R. H. HASENRITTER.

Self-Heating Sad-Iron.

No. 163,312. Patented May 18, 1875.

Fig. 1.

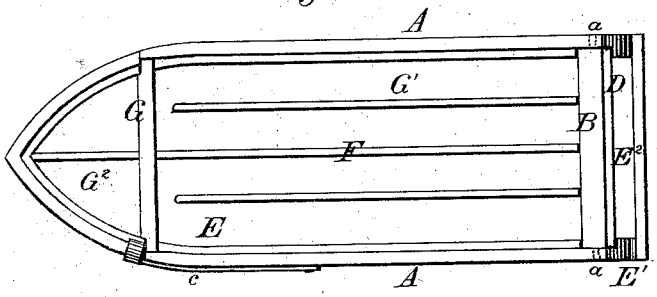


Fig. 2.

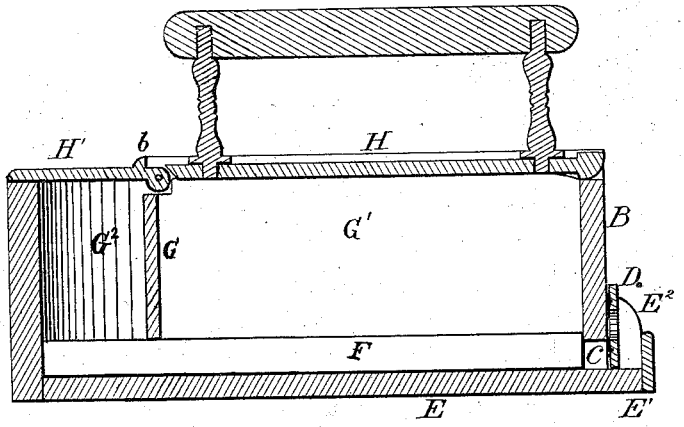
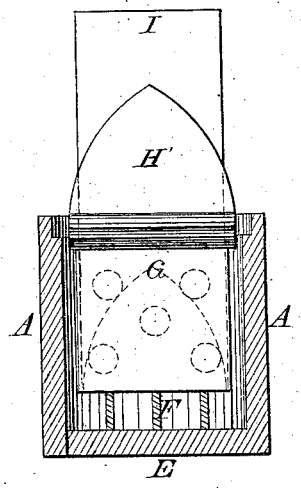


Fig. 3.



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UNITED STATES PATENT OFFICE.

ROBERT H. HASENRITTER, OF HERMANN, MISSOURI.

IMPROVEMENT IN SELF-HEATING SAD-IRONS.

Specification forming part of Letters Patent No. **163,312**, dated May 18, 1875; application filed March 15, 1875.

To all whom it may concern:

Be it known that I, ROBERT H. HASENRITTER, of Hermann, in the county of Gasconade and State of Missouri, have invented certain new and useful Improvements in Sad-Irons; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawing, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to improvements in sad-irons which are heated by fire placed within them. It consists in a removable partition placed across the front end of the chamber, dividing the latter into two compartments—one for the reception of the fire, the other for a flue or for the reception of a removable chimney—there being no communication between said compartments except under said partition; in constructing the lid in two parts, the front part being formed so as to neatly fit over and, when desired, close in the front compartment, and is hinged or journaled in the side walls of the iron. The rear part of the lid closes in the rear compartment, and is hinged or journaled to the walls, so that it can be turned up to a vertical position.

In the drawings, Figure 1 is a plan view with the lids removed, Fig. 2 a longitudinal vertical section, and Fig. 3 a cross-section, of my invention.

A are the side plates or walls, curved at their front ends, in the usual manner, to form the point. B is the rear end plate, so constructed as to leave the opening C between it and the bottom plate for the purposes of draft. D is a slide-valve for closing or opening the draft-passage C. E is the bottom plate, made with the extension E^1, on which is formed the external chamber E^2, which prevents ashes or dust from falling out of the fire-box or compartment onto the clothing. F are a series of parallel vertical ribs attached to the bottom plate E. They have a depth equal to about one-sixth the depth of the iron. They extend from the rear end toward the front. The center rib extends to and is attached to the inner angle of the point. The lateral ribs do not connect at their front ends with the walls, but there is space left, so as to permit free passage of air around them. They form rectangular recesses or troughs, and prevent the fuel from packing too closely on the bottom, and increase the draft by affording narrow passages, through which the air passes; and when the bottom plate becomes covered with ashes they make a connecting medium from the fire to the plate E, so that a uniform heat is preserved in said plate. G is a partition, dividing chamber of the iron into the two compartments G^1 G^2. It is inserted in grooves formed in the walls A at the point where the latter begin to curve inward to form the point of the iron. It rests on the ribs F, and cuts off all communication between the compartments, except a narrow passage on its under side. It may be solid or perforated, as indicated in dotted lines, Fig. 3.

When it is desired to increase the quantity of fire the solid partition is taken out and the perforated one inserted. The draft, passing through the fuel to the perforations, causes a more rapid combustion, and, as a result, greater fire and heat. When the solid partition is used the draft is along the bottom within the rectangular passages formed by the ribs, and the combustion is confined to the under portion of the fuel lying along and near the bottom plate.

The lid is formed in two sections, H H′. The rear section H closes the compartment G^1 It is hinged by screws or other means in the walls A at *a a*, so that it can be turned up to a vertical position, and thus open the fire-chamber for any desired purpose. When turned down, it is held in place by a shoulder on the front section H′, hereinafter described. Any suitable means for holding its front end down may be used when the front section is turned down, so as to take the shoulder from its position above the end. The front section H′ of the lid neatly fits over the triangular compartment G^2. It is secured by suitable means to the walls A immediately above the partition G, and so that it can be raised to a vertical position. It is provided with the flange or shoulder *b*, and, when raised to a vertical position, this shoulder projects over and against the front end of the section H, and holds the lat-

ter firmly in place, and prevents the front section from turning back past a vertical position. Its edges extend out flush with the sides A, the latter being sufficiently cut down to admit of the tops of both sections being flush with each other. It is held in an upright position by the spring-catch *c*, secured to the side A. I is the chimney, constructed to fit neatly in the compartment G^2. Its lower front side is slightly cut away to admit of draft through the perforations in the partition G. It may be removed or inserted at pleasure.

It will be seen that the draft will be along bottom of the chamber in the rectangular passage-ways formed by the ribs, and that the heat will be more evenly distributed over the bottom plate; that the point of the iron will be kept hot by the heat passing directly over the plate from compartment G′; that when, by reason of consumption of fuel, the ashes accumulate on the bottom, the heat of the bottom plate will be preserved by the conducting property of the ribs, which extend up into the fire; that, by removing or inserting the chimney, the draft can be lessened or increased; that, when desired to have a greater amount of fire, the perforated partition can be inserted, and the draft made to rise through the fuel, and cause more rapid consumption of the latter; that the requisite degree of heat is preserved in the smoothing-plate with slight consumption of fuel; and that the compartments can be entirely closed, so as to extinguish the fire by cutting off draft and supply of air from any point.

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

1. The combination, with a box-iron, of the removable partition G, solid or perforated removable chimney I, and spring *c*, for the purposes specified.

2. The combination, with the body of a box-iron, of the lid constructed in the two sections H (which is provided with the shoulder *b*) and H′, (which is journaled or hinged in the side plates A,) substantially as and for the purpose set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

ROBERT H. HASENRITTER.

Witnesses:
G. A. MERTENS,
RUDOLPH HIRZEL.