

No. 694,906.

Patented Mar. 4, 1902.

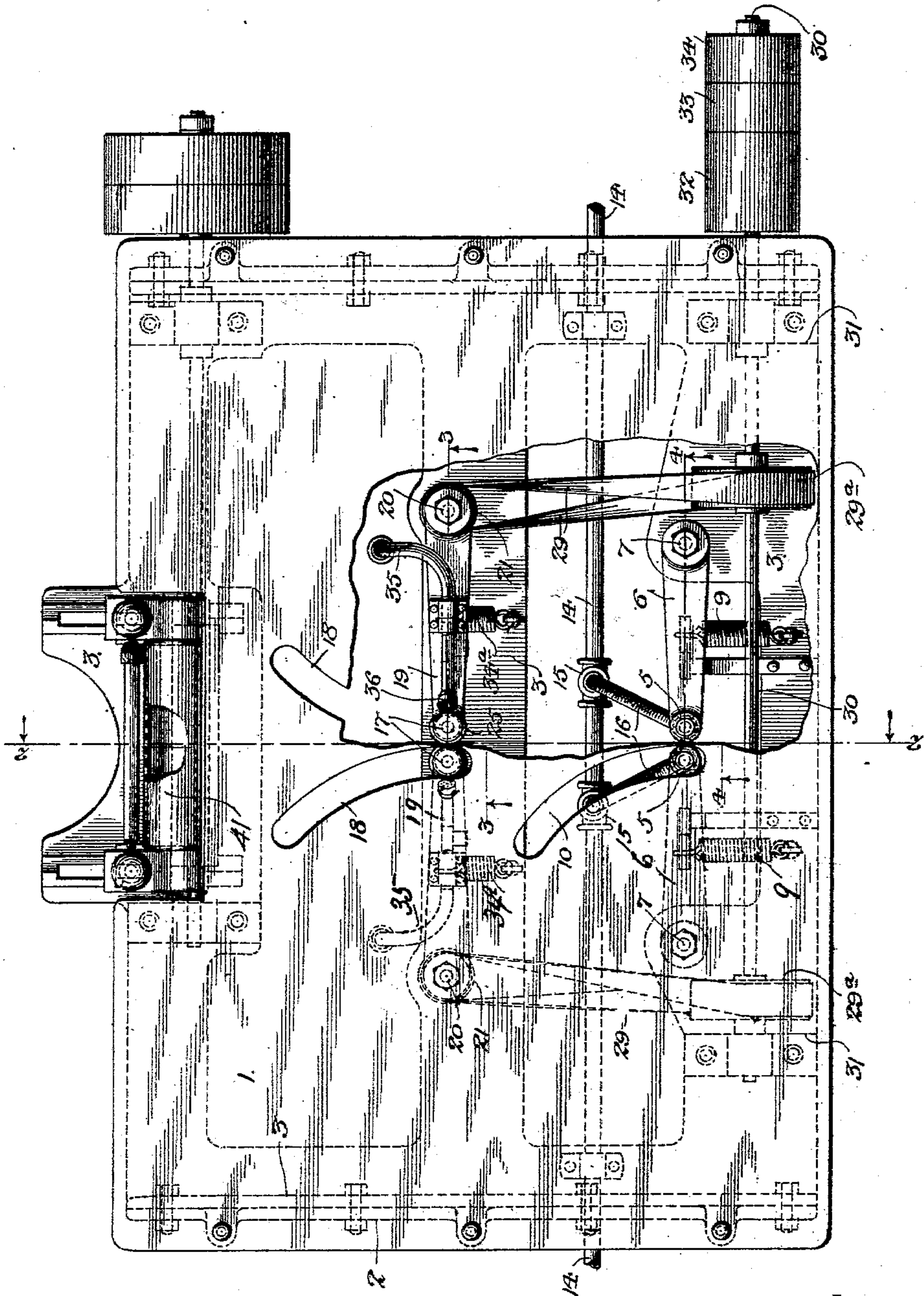
C. W. ANDERSON.  
IRONING MACHINE.

(Application filed Sept. 13, 1897.)

(No Model.)

3 Sheets—Sheet 1.

Fig. 1.



