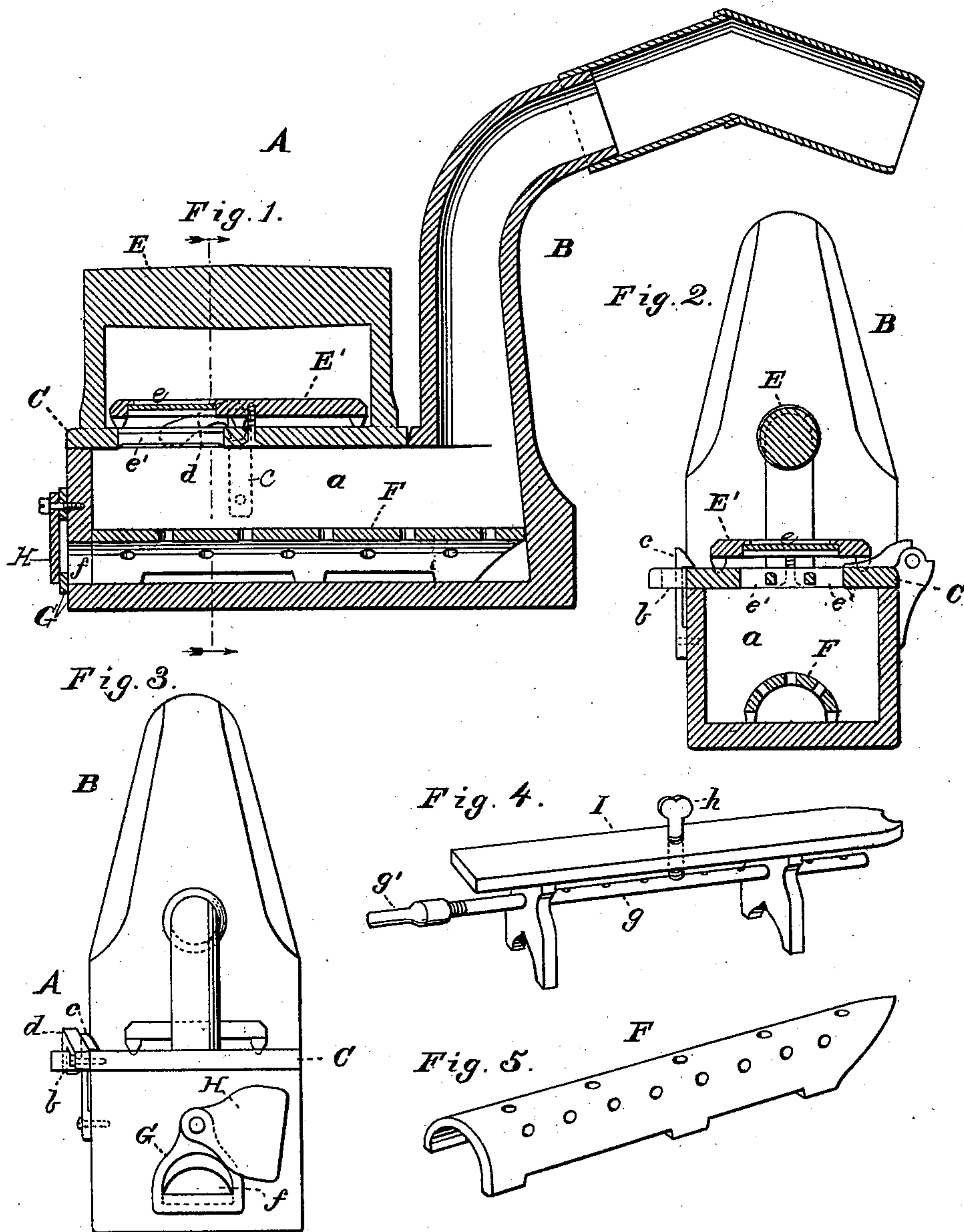


(No Model.)

W. BELL.
SAD IRON.

No. 405,071.

Patented June 11, 1889.



WITNESSES:

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WILLARD BELL, OF GREENCASTLE, INDIANA.

SAD-IRON.

SPECIFICATION forming part of Letters Patent No. 405,071, dated June 11, 1889.

Application filed May 9, 1888. Serial No. 273,364. (No model.)

