

F. D. STOTLER.
 SELF HEATING SAD IRON.
 APPLICATION FILED APR. 8, 1910.

966,717.

Patented Aug. 9, 1910.

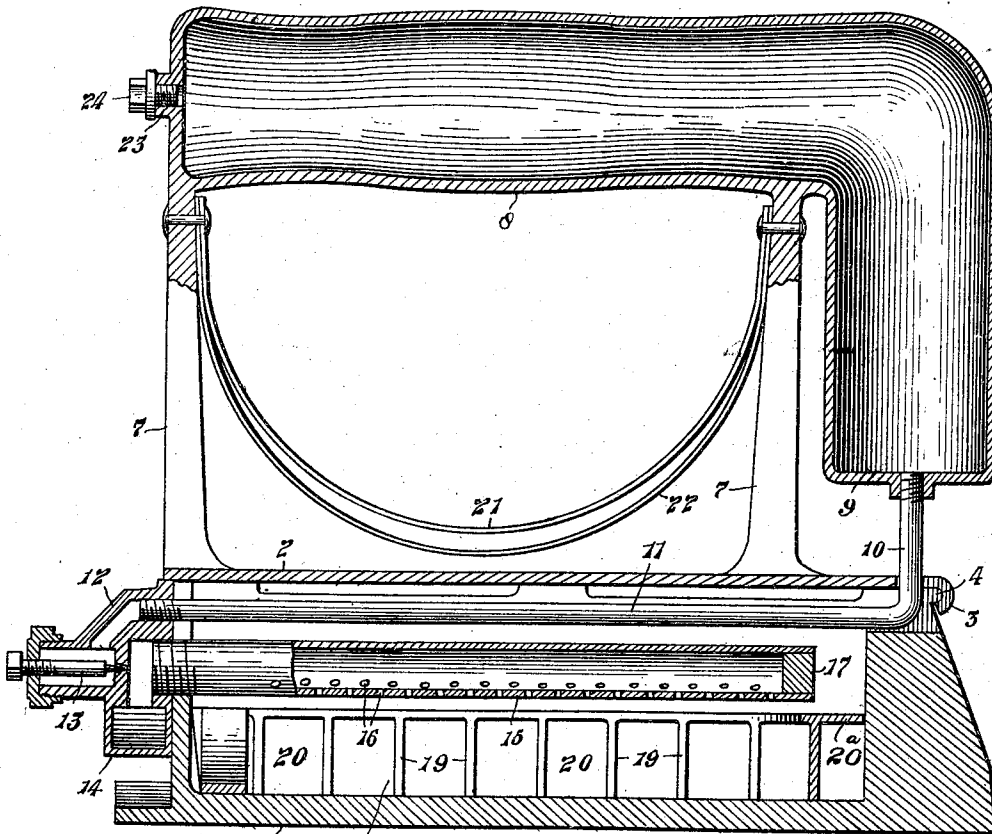


Fig. 1.

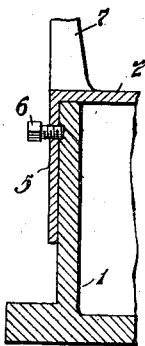


Fig. 2.

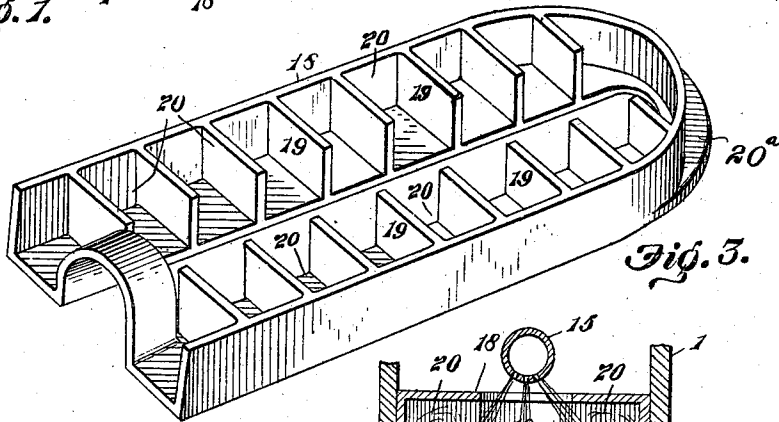
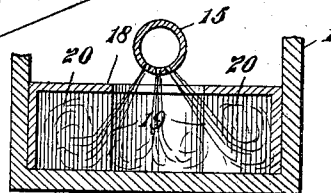


Fig. 3.

