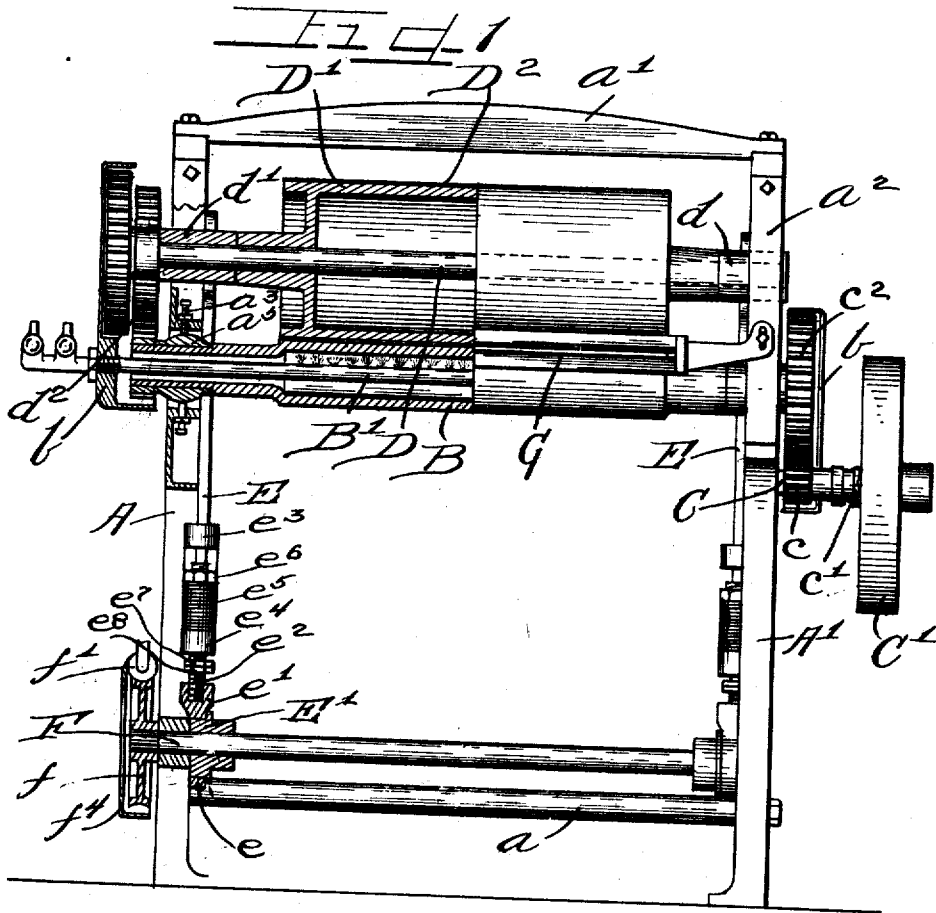


S. MOE.  
MANGLE FOR SMALL ARTICLES.  
APPLICATION FILED MAR. 18, 1909.

1,016,028.

Patented Jan. 30, 1912.

