

W. E. HOYT.
SAD IRON.

APPLICATION FILED APR. 25, 1911.

1,015,185.

Patented Jan. 16, 1912.

2 SHEETS-SHEET 1.

Fig. 1.

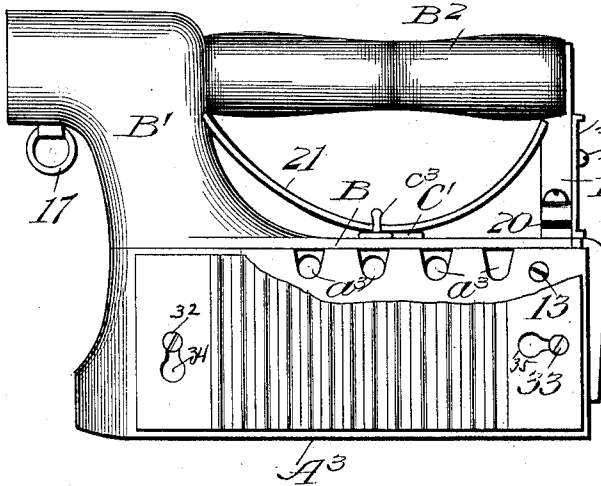


Fig. 2.

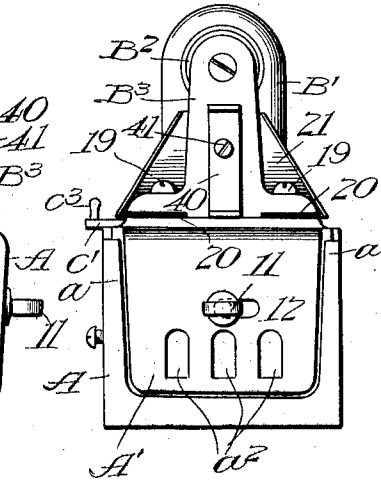


Fig. 3.

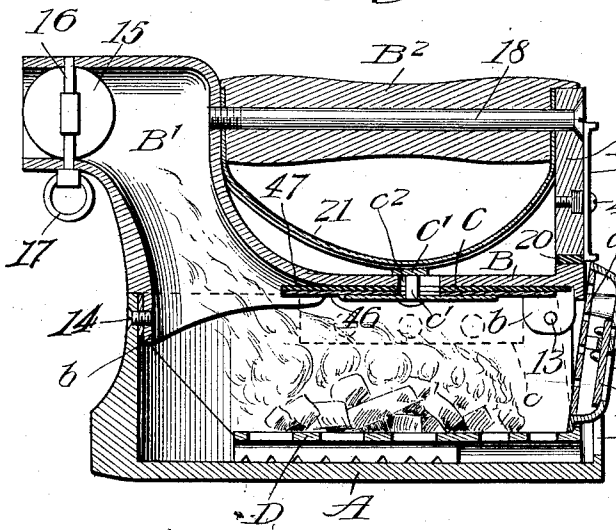
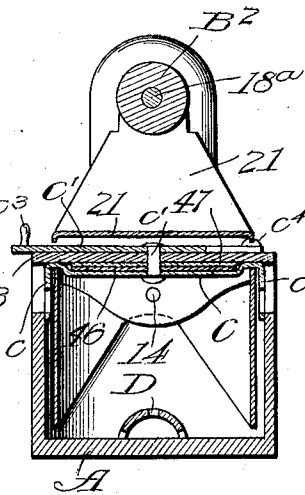


Fig. 4.



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Witnesses

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2 SHEETS—SHEET 2.

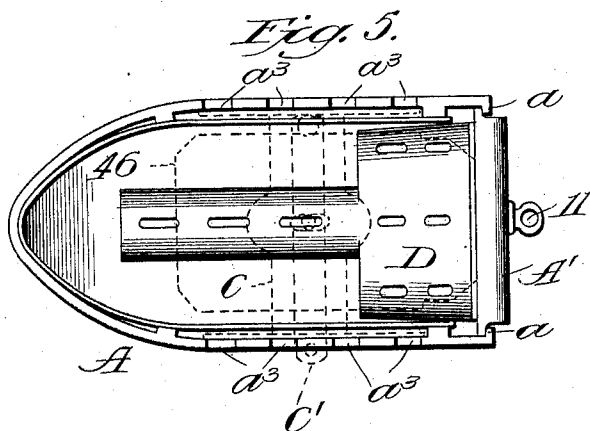


Fig. 6.

