

No. 699,063.

Patented Apr. 29, 1902.

W. H. BAKER.
MANGLE.

(Application filed Dec. 20, 1900.)

(No Model.)

2 Sheets—Sheet 1.

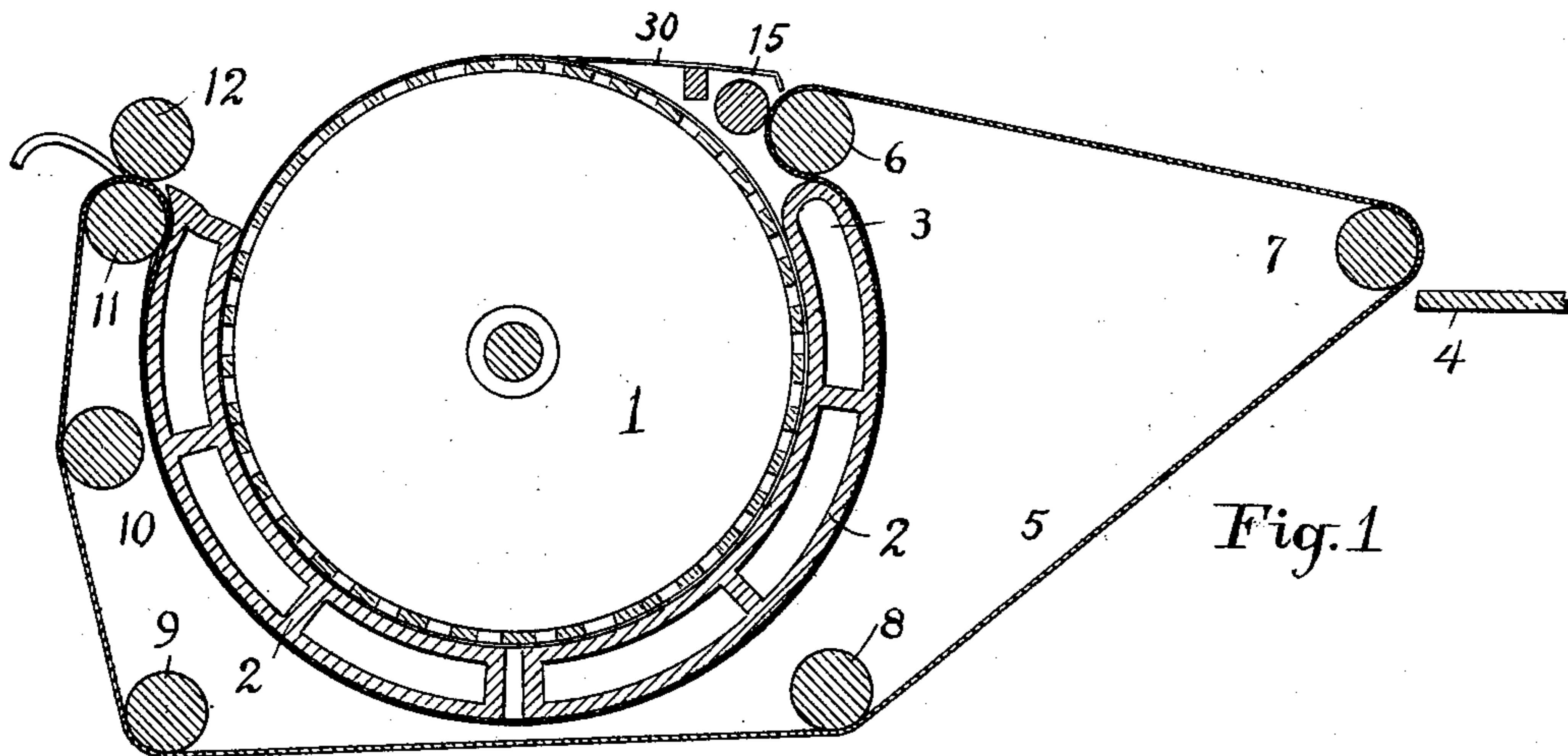


Fig. 1

