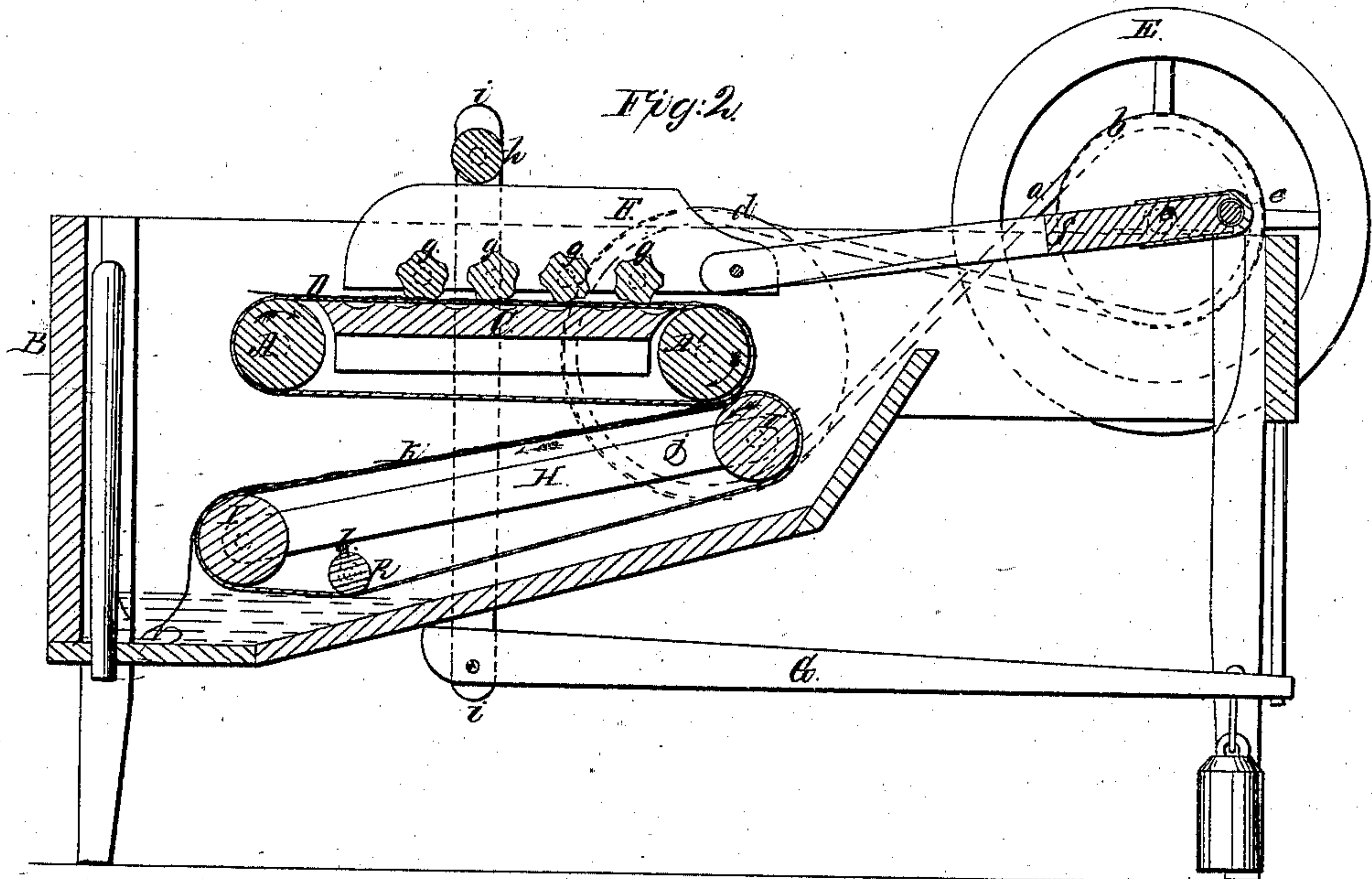
