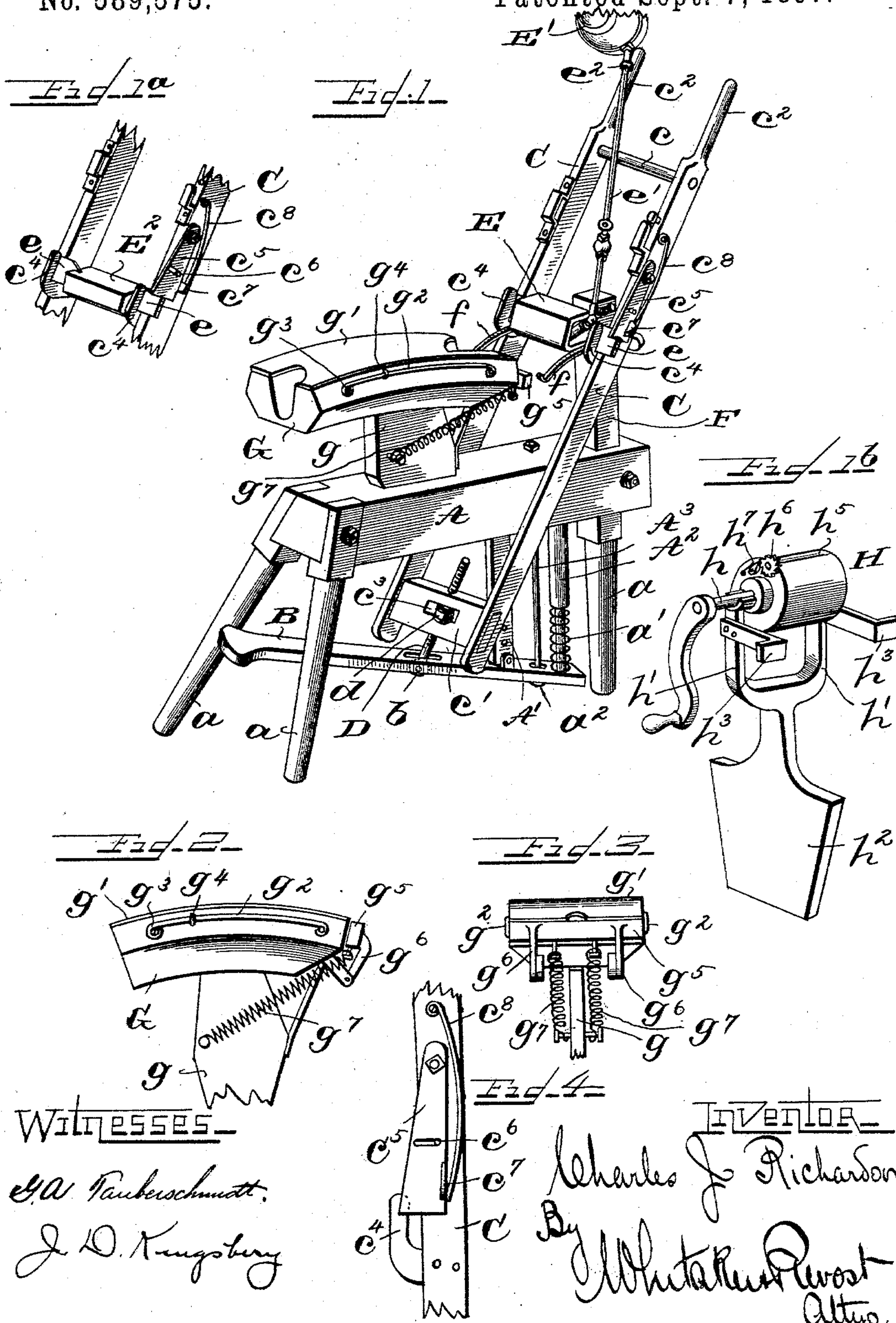


2 Sheets—Sheet 1.

No. 589,575.

Patented Sept. 7, 1897.



(No Model.)

