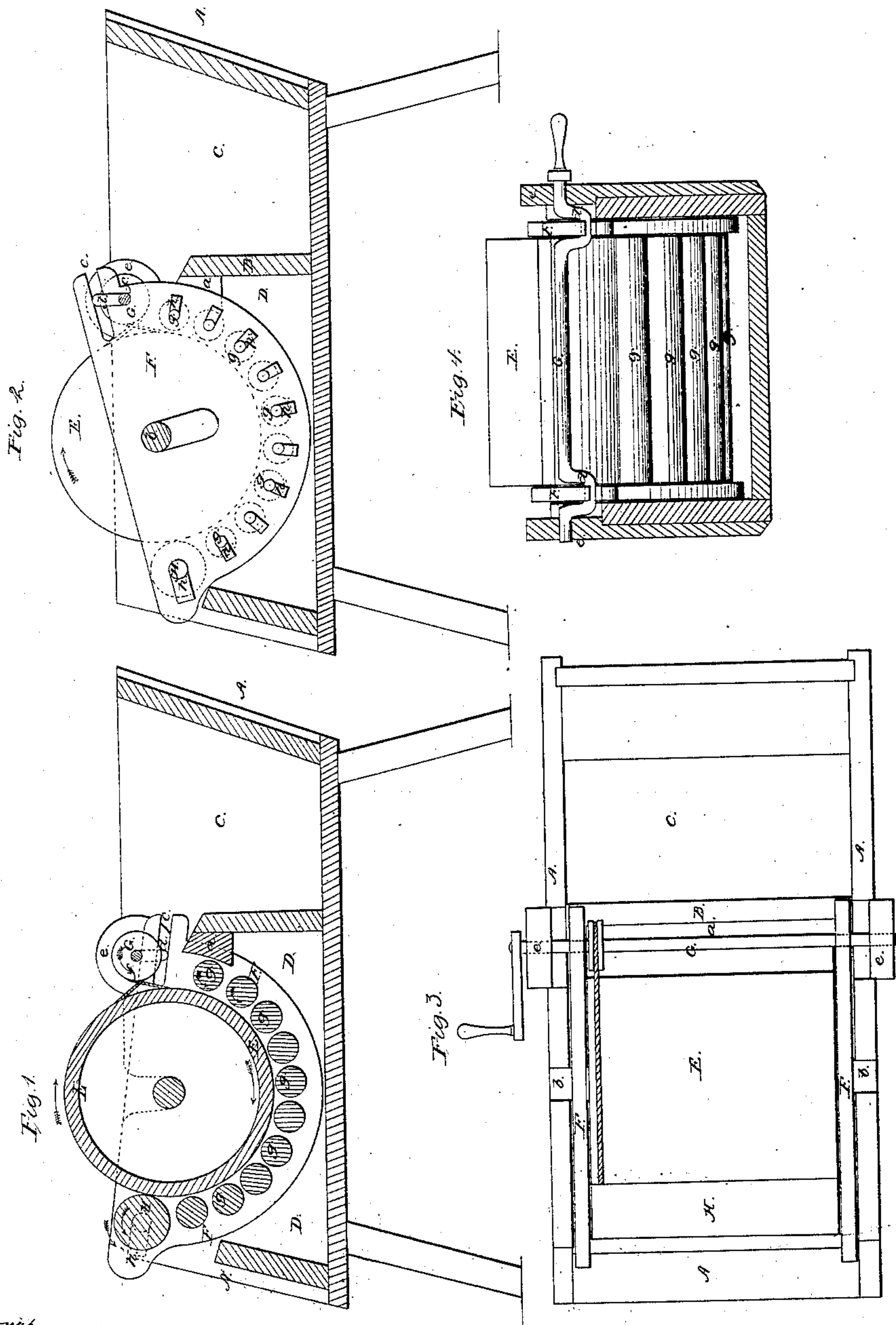


J. B. Winchell,

Washing Machine,

N^o 45448.

Patented Dec. 13, 1864.



Witnesses:
R. J. Campbell.
E. Schuyler.

Inventor:
J. B. Winchell.
by his Atty.
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UNITED STATES PATENT OFFICE.

J. B. WINCHELL, OF CHICAGO, ILLINOIS.

IMPROVED WASHING-MACHINE.

Specification forming part of Letters Patent No. 45,418, dated December 13, 1864.

To all whom it may concern:

Be it known that I, J. B. WINCHELL, of Chicago, Cook county, State of Illinois, have invented a new and Improved Washing and Wringing Machine; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a longitudinal section of my machine, showing the forward part of the roller-frame depressed. Fig. 2 is a sectional view of the machine, showing the front part of the roller-frame elevated. Fig. 3 is a top view. Fig. 4 is a vertical transverse section showing the application of the double crank-shaft to the roller-frame.

