

E. H. PALMER.

SAD IRON.

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1,005,459.

Patented Oct. 10, 1911.

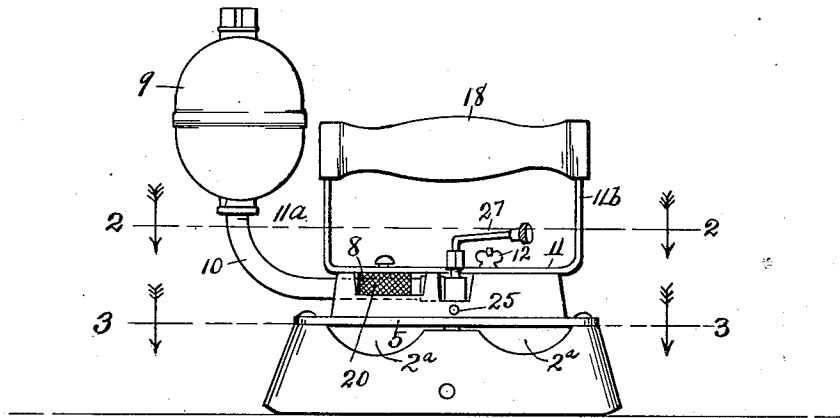


Fig. 1.

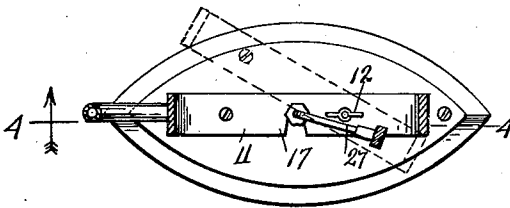


Fig. 2.

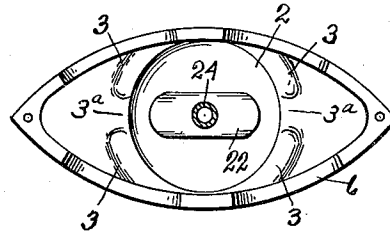


Fig. 3.

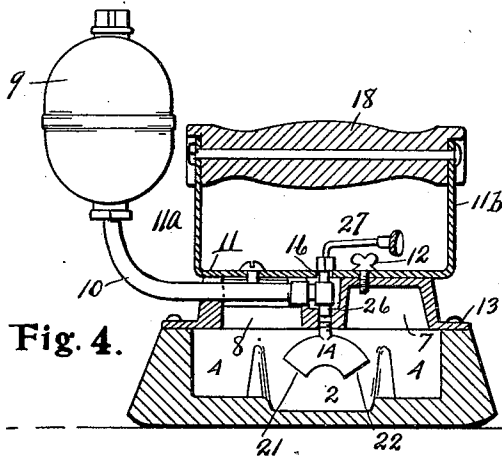


Fig. 4.

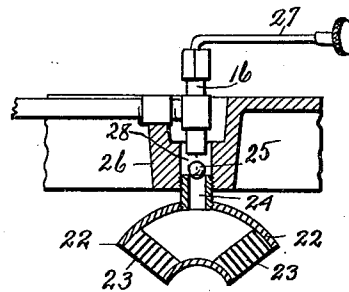


Fig. 5.

Witnesses

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SAD-IRON.

1,005,459.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, EDWARD H. PALMER, a citizen of the United States, residing at Detroit, county of Wayne, State of Michigan, have invented certain new and useful Improvements in Sad-Irons, and declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to sad irons.

It has for its object an improved fuel-burning sad iron in which the fuel is carried in a tank closely adjacent to the iron, is delivered through a conduit and discharge orifice controlled by a valve which is directly under the handle of the sad iron and burns in a double flame within the body thereof.

In the drawings:—Figure 1, is a side elevation. Fig. 2, is a horizontal cross section at the line 2—2 of Fig. 1. Fig. 3, is a horizontal cross section at the line 3—3 of Fig. 1. Fig. 4, is a vertical longitudinal section. Fig. 5, is a vertical longitudinal section of the burner.