3 SHEETS—SHEET 1.



WITNESSES

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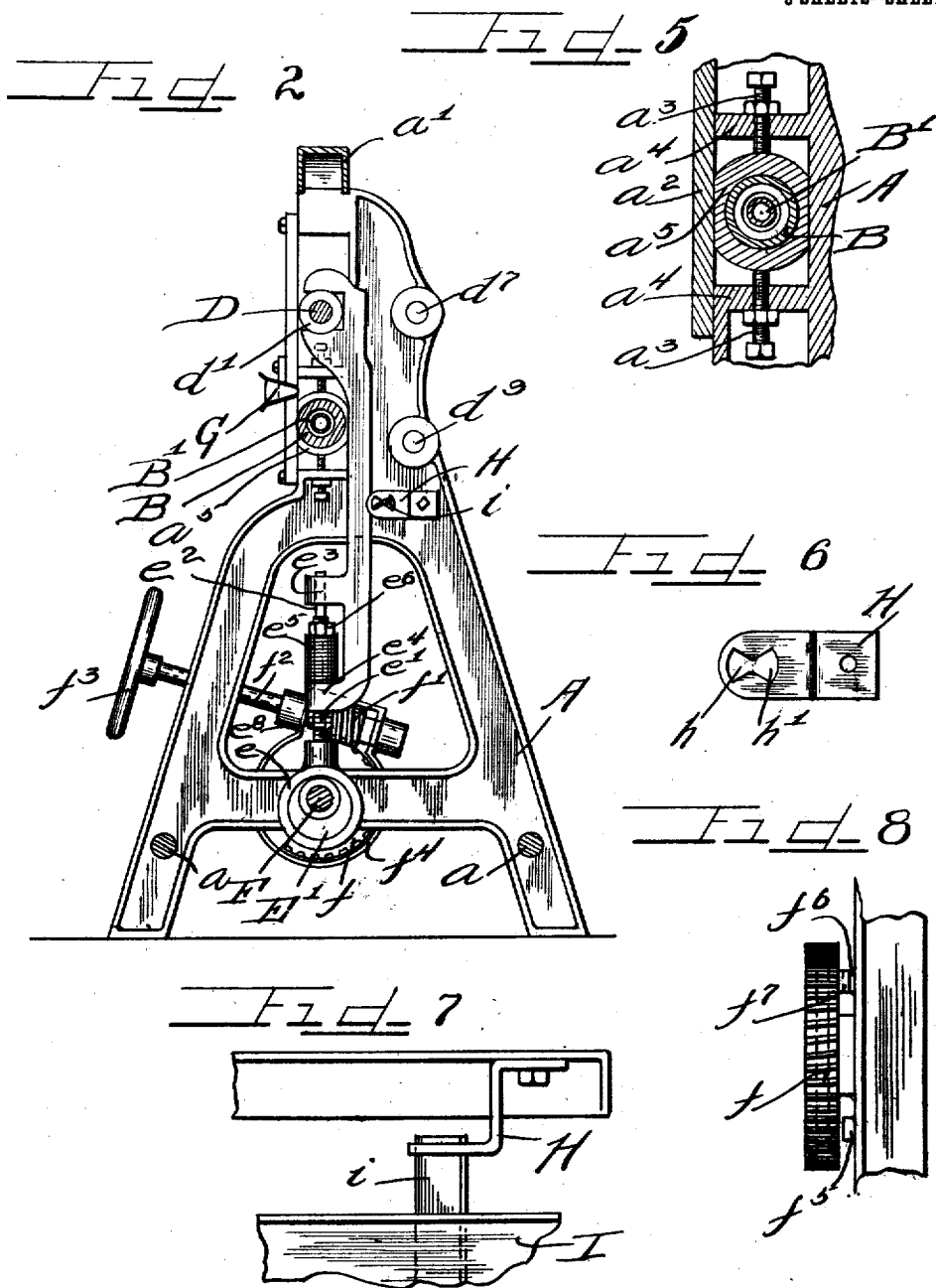
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Charles W. Tires  
Att'y

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3 SHEETS—SHEET 2



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3 SHEETS—SHEET 3.

