(No Model.) 2 Sheets—Sheet 1.

L. M. RYFENBURGH, C. L. HEINS & J. H. LEE.

IRONING MACHINE.

No. 303,233. Patented Aug. 5, 1884.

Fig. 1.

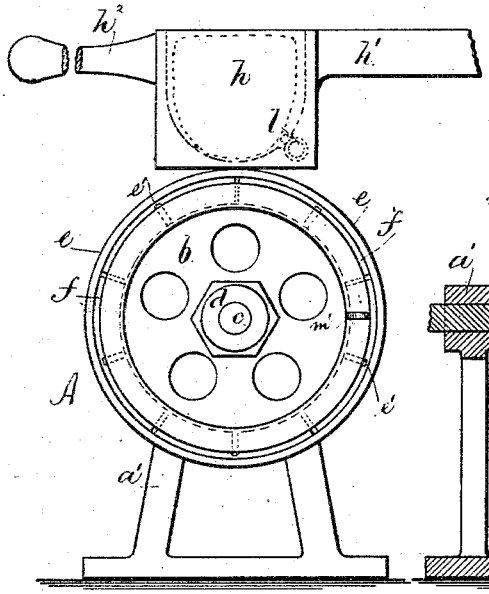
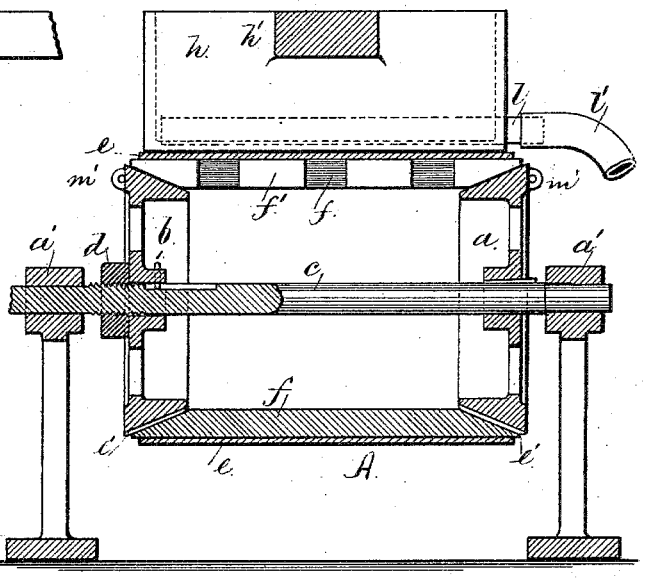


Fig. 2.



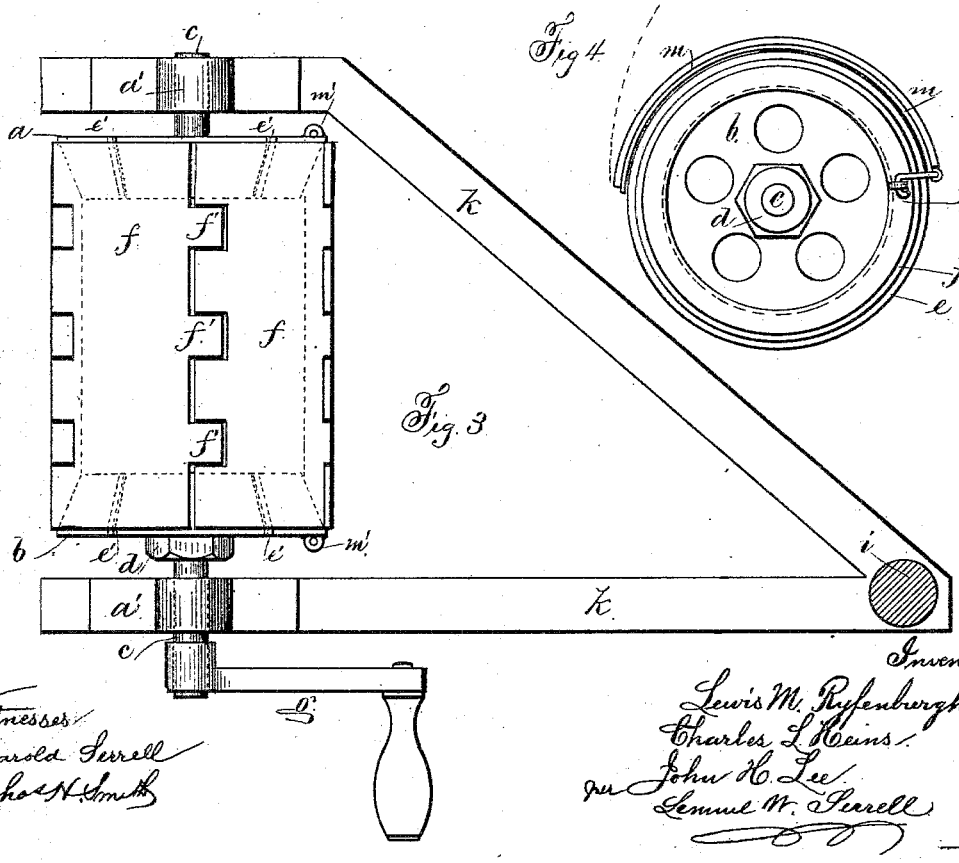


Fig. 3.

