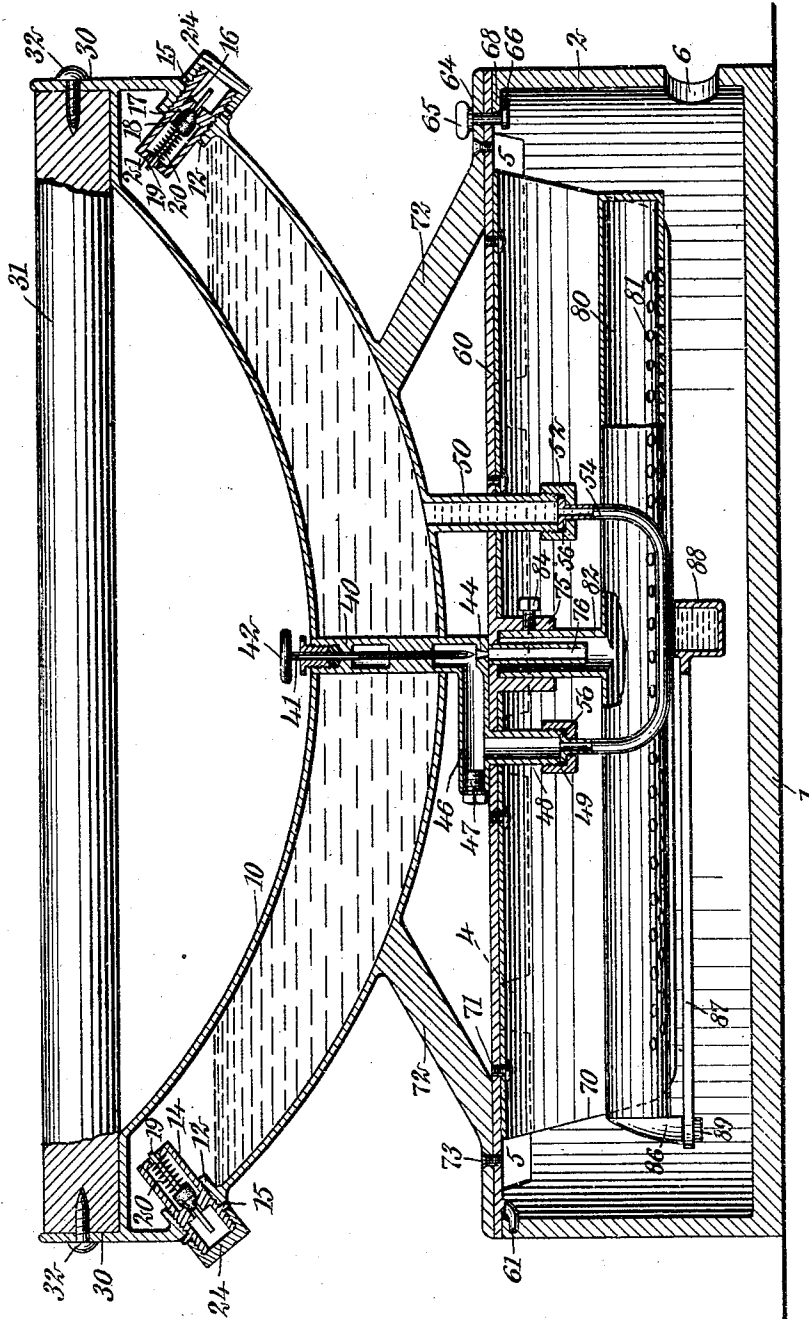


C. S. KONIGSBERG & W. ALLEN.
 SELF HEATING FLAT IRON.
 APPLICATION FILED NOV. 17, 1908.

940,466.

Patented Nov. 16, 1909.
 2 SHEETS—SHEET 1.

