M. HELLER.

SELF LIGHTING SAD IRON.

APPLICATION FILED APR. 19, 1912.

1,050,536.

Patented Jan. 14, 1913.

FIG. 1.

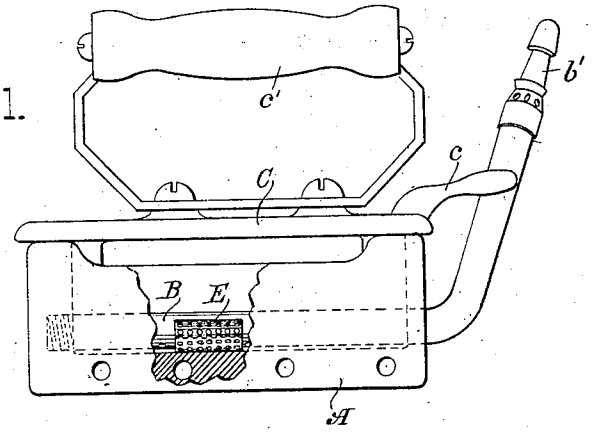


FIG. 2.

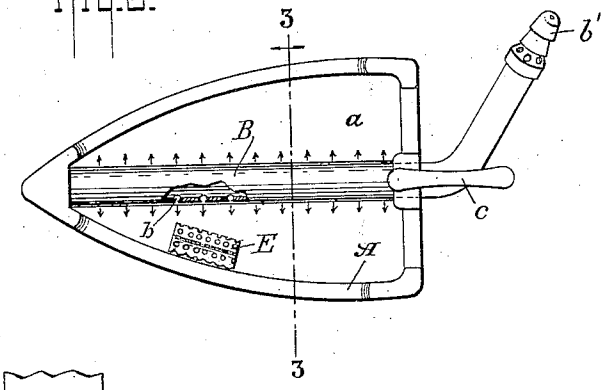


FIG. 3.

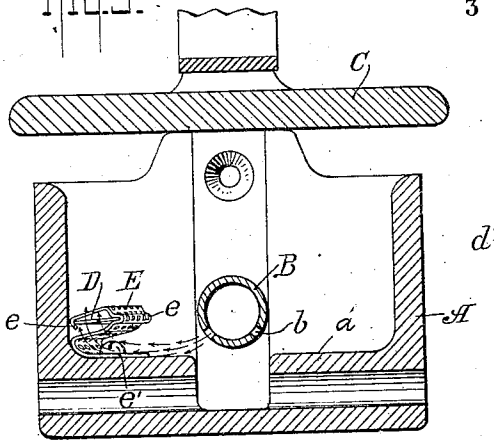
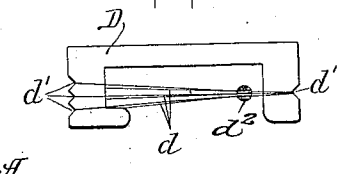


FIG. 4.



WITNESSES

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SELF-LIGHTING SAD-IRON.

1,050,536. Specification of Letters Patent. **Patented Jan. 14, 1913.**

Application filed April 19, 1912. Serial No. 691,773.

To all whom it may concern:

Be it known that I, MAX HELLER, a citizen of the United States, and a resident of Philadelphia, county of Philadelphia, State of Pennsylvania, have invented a certain new and useful Improvement in Self-Lighting Sad-Irons, of which the following is a specification.

My invention relates to sad irons of the kind commonly known as gas irons and has for its object to provide such irons with an attachment whereby the same will become self-lighting.

To this end my improvement contemplates utilizing an initial flow of gas or other fuel for the purpose of bringing an element such as, for instance, a platinum wire located within the body of the iron to a state of incandescence and by this means igniting the said fuel.

A further object of my invention is to position this igniting element in the path of the flow of fuel but outside of the zone of the subsequent flame or flames so that said igniting element after having performed its function of igniting the fuel will not be injured by the effect of the flame or flames.

My invention will be fully described hereinafter and the features of novelty will be pointed out in the appended claims.

Reference is to be had to the accompanying drawings in which—

Figure 1 is a side elevation of a sad iron partly broken away and with my improvement applied thereto; Fig. 2 is a plan view thereof; Fig. 3 is a cross-section on an enlarged scale taken on the line 3—3 of Fig. 2 and Fig. 4 is a detail view of the particular form of igniting element included in the present illustration of my improvement.

In the drawings A represents the body of the iron which is hollow and in which the burner B is located. This burner may be of any well known type and in the illustration is in the form of a tube having a series of perforations *b* projecting downwardly in opposite directions as clearly shown in Fig. 3. The said burner B has its inner end suitably secured in the front of the body A and extends through the rear wall of said body to form an upwardly projecting portion, the free end of which is provided with a nipple *b'* for receiving the one end of the usual hose or tubing connected with a source of fuel supply. The body of the iron is provided with a preferably movable cover C which is secured in operative position on said body in any suitable manner as for instance through the medium of a rotatable lever *c* and carries the usual handle *c'* for manipulating the iron.

