

(No Model.)

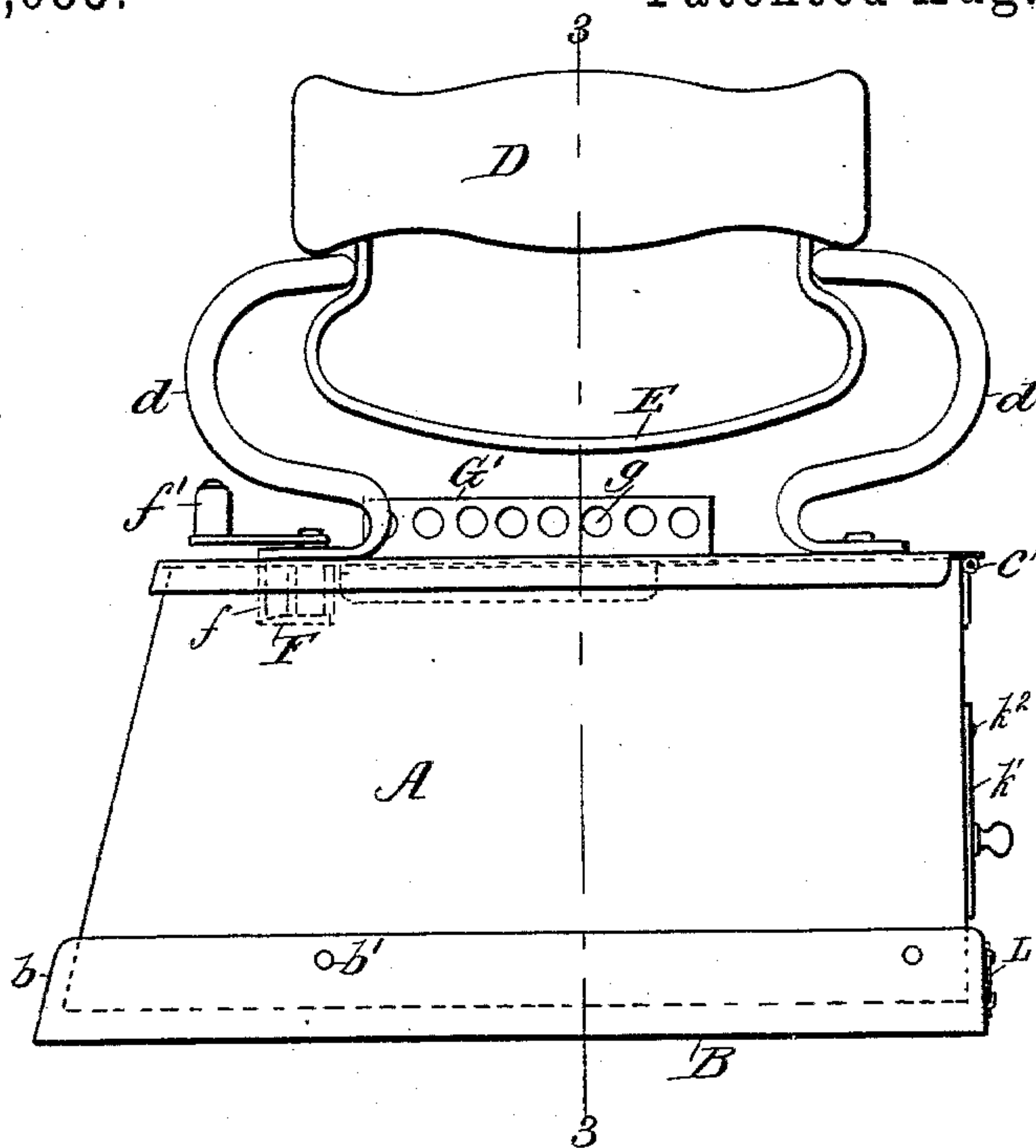
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F. E. HUNTER.  
SAD IRON.