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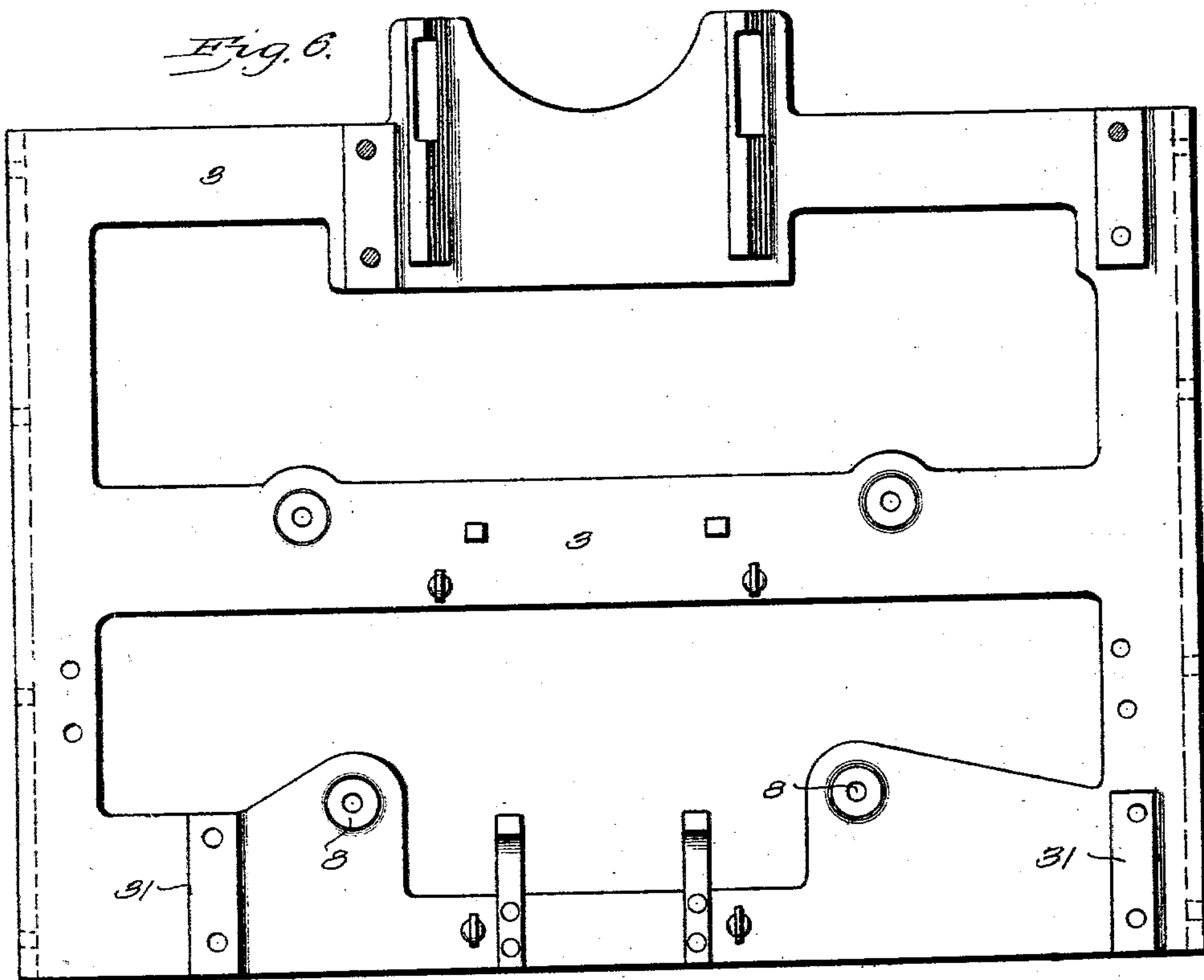
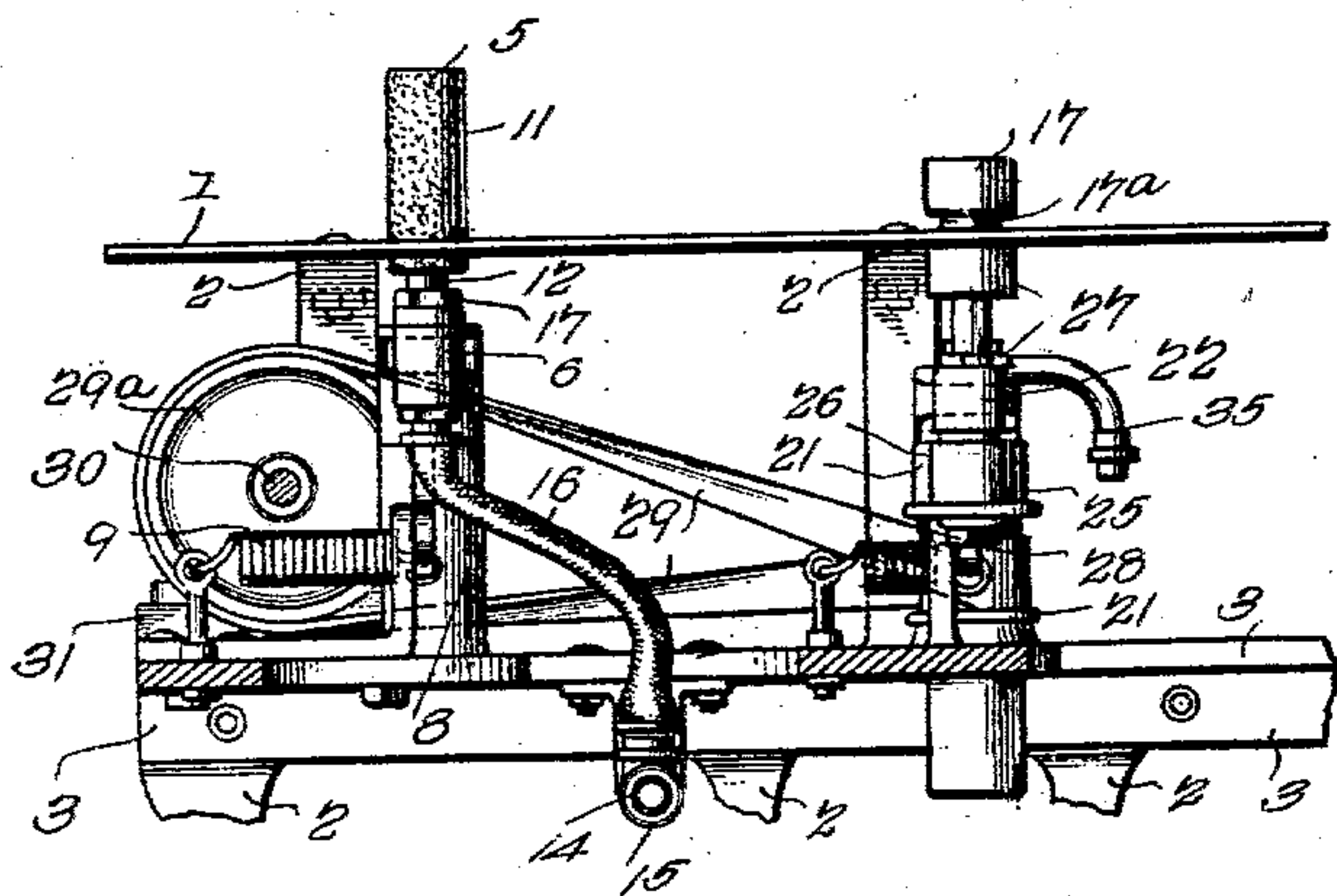
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3 Sheets—Sheet 2.



