

No. 618,933.

Patented Feb. 7, 1899.

M. ELB.
SMOOTHING OR PRESSING BOX IRON.

(Application filed May 28, 1898.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.

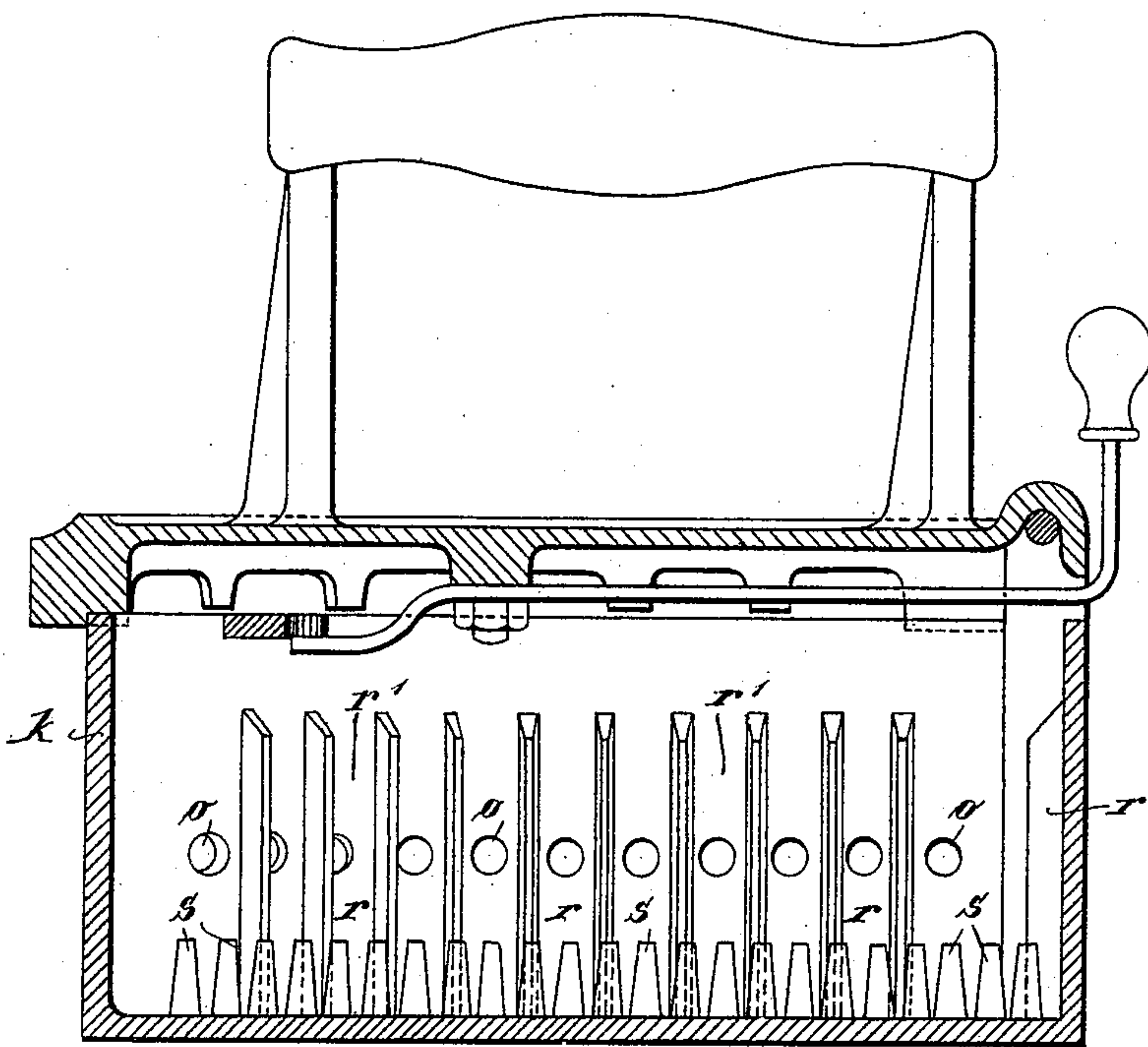
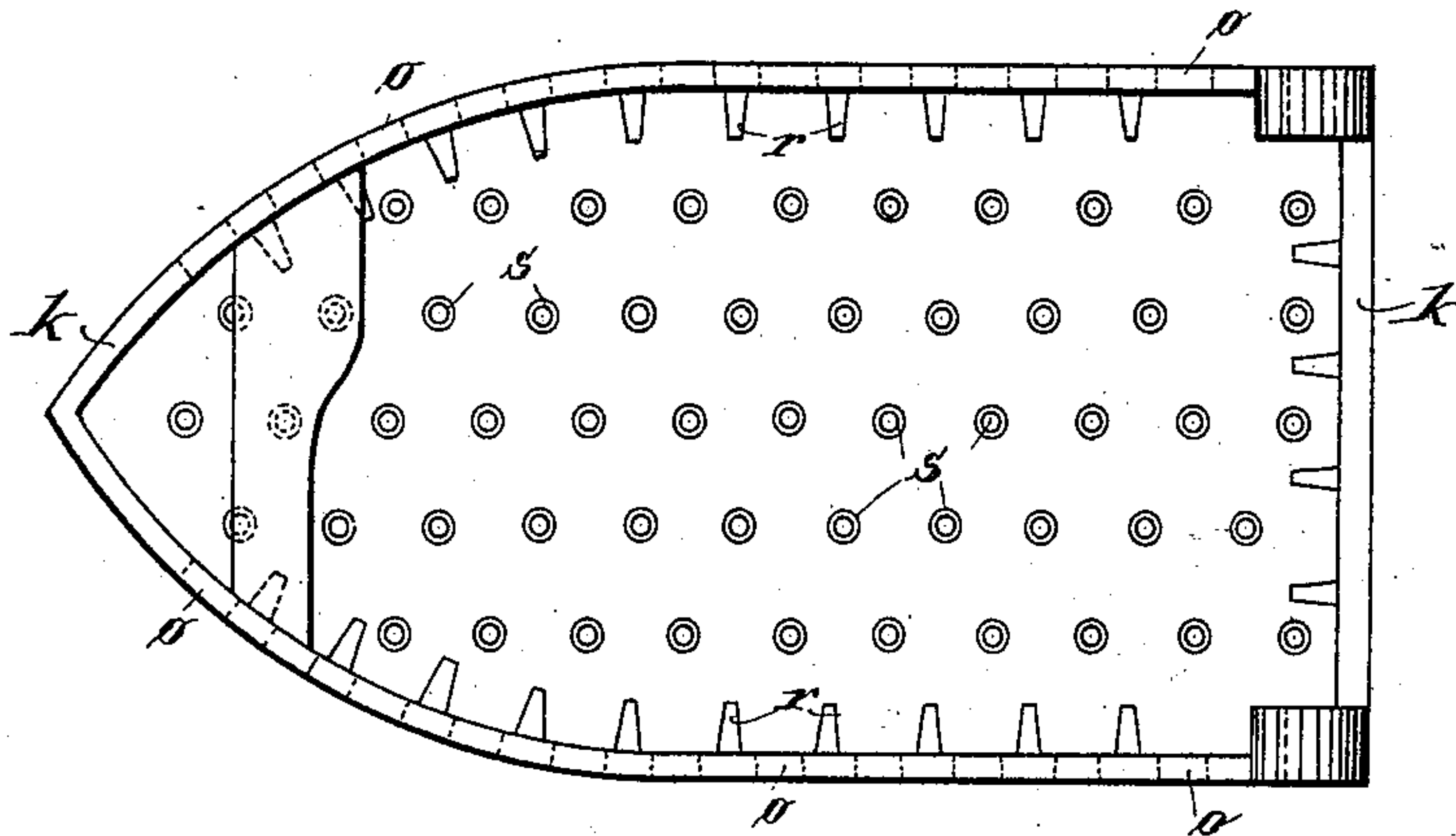


