

J. W. ABEL.  
Ironing-Machine.

No. 197,078.

Patented Nov. 13, 1877.

FIG. 1.

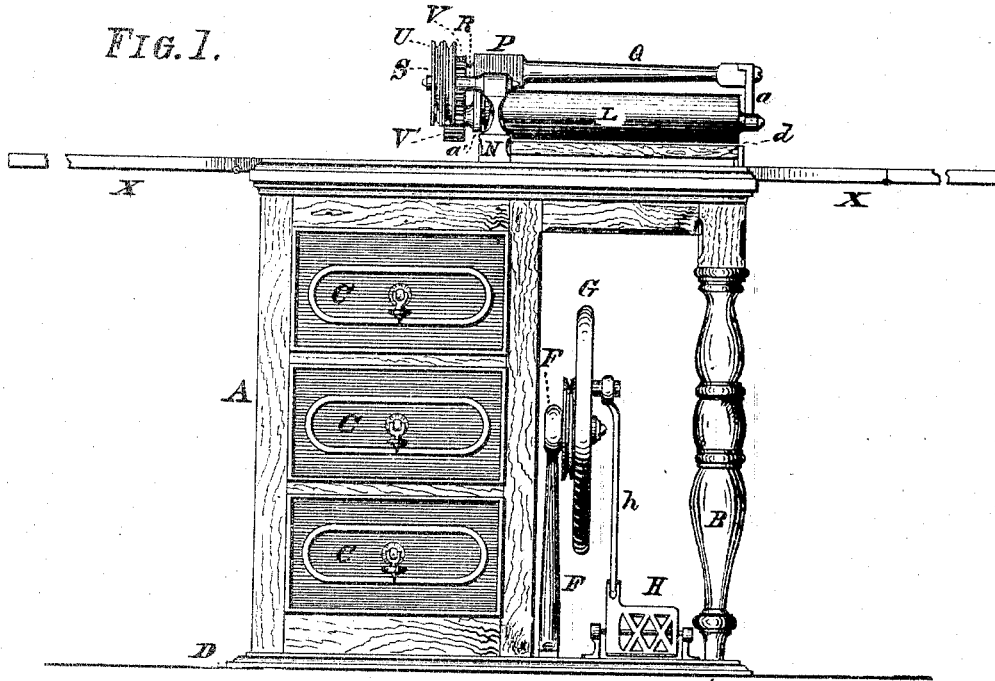
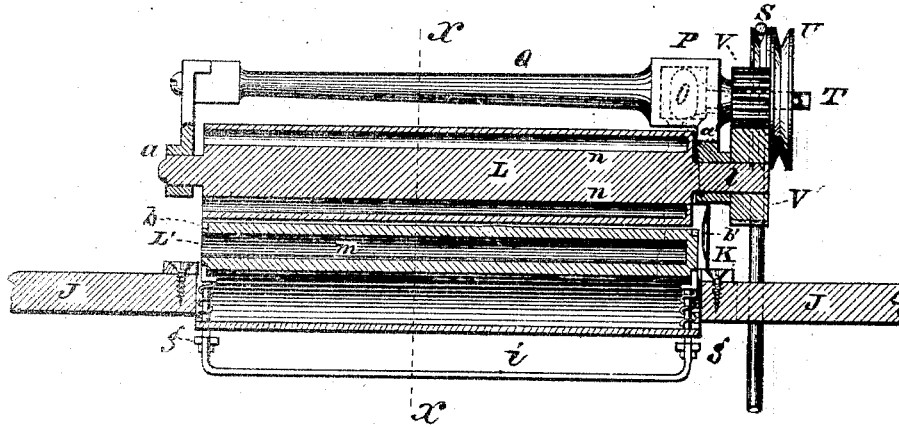


FIG. 2.



Witnesses:

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Inventor:

*Jacob W. Abel*  
by *Michael J. Beck*  
his Atty.

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FIG. 3.

