Sept. 21, 1943. F. E. WOLCOTT 2,329,807

COMBINATION STEAMING AND PRESSING IRON

Filed Nov. 5, 1940

Fig. 1.

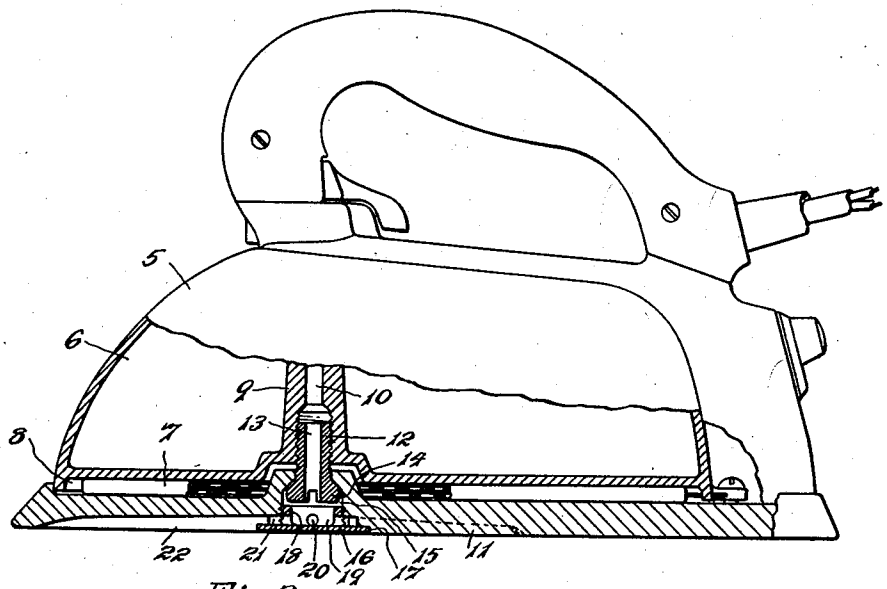


Fig. 2.

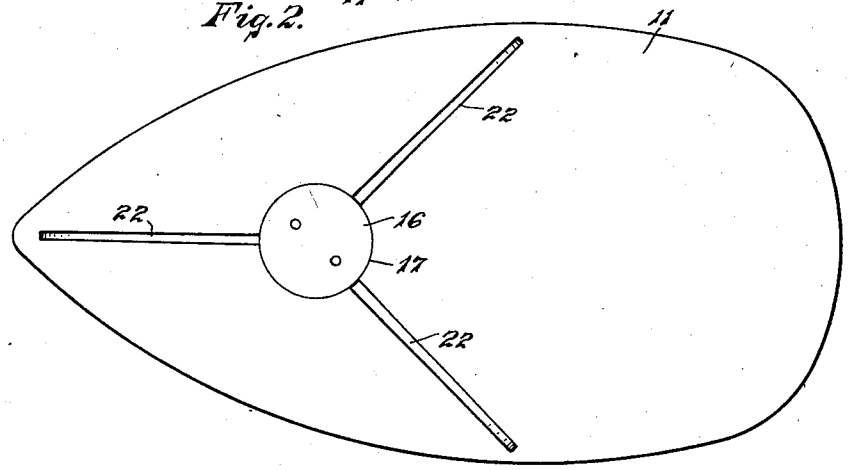


Fig. 3.

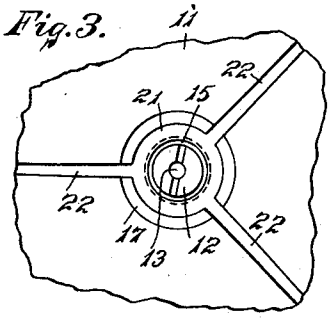


Fig. 4.

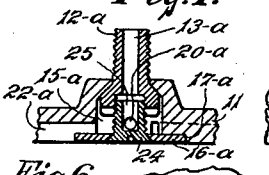


Fig. 5.

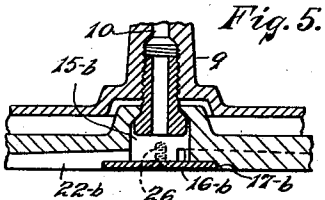
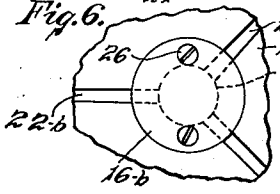


Fig. 6.