Fig. 3.



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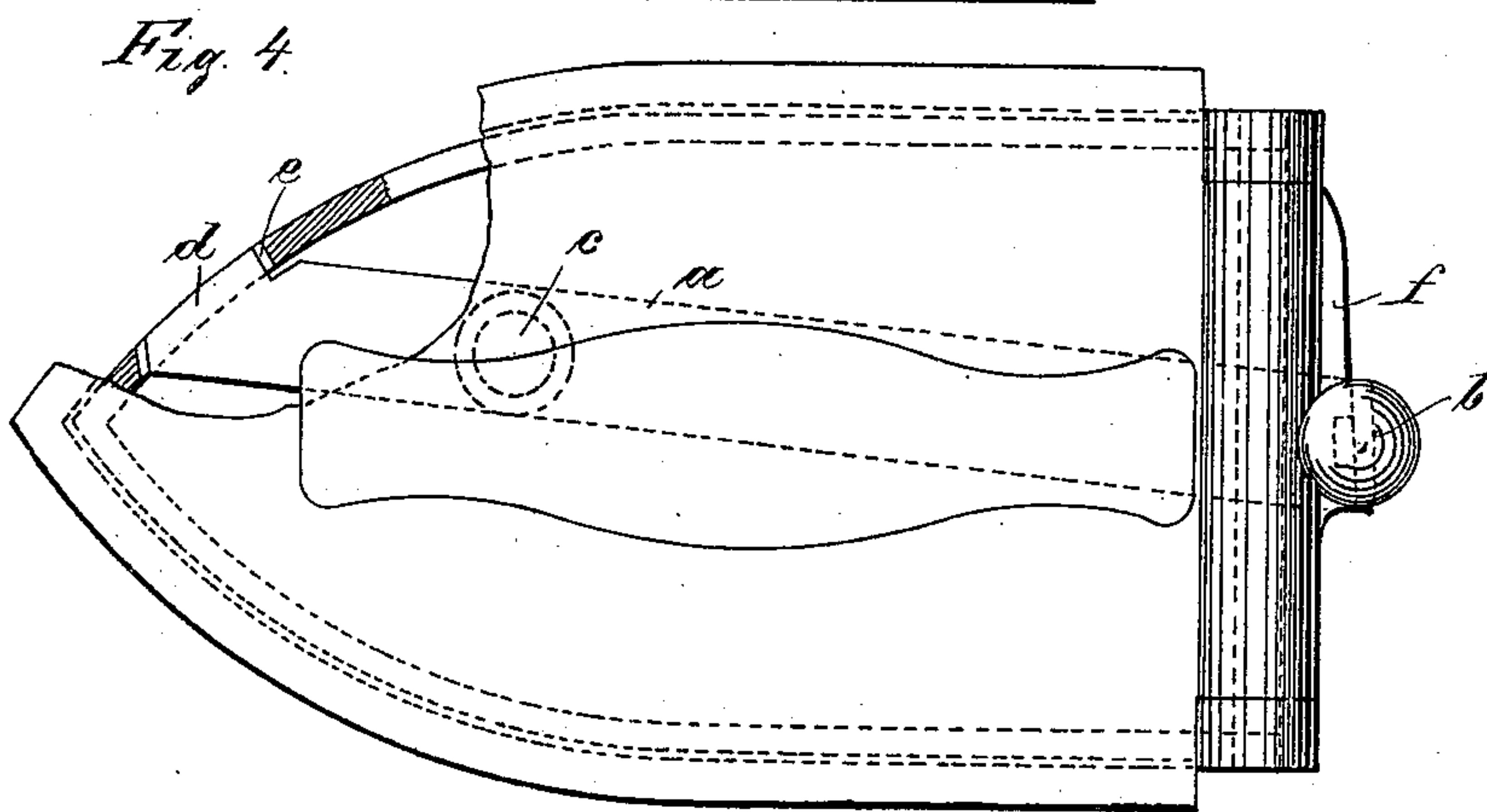
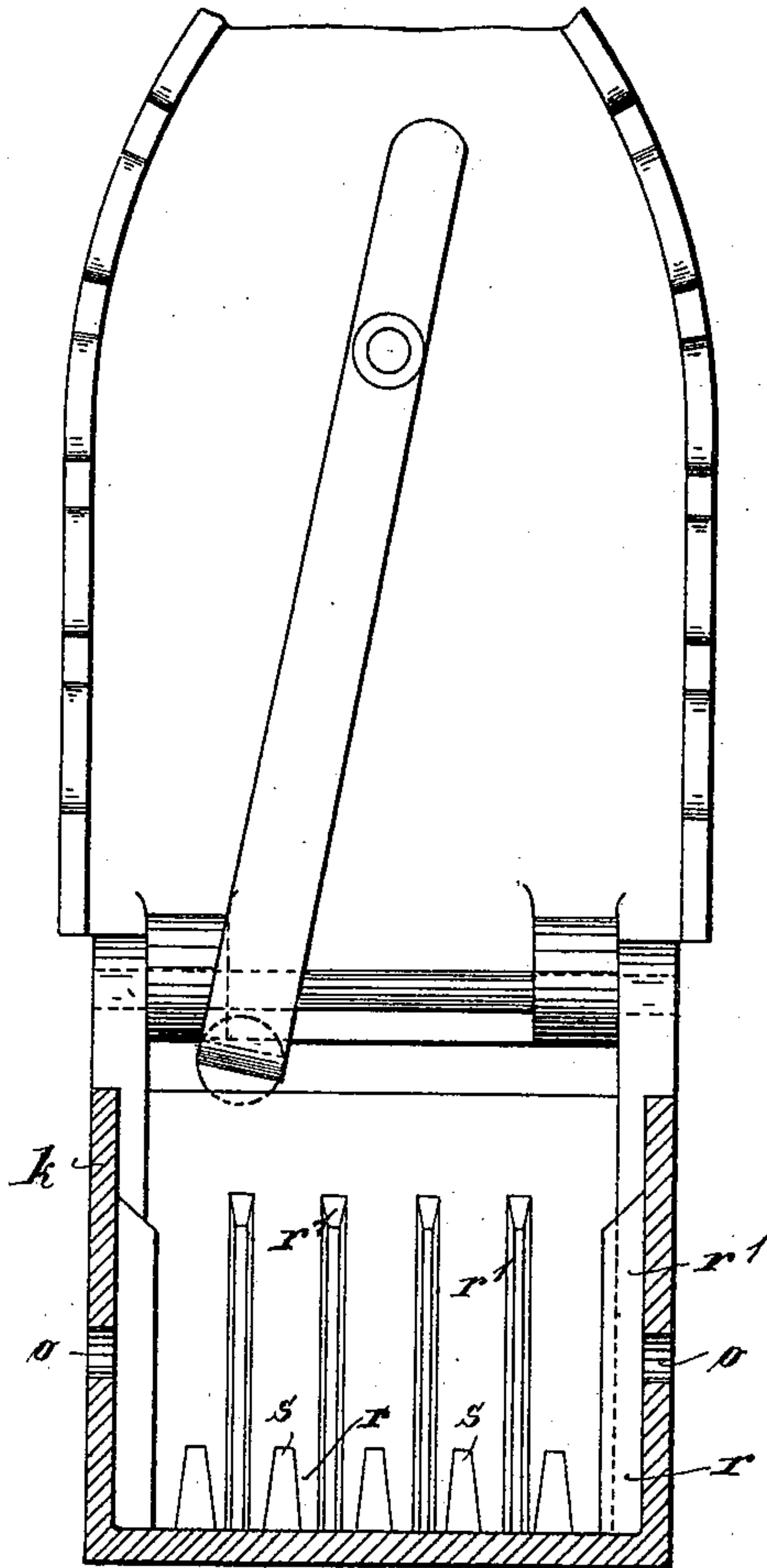
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2 Sheets—Sheet 2.



