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C. A. EISENHART & E. E. LAUER.

Wringing-Machine.

No. 163,645. Patented May 25, 1875.

Fig. 1

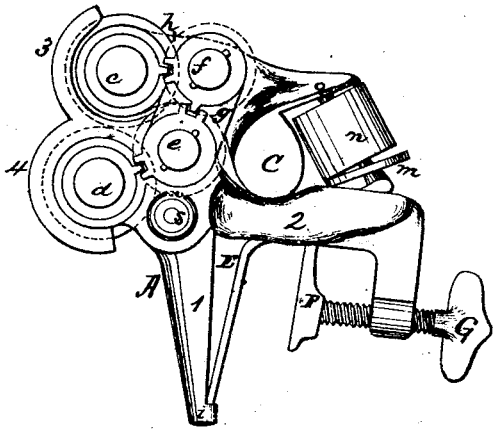

Fig. 2

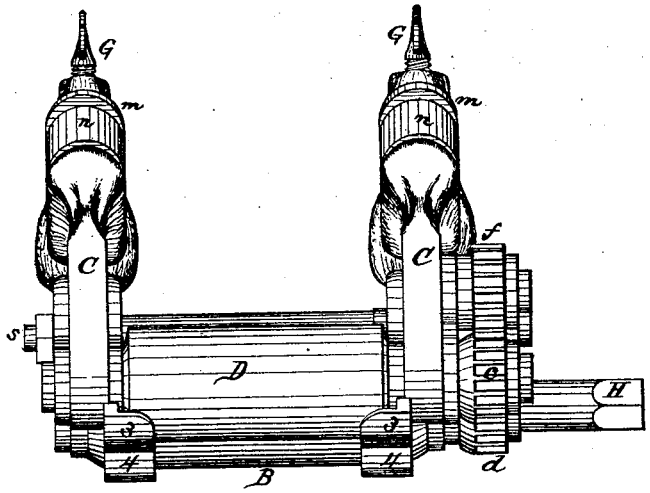

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Fig. 3

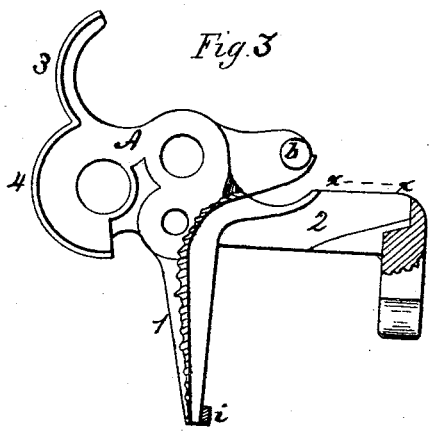

Fig. 4

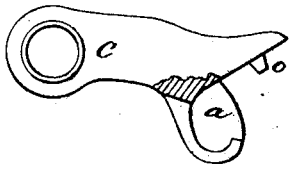

Fig. 6

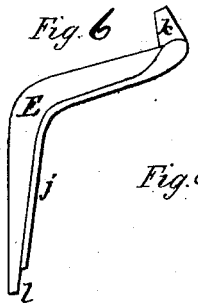

Fig. 8

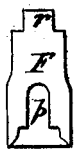

Fig. 9

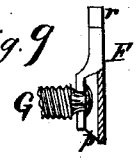

Fig. 5

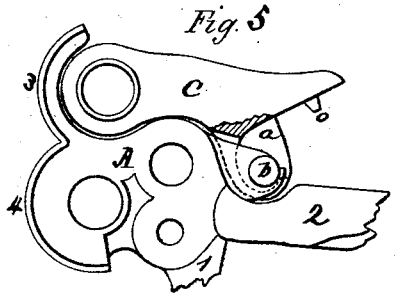

Fig. 7

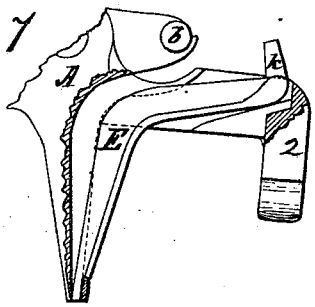

Fig. 10

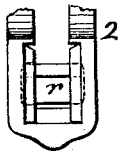

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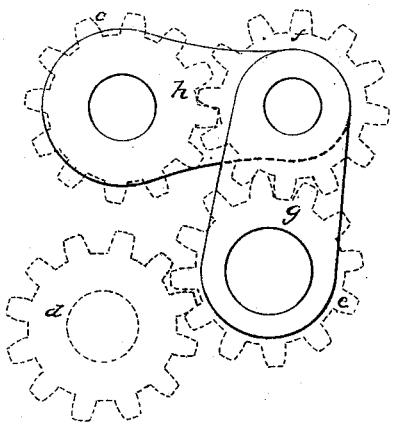
Fig. 11.



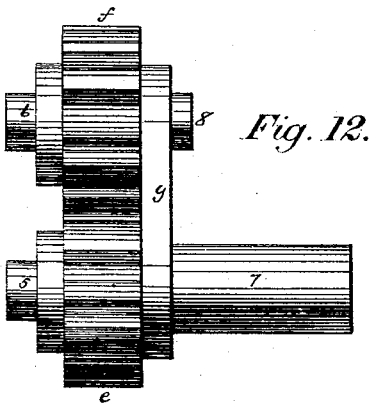
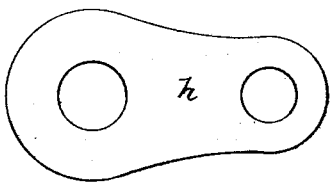


Fig. 12.

Fig. 13.



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UNITED STATES PATENT OFFICE.

CHARLES A. EISENHART AND EDMUND E. LAUER, OF YORK, PA.

IMPROVEMENT IN WRINGING-MACHINES.

Specification forming part of Letters Patent No. **163,645**, dated May 25, 1875; application filed September 23, 1874.

To all whom it may concern:

Be it known that we, CHARLES A. EISENHART and EDMUND E. LAUER, both of York, in the county of York and State of Pennsylvania, have invented certain Improvements in Clothes-Wringers, of which the following ing is a specification:

This invention consists in gearing for connecting the rolls at all times; in the manner of jointing the bearings of the upper roll; in the construction of the spring for exerting pressure upon the upper roll, and in the construction of the clamping-jaws, as hereinafter set forth and claimed.

In the accompanying drawings illustrating our invention, Figure 1 is a side elevation. Fig. 2 is a top-plan view. Fig. 3 is an elevation of the inner face of one of the lower castings with the wall of the clamp-jaw groove partly broken away. Fig. 4 is a side elevation, partly sectional, of one of the bearings for the upper roll. Fig. 5 is a side elevation of the upper-roll bearing, partly in section, and part of the lower casting, showing the manner of jointing the two. Fig. 6 is a side view of the main clamp-jaw, and Fig. 7 is a partly sectional view, showing the arrangement thereof in the lower casting. Fig. 8 is a rear elevation of the adjusting-screw plate or jaw; and Fig. 9 a sectional view thereof, showing the mode of attachment to screw. Fig. 10 is a top view at *x x*, Fig. 3, showing the arrangement of the head of the adjusting-screw plate in the lower casting. Fig. 11 is a plan view of the connecting-links with the gearing in dotted lines. Fig. 12 is an edge view of one of the links with pinions attached. Fig. 13 is a plan view of the other link.

