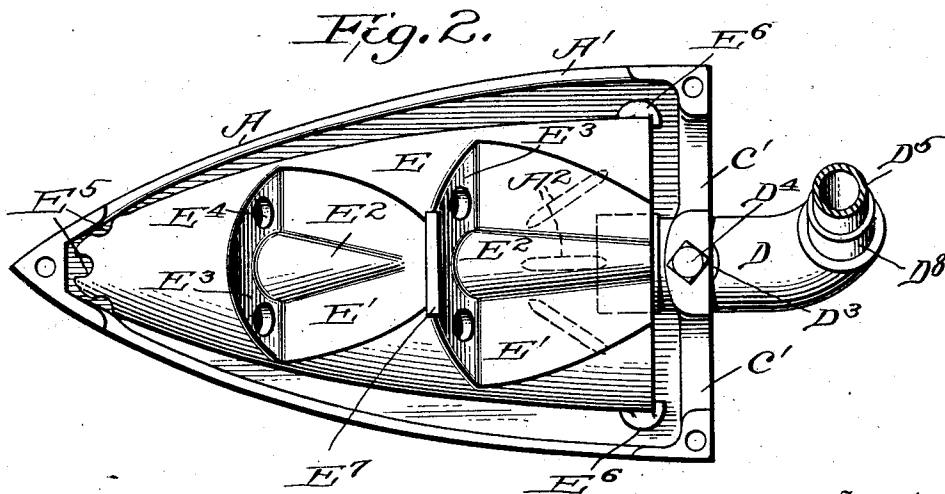
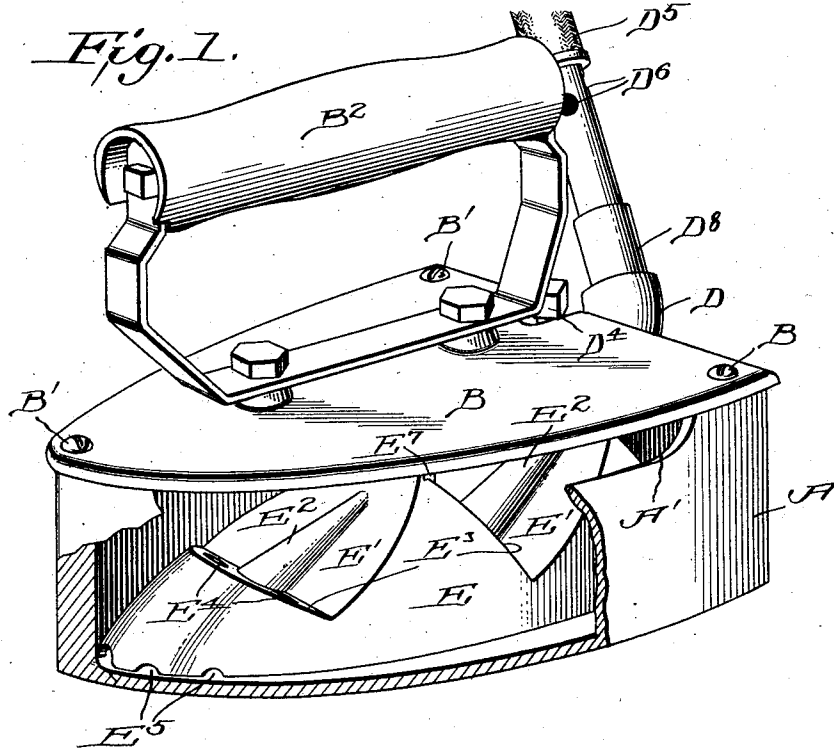


H. A. KOENIG.
GAS HEATED SAD IRON.
APPLICATION FILED JULY 2, 1912.

1,047,953.

Patented Dec. 24, 1912.

