

W. M. Storm. Clothes-Wringer.

N^o 75707

Patented Mar. 17, 1868.

Fig. 1.

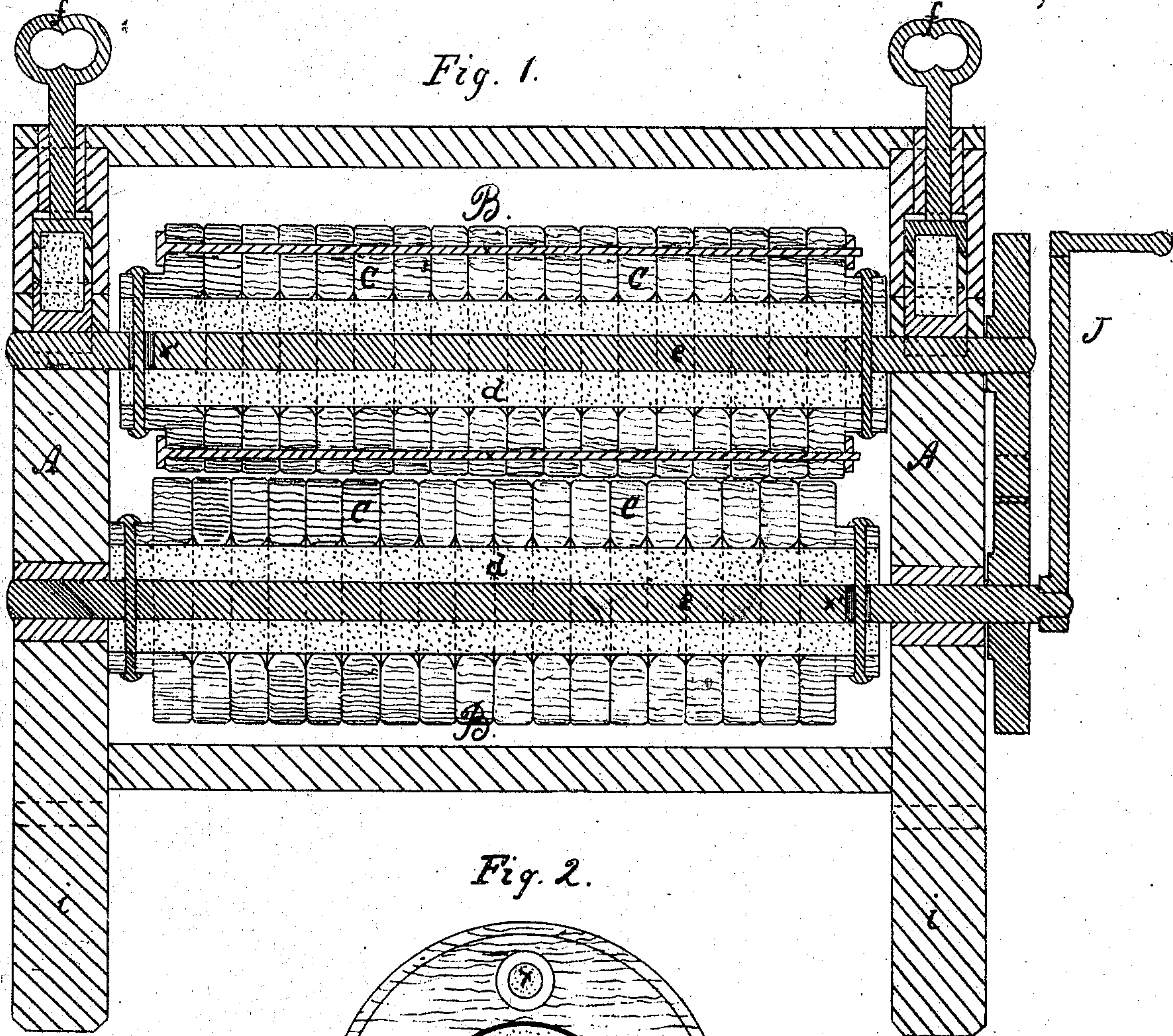
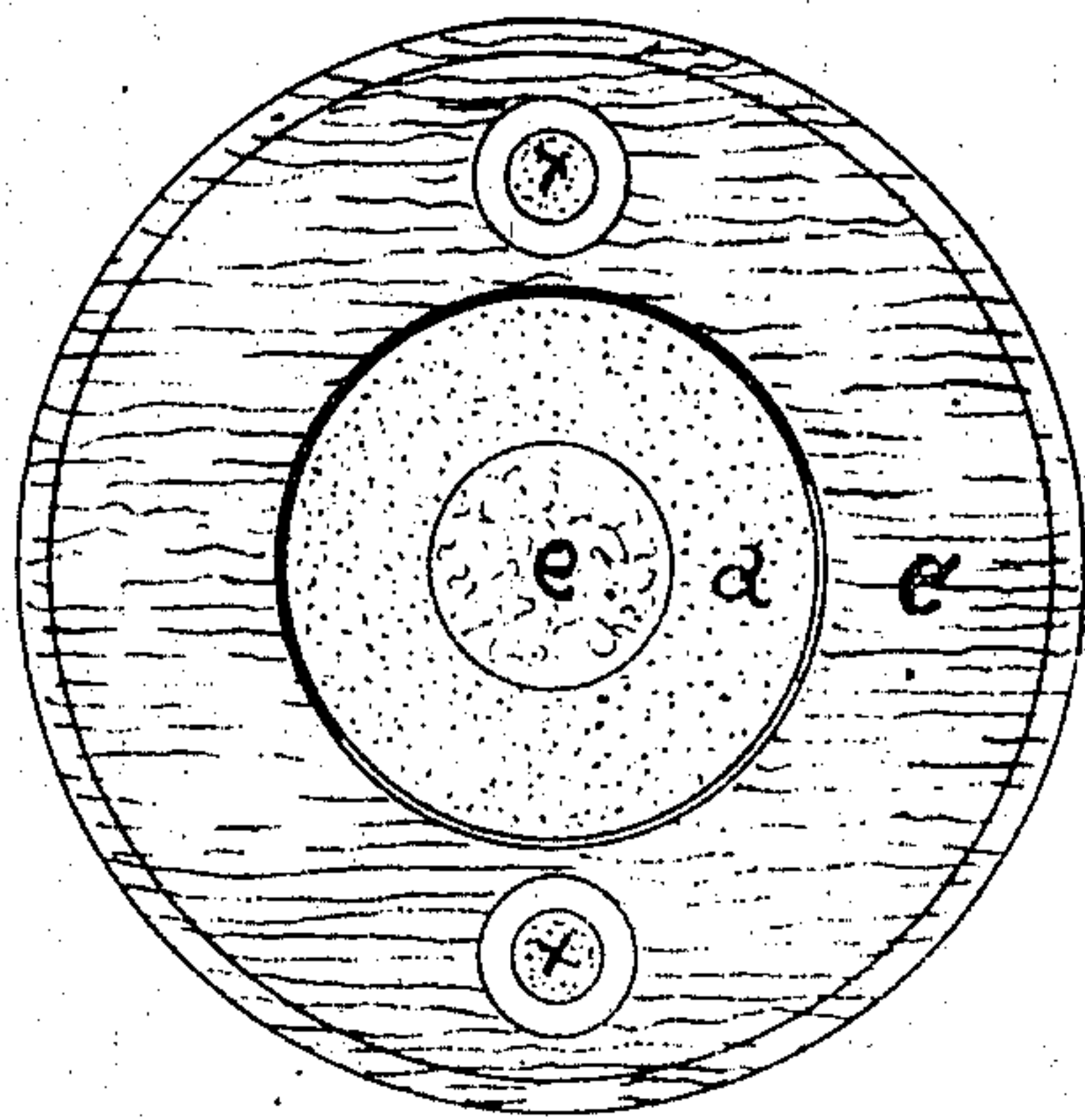


