J. F. & S. W. Palmer.

Clothes Wringer.

No. 90,185. Patented May 18, 1869.

Fig. 3.

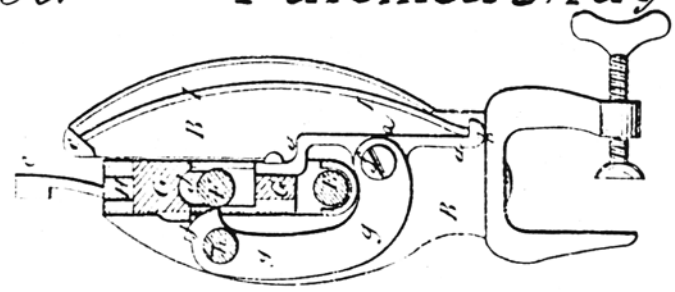


Fig. 2.

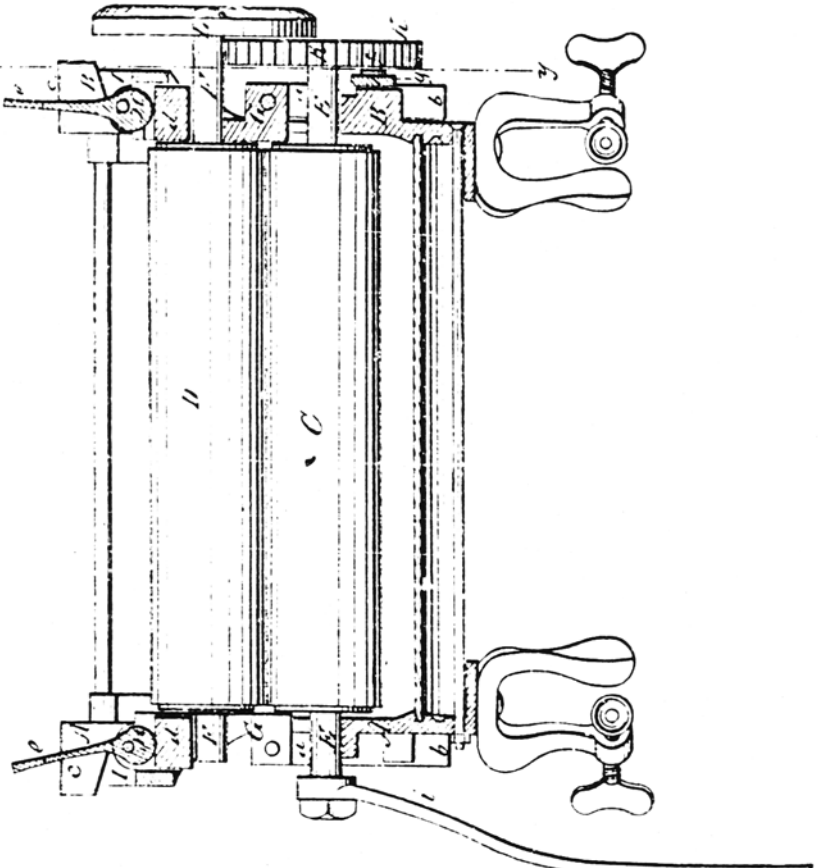
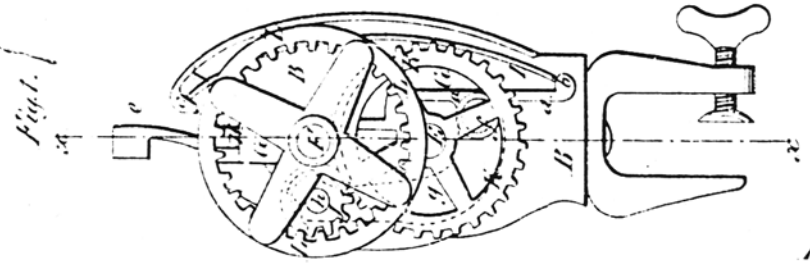


Fig. 1.



Witnesses
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S. W. PALMER AND J. F. PALMER, OF AUBURN, NEW YORK, ASSIGNORS TO S. W. PALMER AND C. M. PALMER, OF SAME PLACE.

Letters Patent No. 90,185, *dated May* 18, 1869.

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 we, S. W. PALMER and J. F. PALMER, of Auburn, Cayuga county, New York, have invented a new and improved Wringer; and we do hereby declare that the following is a full, clear, and exact description thereof, which will enable others 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 represents an end view of our improved wringer.

