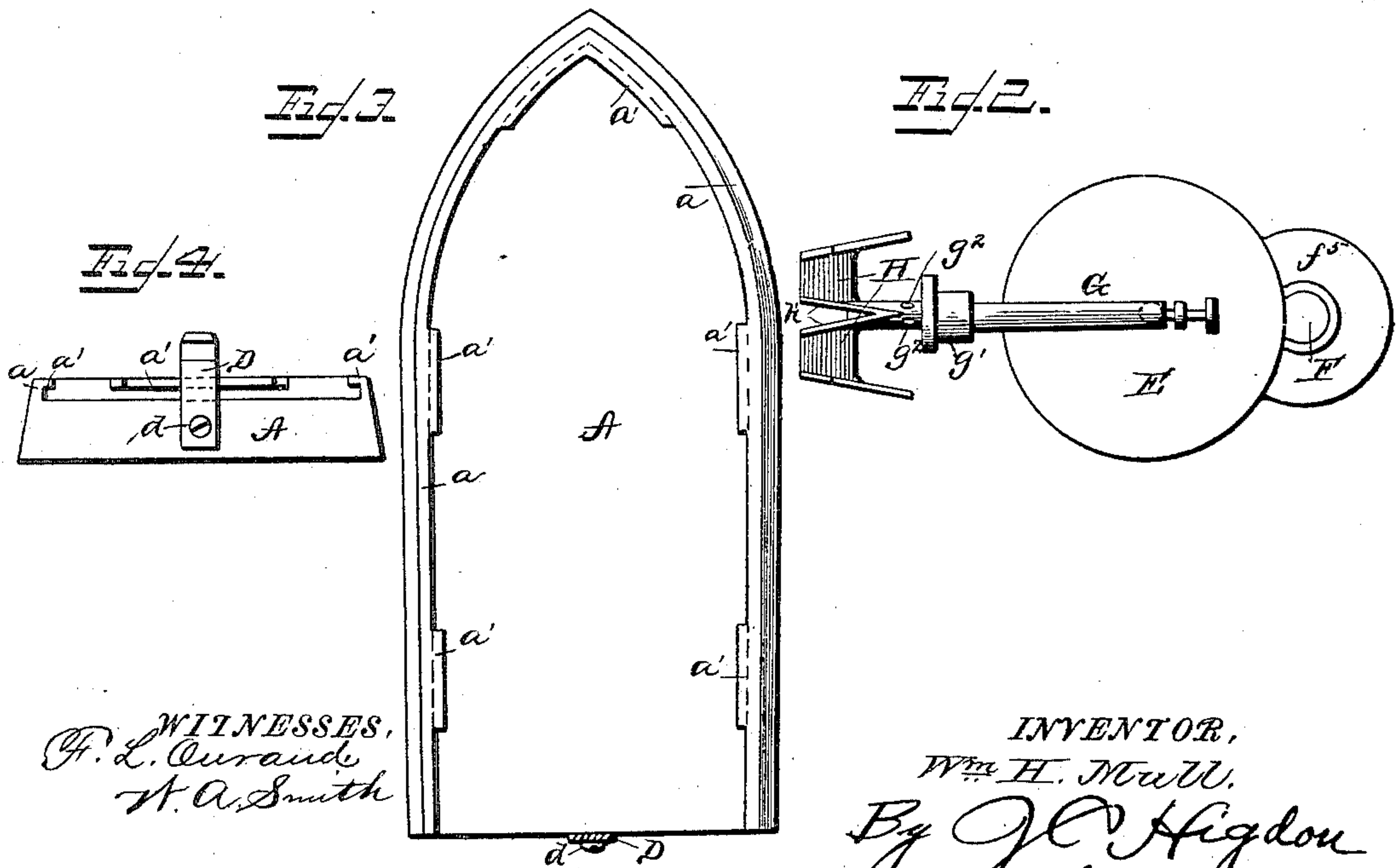