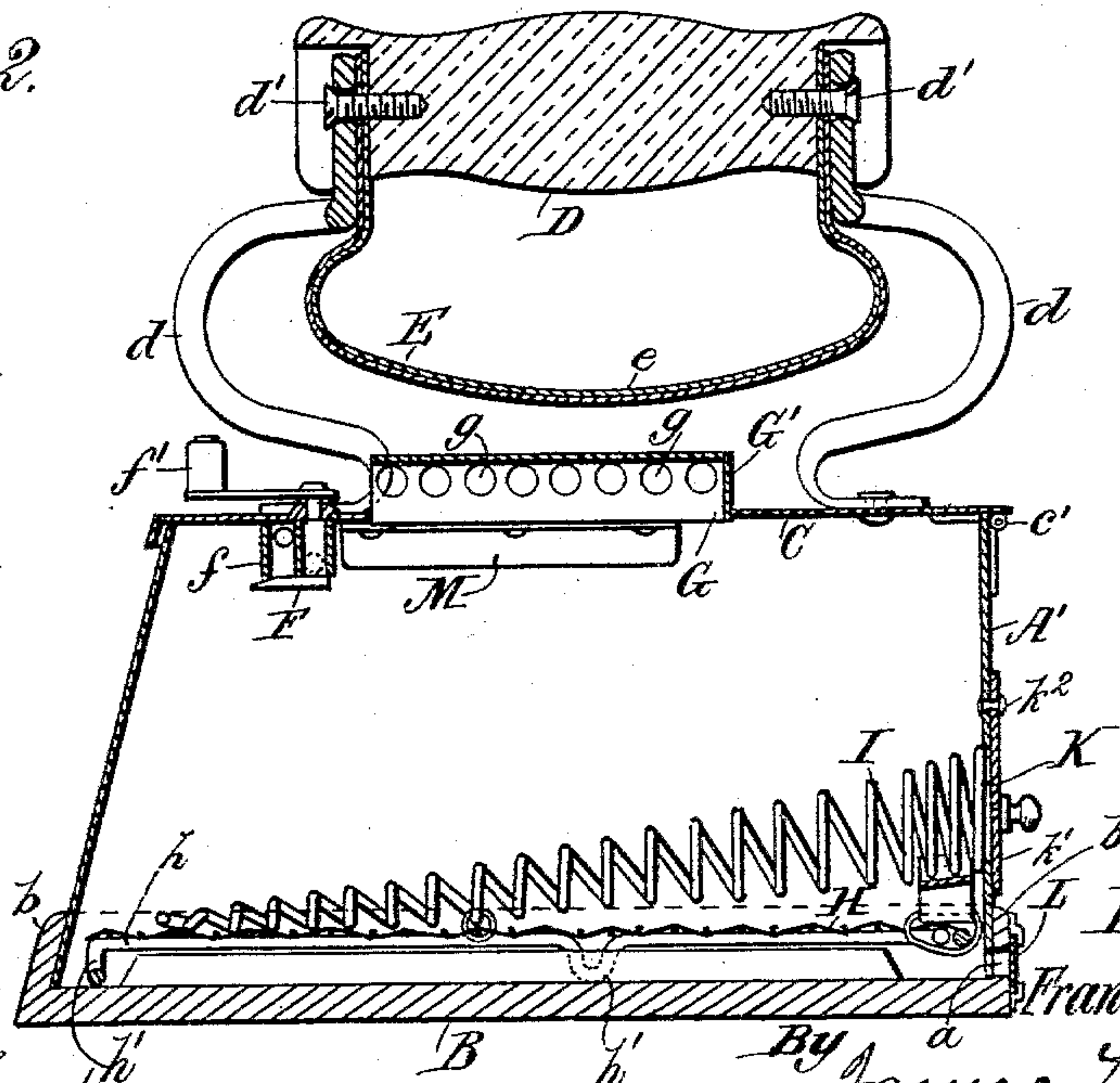
No. 566,685.

Patented Aug. 25, 1896.

*Fig. 1.*



*Fig. 2.*



Witnesses.

Robert Emmett.

Dennis Sumby.

Inventor.

Frances E. Hunter.

By James L. Norris.

Atty.

(No Model.)