2 SHEETS-SHEET 1.



Inventor

H. A. Koenig

Witnesses

Oliver H. Holmes
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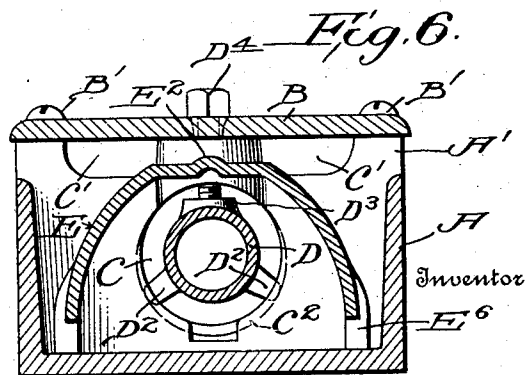
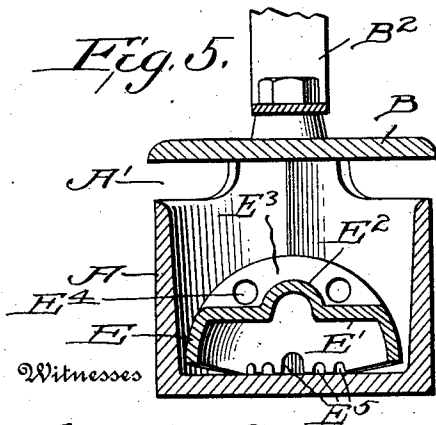
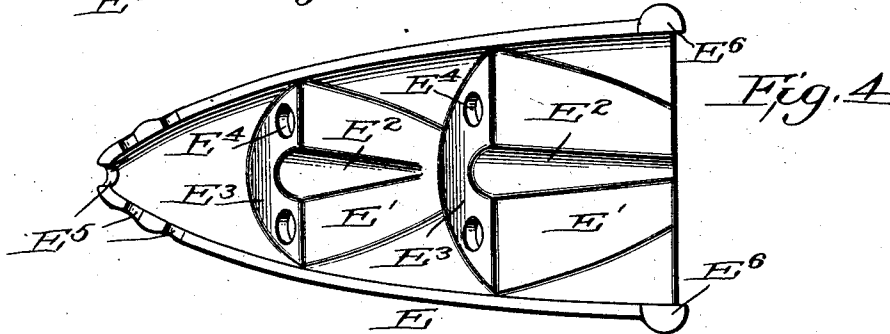
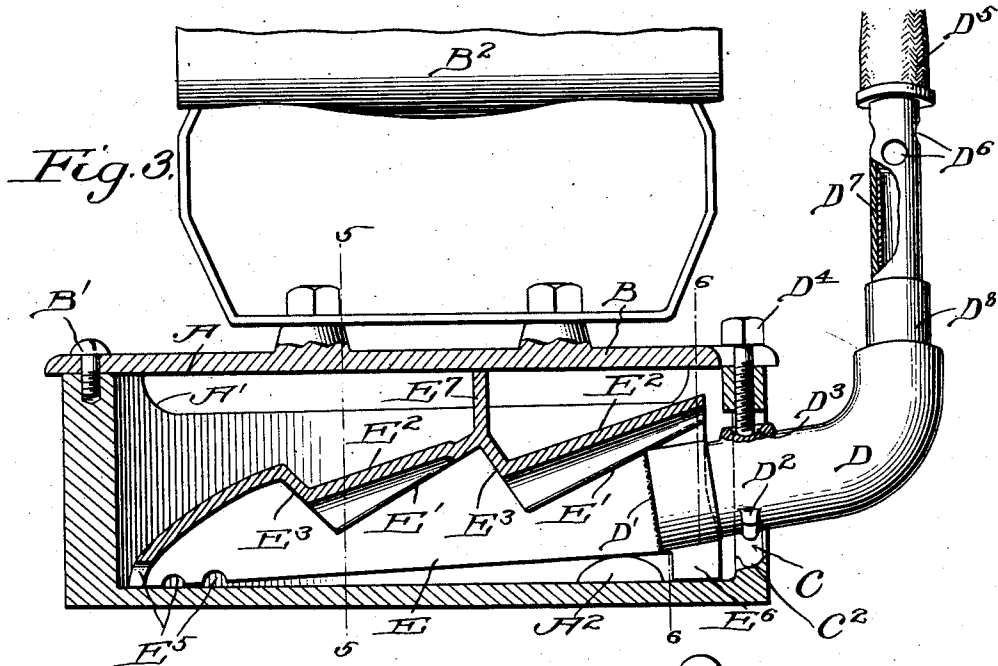
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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

HARRY A. KOENIG, OF PHILADELPHIA, PENNSYLVANIA.

GAS-HEATED SAD-IRON.

1,047,953.

Specification of Letters Patent.

Patented Dec. 24, 1912.

Application filed July 2, 1912. Serial No. 707,272.

To all whom it may concern:

Be it known that I, HARRY A. KOENIG, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and useful Improvement in Gas-Heated Sad-Irons, of which the following is a specification.

This invention relates generally to sad irons and more particularly to that class thereof known as gas heated sad irons in which gas is fed to the body of the iron and ignited within the same.

The object of my invention is to provide a sad iron which will be simple in construction and highly efficient in operation.

Another object of the invention is to provide a deflector within the said iron body of such construction that the commingled air and gas in burning will have the heat thereof deflected along the central line of the smoothing bottom, thereby concentrating the heat upon the bottom and preventing other portions of the iron becoming unduly heated.

With these objects in view, my invention consists of the novel features of construction and combination hereinafter fully described and pointed out in the claims.