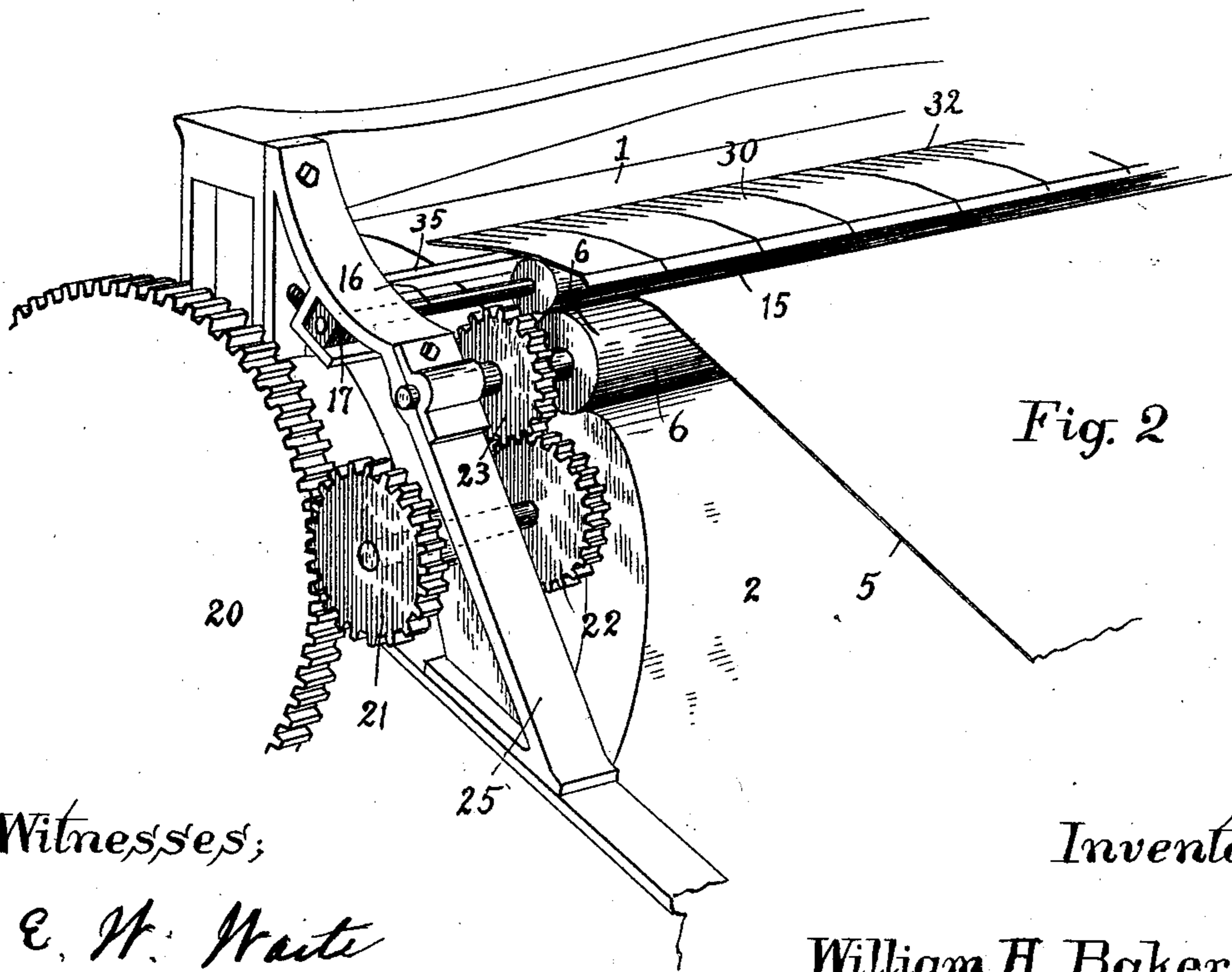


Fig. 2

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Inventor,

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His Attorney.

