P. O'THAYNE.
Ironing-Machine.

No. 210,224. Patented Nov. 26, 1878.

Fig: 1

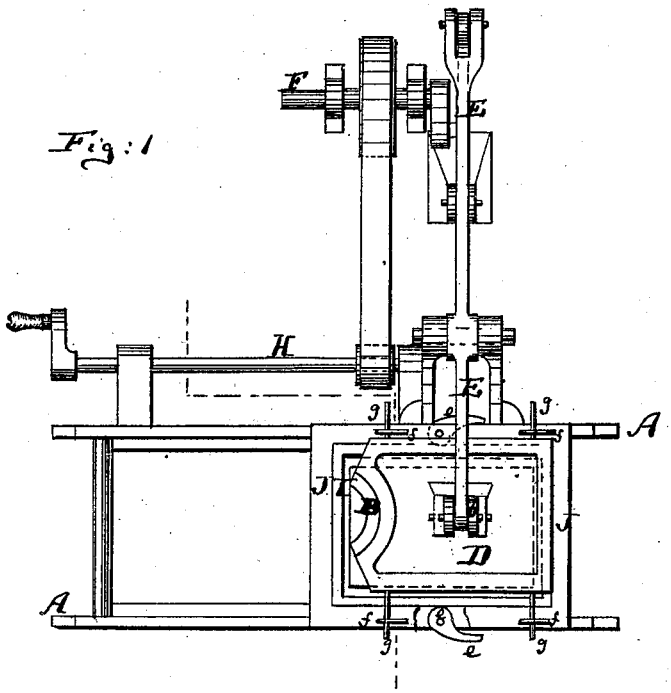
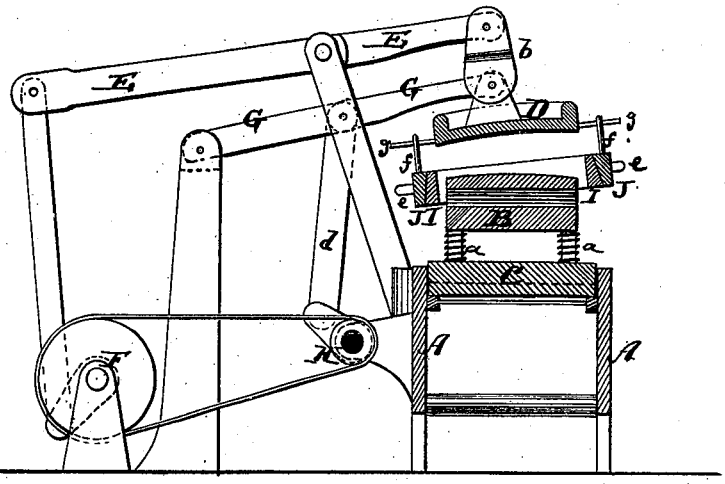


Fig: 2



Witnesses:
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UNITED STATES PATENT OFFICE.

PATRICK O'THAYNE, OF NEW YORK, N. Y.

IMPROVEMENT IN IRONING-MACHINES.

Specification forming part of Letters Patent No. **210,224**, dated November 26, 1878; application filed June 5, 1878.

To all whom it may concern:

Be it known that I, PATRICK O'THAYNE, of the city of New York, county of New York, and State of New York, have invented a new and Improved Shirt-Ironing Machine, of which the following is a specification:

Figure 1 is a plan or top view, partly in section, of my improved shirt-ironing machine. Fig. 2 is a side elevation, partly in section, of the same.

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

This invention relates to a new machine for ironing shirt-bosoms and other similar fabrics; and consists, principally, in the use of an oscillating and at the same time vertically-reciprocating ironing-tool, and also in the employment of means for preventing the adhesion of the fabric to be ironed to the ironing-board.

The invention consists, also, in the arrangement of mechanism employed for imparting motion to the ironing-instrument, and in the combined use of a concave ironing-instrument with convex-cushioned ironing-table, said ironing-instrument being connected to mechanism which imparts to it a combined reciprocating and oscillating movement, all as hereinafter more fully described.

In the accompanying drawings, the letter A represents the frame of the machine. B is the ironing board or table, set on a sliding platform, C, which moves in suitable guides, that are formed horizontally on the frame of the machine.

The ironing-table is supported on springs *a a*, which are interposed between it and the slide C, so that the table may yield to the pressure of the ironing-tool. This ironing-tool is marked D in the drawing, and is of size to enable it to cover substantially the surface of the table. The lower surface of the ironing-tool D is concave, and corresponds with the convex upper surface of the ironing-table, as clearly indicated in Fig. 2. The tool D is, by a suitable link, *b*, connected with a lever, E, to which vibratory motion may be imparted by a connecting-rod and crank from a crank-shaft, F, or by any other means. By vibrating the lever E on its fulcrum the ironing-tool D will be moved up and down. When moved down it presses the shirt-bosom onto the table. When moved up it releases the shirt-bosom from such pressure.

In addition to the connection just stated, the tool D is also connected at its upper part with a lever, G, which, by a rod, *d*, connects with a crank-shaft, H, which is rotated with greater speed than the crank-shaft F. By this last-mentioned connection the ironing-tool D is rocked on its suspension-pivot, which rocking motion, while the tool is pressed upon the shirt-bosom, serves to polish the bosom properly under pressure, and thus to perform at one operation, with one single tool, the service which it heretofore required either more tools or a greater number of movements to produce.

The ironing-table B is surrounded by an open frame, I, which serves to clamp the shirt properly to the board, it being placed over the shirt after the same has been placed upon the board. Another frame, J, surrounds the frame I, and can be clamped thereto by suitable cams *e e*, or by other equivalent fastening means. From the frame J project hooks *f f*, which catch over pins *g g*, that extend from the sides of the ironing-tool D. By this arrangement of connection between the ironing-tool and the frames I J said frames are caused to take part in the up-and-down movement of the ironing-tool, and whenever they are raised they serve to lift the shirt-bosom slightly off the ironing-board, thereby preventing the bosom from adhering to the ironing-board, which it is liable to do when the starch with which shirt-bosoms are saturated becomes heated. Whenever the ironing-tool descends the frames I and J are also carried down again, and draw the bosom tight over the ironing-board.

Instead of the connecting-hooks *f* and pins *g*, hereinabove described, I may use other mechanism for alternately raising and lowering the clamping-frames I J, or either of them, if but one is used—such, for example, as cams placed beneath these frames, and oscillated or rotated at suitable intervals or by other suitable devices.

The ironing-board B should be hollow, so

that it may be heated by steam, hot water, or otherwise, and the ironing-tool D should also be hollow, so that it may be heated by gas, steam, or other means; or it may in other manner be adapted to receive heating fluids or devices.

I claim—

1. The combination of the ironing-tool D, in a shirt-ironing machine, with the lever E and with the lever G, in manner described, so that said tool will be moved up and down by the lever E, and at the same time oscillated by the lever G, substantially as specified.

2. The combination of an ironing-table, B, having a convex upper surface, with the ironing-tool D, having a concave lower surface, said ironing-tool being connected to mechanism which imparts to it a combined reciprocating and oscillating movement, substantially as herein shown and described.

3. The combination of the ironing-table B with the surrounding frame or frames I J, that serve to clamp the shirt-bosom to the ironing-board, and with mechanism whereby said frame or frames are alternately raised and lowered for preventing the adhesion of the fabric to the ironing-board, substantially as specified.

P. O'THAYNE.

Witnesses:
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