FIG. 4

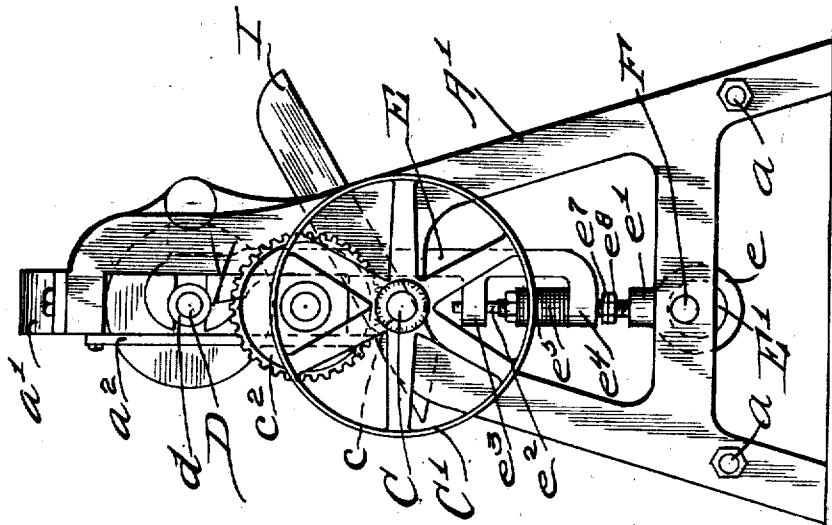
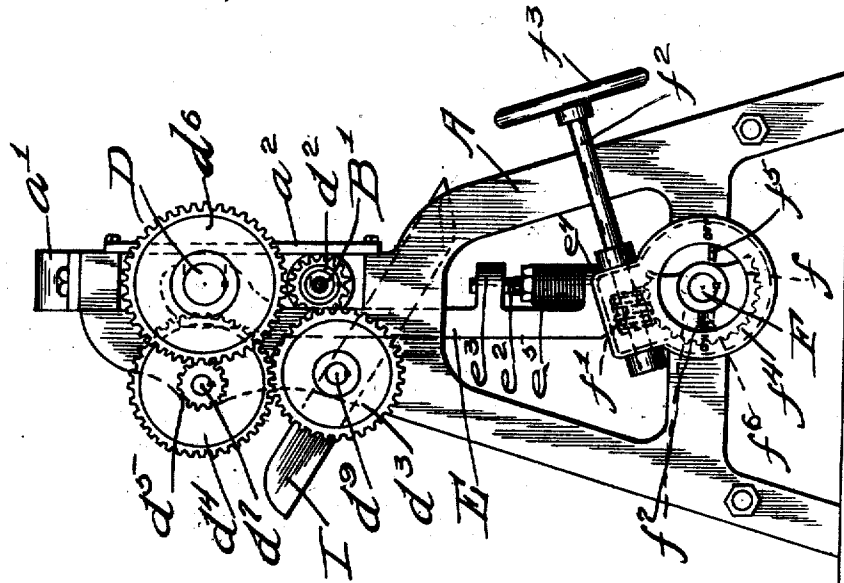


FIG. 3



WITNESSES

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# UNITED STATES PATENT OFFICE.

SIVERT MOE, OF CHICAGO, ILLINOIS.

## MANGLE FOR SMALL ARTICLES.

1,016,028.

Specification of Letters Patent.

Patented Jan. 30, 1912.

Application filed March 18, 1909. Serial No. 484,135.

*To all whom it may concern:*

Be it known that I, SIVERT MOE, a citizen of the United States, and a resident of the city of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Mangles for Small Articles; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to improvements in mangles for small articles and particularly for collars, cuffs and like articles in which various finishes from dull to a high gloss are required.

It is an object of this invention to provide an ironing machine in which the articles after being run through the machine are returned to the operator so that the articles may be sent through the machine any desired number of times without necessitating the operator leaving the feeding side of the mangle.

It is also an object of this invention to provide means whereby a large number of articles may be simultaneously emptied from the chute I by the operator after each has been properly laundered without necessitating the operator leaving the feeding side of the mangle.

It is also an object of this invention to provide an improved mechanism for varying the tension of ironing rollers and for adjusting the same into and out of contact.

It is also an object of this invention to provide in a small machine of the class set forth a mechanism adapting the ironing roller to automatically yield from the heated roller when an abnormally sized article is passing between the rollers.

The invention relates to the matters hereinafter described and more fully pointed out and defined in the appended claims.

On the drawings: Figure 1 is an elevation partly in section and with parts omitted. Fig. 2 is a vertical section taken adjacent one of the standards. Fig. 3 is an elevation of the adjusting end of the machine. Fig. 4 is an elevation of the opposite or driving end of the machine. Fig. 5 is an enlarged fragmentary detail of the adjusting mechanism for the heated roller. Fig. 6 is an end view of the supporting bracket for the re-

turn and dumping basket or chute. Fig. 7 is an enlarged top plan view of the same. Fig. 8 is an enlarged fragmentary detail of the stop mechanism for limiting the adjustment of the ironing roller.

