Jan. 6, 1948. F. E. WOLCOTT 2,434,136

STEAMING AND PRESSING IRON

Filed Feb. 8, 1944

Fig. 1.

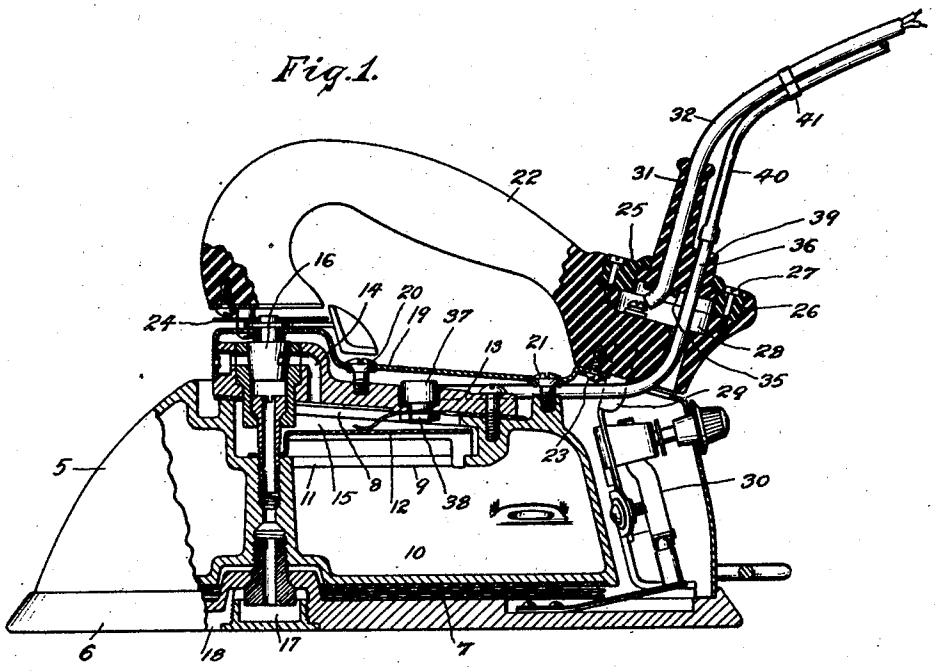


Fig. 2.

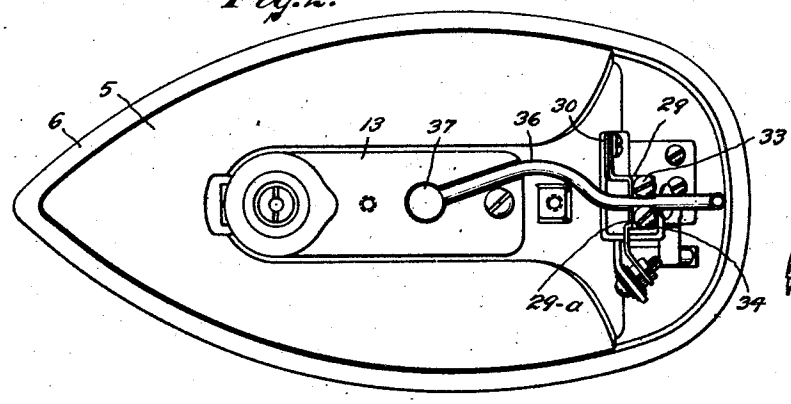


Fig. 7.

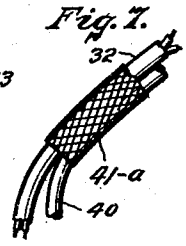


Fig. 3.

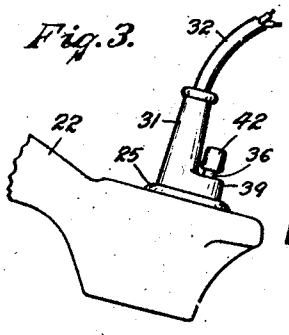


Fig. 4.

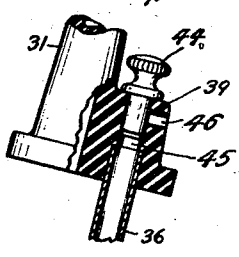
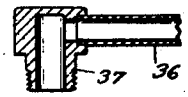


Fig. 5.



Fig. 6.



INVENTOR.
FRANK E. WOLCOTT.
BY Louis V. Lucia
ATTORNEY.

