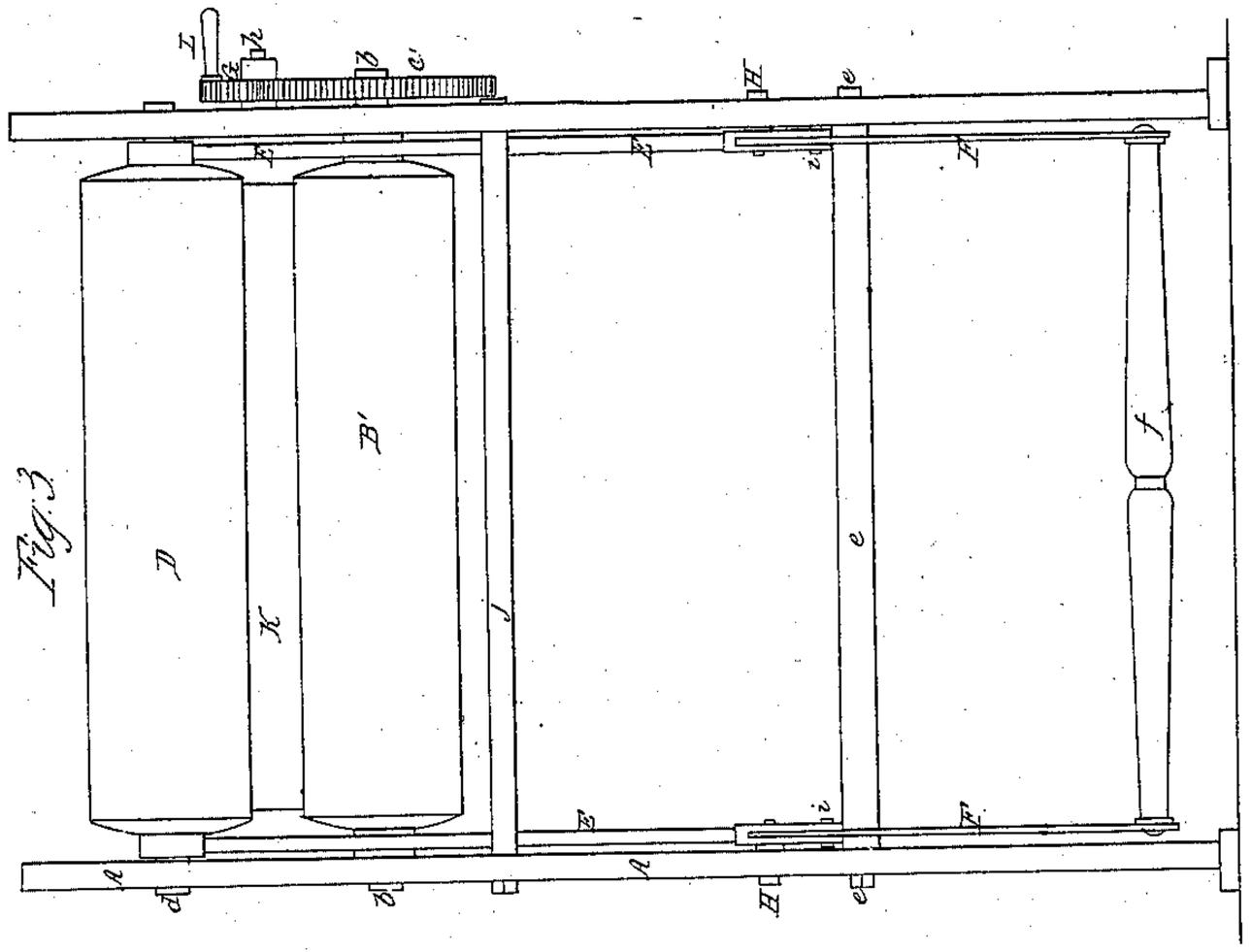
