

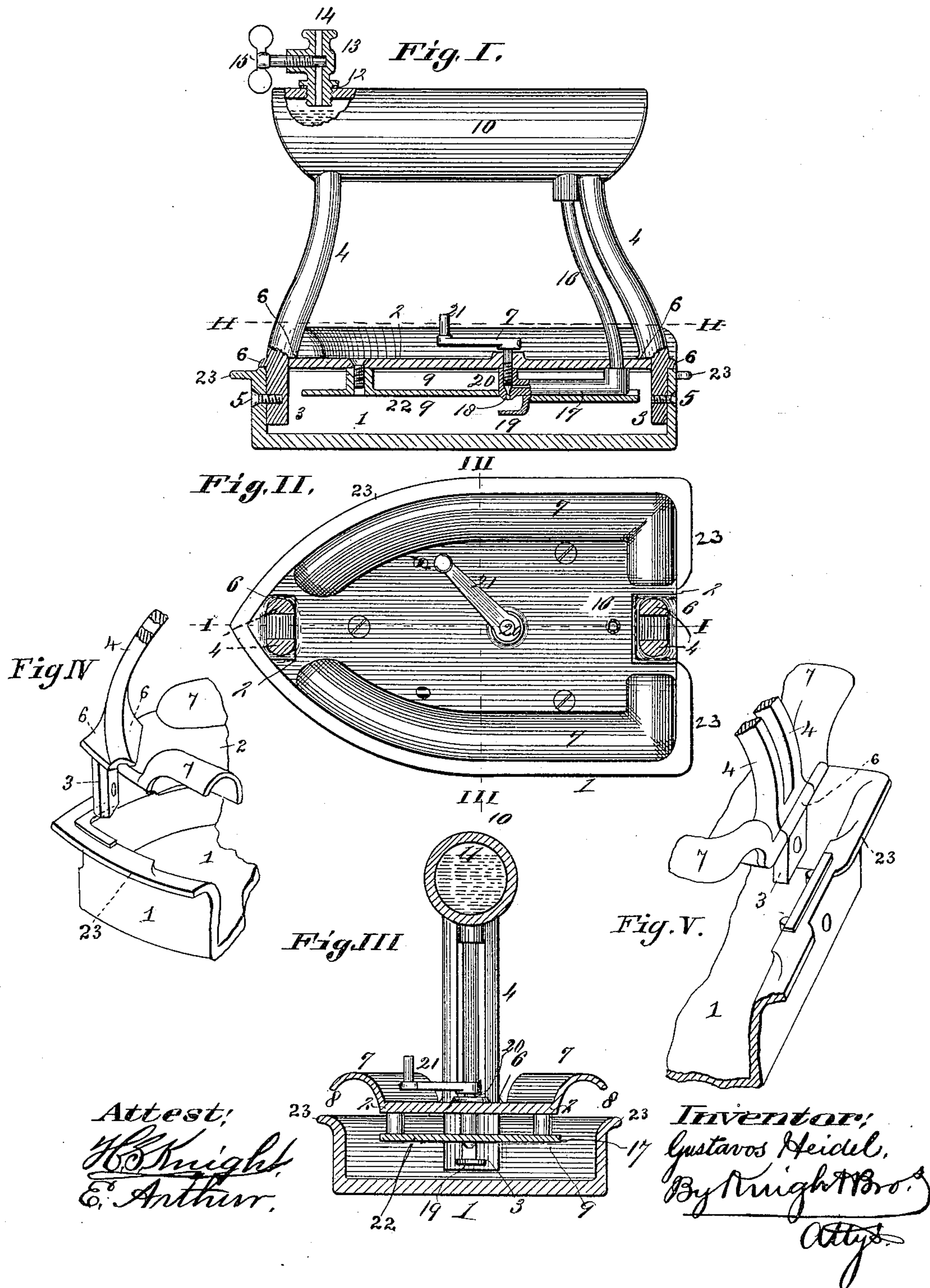
(No Model.)

G. HEIDEL.

SELF HEATING SAD IRON.

No. 379,867.

Patented Mar. 20, 1888.



UNITED STATES PATENT OFFICE.

GUSTAVOS HEIDEL, OF ST. LOUIS, MISSOURI, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, TO THE NATIONAL SELF HEATING SAD IRON COMPANY, OF SAME PLACE.

SELF-HEATING SAD-IRON.

SPECIFICATION forming part of Letters Patent No. 379,867, dated March 20, 1888.

Application filed May 17, 1887. Serial No. 238,538. (No model.)

