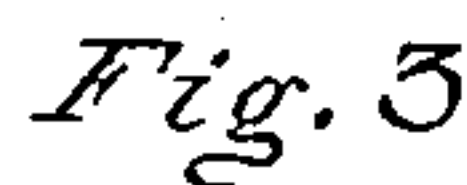


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Inventor—
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United States Patent Office.

GEORGE BOXLEY, OF TROY, NEW YORK.

Letters Patent No. 101,573, dated April 5, 1870.

IMPROVEMENT IN IRONING-MACHINES.

The Schedule referred to in these Letters Patent and making part of the same.

Be it known that I, GEORGE BOXLEY, of Troy, in the county of Rensselaer and State of New York, have invented certain new Improvements in Ironing-Machines, of which the following is a full specification, reference being had to the accompanying drawing and letters of reference marked thereon making a part thereof, in which—

Figure 1 is a perspective view of said improved machine;

Figure 2 is a side elevation thereof;

Figure 3 is a partial cross-sectional view, taken through the smoothing-iron and its driving-bar on an enlarged scale, and

Figure 4 is a top view of said machine.

The same letters refer to like parts in each of said figures.

The object of my invention is to produce an improved machine for the purpose of ironing or smoothing and polishing shirts, shirt-bosoms, collars, and other articles; and

The said invention consists in the combination of certain mechanical devices, in manner substantially as hereinafter fully described and shown, whereby the smoothing and polishing-iron is caused to move either in long or short rectilinear reciprocating strokes, and in lateral curved or circular directions, and its strokes are fully controlled and easily guided in such movements upon and over the article operated on, by the hand and foot of the operator.

The construction of my improved machine is as follows:

A suitable frame, A B B, is first made for supporting the machinery.

On the top part of this frame is secured the ironing-table, C.

At one end of the said frame there is fixed the bearing, D, which has pivoted thereto the vibrating bar E.

This bar has a slotted curve, *k*, with a radius of curvature equal to the length of the connecting-rod or bar G, which is connected to the bar E by a pin or stud, I, so as to slide either way easily in said slot *k*.

J is an adjusting bar, having one end pivoted in the bearing T, while the other end is connected by the link or bar F to the bar G and stud I aforesaid.

A cord or belt, *p*, has one end attached to the said bar, thence passing over the pulley-wheel *s*, while its other end is attached to the treadle or foot-lever R, substantially as shown.

The bar G is attached to the crank H on shaft of pulley M, driven by the belt O passing there-around, and also around the driving-pulley N on driving-shaft Y.

A belt-tightener or starter, P, is provided with a friction-roller at its belt end and pivoted to a supporting standard, whilst its other end is attached by a link

or bar to the foot-lever or treadle Q, substantially as shown in the drawing.

Arranged to operate over the table C is the ironing or iron-driving bar V, made of two pieces or rails, *a*, secured together and provided with a handle at one end, while the other end has a tongue so as to be pivoted in the slot of the swivel-head U, which swivels or turns in a socket, *m*, in the head of the vibrating-bar E aforesaid, and is kept therein by means of the set-screw *q*, in manner as shown.

This mode of constructing the ironing-bar leaves a vertical slot through it nearly its whole length, substantially as shown in the drawing.

Arranged within this slot, and so as to slide or be adjusted to different positions therein, is the smoothing-iron holder, which is composed of the swivel head or stock *d*, provided with the handles or horns *e e* and cap *h* supporting it on its carriage *b*, sliding on the rails *a a*, and held in adjusted position thereon by the set-screw *c*.

A pin, *g*, passes through the under side of the swivel *d*, which holds the ironing-bar V up to its proper place on said swivel *d*.

The smoothing-iron W is readily attached to the swivel *d* by means of the pin *f* passing through a tongue of the iron and jaws of the swivel, in manner as shown, or it may be attached in any other convenient manner.

The new parts of my ironing-machine consist, as shown, of the swiveling iron-holder *d h*, the driving-bar V, connected by the swivel-joint to the rocking arm E, and the connecting-rod G, having adjustable connection with said arm E.

By means of these parts the smoothing-iron W is made to move in different lengths of stroke in reciprocating directions, which, at will, is changed into curved, oval, or circular directions.

These said parts are operated by the before-described devices of driving-pulleys, belts, adjusting-bars or rods, and treadles or levers, but it is apparent that mechanical skill may substitute and arrange equivalents in place of the pulley *s* and cord *p* of said devices; for instance, by arranging a foot-lever in place of the treadle R, and connecting its end by a link to the bar J, the adjustment of the connecting-rod G on rocking-arm E may be made in manner substantially as before done, or the adjusting-bars J and F may be dispensed with, and their place filled by an additional pulley arranged and secured near the end of the machine and over the connecting-rod G, the pulley *s* being turned in line with the extra pulley. The cord *p* therefrom is then passed over the extra pulley and fastened to the rod G.

By pressing down the treadle R, the connecting-rod

G is adjusted on the arm E so as to vary the length of stroke of the smoothing-iron W, in manner substantially as before done.

If necessary, the bar or rod G may be made to adjust quicker by weighting its adjustable end.

In place of the loose belt O with the belt-tightener or starter P, as shown, a loose pulley and tight belt may be used with the tight pulley, and a belt-shifter operated by a foot-lever arranged therewith, so as to shift the belt onto either pulley, as wanted, to either start or stop the machine.

The operation and use of my improved machine is as follows:

The article to be smoothed or ironed is spread on the table C, and the smoothing-iron W, made properly hot, is attached to the driving-bar V at any adjusted position thereon suitable to the article to be ironed.

The machine and iron W is set in motion by the operator's foot pressing the lever Q down, which causes the starter P to tighten the belt O of the driving-pulley N sufficiently to cause it to give motion to the pulley M, thus vibrating the bar E, which causes the iron-driving bar V and iron W to move in reciprocal directions over the table C, the operator keeping one hand on the handle of the driving-bar V so as to thereby guide the iron W over different parts of the article ironed, the other hand being at liberty so as to keep the article in proper position for the action of the iron W, and also to guide the toe of the iron W by means of the handles or horns *e e* aforesaid, so as to give it proper direction in ironing shirt-bosoms, plaits, &c.

When necessary to shorten the length of stroke of the iron W so as to adapt it to ironing collars, cuffs,

&c., the operator's foot is placed on and presses down the lever R, which causes the cord *p* to lift the adjusting-bar J, and with it the end of the connecting-rod G, so that the length of stroke of the iron W may thus be shortened or graduated and properly adapted to the kind of work in hand. The smoothing-iron making straight reciprocating strokes, and, by properly controlling the driving-bar V by its handle, the straight reciprocating strokes may be changed to curved, circular, or oval strokes, in manner about as shown by the dotted lines in fig. 4 of the drawings, and so that the ironing stroke may be best adapted to smooth the article in process of ironing.

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

1. The combination of the adjustable swiveling iron-holder *d h*, provided with handles *e e*, with the slotted driving or ironing-bar V and smoothing-iron W, substantially as and for the purpose described.

2. The combination and arrangement with each other of the table C, the ironing-bar V, the vibrating arm E, and the adjustable connecting-rod G, substantially as set forth, and operated by the means and for the purposes hereinbefore described.

3. The combination of the adjusting bars F and J, treadle R, pulley *s*, and belt *p*, with the connecting-rod G, vibrating arm E, ironing-bar V, and smoothing-iron W, substantially as and operating for the purpose described.

GEORGE BOXLEY.

Witnesses:

JOHN J. SAVAGE,
J. L. BARNEY.