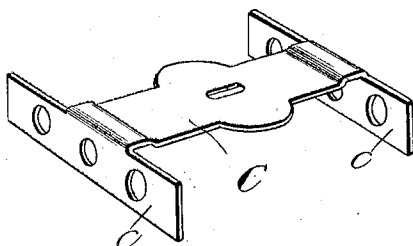


Fig. 7.

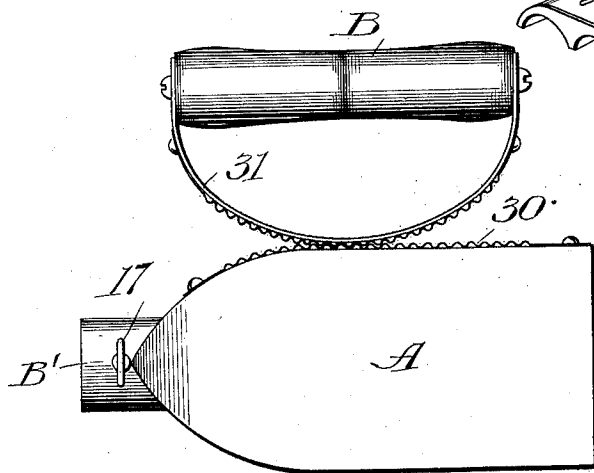
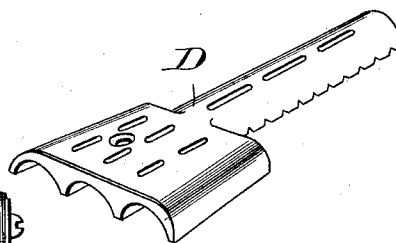


Fig. 8.

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SAD-IRON.

1,015,185.

Specification of Letters Patent.

Patented Jan. 16, 1912.

Application filed April 25, 1911. Serial No. 623,263.

To all whom it may concern:

Be it known that I, WILLIAM E. HOYT, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Sad-Irons, of which the following is a specification.

The object of my said invention is to provide a sad-iron formed to contain a combustion chamber wherein fuel, such as charcoal, may be burned for the purpose of heating said iron and provided with draft controlling devices for regulating and maintaining the heat as desired, and it consists in various improvements in construction whereby such an iron is provided which will not only be very efficient but at the same time may be used with the greatest advantage and the least possible discomfort, all as will be hereinafter more fully described and claimed.

Referring to the accompanying drawings, which are made a part hereof and on which similar reference characters indicate similar parts, Figure 1 is a side elevation of a sad-iron of my improved construction as it appears when ready for use, Fig. 2 an elevation of the rear end thereof, Fig. 3 a central longitudinal section through the same, Fig. 4 a cross section, Fig. 5 a view of the interior of the iron as seen when the top portion thereof is removed, Fig. 6 a perspective view of a damper, or draft regulator, for the side air openings. Fig. 7 a perspective view of the grate, and Fig. 8 a view illustrating the use of the iron for fluting purposes.

In said drawings the portions marked A represent the base of the iron, B the top thereof, C a sliding damper, and D the grate.

The base A is of metal of suitable size, and hollow to form a combustion chamber. Its rear end is open and is provided with a sliding door A' by which it may be closed. Side flanges a are formed on the sides of the opening to serve to guide and retain said door. Said door A' is preferably formed hollow, comprising an outer plate formed with inward edges and with a series of openings a^2 and an inner perforated plate a' mounted within said edges. A valve plate 10 is mounted to slide on the inner face of the outer plate of said door,

being formed with openings corresponding to the opening a^2 , by which the size of the openings may be regulated by sliding said valve plate transversely through the medium of a knob 11 on which said valve plate 10 is mounted, the shank of said knob extending through a horizontal slot 12 in the plate A'. In Fig. 2 the valve is shown wide open and the openings in the valve plate correspond to the openings a^2 in the plate A' of the door. A series of perforations a^3 are formed in each side of said base near its top for the admission of air, as will be presently described.

The top portion B is adapted to fit onto the top edge of base A and is secured there to by means of screws 13 extending through each side of face A near its top rear corner into ears b depending from said top B and by a screw 14 extending through the front of base A into a perforation in a flange depending from the front portion of top B. On the front end of said plate B is formed a flue B' through which the products of combustion may escape from the combustion chamber in base A. A damper 15 is mounted in said flue on a central pivot 16 having a handle 17 by which it may be turned to regulate the size of the flue passage and the draft, as will be readily understood. The inner face of said top B is covered, or lined, with a shield composed of a metal plate 46 backed by a sheet of asbestos, or like heat resisting and non-conducting material 47. Said shield extends substantially from side to side of the iron and for the length of the handle, and thus protects the top B from the heat immediately beneath the handle, and the hand operating the iron.