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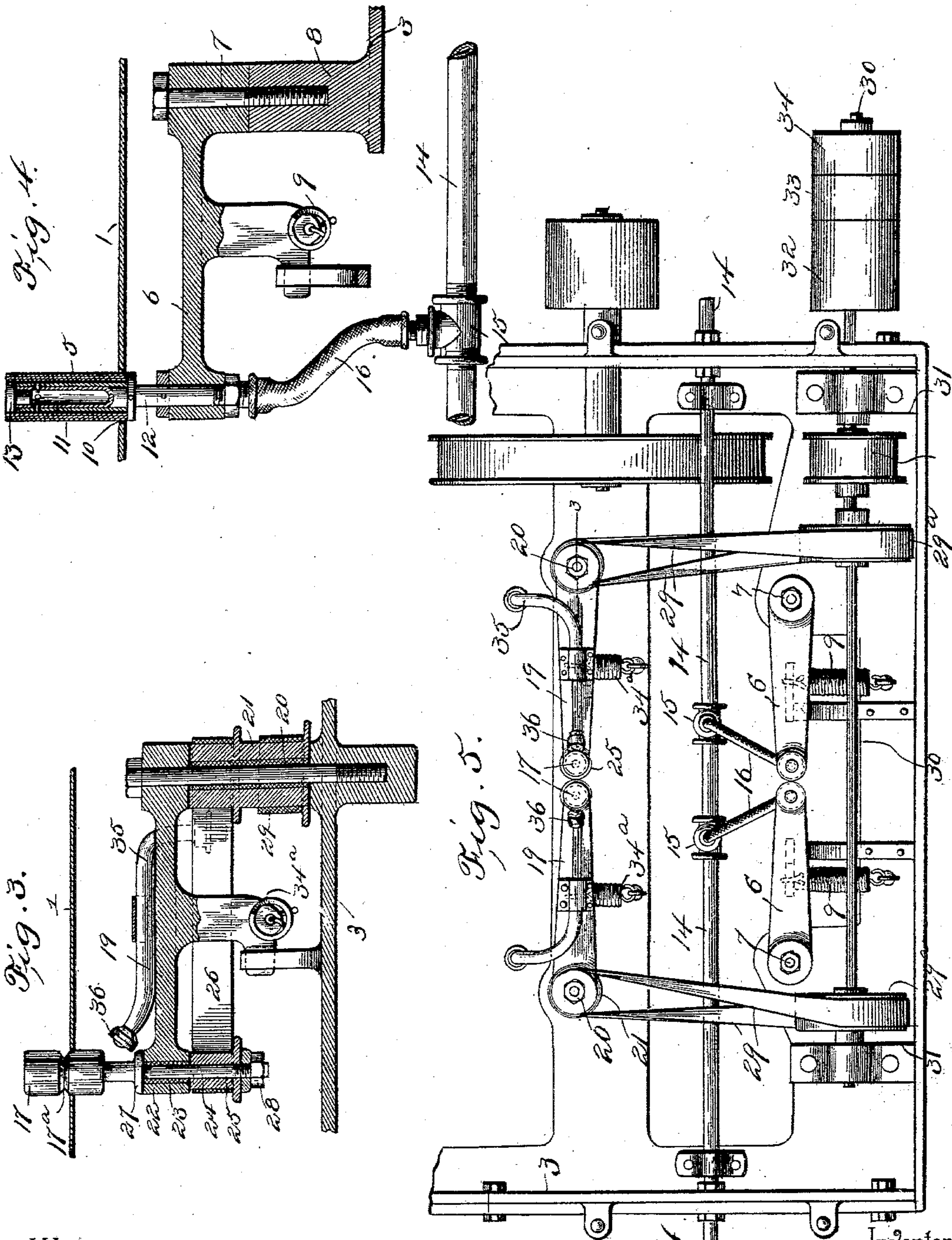
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3 Sheets—Sheet 3.



