No. 737,120. PATENTED AUG. 25, 1903.

W. W. LIND.

SAD IRON.

APPLICATION FILED APR. 24, 1903.

NO MODEL.

Fig. 1.

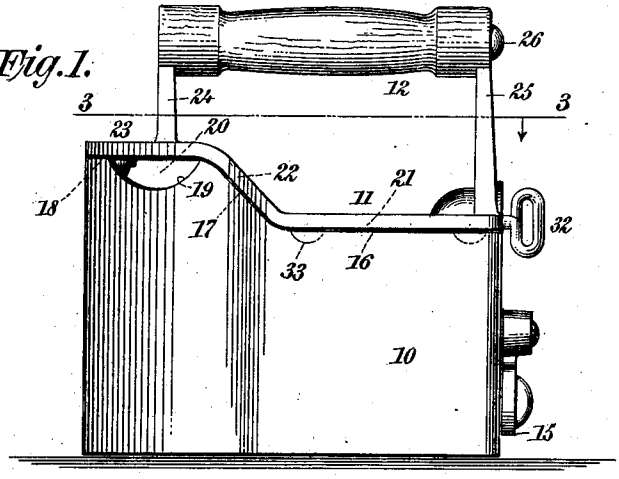


Fig. 2.

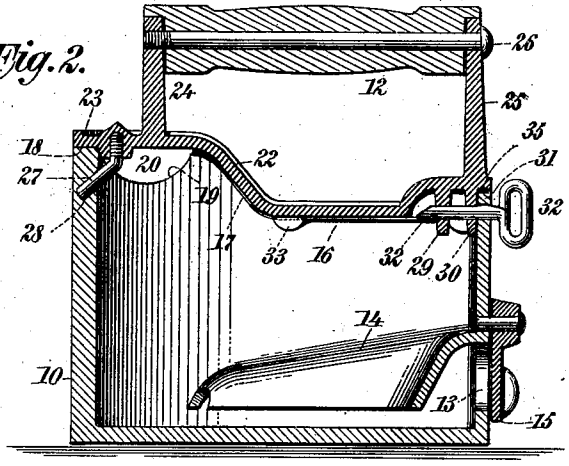


Fig. 3.

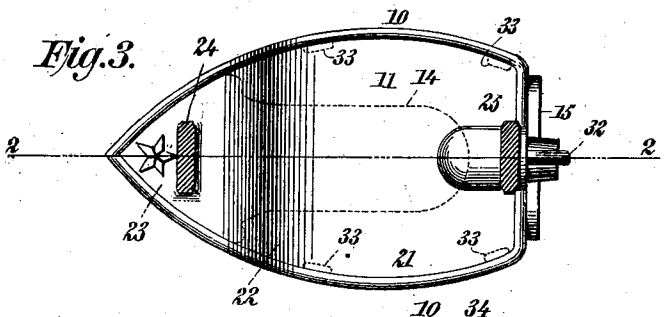
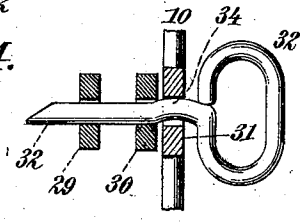


Fig. 4.



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No. 737,120. Patented August 25, 1903.

UNITED STATES PATENT OFFICE.

WALTER W. LIND, OF EAST ORANGE, NEW JERSEY.

SAD-IRON.

SPECIFICATION forming part of Letters Patent No. 737,120, dated August 25, 1903.

Application filed April 24, 1903. Serial No. 154,088. (No model.)

To all whom it may concern:

Be it known that I, WALTER W. LIND, a citizen of the United States, and a resident of East Orange, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Sad-Irons, of which the following is a specification.

The invention relates to improvements in sad-irons; and it consists in the novel features, construction, and combinations of parts hereinafter described, and particularly pointed out in the claims.

The object of the invention is to produce a more efficient, simple, and convenient self-heating or charcoal sad-iron than those heretofore known, and, further, to provide a self-heating sad-iron in which more perfect and uniform combustion may be secured than is possible with the self-heating sad-irons heretofore manufactured.

The invention will be fully understood from the detailed description hereinafter presented, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation of a sad-iron constructed in accordance with and embodying the invention. Fig. 2 is a central vertical longitudinal section of same on the dotted line 2 2 of Fig. 3. Fig. 3 is a horizontal section of same on the dottel line 3 3 of Fig. 1, and Fig. 4 is an enlarged horizontal section looking downward through the apertured ears which coöperate with an eccentric pin for locking the top plate on the body of the iron.

