R. A. Gawler,

Washing Machine.

No. 51,580. Patented Dec. 19, 1865.

Fig: 1

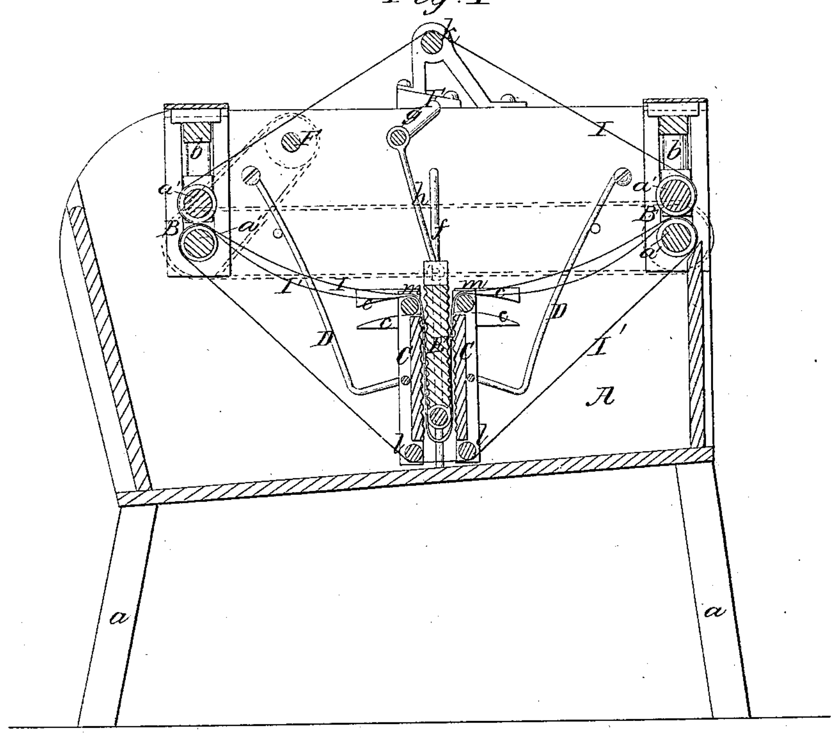
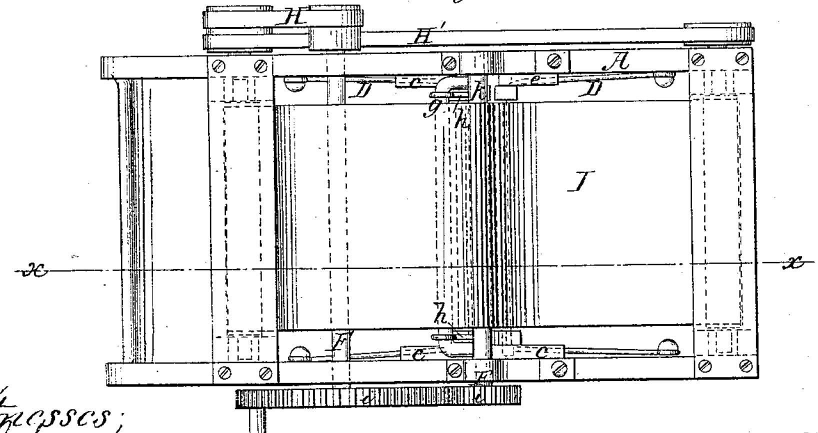


Fig: 2.



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UNITED STATES PATENT OFFICE.

ROBT. A. GAWLER, OF CONCORD, NEW HAMPSHIRE.

WASHING AND WRINGING MACHINE.

Specification forming part of Letters Patent No. **51,580**, dated December 19, 1865.

To all whom it may concern:

Be it known that I, ROBERT A. GAWLER, of Concord, in the county of Merrimack and State of New Hampshire, have invented a new and Improved Clothes Washing and Wringing Machine; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side sectional view of my invention, taken in the line *x x*, Fig. 2; Fig. 2. a plan or top view of the same.