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UNITED STATES PATENT OFFICE.

MAX ELB, OF DRESDEN, GERMANY.

SMOOTHING OR PRESSING BOX-IRON.

SPECIFICATION forming part of Letters Patent No. 618,933, dated February 7, 1899.

Application filed May 28, 1898. Serial No. 682,011. (No model.)

To all whom it may concern:

Be it known that I, MAX ELB, a subject of the King of Saxony, and a resident of Dresden, in the Kingdom of Saxony, German Empire, have invented certain new and useful Improvements in Smoothing or Pressing Box-Irons, of which the following is an exact specification.

This invention relates to smoothing or pressing hollow or box irons, arranged to hold charcoal or other artificial fuel and adapted for ironing household linen—such as handkerchiefs, collars, cuffs, and the like—as well as for the general use of laundresses, tailors, hatters, &c., the object of the invention being to cause the face or bottom surface of the iron to be kept constantly hot and in a condition fit for use. This object is attained by causing the proper glow or combustion of the heated fuel placed within the box or body of the iron to be maintained or supported by the arrangement of air orifices and channels in the manner hereinafter more fully described.

In the accompanying drawings, Figure 1 is a vertical section; Fig. 2, an end section; Fig. 3, a plan of the interior of the iron, and Fig. 4 illustrates a modified form of locking means for the cover.

My box-iron is so constructed that the same possesses two especial characteristic features—first, that at about half the height or the center of the sides or side walls of the iron perforations or orifices are provided, said orifices serving to conduct air not only to the charcoal or glowing fuel located below these orifices, but also to the fuel above the said orifices or to the fuel in the upper portion of the iron. I attain this result by causing the said air-orifices to be located between vertical ribs, and herein resides the second characteristic feature of my invention, said vertical ribs being attached to the inner sides or side walls of the iron in such manner that, as above mentioned, the air-holes lie between each two ribs, so that the said ribs form, as it were, two chimneys, each operating in a different manner, the use and function of which are hereinafter mentioned.

I will proceed to give a description of the general construction or arrangement of my improved iron.

