No. 750,930. PATENTED FEB. 2, 1904.

J. ZALIKOWSKI.

MANGLE.

APPLICATION FILED AUG. 24, 1903.

NO MODEL. 3 SHEETS—SHEET 1.

Fig. 1.

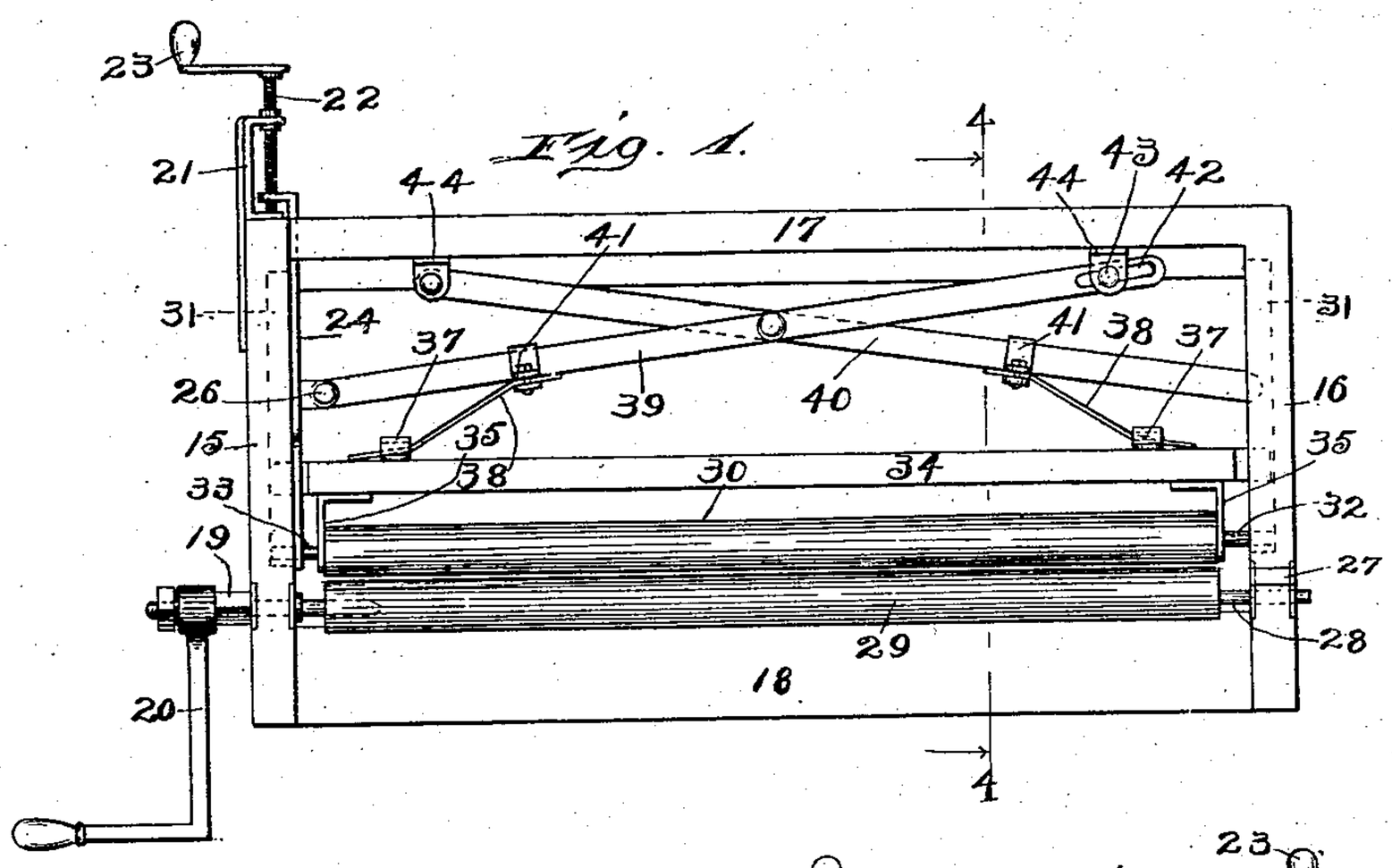


Fig. 3.

