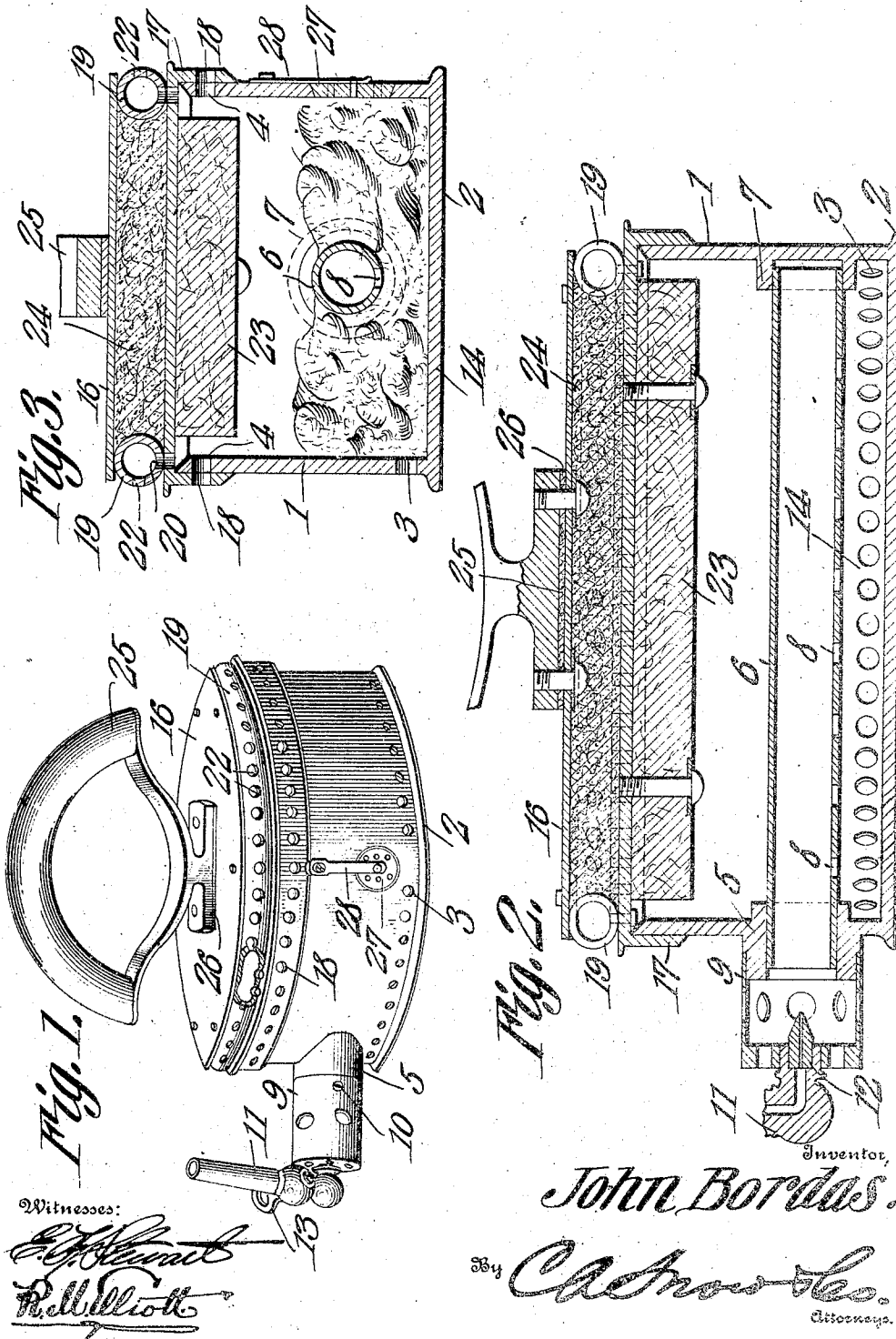


J. BORDAS.
 SELF HEATING SAD IRON.
 APPLICATION FILED FEB. 15, 1909.

944,842.

Patented Dec. 28, 1909.



Witnesses:

E. H. Smith
R. H. Elliott

Inventor,
John Bordas.

By *C. A. Smith*
 Attorneys.

UNITED STATES PATENT OFFICE.

JOHN BORDAS, OF DUNKIRK, NEW YORK.

SELF-HEATING SAD-IRON.

944,842.

Specification of Letters Patent. Patented Dec. 28, 1909.

Application filed February 15, 1909. Serial No. 478,054.

To all whom it may concern:

Be it known that I, JOHN BORDAS, a citizen of the United States, residing at Dunkirk, in the county of Chautauqua and State of New York, have invented a new and useful Self-Heating Sad-Iron, of which the following is a specification.

This invention relates generally to self heating sad irons, and more particularly to one of that class employing gas as a fuel.

The object of the invention is to improve the manner in which the heating medium is disseminated within the body of the iron, whereby to utilize practically all of the heat units for performing effective work, and so to ventilate the body that perfect combustion will ensue, thereby preventing smoking and thus the escape of disagreeable odors, and further to protect the hand of the user from injury or discomfort from escaping heated air.

With the above and other objects in view, as will appear as the nature of the invention is better understood, the same consists in the novel construction and combination of parts of a self heating sad iron, as will be hereinafter fully described and claimed.