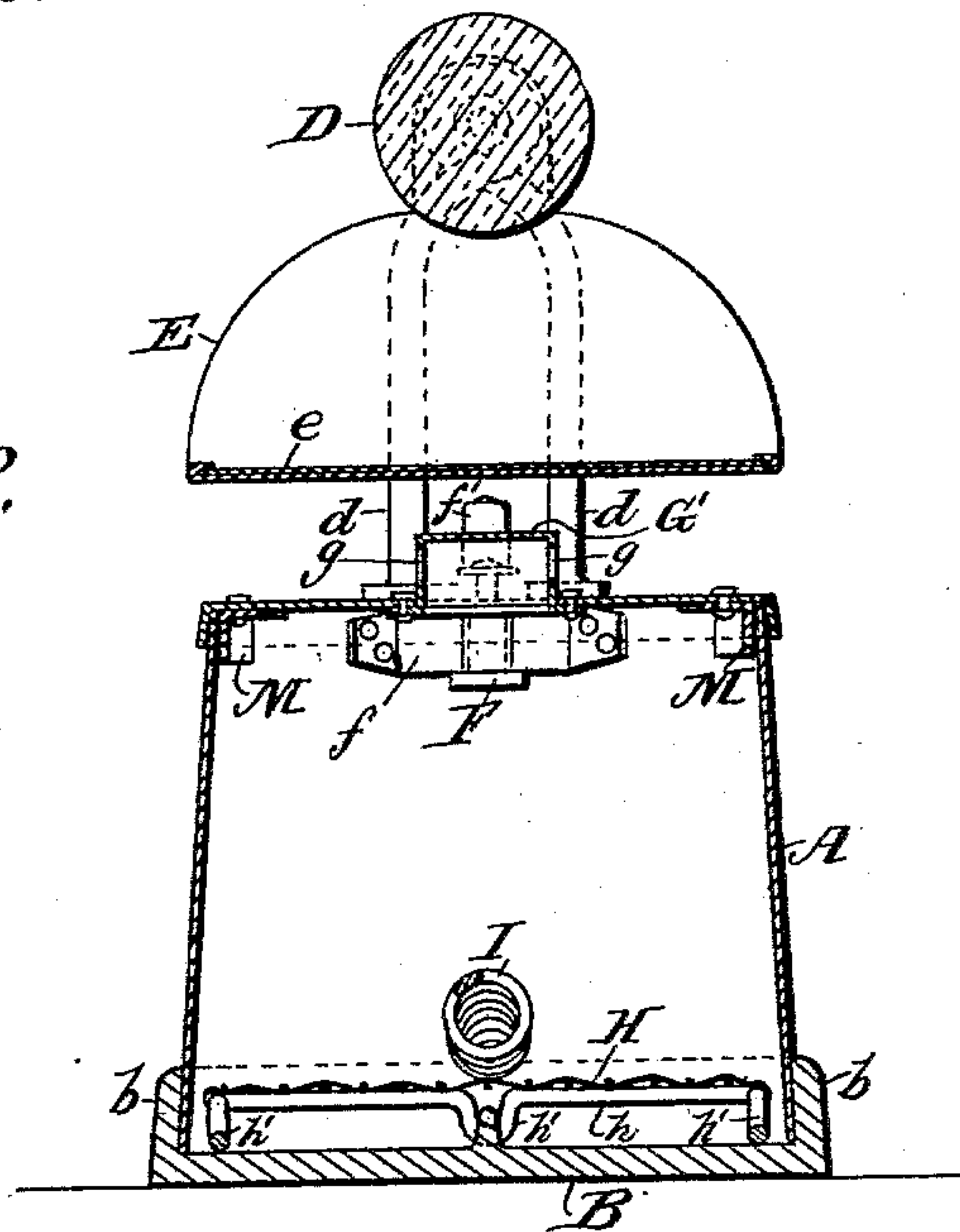
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F. E. HUNTER.  
SAD IRON.