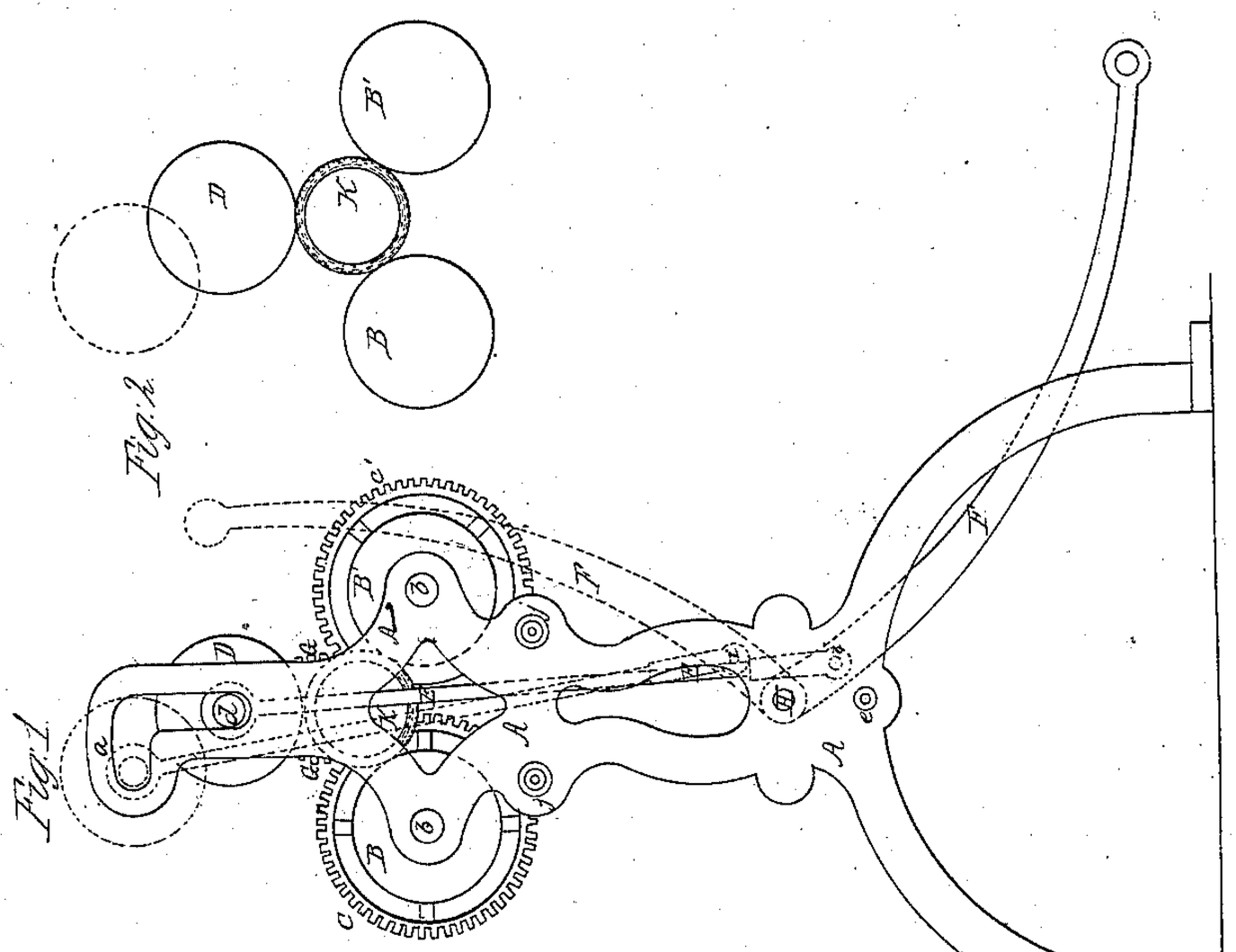
R. A. Stratton,