Fig. 1



WITNESSES
J. A. Brophy
Wm. J. Seal

INVENTORS.
William Allen
Charles S. Konigsberg
 BY *Munn & Co.*
 ATTORNEYS

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Fig. 2

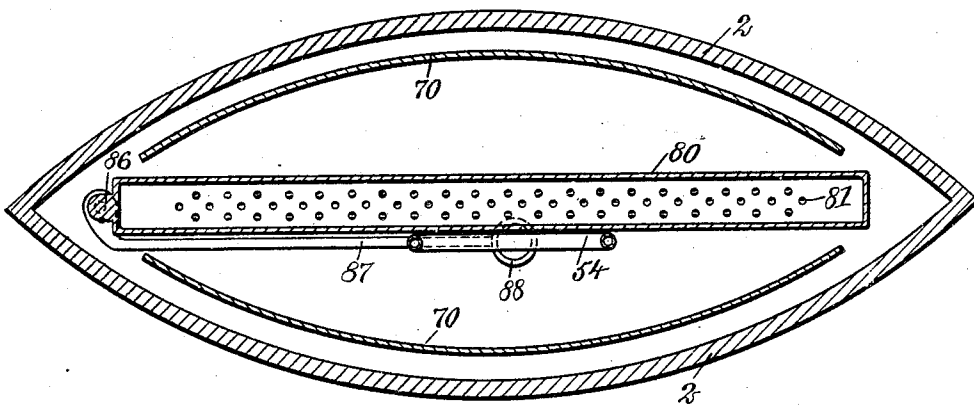
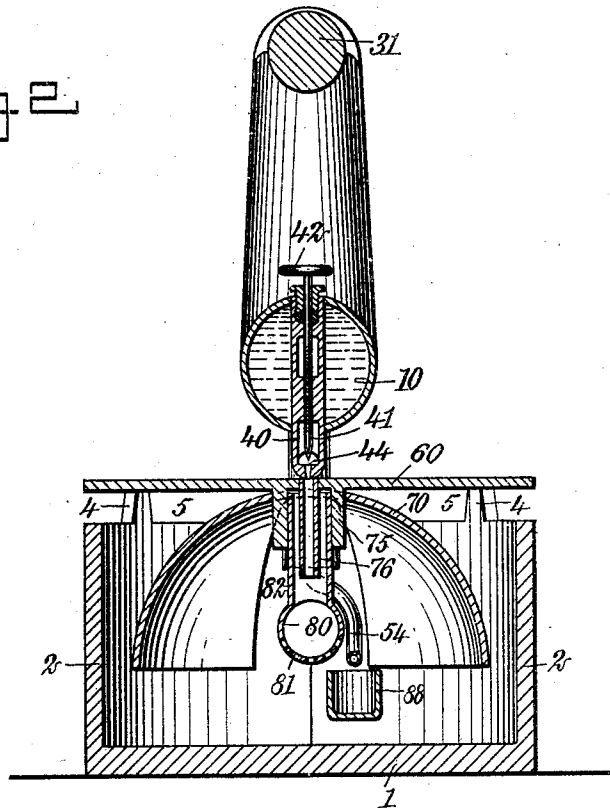


Fig. 3

WITNESSES
J. A. Brophy
Wm. J. Spurl

INVENTORS.
William Allen
Charles S. Konigsberg
 BY *Mumme & Co.*
 ATTORNEYS

UNITED STATES PATENT OFFICE.

CHARLES S. KONIGSBERG AND WILLIAM ALLEN, OF OAKLAND, CALIFORNIA.

SELF-HEATING FLAT-IRON.

940,466.

Specification of Letters Patent.

Patented Nov. 16, 1909.

Application filed November 17, 1908. Serial No. 463,100.

To all whom it may concern:

Be it known that we, CHARLES S. KONIGSBERG and WILLIAM ALLEN, citizens of the United States, and residents of Oakland, in the county of Alameda and State of California, have invented a new and Improved Self-Heating Flat-Iron, of which the following is a full, clear, and exact description.

This invention relates to self-heating flat irons adapted to generate the vapor or gas by which they are heated.

One object of the invention is to produce an iron adapted to use denatured alcohol and the like for the heating agent, and having a supply tank formed in the lower portion of the handle of the iron.

A further object is to provide an iron in which there are no parts attached to the body or shell, but the burner, generator and supply tank are all mounted upon the cover for the body, which may be readily attached and detached from said body, thereby rendering one burner mechanism applicable to several bodies.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a central longitudinal vertical section through the iron; Fig. 2 is a central transverse vertical section through the iron; and Fig. 3 is a horizontal section taken on a line with the center of the burner.

In said drawings, the body of the iron comprises a bottom plate 1 and vertically-extending sides 2. The general shape of the body is that of an oval with pointed ends, as shown in Fig. 3. The upper edge of the sides 2 is provided with a series of projections 4 and intervening notches 5. These notches allow the escape of the products of combustion from the interior of the body. A hole 6 is provided near the bottom 1 for the admission of air into the body.

Above the body of the iron is a supply tank 10, which is circular in cross section and bent on the arc of a circle. This tank may be made of a brass casting or any other suitable material. A boss 12 is provided near each end of the tank and internally threaded, to receive a correspondingly-threaded shell or valve casing 14. Said valve casing comprises a flange 15 adapted to bear against the outer face of the boss 12.

Intermediate the length of the casing 14 is a web 16 having a tapered aperture 17 formed therein, for coöperation with a tapered valve body 18. Said valve body 18 is mounted upon a stem 19 having a spring 20 extending between the upper end of the valve body and the inner face of the end 21 of the valve casing. A cap 24 is screw-threaded upon the outer end of the valve body 14 in order to close the same. This valve may be any well known form of air valve, such as is common in bicycle tires. The purpose of the valve is to permit air to be pumped into the supply tank 10 above the liquid therein at each end, to equalize the pressure. Extending upwardly from each end of the said tank 10 are ears 30, between which a handle 31 extends, which may be secured in position by means of screws 32. Said handle may be of wood or any other suitable heat non-conducting material.