Fig. 4.



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UNITED STATES PATENT OFFICE.

FREDDIE D. STOTLER, OF MANSFIELD, OHIO.

SELF-HEATING SAD-IRON.

966,717.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, FREDDIE D. STOTLER, a citizen of the United States, residing at Mansfield, in the county of Richland and State of Ohio, have invented certain new and useful Improvements in Self-Heating Sad-Irons; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The present invention has relation to improvements in self-heating sad-irons of the kind wherein liquid-hydrocarbon fuel such as gasoline is employed.

The objects of the invention are to provide a combined handle and tank and to provide efficient means to regulate ventilation to discharge the products of combustion, and also to provide means whereby the flames emanating from the burner in a sense are confined and utilized to the greatest extent in heating the sad-iron proper.

Another object is to provide means whereby the sad-iron is properly weighted so that it will have sufficient weight to properly press upon the material worked upon without increasing the bulk of the sad-iron.

With these and other objects in view which are readily apparent to the skilled mechanic the same consists in certain novel features of construction and arrangements of parts which will be hereinafter more fully described and pointed out in the claims and illustrated in the accompanying drawing, in which—

Figure 1 is a vertical longitudinal sectional view. Fig. 2 is a view showing a portion of the body of the iron and a portion of the cover showing the position of the set screw designed to hold the cover in place. Fig. 3 is a detached inverted perspective view of the combined heater and removable weight. Fig. 4 is a transverse section of the burner and heat conductor, also showing a portion of the burner in transverse section.

Similar numerals of reference indicate corresponding parts in all the figures of the drawing.

In the accompanying drawing, 1 represents the chambered body of the iron which consists of a base and the usual side walls connected in the usual manner to form the

point or nose of the iron and a rear wall all formed integral in a single casting. The chamber of the body is closed at the top by means of a suitable cover 2, which cover is provided with the forward hooked end 3, which hook embraces the flange 4 located at the front upper end of the chambered body 1. The rear end of the cover is provided with a downwardly extending flange 5, in which is located the set screw 6, which set screw is for the purpose of securely holding the cover. The cover 2 is provided with the standards 7, which standards are connected together at their top or upper ends by means of the hollow handle 8, which hollow handle is provided with the downwardly extended portion 9. The handle 8 and its integral downwardly extended portion 9 constitute a tank designed to contain the liquid hydro-carbon fluid. It will be understood that by forming the handle hollow and providing the downwardly extending portion a suitable combined tank and handle is provided, and that by providing the downwardly extending portion the fuel or more specifically the liquid hydro-carbon fuel will be at all times in position to be conveyed to the fluid pipe 10 so long as any fuel remains in the tank. Another advantage in providing the downwardly extended portion 9, is to insure the proper feeding of the fuel to the burner. From the feed pipe leads the vaporizing pipe 11, which vaporizing pipe is preferably formed integral with the feed pipe 10 and extends horizontally or parallel with the cover 2 and leads to the valve casing 12, which valve casing is of the usual construction such as used in hydro-carbon burners wherein the gasoline or other fuel is first vaporized or converted into gas.

The valve casing 12 is provided with the ordinary needle valve 13, and also the starting or pilot cup 14, which is for the purpose of containing a quantity of gasoline designed to be ignited and properly heat the valve casing.

The burner does not form any specific part of the present invention, except that a burner must necessarily be present but may be of any well known construction. To the valve casing proper is attached the burner tube 15, which burner tube is provided upon its underside with jet-orifices 16. The front

end of the burner tube 15 is closed by means of the plug 17 or its equivalent.