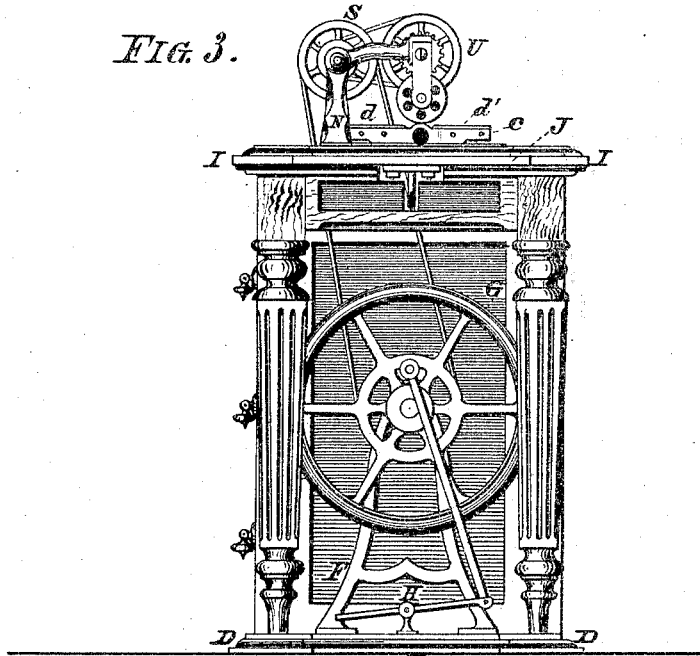
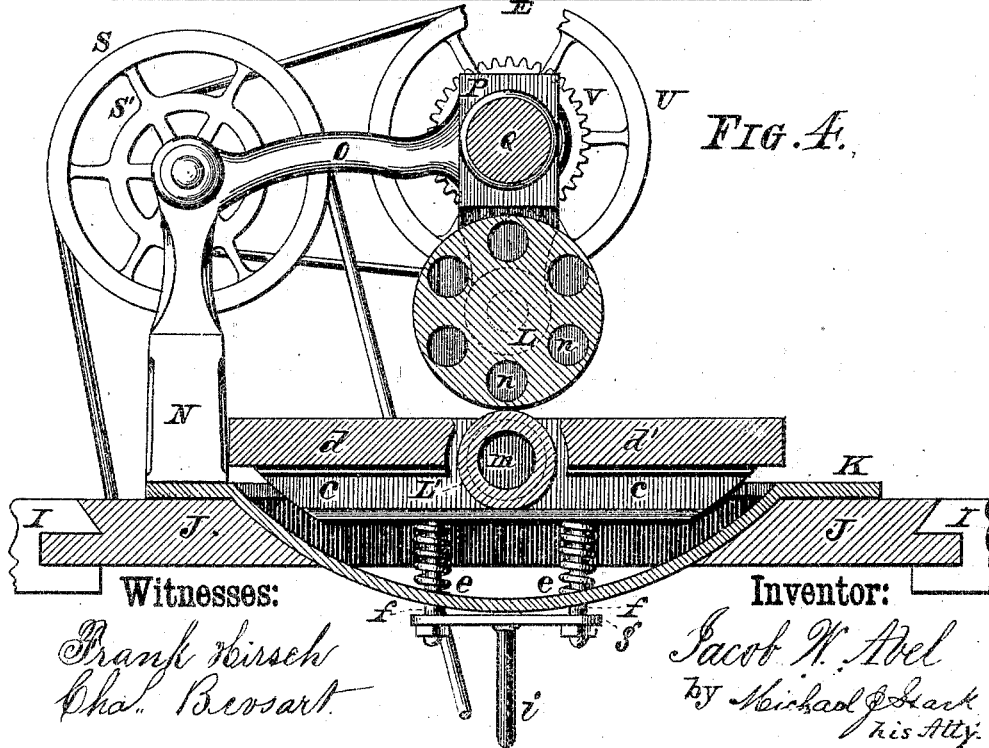


FIG. 4.



Witnesses:

Frank Kirsch  
Chas. Bessart.

Inventor:

Jacob W. Abel  
by Michael J. Clark  
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# UNITED STATES PATENT OFFICE.

JACOB W. ABEL, OF BUFFALO, NEW YORK.

## IMPROVEMENT IN IRONING-MACHINES.

Specification forming part of Letters Patent No. 197,078, dated November 13, 1877; application filed September 24, 1877.

*To all whom it may concern:*

Be it known that I, JACOB W. ABEL, of Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements on a Combined Wardrobe and Ironing-Machine; and I do hereby declare that the following description of my said invention, taken in connection with the accompanying sheets of drawings, forms a full, clear, and exact specification, which will enable others skilled in the art to which it appertains to make and use the same.

My present invention relates to a combined wardrobe and ironing-machine; and it consists in the peculiar arrangement of parts and details of construction, as hereinafter first fully set forth and described, and subsequently pointed out in the claims.

In the drawings heretofore mentioned, Figure 1 is a front elevation of my improved combined wardrobe and ironing-machine. Fig. 2 is a longitudinal sectional elevation of the ironing mechanism. Fig. 3 is a side elevation, and Fig. 4 a transverse sectional elevation in line X X of Fig. 2, on an enlarged scale.

Like letters of reference indicate corresponding parts in all the figures.

