

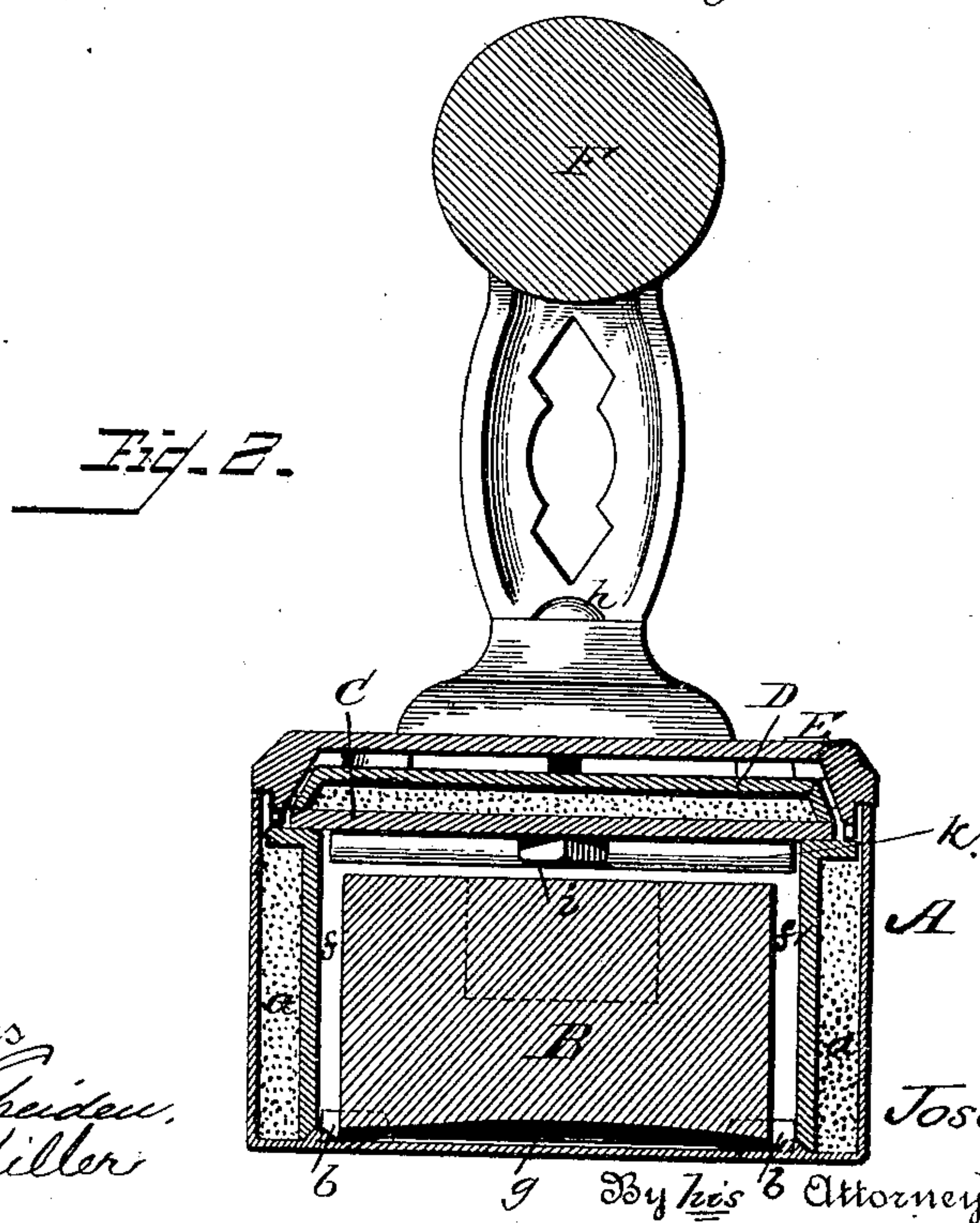