Fig 4

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(No Model.) 2 Sheets—Sheet 2.

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Fig. 5.

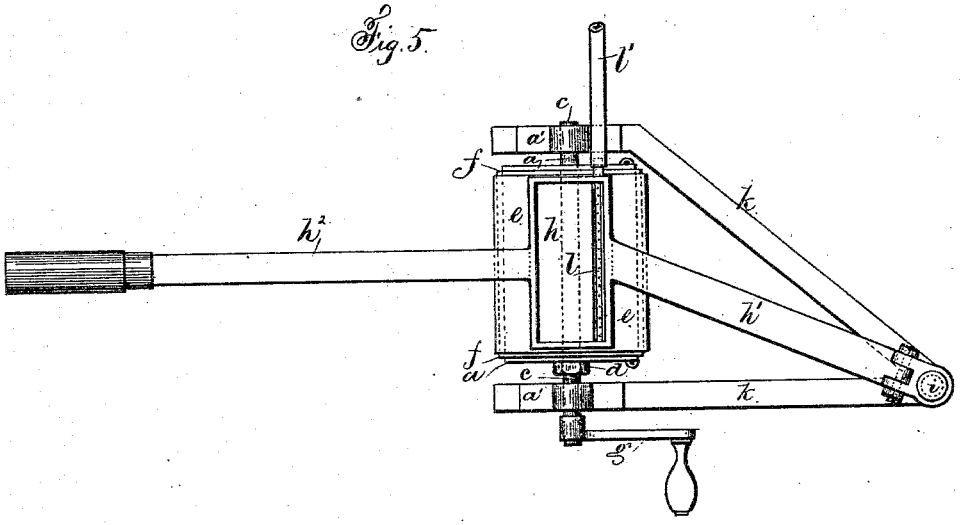
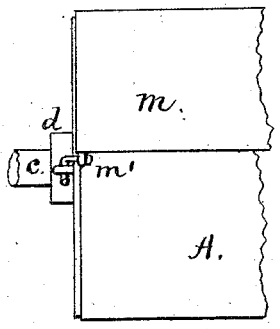


Fig. 6.



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UNITED STATES PATENT OFFICE.

LEWIS M. RYFENBURGH AND CHARLES L. HEINS, OF NEW YORK, N. Y., AND JOHN H. LEE, OF NORWALK, CONNECTICUT, ASSIGNORS TO SAID HEINS AND LEE.

IRONING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 303,233, dated August 5, 1884.

Application filed December 28, 1883. (No model.)

To all whom it may concern:

Be it known that we, LEWIS M. RYFENBURGH and CHARLES L. HEINS, of the city and State of New York, and JOHN H. LEE, of Norwalk, in the State of Connecticut, have invented a new and useful Improvement in Ironing-Machines; and the following is declared to be a description of the same.

Our invention relates to an ironing-machine in which the ironing-cylinder is made with coniform heads, and the outer surface of the cylinder of sections having beveled inner edges to fit the coniform heads, and provided with a cloth covering for ironing upon. The coniform heads are on a screw-threaded axle, and while one head is fast the other is adjustable, so as to set up and expand the sections and stretch the covering tightly thereon.

Our invention also relates to an iron to be employed in connection with said cylinder, wherein a hollow shell constitutes the iron, and said shell is provided with a perforated tube for burning gas to heat the iron, and is also adapted to receive a red-hot slug for heating it when desired; and our invention further relates to an ironing-board for shirt-bosoms, of circular form, and adapted for use in connection with the aforesaid cylinder, and said bosom-board is preferably hooked to lugs upon the cylinder-heads, and can be swung back to insert the shirt and again turned down to iron the bosom. Collars and cuffs can, if desired, be ironed upon the same bosom-board. The frame of the machine is made of such shape that the arm for supporting the iron comes from one corner of the frame in an angular direction to the iron.

In the drawings, Figure 1 is an end elevation of the ironing-cylinder and iron. Fig. 2 is a longitudinal section of ironing-cylinder and elevation of the iron. Fig. 3 is a plan of the ironing cylinder and frame, the cloth wrapping being removed from the cylinder. Fig. 4 is an end elevation of the ironing-cylder and bosom-plate, and Fig. 5 is a plan of the ironing-machine complete. Fig. 6 shows one end of the cylinder and bosom-plate.

