

No. 751,288.

PATENTED FEB. 2, 1904.

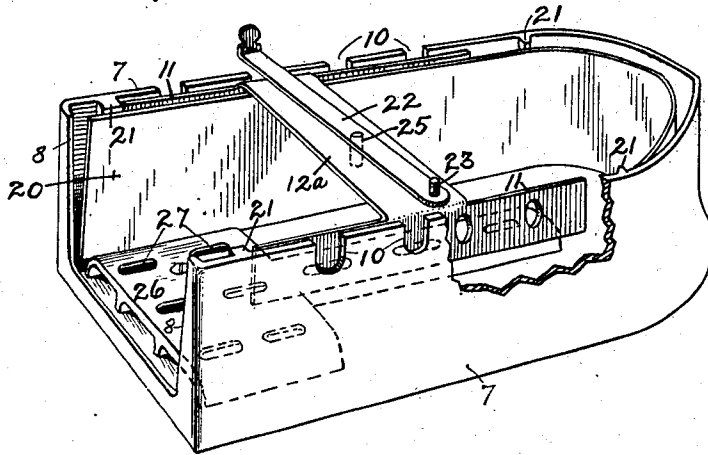
W. E. HOYT.  
SAD IRON.

APPLICATION FILED JULY 28, 1903.

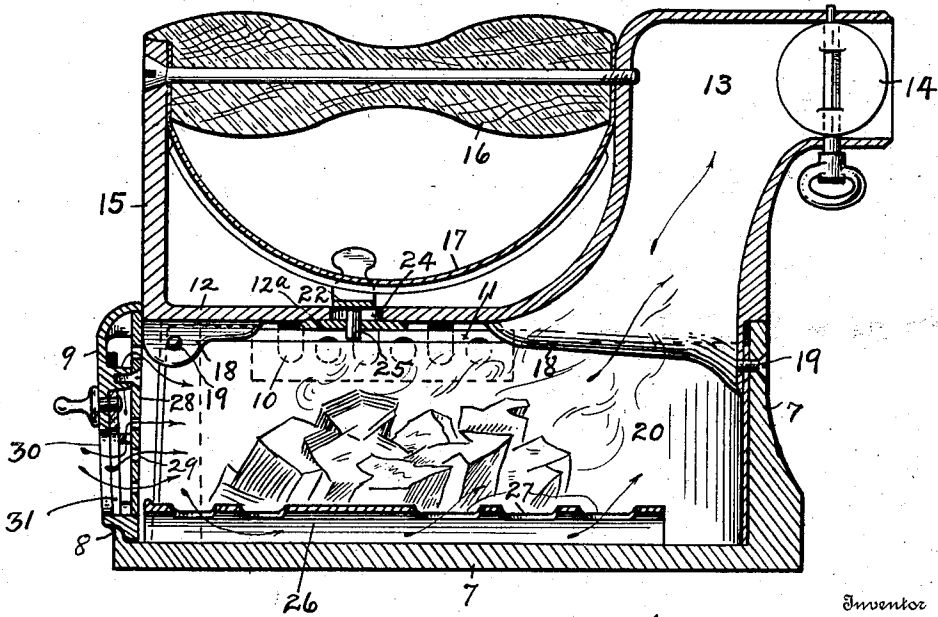
NO MODEL.

2 SHEETS—SHEET 1.

*Fig. 1.*



*Fig. 2.*



Witnesses

*F. W. Koerner,*  
*John B. Sherwood*

Inventor  
*William E. Hoyt.*  
By  
*Joseph A. Minton*  
Attorney

No. 751,288.

PATENTED FEB. 2, 1904.

W. E. HOYT.  
SAD IRON.

APPLICATION FILED JULY 28, 1903.

NO MODEL.

2 SHEETS—SHEET 2.

Fig. 3.

