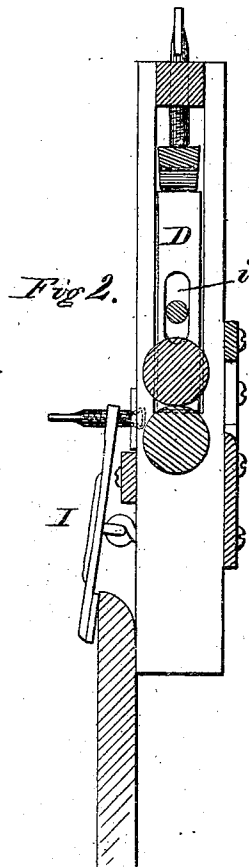
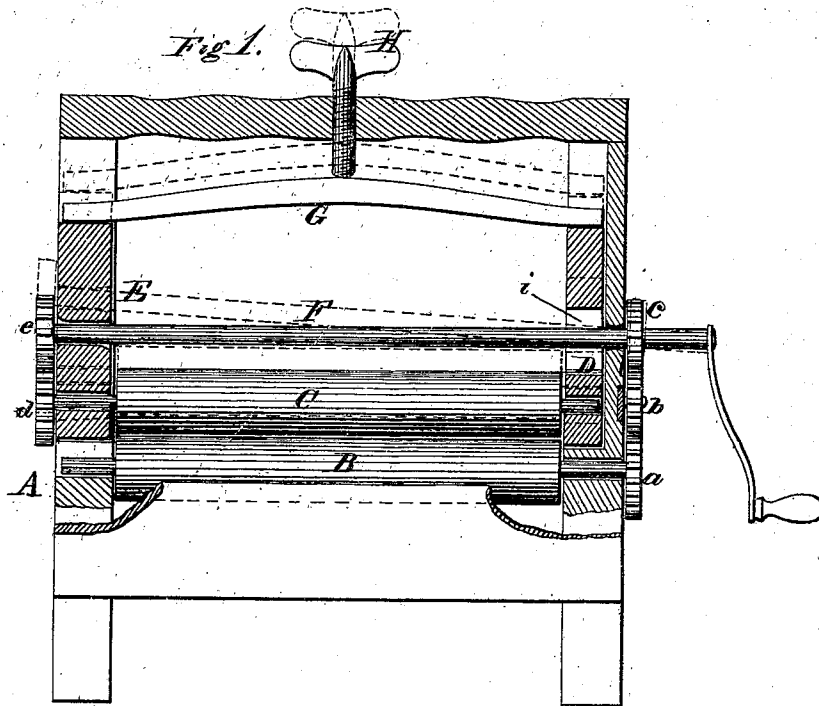


CHARLES H. BANGS.

Improvement in Clothes-Wringers.

No. 127,831.

Patented June 11, 1872.



Witnesses.

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UNITED STATES PATENT OFFICE.

CHARLES H. BANGS, OF FARMINGTON, MAINE.

IMPROVEMENT IN CLOTHES-WRINGERS.

Specification forming part of Letters Patent No. 127,831, dated June 11, 1872.

SPECIFICATION.

To all whom it may concern:

Be it known that I, CHARLES H. BANGS, of Farmington, in the county of Franklin and State of Maine, have invented certain Improvements in Clothes-Wringing Machines, of which the following is a specification, reference being had to the accompanying drawing.

My invention consists in a novel arrangement of gearing for operating the rolls of a clothes-wringer, which permits the two rolls to be separated to any desired extent and remain in full gear with each other.

Figure 1 is a longitudinal vertical section through my improved wringer, and Fig. 2 a cross-section of the same.

In the drawing, A represents the frame of the wringer, and B the lower roll, mounted therein in fixed bearings, and provided on its right-hand journal with a pinion, *a*, which gears into a pinion, *b*, mounted on a journal secured rigidly to the side of the frame, as shown in Fig. 1. C is the upper movable roll, having its respective journals mounted in blocks D and E, both of which are arranged to slide vertically in the frame in order to let the roller rise and fall, the left-hand journal of the roll being provided with a pinion, *d*, as shown. F is a longitudinal shaft mounted in the frame above the upper roll, and provided at one end with a hand-crank, L, and with a pinion, *c*, gearing into the fixed pinion *b*, and at its opposite end with a pinion, *e*, gearing into the pinion *d* of the upper roll. The right-hand end of shaft F is supported in a fixed bearing in the frame, but the left-hand end is mounted in the sliding block E, which supports that end of the movable roll, so that the end of the shaft rises and falls with the roll. Now, it will be seen that, as the right-hand end of the shaft is mounted in a fixed bearing, its pinion *c* must always remain in gear with the fixed pinion *b*, which drives the pinion *a* of the lower roll, and that, as the left-hand end of the shaft is mounted in the same sliding block as the end of the movable roll C, their pinions *d* and *e* cannot separate, but remain in gear unaffected by the rise and fall of the roll. When, therefore, the shaft is turned, motion is communicated from its pinion *c* through the pinions *b* and *a* to the lower roll, and from the pinion *e* on the movable end of the shaft to the pinion *d* on the upper movable roll.

In this manner it will be seen that a posi-

tive rotary motion is communicated to each roll separately, and the upper roll allowed to rise and fall without disengaging or interfering with the gear.

In the frame there is mounted an elastic bar, G, with its ends bearing on the blocks D and E, which carry the movable roll, and through the top of the frame there is inserted a thumb-screw, H, bearing on said bar, so that, by turning the screw, the roller may be forced down with any desired degree of pressure. The block D, it will be observed, is provided with a slot, *i*, through which the fixed end of the shaft F passes, so that the block can move up and down without hinderance.

For the purpose of attaching the wringer to a tub or washing-machine, I secure to each end of the frame A a lever, I, pivoted at its middle, and provided in its upper end with a thumb-screw, J, which has its inner end swiveled in a plate secured to the frame.

The wringer is attached in place by setting the frame against the inside of the tub, and allowing the lower ends of the levers to rest against the outside of the same, and then turning the thumb-screws so as to force the lower ends of the levers inward and clamp the edge of the tub between them and the frame, as shown in Fig. 2.

By means of a wringer thus constructed it will be seen that the upper roll C will automatically adjust itself to any varying thickness of the material being operated upon, whether that thickness is uniform or greater near one end of the rolls than at the other, and also that the gearing is so arranged as to be always in connection, as well as to give uniform motion to them, and to operate them easily.

Having thus described my invention, what I claim is—

1. The combination of the rolls B C, provided with gear-wheels on their opposite ends, and the sliding blocks E D with the shaft F, having gear-wheels on each end, and the pinion *b*, when arranged to operate substantially as described.

2. In combination with the above-named devices, I claim the spring-bar G, arranged to operate as set forth.

CHARLES H. BANGS.

Witnesses:

E. G. BLAKE,
EDWIN H. STEVENS.