In the accompanying drawings forming a part of this specification, and in which like characters of reference indicate corresponding parts: Figure 1 is a view in perspective of a sad iron constructed in accordance with the present invention. Fig. 2 is a view in vertical longitudinal section, on an enlarged scale. Fig. 3 is a transverse sectional view on an enlarged scale.

The hollow body 1 of the iron is shown as fusiform in contour, although it may be of any other preferred shape, and is provided near its face and adjacent to its upper edge with rows of orifices 3 and 4 respectively, through the former of which cold air is drawn to support combustion; through the latter heated air escapes.

Projecting beyond one end of the body is a boss 5 in which is secured one end of a burner tube 6, the other end of which is secured in a boss 7 projecting inward from the inner wall of the nose of the body. This tube is provided along its under side with orifices 8 through which the mixed gas and air escape to the body and are ignited. The means for mixing the fuel and air consists of an ordinary mixing chamber 9 that is secured to the boss 5 by screws 10 and in the end wall of which is secured a union 11

carrying a jet 12 and a valve 13. The union is designed to be connected with a gas jet by a flexible pipe as usual. In order to conserve the heat units, and check their too rapid escape, the bottom of the body contains a loose mass 14 of a refractory material, such as asbestos wool, which may partially, or wholly, surround the burner tube, as shown in Fig. 3. This filling will also prevent passage externally of the body of tongues of flame, and thus in a positive manner preclude danger of injury to the user.

The cover embodies two spaced plates 15 and 16, the former of which is provided with a depending flange 17 having orifices 18 that register with the orifices 4 of the body. Secured to the plates 15 and 16 and conforming in shape to the perimeters thereof is a ventilating tube 19 which is provided on its under side with spaced orifices 20 that register with similar orifices 21 in the plate 15 and at its outer side with orifices 22 that discharge air laterally at points farthest removed from the fuel, whereby such air is cooled sufficiently to remove all danger of burning the user of the iron.

Secured to the under side of the plate 15 is a block 23 of asbestos, and disposed between the plates 15 and 16 is a second block 24 of asbestos, and these blocks are of such thickness that they lag the plate 16 to such an extent as to prevent it from becoming hot enough to burn the hand.

The plate 16 has secured to it a handle 25 of any preferred construction, between the base of which and the plate is interposed a sheet 26 of insulating material. In order to ignite the burner tube there is a perforated tapered door 27 provided which fits a similarly shaped opening in the side of the body and has secured to it one end of a spring 28 the other end of which is riveted or otherwise assembled with the body.

In using the iron, the union is connected with a gas jet in a manner that will be understood, and the valve 13 is opened thus allowing the gas to pass to the mixing chamber and thence to the burner, where it is ignited at the door 27, the same being turned to one side for the purpose. The ignited gas jets discharging from the openings 8 insinuate themselves through the loose asbestos wool and cause it to become incandescent, whereupon it will heat the body rapidly and easily. As will be ap-

parent, air to support combustion will be drawn in through the openings 3 and after circulating through the body will escape through the openings 21 and 22. In its pas-

5 sage toward these openings, the heated air establishes an injector action at the openings 18 and 4 which operates to draw cool air into the upper portion of the body and thus prevents the cover from becoming
10 heated to a degree that would be uncomfortable to the hand of the user.

The improvements herein described while simple in character will be found of the highest efficiency in use, and will coöperate
15 in the production of a practical and durable form of sad iron.

What is claimed is:

1. A sad iron comprising a body provided near its face and upper edges with orifices,
20 a burner tube arranged within the body, a filling of loose fibrous refractory material surrounding the tube, means for supplying a combustible fluid to the tube, and a cover embodying a depending flange having orifices
25 registering with those of the upper portion of the body, and a ventilating tube combined with the cover and having orifices communicating with the interior of the body and also having orifices communicating with
30 the external air.

2. A sad iron comprising a body provided near its face and upper edges with orifices, a burner tube arranged within the body, a filling of loose fibrous refractory material
35 surrounding the tube, means for supplying a combustible fluid to the tube, a cover embodying a depending flange having orifices registering with those of the upper portion of the body, a ventilating tube combined
40 with the cover and having orifices communi-

cating with the interior of the body and also having orifices communicating with the external air, and lagging material combined with the cover.

3. A sad iron comprising a hollow body 45 portion, means for conducting the hot air off and supplying cool air in the place thereof, a burner tube arranged in said body portion, a filling of loose fibrous refractory material surrounding the tube, means for supplying a combustible fluid to the tube, a cover embodying a depending flange having orifices registering with those of the upper portion of the body, a ventilating tube combined with the cover and having orifices
50 communicating with the interior of the body and the external air, and lagging material interposed in said cover and secured to the lower surface thereof.

4. A sad iron comprising a hollow body 60 portion, means for conducting the hot air off and supplying cool air in the place thereof, a burner tube arranged in said body portion, a filling of loose refractory material surrounding the tube, means for supplying a
65 combustible fluid to the tube, a cover embodying a depending flange having orifices registering with those of the upper portion of the body, a ventilating tube combined with the cover and having orifices communicating with the interior of the body and the external air, and means disposed in the side of said body whereby a jet may be ignited.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

JOHN BORDAS.

Witnesses:

GEO. WIEBEL,
B. E. FARNHAM.