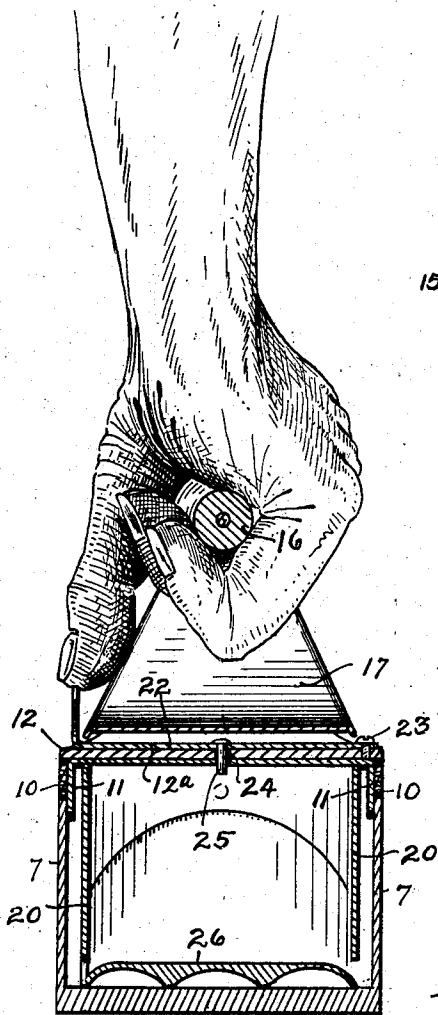


Fig. 4.

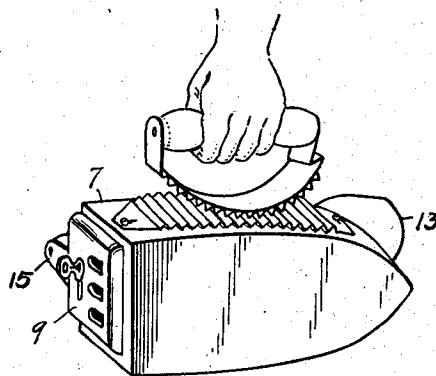


Fig. 5.

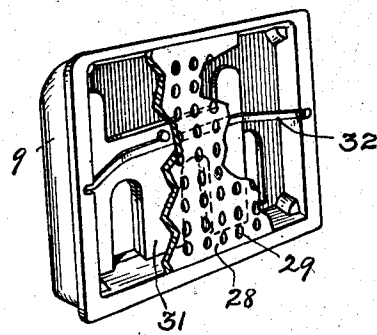
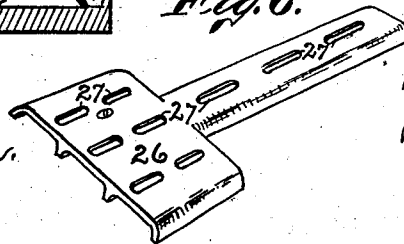


Fig. 6.



Witnesses

*F. H. Koerner.*  
*John P. Hurwood*

Inventor  
*William E. Hoyt*  
By *Joseph A. Minturn*  
Attorney

# UNITED STATES PATENT OFFICE.

WILLIAM E. HOYT, OF NEW YORK, N. Y.

## SAD-IRON.

**SPECIFICATION** forming part of Letters Patent No. 751,288, dated February 2, 1904.

Application filed July 28, 1903. Serial No. 167,260. (No model.)

*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.

This invention relates to improvements in sad - irons having a combustion - chamber wherein charcoal is burned for the purpose of heating the iron, so as to enable the latter to be used continuously for a whole day, if necessary, without the trouble and delay of heating the iron on a stove and also to enable the ironing to be done without the necessity of a hot stove to heat the irons, over which housewife or person doing the work is compelled to labor to the verge of prostration.

By my invention the ironing may be done under a shady tree or in any cool retreat, and the heat from the small charcoal-fire required in the iron to heat it will be inappreciable to the operator or ironer.

The object of my invention is to provide a better draft regulation which can be more uniformly distributed to all parts of the fuel than has been obtained heretofore and to provide convenient means for regulating the draft instantly without checking the movement of the iron in ironing.

Another object is to provide a sad-iron that will be thoroughly efficient and practical, that can be produced at a moderate cost, and that will embody a fluting device that will not render the iron cumbersome or inconvenient.

I accomplish the objects of the invention by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a detail in perspective view showing the body of the iron with the top and end removed; Fig. 2, a longitudinal vertical section of the iron; Fig. 3, a transverse vertical section; Fig. 4, a perspective view of the iron turned on its side with the fluting devices applied and in operative position; Fig. 5, a detail in perspective of the door looking toward the inside of the latter and showing the inner lining broken away, and Fig. 6 a perspective view of the grate-bar of the iron.

Like characters of reference indicate like

parts throughout the several views of the drawings.

7 represents the body of the iron, which is of the usual shape and size and is made hollow to form a chamber open at the rear end. This opening has flanges 8 at each side to form guides to retain and direct a sliding door or gate 9. Both sides of this body have the air-holes 10, inside of which sides, opposite the holes, are the sliding damper-plates 11 11, which are connected by the cross-bar 12<sup>a</sup>, so as to have simultaneous movement. The plates 11 have suitable openings, which are brought more or less into register with the openings in the sides of the iron by longitudinal movement of said plates.

