Nov. 26, 1946. L. V. LUCIA ET AL 2,411,738

STEAMING AND PRESSING IRON

Filed March 4, 1944

Fig. 1.

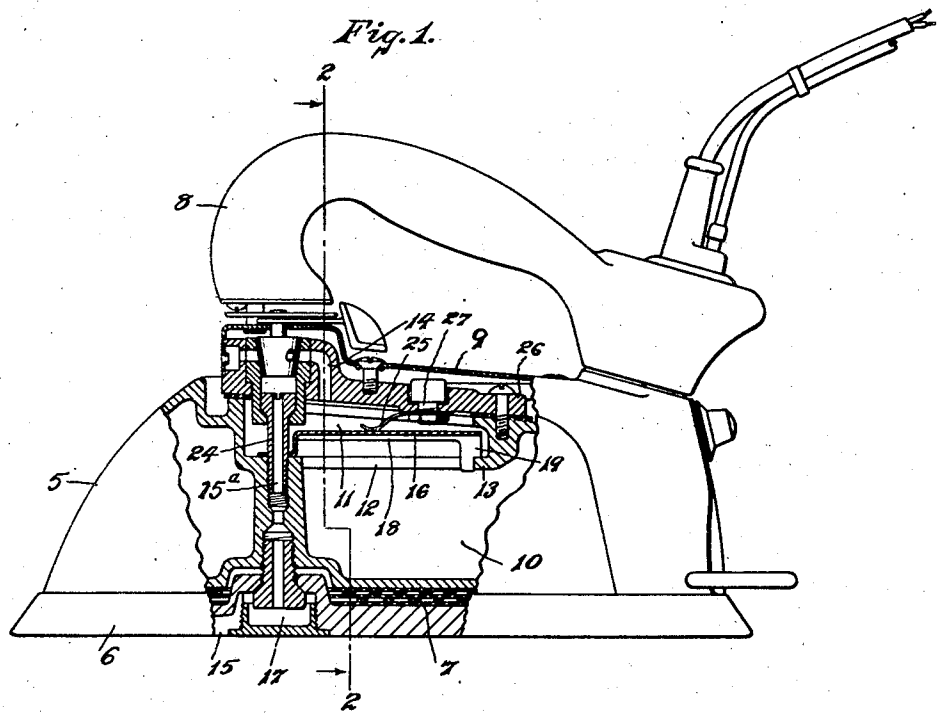


Fig. 3.



Fig. 2.

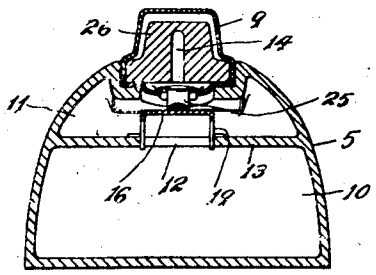


Fig. 4.

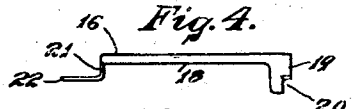
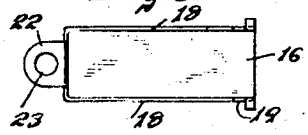


Fig. 5.



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STEAMING AND PRESSING IRON

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Application March 4, 1944, Serial No. 525,082

7 Claims. (Cl. 38—77)

1

This invention relates to steaming and pressing irons and more particularly to such irons having a steam generating chamber and a steam chamber from which steam is conducted to the ironing surface of the sole plate of said iron.

It is commonly know that, in such irons, it is very difficult to prevent water from passing out of the iron with the steam and this is objectionable for the reason that it causes an uneven application of moisture upon the work being ironed.

An object of this invention, therefore, is to provide such a steaming and pressing iron having improved means for preventing the escape of liquid from the steam generating reservoir of a steam iron.

A further object of this invention is to provide, in a steaming iron having a steam chamber separated from the steam generating chamber, improved baffle means between the said chambers for preventing water from splashing into the steam chamber and accumulating therin.

A still further object of this invention is to provide novel means for retaining said baffle in position.

Further objects of the invention and advantages thereof will be more clearly understood from the following description and from the accompanying drawing in which—

Fig. 1 is a side view, partly in central vertical section, of a steaming and pressing iron embodying the invention.

Fig. 2 is an end view of some parts of the iron in central vertical section on line 2—2 of Fig. 1.

Fig. 3 is a plan view of the baffle plate retaining spring.

Fig. 4 is a side view of the baffle plate.

Fig. 5 is a bottom view thereof.

As illustrated in the drawing, the numeral 5 denotes the body portion or casing of a steam iron having a sole plate 6 attached thereto and a heating element 7 for heating said sole plate and casing.

The said iron is provided with a handle 8 which is preferably secured to a shell or covering 9.

The interior of the casing 5 is hollow to provide a water chamber 10 within which steam is generated. The upper portion of the casing is provided with a separate steam chamber 11 which communicates with the water chamber 10 through an opening 12 in a horizontal baffle wall 13 separating the steam chamber from the generating chamber.

2

A steam conduit 14 communicates the steam chamber 11 with open grooves 15 in the sole plate, through a vertical passage 15a and a steam distributing chamber 17 contained within said sole plate.

In order to prevent the passage of water from the chamber 10 into the steam chamber 11, during the movement of the iron while in operation, we provide a baffle plate 16 which is mounted over the said opening 12 so as to prevent water from passing into the steam chamber 11. The said baffle plate is constructed to provide perpendicular side flanges 18 which extend downwardly, as at 19, to provide upright leg portions which fit within the opening 12, against the side thereof, and have notches 20 resting upon the edge portion of the wall 13 near said opening. The front of said baffle plate is provided with an upright portion 21 and a horizontal portion 22 having an opening 23 therein to receive a member, such as an assembling screw 24, to retain said baffle plate against lateral movement. In order to retain said baffle plate against vertical movement, we provide a spring member 25 which is mounted to the bottom of a cover 26, or other suitable portion of the iron body or casing 5. The said spring is preferably secured by means of a threaded stud 27 which projects through the cover, although other suitable means may be used, and has a downwardly projecting portion 28 which presses upon the top of the baffle plate 16 and retains the same against vertical movement.

