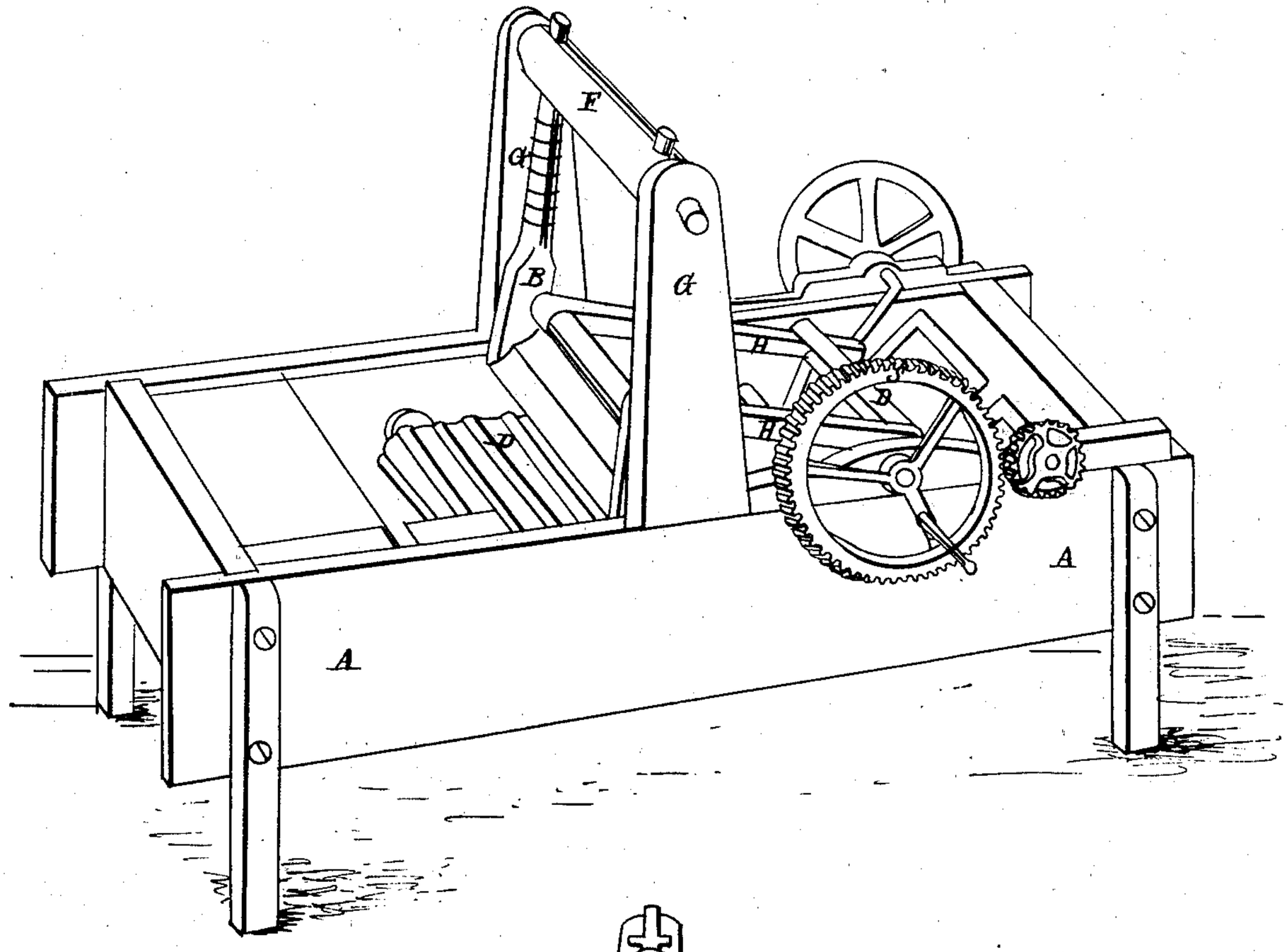
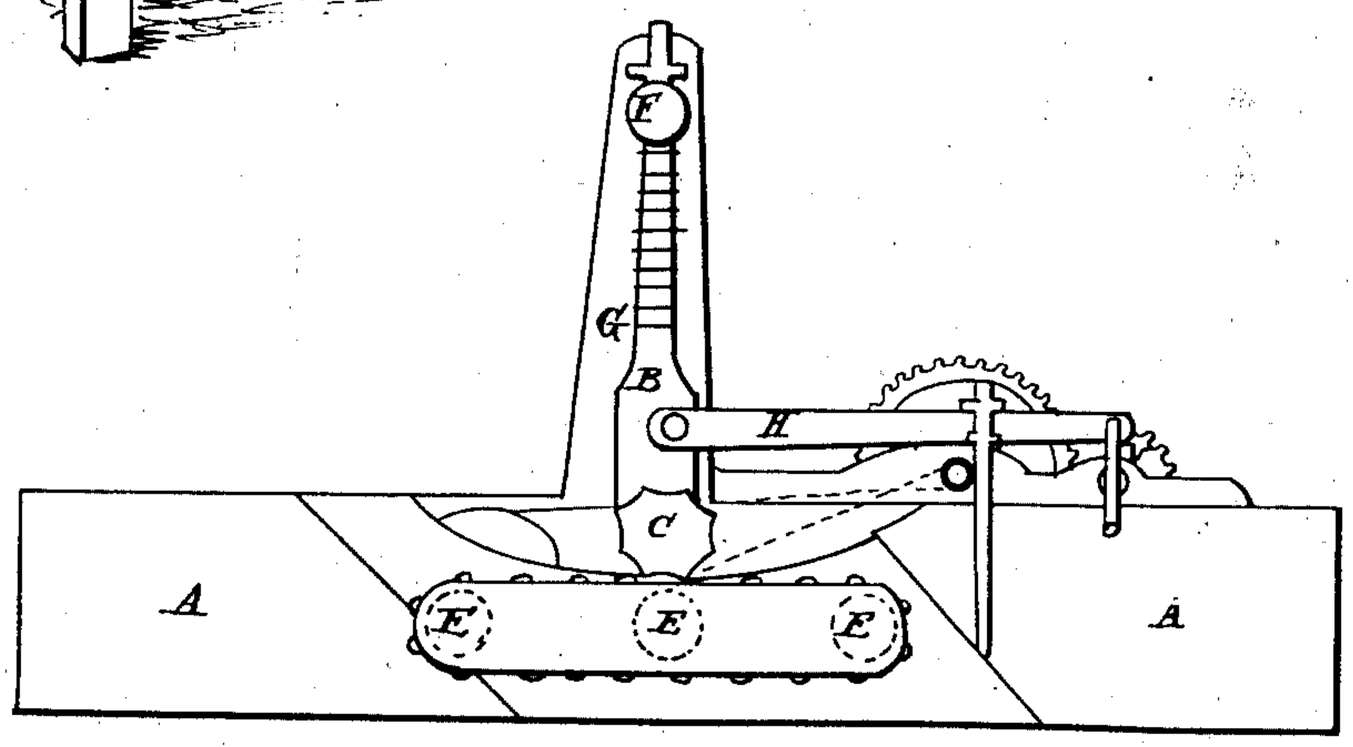
F. Ayres,