The igniting element in the present illustration of my invention comprises a frame D on which a number of fine platinum wires *d* are strung, notches *d'* being preferably provided for positioning said wires on and preventing dislocation thereof relatively to said frame. The said wires *d* further carry a pellet d^2 of platinum sponge or any other substance having the property of becoming incandescent when in the presence of gas or other fuel. The frame D when in operative position is preferably slidably or otherwise located in the protecting carrier E of foraminous material, which carrier E may be formed with grooves *e* for the accommodation of id frame D, and is secured in position within the body of the iron in any suitable manner as for instance by means of a screw *e'*.

In order to obtain a satisfactory operation of my improvement the carrier E is so positioned within the body of the iron as to bring the platinum wires *d* and pellet d^2 directly in the path of the gas which issues from one or more of the perforations *b* of the burner B as shown in Fig. 3. In addition to this, however, the position of the said carrier E is preferably such that it and the platinum wires are located outside of the reach of the flame or flames produced by the gas after ignition as shown by the arrows in Fig. 2 so that said carrier and wires are not subject to the destroying effects of said flame or flames or the excessive heat produced thereby as would be the case if the carrier and wires were located within the embrace thereof. Thus in the present instance as the gas or other fuel is turned on it will pass out of the apertures *b* of the burner B in an initial flow and become mixed with air, which mixture of air and gas owing to the direction in which said apertures *b* project will be directed against the inner surface *a* of the bottom of the body A. This initial flow of gas mixed with air will pass along said surface *a* and will be deflected upwardly by the side walls of the iron as shown by the arrows in Fig. 3, so that some of it will pass through the

foramina of the carrier E and contact with the pellet d^2 and the platinum wires d which, as will be seen by referring to Fig. 3 are directly in the path of a part of this initial flow. The said pellet d^2 will by the action of the gas and air thereon be quickly brought to a state of incandescence and will bring the wires d to a similar condition in the usual manner and will then ignite the gas which is flowing about said wires as well as any gas which may have collected in the body of the iron and thus start the burner. Owing to the fact that the apertures b direct the gas downwardly against the surface a of the body A the subsequent flames will be similarly directed against said surface a and will spread over the same to quickly heat said bottom. With this arrangement the igniting element, while it is directly in the path of the fuel, is out of line with the apertures b and the flames will consequently be prevented from directly reaching or contacting with either the carrier E or wires d and pellet d^2 so that as before stated these elements are effectually protected against the effects of said flames and will not be destroyed thereby and yet the igniting element is in a position in which it will most effectively exercise its functions.

It will thus be seen that with my improved structure the mere act of turning on the gas is all that is necessary to ignite or light the burner when it is desired to heat the iron. It is therefore unnecessary for the person using the iron to use a match, taper or the like to light the burner so that the danger of explosion is reduced to a minimum and other annoyances which may result from the use of the match or the like are obviated. In addition to this it is to be understood that the usual air inlets are provided to insure proper combustion and that my improvement may be adapted to any form of sad iron other than the one illustrated.

Various changes in the specific form shown and described may be made within the scope of the claims without departing from the spirit of my invention.

I claim:

1. A sad iron comprising a hollow body, a burner located therein and connected with a source of fuel supply, said burner being provided with a jet aperture, and an igniting element adapted to be brought to incandescence by the fuel whereby said fuel is ignited, said igniting element being located in said body out of line with said aperture and out of the reach of the flame produced after ignition.

2. A sad iron comprising a hollow body, a burner located therein, and connected with a source of fuel supply, said burner being provided with a jet aperture, an igniting element adapted to be brought to incandescence by the fuel whereby said fuel is ignited, and a protective foraminous carrier for said igniting element, said igniting element and carrier being located in said body out of line with said aperture and out of reach of the flame produced after ignition.

3. A sad iron comprising a hollow body, a burner tube therein and connected with a source of fuel supply and located above the bottom of said iron, said burner tube being provided with a plurality of jet openings projecting downwardly toward said bottom, and an igniting element in said body out of line with said jet openings and adapted to be brought to incandescence by the fuel, the inner surface of said bottom being adapted to direct the fuel toward said igniting element.

4. A sad iron comprising a hollow body, a burner located therein and connected with a source of fuel supply, said burner being provided with a jet aperture, an igniting element adapted to be brought to incandescence by the fuel whereby said fuel is ignited, said igniting element being located in said body out of line with said aperture and out of reach of the flame produced after ignition, and protective foraminous carrier for said igniting element removably secured in said body.

In witness whereof I have hereunto set my hand in the presence of two subscribing witnesses.

MAX HELLER.

Witnesses:
JOHN A. KEHLENBECK,
LOUIS ALEXANDER.