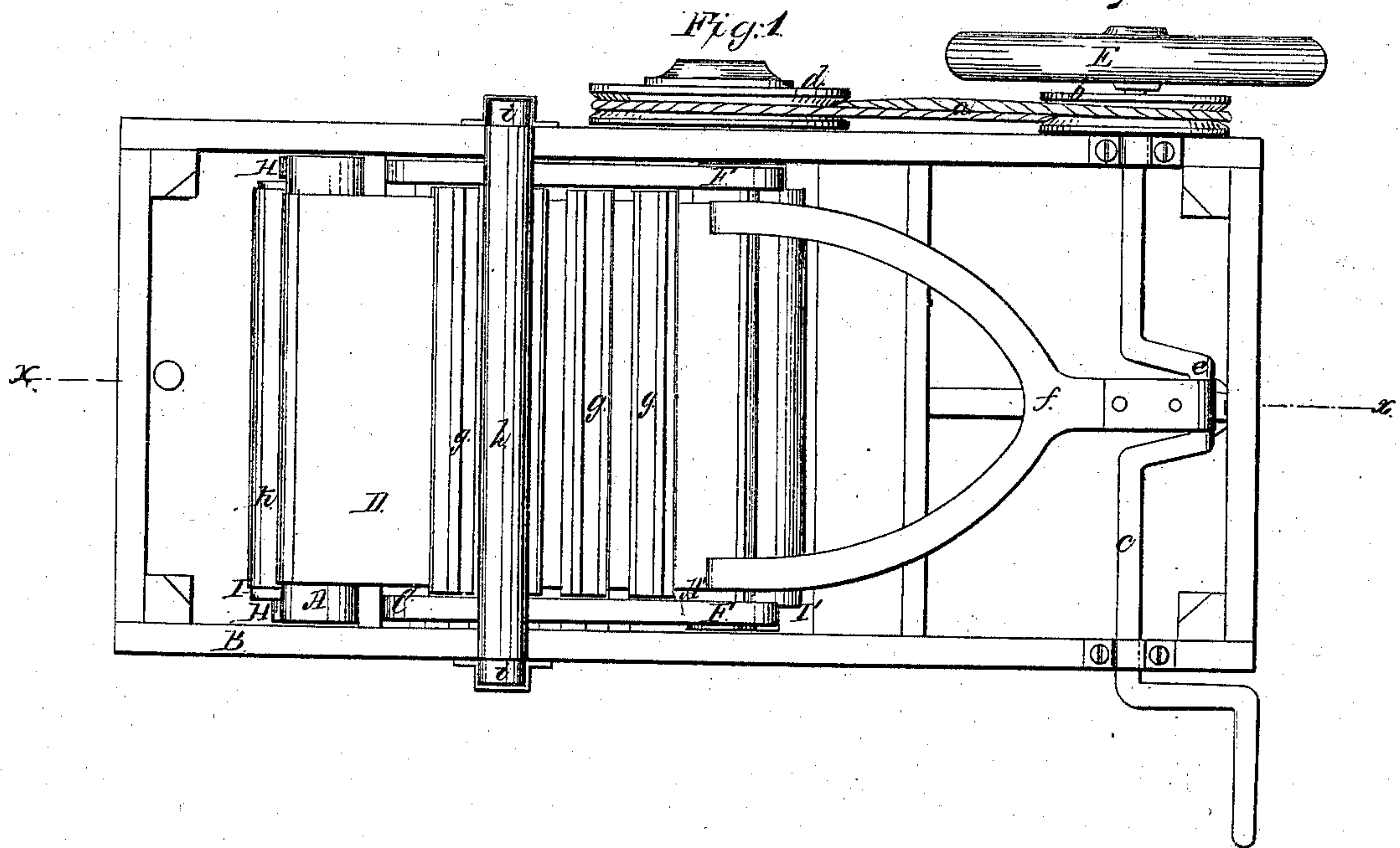