Similar letters of reference indicate corresponding parts in the several figures.

The object of my invention is to combine an oscillating bed of rollers with a rotating cylinder in such manner that the articles passed over said bed of rollers will be conducted through the water in the wash-tub, and at the same time subjected to a squeezing and a rubbing action, as will be hereinafter described.

Another object of my invention is to combine with an oscillating frame and a rotating cylinder a rotating drum, which latter is so arranged and applied as to receive the washed articles as they emerge from the tub and wring the water out of them, as will be hereinafter described.

Another object of my invention is to apply the contrivances for washing within a tub or box, which has a soaking and rinsing compartment and a washing compartment, which are separated from each other by a division, over which the articles are passed to be washed, as will be hereinafter described.

To enable others skilled in the art to make and use my invention, I will describe its construction and operation.

In the accompanying drawings, A represents the wash-box, which is constructed with vertical sides and inclined ends, as shown in Figs. 1 and 2. This box is divided into two apartments by means of a partition, D, which extends up from the bottom of the box a short distance, and has a narrow strip, a, secured along its upper edge, which forms a kind of shelf and prevents the articles to be

washed from being carried down under the rocking bed of rollers, as will be hereinafter further explained. The division B forms two apartments, C D, one of which, C, is to receive the articles for soaking preparatory to washing them, and the other, D, is to receive the contrivances for washing and wringing the articles. E represents a cylinder, which is nearly equal in length to the width of the box A, and which may be of any convenient diameter. This cylinder is supported by means of a central shaft, b, the ends of which rest in open bearings cut in the sides of the box A, as shown in Fig. 3, so that the cylinder can be lifted out of its bearings at pleasure. The shaft b of cylinder E passes through two semi-cylindrical side pieces, F F, at the ends of the cylinder E, and hence these side pieces are allowed to have an oscillating motion upon the cylinder-shaft b, which motion is communicated to them by means of a crank-shaft, G, the cranks d d of which play in slots c c, which are formed in projections of said side pieces, as shown in Figs. 1, 2, and 4. This crank-shaft G is supported in bearings e e and carries a grooved pulley, f, over which a band passes, which, being crossed and passed around the cylinder E, communicates a rotary motion thereto, at the same time that the cranks give a rocking motion to the side pieces, F F. These side pieces, F, constitute a frame for supporting a series of small rollers, g g g, and also a drum, H, the former of which are arranged concentrically to the axis of their cylinder, toward which they are forced by means of springs h h, acting upon their ends, as shown in Fig. 2. The drum H is likewise acted upon by strong springs h' h', which force it toward the surface of the cylinder E, but allow it to yield backward when anything passes between it and the cylinder. The end of the wash-box, beneath this drum H, is arranged in such relation to it as to allow the articles which pass over it, during the operation of washing and depriving the articles of water, to fall outside of the wash-box, yet it will be seen that said drum is arranged in such relation to the smaller rollers g as to take the articles from these rollers and, after squeezing the water out, discharging the articles into a basket or other receptacle placed at the end of the machine to receive them.

The springs which act upon the rollers and

force them toward the large cylinder may be made of metal or of rubber, and they should be sufficiently elastic to allow all the rollers to yield and accommodate themselves to articles of different sizes which pass between the rollers *g* and the surface of the cylinder *E*.

To perform the operation of washing and wringing with my machine, the cylinder *E*, with its rolling bed and wringer, are rotated in the direction indicated by the arrows in Fig. 1, and the articles to be washed are drawn out of the soaking tub *C* and introduced, one at a time, between the roller *g* nearest the ledge *a* and the cylinder *E*. As the articles are drawn over the bed of rollers *g* these rollers yield and accommodate themselves to the size of the articles, and also roll backward and forward with a rapid motion, so that as the articles pass down into and through the water the dirt is all washed out by a rubbing, rolling, and pressing action of the rollers upon the articles. As the latter emerge from the water they are received between the drum *H* and the cylinder *E* and the water is squeezed out, so that when the articles leave the machine they are ready for rinsing or drying. As the rollers *g* do not extend down to the bottom of the tub, and as they do not violently agitate the water

therein, it will be seen that the dirt will fall as rapidly as it is separated from the articles, leaving the water comparatively clean near its surface. As the bed of rollers and the cylinder *E* may be operated by a number of contrivances, arranged either within the wash-box or on the outside thereof, I do not desire to limit myself to the means for giving motion to said devices, which I have herein described.

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

1. The application of an oscillating bed of rubbers, *g*, to a cylinder, *E*, substantially as described.

2. The rolling drum *H*, applied and operating in conjunction with the oscillating bed of rollers and cylinder *E*, substantially as described.

3. The arrangement of means, substantially as described, for reciprocating a series of yielding rollers or rubbers and turning a cylinder, as set forth.

J. B. WINCHELL.

Witnesses:

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