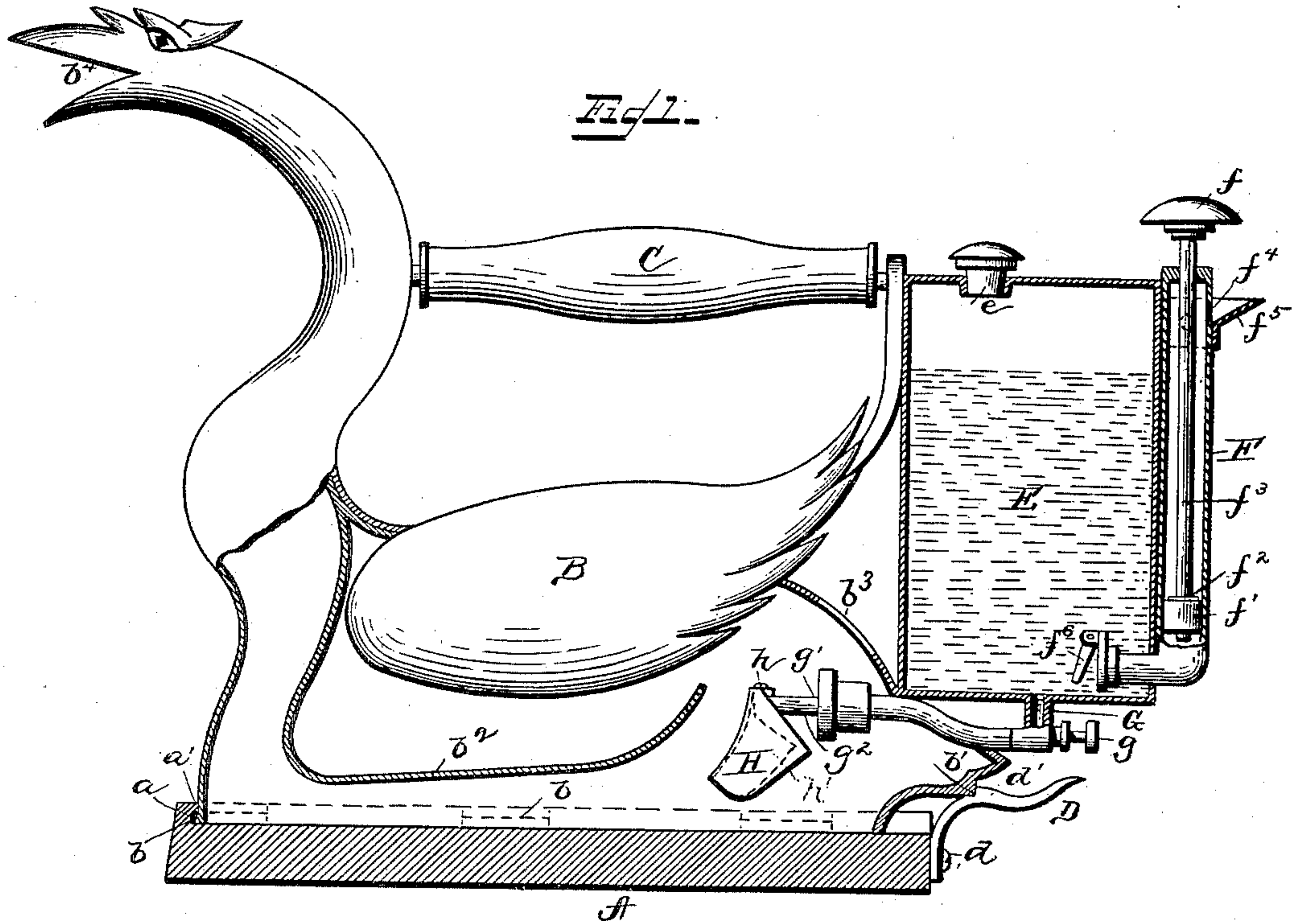