In the drawings, 10 designates the body of the iron, 11 the detachable top plate thereof, and 12 the handle secured to said top plate 11. The body 10 is hollow to receive the charcoal or other combustible material and is pointed at its front end and flat at its rear end, as illustrated, the said rear end being provided near the bottom of the iron with the inlet draft-aperture 13, which opens into the body 10 below the downwardly and inwardly converging flange 14, constituting a part of said body, and which aperture 13 is adapted to be opened or closed by means of a suitable plate-valve 15, pivotally secured to the end of the iron.

The flange 14, draft-aperture 13, and plate-valve 15 are known features in this art and are not separately claimed herein, my invention pertaining more particularly to those features and parts of the iron disposed above the flange 14.

The upper edges of the body 10 for about one-half of the length of said body, commencing with the rear end thereof, present uniform horizontal surfaces numbered 16, and from the inner ends of these horizontal surfaces 16 the upper edges of said body turn upwardly and forwardly, as at 17, and thence forwardly, this latter forward portion of the body 10 being designated by the numeral 18 and being at opposite sides of the point of the iron curved downwardly, as at 19, to form draft-apertures 20, there thus being one draft-aperture 20 formed in the side walls of the body of the iron at each side of the upper front end of the same. Within the body 10 is formed the chamber to receive the combustible material, and in accordance with my invention the front portion of this chamber below the cover-plate 11 is enlarged due to the shape of the upper edge of said body.

Upon the upper edges of the body 10 and arranged to fully conceal said edges and the entire top of said body is applied the cover-plate 11, which fits upon the upper edges of the body 10 and comprises the rear horizontal portion 21, the upwardly and forwardly inclined portion 22, and the horizontal front portion 23, and whose side edges are on the same perpendicular plane as the side walls of the body 10, whereby there is no opening through the plate 11, the appearance of the iron is improved, and increased space is left for the handle 12. The top plate 11 fits upon the upper edges of the body 10 from end to end of the latter except along the edges 19, defining the draft-apertures 20, at which points the forward horizontal portion 23 of the plate 11 defines the upper wall of said apertures. The top plate 11 is an integral casting and formed with the vertical standards 24 25, between whose upper ends the handle 12 is secured upon the rod 26.

The top plate 11 is provided at its front end with a forwardly and downwardly inclined pin 27, adapted to detachably enter a correspondingly-inclined recess 28, formed in the interior wall of the front end of the body 10, the purpose of the pin 27 and recess 28 being to

center the front end of the plate 11 upon said body and to aid in locking said plate upon said body during the use of the iron. The rear end of the top or cover plate 11 is formed with the depending ears 29 30 to coöperate with an upwardly-extending ear 31 on the rear end of the body 10 in receiving a locking-pin 32, the said ears 29 30 31 being apertured to receive said pin 32, the purpose of the latter being to lock the rear end of the top or cover plate 11 upon the body 10, while the front end of said top or cover plate is held against upward movement by means of the pin 27 and recess 28. The lower surface of the rear portion 21 of the top or cover plate 11 is formed at its edges with depending lugs 33, which set within the inner edges of the body 10, as indicated in Figs. 2 and 3, and these lugs 33 serve to center the top or cover plate 11 upon the upper edges of the body 10 and prevent any lateral displacement of said plate from over said body. When the pin 32 is absent from the ears 29 30 31, the top or cover plate 11 may be raised upwardly from the body 10, because at such time said plate 11 is only held upon said body by the pin 27, which is on an incline and permits of the upward movement of said plate, but which when the locking-pin 32 is in position effectually prevents any elevation of the front end of said plate 11. The locking-pin 32 is not exactly straight from end to end, but is slightly humped or inclined adjacent to its outer end, as at 34, so that after the introduction of the pin 32 through the apertures in the ears 29 30 31 an axial one-quarter turn of the pin will cause said pin to bind against the side walls of the apertures in said ears and lock the top or cover plate 11 in position upon the body 10, the pin 32 by this binding action also becoming rigidly held within said apertures, so that during the use of the iron there will be no rattling of the top or cover plate 11 and no danger of the pin 32 slipping from its position. It is very important that the top or cover plate 11 be firmly locked upon the body 10 when the iron is to be put into use, and it is equally important that the user of the iron may readily detach the top or cover plate 11 when desired, and both of these purposes may be accomplished in the employment of the pin 32 and ears 29, 30, and 31, since by inserting the pin 32 in the manner shown in Fig. 2 and then giving said pin a one-quarter turn both the cover-plate 11 and pin 32 become locked in position, and upon reversing the motion of the pin 32 the pin becomes loosened and may be readily withdrawn to permit of the detachment of the top or cover plate 11. When the pin 32 is in the position in which it is shown in Fig. 2, it may readily be introduced through and removed from the ears 29 30 31, and when the pin 32 is in the position indicated the top or cover plate 11 will be slightly loose upon the body 10 and be enabled to have a slight rattling action thereupon; but when the pin 32 is given the one-quarter turn, as shown in Fig. 4, the top or cover plate 11 becomes firmly locked upon the body 10, with no freedom of movement or play or rattling between said top or cover plate and said body.