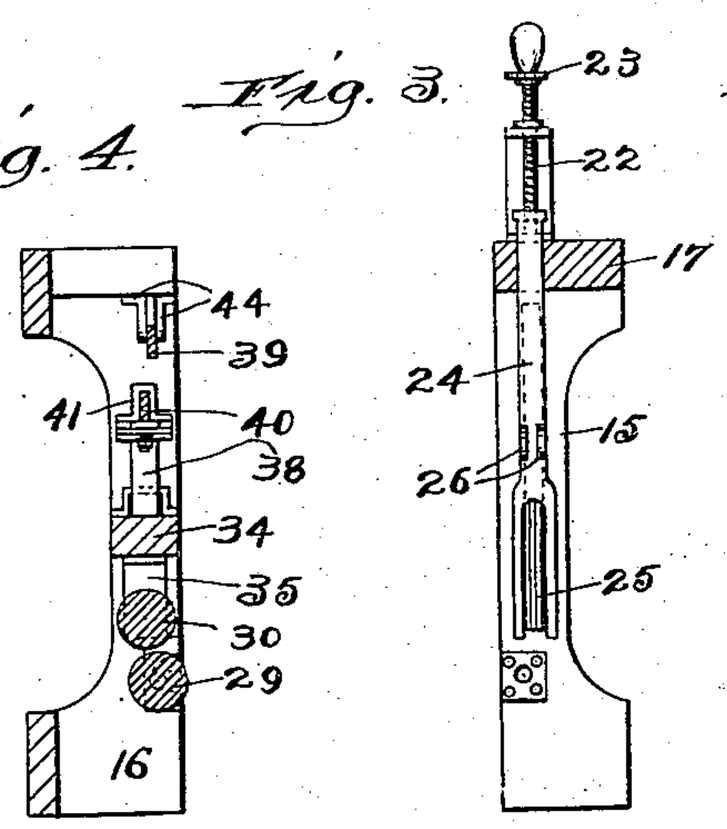


Fig. 2.

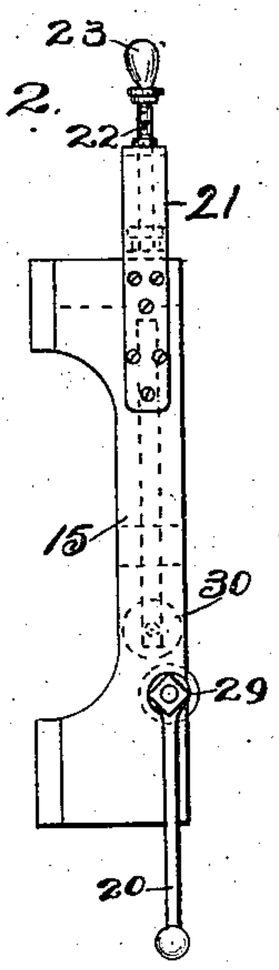


Fig. 5.

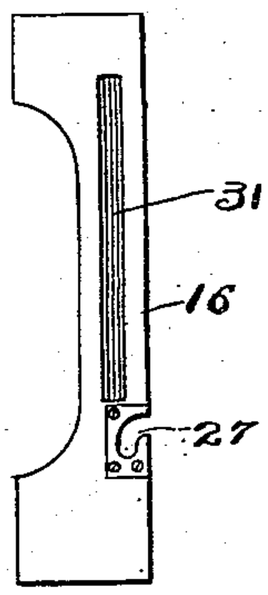
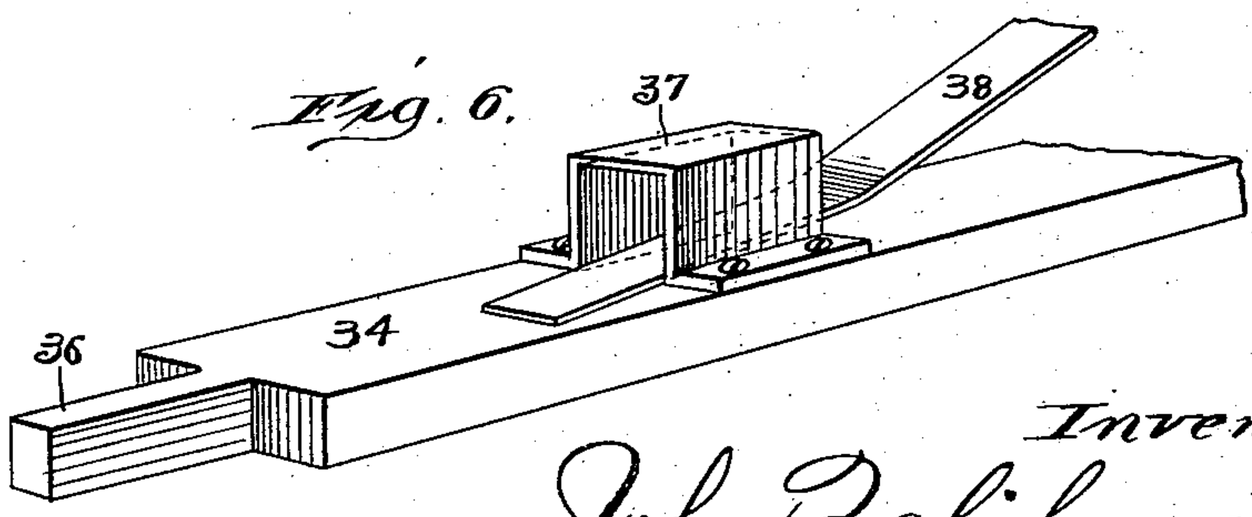


Fig. 4.

