upon the sides of said receptacle and pivotally connected with said cross-bar.

In testimony whereof we affix our signatures in presence of two witnesses.

ROBERT LOUX.

FRANK E. BUTTERFIELD.

Witnesses:

H. S. JOHNSON,
EMILY F. OTIS.