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# UNITED STATES PATENT OFFICE.

CHARLES W. ANDERSON, OF LOS ANGELES, CALIFORNIA, ASSIGNOR OF ONE-HALF TO W. W. WOOD, OF LOS ANGELES, CALIFORNIA.

## IRONING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 694,906, dated March 4, 1902.

Application filed September 13, 1897. Serial No. 651,473. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES W. ANDERSON, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented a new and useful Ironing-Machine, of which the following is a specification.

My invention relates to improvements in ironing-machines which are especially designed for the purpose of ironing collars and cuffs; and the primary object that I have in view is to provide an improved machine by which the rough and frayed edges of collars and cuffs may be turned in and ironed smooth and flat upon the fabric.

A further object of the invention is to provide means by which work-treating devices, either in the form of ironing-rolls or of moistening-rolls, may be spread for the passage of the work of different thicknesses and maintained at all times in parallel relation to each other in order to operate efficiently on the work.

A further object of the invention is to provide means for positively driving the work-treating devices that serve to iron the collars and cuffs at all points in the adjustment thereof and also to provide means for heating said devices under all conditions of service.

To the accomplishment of these ends the invention consists in the novel combination of elements and in the construction and arrangement of parts, which will be hereinafter fully described and claimed.

To enable others to understand my invention, I have illustrated the preferred embodiment thereof in the accompanying drawings, forming a part of this specification, and in which—

Figure 1 is a plan view of a machine for ironing collars and cuffs embodying the invention. Fig. 2 is a vertical sectional view on the line 2 2 of Fig. 1. Fig. 3 is an enlarged sectional view on the line 3 3 of Fig. 1, showing one of the ironing-rolls, its swinging arm, the driving mechanism for rotating said ironing-roll, and the heating appliance. Fig. 4 is an enlarged sectional view on the line 4 4 of Fig. 1, showing one of the fabric-covered moistening-rolls, its swinging arm, and the means for supplying water to said fabric-cov-

ered roll. Fig. 5 is a plan view, partly broken away, the work table or plate being omitted. Fig. 6 is a detail plan view of the supporting plate or frame attached to the main frame for supporting the operative appliances of the machine.

