

(No Model.)

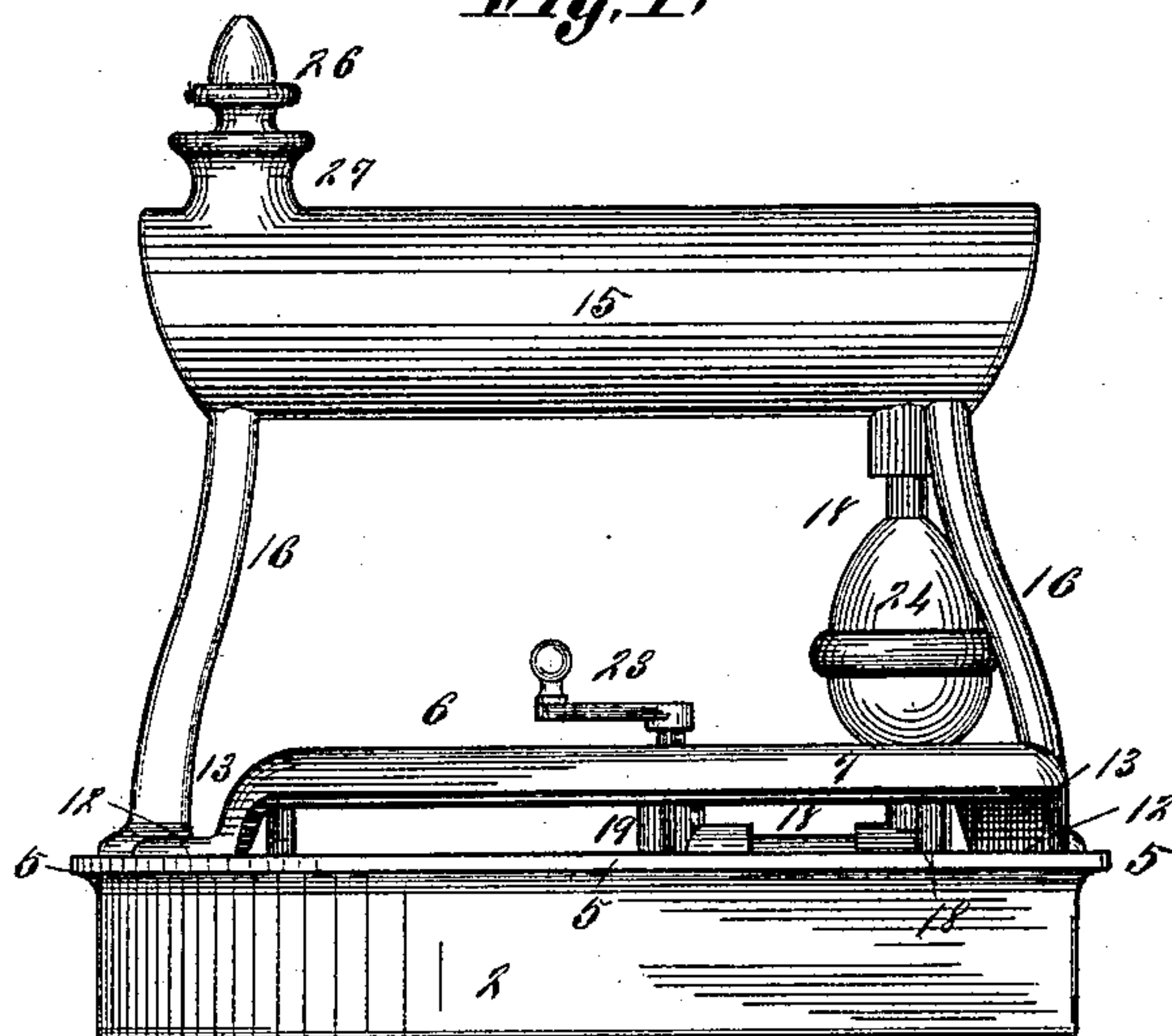
G. HEIDEL.

SELF HEATING SAD IRON.