As shown in said drawings: A—A', indicate end frame members, which are rigidly secured together at their bottom by means of stay rods *a*, and a channel bar *a'*, rigidly connects the tops of the frame members together. The frame members are cut away or recessed on corresponding sides and a plate *a<sup>2</sup>*, is bolted to the frame over each recess. A bearing member *a<sup>3</sup>*, is engaged between each plate *a<sup>2</sup>*, and frame, and is adjustable by means of adjusting screws *a<sup>4</sup>*, threaded through flanges *a<sup>5</sup>*, integral with the frame. Journalled in said bearing members *a<sup>6</sup>*, is a hollow heating roller B, which may be heated in any suitable manner. As shown, however, a guard *b*, is secured to each frame member and supported thereby and extending axially through the heating roller is an apertured pipe B', which may be connected either with a source of steam or gas depending upon the facilities.

A stud shaft C, is secured to the frame member A', upon which is journalled a pulley C', adapted to be connected to the pinion *c*, by means of a clutch *c'*, and said pinion meshes with a gear *c<sup>2</sup>*, secured on the reduced end of the heating roller whereby said roller is driven.

Journalled in bearings *d—d'*, supported by the yoked end of adjusting bars E, between the plates *a<sup>2</sup>*, and frame members, is a shaft D, rigidly secured to which is the ironing roller D', which is covered with fabric D<sup>2</sup>, as is usual. Said shaft is driven from the heating roller B, by means of a pinion *d<sup>2</sup>*, secured on said heating roller, which meshes with a gear *d<sup>3</sup>*, on the stud shaft *d<sup>4</sup>*, which in turn meshes with a gear *d<sup>4</sup>*, on the stud shaft *d<sup>5</sup>*, and a pinion *d<sup>5</sup>*, on said shaft *d<sup>5</sup>*, meshes with a gear *d<sup>6</sup>*, on the shaft D. In each instance all of the gears are inclosed in the guards *b*.

Extending longitudinally of the rollers is an adjusting shaft F on one end of which is a mutilated or segment worm gear *f*, which is actuated by a worm *f'*, on the actuating shaft *f<sup>2</sup>*, having a handle *f<sup>3</sup>*, secured thereto for manual actuation. A housing *f<sup>4</sup>*, incloses said segment and worm and affords bearings for the actuating shaft and stops

$f^5-f^6$ , are secured to the frame and adapted to be engaged by a stop  $f^7$  on the segment for indicating the adjustment of the ironing roller to and from the heating roller.

5 For the purpose of effecting said adjustments an eccentric  $E'$ , is keyed on each end of the adjusting shaft on which is journaled an eccentric strap or ring  $e$ , which is provided with a boss  $e'$ , in which is threaded a  
10 rod  $e^2$ . Said rod is threaded for its entire length except for a short distance at its outer end and extends through apertured lugs  $e^3-e^4$ , integral with the adjusting bar  $E$ . A strong spring  $e^5$ , is secured on said rod  
15  $e^2$ , between the lug  $e^4$ , and a nut  $e^6$ , providing a yielding pressure of the ironing roller on the heated roller. Nuts  $e^7-e^8$ , one of which acts as a lock nut, are threaded on the rod  $e^2$ , which contact the lug  $e^4$ , of the  
20 adjusting bar  $E$ , when the actuating shaft is rotated in the proper direction and moves the adjusting bar to elevate the ironing roller. Of course, these may be adjusted on the rod to vary the movement of the adjust-  
25 ing bars.

A guide  $G$ , is adjustably secured on the frame in any suitable manner and acts to direct the articles between the rollers. Brackets  $H$ , are rigidly secured to the frame  
30 members, each of which is provided with connected sector-shaped apertures  $h-h'$ .