Fig. 6.



Witnesses:

Chas. E. Gorton.

A. Gustafson.

Inventor:

John Zalikowski.

By Chas. A. Tillman

Attys

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NO MODEL. 3 SHEETS—SHEET 2.

Fig. 7.

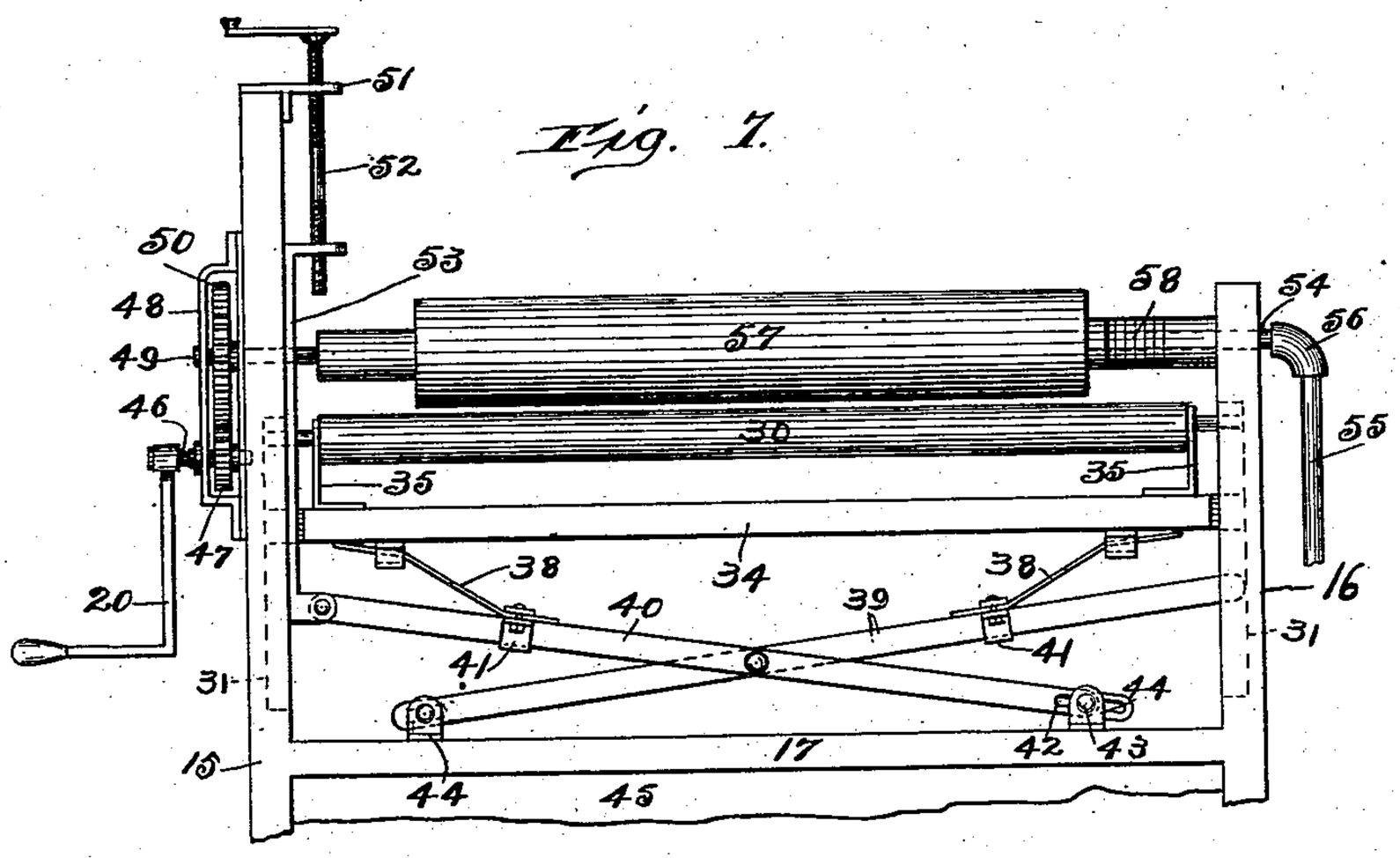


Fig. 8.

