

No. 649,268.

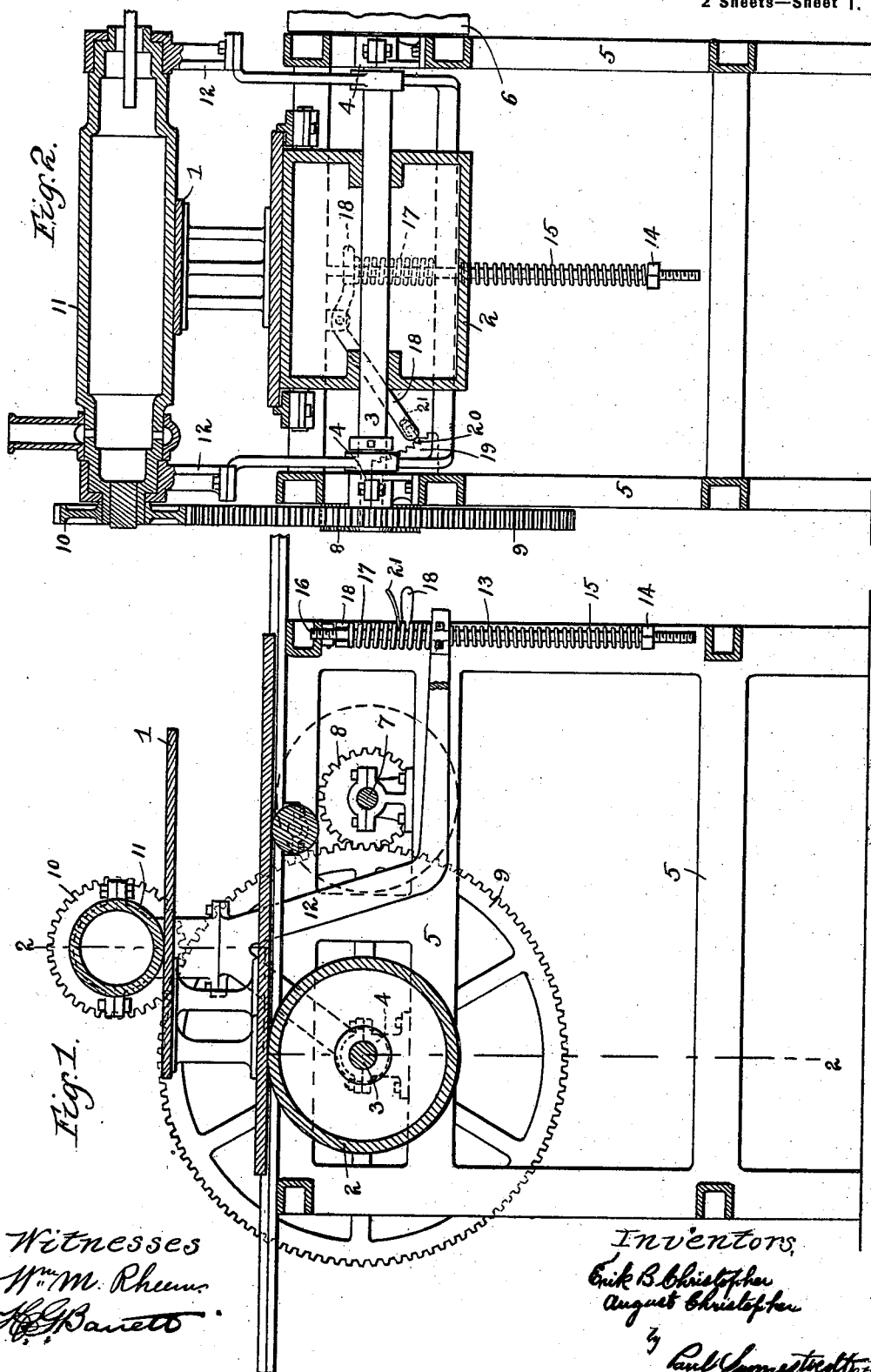
E. B. & A. CHRISTOPHER.  
IRONING MACHINE.

(Application filed Dec. 27, 1898.)

Patented May 8, 1900.

2 Sheets—Sheet 1.

(No Model.)



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Fig. 3.