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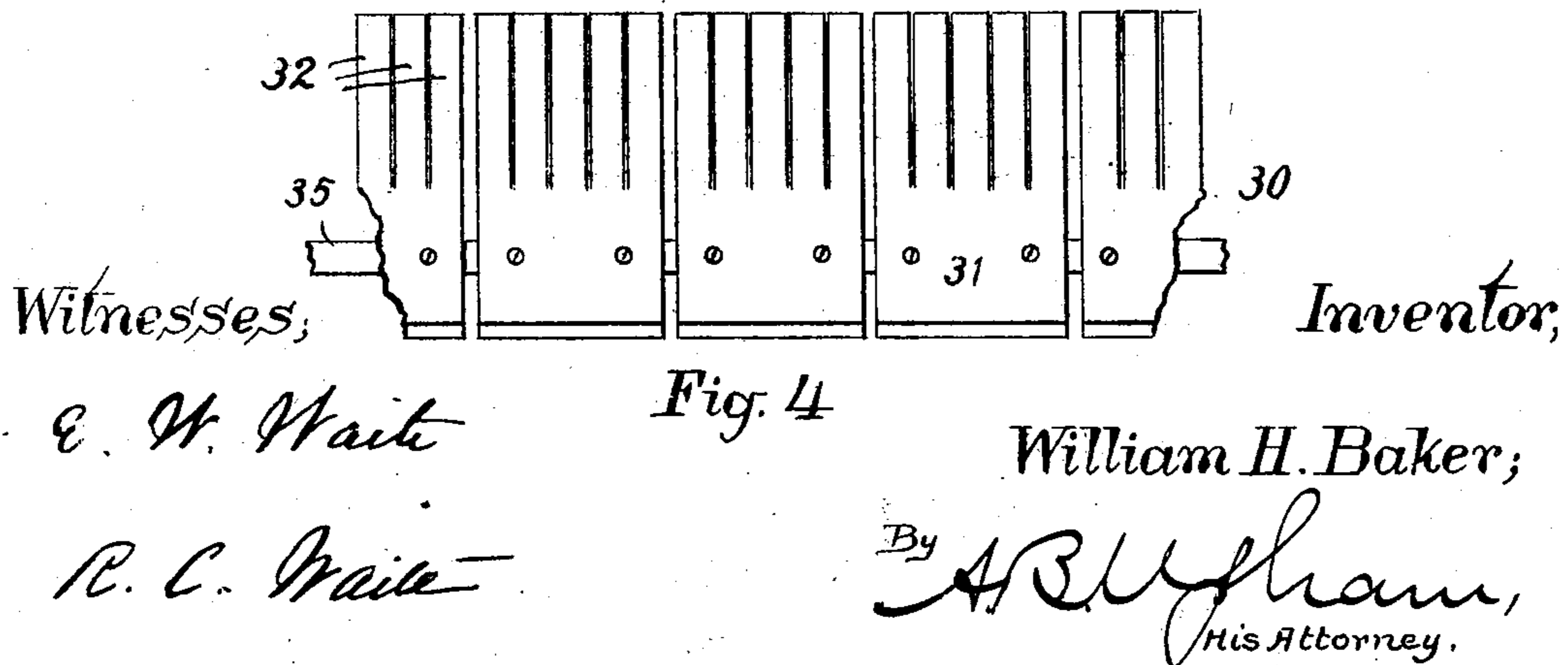
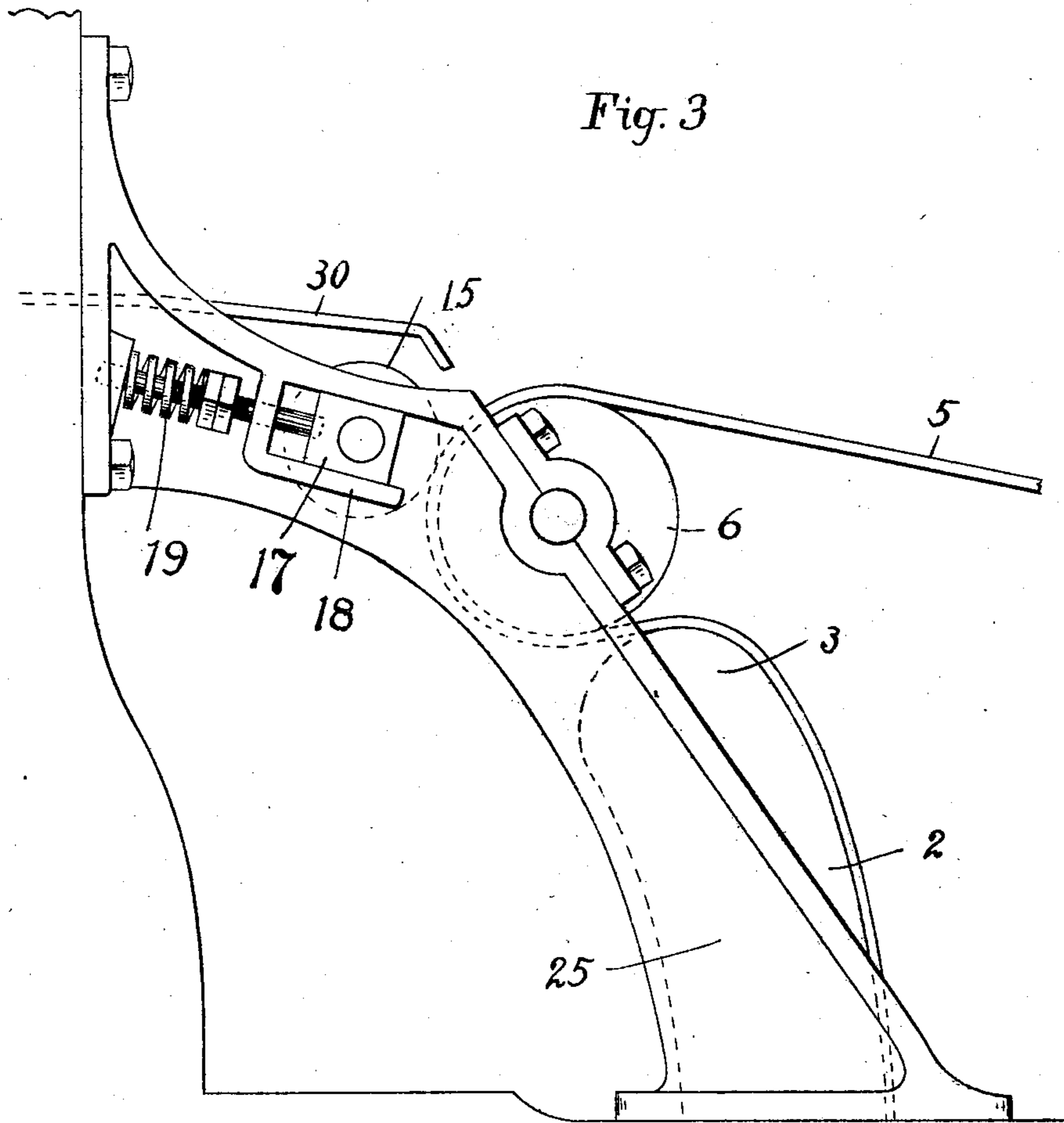
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UNITED STATES PATENT OFFICE.