The manner of employing the self-heating iron hereinbefore described will be understood from the description already presented in view of the fact that self-heating or charcoal irons of other constructions are well known.

The iron of my invention represents an advance over all other self-heating or charcoal irons known to me, both in appearance and efficiency, as well as in convenience of use. I regard the vertical enlargement of the front portion of the interior of the iron as of great importance, because by reason thereof and the increased interior capacity afforded thereby I am enabled to secure more thorough and uniform combustion within the body 10 and supply an iron which will afford increased satisfaction and convenience to the user. The provisions of the draft-apertures 20 at the opposite sides of the upper end of the body 10, below the top plate or cover 11, aids in securing proper combustion of the charcoal or other fuel, and the fact that these draft-apertures 20 are below the top plate 11 leaves no projecting flues extending upwardly at the end of the handle 12 to interfere with or burn the hand of the user of the iron. The formation of the upwardly and forwardly inclined edges 17 of the body 10 and the correspondingly-shaped portion 22 on the top or cover plate 11, aside from enabling me to secure the enlarged chamber within the front end of the body 10, are of a character to receive the forward thrust exerted by the user of the iron when driving the iron forwardly. It will be apparent that with the means provided for detachably securing the top or cover plate 11 the latter may be applied and removed at will with the utmost convenience. Moreover, the entire construction of the iron is such that it may be manufactured at the minimum expense.

The ear 31 on the rear end of the iron seats within a correspondingly-shaped recess 35, formed in the rear end of the cover-plate 11, as shown in Fig. 2.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The hollow iron comprising the body 10 containing the interior flange and inlet draft-aperture, and the upper edge of said body comprising the rear horizontal portion 16, the upwardly-extending portion 17 and frontwardly-extending portion 18, the latter at the upper front portion of said body being recessed, as at 19, to form the side draft-apertures 20, whereby within the forward portion of the iron an enlarged interior chamber is formed, combined with the top or cover plate 11 carrying the handle 12 and fitting upon and conforming to the upper edges of said body except at the recesses 19, where said

top or cover plate defines the upper walls of said draft-apertures 20; substantially as set forth.

2. The hollow iron comprising the body 10 containing the interior flange 14, the inlet draft-aperture 13 and, in the upper front part of its sides, the draft-apertures 20, and the upper edge of said body comprising the rear horizontal portion 16, the upwardly-extending portion 17 and frontwardly-extending portion 18, whereby within the forward portion of the iron an enlarged interior chamber is formed, combined with the cover-plate 11 carrying the handle 12 and having the rear horizontal portion 21, the upwardly-extending portion 22 and horizontal front portion 23, and means for detachably securing said cover-plate upon said body, the said portions 21, 22 and 23 of said cover-plate being adapted to seat against said portions 16, 17 and 18 of said body 10; substantially as set forth.

3. The self-heating iron comprising the hollow body 10 having the interior flange and inlet and outlet draft-apertures, and also having the recess 28 at its front end and the apertured ear 31 at its rear end, combined with the top or cover plate 11 carrying the handle 12 and having at its front end the pin 27 adapted to said recess 28 and at its rear end the apertured ears 29, 30 to pass into line with said ear 31, and the locking-pin 32 for entering said ears and securing said cover 11 in position, said pin being eccentrically formed so that upon its being turned from its initial position it may bind against the walls of said apertures and firmly hold the said top or cover plate; substantially as set forth.

Signed at New York, in the county of New York and State of New York, this 23d day of April, A. D. 1903.

WALTER W. LIND.

Witnesses:
CHAS. C. GILL,
ANNA V. BRODERICK.