Similar letters of reference indicate corresponding parts.

This invention relates to a new and improved clothes-washing machine of that class in which the clothes are subjected to a requisite degree of pressure and friction by means of corrugated boards.

The invention consists in the employment or use of a vertical reciprocating fluted or corrugated board operating between the pressure-boards, in connection with two endless feed or conveying belts, arranged with the reciprocating board and the pressure-boards in such a manner that the clothes will be fed between the pressure-boards and around the reciprocating board, so to be acted upon in the most efficient manner. Wringers are also used in connection with the endless belts, by which the clothes may have the moisture expressed from them as they are washed.

A represents the suds-box, which is supported at a suitable height by legs *a*, and is slightly inclined to admit of the suds being entirely drawn from it when desired.

B B′ represent two clothes-wringers, placed at or near the ends of the suds-box at its top. These wringers are composed each of two pressure-rollers, *a′ a′*, the upper rollers having their shafts fitted in sliding bearings, on which springs *b* bear, to give necessary pressure. The rollers *a′ a′* may be of india-rubber, or have a covering of that material, and the wringers may be constructed in substantially the same way as they are now constructed with rollers, and with a view of expressing the moisture from clothes only.

C C represent two pressure-boards which are placed in an upright position and transversely within the suds-box. These pressure-boards work on journals at their lower ends, and their upper ends, at each side, are provided with arms which work between curved guides *c*, attached to the inner surfaces of the sides of the suds-box, the curvature of the guides *e* being such as to form parts of circles of which the journals of the pressure-boards are the centers. This will be understood by referring to Fig. 1. Each pressure-board C has a spring, D, bearing against it, and these springs have a tendency to keep the boards C C in contact with a board, E, which is fitted vertically between the boards C C, and is fluted or corrugated horizontally at both sides, the boards C being corrugated at the inner sides only. The board E works between suitable guides *f*, attached to the sides of the suds-box, and it has a reciprocating motion imparted to it by means of a crank, *g*, on a shaft, F, which passes transversely through the suds-box, the crank being connected with the board E by pitmen *h h*. The crank-shaft F is rotated by means of gears *i i* from a driving-shaft, G, which also passes transversely through the upper part of the suds-box, and is turned by means of a handle, *j*, attached to its wheel *i*.

Motion is communicated to the rollers of the wringers B B′ by means of belts H H′, as shown in Fig. 2 and by the dotted lines in Fig. 1.

I I′ represent two endless belts, one of which, I, passes around the upper rollers, *a′*, of the wringers, over a roller, *k*, above the suds-box, and around or under the reciprocating board E, as shown in red, Fig. 1. The other belt, I′, passes around the lower rollers, *a′*, of the wringers, around rollers *l*, at the bottom of the suds-box, and around rollers *m*, above the pressure-boards C C, the belt I also passing around the rollers *m*.

The operation is as follows: The clothes to be washed are inserted between the belts I I′, and the box A is supplied with a requisite quantity of suds. The shaft F is then rotated and a reciprocating motion given the board E, the clothes passing down between one side of the board E and the pressure-board C adjoining, and then around the bottom of E and up at the other side of E, between it and the other board C, the clothes being subjected to the requisite degrees of pressure on account of the spring D acting against the boads C C. The clothes are thus subjected to a rubbing and pressure very similar to that given them by

the usual hand process. After the clothes are thoroughly cleaned, by passing them down and up several times between the boards C C, they are discharged from the machine by passing them through the wringers either B B′. The belts I I′ serve to protect the clothes from abrasion or undue friction.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The reciprocating board E, in combination with the pressure-boards C C and endless belts I I′, arranged for joint operation, substantially as and for the purpose specified.

2. The wringers B B′, when used in combination with the endless belts I I′, reciprocating board E, and pressure-boards C C, substantially as and for the purpose set forth.

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Witnesses:
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