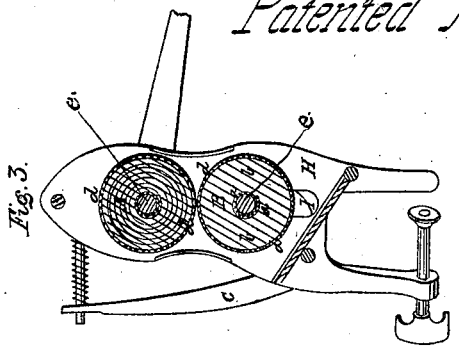
J. F. Pond,

Wringer,

No. 51,862. Patented Jan. 2, 1866.

Fig. 3.



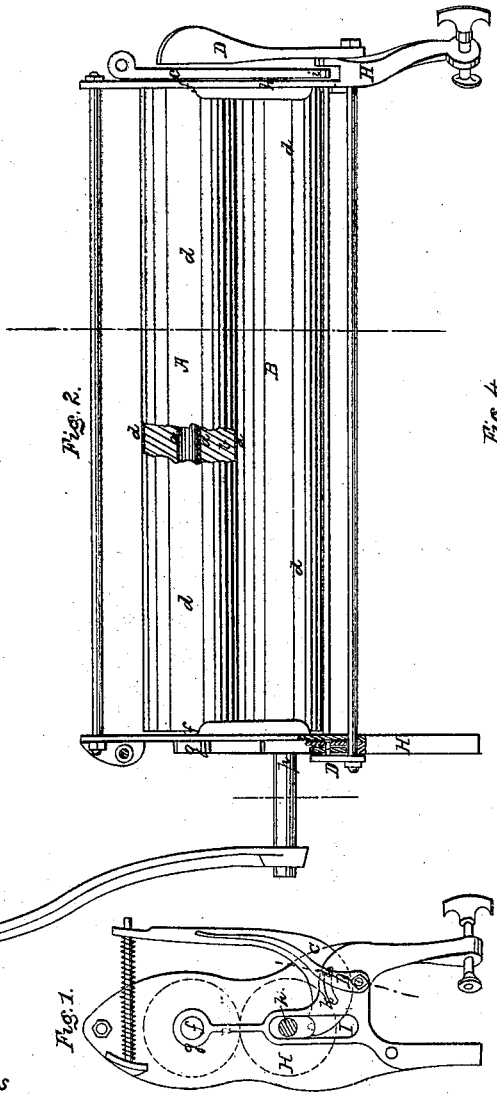


Fig. 2.

Fig. 4.

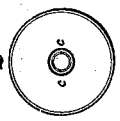


Fig. 1.

Witnesses
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UNITED STATES PATENT OFFICE.

JOSEPH F. POND, OF CLEVELAND, OHIO.

CLOTHES-WRINGER.

Specification forming part of Letters Patent No. **51,862**, dated January 2, 1866.

To all whom it may concern:

Be it known that I, JOSEPH F. POND, of Cleveland, in the county of Cuyahoga, in the State of Ohio, have invented certain new and useful Improvements in the Mode of Manufacturing Elastic Vulcanized India-Rubber Rollers for Clothes-Wringers, and also in the construction of the frames for operating the same; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 represents an end view of the frame with the cam and spring levers for changing the fulcrum to vary the pressure of the rolls. Fig. 2 shows a side elevation of the clothes-wringer with a piece out of the top roll to illustrate the mode of making the rollers and fastening them on the iron shafts. Fig. 3 is a cross-section of the same, showing an end view of the rollers and mode of manufacturing.

The object of my invention is to manufacture elastic india-rubber rollers for clothes-wringers so that they may be permanently secured to the shafts and otherwise be substantial and durable; also, in so constructing the frames that different degrees of pressure can be instantly applied to the rollers.

My invention consists in placing canvas cloth within the inner portion of elastic india-rubber rolls, where they come in contact with the iron shafts to secure them to it and prevent the iron from corroding and acting on the rubber.

My invention further consists in so constructing the frames for clothes-wringers that cam-levers operate on the spring-levers and change the fulcrum, so that a greater or lesser degree of pressure can be instantly applied to the rollers, at the will of the operator, when a thick or thin substance is passed between them.

To enable others skilled in the art to make and use my inventions, I will describe them more fully, referring to the drawings, and to the letters marked thereon.

In manufacturing rollers for clothes-wringers, I take a straight rod, of iron, a trifle less than the shafts to be used, and commence by winding a strip of gummed canvas, *a a*, around the rod, having the width of the canvas *a* sufficient to lap over the edge of a sheet of prepared rubber, *b b*, which is placed in between the canvas after it has reached round the rod, so that by winding the sheet of rubber tight it compresses the lap of the canvas between two layers and holds it firmly. The sheet-rubber *b* is then wound around until a sufficient quantity is put on to make the required size of the roll, when a coating, *d d*, of the same gummed canvas is cemented over the outside of the roller, the lap of which should be in the direction to correspond with the lap of the inner canvas, *a a*, so that the wringing of the rubber by action on the surface of the rollers will have the tendency to tighten the rollers on the shafts, as seen in the top roll of Fig. 3.

When the elastic rollers are manufactured, and the centers left open to put the shafts in, I use copal varnish or other substance which is impervious to water to cement them, by saturating the inside of the canvas tube and the rod of iron to be used for the shaft, and force the shaft in and leave the varnish to dry and harden. The canvas *a* coming in contact with the iron will not become loose in places on the shaft by the drawing or twisting of the elastic rubber, as is the case when nothing but the clear rubber is used, and if it ever becomes loose on the shaft it must loosen the entire length, as the canvas tube *a* makes that portion of the roller non-elastic, so that it cannot yield and stretch away from the shaft in places.

In constructing my frame for clothes-wringers I have my upper roller, A, in a stationary position, the journals *f f* running in boxes *g*. The journals *h h* of the lower roller, B, pass through an elongated opening, I, in the frame H, and are supported on the ends of angular levers C, with bearings on them, which move up or down in the openings I I. The angular spring-lever C rests and operates upon the projecting bearing *i* of the cam-lever D, which is made to move laterally in a straight slot, *k*, in the lower angle of the spring-lever C, so that by moving the cam-levers the fulcrum of the spring-bearers is varied and a greater degree, or a lesser, of pressure is instantly obtained,

so that when wringing out clothes, (and large and small articles present themselves promiscuously,) the operator can change the pressure instantly to suit the various articles.

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

1. The application of canvas cloth or other material for lining, covering, and protecting the inner surface of india-rubber clothes-wringer rollers, and to serve as a fastening to secure the rolls to the shaft, substantially as herein described.

2. The cam-lever D, with its bearing *i*, operating in the slot *k* of the spring-lever C, for the purposes herein set forth.

JOSEPH F. POND.

Witnesses:
J. B. WOODRUFF,
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