Fig. 2.



Witnesses.

Charles Smith

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WILLIAM MONT STORM, OF NEW YORK, N. Y.

Letters Patent No. 75,707, dated March 17, 1868; antedated March 10, 1868.

IMPROVED CLOTHES-WRINGER.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, WILLIAM MONT STORM, of the city and State of New York, have invented a certain new and useful Machine for Wringing Clothes, of which the following specification, in connection with the accompanying drawings, embraces a full and clear description.

As is well known, the most popular "wringers" of the present day depend upon the use of two "made-up" rolls of India rubber, not only costly in the first instance, both in regard to material and manufacture, but of little durability; the rolling action upon the clothes, aided by the heat and soap in the water to be expressed from the latter, too frequently causing the rolls to blister on their exterior and peel off.

My device is intended to obviate these defects and others, while at the same time reducing the cost of an effective wringer, by employing rollers composed of a series of annular disks, of wood, metal, or other comparatively inelastic material, with an elastic bushing, the series being mounted or "strung," so to express it, on a rigid shaft, and thus, as a whole, constituting an elastic or flexible roll. For further explanation I will now refer to the accompanying drawing, of which—

Figure 1 represents a vertical central section, reduced from full size.

Figure 2 one of the sections or disks, full size, of which my roll is composed, as shown in fig. 1.

A A is a frame, of any ordinary or convenient form, supporting the rolls, &c. B B are the rolls, composed, as before stated, of a series of disks, as *c c c c*, having an elastic bushing, *d d*, through which is sheathed a rigid shaft, *e*. The bushing *d* may be a thick India-rubber tube, which may be continuous the entire length of the roll, or divided into sections corresponding with each disk *c*. The terminal disks of each roll are attached to the shaft *e*, and are compelled to rotate with it. To compel the intermediate disks to do so, rods *x x*, clamped to the terminal disks, as shown, pass through the entire series. The holes in each disk, through which the rods pass, are made larger than the latter, to permit the vertical, lateral, or other play of the disks, individually on their elastic bushing, and eccentrically to their bearing-shafts. Irrespective of the elasticity or flexibility of the "rolls," the shaft of one of the pair, say the upper one, should be provided with adjustable spring bearings, by which it may be "set" as a whole into more or less proximity with its counterpart, according to the texture of the fabrics that require wringing. One of many such devices is shown on fig. 1, but demands no special explanation, further than, perhaps, that the turning of the set-screws *f* adjusts the roll in the respect mentioned.

As the upper and lower rolls, fig. 1, are supposed to be counterparts, it is considered unnecessary to show the rods *x x* in the latter on the drawing.

I propose to make the disks *c* of lignum-vitæ or any other durable wood, not liable to check. They may be made of metal, say zinc, either cast or "struck up." In either case the disks would be "freed" from each other, except near their peripheries, and these portions by attrition will constantly, during use, adjust themselves.

The legs *i* of the frame of the wringer are supposed to be provided with some proper kind of clamps, for fastening it to a wash-tub or its substitute.

For ease and efficiency of action in a "wringer," the greater the diameter of the rolls within a certain extent, the better it would be; but if this diameter is to be obtained, as it must be, by the use of more rubber, as in the ordinary rubber rolls, it much enhances the expense, and hence the rolls of wringers in the market are made too small. By my device this is obviated.

In the case of a wringer with rubber rolls, as now made, or any other, the elasticity of the rolls to pass over buttons, inequalities in the folds of the fabric, &c., is only called into action at the points of contact, and the range of this elasticity is more than supplied by my elastic bushing, whereas the elasticity, as a mass, of the ordinary roll entirely of rubber, is wasted. Hence by my device I get an efficient wringer with larger rolls at far less expense. My bushing has to perform the function of a spring only.

Operation.

The machine being clamped in place, and the rollers adjusted according to the fabrics to be wrung, the latter are entered between the rolls, and by turning the crank J, they are passed through and come out in a condition ready to be hung up to dry. If, when the machine is at rest, the disks on the counterpart rolls stand opposite each other and very slightly apart, then, owing to the resistance to their rotation offered by the clothes,

a certain amount of torsion will be produced, of the India-rubber bushing, and to that extent a shortening on the shaft of it, and of the roll as a whole, will take place. To permit this, the pin passing through the hubs of the terminal disks and the shaft, traverses in a slot in the latter, as shown at $x' x'$, and this being the case at one end only of each roll, and also the end non-correspondent to that of the other, the disks will be forced into such position as to "break joints" somewhat as shown in the drawing; but I do not consider this essential to the proper action of the wringer.

I have anticipated that a wringer of tolerable efficiency may be produced with only one roll divided into disks, the other being a plain cylinder over an elastic bushing, or even fixed upon its shaft, without the interposition of any bushing whatever; but of course that both rolls should be as before described, is preferable.

Having now fully described the nature of my invention, what I claim therein, and desire to secure by Letters Patent, is—

Constituting the roll or rolls of a series of inelastic annular disks, having an elastic bushing of India rubber or its equivalent, the whole mounted on a shaft or shafts, and operating substantially in the manner and for the purpose described.

WM. MONT STORM.

Witnesses:

THOMAS SMITH,
LOUISE SMITH.