A is a wardrobe or portable closet, consisting of a table having the usual legs B, and part of the space underneath the table closed up and provided with drawers C. The base-plate upon which this closet and the table-legs stand is composed of two parts, D and E, the latter being arranged to slide into the former, and provided with tongues fitting grooves in said part D. Upon this slide E are secured the standards F, carrying the balance-wheel and pulley G, and the treadle H, by means of which and the connecting-rod *h* the said wheel G is rotated. Upon the table, which, like the base-plate, is composed of two parts, I and J, the latter being arranged to slide into the former, and provided with tongues fitting grooves in the table-leaf I, is secured the bed-plate K of the ironing-machine, which latter is composed of two metallic rollers, L L', placed horizontally one above the other, and rotating within the bearings *a a'* and *b b'*, the former bearings being those for the upper and the latter those for the lower roller. The upper roller L is supported by a standard, N, having

an arm, Q, terminating in a head, P, from which projects the arm Q, to whose front extremity the bearing *a* is secured, while the bearing *a'* is attached to, or formed in one part with, the head P. From the standard N projects a stud, R, Fig. 1, upon which revolve the pulleys S S', and from the head P protrudes a similar stud, T, upon which revolve the pulley U and gear-wheel V. This latter wheel meshes a similar wheel, V', placed upon the pivot *l* of the roller L.

The lower roller L' revolves by frictional contact with the upper roller, and is supported within a yielding bed composed of the two side pieces *e e* and the platforms *d d'*, the latter serving as a table for the fabric to be ironed. This bed is carried upon spiral springs *e e*, passed over rods *f*, which rods are united at their lower extremity by the transverse plates *g*, which plates, in turn, are connected together by the bail *i*.

The bed-plate K of the machine has centrally a curved depression, as clearly shown in Fig. 4, so as to afford space for the spiral springs *e*, and also to serve as a protector to prevent the heat radiating from the lower roller from affecting the wood-work of the closet.

The rollers L L' are hollow, the lower one being provided with a central cone, *m*, and the upper one with a series of longitudinal passages, *n*, arranged concentrically with the roller-pivot *l*. These passages *m* and *n* receive heated irons or belts in the usual manner, whereby the said rollers are heated.

The operation of this machine is as follows, to wit: The slides J and E are pulled out so that nearly the entire ironing-machine projects over the table, and the balance-wheel and pulley G is in line with the pulley S. Now the heated bolts are inserted into their respective places, and the rollers rotated by means of the pulley S, communicating motion to the pulley U, and the wheel V transmitting said motion to the wheel V'. The fabric to be ironed is passed between said rollers, and emerges therefrom in a perfectly smooth condition after having been acted upon by said rollers, the necessary pressure being obtained by the spiral springs *e e*. To insert the fabric, the lower roller can be pulled downward by means of the bail *i*, which, being connected

with both ends of the roller through the rods *f* and plates *g*, allows this to be done very readily.

It is evident that, the power available for revolving the rollers being, in the present case, foot-power, the said rollers must be geared to such a speed only that a lady engaged in operating the machine can readily perform the task for a sufficient length of time to do the larger part of a family's ironing. This I have attained by the introduction of properly-sized pulleys and gear-wheels, whereby the roller is revolved at proper speed. If steam or other motive power is available, the rollers may be revolved considerably faster by making suitable connections with such motor.

Although the most elaborately-worked dresses, &c., can be ironed on this machine, it is more particularly adapted for ironing plain goods, such as handkerchiefs, cuffs, collars, shawls, and similar articles which are not embroidered, and it will be very advantageously employed in hotels for ironing sheets and table-linen, towels, &c.

For family use I have provided the stand with suitable drawers, so that the ironed goods may be at once stored away. When not in use the slides *J* and *E* are pushed in, when the machine will not occupy more floor-space than the common sewing-machine, unless a large capacity for the wardrobe is a desideratum; and the working parts may be protected by

the folding top *X*, which, when properly adjusted, forms a perfect cover for the said parts.

Having thus fully described my invention, I desire to secure to me by Letters Patent of the United States—

1. In an ironing apparatus, a frame supporting slides *E* and *J*, the former carrying the operating and the latter the ironing mechanism, the whole being constructed and arranged substantially as and for the purpose set forth.

2. The combination, with the slide *J*, of the bed-plate *K*, standard *N*, having the arm *O*, head *P*, arm *Q*, and bearings *a a'*, and the rollers *L L'*, said roller *L'* being fitted within a yielding bed-plate, as and for the purpose stated.

3. The combination, with the roller *L*, of the standard *N*, pulleys *S S'*, pulley *U*, gear-wheel *V*, and wheel *V'*, as described.

4. The combination, with the bed-plate *K*, of the bearing-pieces *b b'*, forming bearings for the roller *L'*, platforms *d d'*, rods *f*, springs *e*, plates *g*, and the bail *i*, as specified.

In testimony that I claim the foregoing as my invention I have hereto set my hand and affixed my seal in the presence of two subscribing witnesses.

JACOB W. ABEL. [L. S.]

Attest:

MICHAEL J. STARK,  
FRANK HIRSCH.