Like numerals of reference denote like and corresponding parts in each of the several figures of the drawings.

1 designates the table of my improved ironing-machine. This table is in the form of a flat metallic plate having a smooth polished upper surface, or said upper surface of the table may be nickel-plated or otherwise finished, as desired. This flat table 1 is supported by a main frame 2, and said main frame carries a supporting-plate or supplemental frame 3 and suitable journal-bearings for the shafting required to operate the working parts of the machine.

The main frame has the supporting-plate or supplemental frame 3 attached thereto below the table 1, and this supporting plate or frame 3 is arranged in parallel relation to the table 1, so as to extend from front to rear and from side to side thereof.

The moistening-rolls 5 5 are arranged near the front edge of the table 1, and they are movably and yieldingly sustained in or on said table and arranged to be supplied with water for keeping the fabric coverings thereof in a moistened condition. These moistening-rolls 5 are carried by the swinging arms 6 6, situated in horizontal positions between the table 1 and the supporting-plate 3, and said arms are pivotally or loosely supported on the plate or frame 3—as, for example, by means of the bolts 7, which pass through enlarged hubs of the arms, said bolts being fastened to short standards 8 on the frame or plate 3, as shown by Fig. 4. The swinging arms 6 are drawn normally toward each other by the springs 9, so that the moistening-rolls engage with each other, and said arms 6 turn or swing on their pivots, so as to permit the rolls to spread apart and allow of the passage of the work between them. These moistening-rolls pass through and play freely in arc-shaped slots 10, provided in the table 1, and thus the moistening-rolls are arranged to project above the table, while the supporting and



operating devices for said rolls are housed below the table. Each moistening-roll consists of a cylindrical shell covered with a fabric 11, preferably of linen, wrapped thereon to produce a yieldable surface, and the roll is arranged to be supplied with water for moistening this fabric covering no matter in what position the rolls may be. To this end each idler-roll 5 is revolvably mounted upon a water-supply tube 12, which passes through the cylindrical roll-shell and through the slot 10 in the table, and this supply-tube is extended through an enlarged outer end of the arm 6, which carries the roll 5, and is rigidly secured to said arm. The upper end of the tube 12 and roll-shell have lateral escape-ports for the water to pass from the tube and from the roll-shell to have access to the fabric covering 11, and the upper end of said tube 12 is closed by means of a plug 13. (See Fig. 4.)

Water is supplied to the tubes 12 of both the rolls 5 from a single water-pipe 14, which is suitably attached to the main frame 2 below the plate or supplemental frame 3. This water-pipe 14 has a coupling 15 for each tube 12 of the moistening-rolls, and to said couplings 15 and the lower ends of the pipes 12 are attached the flexible hose or pipes 16, which permit the rolls 5 to swing with the arms 6 and serve as the means for supplying water to said fabric-covered rolls 5, no matter what position they may occupy in the slots 10 of the table 1.

The ironing-rolls 17 are arranged in rear of the moistening-rolls 5 more in the central line of the table 1, and said ironing-rolls are fitted loosely in arc-shaped slots 18, provided in the table, as shown by Fig. 1. These ironing-rolls 17 are carried by another pair of swinging arms 19, which are also arranged between the table 1 and the supporting-plate 3. These arms 19 for the ironing-rolls are attached loosely to the frame or plate 3 by means of the arbors or spindles 20, which are suitably fastened to the plate 3 to serve as journals for the swinging arms 19 and as means for supporting the double pulleys 21, by which and suitable belting the ironing-rolls 17 are adapted to be positively driven at a relatively high rate of speed. Each arm 19 is provided at its outer free end with a journal-bearing 22, lined with a suitable sleeve or bushing 23, and in this sleeve or bushing is journaled the roll-carrying arbor 24, which has the roll 17 attached to its upper end in any suitable manner. The lower end of the roll-arbor 24 carries a pulley 25, which is made fast to said arbor or shaft, and around the pulleys 21 25 passes an endless belt 26, whereby the motion of the pulley 21 is communicated through the belt to the pulley 25 to positively drive the shafts and rolls 24 17, as will readily be understood by reference to Fig. 3.

The arbor or shaft 24 of each ironing-roll 17 is provided with a collar 27, that bears upon the bearing 22 and bushing 23 to limit the vertical movement of the shaft and roll

in a downward direction, and the lower end of said arbor or shaft has a nut 28, by which the upward displacement of the shaft is prevented and the pulley 25 is prevented from coming off said arbor or shaft 24.