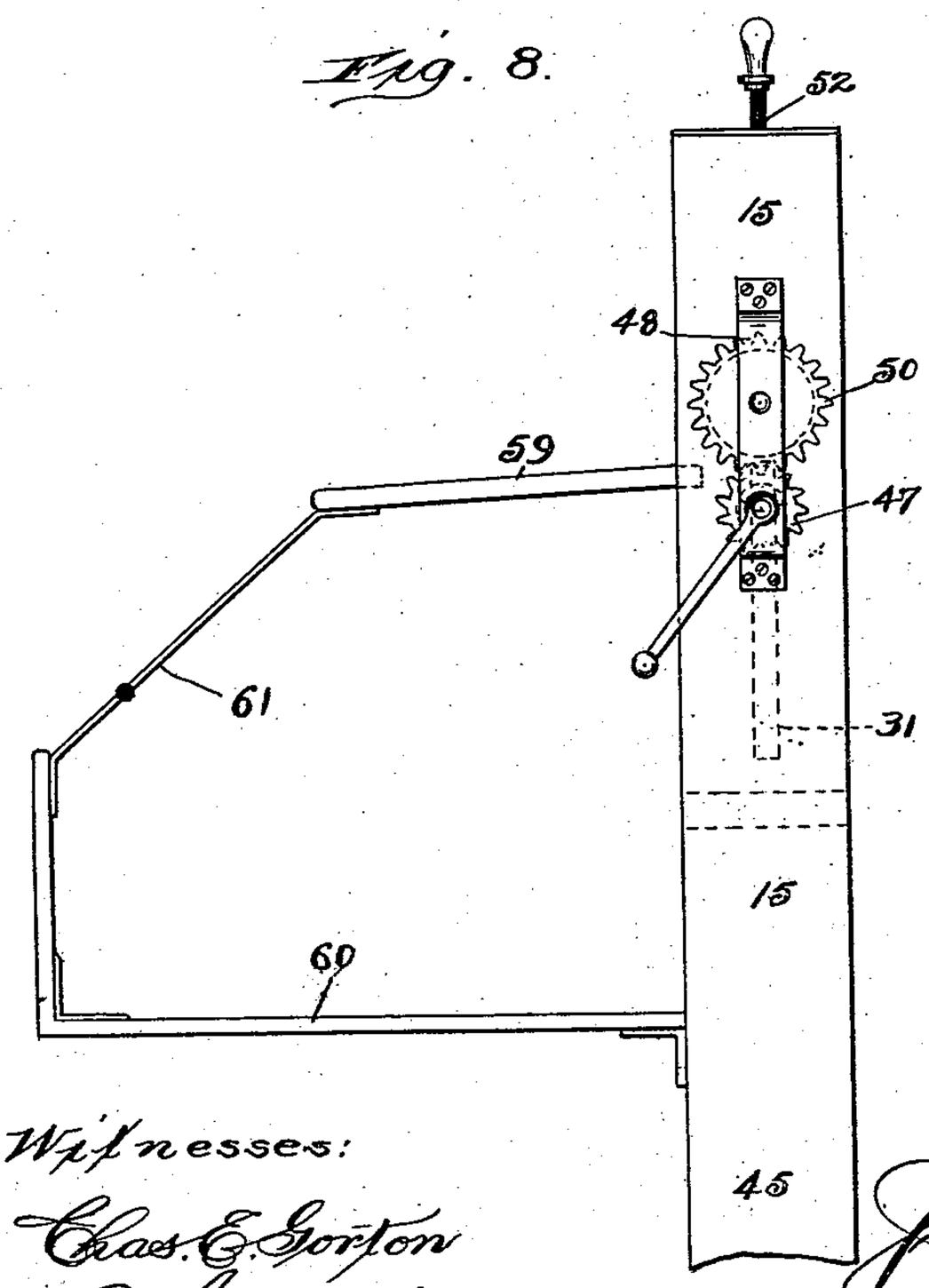
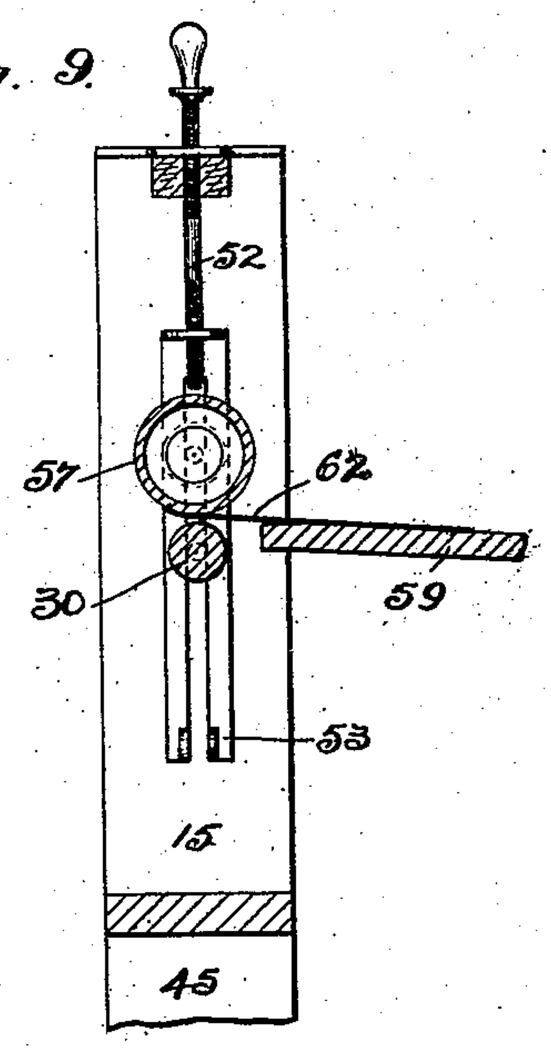