In the drawings, *k*, Figs. 1 to 3, represents

the body or box proper of the iron of the usual ogival form or shape, the interior lower surface of which is provided with a suitable number of rows of pins or studs *s*, upon which the glowing fuel is placed. To the side walls or to the sides of said box-iron ribs *r* are attached, and at approximately half the height of the said side walls and intermediately located as regards the said ribs *r* the air orifices or openings *o* are provided.

To render the box-iron ready for use, the before-mentioned blocks of glowing fuel rest, as hereinbefore indicated, upon the pins or studs *s* at the bottom of the iron. The ribs *r* cause the said blocks of fuel to remain at a fixed distance from the sides of the iron, from which it will be apparent that vertical channels are formed by the said ribs, said vertical channels serving to maintain a thorough combustion of the glowing fuel, this being of great importance for the reason that the air in the lower portions of these vertical channels will travel along a double path. First, the said air-currents entering through the openings *o* will pass along the side wall of the iron, will then descend to the bottom of the iron and there produce and support a complete combustion of the glowing fuel, and as a natural consequence must also cause increased heat to be imparted to the face or surface plate of the said iron. The second and opposite air-current rising from the combustion or waste gases passes partly across and partly through the glowing fuel, subsequently ascending the lower channels formed by the vertical ribs below the said orifices *o*. These combustion-gases ascend until they reach the orifices *o*, where the upper channels or chimneys—viz., the vertical channels *r'*, formed by the ribs above the air-openings *o*—exert a suction action upon the escaping combustion-gases. This suction, as is apparent, must accelerate the discharge of the combustion or waste gases through the glowing fuel. It will further be clear that the action of the fire-gases upon the exposed surfaces of the ribs must to a very large extent draw the heat to the sides of the iron, which heat, as is apparent, will also to a considerable extent be imparted to and absorbed by the bottom of the iron, more especially at the outer edges, which outer edges, as is known,

come more especially in contact with the damp portions of the fabric to be ironed, and it is also at once apparent that this imparting of the heat to the said edges and face-plate of the iron forms one of the most important features by means of which an improved and successful operation has been attained by the box-iron hereinbefore described.

10 I wish also to mention a further characteristic feature which the employment of the before-mentioned vertical ribs confers. This refers to dealing with the ashes, which ashes must necessarily be formed during the proper use or operation of the iron. The ashes are, as shown, prevented from falling through the openings *o* during the ironing, for the reason that the vertical ribs prevent the glowing fuel from coming in contact with the sides of the iron. It will thus be clear that no ashes can possibly escape through the said openings *o* during the ironing, as before stated, and that therefore there is no danger or possibility of the ashes falling upon the fabrics under treatment. Furthermore, the vertical ribs keep the glowing fuel always at a fixed distance from the air-openings, so that the ashes therefrom must fall to the bottom of the vertical channels formed by the ribs, said ashes being subsequently removed without any difficulty and without any injurious effect. By simply inverting the iron with the cover open the ashes will fall out.

35 In Fig. 1 I show the means usually employed for locking the cover to the body of the iron. In Fig. 4 I have illustrated a modified means for accomplishing the same result. In the construction shown in Fig. 4 the locking-lever *a*, pivoted at *c*, is provided at its forward end with a tongue *d*, said tongue entering a slot *e* in the side wall of the iron, as shown. By this means the cover is conveniently, rapidly, and securely locked to the iron.

I may also mention that instead of making the before-mentioned ribs *r* vertical I reserve the right of altering the shape of said ribs or of making only part of the same vertical. Furthermore, I also reserve the right of substituting for said ribs either lugs, extending pieces, or other suitable projections of any approved form, from which it will be seen that the shape of the ribs shown in the drawings is intended to serve simply as an example.

Having thus fully described the nature of this invention, what I desire to secure by Letters Patent of the United States is—

1. In a box-iron, the combination with the side walls thereof, of vertical ribs fixedly secured to the said walls upon their inner sides and arranged sufficiently close together to keep the fuel away from said walls, and air-inlet orifices in the latter arranged intermediate the ribs, at a point about midway the height of the walls, the said ribs extending above and below the openings to form suction or draft channels.

2. In a box-iron, the combination with the side walls thereof, of vertical ribs fixedly secured to the said walls upon their inner sides and arranged sufficiently close together to keep the fuel away from said walls, air-inlet orifices in the latter arranged intermediate the ribs at a point about midway the height of the walls, the said ribs extending above and below the openings to form suction or draft channels, and vertical pins arranged upon the inner lower surface or bottom of the iron adapted to support the fuel and provide for draft beneath the same.

In witness whereof I have hereunto set my hand in presence of two witnesses.

MAX ELB.

Witnesses:

HERNANDO DE SOTO,
PAUL ARRAS.