To all whom it may concern:

Be it known that I, GUSTAVOS HEIDEL, of the city of St. Louis, in the State of Missouri, have invented a certain new and useful Improvement in Self-Heating Sad-Irons, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

This iron contains a gasoline-burner in the base and a reservoir in the handle.

Figure I is a longitudinal section at I I, Fig. II, the handle being in elevation. Fig. II is a horizontal section at II II, Fig. I. Fig. III is a transverse section at III III, Fig. II. Figs. IV and V are detail perspective views showing how the upper plate rests on the lower one at the ends of the iron.

The base is made hollow, and consists of a lower plate, 1, and an upper plate, 2, secured together by means of lugs 3 upon the end pieces, 4, of the handle and screws 5, which pass through the vertical ends of the plate 1 and screw into the lugs. These lugs 3 pass through recesses made in the plate 2, and have shoulders 6 bearing upon the top of the plate to hold it firmly down upon the plate 1, and also have similar shoulders, 6, resting upon the flange of the lower plate. The edges of the plate 2 have curved flanges 7, between which and the upturned edges of the plate 1 is a space, 8, through which the air can have ingress and egress to and from the hot chamber 9. The flanges 7 I prefer to curve in the manner shown, but do not confine myself to this form, as the form may be varied without essential change in principle.

10 is the grip of the handle. This is made with a hollow or chamber, 11, to contain some gasoline or other combustible fluid. The chamber is filled through an orifice, 12, situated at the forward end of the iron, closed by a valve-case, 13, which is screwed into it, and has a small passage, 14, to allow the entrance of air into the chamber 11. The passage 14 may be closed or partly closed by the screw-valve 15, so as to limit the supply of air; or air may be blown into the chamber 11 through this passage to increase the pressure upon the surface of the gasoline or other combustible material in the chamber.

16 is a pipe extending from the lower side of

the chamber 10 and connecting with the tubular casting 17, having the gas-jet hole 18.

19 is a lip extending beneath the jet-hole, so that the jet issuing from the hole impinges against the lip. The jet-hole is governed by a conical valve, 20, having a crank-formed handle, 21, by which it is turned.

The upper side of the plate 2 is marked with the letters "O" and "S," so that the position of the valve may be indicated, the valve being open when the free end of the handle is at O and shut when it is at S.

22 is a plate which extends beneath the plate 2, there being a space between them which serves to retard the passage of heat to the plate 2 from the gas-flame, the lip 19, and the plate 22.

The heated air from between the plates 2 and 22 finds free exit through the space 8 beneath the flanges 7, being carried out by the cool air entering through this space 8, owing to the movement of the iron in its proper use. The plate 22 prevents the cool air passing into the space beneath it except in small quantity, so that this space is not cooled, and consequently while the bottom plate, 1, is kept at a high temperature the upper plate, 2, is comparatively cool, and though the plate 1 is hot enough to iron the clothes the hand is protected from heat. The temperature of the bottom plate is regulated by the volume of the flame, and that by the position of the valve.

It will be seen that the curved form of the flange 7 will deflect air and other gases downward as they issue from the chamber 9, and thus they are carried away from the hand of the operator.

From the back of the lower plate extends a horizontal projection, 23, which, in conjunction with the rear end of the handle when the iron is turned on end, serves to support the face of the iron clear of the support on which the iron rests. Said flange is continued entirely around the lower plate and prevents any clothing from entering air spaces or openings on sides while in use. The orifice 12 being located at the forward end of the handle, its function is the same when the iron is supported, as just described, or is on its face.

This improvement is intended for sad-irons

for domestic, laundry, tailors', and all other uses.

I have described a burner suited for burning gasoline; but a gas or any other burner may be used, the base having the described construction to keep the bottom hot and the top comparatively cool by means of the plate 22 and the side openings, 8, as set forth.

I claim as my invention—

10 In a self-heating sad-iron, the combination of the hollow handle forming a reservoir and provided with a valve, ends extending downward from the handle and provided with shouldered lugs, top plate having flanges extending upward and outward, lower plate hav-
15 ing a vertical marginal flange forming a combustion-chamber and upon which the top

plate fits and is held by screws passing through said marginal flange and into said lugs, an out-turned projection, 23, on said vertical flange, 20 intermediate plate located between said bottom and top plates to deflect heat from the latter, supply-pipe leading from said hollow handle through the top plate to the under side of said intermediate plate, and a burner on 25 the lower end of said supply-pipe provided with a regulating valve having an operating-lever located above said top plate, substantially as and for the purpose set forth.

GUSTAVOS HEIDEL.

In presence of—

SAML. KNIGHT,

BENJN. A. KNIGHT.