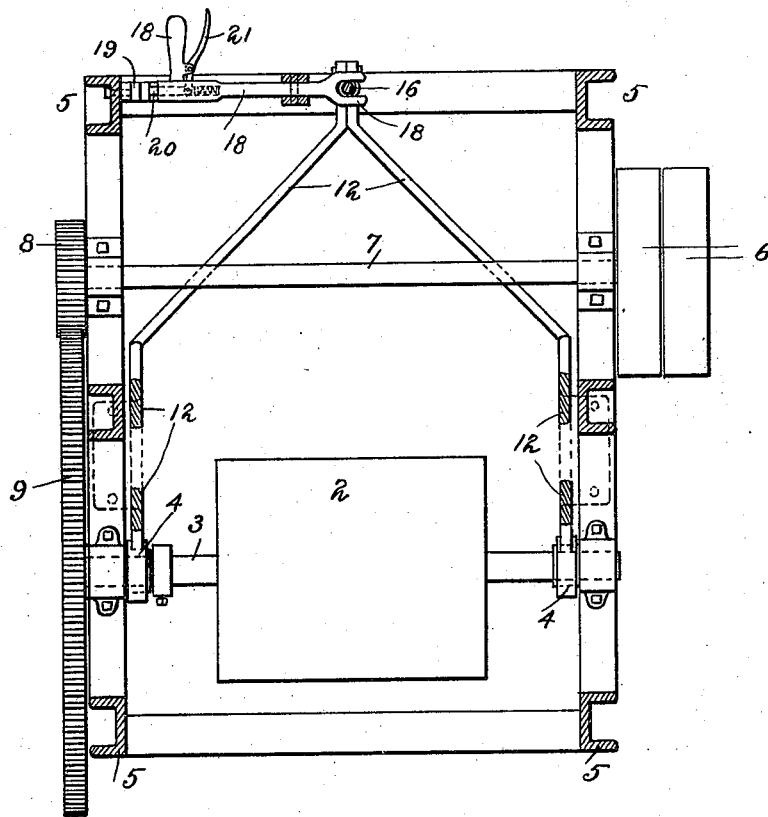
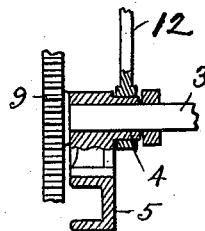


Fig. 4.



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# UNITED STATES PATENT OFFICE.

ERIK B. CHRISTOPHER AND AUGUST CHRISTOPHER, OF CHICAGO, ILLINOIS.

## IRONING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 649,268, dated May 8, 1900.

Application filed December 27, 1898. Serial No. 700,420. (No model.)

*To all whom it may concern:*

Be it known that we, ERIK B. CHRISTOPHER and AUGUST CHRISTOPHER, citizens of the United States, and residents of Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Ironing-Machines, of which the following, taken in connection with the accompanying drawings, is a specification.

10 Our invention has for one of its objects the provision of an ironing-machine constructed with a main frame, a reciprocating board, a driving-roller for moving said board, an ironing-roller, and an auxiliary frame pivotally  
15 mounted about the same axis of rotation as the driving-roller, and preferably upon the boxes thereof, the whole being provided with suitable means for regulating the pressure of the ironing-roller upon the board.

20 Another object of our invention is the provision of a machine having the parts just described, in which the weight of the adjustable end of the frame which carries the ironing-roller shall be carried upon a spring under  
25 adjustable tension and in which the pressure of the roller upon the board is secured by a second spring, the tension of which is also adjustable.

Another object of our invention is the provision of a hand-operated device or lever by which the pressure of the roller upon the board may be readily and instantaneously released in case of necessity—as, for example,  
35 where an extra thickness of material has to be passed under the roller.

Another object of our invention is the combination, with the last-mentioned hand-operated device, of an adjustable locking attachment whereby the hand-operated device may  
40 be secured in any desired position and the desired tension of the pressure-regulating spring thereby determined, the same means being thus employed to adjust this tension as serve the purpose of permitting the ready release of the pressure of the roller in case of  
45 necessity.