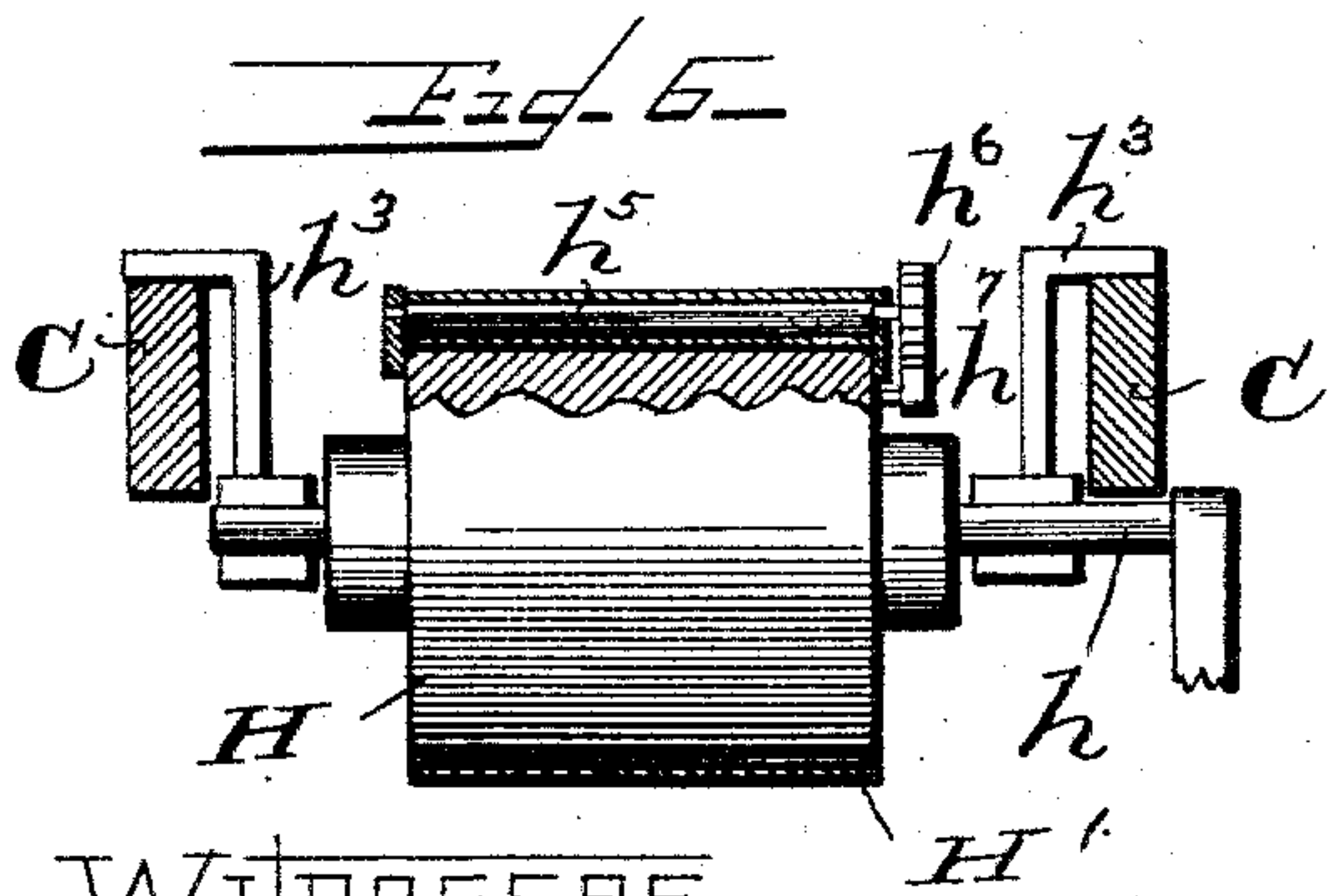
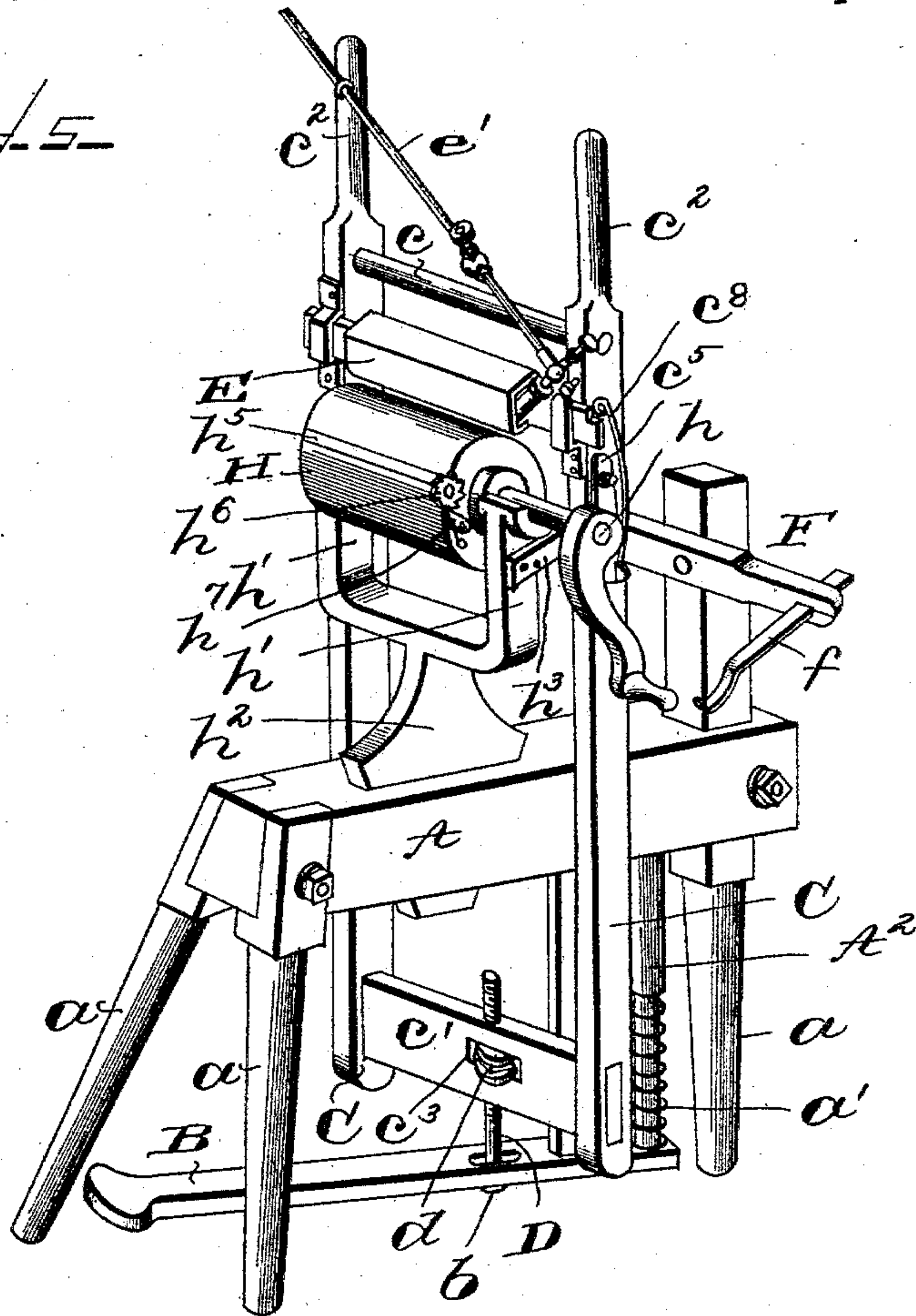
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C. J. RICHARDSON.  
IRONING MACHINE.