Within the chambered body 1 is located the combined weight and heat conductor 18, which heat conductor is substantially of the form shown in Fig. 3 and as shown its side walls are provided with a series of spaced flanges 19, which spaced flanges produce a series of pockets or small chambers upon opposite sides of the heat conductor. The flanges 19 are spaced apart at their inner ends so as to better permit the flames emanating from the lowermost jet-orifices to come in direct contact with the upper or inner surface of the chambered body 1.

The side jet-orifices are so arranged that the flames will descend in an inclined direction and enter the chambers or pockets 20, which flames will to a certain extent be confined in said chambers or pockets, thereby better heating the heat conductor 18. The heat conductor 18 or more specifically the side, end and short parallel flanges rest upon the upper inner surface of the chambered body, thereby assisting in transmitting the heat to the chambered body. The heat conductor also serves the purpose of giving the chambered body the desired and proper amount of weight.

For the purpose of protecting the hand of the operator from the heat arising from the chambered body, the shields 21 and 22 are provided, which shields are attached to the standards 7. For the purpose of better protecting the hand of the operator two shields are provided and their lower portions spaced from each other as illustrated in Fig. 1, so that an air space is provided between the two shields, by which arrangement the upper shield is protected to a better extent than when a single shield is employed. In practice it is desirable to remove the cover 2 from time to time and in order that this may be done without disturbing the vaporizing pipe, valve casing and burner tube said parts are so connected that they will all be removed with the cover. In order to remove the cover it is only necessary to loosen the set screw 6, at which time the rear end of the cover will be lifted upward and the same detached by a slight backward movement, after the cover has been elevated a sufficient distance to clear the flange 5.

It will be understood that the rear wall of the chambered body should be open at its upper central portion so as to allow the burner tube 15 and the vaporizing pipe 11 to assume the position illustrated in Fig. 1 when the cover is placed in proper position.

It will be understood that the combined handle and tank should be provided with the ordinary filling nozzle 23, which is closed by the ordinary stopper 24.

The heat conductor 18 is not designed to be permanently attached to the chambered

body 1, but should be formed of such size that it will fit the lower portion of the chamber in a neat manner, but can be easily removed for any desired purpose.

For the purpose of preventing any end movement of the heat conductor 18 it is provided with the extended flange 20^a which flange abuts against the inner wall of the chambered body 1.

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

1. In a self-heating sad-iron the combination of a chambered body, a cover adapted to be connected to said body, a combined handle and fuel tank secured to said cover, said fuel tank consisting of a horizontal and downwardly extended portion, a feed pipe connected to the lower end of the downwardly extended portion of the tank, a vaporizing pipe connected to the feed pipe and located in the upper portion of the chambered body, a valve casing and a burner, said vaporizing pipe and burner connected to the valve casing, a heat conductor provided with a series of short parallel flanges, said flanges adapted to constitute small chambers and said heat conductor adapted for contact with the upper face of the bottom surface of the chambered body, substantially as and for the purpose specified.

2. In a self-heating sad-iron, the combination of a chambered body, a cover therefor, a combined handle and tank connected to said cover by supports hand shields located between the tank and cover and connected to the handle and tank supports, said shields spaced from each other, a feed pipe leading from the tank and extended through the upper portion of the chambered body, a valve casing connected to said feed pipe, a burner connected to the valve casing, the cover and aforesaid parts removably connected to the chambered body, a heat conductor located in the lower portion of the chambered body and provided with a series of chambers located upon opposite sides of the heat conductor and means for securing the cover to the chambered body, substantially as and for the purpose specified.

3. In a self-heating sad-iron, the combination of a chambered body, a cover therefor, a combined handle and tank connected to said cover by supports hand shields located between the tank and cover and connected to the handle and tank supports, said shields spaced from each other, a feed pipe leading from the tank and extended through the upper portion of the chambered body, a valve casing connected to said feed pipe, a burner connected to the valve casing, the cover and aforesaid parts removably connected to the chambered body, a heat conductor located in the lower portion of the chambered body and provided with a series of chambers lo-

cated upon opposite sides of the heat conductor, said heat conductor provided with a flange adapted to abut against the inner wall of the chambered body, and means for
5 securing the cover to the chambered body, substantially as and for the purpose specified.

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

FREDDIE D. STOTLER.

Witnesses:

DAVID LIPPY,
GEORGE W. NAGLE.