To all whom it may concern:

Be it known that I, WILLARD BELL, a citizen of the United States, and a resident of Greencastle, in the county of Putnam, State of Indiana, have invented a certain new and useful Improvement in Sad-Irons, of which the following is a full, clear, and exact description or specification, reference being had to the accompanying drawings, in which—

Figure 1 is a longitudinal section of my improved sad-iron as adapted for heating by coal or similar fuel. Fig. 2 is a transverse section thereof. Fig. 3 is a rear end view of the same. Fig. 4 is a view in detail, showing the attachment to adapt the sad-iron for heating by gas or fluid fuel, and Fig. 5 is a detail perspective view of the serially-apertured curved plate for use in heating the sad-iron by coal or like fuel.

This invention contemplates certain improvements in sad-irons, having for its object the expeditious heating thereof, as also to improve the general construction and disposition of the parts; and to these ends the nature of the invention consists of the combination of parts, substantially as hereinafter fully set forth, and pointed out in the claims.

In the embodiment of my invention I employ a sad-iron A, in its general outline of the ordinary construction of this class of sad-irons, the same having a goose-neck chimney B, as well as a combustion-chamber *a*, and a hinged lid or cover C. The lid or cover C has an aperture *b* at its free or forward edge, formed in a projection thereof, and which receives and through which passes a spring catch or snap *c*, applied to the sad-iron. This catch, after passing through the hole or aperture *b*, snaps past its upper inner edge, serving thus to retain the lid or cover closed. In order to provide against possible disengagement of the catch, under the action of the heat, from the lid or cover, a hook *d*, applied to the forward edge of the lid or cover, is provided, fitting at its beak end into the aperture or hole *b* of the lid or cover C, thus wedging the hook in place.

To the top side of the cover or lid C is fixed or applied the handle E, beneath which is disposed the shield or deflector E', resting upon studs or cleats let into and fast with the lid

or cover C. These cleats or studs slightly raise the deflector or shield E' above the cover or lid and permit of the circulation of air beneath, and thus prevent the absorption of the heat by the shield or deflector. In the deflector or shield is a viewing mica-covered opening *e*, directly in alignment with which the cover or lid C is provided with a series of apertures *e'* *e'*, to permit an unobstructed view into the combustion-chamber *a* of the sad-iron, to ascertain the condition of the fire in said chamber, without requiring the opening of the lid or cover. This arrangement also isolates or removes the mica covering in the viewing-opening in the shield or deflector from the action of the heat, as would not be the case if the mica were placed in an opening made directly in the lid or cover.

In the bottom of the combustion-chamber *a* of the sad-iron A is disposed a serially perforated or apertured plate F, which is semi-circular in cross-section, its convexity being presented upward, and which provides an air-chamber under the fuel, coal or the like in that case being used. The apertures or perforations in said plates serve to distribute the air through the fuel. Air is admitted thereunder through a registering or coincident opening *f* in the rear wall or end of the sad-iron, as will be readily seen.

In order to prevent ashes or coals of fire falling out of the combustion-chamber through the draft or air inlet opening *f* in the end of the sad-iron, a skeleton or apertured plate or frame G is hinged or pivoted to the outer side of the rear end of the sad-iron, so as to form around said opening, at its lower edge, a rim or flange, as shown, at the bottom of said opening and partly covering the latter. The opening in the plate or frame G, as also the opening *f*, are completely closed, when desired, by means of a plate or door H, hinged in place by the same pivot-bolt connecting the frame or plate G to the sad-iron.

In heating the sad-iron by a fluid or gas, I substitute in lieu of the plate F a flat or plain plate I, to the under side of which are secured feet or cleats resting upon the bottom of the combustion-chamber, and through which passes, and is thus held thereto or in place, a section of gas-pipe *g*. Coupled to said pipe is

a hose-pipe g' , leading to a burner or other source of gas supply. The pipe-section is clamped in place by means of a holding or clamping screw h , working in the plate I and bearing or pressing upon said pipe-section.

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

1. The sad-iron having in its bottom a serially apertured or perforated plate semicircular in cross-section, a corresponding opening in its rear end, and pivoted skeleton plate, applied to form a rim or flange around said opening at the bottom of and partly covering said opening, substantially as and for the purpose specified.

2. The sad-iron having in its bottom the serially apertured or perforated plate, semicircular in cross-section, a corresponding open-

ing in its rear end or wall, a skeleton or aperture plate forming a flange at the bottom of and partly covering said opening, and a second plate or door applied to the sad-iron upon a common pivot-bolt, substantially as and for the purpose specified.

3. The sad-iron having its cover or top provided with a series of viewing-apertures, said cover or top also having applied thereto a raised shield or deflector provided with a mica-covered viewing-opening in alignment with the aforesaid apertures, substantially as and for the purpose set forth.

In testimony whereof I sign this specification in the presence of two witnesses.

WILLARD BELL.

Witnesses:

JOHN EADS,

MICHAEL N. GELWICK.