The above, as well as such other objects as may hereinafter appear, we attain by means of a construction which we have illustrated  
50 in preferred form in the accompanying drawings, in which—

Figure 1 is a vertical section through the

center of our machine. Fig. 2 is a vertical section at right angles to the first, taken on the line 2 2 of Fig. 1. Fig. 3 is a horizontal section showing the arrangement of hand-latch which we employ and the shape of the frame, and Fig. 4 is a sectional view designed to illustrate the pivotal mounting of the ironing-roller frame upon the main frame.

60 The ironing-board 1 is reciprocated by means of the driving-roller 2, which is secured to an axle 3, journaled in two boxes 4, fixed to the frame 5. The power for driving the machine may be derived from a hand-crank 65 or, as shown in Fig. 2, from a belt-pulley 6, keyed to another shaft 7, which carries a gear 8, meshing with the gear 9, secured to the shaft or axle 3. Intermeshing with the gear 9 we provide another gear 10, which is fastened upon  
70 a projecting end of the ironing-roller 11, the roller 11 being carried in an auxiliary frame 12, which is pivotally mounted around the same axis of rotation as the driving-roller 2 and preferably around the outside of the boxes 4,  
75 so that the outer end of the frame 12 may be moved up and down without disarranging the engagement between the gears 9 and 10 and also without causing undue friction upon the axle 3 where the frame 12 surrounds the  
80 same. The outer end of the frame 12 is vertically movable, being supported upon its under side by a spring 13, adjusted by means of the nut 14, which has threaded engagement with the rod 15, so as to have just sufficient tension to properly carry the weight of  
85 the frame 12 and the ironing-roller 11, the upper end of the rod 15 being securely fastened in the main frame at 16. Upon the upper side of the outer end of the frame 12  
90 we provide another spring 17, arranged to be pressed down by means of the lever 18 and held at any desired point by means of the notched piece 19 and the engagement therewith of a pawl 20, controlled by a hand-latch  
95 21. The spring 17 thus arranged, as will be clearly seen by an examination of Fig. 1, acts to press the roller 11 against the board 1.

It can now be clearly seen that by the arrangement which we have described, and particularly by the mounting of the ironing-roller in a frame which is rotatably movable about the same axis of rotation as the driving-roller 2 and the gear 9, we are enabled to secure  
100

any desired degree of movement of the ironing-roller with reference to the ironing-board without interfering in any way with the operation of the gears or the working of any other part  
5 of the machine.

In the use of our invention the necessary variations in pressure between the board and the roller can be made without any change in the plane of movement of the table, the  
10 guideways therefor occupying a fixed position with reference to the frame and without the use of a third gear or set of gears. We have also provided a construction in which pressure between the ironing roller and board can,  
15 by means of the hand-lever 18, be readily and quickly released in case it becomes necessary at any time because of the nature of the work being done.

It is clearly evident that many of the details of construction hereinabove described  
20 may be modified without departing from the spirit of our invention, and we desire to be understood as regarding all such modifications as covered by our claims.

25 Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. An ironing-machine comprising a main frame, a reciprocating board, a driving-roller  
30 for moving said board, an ironing-roller, and an auxiliary frame carrying said ironing-roller, said auxiliary frame being pivotally mounted about the same axis of rotation as said driving-roller, the outer end of said auxiliary frame being carried between a pair of  
35 springs, the one arranged to carry the weight of the frame and ironing-roller and the other

to regulate the pressure between the ironing roller and board.

2. An ironing-machine comprising a main frame, a reciprocating board, a driving-roller  
40 for moving said board, an ironing-roller, and an auxiliary frame carrying said ironing-roller, said auxiliary frame being pivotally mounted about the same axis of rotation as  
45 said driving-roller, the outer end of said auxiliary frame being carried between a pair of springs, the one arranged to carry the weight of the frame and ironing-roller and the other  
50 to regulate the pressure between the ironing roller and board, both of said springs being provided with suitable means for adjusting the tension thereof.

3. In an ironing-machine, the combination with the reciprocating board thereof, the driving-roller constructed to move said board, of  
55 an ironing-roller, an auxiliary frame for carrying said ironing-roller, intermeshing gears forming an operative connection between the axes of said driving-roller and said ironing-  
60 roller, said auxiliary frame having one end pivotally mounted about the axes of said driving-roller and the other end provided with means for adjusting the position of said frame  
65 whereby the position of the ironing-roller relative to the reciprocating board may be varied and the gears at the same time kept in the same relative engagement the one with the other, substantially as described.

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