In the drawings forming a part of this specification: Figure 1 is a perspective view of a gas heated sad iron constructed in accordance with my invention, a portion of the side wall being broken away to disclose the combination deflector. Fig. 2 is a top plan view with the cover plate removed. Fig. 3 is a longitudinal sectional view. Fig. 4 is an inverted view of the combination deflector. Fig. 5 is a transverse section on the line 5—5 of Fig. 3, and, Fig. 6 is a sectional view on the line 6—6 of Fig. 3.

In carrying out my invention, I employ a hollow sad iron body A, flat upon the bottom as usual, and this body may be of any size or shape desired, but in the drawings, I have illustrated the usual type of pointed or triangular sad iron body. The sides of the hollow body are cut away slightly upon their upper edges as at A', and a cover plate B, substantially the same size and shape as the body of the iron is attached to the body by means of screws B' passed through the cover plate into the corners of the body. The handle B² is connected to the cover plate in any suitable manner. The rear wall of the body has a circular opening C, in which is secured the delivery pipe D, as hereinafter

fully described, and this rear wall is also constructed with notches or openings C' at the top, upon opposite sides of the center.

Within the hollow body is arranged the combined deflector and mixer E, this deflector being substantially the same shape as the sad iron body, and is adapted to fit snugly therein, and occupy nearly the entire area of the said hollow body. This deflector is of peculiar construction as shown in the drawings, and generally speaking may be described as arched from side to side and gradually tapering toward the forward end. It will be noted that instead of being uniformly arched, it is formed with zig-zag steps E', each of which has a central arched or ridged portion E², which expands or enlarges toward the front, and each zig-zag step E' with its central arched portion E² terminates in a wall E³ which is provided with apertures E⁴ preferably upon each side of the central arched portion, and these walls are preferably inclined as shown. There may be any desired number of stepped portions E' and any desired number of openings E⁴ in the adjacent walls, and at the front end of the deflector I preferably produce a plurality of openings E⁵ in the lower edge thereof. At its rear end, the deflector is slightly elevated by suitable feet E⁶ preferably formed integral with the deflector.

If desired, radiating fins A² may be formed upon the inner face of the bottom of the sad iron body to aid in spreading the commingled air and gas which is fed in through the pipe D.

It will be noted that the side walls of the sad iron body are free from air feeding apertures as a sufficient quantity of air can be drawn in from the openings at the top of the sides and end.

The delivery pipe D has a screen D' arranged upon its extreme inner end and adjacent said inner end, this delivery pipe is provided with two or more lugs D² which are adapted to engage the channeled or grooved walls C² of the circular opening produced in the rear wall of the body and this delivery pipe is also formed with a socketed projection D³ in which seats the set screw D⁴ which serves to secure the delivery pipe in the end of the sad iron body. The supply pipe D⁵ which is connected to the delivery pipe, is provided with one or more openings D⁶ to permit air to enter and commingle with the gas as it passes through

the delivery pipe into the sad iron, and in practice I prefer to slightly contract the lower end of the supply pipe in order to sufficiently retard the gas and air in order to effect a sufficient commingling, and this can be accomplished by the insertion of a tube D' in the lower end of the supply pipe, or any other suitable means may be employed. A sliding collar D^s is arranged upon the lower end of the supply pipe for the purpose of cutting off the air whenever desired.

The deflector is preferably constructed with an upwardly projecting rib or wing E' which is adapted to contact with the underside of the cover plate and thereby hold the deflector rigid within the sad iron body, and owing to the construction and arrangement of all of the various parts this iron will be thoroughly effective whether held perfectly flat or at an angle as holding the iron at an inclination or in a vertical position will have no effect upon the burner or deflector.

From the foregoing description, taken in connection with the accompanying drawings, it will be seen that I provide a gas heated sad iron in which the products of combustion are drawn along the central line of the sad iron body and deflected downwardly during the course of combustion thereby effectively heating the smoothing portion of the iron, and preventing the other portions becoming unduly heated, and it will also be noted that the deflector serves

not only to deflect the heat toward the bottom of the iron but also serves to combine air with the commingled air and gas drawn through the supply pipe.

What I claim is:—

1. The combination with a sad iron body, of a stepped and concaved deflector arranged therein, said deflector having openings at the end of each stepped portion for the purpose specified.

2. The combination with a hollow sad iron body, of a deflector arranged therein, said deflector being concaved and stepped, the central portion of each step being arched, each arched portion expanding toward the front and terminating in an apertured wall, as set forth.

3. The combination with a sad iron body having a circular opening in the rear wall thereof, the walls of said opening being grooved, a delivery pipe adapted to pass through the circular opening and having lugs, said lugs being adapted to engage the grooved walls of the opening and means for locking the delivery pipe in such position, as set forth.

4. A deflector of the kind described concaved and tapered, the concaved portion being stepped, one member of each step being apertured and the other member arched longitudinally, as set forth.

HARRY A. KOENIG.

Witnesses:

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