It will be understood that the double pulley 21 for each ironing-roll has the belt 26 passed around one member thereof, while around the other member of said double pulleys pass the belts 29, that extend around driving-pulleys 29<sup>a</sup>, carried by a shaft 30, which is journaled in suitable bearings 31 on the frame 3. In case the machine is designed to be driven by power from an overhead line of shafting I extend one end of this shaft 30 beyond the ironing-machine and provide it with pulleys 32 33 34.

The swinging arms 19 for the ironing-rolls are normally impelled in a direction where the rolls 17 are in contact with each other by means of springs 34<sup>a</sup>, whereby the rolls 17 are arranged in operative relation to iron the work; but the rolls are adapted to spread, because the arms 19 thereof are arranged to swing on their pivots 20 to permit the work to pass between the ironing-rolls. I have shown each of the four swinging arms for the moistening and ironing rolls as provided with a spring, which is attached to a lug extending from the arm and attached or supported on the plate or frame 3; but I would have it understood that I do not restrict myself to the particular arrangement of the coiled springs shown in the drawings, as I am aware that flat springs may be used in lieu of the coiled springs and that other means may be used to draw the arms and rolls together.

The ironing-rolls are made of metal, and in the cylindrical surfaces of the rolls are provided annular grooves 17<sup>a</sup>, one groove in each roll. These grooves in the pair of rolls are coincident with each other, and the rolls are thus adapted for turning in the rough or frayed edges of the collar or cuff which may be passed between the pair of rolls.

From the foregoing description, taken in connection with the drawings, it will be observed that the pairs of swinging arms which support the ironing-rolls and the moistening-rolls are similar in their construction and mode of operation—that is to say, each pair of arms is independently supported below the slotted table, so as to be out of the way of the work and so as to have the pivots of said arms concentric with the arcs of the segmental slots in the table. The rolls that treat the work, whether they are the moistening-rolls or the ironing-rolls, are supported revolvably in the swinging arms, and with these arms are associated springs or equivalent devices that normally act on the arms to force or move them into positions where the work-treating rolls lie at the inner contiguous ends of the slots in the tables. These work-treating rolls are thus maintained in parallel relation one to the other at all points of their adjustment with the swinging arms, and when normal



conditions prevail the pair of rolls are in contact with each other, so as to properly operate on the work when it is introduced between the rolls. I have also provided mechanism  
 5 for heating these ironing-rolls. On the swinging arms 19 are mounted or attached in any suitable way the short lengths of gas-supply pipes 35, which extend along the arms 19 and which have their inner ends coupled to flexible tubes or hose, (not shown,) by which said  
 10 pipes 35 may be supplied with gas from any suitable source of supply. The outer end of each gas-pipe 35 is extended upward to terminate adjacent to the base of the ironing-roll 17, and on this end of the pipe is provided  
 15 a burner, (indicated in a general way by the numeral 36.) In the practical embodiment of my invention I prefer to employ a burner of that kind known to the art as a "Bunsen"  
 20 burner; but as this style of burner is well known and as it forms no part of the invention I do not deem it necessary to illustrate or describe the detailed construction thereof. The type of burner mentioned is preferable,  
 25 because of the absence of smoke and the fact that the ironing-roll will not become dirty to soil the work; but it is evident that other kinds of burners may be used for heating the ironing-rolls.

30 At the rear side of the table 1 is arranged the shaper mechanism 41, which is designed to give collars and cuffs the desired roll or cylindrical form previous to their discharge from the machine. The shaper mechanism

may be of any desired construction, and as it  
 does not form a part of the present invention  
 a detailed description is deemed unnecessary. 35

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

1. The combination of a slotted table, swinging arms pivotally supported below the table, work-treating rolls revolubly mounted on the arms for adjustment therewith and maintained thereby in parallel relation to each  
 40 other at all points of their adjustment, and springs operatively fitted to said arms and actuating the latter to maintain said rolls normally in contact with each other, substantially as described. 45

2. The combination of a table having segmental slots, swinging arms lying below the table and pivoted at points concentric with the arc of the slots in said table, work-treating rolls revolubly mounted on said arms and  
 50 extending through the table-slots, and springs connected to the arms to normally hold the latter and said rolls contiguous to the adjacent ends of said segmental slots, substantially as described. 55

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses. 60

CHARLES W. ANDERSON.

Witnesses:

PETER HANSEN,  
 PASCAL PASQUALINI.