Mangle

No. 16,887. Patented Mar. 24, 1857.





Witnesses:
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UNITED STATES PATENT OFFICE.

RICHARD A. STRATTON, OF PHILADELPHIA, PENNSYLVANIA.

MANGLE.

Specification of Letters Patent No. 16,887, dated March 24, 1857.

To all whom it may concern:

Be it known that I, RICHARD A. STRATTON, of the city of Philadelphia and State of Pennsylvania, have invented a new and Improved Mangle; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing and to the letters of reference marked thereon.

My invention consists in arranging four rollers for mangling cloths in the following manner: Two of the rollers are placed with their centers in a line horizontally with each other, their surfaces being some distances apart, and are caused to turn in the same direction on journals, in suitable frames, by gearing. Above and between these two first rollers, I introduce a third roller, around which the goods to be mangled are wound. This third roller is independent of the frames and has a rotary motion imparted to it by the contact of its surface, or rather that of the goods wound around it, with the two first rollers. Directly above this third roller is a fourth, which has its bearings on the end of vertical rods, connected to levers in such a manner that the said roller may be elevated at pleasure a considerable distance above the third roller, allowing the operator to remove and replace the latter at pleasure, the object of the whole arrangement being in order that the third roller, around which the clothes are wrapped, may become partially wedged between the surface of the two first rollers by the superincumbent weight of the fourth roller and its appendages, thereby efficiently mangling the clothes on the third roller, without winding and unwinding them, as in ordinary mangles, the above duty being performed by much less exertion for the operator, while the whole machine occupies much less space and is much less costly than the common mangles.

In order to enable others skilled in the art to make and use my invention I will now proceed to describe its construction and operation.

On reference to the drawing Figure 1 is a side elevation of the machine. Fig. 2 is a detached sectional view of the rollers. Fig. 3 is a front view of the machine.

A A are the frames of the machine in which the axles *b b* of the rollers B and B′ have their bearings. To these axles, and on the outside of the frame, are secured the toothed wheels C and C′, into both of which gears the pinion G. The latter is allowed to turn loose on a pin *h* secured to the frame, and is furnished with a handle L, on turning which the rollers B and B′ are caused to turn in the same direction. The axles *d* of the upper roller D are allowed to move freely in the slot at the upper portion of the frames A, and connected to the axles on each side of the roller D and inside the frames are the rods E, the lower ends of which are jointed to the pins *i* on the bent levers F. The latter have their fulcrums on pins H secured to the inside of each frame, the other ends being connected together by the cross-bar *f*. The frames are connected together by the stays *j j* and *e*.

K is the middle roller around which the goods to be mangled are wound.

As the machine is shown in the accompanying drawing, the roller K with the surrounding goods to be mangled is introduced to its proper position in regard to the rollers, ready to be operated upon. It will be observed that the rollers B and B′ are a considerable distance apart, allowing the roller K to be partially wedged between their surfaces by the upper roller D, which is acted upon through the rods E by the levers F. The operator may place his foot or hang any additional weight on the cross-bar *f* and proceed to set the rollers B and B′ in operation by turning the handle L. The action of the rollers (as I have found by experiments on a large scale) have now a tendency by their peculiar arrangement not only to press the goods against the roller K but also wind them tight around the same, effectually removing all the creases. By the peculiar position of the pin *i* in regard to the fulcrum H when the levers F are down the weight of the latter and the cross bar *f* must of themselves exert considerable force in pressing down the roller D. From this fact, together with the natural tendency of the roller K to wedge itself between the rollers B and B′, it is evident that but little additional weight will be required on the ends of the levers F. The goods on the roller K being sufficiently mangled the levers F are raised by the operator to the position shown in red lines, which through the rods E raise the roller D until its axles *d* rests on the termination of the horizontal slots *a* in the frames A. The roller K with its goods may now be easily removed and replaced by

another and the upper roller D, which rests in the position shown in red lines, may now be pulled toward the perpendicular slot and the levers F deperssed, when the machine is again ready to be put into operation.

I am aware that rollers have been used for mangling clothes, but heretofore the goods have generally been wound from one roller to another and pressed between their surfaces after the manner of ordinary calenders. Therefore I do not claim clothes, but

What I do claim and desire to secure by Letters Patent is—

The rollers B and B′ in combination with the movable roller D, arranged and driven substantially in the manner set forth, for the purpose of acting upon the roller K in such a manner that the cloth on the same may be efficiently mangled without winding it from one roller to another, and for the purpose of removing and replacing the said roller K with facility.

RICHARD A. STRATTON.

Witnesses:

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