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

The letter A represents the lower casting, made with a hollow leg, 1, an L-shaped leg, 2, also hollow and grooved, and fenders 3 4. B is the lower roll, having its bearings in said casting. C is the bearing, of cast metal, for the upper roll D. This bearing is jointed to the casting A by flanged ears *a*, placed on each side and fitting over gudgeons *b*, extending from a projection on the casting A, as shown in Figs. 3, 4, and 5. The rolls are rotated by means of pinions *c d* on their shafts, which are connected by stud-wheels *e f*. *g* is a plate or link for connecting pinions *e f*, said pinions revolving on arbors 5 and 6, projecting from the plate at right angles thereto. From the lower end of link *g* a similar arbor or pin, 7, extends through the casting A and is keyed, and at the upper end a short stud, 8, projects into a plate or link *h*. This link serves to connect the pinion *f* with pinion *c*, and has a hole in it to fit on the shaft of roll D. By thus gearing the rolls their rotation is not interrupted, for the pinion *f* will be carried along with the upper roll in its motions, and still preserve contact, and be in mesh with the other pinions, and by the use of the link connections, having the central joint at the pinion *f*, the gearing moves with great ease and flexibility, and much strain on the teeth and friction are avoided. E is the main clamping-jaw, constructed with lateral flanges *j*, a tapering projection, *k*, and a tongue, *l*. This jaw is somewhat of the shape of an obtuse angle, and fits in a grooved recess in the legs 1 and 2, as shown particularly in Fig. 7. As there seen, the tongue *l* fits in a socket, *i*, in the end of leg 1, and the projection *k* extends outside of leg 2. *m* is a metallic washer placed on projection *k*, and supporting a spring, *m*, which is held in place by contact with said washer and a lug, *o*, on the bearing *c*. F is the adjusting-screw clamp-plate, recessed and slotted at *p*, so as to be detachably secured to the adjusting-screw G, and having a shouldered head, *r*, which plays in the recessed leg 2 under the jaw E, as shown in Figs. 1 and 10. The screw G is fitted in a threaded boss on the the end of leg 2, and serves to adjust the plate F against a tub or elsewhere in securing the wringer for use. At the same time the head of the plate presses against the under side of jaw E, and by compressing the spring *n* increases the pressure on the bearing C, and, of course, the roll. The under surface of bearing C where the spring rests, and the surface of jaw E where the lug *k* is, are parallel, and hence, when pressure is exerted on the spring, the washer *m* distributes such pressure evenly and equally through the spring, so that the wear on said spring will be alike in all parts. The casting A, with all its parts, including bearings and fenders, is made

at one operation. So, also, is the bearing C, and thus there is no necessity for drilling, &c. The fender 4 is extended down to or beyond the vertical center of the lower roll, and thus prevents the clogging of the rolls by clothes catching in it, and also prevents the consequent injury to the clothes. H is the shaft of the lower roll extended to receive the operating handle. The two sides of the wringer are exactly alike, except, of course, in the application of the gearing, and the only bolt used in securing parts is the central bolt at *s*.

We are aware that three or more pinions have been used to transmit, uninterruptedly, motion to the rolls, but such gearing has not been connected by links, such as here shown. And, further, where four wheels or pinions are used, three of them are movable and tend to produce friction and clogging, thereby rendering the operation of the rolls uncertain and difficult. By our construction and arrangement of the gearing these difficulties are avoided.

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

1. In a clothes-wringer, the fixed pinions *d e*, movable pinions *c f*, links *g h*, and rolls B D, in combination with the jointed castings A C, substantially as and for the purpose described.

2. In a clothes-wringer, the bearing C, constructed with flanged ears *a*, fitting over and embracing gudgeons *b* on casting A, as herein shown and described.

3. The clamp-jaws E, constructed with flanges *j* and tongue *l*, in combination with legs 1 and 2, substantially as shown and described.

4. The bearing C of the upper roll in combination with the clamp-jaw E and spring *n*, substantially as and for the purpose described.

5. The combination, with the bearing C, spring *n*, and jaw E, of the plate F and adjusting-screw, substantially as and for the purpose described.

To the above specification of our invention we have signed our names this 21st day of September, A. D. 1874.

CHARLES A. EISENHART.
EDMUND E. LAUER.

Witnesses:
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