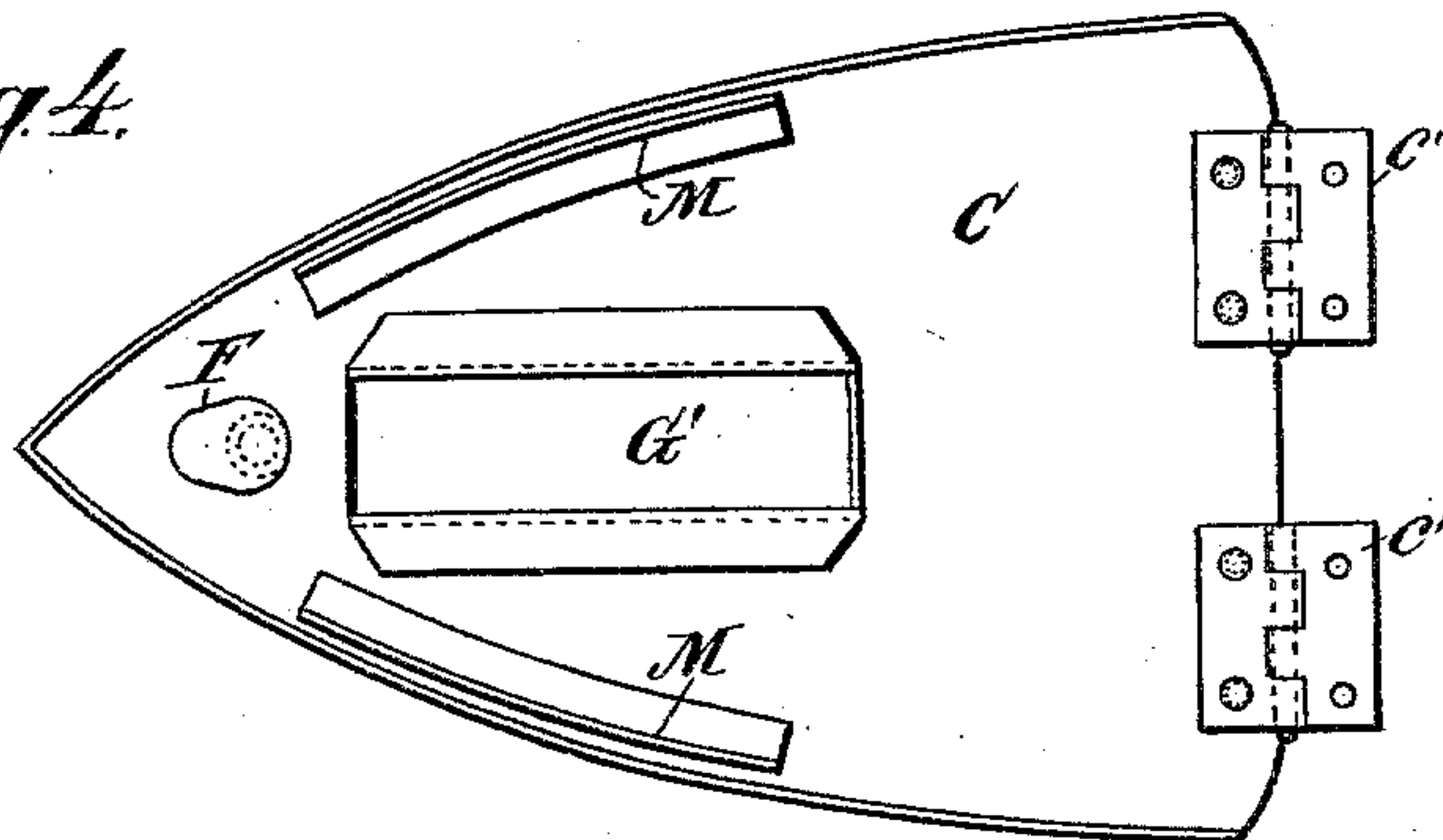
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