WILLIAM H. BAKER, OF BOSTON, MASSACHUSETTS.

MANGLE.

SPECIFICATION forming part of Letters Patent No. 699,063, dated April 29, 1902.

Application filed December 20, 1900. Serial No. 40,502. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. BAKER, a citizen of the United States, residing at 261 Columbia road, in the city of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Mangles, of which the following is a full, clear, and exact description.

This invention relates to that class of mangles in which an endless apron is employed for carrying the articles in contact with the steam-heated iron; and the object of my invention is the effecting of certain improvements in details hereinafter set forth.

Referring to the drawings forming part of this specification, Figure 1 is a sectional side elevation of my improved mangle. Fig. 2 is a perspective view of a part of the same. Fig. 3 is a detail view of a part of the mechanism, and Fig. 4 is a plan view of the plate or fingers for removing the ironed articles.

The mangle consists of the slat-cylinder 1, covered with canvas in the usual manner and adapted to be rotated in contact with the concave faces of the irons 2, suitably heated. The endless apron 5 passes about the rollers 7, 8, 9, 10, and 11, and from the last roller down about the convex face of the irons 2, thence up over the rounded end 3 of the right-hand iron and around the roller 6 to the first roller 7, immediately below which is the receiving-table 4. This apron moves with its under section passing toward the left and is furnished with a common tension device, as the roller 10. Inasmuch as there is considerable friction between the apron and the convex face of the irons, with a consequent danger of the apron's slipping on the driving-roller, I provide its driving-roller 6 with a pressure-roll 15, adapted to strongly pinch the apron between the surfaces of said roll and roller, and thereby insure the apron shall not slip on said roller. The means for thus forcing said roll against the apron consists of the bearing-boxes 17, movable in the ways 18 and pressed toward the roller 6 by suitable spiral springs 19.