The body part of the iron is double pointed and hollow with a circular combustion chamber 2, formed by the circular baffle plate 3 which also forms the end cavities 4. The escape of burned gases takes place through notches 2^a which communicate directly with the end chambers 4. A cover 5 extends over the top of the body part and is provided with a raised part which forms a housing entirely closing in the cavity 7 at the rear, and a chamber 8 at the front. The raised part of the cover is notched at the end to receive pipe 10 which passes through the chamber 8 so as to expose part of the pipe 10 to the heated air from the burner; between the cavity 7 and the chamber 8 is a thick septum 26, provided with a vertical passage 28 into which lead inlet passages 25 through the side walls of the septum. Fuel is contained in a tank 9 which is supported on the pipe 10. The fuel is carried from the tank through the pipe 10 to a needle valve located in a valve casing which terminates the pipe 10 and which, when in place, registers with the mouth of the passage 28. The portion of the pipe 10 which passes through the chamber 8 and is exposed to the heat of the flame

serves as a generator. The valve neck 16 is engaged by the bar 11 of the handle which is notched at 17 for such engagement. This locks the pipe 10 upon which is located the valve casing and which supports the tank, in a vertical position. The horizontally arranged lever extension 27 which is attached to the valve stem is thereby also held in place and turns in a plane parallel to the bar 11.

The handle bar is made as a flat plate 11 with struts 11^a and 11^b between which is a wooden hand grip 18. The bar 11 is pivotally secured by set screw 12 to the cover. A guard of perforated metal 20 is placed over the pipe 10 and an opening in the chamber 8 to prevent the accidental issue of flame therefrom. Flame, however, cannot issue through this opening under ordinary conditions of use, as the flame employed to heat the iron is very small. Into the lower end of the septum is screwed a short nipple 24 which couples to the septum a curved quadrant shaped member 22 which is provided at each end of the quadrant with metal gauze. The quadrant serves at each end as a burner, and that part included in the septum comprising a passage 28, the nipple 24 and the quadrant forms a mixing chamber or mixer. The burners direct flame against the circular baffle plate 3.

The above structure allows the valve lever to be placed directly under the handle, as well as the set screw 12 by which the engagement of the handle bar 11 with the cover may be loosened and the bar swung away from the valve neck 16. The pipe with the fluid tank 9 which it supports, may then readily be removed.

What I claim is:—

1. The combination of a sad iron, having a central chamber, a mixer projecting into said chamber, a burner within said chamber connected to said mixer, a fuel tank, a pipe supporting the same, and leading therefrom, the said pipe adapted to register with said mixer, and a pivoted handle adapted to engage over the said pipe and removably hold the same in place, substantially as described.

2. The combination of a sad iron having a chamber, a mixer in fixed relation with said iron and projecting into said chamber, a burner within said chamber connected to said mixer, a fuel tank, a pipe supporting the same and leading therefrom, the said pipe having a discharge valve opening into

said mixer, a handle pivotally connected to said sad iron and adapted to lock said pipe and valve in proper relation to said sad iron, and means for securing said handle from swinging on its pivotal connection, substantially as described.

3. A sad iron, having in combination a body portion having a hollow interior, a baffle plate dividing said interior into end chambers and a central combustion chamber, means for supplying fuel, a mixer connected therewith and a plurality of burners connected with said mixer and adapted to direct flame against said baffle plate, substantially as described.

4. A sad iron, having in combination a body portion having a hollow interior, said body portion provided with notches at the sides for escaping gases, a cover for said body portion having a central vertically disposed mixing chamber, a burner in the interior of said body and connected with said mixer, a fuel tank, a pipe supporting the

same and leading therefrom, a valve casing terminating said pipe and discharging into said mixer, a needle valve in said valve casing, a stem connected thereto, and a handle pivoted to the cover of said sad iron and adapted to lock the pipe in position, substantially as described.

5. A sad iron, having in combination a body having a hollow interior, a circular baffle plate dividing said hollow interior into a central combustion chamber and end chambers, means for supplying fuel, a mixer connected therewith and a quadrant shaped pipe connected to said mixer having burner terminals directed against said circular baffle plate, substantially as described.

In testimony whereof, I sign this specification in the presence of two witnesses.

EDWARD H. PALMER.

Witnesses:

CHARLES T. BURTON,
VIRGINIA C. SPRATT.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."