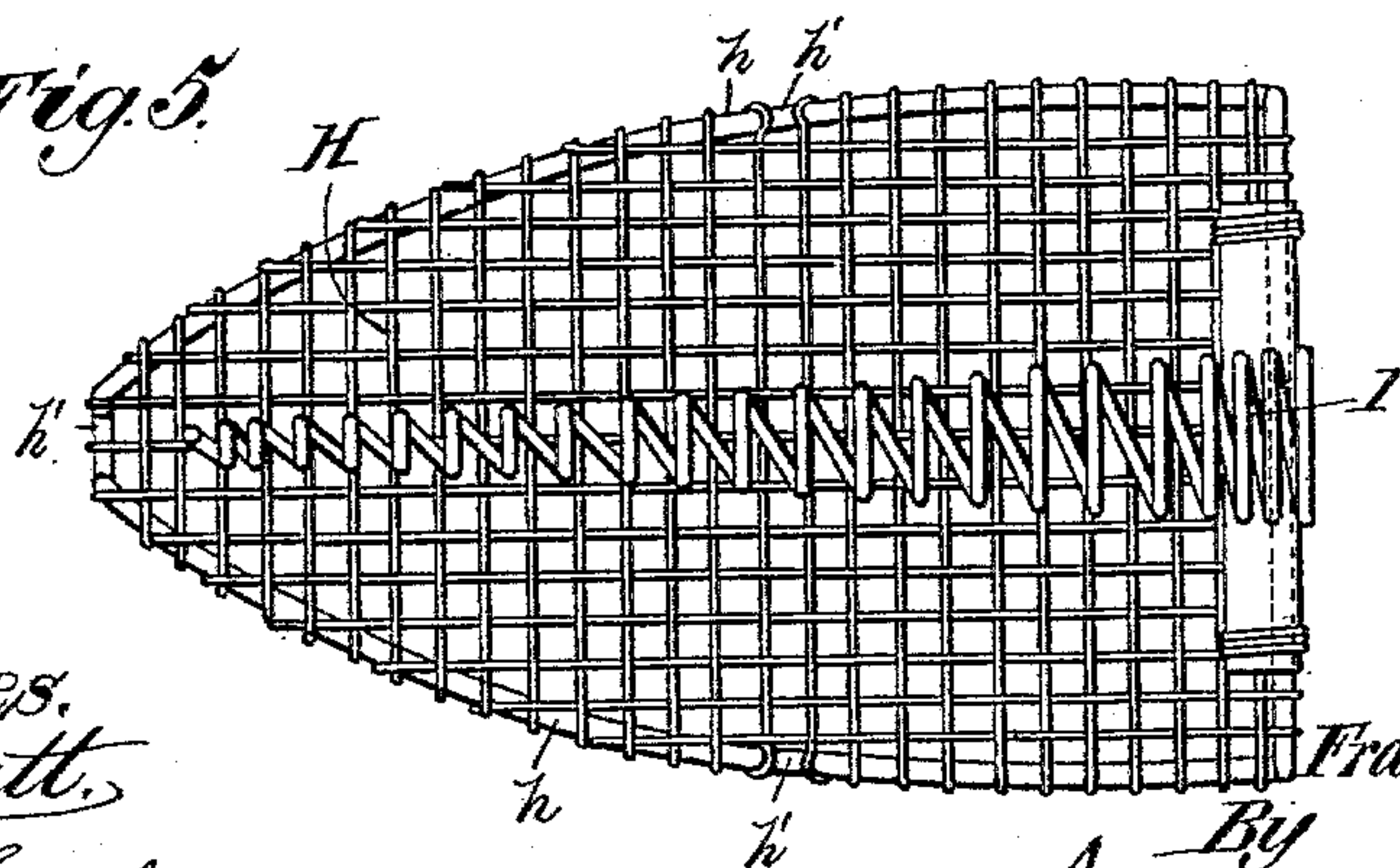
*Fig. 3.*