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COMBINATION STEAMING AND PRESSING IRON

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Application November 5, 1940, Serial No. 364,425

8 Claims. (Cl. 38—77)

This invention relates to combination steaming and pressing irons from which steam is ejected upon the surface of the work so as to dampen the same while it is being ironed, and more particularly to such irons having open grooves in the ironing surface thereof, as shown and described in the co-pending application of Louis V. Lucia, Serial No. 352,926, filed August 16, 1940.

The object of the present invention is to provide novel improvements in the construction of said irons whereby certain advantages are attained, as will be more clearly understood from the following description and from the accompanying drawing in which:

Fig. 1 is a side view of a steam iron embodying my invention with parts thereof being shown in central vertical section.

Fig. 2 is a bottom view in elevation.

Fig. 3 is a bottom view, on an enlarged scale, of a portion of the sole plate of said iron with the steam distributing chamber cover removed therefrom.

Fig. 4 is a fragmentary view, in central vertical section, illustrating a modified form of my present invention.

Fig. 5 is a similar view illustrating a further modification of my invention.

Fig. 6 is a bottom view thereof.

As illustrated in the drawing, a steaming iron embodying this invention may comprise a casing 5 having a steam chamber therein, to which steam may be supplied, or, in which water may be heated, to generate steam therein, by a heating element 7 which may be contained within a heating chamber 8.

The said casing is also provided with steam conduit 9 having a steam passage 10.

A sole plate 11 is secured to said container, and in contact with the heating element 7, by means of a screw 12 having a passage 13 therethrough communicating with the passage 10. The said screw has a head 14 which is seated within a steam distributing chamber 15 in the sole plate which communicates with the passage 10 through the passage 13.

The said distributing chamber is provided with a closure in the form of a screw plug preferably comprising a plate 16 which fits within a recess 17 in the surface of the sole plate. The said plate 16 has an annular wall 18 which is threaded to the wall of said distributing chamber 15 and provides a recess 19 that communicates, through apertures 20, with an annular steam conducting recess 21 that surrounds the said plug. Open grooves 22 are provided in the ironing surface of the said sole plate and communicate with the said distributing chamber 15 to direct steam therefrom upon the surface of the work, as described in the said co-pending application.

In the operation of a steam iron embodying the present invention, steam is directed through the passages 10 and 13 to the steam distributing chamber 15. From said chamber the steam will pass outwardly through the apertures 20 to the annular chamber 21 and therefrom into the grooves 22.

The present invention is of particular advantage in that it permits the forming of the grooves 22, in the ironing surface of the sole plate, by a casting operation and without requiring drilling or other like operations for communicating said grooves with the steam distributing chamber; the annular recess 21 providing communication between the said steam distributing chamber and the said grooves, through the passages 20, irrespective of the position of said passages with relation to the grooves.

It will be noted that the plate 16 underlies a portion adjacent the ends of the grooves 22 which connect with the recesses 21. This provides conduit means for directing steam into said grooves substantially in the direction in which they extend and thus permitting the said steam to be projected over and against the surface of the work, so as to provide for the application of steam on said surface over a width substantially equal to the width of said sole plate.

As clearly illustrated in Fig. 3 of the drawing, it will be seen that the grooves 22 may be cast in the surface of the sole plate, so that they will extend into the recess 21 which communicates with the distributing chamber 15 through the passages 20.

The said grooves, recess and chamber, all being open to the surface of the sole plate, may be formed in the same operation of die-casting, or the like, whereby the sole plate is produced.

In the modified form illustrated in Fig. 4, the closure for the steam distributing chamber 15—*a* may be provided in the form of a washer 16—*a* which fits within the recess 17—*a* and is secured therein by means of a screw 24 that is threaded to the screw 12—*a* and has a recess 25 which communicates with the distributing chamber 15—*a* through steam passages 20—*a*. In this form, the ends of the grooves 22—*a* communicate directly with the steam distributing chamber 15—*a*.