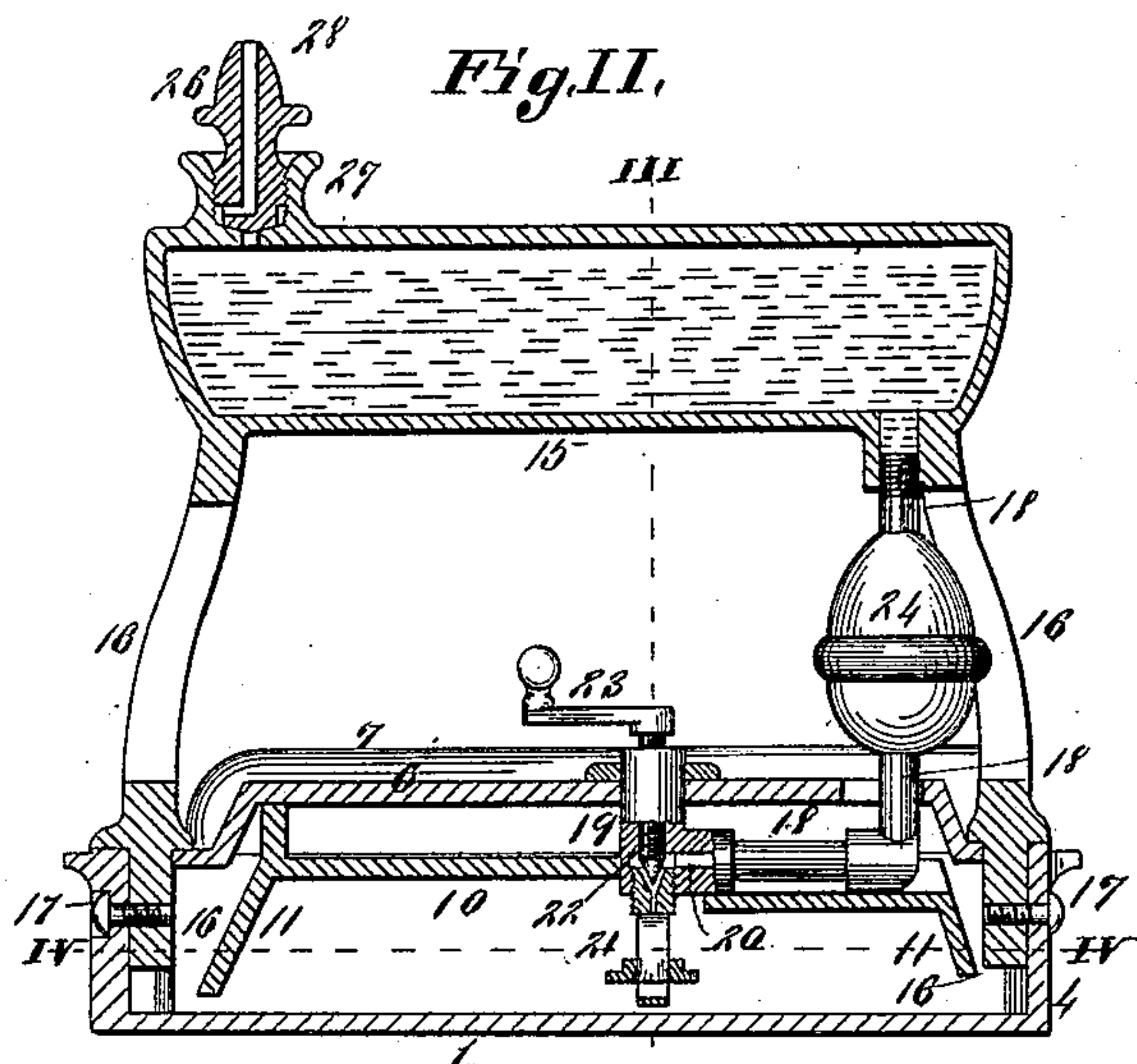
No. 396,998.

Patented Jan. 29, 1889.