Washing Machine,

No. 27,031, Patented Feb. 7, 1860.





UNITED STATES PATENT OFFICE.

FRAZEE AYRES, OF RAHWAY, NEW JERSEY.

WASHING-MACHINE.

Specification of Letters Patent No. 27,031, dated February 7, 1860.

To all whom it may concern:

Be it known that I, FRAZEE AYRES, of the city of Rahway, in the county of Middlesex and State of New Jersey, have invented a new and useful Improvement in Washing-Machines, of which the following is a full and exact description.

The nature of my invention consists in the combination of a grooved or fluted roller with an endless apron which is also grooved or what is equivalent has small slats fastened to it at short intervals and the arranging of the said roller and endless apron with respect to each other in such manner that while the endless apron moves slowly and continuously in one direction the fluted roller by means of suitable mechanism is made to roll backward and forward under pressure over said endless apron with the article to be washed between said roller and apron partially or wholly immersed in the washing solution.

To enable others skilled in the art of making and using washing machines to make and use my improved machine I will describe it in the following specification and the drawings annexed thereto reference being had to the letters and figures marked thereon.

Figure 1 is a perspective and Fig. 2 is a sectional view taken lengthwise through the center of the machine and the letters and figures marked thereon refer to corresponding parts of both the figures.

A, Figs. 1 and 2, is the box which serves the double purpose of containing the washing solution and a base upon which to mount the other parts of the machine.

G G are two upright posts which receive at their top the two journals of the roller or top tree F.

B B are two pieces the upper ends of which pass loosely through the roller F near its ends and are prevented from dropping entirely out by pins pressing through their upper ends. Near their lower ends they are secured together by a bar of wood which also serves as a wrist to which the ends of the connecting rods H H are secured and by means of the connection of the other ends of said rods with the cranks *i i* a vibratory motion of said side pieces is produced. At the lower ends of the side pieces B B is the fluted roller C which revolves on its journals in suitable bearings in the ends of B B.

O is the endless apron located below the fluted roller C, said apron being supported by the rollers E E E, Fig. 2, and receiving a slow motion by means of a band and pulley from the shaft of the wheel *j*.

X X is a rake or rinser fastened to the connecting rods H H which also serves the purpose of returning the articles operated upon to the opposite ends of the box by thrusting them under the endless apron O.

The operation is as follows: Motion is communicated to the cranks and through them to the rods H H and to the side pieces B B and the roller C by means of the gearing as shown at J and L, the roller C being held against the endless apron by its own weight and also by the spiral springs as shown will be made to roll backward and forward over the endless apron producing a kind of beating motion against the apron or anything lying thereon by means of the projections of said roller striking forcibly against it as it rolls over it the endless apron meantime carrying the articles through under the roller as fast as the operator may choose to let them pass and by this means every part of a garment may be operated upon just as much as is necessary and no more. When they have passed through between the roller and apron and beyond convenient reach of the operator they are returned under the endless apron by means of the rake or rinser *x x* to be operated on again if found necessary.

The rollers E E E, Fig. 2, have not their bearings in the box A but in a frame one side of which is shown in Fig. 2. As will be seen the ends of the sides of said frame are cut off obliquely. Now a recess is made in the sides of the box by cutting away part of their thickness and the frame may be slid into and out of its place without disturbing any other part of the machine. This arrangement enables the operator to clean out the box when done washing which is a very great convenience in a machine and it also enables the operator by having two endless aprons upon separate frames to introduce an apron without slats upon it or, even a box containing small articles, when delicate and small articles are to be washed.

Having thus described the construction

and mode of operation of my improved washing machine I would state that what I claim as my invention and desire to secure by Letters Patent is—

The arrangement of the fluted roller *c* raker (or rinser) *x x* and endless apron O with respect to each other and the other parts of the machine hereinbefore described when operated in the manner and for the purpose specified.

FRAZEE AYRES. [L. S.]

Witnesses:

PATRICK CLARK,

GEORGE AYRES.