Fig. 9.



Witnesses:

Chas. E. Gorton

A. Gustafson

Inventor:

John Zalikowski.

By. Chas. A. Tillman Atty.

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APPLICATION FILED AUG. 24, 1903.

NO MODEL. 3 SHEETS—SHEET 3.

Fig. 10.

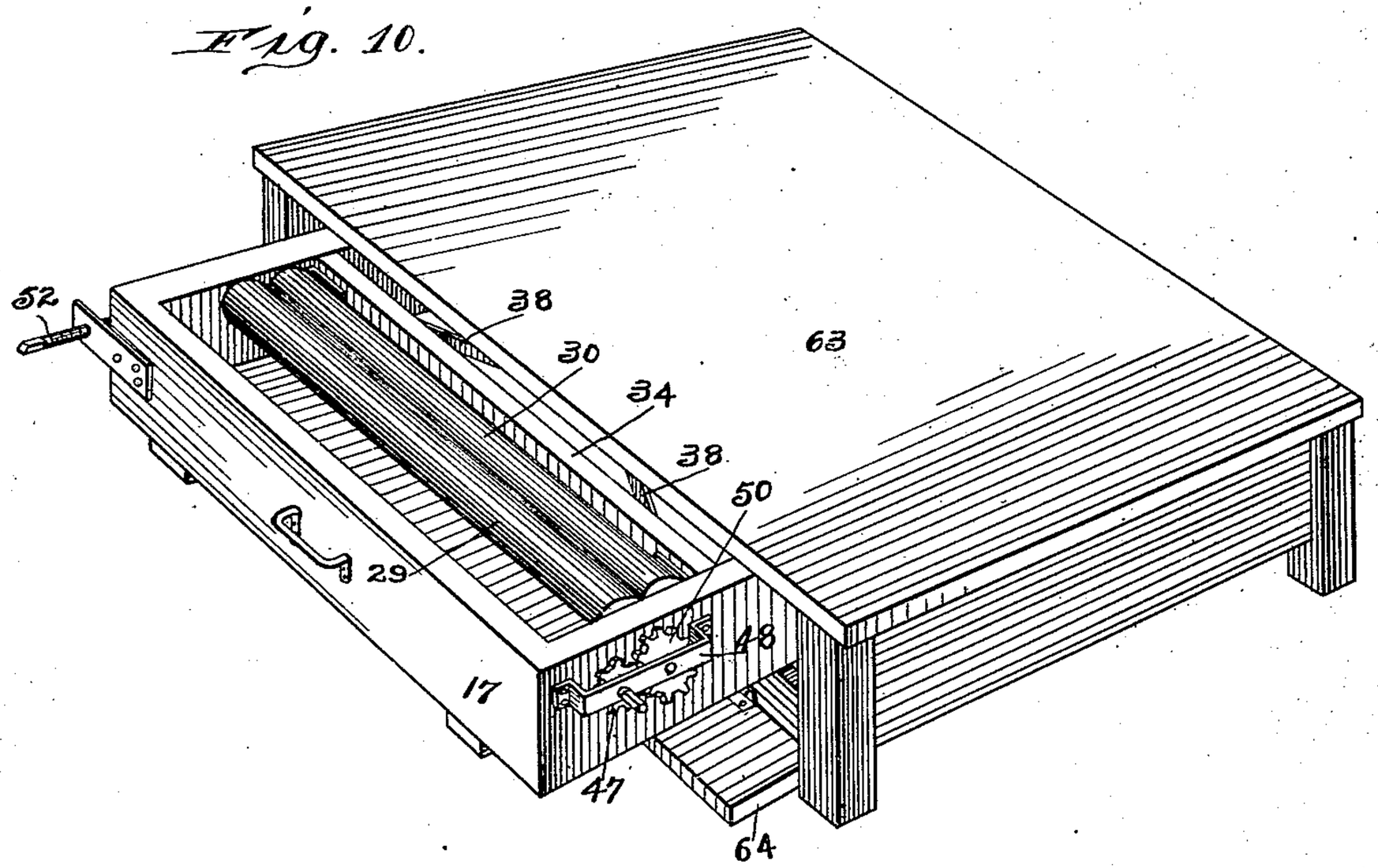
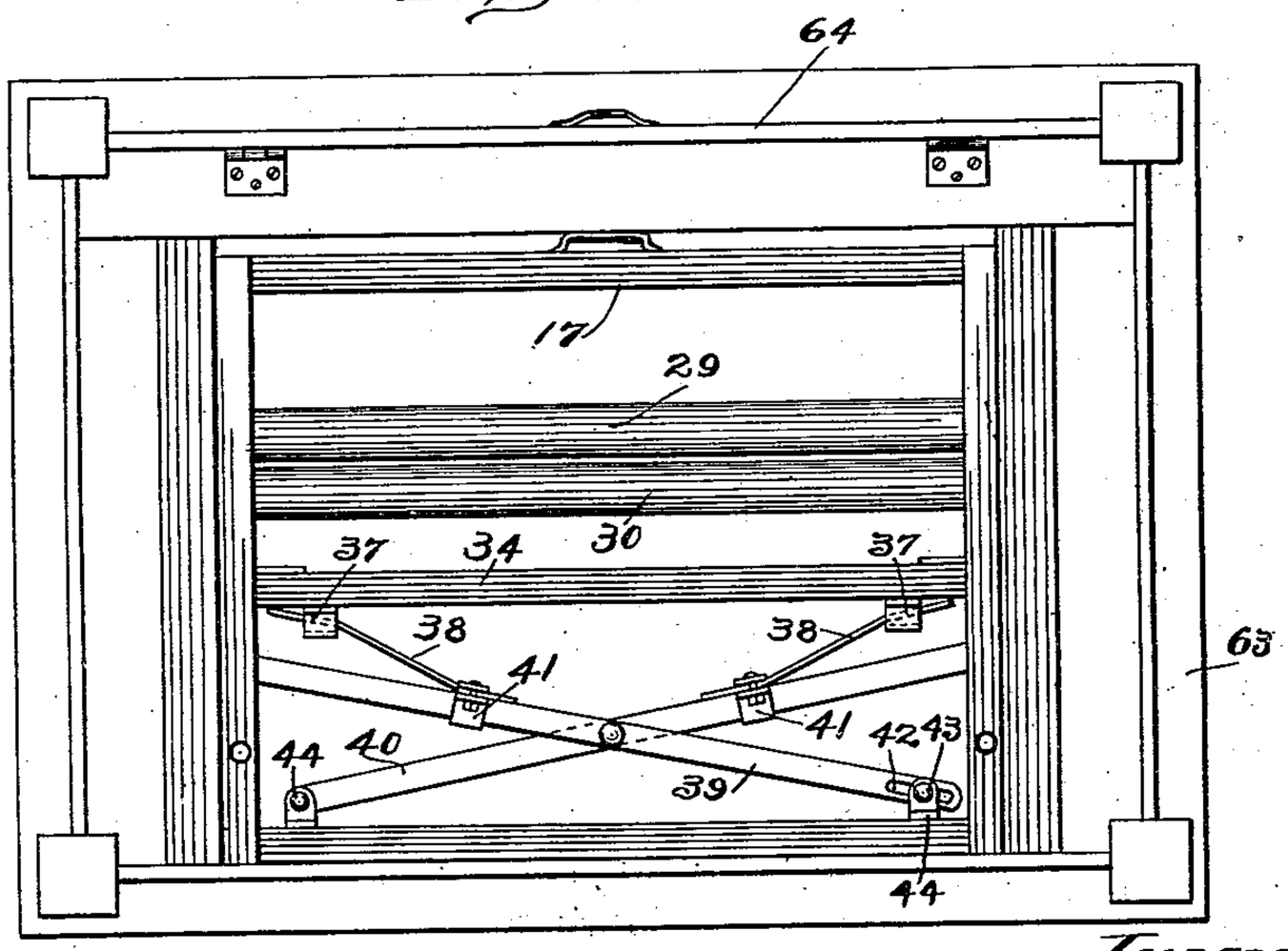


Fig. 11.