In the form illustrated in Fig. 5, the closure for the steam distributing chamber 15—*b* may

be in the form of a flat plate 16—*b* which fits within the recess 17—*b* and is secured therein by means of screws 26.

From the foregoing description, it will be clearly understood that I have provided novel improvements, in the construction of steaming irons and the like, whereby the open grooves described in the said co-pending application may be formed in an inexpensive manner; such as by casting them directly in the sole plate and in the same operation that is used for producing the said plate. Furthermore, the said improvement provides novel and inexpensive means for directing steam to the open grooves in the direction in which they extend in said sole plate.

I claim:

1. A steaming iron of the character described comprising a casing including a steam chamber, a sole plate having an ironing surface thereon, steam conducting means in said ironing surface including an open recess and an open groove extending therefrom, fastening means for securing said sole plate to said casing, said fastening means having a tapered portion seated within said recess, a passage through said fastening means for communicating said recess with said steam chamber, and a closure for said recess having means for directing steam from said recess into said groove.

2. A steam iron of the character described comprising a casing having steam conducting means therein, a sole plate including an ironing surface at the bottom thereof, said surface having therein a recess with open grooves extending therefrom, a surrounding depression at the mouth of said recess and a closure for said recess having a portion thereof seated in said depression and underlying a portion of said grooves adjacent the ends thereof for guiding steam thereinto.

3. A steam iron of the character described including a sole plate having an ironing surface, a recess in said surface having a threaded wall, open grooves in said surface communicating with said recess, a depression in said surface surrounding said recess and extending over a portion of said open grooves, a closure threaded to said wall and having a disc-shaped portion fitting within said depression, and means for supplying steam to said recess, said closure having apertures therein for permitting the passage of steam from said recess into said grooves and the said disc-shaped portion directing the steam into said grooves and in the direction thereof.

4. A steamng iron of the character described including at the bottom thereof an ironing surface having an open recess, a closure for said recess threaded to the wall thereof, an annular distributing recess surrounding said closure, an open groove radiating from said annular recess, a flange on said closure underlying said annular recess to form an annular steam distributing chamber therefrom, the said flange also underlying a portion adjacent the end of said groove for directing steam from said chamber to said groove. the said closure having conduit means communicating said recess with the said annular distributing chamber whereby steam in said recess will be directed to the said distributing chamber and therefrom into said groove and substantially in the direction in which said groove extends.

5. A steaming iron of the character described comprising a casing having a steam passage therein, a sole plate secured to said casing and having an ironing surface thereon, the said ironing surface having therein an open recess and an open groove extending therefrom, a sleeve threaded to the wall of said passage and having a head seated in said recess for securing the sole plate to said casing, and a separate closure for said recess comprising a disc-shaped member fitting within a depression surrounding said recess for directing steam from said recess into said groove and substantially in the direction in which said groove extends.

6. For a steaming iron of the character described and including a steam passage, a sole plate having an ironing surface in which is provided an open recess adapted to communicate with said steam passage, open grooves in said surface extending from said recess, and a depression in said surface surrounding said recess and extending under a portion of said grooves adjacent the ends thereof whereby the said sole plate with the said recess and groove may be produced by a casting operating and a closure may be seated within said depression for directing steam from said recess into said groove in the direction thereof to be distributed therefrom over the surface being ironed, and substantially in the direction in which said groove extends.

7. For a steaming iron of the character described, a sole plate having an ironing surface at the bottom thereof and means above said surface for supplying steam thereto, said means including a recess in said sole plate, a depression in said surface surrounding said recess, a cup-shaped closure for said recess having a surrounding flange fitting within said depression, an annular distributing groove surrounding said recess and located between the same and said flange, open grooves in said surface having a portion thereof extending over said flange and communicating with said annular groove, the said closure having apertures in the wall thereof for communicating said recess with said distributing groove.

8. For a steam iron of the character described comprising a sole plate having an ironing surface with a steam distributing recess and open grooves in said surface communicating with said recess, a closure for said recess including a cup-shaped member having steam apertures in the wall thereof and a peripheral flange extending laterally from the bottom thereof and adapted to underlie a portion of said grooves to direct steam from said apertures into said grooves in the direction thereof, and means for supplying steam to said recess.

FRANK E. WOLCOTT.