No. 589,575

Patented Sept. 7, 1897.

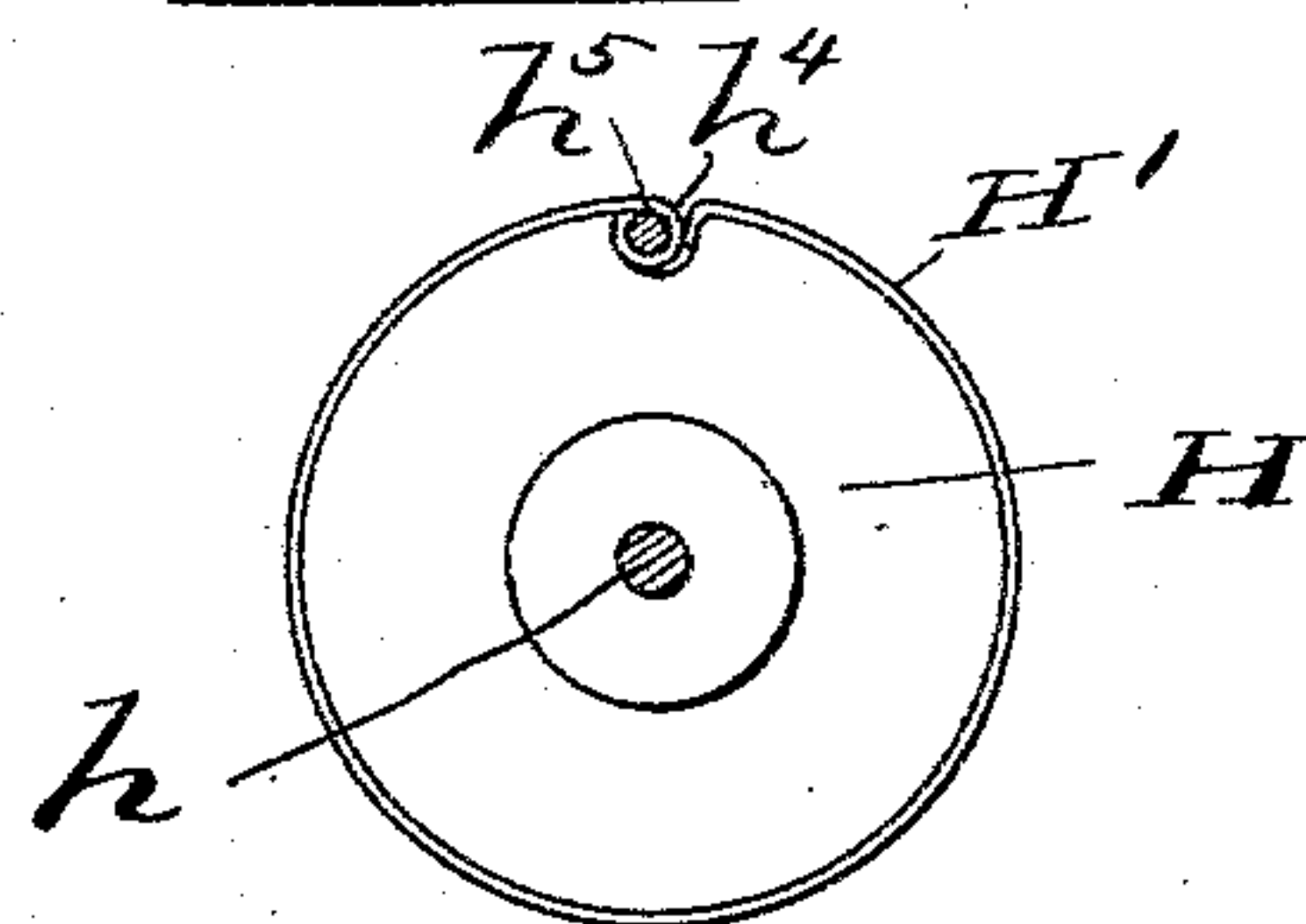
Fig. 5



Witnesses—

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Fig. 7



Inventor—

Charles J. Richardson  
By Whitaker & Trow  
Attys.



# UNITED STATES PATENT OFFICE.

CHARLES J. RICHARDSON, OF ADRIAN, MICHIGAN.

## IRONING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 589,575, dated September 7, 1897.

Application filed February 26, 1896. Serial No. 580,776. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES J. RICHARDSON, a citizen of the United States, residing at Adrian, in the county of Lenawee and State of Michigan, have invented certain new and useful Improvements in Ironing-Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention is an improvement in ironing-machines; and it consists in the novel features of construction and combination of parts hereinafter fully described, reference being had to the accompanying drawings, which illustrate one form in which I have contemplated embodying my invention, and said invention is fully disclosed in the following description and claims.

Referring to the said drawings, Figure 1 represents a perspective view of my improved machine arranged to iron shirts, &c., and showing the cuff-and-collar-ironing device detached. Fig. 1<sup>a</sup> is a detail perspective view showing another form of iron which may be employed. Fig. 1<sup>b</sup> is a perspective view of the roller used for ironing collars and cuffs and its attaching means. Figs. 2 and 3 are respectively a side elevation and end view of the shirt-board. Fig. 4 is a detail of a part of the mechanism. Fig. 5 is a perspective view of the machine arranged to iron collars and cuffs. Fig. 6 is a horizontal view, partly in section, of the ironing-roller. Fig. 7 is an end view of the said roller, showing the roller-shaft and adjusting-shaft in section.