It will be noted that said baffle plate, being forced downwardly by the spring 25, is retained with the leg portions 19 in position within the opening 12.

Our improved baffle plate has been found to be highly efficient in preventing the passage of water from the chamber 10 to the steam chamber 11, when the water in the said chamber 10 is agitated by the movement of the iron while it is being used. It has been found, by extensive research, that the water within the chamber 10 has a tendency to splash upwardly and, upon entering the chamber 11, accumulate upon the upper surface of the wall 13. In steam irons heretofore produced, this accumulation of water was sufficient to obstruct the opening between the baffle plate and the surface of the said wall with a film of water which was picked up and carried through the steam chamber by the steam, as it moved from the generating chamber 10 to the sole plate.

Our improved baffle plate is so constructed that

water splashing upwardly from the lower compartment 10 will strike the bottom surface of the baffle plate and be caused to simply drop straight downwardly, back through the opening 12 and into the chamber 10. This is caused by the slightly depending flanges 18 which will prevent the water from being deflected in a lateral direction, upon striking the bottom of the sole plate, and accumulating upon the upper surface of the wall 13. Also, the distance between the lower edges of the flanges 18 and the upper surface of the wall 13 is sufficient to provide a clearance which is too large to be spanned by a film of water and thereby prevents the formation of such a film of water which could be picked up and carried out of the iron with the steam.

It will also be noted that the surface underneath the baffle plate which interrupts the passage of water through the opening 12 into the steam chamber 11, is slightly narrower than the opening 12 so that all of the water which is deflected downwardly by said baffle plate can pass back into the chamber 10 through the opening 12 without striking the upper surface of the wall 13 and collecting thereon.

We claim:

1. A steaming iron of the character described having a water chamber, a heating element for heating water in said chamber, a steam chamber above said water chamber, means communicating said steam chamber with the ironing surface of said iron, an opening between said water and steam chambers, a baffle plate positioned over said opening and having a baffle surface narrower than the opening, and means comprising flanges substantially perpendicular to the bottom surface of said baffle plate for directing water downwardly through said opening.

2. A steaming iron of the character described comprising a body portion, a sole plate, a chamber in said body portion for generating steam therein, a steam chamber communicating with said generating chamber, means communicating said steam chamber with the bottom surface of said sole plate, an opening between said generating chamber and steam chamber and a baffle plate over said opening; said baffle plate comprising a substantially flat member having a baffle surface narrower than said opening and downwardly depending flanges along the sides thereof and substantially perpendicular thereto spacing portions depending from said flanges for supporting and spacing said baffle plate above an opening between said steam and generating chambers, and means for retaining said baffle plate in position against lateral movement.

3. In a steaming iron of the character described and having a steam chamber, a steam generating chamber, an opening between said steam and generating chambers, and a baffle plate over and spaced from said opening; and means including a spring member secured to the upper portion of said iron and retaining said baffle plate against vertical displacement.

4. In a steam iron of the character described and having a steam chamber provided with an opening in its top wall, a steam generating chamber, a cover for said opening in the steam chamber, an opening between said steam and steam generating chambers, and a baffle plate

over and spaced from said second mentioned opening; and means including a spring member secured to said cover and engaging the upper surface of said baffle plate to retain it against vertical displacement.

5. In a steaming iron of the character described and having a steam chamber, a steam generating chamber, and an opening between said chambers; a baffle comprising a plate positioned above said opening and having a baffle surface narrower than the opening, flanges depending along the side edges of said surface, supporting leg portions at one end of said plate fitting within said opening and preventing lateral displacement of said plate, an upright portion supporting the opposite end of said plate, a horizontal portion extending from said upright portion and having an opening therein, a member on said iron extending through said second mentioned opening for preventing lateral displacement of said plate, and spring means for retaining said plate against vertical displacement.

6. A steaming iron of the character described comprising a body portion, a sole plate at the lower part of said body portion, a chamber in said body portion for generating steam therein, a steam chamber in said body portion located above and communicating with said generating chamber through an opening, means communicating said steam chamber with the bottom surface of said sole plate, and a baffle plate positioned above said opening; said baffle plate comprising a substantially flat portion having downwardly turned flanges along the sides thereof, downwardly extending portions on said flanges spacing said baffle plate above said opening; each of said downwardly extending portions having a notch forming a shoulder fitting against an edge portion of said opening and a projection extending into said opening to prevent lateral movement of said baffle plate, and means at the forward end of said baffle plate having an opening therein to receive a portion of said iron and thereby prevent longitudinal and lateral movement of said plate.

7. A steaming iron of the character described comprising a body portion, a sole plate at the lower part of said body portion, a chamber in said body portion for generating steam therein, a steam chamber in said body portion located above and in communication with such generating chamber through an elongated opening having corners at one end thereof, means communicating said steam chamber with the bottom surface of said sole plate, and a baffle plate positioned above said opening; said baffle plate comprising a substantially flat portion having downwardly turned flanges along the sides thereof, downwardly extending portions on said flanges spacing said baffle plate above said opening; each of said downwardly extending portions having a notch forming a shoulder resting upon an edge portion of said opening and a projection extending into said opening and fitting against one of said corners to prevent horizontal movement of said baffle plate.

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