W. Brannan,

Washing Machine,

N^o 32,177.

Patented Apr. 30, 1861.



Witnesses:
J. W. Corbin
R. S. Spencer

Inventor.
Wm. Brannan,
per Munn & Co.
Attorneys.

UNITED STATES PATENT OFFICE.

WILLIAM BRANNAN, OF GLOUCESTER CITY, NEW JERSEY.

WASHING-MACHINE.

Specification of Letters Patent No. 32,177, dated April 30, 1861.

To all whom it may concern:

Be it known that I, WILLIAM BRANNAN, of Gloucester City, in the county of Camden and State of New Jersey, have invented a new and Improved Washing-Machine; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, forming part of this specification, in which—

Figure 1 represents a plan or top view of my invention. Fig. 2 is a longitudinal vertical section of the same, the line x, x , Fig. 1, indicating the plane of section.

Similar letters of reference in both views indicate corresponding parts.

The object of this invention is to clean the clothes by passing them on a movable endless apron, through under a reciprocating roller frame, for the purpose of rubbing them and by squeezing the same between one of the rollers, carrying the endless apron, and between a gravitating frame with two rollers carrying an endless apron in such a manner that the inner roller of the gravitating frame bears against the inner roller carrying the first endless apron by the gravity of the other roller in said gravitating frame, the whole being so arranged, that by this combined action the washing of the clothes is effected in a superior and easy manner and with a small quantity of water.

To enable those skilled in the art to make and use my invention I will proceed to describe its construction and operation with reference to the drawing.

The rollers A, A', are arranged in the tub B, the bearing of said rollers being in the sides of the tub. The space between these rollers is filled out by a stationary platform C, and an endless apron D, which is stretched over the two rollers A, A', passes close over the upper corrugated surface of said platform. A rotary motion is imparted to the roller A', by a belt a , which is stretched over a pulley b , on the driving shaft c , and over a pulley d , on the end of the axle of the roller. A fly-wheel E, on the driving shaft serves to equalize the motion of the working parts of the machine, and a crank e , in the middle of the driving shaft connects by a forked connection rod f , with a frame F, which contains a series of fluted rollers g . These rollers rest on the platform C, being kept down by a roller h , that bears on the top edges of the side pieces of the

frame F, and which has its bearings in two vertically sliding standards i , which are depressed by a weighted lever G.

Situated in the lower part of the tub is the gravitating frame H, which forms the bearings for the two rollers I, I', and which is secured to the sides of the tub by means of pivots j , in such a manner that the weight of the roller I, causes the roller I', to bear against the roller A', with considerable force. To effect this purpose, the pivots j , are placed close to those ends of the frame H, which form the bearings for the roller I', and it is obvious that by increasing the length of those arms of the frame which form the bearings for the roller I, and also by increasing the weight of this latter roller the force with which the roller I', bears on the surface of the roller A', can be increased at pleasure. An endless apron K, is stretched over the rollers I, I', and the friction between the endless apron D, and said apron at their point of contact between the rollers A', and I', causes the rollers I, I', to rotate and the apron K, to travel in the direction of the arrows marked thereon in Fig. 2. The required tension of the apron K, may be insured by a roller k , which has its bearings in two standards l , secured to the lower edges of the gravitating frame H.

The operation is as follows:—A small quantity of water is poured into the tub, the shape of which is such that a small quantity of water is sufficient to insure the required depth and one piece of cloth after the other is now taken up and its end placed on the apron D, right over the roller A. By the motion of this apron the cloth is carried through between the corrugated platform C, and the reciprocating roller frame F, and by the action of this frame the cloth is rubbed. The pressure exerted by the roller frame on the cloth is regulated according to the nature of the fabric by shifting the weight on the lever G. After the cloth has thus been rubbed, it is carried, by the action of the apron D, down between that apron (D) and the apron K, and in passing through between the point of contact between these aprons, the dirt is squeezed out and the cloth is deposited at the bottom of the tub perfectly clean, or if it should be necessary the same piece may be passed through the machine more than once, and after it is considered clean, it is rinsed in fresh water, wrung out, and hung up for drying. A

very large quantity of clothes can thus be washed in a short time with little exertion and without the slightest injury to the fabric.

5 Having thus fully described my invention what I claim as new and desire to secure by Letters Patent is:—

The combination of the yielding reciprocating roller frame F corrugated platform

C and endless belt D, with the yielding 10 gravitating frame H and endless belt K, substantially in the manner and for the purpose herein shown and described.

WILLIAM BRANNAN.

Witnesses:

I. H. BANKS,
H. H. BANKS.