In the drawings, A represents the main body of the machine, which consists of a supporting beam or table provided with suitable legs or supports *a*. Beneath the body A is a depending bar A', to which is pivoted a foot-lever B. In rear of bar A' is another rod A<sup>2</sup>, which preferably engages an aperture in the foot-lever B and is encircled by a coiled spring *a'*, which is held between said foot-lever and a shoulder or stop on the rod A<sup>2</sup>, thus serving to hold the front end of the lever B in an elevated position. In order to prevent the rear end of the lever B from being depressed too far, I prefer to provide a guide-rod A<sup>3</sup>, in this instance secured to the

body A between the bar A' and rod A<sup>2</sup> and engaging a slot or opening in the lever B, beneath which it is provided with a head *a*<sup>2</sup> or nut, serving as a stop to limit the downward movement of the rear end of said lever B.

A pivotally-mounted ironing-frame is connected with the foot-lever B forward of its pivotal support. In this instance this frame consists of vertically-disposed bars C C, connected by cross-pieces *c* and *c'*, so as to form a light frame, the upper ends of bars C C being provided with handle portions *c*<sup>2</sup>.

The lower cross-piece *c'* is provided with a central slot *c*<sup>3</sup> and a vertical aperture through which passes the threaded stem of an eye-bolt D, and a nut *d* engages said threaded portion and lies in the slot *c*<sup>3</sup> of the cross-piece. The eye of the bolt D engages a pivot-pin *b* in the lever B, thus forming a pivotal connection between the ironing-frame and said lever, and the frame can be adjusted vertically by means of the nut *d*, as will be readily seen.

I may employ two bolts D instead of one, if preferred, as will be obvious.

The bars C C of the ironing-frame are provided intermediate their ends with the hook-shaped brackets or iron-supports *c*<sup>4</sup>, which receive flattened arms secured to or forming parts of the irons. Adjacent to these brackets *c*<sup>4</sup> each bar C is provided with a spring-latch or locking-lever *c*<sup>5</sup>, pivoted to the bar and having its end in position to engage the upper side of the arms of the irons, as shown, to prevent the iron from being forced upward while it is in use. These latches are allowed a limited movement, preferably by means of a slot therein which is engaged by a screw or pin *c*<sup>6</sup>, (see Fig. 4,) and the said latches are also provided each with a lip *c*<sup>7</sup>, by means of which they can be moved away from above the arms of the iron, so as to permit the removal of the iron when desired. A spring *c*<sup>8</sup> holds each latch normally in operative position.

In using the machine I may employ several styles of irons according to the character and amount of work to be done.

In Fig. 1 I have shown a hollow iron E, having a portion of its surface curved and provided interiorly with a gasolene or other heater, a gasolene-heater being shown. In



this case I have also shown a gasoline-tank  $E'$ , connected with the heater by a pipe  $e'$ , which engages a hook-bolt  $e^2$  on one of the handles  $c^2$ . The iron is provided at each side  
5 with the supporting-arms  $e e$ , which engage the brackets  $c^4$  and are secured therein by the latches  $c^5$ , as previously described.

In Fig. 1<sup>a</sup> I have shown a solid iron  $E^2$ , having supporting-arms  $e e$  and provided with a  
10 curved face. This iron, it is obvious, must be heated prior to use by placing it upon a stove or other heating device.

At the rear end of the table or main body  $A$  of the machine is a vertical standard or  
15 rest  $F$ , provided with two forwardly-extending arms  $f f$ , preferably of spring material and curved slightly, as shown. These arms engage the under sides of the arms  $e e$  of the iron when the ironing-standard is thrown  
20 back into inoperative position, as shown in Fig. 1, and hold the ironing-frame.

The main body or table  $A$  is provided adjacent to its central portion with a vertical slot or recess, which is adapted to receive  
25 broad, tapering, or wedge-shaped shanks secured to the shirt-board  $G$  and the cuff-and-collar roller  $H$ .