12 is the top of the iron, and it has a chimney 13 for the escape of the waste products of combustion and for the complete ventilation or draft of the iron. This chimney has the damper 14 to regulate the draft. The opposite end of the top from said chimney has the standard 15, which serves as a post against which the door 9 is frictionally fastened when raised, and also forms one of the supports for a handle 16. The opposite end of the handle is supported by attachment to the wall of the chimney 13. A heat-deflector 17 is interposed between the top of the iron and the handle. The top 12 also has the under side flanges or lugs 18, which fit inside of the walls of the body near the top of the walls, to which they are secured by screws 19.

20 is a sheet-metal lining which is secured by the screws 19, that fasten the top to the sides of the iron. This lining is held away from the outer side walls of the iron by the ribs 21, thereby producing air-passages at the sides of the combustion-chamber. The said lining does not reach clear to the bottom of the combustion-chamber, but stops a suitable distance above it to allow the discharge of air under it into the iron.

22 is a lever which rests upon the top 12 and is pivoted at one end thereto by screw 23. The top of the iron has a longitudinal slot 24, through which a rivet 25 passes to connect the lever with the cross-bar 12<sup>a</sup> of the side dampers. The free end of the lever 22 is turned up as a means, as shown in Fig. 3, for

shifting the lever by pressure with the thumb of the operator, so that the side dampers may be changed in position to regulate the supply of air through the sides without stopping the  
5 movement of the iron.

Located within the iron, upon the bottom thereof, is a false bottom 26, with air-passages underneath or between it and the real bottom of the iron. Preferably there will be three  
10 passage-ways, which will occupy practically the entire width of the bottom next to the door; but the two outside ways will terminate at about one-fourth the distance in from the door, while the middle passage will extend  
15 nearly the full length of the interior of the iron. These passages open at their ends into the combustion-chamber of the interior and they have additional top openings 27. The reason that the outer passages do not extend  
20 as far as the middle one is because they would keep the charcoal from contact with the bottom to such an extent as to interfere with the heating of the bottom; otherwise the base-burner feed which would be provided would  
25 be an advantage in keeping the charcoal-fire in live condition.

The to-and-fro movement of the iron in use will cause an air circulation through it if proper openings are provided; but as a rapid  
30 movement would force more air through the same openings than a slow movement it is necessary to provide a means of regulating the size of whatever openings are provided. In my iron I make the door 9 hollow and close  
35 the chamber thus formed by means of an inside plate 28, having a number of evenly-distributed openings 29, so as to distribute the air equally to the whole mass of fuel. The outer wall of the chamber has the air-openings  
40 30 closed by the sliding damper 31, having the usual openings, whereby the size of air-inlets to said chamber may be regulated, and a given position of the movable damper-plate is retained by the spring-bar 32, the  
45 ends of which are seated in indents in the sides of the door and are held by the plate 28, while the bent middle portion of the spring bears against the damper 31. The friction be-

tween spring-bar and damper-plate is sufficient to hold the plate from accidental movement.

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

1. In a sad-iron, a hollow body having side openings for the admission of air, a lining inside of the hollow body, a top covering the hollow body, damper-plates opposite the side openings and between the walls of the body and the lining, a cross-bar resting upon the lining and connecting the damper-plates and a lever outside of the iron pivoted to the top thereof at one end and connected by a rivet between the ends of the lever with said cross-bar, said rivet extending through a slot in the  
60 top of the iron.

2. A hollow sad-iron in which charcoal is burned to heat it and a false bottom for said iron having a middle air-passage extending nearly the entire inside length of the iron and also having two much shorter air-passages, one on each side of said middle one, all of said passages having top and end openings into the fire-box of the iron.

3. An end gate or door for sad-irons having a hollow interior to form an air-distributing chamber, the outside wall of said hollow interior having openings and said outside wall having an adjustable damper-plate to regulate the passage of air through said openings, said  
80 door having a plurality of holes through the inside wall of said hollow interior, said holes being uniformly distributed over all portions of said interior wall and a spring-bar having its ends seated under the inside plate in indents in the sides of the door and having its middle portion bent over and contacting with the damper-plate so as to hold it by friction against accidental displacement.

In witness whereof I have hereunto set my hand and seal, at Indianapolis, Indiana, this  
90 22d day of July, A. D. 1903.

WILLIAM E. HOYT. [L. s.]

Witnesses:

JOHN B. SHERWOOD,  
J. A. MINTURN.