A basket or chute  $I$ , inclining downwardly and forwardly to receive the articles after passing through the machine and to  
35 return them to the operator is provided with arms or bars  $i$ , which engage in the apertures in the bracket  $H$ .

The operation is as follows: Steam or gas is used as preferred, and in either event suitable valves are provided and if gas is used,  
40 suitable means are provided for igniting the same in starting. The operator feeds the articles through the guide  $G$ , which may be adjusted to compensate for any adjustment of the ironing roller. The articles as  
45 for instance, collars, pass between the rollers and are delivered into the basket or chute  $I$ , where they return by gravity to the operator. If a high gloss is desired, it  
50 is usually necessary to run the collars several times through the machine to secure the desired finish, and it is obvious that any finish desired may be quickly obtained on a large quantity of collars without necessitat-  
55 ing the operator leaving the feed position of the machine. When all the collars in the basket or chute have been finished, the basket is tipped in the opposite direction, discharging the collars into a suitable recep-  
60 tacle at the rear of the machine. Owing to the shape of the apertures in the brackets  $H$ , the bracket may be easily and quickly adjusted from one position to the other.

The ironing roller may be adjusted to bear  
65 against the heated roller with any degree

of pressure by means of the actuating shaft and eccentric mechanism and such adjustment may be quickly effected. Furthermore, with any degree of pressure exerted, the roller is yieldingly supported and any  
70 obstruction would not injure the machine.

Of course, many details of construction may be varied, and I therefore do not desire to limit this application for patent other-  
75 wise than necessitated by the prior art.

I claim as my invention:

1. In a device of the class described a heated roller, an adjustable roller adapted to contact the same, a chute pivoted below the rollers, a shaft extending longitudinally  
80 of the rollers, a mutilated gear on the shaft, an actuating shaft, a worm gear on the actuating shaft meshing with the mutilated gear, a stop carried by the mutilated gear and a plurality of rigid stops adapted to be con-  
85 tacted thereby to limit the adjustment of the adjustable roller.

2. In a device of the class described frame members having recesses on corresponding  
90 sides, a plate secured over each recess, a bearing member adjustably engaged in each recess between each plate and frame, a heating roller journaled in said bearing members, an apertured pipe extending axially through the heating roller, a roller adjust-  
95 able toward and from the heated roller, bars supporting the ends of the adjustable roller, lugs integral with the lower end of each of said bars, a rod extending there-  
100 through, a spring secured on said rod and means adapted to contact one of the lugs on said bar to elevate the adjustable roller.

3. An ironing machine comprising a frame, a heated roller, a roller adjustable toward and from the same, bars supporting  
105 the ends of the adjustable roller, a pair of apertured lugs at the lower end of each of the said bars, a rod passing loosely through the apertures in said lugs, a compression spring on the rod between the lugs having one end  
110 abutting a shoulder on the rod, and the other end bearing against one of the lugs, adapting the bar to move independently of the rod against spring pressure, a shaft, eccentrics thereon, eccentric straps connected with the  
115 rods and engaging around the eccentrics, a mutilated gear on the shaft, an actuating shaft and a worm on the actuating shaft meshing with the mutilated gear.

4. An ironing machine comprising a  
120 frame, a heated roller, a roller adjustable toward and from the same, bars supporting the ends of the adjustable roller, a rod loosely connected to each bar, a spring on each rod adapting the bar to move inde-  
125 pendently of the rod against spring pressure, a shaft extending longitudinally of the rollers, eccentrics thereon, eccentric straps connected with the rods and engaging around the eccentrics, a mutilated gear on  
130

the shaft, an actuating shaft, a worm gear on the actuating shaft meshing with the mutilated gear, a stop carried by the mutilated gear and a plurality of rigid stops adapted to be contacted thereby to limit the adjustment of the adjustable roller.

In testimony whereof I have hereunto

subscribed my name in the presence of two subscribing witnesses.

SIVERT MOE.

Witnesses:

K. E. HANNAH,  
J. W. ANGELL.