In Fig. 1 the shirt-board is shown in operative position, its supporting-shank  $g$  engaging the slot in the main body  $A$  and held by frictional contact therewith. The shirt-board is formed in the usual manner, having a slightly-curved upper face upon which is secured a cushioning-pad  $g'$ . At each side said  
30 board is provided with a spring-arm  $g^2$  for holding parts of the shirt while the bosom is being ironed. These arms are preferably formed of spring material having one end secured rigidly to the board, as at  $g^3$ , and a  
40 second securing device  $g^4$ , engaging said arm adjacent to the first-named device, leaving the other end free but adapted to clamp tightly against the board. At one end I provide the bosom or shirt board with a clamping  
45 device. (Shown best in Figs. 2 and 3.) This device consists of a clamping-bar  $g^5$ , having arms  $g^6$ , pivotally connected with parts secured to the board  $G$ , and the said clamping-bar is engaged by springs  $g^7$ , secured  
50 to a part of the shirt-board, or, as in this instance, to the shank  $g$ , which springs force the bar against the end of the shirt-board.

The operation of the device in ironing shirts and similar garments is as follows:  
55 The shirt is placed upon the shirt or bosom board in the usual manner and secured by placing parts of the garment in engagement with the spring-arms  $g^2$  and clamping-bar  $g^5$ . The operator then grasps the handles  $c^2 c^2$   
60 and moves the ironing-frame forward until the iron is brought over the part to be operated on, when the foot-lever  $B$  is depressed, and the handles are then moved forward and backward to iron the garment, the proper  
65 amount of pressure being regulated by the operator.

$H$  represents the cuff-and-collar roller, pro-

vided with a shaft  $h$ , which is adapted to removably engage bearings in the upper ends of supporting-arms  $h' h'$ , secured to the shank  
70  $h^2$ , which fits into the slot of the table or body  $A$ . Each of these arms  $h' h'$  is provided with a horizontal bracket  $h^3$ , having a lateral projection or arm, said brackets being adapted to hold the bars  $C$  of the ironing-frame be-  
75 tween them and the shaft  $h$  of the roller  $H$ .

In arranging the machine to iron collars and cuffs the shirt-board is removed and the shank of the roller-supporting frame is placed in the slot of the table  $A$ , while the arms  $C C$   
80 are held in a position forward of said supporting-frame. The ironing-frame is then moved rearwardly until the bars  $C C$  strike the laterally-turned projections of brackets  $h^3$ , when the roller  $H$  is placed in position  
85 with its shaft in its bearings, thus holding the bars  $C C$  in a vertical position, (see Figs. 5 and 6,) but permitting them to move up and down.

The roller-shaft  $h$  is provided with a suitable handle by means of which the roller can be turned, and the ironing is performed by  
90 laying the collar or cuff upon said roller in the usual manner and forcing the iron down upon it by means of the foot-lever  $B$ .

I prefer to form the roller  $H$  with a longitudinal notch or recess  $h^4$  therein and to cover it with a layer or layers of suitable material, one end of which is tacked or otherwise secured to the roll in said recess. The material  $H'$  is then carried around the roll and made  
100 to engage a winding-shaft  $h^5$ , located in said recess below the surface of the roll. At one end of the roll, beyond the portion engaged by the iron, the said shaft  $h^5$  is provided with  
105 a ratchet-wheel  $h^6$ , which is engaged by a pawl  $h^7$ , so that said shaft can be turned in any suitable manner to wind up and stretch the material  $H'$  upon the surface of the roll.

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

1. In an ironing-machine the combination with the main frame provided with a wedge-shaped socket, of the pivotally-mounted ironing-frame, means for moving said frame to-  
115 ward and from the work and a work-support provided with a wedge-shaped shank adapted to engage said socket, whereby said work-support may be removed and another substituted therefor, substantially as described.

2. In an ironing-machine the combination with the main frame, of a lever pivoted thereto, an ironing-frame pivoted to said lever, at its lower end, adapted to be moved vertically by  
120 said lever, and having a swinging movement with respect to said lever, supporting-arms  $f f$  and a work-support detachably secured to said main frame adjacent to said ironing-frame, substantially as described.

3. In an ironing-machine the combination  
130 with the main frame, of a lever pivoted thereto, a rectangular ironing-frame, a connecting-bar adjustably secured to the ironing-frame, and pivoted directly to said lever, and a work-



support detachably secured to said main frame, substantially as described.

4. In an ironing-machine the combination with the main frame, of a lever pivoted thereto, an ironing-frame pivoted to said lever, said frame being provided with retaining-brackets and spring-latches adjacent thereto, an iron having end portions adapted to engage said brackets and latches and a work-support

detachably secured to the main frame, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES J. RICHARDSON.

Witnesses:

A. N. OLDHAM,

GEO. W. WESTERMAN.