Extending centrally through the tank 10 is a valve casing 40 having a needle valve stem 41 passing therethrough, said stem being provided in its upper end with a hand wheel 42. The needle valve body is adapted to coöperate with an aperture 44 formed at the lower end of the body 40. A laterally-extending pipe 46 connects with the valve body 40 near the lower end thereof, and is provided at its outer end with a screw plug 47, to allow the needle valve to be cleaned. Extending downwardly from the pipe 46 is a pipe 48, which is screw-threaded at its lower end to receive a coupling 49.

Projecting from the lower side of the tank 10 is a pipe 50 which may be cast integrally with the tank 10. Said pipe 50 is screw-threaded at its lower end to receive a coupling member 52. A pipe 54 provided with flanges 56 at each end is held in position by the coupling members 49 and 52 and affords means of communication between the pipe 50 and the pipe 48. The pipe 54 may be made of brass or any other suitable material and forms a vaporizing chamber within which the liquid fuel is vaporized.

A cover plate 60 extends over the top of the body, resting upon the projections 4. Said cover plate is provided at one end with a hook 61 adapted to enter a recess formed therefor near the top of one of the walls 2. This hook and recess act as a hinge for the cover. At the other end of the cover plate 60 is a short stem 64 rotatably mounted

therein and provided with a knob 65 at its upper end, and a cam 66 at its lower end adapted to engage the under side of a flange 68 formed on the inner side of the wall 2.

5 By turning the knob 65 so that the cam 66 is freed from the flange 68 the cover may be tilted upwardly and removed from the body.

The pipes 48 and 50 extend through suitable holes formed in the cover plate 60. A
10 deflector 70 is fastened to the under side of the cover plate 60 by means of screws or rivets 71. The supply tank 10 is supported upon the cover plate 60 by legs 72, said legs being fastened to said cover plate by means
15 of screws 73.

A boss 75 is formed on the under side of the cover plate 60 and passes through the deflector 70. A pipe 76 extends downwardly from said cover plate 60 in line with the
20 aperture 44, for the conduction of the vapor from the valve to the burner. The burner comprises an elongated cylindrical tube 80 closed at each end and provided with a plurality of rows of apertures 81. A pipe 82
25 extends upwardly from said burner pipe 80 and fits within the boss 75 and is held in place by a set screw 84.

At one end of the burner tube 80 is a depending lug 86 to which an arm 87 is pivotally attached by means of a screw 89. At
30 the outer free end of said arm 87 is a starting cup 88 adapted to receive a small supply of alcohol or other liquid which is to be ignited, in order to heat the vaporizing
35 chamber 54 sufficiently to generate the vapor for use in the main burner 80. From the description above set forth it will be seen that the supply tank and the burner together with the mechanism for controlling
40 the same, are all mounted upon the cover 60. When said cover is removed it may be readily attached to a similar iron body without requiring any connections to be made or broken.

45 The tank 10 is filled with the alcohol through either one of the openings in the bosses 12, leaving a space above the liquid

for the reception of air under pressure. By means of a suitable air pump, however, air may be forced in by a few strokes. By
50 manipulating the needle valve 41, the supply of alcohol from the pipe 50 to the vaporizing chamber and from thence into the burner, may be regulated.

Having thus described our invention, we
55 claim as new and desire to secure by Letters Patent:

1. In a self-heating flat iron, the combination of a hollow body, a cover detachably secured to said body, a liquid fuel tank, a
60 pipe projecting downwardly from said tank through said cover, a valve casing passing through said tank, a laterally-extending pipe communicating with said valve casing and having a depending portion extending
65 through said cover, a vaporizing chamber connected to said downwardly-projecting pipe and to said depending portion, a valve in said casing having a stem projecting above said tank, a tube in line with said
70 valve, and a burner communicating with said tube.

2. A flat iron comprising a body and a removable cover, a tank secured to the cover, a
75 handle connected with the tank a valve casing extending through the tank and the cover at the centers thereof and provided at its lower end with a valve seat, a boss on the inner surface of the cover coaxial with the
80 valve seat, a pipe extending from the cover through the boss, the valve seat forming a communication between the casing and the pipe, an elongated burner having a lateral pipe fitting into the boss, and a set screw engaging the pipe for securing the burner in
85 place.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

CHARLES S. KONIGSBERG.
WILLIAM ALLEN.

Witnesses:

EDWARD JANVRIN,
GEO. INGRAHAM.