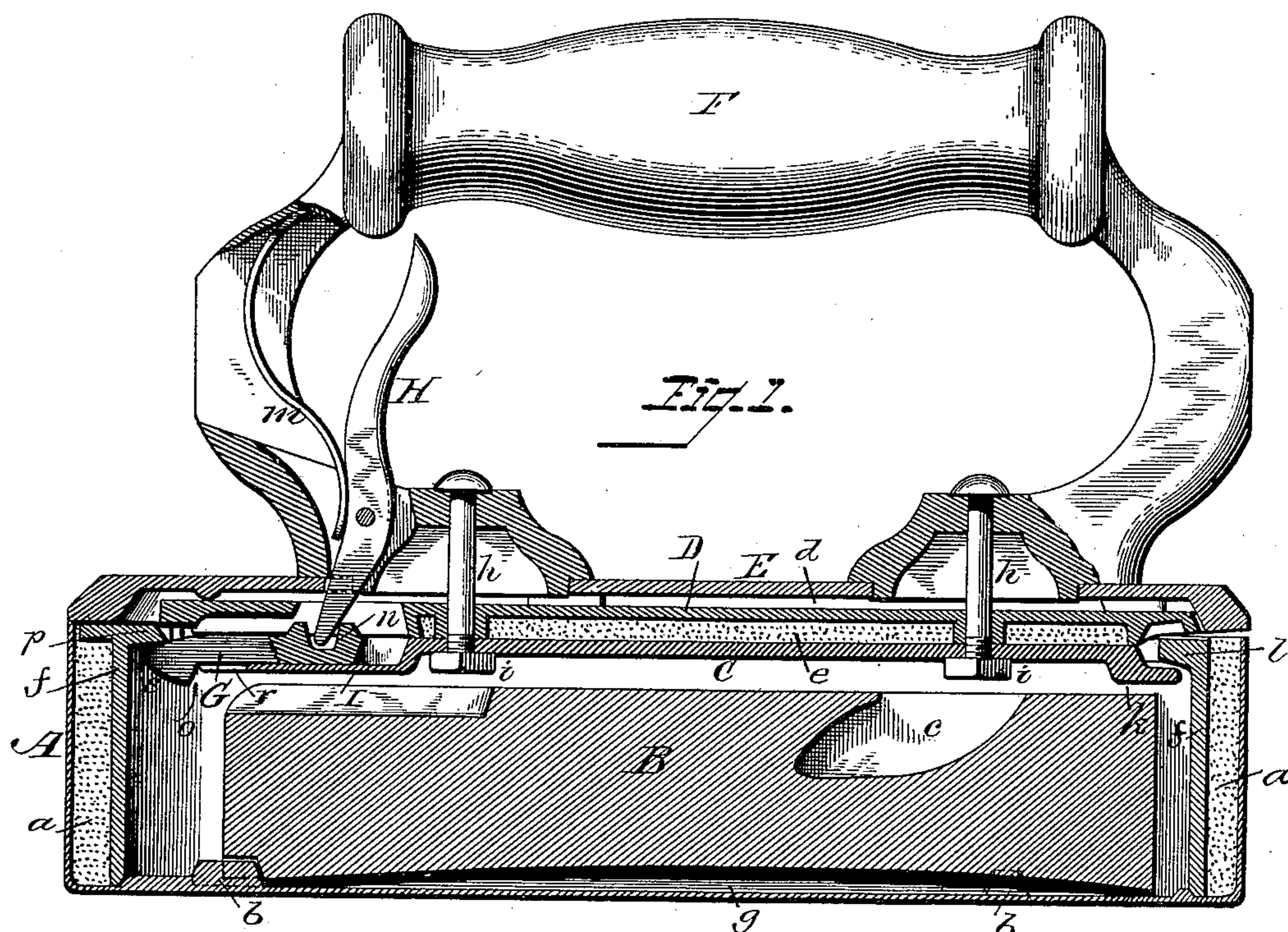
(No Model.)