A handle B² is mounted between a standard B³ and the rear side of the flue B' on a screw rod 18. Said standard B³ is mounted on top B at its rear end by means of horizontally extending flanges and screws 19 projecting therethrough into said top. Strips of asbestos, or other heat insulating material, 20 are interposed between said standard B³ and the plate B to prevent the transmission of heat from said plate to said standard, and thus further protect the handle B² from being unnecessarily heated from this cause. A heat deflector 21 is also interposed between handle B² and plate B

being of a form to extend out over the plate and further protect the hand of the user from the heat of the iron.

The side flue regulator comprises a transverse bar C having longitudinally extending side bars *c* formed with perforations adapted to register with the apertures *a*³ in the sides of base near its top, the spaces between said perforations being adapted to cover said apertures when slid to proper position. Said draft regulator is connected to a lever C' which carries a depending pin *c'* on the lower end of which said bar C is mounted. The pin *c'* projects through a longitudinal slot *c*² in plate B and the shield composed of the metal plate 46 and asbestos sheet 47 and thus supports said shield between said bar C and the inner face of the combustion chamber. The outer end of lever C has a handle *c*³ by which it may be conveniently operated, its opposite end being mounted on a pivot *c*⁴ connected with the opposite side of top B.

The grate B is of substantially the form shown in Fig. 7, comprising a casting with air spaces within and slots or perforations extending through the shell of said grate into said air spaces. The front end of said grate is mounted adjacent to the apertures *a*² in the top A', as shown.

A button 40 is mounted on a pivot 41 on the rear face of standard B² and is adapted to hold door A' in place. Said button is pivoted to one side of its longitudinal center so that when turned one way it will bear upon the top edge of door A' when closed (as in Fig. 2) and when reversed it will bear upon its top edge when said door is raised somewhat, with its lower edge resting on top of grate D (as in Fig. 3) to enlarge the area of the draft openings through the rear end. When it is turned to a horizontal position said door may be lifted entirely out of the base.

The operation is as follows: The parts being assembled as shown most clearly in Figs. 1 and 2, the fire is kindled in the combustion chamber, charcoal being preferably used as the fuel. The draft is regulated as desired by means of the sliding valve plate 10, the sliding damper C and the pivoted damper 15 to control the combustion as may be necessary to regulate the degree of heat of the iron. The asbestos insulation 20 between the top B and the standard B² carrying the handle B², prevents the transmission of heat through said standard to said handle. The shield composed of the asbestos sheet 47 and metal plate 46, covering the under side of top B, protects said plate from the fire beneath and to a large degree prevents the heating of said top B to a point

so that heat radiated therefrom will be of sufficient intensity to be uncomfortable or annoying.

In Fig. 8 I have shown the iron turned on its side, a fluting plate 30 being mounted thereon which is heated from the fire within and in connection with which a fluting iron 31 may be used for such work. Said fluting plate 30 is mounted on one side of base A by screws, or headed pins, 32 and 33 projecting from said base at appropriate points and adapted to engage with key-hole-shaped slots 34 and 35 in opposite ends of plate 30, said slots being arranged to extend at right angles with each other, as shown, to facilitate attachment and removal and at the same time insure that the part will be retained in position during its use.

Having thus fully described my said invention, what I claim as new and desire to secure by Letters Patent, is:

1. A sad iron formed with a combustion chamber, a flue leading from said combustion chamber, a door leading into said combustion chamber, a draft valve in said door, a damper in said flue, side air inlets at the top of said combustion chamber, sliding side valves for controlling the area of said air inlets, said sliding valve being mounted on a pivoted lever by means of a depending pin extending through a slot in the top of said iron and engaging at its lower end with a cross bar connecting said side valves, a heat protecting shield covering the inner face of the top of said combustion chamber interposed between said face and said cross bar of said side valves and supported thereon, a handle for manipulating the iron, a standard for supporting one end of said handle, and heat insulating material interposed between said standard and the top of said iron, substantially as set forth.

2. A sad iron formed with a self-contained heating chamber, a vertically sliding door to said chamber, draft openings and valves for controlling the same, a handle supported on a standard on the top of said iron and a pivoted button on said standard for securing said sliding door, said button being pivoted to one side of its longitudinal center, whereby when turned one way it will hold the door in one position and when reversed will hold the door in another position, substantially as set forth.

In witness whereof, I, have hereunto set my hand and seal at New York, New York this 24th day of April, A. D. nineteen hundred and eleven.

WILLIAM E. HOYT. [L. s.]

Witnesses:

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GEO. W. BECKER.