Figure 2 is a vertical longitudinal section of the same, taken on the plane of the line *x x*, fig. 1.

Figure 3 is a vertical transverse section of the same, taken on the plane of the line *y y*, fig. 2.

Similar letters of reference indicate corresponding parts.

This invention relates to a new clothes-wringer, which is so arranged that the adjustable upper roller can be readily moved up or down, and always remain in gear with the lower roller, and that, by simple means, considerable spring-power will be obtained.

The invention consists, first, in a novel manner of hanging the pinion that transmits motion from the toothed wheel of the lower roller to the internal gear-wheel of the upper roller, so that it will be in proper connection with the said wheels, whatever may be the position of the adjusted upper roller.

The invention also consists in the use of upright flat springs, interposed between fixed lugs of the frame and pendent arms of the upper roller, to hold the latter down upon the lower roller with all power that can be obtained by such springs. By placing the springs in an upright position, and causing them to act with the ends, more power will be obtained, and they will not be as apt to become worn as the springs usually applied, and to give a more uniform pressure, or spring-power at all positions of the upper roller, as the springs give nearly a uniform resistance at all degrees of deflection from a straight line.

They thus give a sufficient pressure on thin fabrics that pass between the rolls, without giving the excessive heavy pressure on very thick articles, making the wringer self-adjusting, running equally easy on thick as well as on thin articles.

A, in the drawing, represents one of the end-plates, or supports of our improved wringer.

B is the other end-plate.

C, the lower roller.

D, the upper roller.

Both these rollers are made of rubber, or other suitable material, mounted on metallic axles E F, respectively, as shown.

The axle of the lower roller C has its bearings in, and is fitted through slots of the plates A B.

The upper axle F is also fitted through slots of the plates A B, and through slotted bars, or plates G G, that slide in the grooved faces of the plates A B.

From each plate, G, projects downward an arm, *a*, having a hook, or flange, *b*, at the lower end, to receive the lower end of an upright flat spring, I, whose upper end fits under a lug or ear, *c*, of the plate A or B, as shown in fig. 3.

The springs thus serve to draw down the plates G with considerable power.

In the upper slotted part of each plate G is pivoted a cam, H, bearing with its lower edge upon a block, *d*, that rests upon the axle F, as shown.

The springs I, drawing the plates G down, carry, therefore, also by means of the blocks *d*, the axle F and roller D down upon the lower roller.

Each cam H has a handle, *e*, which can be turned at will to more or less lower the sliding block *d* in the plate G, and to, therefore, force the rollers more or less close together.

The object of these cams is to remove pressure from the rolls when the wringer is not in use.

To the arm *a* of the plate G, that is on the plate B, is pivoted, by a pin, *f*, and below the axle E, a curved plate, *g*, whose upper end has a segmental edge that is in constant contact with the axle E.

On an arbor, *h*, projecting from the plate *g*, is fitted a pinion, J, that meshes into the teeth of a toothed wheel, K, mounted on the axle E, and into those of an internal gear-wheel L, mounted on the axle F.

The pinion thus serves to transmit motion from the lower to the upper roller, the latter being turned by means of a handle, *i*, or otherwise.

As the upper shaft is lowered, by means of the cams H, its wheel L is carried nearer to the axle E, and its centre is almost in line with the pinion E.

At the same time, however, the plate *g* is swung outward by the shaft F, working on the segmental edge *j*, and the pinion is thereby kept in gear with the broader part of the wheel L, while it will also move further outward on the wheel K, to make up for its downward motion with the plate G. It is thus always kept in proper gear, whatever its position may be.

Having thus described our invention,

What we claim as new, and desire to secure by Letters Patent, is—

1. The upright flat springs, when employed on the ends of a wringer, substantially as herein shown and described, to operate as set forth.

2. The pivoted arm *g*, attached to the sliding plate G, and carrying the pinion J, when provided with the segmental edge *j*, for keeping the pinion in constant gear, as set forth.

3. The combination of the axles E F and gear-

wheels K L, with the pinion J and pivoted arm *g*, all combined and operating substantially as herein shown and described.

4. The combination of the handled cams H with the plate G and block *d*, for the purpose of removing and putting on the pressure quickly and easily, when arranged and made substantially as herein shown.

S. W PALMER.
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Witnesses:
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JAMES A. WILSON.