J. B. McFALL.

## SMOOTHING AND POLISHING IRON.

No. 350,759.

Patented Oct. 12, 1886.



Witnesses  
 Wm. J. Speiden.  
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By his <sup>3</sup> Attorney Chas H. Fowler



# UNITED STATES PATENT OFFICE.

JOSEPH B. McFALL, OF OSKALOOSA, IOWA, ASSIGNOR, BY MESNE ASSIGNMENTS, TO GEORGIA L. McFALL, OF SAME PLACE.

## SMOOTHING AND POLISHING IRON.

SPECIFICATION forming part of Letters Patent No. 350,759, dated October 12, 1886.

Application filed February 2, 1886. Serial No. 190,502. (No model.)

*To all whom it may concern:*

Be it known that I, JOSEPH B. McFALL, a citizen of the United States, residing at Oskaloosa, in the county of Mahaska and State of Iowa, have invented certain new and useful Improvements in Smoothing and Polishing Irons; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a longitudinal section of my invention, and Fig. 2 a cross-section thereof.

The present invention has relation to certain new and useful improvements in that class of smoothing and polishing irons in which the body is formed hollow and provided with a removable heating-core, the body having a detachable top and handle and a latch device for securing the top in place.

The object of the invention is to render more effective the above-mentioned class of irons whereby the necessary amount of heat is obtained where most needed without danger of burning the goods with which it comes in contact, the heat being generated on the inside of the body of the iron and consumed at the face thereof, as will be hereinafter described and claimed.

In the accompanying drawings, A represents the body of the iron, formed hollow, as shown, and having double walls around its sides and ends, between which is placed a filling, *a*, of plaster-of-paris or other heat non-conducting material. Within the body A is placed the heated core B, said core being concave upon its under side to form a heat-storing chamber and equalizing the heat over the face of the iron, as all heated bodies are hotter or give off a stronger force of heat at the center than at the surface, and without this construction the face of the iron would be hotter in the center than at the surface.

Suitable lugs, *b*, may be formed on the bottom of the body A to fit in corresponding depressions in the core B, to hold it stationary and in place when the iron is in use, and the core is cast with an inclined orifice, *c*, to receive the end of a lifter for removing it from

the fire and placing it in the body of the iron.

The top of the body A consists of three plates, C D E, and between these plates are two non-conductors of heat—viz., a confined air-space, *d*, and a filling, *e*, of plaster-of-paris, or other suitable material.

As will be understood, all bodies are constantly making an effort to come to an equal temperature. Therefore I provide an inner wall, *f*, of metal, which will become equal in temperature with the heating-core B, and behind this wall I place the filling *a*, hereinbefore described, and which with the wall extends around the sides and ends of the body A, refracts the heat, and prevents it from passing out through the outer wall and being lost and wasted. As the heat generates in the body A it passes upward and is met by the lower plate, C, which becomes equal in temperature with the core B; but immediately above this plate the heat is met by the refractory non-conducting filling *e*, above which is the plate D, and above this a layer of confined air in the space *d*, to prevent the heat from passing into the top of the iron or upper plate, E.

The heating-core B is supported off the bottom of the iron by lugs *b*, hereinbefore described, fitting into depressions in the core and the concave face thereof, together with the space formed by supporting it off the bottom of the iron forms the heating-chamber, a perfect heat-storing chamber being also provided at the sides and top of the core.

To the top plate of the cover, or the top of the body A, is suitably attached a handle, F, by screw-bolts *h* and nuts *i*, or any preferred fastening may be used, the bolts passing through the plates C D, and by means of the nuts the plates are held together. The lower plate, C, at its rear end, is formed with a catch, *k*, which extends under a flange, *l*, on the inner wall, *f*, and the opposite end of the plate is depressed to form a seat and support for a sliding bolt, G, operated by a thumb-lever, H, and spring *m*. The lever H is pivoted to the shank of the handle F, its lower end engaging with a notch, *n*, in the rear end of the bolt G, said bolt having a stop, *o*, to prevent it from being drawn back too far when releasing it from engagement with the flange *p*. The stop *o* also forms a guide for the bolt, as when it is drawn



back it enters a slot, *r*, in the bolt seat or support I and guides it in its sliding motion, the spring *m* forcing the bolt back to its normal position when pressure is released from the lever H.

The bolt G at its forward end and upon its under side is beveled, as shown at *s*, and the end of the flange *p* also beveled, so that the bolt will be acted upon automatically by coming in contact with the edge of the flange *p*, thereby attaching the cover or top of the body A without using the lever H to draw the bolt back, this being only necessary when removing the top or cover.

An iron constructed in accordance with my invention is perfectly insulated; consequently the heat is prevented from escaping at the sides and at the top by the double insulation, which effectually accomplishes the object sought. The heat-storing chamber formed by the concavity in the under side of the heating-core, in which the generated heat accumulates to heat the face of the iron, prevents an unnecessary and too rapid evaporation of heat, while it is equalized over the face of the iron.

The perfect insulation of the iron renders the handle sufficiently cool to insure the operator experiencing no inconvenience from the heat arising from said iron, this feature in itself being essential in a core-heating iron.

By the depression of the lower plate, C, of

the top or cover the seat I for the bolt is below the plane of said plate, and a rear stop is formed for the bolt, while the shape of the depression is such as to enable said bolt to nicely fit it.

Having now fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with the hollow body, of a removable core forming a chamber between its lower face and the upper side of the bottom of the body, gradually diminishing in thickness or height in every direction from a central point of the core, as and for the purpose set forth.

2. The combination, with the hollow body and top or cover, of a core having a concaved lower face supported within the body, leaving a space between it and the top, bottom, sides, and ends of the body, the space between the upper side of the bottom of the body and the concaved face of the core gradually diminishing toward the ends and sides of the body, substantially as set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

JOSEPH B. McFALL.

Witnesses:

H. C. HUNTSMAN,  
B. W. PRESTON.