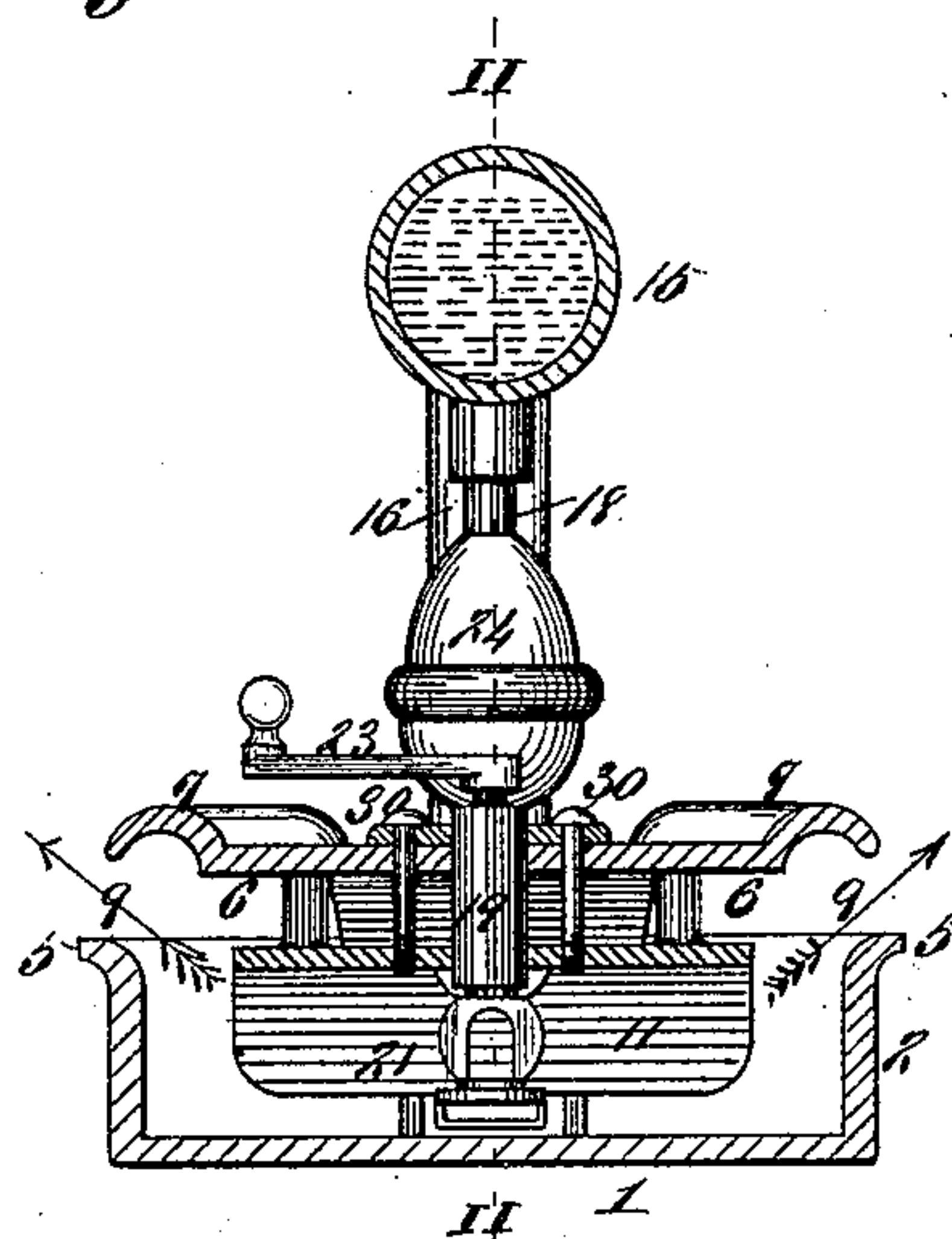
*Fig. I.*



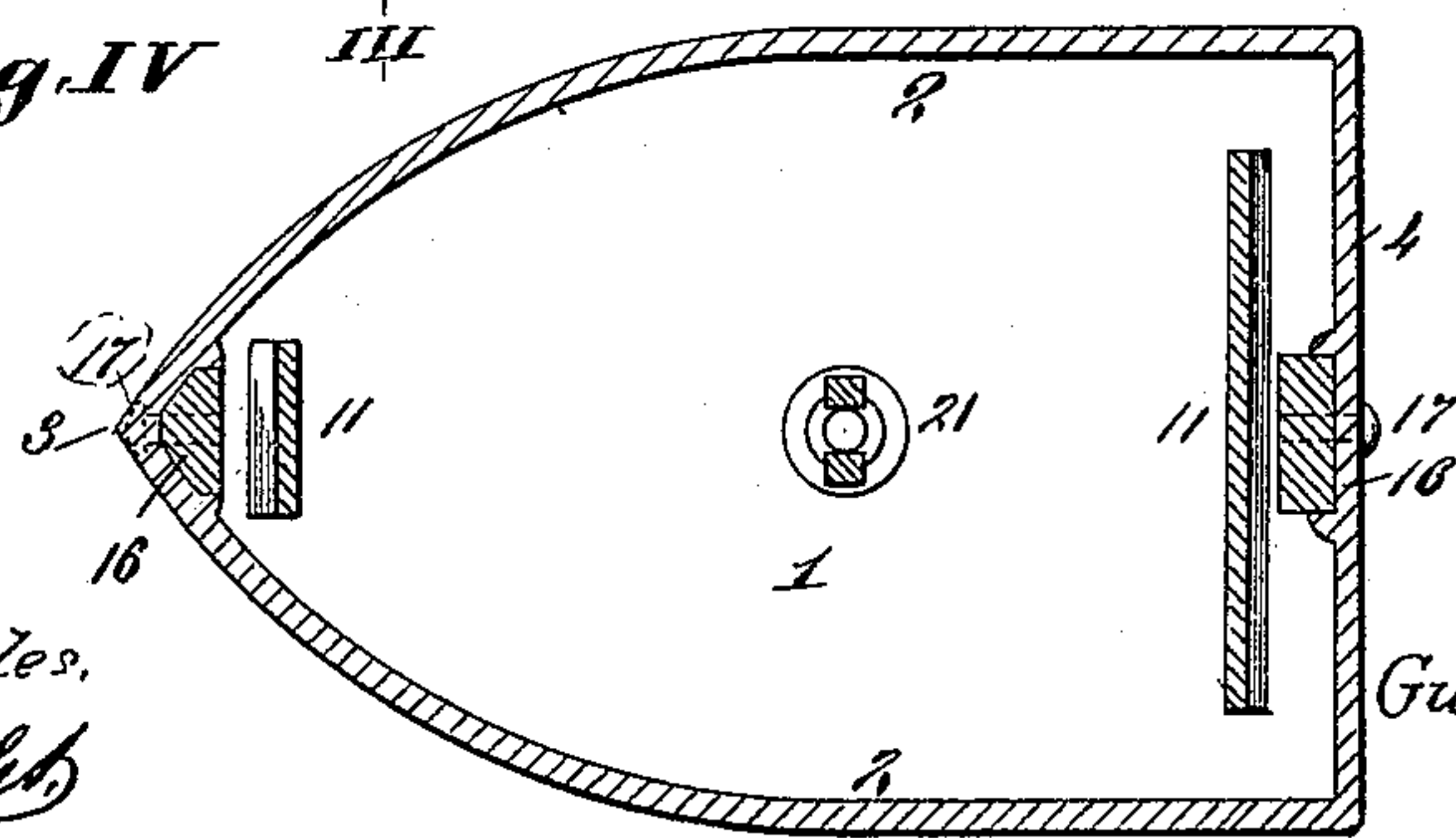
*Fig. II.*



*Fig. III.*



*Fig. IV.*



*Attest;*

*Charles Pickles,*

*H. S. Knight,*

*Inventor,*

*Gustavos Heidel*

*By Knight Bros*

*Attys*



# UNITED STATES PATENT OFFICE.

GUSTAVOS HEIDEL, OF ST. LOUIS, MISSOURI, ASSIGNOR TO THE NATIONAL  
SELF HEATING SAD IRON COMPANY, OF SAME PLACE.

## SELF-HEATING SAD-IRON.

SPECIFICATION forming part of Letters Patent No. 396,998, dated January 29, 1889.

Application filed October 4, 1887. Serial No. 251,465. (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, and in which—

Figure I is a side elevation of my improved iron. Fig. II is a vertical longitudinal section through the iron, taken on line II II, Fig. III. Fig. III is a transverse section taken on line III III, Fig. II. Fig. IV is a horizontal longitudinal section taken on line IV IV, Fig. II.