Witnesses:

Chas. E. Gorton.

A. Gustafson.

Inventor:

John Zalikowski

By. Chas. C. Tillman Atty.

No. 750,930. Patented February 2, 1904.

UNITED STATES PATENT OFFICE.

JOHN ZALIKOWSKI, OF CHICAGO, ILLINOIS.

MANGLE.

SPECIFICATION forming part of Letters Patent No. 750,930, dated February 2, 1904.

Application filed August 24, 1903. Serial No. 170,537. (No model.)

To all whom it may concern:

Be it known that I, JOHN ZALIKOWSKI, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Mangles, of which the following is a specification.

This invention relates to improvements in an apparatus to be used for pressing and smoothing various articles, such as sheets, tablecloths, towels, bedspreads, and the like; and it consists in certain peculiarities of the construction, novel arrangement, and operation of the various parts thereof, as will be hereinafter more fully set forth and specifically claimed.

The principal object of my invention is to provide a mangle which shall be simple and inexpensive in construction, strong, durable, and effective in operation, and so made that one of the compressing-rollers will be spring-actuated and adjustably held in the main frame so as to permit of the passage of clothes or garments of different thicknesses and also to prevent the crushing of buttons on the garments.

Another object of the invention is to so construct the support that it may be used for holding the clothes or garments to be pressed.

A further object of the invention is to so construct the apparatus that one of the compressing-rollers may be heated by steam.

Other objects and advantages of the invention will be disclosed in the subjoined description and explanation.

In order to enable others skilled in the art to which my invention pertains to make and use the same, I will now proceed to describe it, referring to the accompanying drawings, in which—

Figure 1 is a rear view in elevation of a mangle embodying one form of my invention. Fig. 2 is an end view thereof, showing the cranks for operating and adjusting the compressing-rollers. Fig. 3 is an inner view of that end of the main frame on which the operating-cranks are journaled. Fig. 4 is a vertical sectional view taken on line 4 4 of Fig. 1 looking in the direction indicated by the arrows. Fig. 5 is an inner view in elevation of the end of the main frame opposite that on which the operating-cranks are mounted. Fig. 6 is a perspective view of a portion of the adjusting-bar for one of the compressing-rollers, showing a portion of one of the springs thereon. Fig. 7 is a rear view in elevation, illustrating a modification in the construction of the mangle and also in the construction of the support therefor. Fig. 8 is an end view of the same. Fig. 9 is a view, partly in section and partly in elevation, of a portion of the end of the frame on which the operating and adjusting means are mounted, showing the compressing-rollers in section. Fig. 10 is a perspective view of another modification in the construction of the support for the mangle, showing the mangle-frame withdrawn therefrom or extended; and Fig. 11 is a bottom plan view thereof, showing the mangle-frame retracted or inclosed in the support.

Like numerals of reference refer to corresponding parts throughout the different views of the drawings.

The main frame of the mangle comprises end pieces 15 and 16 and side pieces 17 and 18, united together to form a rectangular frame. Transversely journaled in the lower portion of the end piece 15 of the frame is a stub-shaft 19, on which is secured a crank 20, used for operating the compressing-rollers. Secured to one end of the piece 15 is a bracket 21, which carries a screw 22, the outer end of which is provided with a crank 23, used for turning the same. Extending through an opening in the side piece 17, near the inner surface of the piece 15, is a sliding bar 24, the outer end of which engages the screw 22, as is clearly shown in Figs. 1 and 3 of the drawings. This bar lies alongside of the inner surface of the piece 15 and is provided in its free end with a longitudinal slot 25 for the reception and operation of one end of the adjusting-bar for one of the compressing-rollers. The bar 24 is also provided on its inner surface with lugs 26, to which one of the toggle-bars is pivotally secured. The end piece 16 of the main frame is provided with a recess 27 at a point opposite the stub-shaft 19 to form a bearing for the stub-shaft 28 on one end of the compressing-roller 29,