*Fig. 4.*



*Fig. 5.*



*Witnesses.*  
*Robert Everett.*  
*Samuel Sumby.*

*Inventor.*  
*Frances E. Hunter.*  
*By James L. Norris.*  
*Att'y.*



# UNITED STATES PATENT OFFICE.

FRANCES ELIZA HUNTER, OF NORTH FITZROY, VICTORIA.

## SAD-IRON.

SPECIFICATION forming part of Letters Patent No. 566,685, dated August 25, 1896.

Application filed April 7, 1896. Serial No. 586,592. (No model.)

*To all whom it may concern:*

Be it known that I, FRANCES ELIZA HUNTER, spinster, a subject of the Queen of Great Britain, residing at North Fitzroy, near Melbourne, in the British Colony of Victoria, have invented an Improved Sad-Iron, of which the following is a specification.

This invention has been devised in order to remedy some of the defects in sad-irons as at present constructed. Its main object is to provide means for enabling the charcoal to burn brightly in the box without the aid of bellows. It has also been designed for the purpose of making such irons lighter and more durable, as well as neater in appearance and more convenient in use than the ordinary ones.

Referring to the accompanying drawings, Figure 1 represents a side elevation of a sad-iron constructed according to this invention. Fig. 2 is a central vertical longitudinal section thereof. Fig. 3 is a vertical transverse section on line 3 3, Fig. 1. Fig. 4 is a plan of the under side of the lid of the iron, while Fig. 5 is a plan of a wire grating which is fitted over the inside of the bottom of the iron.

The same letters of reference indicate the same parts in all the figures.

The body A of the iron is made of sheet-iron and its bottom B of cast-iron. The latter is cast with upwardly-projecting flanges b around its edge, within which the lower edge of the sheet-iron body A fits, and to which it is fastened, preferably by rivets, such as b'. This makes a much lighter and better article than when it is cast in one piece. The lid C is also made of sheet metal and is connected to the back of the body by hinges c'. It is provided with supports d, carrying a wooden or other handle D, said supports being preferably made of bent rods riveted to said cover C, the handle being secured to said supports by screws d', as indicated in Fig. 2.

E represents a shield, the ends of which are clamped between the supports d and handle D by said screws d'. It is preferably lined on its upper and inner surface with asbestos, as indicated at e, or other similar non-conductor of heat. A small catch or button F is beneath the forward end of the cover C, and when turned into the position shown in Figs.

1, 2, and 3 engages underneath a stout cross-bar f in the front end of the body of the iron, said catch or button being provided with a handle f', whereby it may be conveniently operated when it is required to either open or close the lid or cover C. A slot G is made in the center of the lid and is covered by a cap G', in which are openings or perforations g along each side to provide a vent for the products of combustion to pass out from the body of the iron.

The grating H (shown in Fig. 5) is made of woven wire extending across a frame h of stouter material and of a shape and size to correspond with the interior of the iron. It is formed with downward projections or legs h' at intervals in order to raise it slightly above the bottom of the iron. Upon this grating H is secured a tapering spirally-wound wire flue I, the rear and larger end of which is arranged to come opposite the opening K in the back plate A', through which the air is supplied to the charcoal used in the iron. This opening K may be closed by a small plate or cover k', adapted to turn upon a pivot k<sup>2</sup>, whereby the size of such opening may be varied in order to regulate the amount of air allowed to enter the iron.

Openings a are provided in the back of the sad-iron below the grating H, and are covered or closed by sliding dampers or plates L. These openings enable a small scraper to be inserted so as to clear out any fine dust that may have passed through the grating onto the bottom of the iron.

M M represent two pieces which are riveted on the under side of the lid or cover C and fit inside the body A, thus keeping said lid or cover in position.

In use the charcoal is supplied to the interior of the sad-iron in sufficient quantity to cover the spiral wire flue I completely, the height to which it rises above said flue being regulated by the operator according to the work to be performed. The wire flue passes directly through the center of the fuel-chamber, leaving an ample space on each side for the charcoal to lie upon the netted grate H close to the bottom B. The spiral wire flue preserves a central longitudinal passage for the air entering through the opening K, and also permits the air traversing this passage



to pass out of the same at all points and in all directions, to penetrate the fuel and maintain uniform combustion in all parts. Another advantage of this flue is that it presents no obstruction to the radiation of heat in all directions, and, being light and of small bulk or mass in the aggregate, it does not absorb a large portion of the heat generated.

Having now particularly described and ascertained the nature of my said invention, and in what manner the same is to be performed, I declare that what I claim is—

1. The combination with a sad-iron having an interior chamber for fuel, of a netted grating arranged therein near the bottom, and a central longitudinal flue formed of a spiral open coil of wire having one end sur-

rounding an air-inlet in the wall of the fuel-chamber, substantially as described.

2. The combination with a sad-iron having a chamber for fuel, of a netted wire grate arranged near the bottom and a central, longitudinal flue formed of a spiral coil of wire having its larger end surrounding an air-inlet opening in the end of the sad-iron and tapering to its other end, the spirals being separated to provide ample passages in all directions for the air, substantially as described.

FRANCES ELIZA HUNTER.

Witnesses:

EDWARD WATERS,

EDWARD WATERS, JUNR.