The ironing-cylinder A is made with coniform heads *a b*, mounted upon a shaft, *c*, the shaft *c* being either separate or part of the head *a*, as desired. The head *b* is sufficiently loose upon the shaft *c* to slide, and there is a pin, 1, in a slot in the shaft *c* that keeps said head from turning, and the nut *d* serves to move the head *b* toward *a* in tightening the ironing-cloth *e* upon the cylindrical sections *f*. The heads *a b* are perforated for lightness. The ironing-cylinder A and axle or shaft *c* is mounted in suitable bearings, *a'*, and provided with a handle, *g*, for revolving it when in use. The cylindrical sections *f* are beveled at their ends on their under edges, as shown in Fig. 2, and their parallel opposing edges are made with projections *f'* upon one section entering notches in the opposite section. This construction gives a surface under the ironing-cloth *e*, and prevents it being pressed into the divisions or openings between the sections.

Upon the coniform heads *a b* there are projections *e'*, and in the beveled ends of each section *f* there is a groove fitting the projections.

In placing the ironing-cloth upon the ironing-cylinder the heads are separated until the sections *f* close tightly. The cloth is then wound around the sections and fastened. The nut *d* is then turned, and draws the coniform heads toward each other, expanding the sections and stretching the ironing-cloth. These projections *e'* upon the coniform heads are placed at equal distances apart, and the grooves in the beveled ends of the sections are cut in planes intersecting the shaft *c* of the machine, and when the shaft *c* is rotated and the coniform heads caused to approach each other the sections are expanded uniformly, and said projections and grooves cause the sections and coniform heads *a b* to maintain their proper relative positions. The base-frame *k* is triangular, as shown in Fig. 3, and at one corner there is a post or column, *i*. This being in line with one of the side frames *a'*, is not in the way of any article that is being ironed. The iron *h* is upon an arm, *h'*, that extends to the column *i*, where it is pivoted, as seen in Fig. 5, and the handle *h²* extends out from the

iron and forms a lever for pressing the iron upon the article that is being ironed. This iron *h* is a metal shell made hollow for the reception of a heating-slug, (shown by dotted lines in Fig. 1;) and we also provide a pipe, *l*, within a longitudinal recess in said iron, which is either perforated or provided with small burners, and used for burning gas to heat the slug and the iron, and a flexible tube, *l'*, is used to connect the pipe *l* to the gas-supply. This iron may be provided with a cover, if desired, either hinged to it or removable, as desired, to lessen the heat radiated upwardly from the same.

In connection with the ironing-cylinder A, we provide an adjustable bosom-plate, *m*, (see Fig. 4,) and said bosom-plate is of a segmental form corresponding with the ironing-cylinder A, and it is covered with an ironing-cloth and is connected removably to the ironing-cylinder by pins or hooks *m'* upon the bosom-plate entering perforations or lugs upon the cylinder A. This bosom-plate can be swung back while a shirt is being placed upon it and the bosom spread thereon, and in ironing said shirt the cylinder is partially revolved backward and forward by the handle *g*.

Collars and cuffs can be ironed upon the bosom-plate *m*, if desired, and the iron *h* will do its work upon said plate as well as upon the cloth-covered cylinder.

We claim as our invention—

1. In an ironing-machine, the combination of the expansible cylinder A, iron *h*, frame *k*, and supports for the cylinder and iron, and a bosom-plate, *m*, substantially as set forth.

2. In an ironing-machine, the combination, with the shaft *c*, nut *d*, and coniform heads *a b*, provided with projections *e'*, of the cylinder-sections *f*, beveled on the under sides of their ends, and provided with grooves for receiving said projections *e'*, and having upon their parallel opposing edges projections and notches, as and for the purposes set forth.

3. In an ironing-machine, a cylinder composed of sections extending from one end to the other, beveled on the inner sides at the ends, and said beveled ends being grooved, in combination with the shaft *c* and coniform heads *a b*, between which the cylinder-sections are received, said heads *a b* being provided with guide-projections *e'* fitting the grooves in the ends of the cylinder-sections, the head *a* being rigidly attached to the shaft and the head *b* movably mounted thereon, and nut *d*, substantially as set forth.

4. In an ironing-machine, the combination, with an ironing-cylinder, of a bosom-plate, *m*, removably connected to said cylinder, and of a curved form corresponding with said cylinder, substantially as set forth.

Signed by us this 22d day of December, A. D. 1883.

LEWIS M. RYFENBURGH.
CHAS. L. HEINS.
JOHN H. LEE.

Witnesses:
GEO. T. PINCKNEY,
HAROLD SERRELL.