the other end of which is formed with a suitable socket to receive the inner end of the shaft 19, to which it is fixed. The inner surface of the end piece 16 is formed or provided with a longitudinal groove 31 for the reception and operation of a stub-shaft 32 on one end of the adjustable compressing-roller 30, the other end of which is provided with a stub-shaft 33, which fits into the slot 25 of the sliding bar 24, as shown in Fig. 1 of the drawings, and also extends into a groove 31 in the piece 15. Secured to the adjusting-bar 34, near each of its ends, is a bracket 35, in which the shafts 32 and 33 on the roller 30 are journaled. Each end of the bar 34 is reduced, as at 36, one end to fit or extend into the slot 25 of the sliding bar 24 and the groove 31 of the end piece 15 of the main frame and the other end to extend into the groove 31 of the end piece 16. Secured to the bar 34, near each of its ends and on that side thereof opposite the roller 30, is a guide-bracket 37 for one end of the springs 38, the other ends of which are secured to the toggle-bars 39 and 40 by means of clips 41 thereon. The toggle-bar 39 is pivotally secured at one of its ends to the lugs 26 on the sliding bar 24 and is provided at its other end with a slot 42, through which a pin 43 on a bracket 44, secured to the side piece 17 of the main frame, passes, thus loosely connecting said toggle-bar to the main frame. The toggle-bar 40 is pivotally connected at one of its ends to a bracket 44 on the side piece 17 of the frame and has its other end extended into the groove 31 of the end piece 16 of the main frame. The toggle-bars are pivotally connected together near their centers.

In the construction just above described it is apparent that by turning the crank 20 the rollers 29 and 30 will be rotated by reason of their frictional contact with the clothes or garments as they pass therebetween and that the springs 38, pressing on the adjustable bar 34, on which the roller 30 is hung, will allow said roller to yield in its position sufficiently to accommodate enlargements in the clothing or to prevent the crushing of buttons thereon. It is further apparent that by turning the screw 22 by means of the crank 23 the sliding bar 24 may be extended or retracted so that the toggle-bars 39 and 40 and the springs 38 will give the desired pressure or tension to the adjusting-bar 34 and the roller 30 which it carries.

In Figs. 7 to 9, inclusive, I have shown a modification in the construction of the mangle and its support, which comprises a supporting-frame 45, between the end pieces of which a mechanism like that shown in Fig. 1 and above described for adjusting one of the compressing-rollers is employed, except that it is shown as being located below the rollers instead of above the same. In this modification the crank-shaft 46, which carries a pinion 47, is journaled on a bracket 48, secured to one end of the supporting-frame, and is provided with a crank 20 for turning the same. Journaled in the bracket 48, near the shaft 46, is another shaft 49, on which is mounted a gear 50, which meshes with the pinion 47, as shown. Secured to the upper portion of the end piece 15 is a bracket 51, which carries a right and left screw-threaded bolt or rod 52, the lower end of which engages the upper portion of a sliding bar 53, which is similar in construction to the sliding bar 24, above described, and is used for the same purpose, except that the toggle-bar 40 is secured to its lower portion. Journaled in the upper portion of the end piece 16 is a hollow shaft 54, which is connected to a steam-supply pipe 55 by means of a coupling 56. Mounted on the shafts 54 and 49 is a compressing-roller 57, which is hollow and may be made of any suitable material. Located on the hollow shaft 54, through which the steam may pass from the supply-pipe 55 to the roller 57, are a number of washers or packing-rings 58, used to prevent the escape of steam. In this modified construction the support for the mangle is provided with a platform 59, which extends horizontally from the end pieces 15 and 16 at a point about level with the compressing-rollers. Below this platform the support 45 is provided with a box-like receptacle 60, which is connected at its upper portion by means of rods 61 to the outer portion of the platform 59, as is clearly shown in Fig. 8 of the drawings, and is designed to be used as a receptacle for the clothes or garments, while the platform 59 may be employed for ironing purposes or for smoothing out the garments. The roller 57 is preferably provided with a strip of cloth 62, which is secured thereto at one of its edges and is employed to draw the article to be pressed between the rollers, which may be done by placing the edge of the article between the roller and the upper surface of the strip 62, as is apparent.

In Figs. 10 and 11 I have shown still another modification, which consists in employing a table 63 as a support for the mangle, the main frame and construction of which is similar to that shown in Fig. 7 except that the hollow roller 57 is not employed, and, further, that the screw 52 is located on the opposite end of the main frame from that shown in said figure. In this modification it is apparent that the main frame may be withdrawn and pushed into the table, (drawer-like fashion,) when the door 64 may be closed, thus concealing the pressing mechanism.

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

The combination with a main frame, of a compressing-roller journaled thereon, a screw mounted longitudinally on one end of the frame, a slotted sliding bar located on said end of the frame and in engagement with said screw, an adjusting-bar movably mounted on the main frame and having one of its ends ex-

tending into the slot of the sliding bar, a compressing-roller journaled on the adjusting-bar, a toggle-bar connected at one of its ends to the main frame and at its other end to the sliding bar, another toggle-bar connected at one of its ends to the main frame and pivotally secured to the first-named toggle-bar, and a spring secured to each of the toggle-bars and resting on the adjusting-bar near each of its ends, substantially as described.

JOHN ZALIKOWSKI.

Witnesses:
CHAS. C. TILLMAN,
A. GUSTAFSON.