(No Model.)

W. H. MULL.  
SELF HEATING SAD IRON.

No. 398,743.

Patented Feb. 26, 1889.



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# UNITED STATES PATENT OFFICE.

WILLIAM H. MULL, OF LAWRENCE, KANSAS.

## SELF-HEATING SAD-IRON.

SPECIFICATION forming part of Letters Patent No. 398,743, dated February 26, 1889.

Application filed June 28, 1886. Serial No. 206,439. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM H. MULL, a citizen of the United States, residing at Lawrence, in the county of Douglas and State of Kansas, have invented certain new and useful Improvements in Self-Heating Sad-Irons; and I hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to self-heating sad-irons; and my object is to provide mechanism for regulating the supply of heat and directing the course of the flame downward upon the upper surface of the base portion.

With these ends in view my invention consists in a sad-iron having an oil-reservoir provided with a safety-plug, an air-pump connected therewith and provided with a drip-cup, air inlet-port and outlet-valve, an oil-pipe leading from the reservoir and provided with a valve for governing the supply of oil, a burner secured on the end of said oil-pipe, a spreading device fastened to said burner, a shield or deflector secured within the hollow portion of the iron and located in close proximity to the spreader, a separable base-plate, and a hollow upper body portion provided with inlet and outlet ports.

In the accompanying drawings, Figure 1 represents a side elevation of my complete device, partly in cross-section; Fig. 2, a bottom view of the heating apparatus; Fig. 3, a top view of the base-plate, and Fig. 4 an end view of the same.

The reference-letter A indicates the base-plate of the sad-iron, which is provided with the flange *a*, having lugs *a'* projecting therefrom.

B is the body of the sad-iron, which is formed hollow, and is provided with the handle C. It is also provided at its rear end with the air-inlet *b<sup>3</sup>* and at its opposite end with outlet *b<sup>4</sup>*. Around the lower edge of this hollow body portion B are formed lugs *b*, which are adapted to engage the lugs *a'* of the base-plate A, and thereby secure these two parts together. The rear end of said base-plate is provided with

spring D, which engages a projection, *b'*, in the rear of body portion B, and prevents said body portion and base-plate from becoming disengaged.

At the rear of the sad-iron I provide a reservoir or tank, E, for gasoline or oil, which has attached thereto a pump, F, for forcing air into said oil-reservoir. This pump consists of the handle *f*, piston-rod *f<sup>3</sup>*, piston *f'*, and an ordinary downwardly-opening piston-valve, *f<sup>2</sup>*. This pump is also provided with an air-inlet, *f<sup>4</sup>*, and drip-cup *f<sup>5</sup>*, secured below said air-inlet and adapted to catch any oil which may be brought up by the piston of the pump. A valve, *f<sup>6</sup>*, is hinged to the lower end of the pump, inside the reservoir E. A safety-plug, *e*, of cork or other suitable material, is forced into a suitable opening in the top of the reservoir.

The oil-pipe G leads from the reservoir into the body portion B of the iron, and is provided with stop-valve *g* for regulating the supply of oil to the burner *g'*, which is secured to the oil-pipe G inside the hollow portion B of the iron, and is provided with small openings *g<sup>2</sup>* for the escape of the gas generated within the burner.

A spreading device, H, is secured to the end of the burner by the screw *h*. This spreading device consists of a hollow wedge-shaped trough separated into two parts at its lower end by the partition *h'*. The gas escaping from holes *g<sup>2</sup>* passes downward through this device and is spread over as much of the top surface of the base-plate as possible. A shield, *b<sup>2</sup>*, is provided within the hollow upper portion, B, and is so situated as to keep the current of flame and hot air in close contact with the upper surface of the base-plate A and insure its being uniformly heated.

The construction of my invention having been set forth, I will now proceed to describe its operation.

The reservoir E is first partly filled with gasoline or oil. The pump is then manipulated by means of handle *f* and sufficient air forced through the oil to the top of the tank to cause the gasoline or oil to be forced through the pipe G to the burner. The burner is heated by means of a lamp or other sufficient means, so that when the oil enters the same it will be converted into gas. The valve

*g* is then opened and a supply of oil allowed to advance to the burner. By means of the spreader *H* and deflector *b*<sup>2</sup> the base-plate *A* will be uniformly heated.

5 Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

10 In the herein-described sad-iron, the oil-reservoir *E*, provided with the safety-plug *e* and air-pump *F*, connected therewith, and provided with the drip-cup *f*<sup>5</sup>, air-inlet *f*<sup>4</sup>, and outlet-valve *f*<sup>6</sup>, hinged to its lower extremity, in combination with oil-pipe *G*, having valve  
15 *g*, the burner *g*', secured to the inner end of the pipe *G* and provided with perforations *g*<sup>2</sup>,

the wedge-shaped spreading device *H*, secured to the end of the burner, the shield *b*<sup>2</sup>, secured within the iron and located in close proximity to said spreading device, the base-plate *A*, and the hollow body portion *B*, provided with 20 inlet and outlet ports *b*<sup>3</sup> and *b*<sup>4</sup>, all arranged and adapted to operate substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM H. MULL.

Witnesses:

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HOWARD A. PEAIRS.