The articles to be ironed are introduced between the rollers 11 and 12 and fed thereby between the apron and the convex face of the irons 2, along which face they are carried by the friction of the apron. When each article

reaches the rounded end 3 of the right-hand iron, it passes toward the cylinder 1 about the said rounded end and down between said cylinder and iron, where the frictional effect of the canvas cover carries the article along the entire concave face of the irons. As each article rises above the left-hand iron the natural effect would be for it to be carried on over the cylinder 1 and then down again between the same and the right-hand iron. To prevent this by causing the articles to ascend to the section of the apron between the rollers 6 and 7 and be transported thereby to the receiving-table 4, I have devised the bridge 30. When I first constructed this mangle, I made the bridge 30 in a single length of sheet metal extending the entire width of the machine, but was unable to get good results therefrom. This was especially so in the cases of sheets and table-spreads. A part of each article would rise up on the bridge well enough; but other sections of the front edge thereof would be sure to catch beneath the bridge, instantly causing the cloth to ball up and entail no end of trouble, if, indeed, the articles were not ruined and torn. After much experiment I finally devised the bridge shown more clearly in Fig. 4. In place of a continuous sheet of metal I divided the same into numerous sections 31, secured upon the supporting-bar 35, and cut the working edge of each section into several terminally-independent fingers 32, all the sections being of a resilient metal, as steel. The ends of these spring-fingers 32 being given a suitable pressure against the cylinder 1, there is found to be no more difficulty, but every article is smoothly received upon the bridge 30 and carried thereby over to the apron-section between rollers 6 and 7.

In constructing my mangle I am able to utilize an existing make of machine, the only new parts comprising the cast brackets 25, the idler-gears 21 22, fixed upon a short shaft and taking power from the gear 20, the roller 6, with its gear 23, meshing with the gear 22, the roll 15, and its bearings, and the bridge 30. Said gear 20 is rigidly mounted on the shaft of the cylinder and when driven causes the cylinder to rotate therewith. The apron, however, I change in path, thereby shortening it by about three yards, since previously it passed down about the rounded end 3 of

the iron, and thence almost entirely around the cylinder 1 to the roller 7, the remainder of the path being the same as above described. It is this length of apron which I am enabled
 5 to save, since instead of its passing about the cylinder the apron goes directly up around the roller 6 to the roller 7. As shown in the drawings, the roller 7 is located a short distance away from the roller 6 and also
 10 slightly below the level of the same for the purpose of forming an inclined section of the apron upon which the fully-ironed articles are received from the bridge 30, and from which section the articles are then delivered
 15 to the table 4 immediately below the roller 7. Inasmuch as these aprons wear out quite rapidly, the three yards of length which my construction enables to be saved amount to a considerable sum in the course of a year. In
 20 fact, less than six months' saving fully pays for the expense of my improvement.

What I claim as my invention, and for which I desire Letters Patent, is as follows, to wit:

25 1. In combination with a mangle of the character described, the take-off attachment comprising the cross-bar, and the plurality of spring-metal plates fixed thereto, each plate being partially split up into several in-
 30 dependently-yielding fingers, substantially as described.

2. In a mangle, the combination of the rotating cylinder, the irons beneath the same, the endless apron, the rollers supporting the

said apron, one of which is just above an end 35 of the irons and another a short distance away from said roller and somewhat below its level, and a bridging plate constructed to contact with the cylinder and deliver the ironed clothes therefrom to the section of the apron 40 between the two last-named rollers, substantially as described.

3. In a mangle, the combination of the cylinder, the spur-gear rotating the same, the frame supporting said cylinder, the irons be- 45 neath said cylinder, the endless apron, the rollers supporting the apron, one of said rollers being located just above an end of one of said irons and another a short distance away and slightly below the level of said roller, the 50 brackets fixed to said frame and rotatably supporting the roller at one end of one of the irons, the short shaft revolvably held by one of said brackets, the spur-gears fixed on the ends of said short shaft, one of which gears 55 meshes with the spur-gear which rotates said cylinder, and a spur-gear rigidly connected with the last-mentioned roller and meshing with the other of the two gears on said short shaft, substantially as described. 60

In testimony that I claim the foregoing invention I have hereunto set my hand this 18th day of December, 1900.

WILLIAM H. BAKER.

Witnesses:

A. B. UPHAM,
 E. W. WAITE.