My present invention relates to certain improvements in self-heating sad-irons; and my invention consists in features of novelty hereinafter fully described, and pointed out in the claims.

Referring to the drawings, 1 represents the bottom plate of the iron, which has sides 2, that come to a point at 3, as shown in Fig. IV, at the front of the iron, and which unite with a back, 4, at the rear of the iron. At the upper edge of the walls 2 and 4 is preferably an outturned flange, 5. Located over this part of the iron is a top plate, 6, which has upwardly, outwardly, and downwardly turned flanges 7. The plate 6 is located slightly above the top of the sides and back of the lower plate, 1, as shown, leaving a space, 9, for the admission of air to the burner and for the escape of heat and gases.

Located beneath the top plate, 6, and preferably about in line with the top of the sides of the lower plate, 1, is an intermediate plate, 10, beneath which the burner, hereinafter described, is located. The object of this plate is to deflect the heat from the top plate, 6, and prevent the latter from becoming hot. This plate 10 is preferably provided with downwardly-extending ends 11, which deflect the heat from the ends of the handle of the iron, as hereinafter mentioned. As the heat escapes from beneath the plate 10, it passes out through the spaces 9, and the curved portions 7 of the plate 6 serve to keep the heat from

passing upward and striking the hand of the person using the iron, as they tend to deflect or throw the currents of heat downward and outward or laterally from the iron. The plate 6 rests on the sides 2 and end 4 of the plate 1, as shown at 12, Fig. I, it having downturned portions 13 for this purpose.

15 represents the handle of the iron, which is made hollow to receive gasoline or other combustible matter. It has end arms, 16, which extend downward through the top plate, 6, and are connected by screws 17, or other suitable means, to the front 3 and back 4 of the iron. The parts 11 of the plate 10 serve to deflect the heat from the lower ends of these arms and prevent them from becoming hot and conveying heat to the handle 15.

18 represents a supply-pipe leading from the handle 15 to a casting, 19, which is provided with a port, 20, for the passage of the combustible. On the lower end of the casting 19 is a burner, 21, which extends beneath the plate 10, as stated.

22 represents a valve in the port 20 for regulating the flow of the combustible to the burner, and this valve extends above the upper end of the casting 19, and is provided with a lever, 23, for operating it. The lever is located directly beneath the handle 15, so that it may readily be moved to regulate the burner.

The pipe 18 is provided with a chamber, 24, which becomes hot from the heat conducted through the pipe 18 from the burner and assists in vaporizing the liquid.

26 represents a valve in the front end of the handle 15, and which closes a filling opening or mouth, 27, on the handle. The valve is provided with a port or opening, 28, through which air passes to the hollow handle to replace the vacuum caused by the outflow of the liquid.

30 represents screws or bolts passing through the top plate, 6, into the intermediate plate, 10, for holding the latter in place.

It will be observed that the supply-pipe 18 is directly beneath the handle 15 and does not extend beyond the ends of the iron, so that the iron may be turned up on its rear

end, with the flange 5 and the rear end of the handle resting on the support when the iron is not in use.

I claim as my invention—

- 5 1. In a self-heating sad-iron, the combination of the imperforate bottom 1 2 4, forming a combustion-chamber, top plate arranged over the bottom, with an air-space between them, intermediate plate, 10, having down-  
10 turned ends 11, said plate being disconnected from the bottom of the iron and being located between the bottom and top plate, with a space between it and the walls of the bottom to provide for a circulation, said intermediate  
15 plate deflecting heat from the top plate, the downturned ends of said plate being adapted to deflect heat from the lower ends of the

handle, a reservoir, and a pipe leading from the reservoir to the under side of said intermediate plate, substantially as shown and 20 described.

2. In a self-heating sad-iron, the combination of the bottom plate having sides 2 and back 4, top plate having the upwardly, outwardly, and downwardly extending flanges 7, 25 intermediate plate having the end flanges, 11, handle having arms 16, by which it is secured to the sides and back, supply-pipe, and burner provided with a regulating-valve, all substantially as and for the purpose set forth.

GUSTAVOS HEIDEL.

In presence of—

GEO. H. KNIGHT,  
JOS. WAHLE.