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STEAMING AND PRESSING IRON

Frank E. Wolcott, West Hartford, Conn., assignor to The Silex Company, Hartford, Conn.

Application February 8, 1944, Serial No. 521,506

5 Claims. (Cl. 38—77)

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This invention relates to steaming and pressing irons and particularly to such as are adapted for supplying steam to a piece of material while being ironed.

It is well known that such steaming irons are commonly designed to contain a certain quantity of water from which steam is generated within the iron and then delivered to the work being ironed. While such irons operate very satisfactorily, the amount of water which they can hold, and still be of a convenient size for easy handling, is not sufficient to provide enough steam for ironing a quantity of pieces in succession or to take care of a large laundry where continuous operation of the iron is required.

An object of this invention, therefore, is to provide such a steaming iron which is adapted to hold a certain quantity of water to be generated into steam and also provided with means for an auxiliary supply of steam or water to said iron from a remote source.

A further object of the invention is to provide such an iron which can be used either as a self-contained unit or as an iron receiving water or steam from an outside source.

A still further object of the invention is to provide an auxiliary connection for said iron which will not interfere with the handling of the iron during the use thereof.

Another object of the invention is to provide novel safety means for permitting the release of pressure in said iron should it reach beyond a safe limit.

Further objects and advantages of the invention will be more clearly understood from the following description and from the accompanying drawings in which:

Fig. 1 is a side view, partly in central vertical section, of a steam iron embodying my invention.

Fig. 2 is a plan view of the same with the handle and outer cover portion removed.

Fig. 3 is a side view, in elevation, of a rear portion of the handle with the hose detached therefrom.

Fig. 4 is an enlarged side view, partly in central vertical section, showing a modified form of pressure releasing means.

Fig. 5 is an enlarged side view, in central vertical section, of the pressure releasing means shown in Fig. 3.

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Fig. 6 is an enlarged side view, in central vertical section, showing the connection for the auxiliary supply tube.

Fig. 7 is a fragmental view showing a modified form of binding for the electric cord and flexible tube.

As illustrated in the drawings, the steam iron embodying my invention may comprise the usual body portion 5, preferably in the form of a container for water to be generated into steam. A sole plate 6 is secured to said body portion and a heating element, in the form of an electrical resistance 7, is provided between said sole plate and body portion.

An opening 8 is formed in the upper part of the body portion and a baffle wall 9 is provided between said opening and the reservoir 10 within said body portion 5. The said wall 9 has an opening 11 which is covered by a suitable baffle plate 12 to prevent water in said reservoir from splashing through the opening 9 and thereupon passing out of the iron with the steam.

An inner cover 13 is provided for closing the opening 8. This cover has a steam passage 14 therein which permits the passage of steam from the steam chamber 15 through said passage, and through a selectively operable valve 16 to a steam distributing chamber 17 located in the sole plate and from which the steam is allowed to pass preferably into grooves 18 and from there upon the work being ironed.

The specific construction of some of the elements herein mentioned will not be described since they are fully disclosed in U. S. Patent No. 2,371,569, dated Mar. 13, 1945, to Frank E. Wolcott et al.

It will be noted that the embodiment illustrated herein provides an outer cover 19 which is secured to the iron by means of screws 20 and 21 which are threaded respectively to the cover 13 and the body portion 5.

A handle 22 is secured to said outer cover, at its rear end, by means of a screw 23. The front end of the handle is secured to the cover 19 through a series of radiating plates 24.

The present invention is particularly directed to the structure including the rear portion and the handle 22 and the means extending therethrough, for connecting an electric circuit to the heating element, 7, and also to a tube for provid-

ing an auxiliary supply of water and steam to the chamber 10. This construction includes a cap 25 which fits within a recess 26 in the top of the rear portion and is secured by means of screws 27.

A recess 28 is provided below the recess 26 to contain an electrical connection to conductors 29 and 29—*a*, which extend into said recess 28 from a circuit control, indicated generally at 30 and such as fully described in U. S. Patent No. 2,424,433, dated July 22, 1947, to Leslie M. Brown, through openings in said rear handle portion and into said recess 28.

A flexible extension 31 is mounted within the cap 25 and projects upwardly therefrom through an opening in said cap, and an electrical conductor cord 32 extends downwardly through said flexible extension 31 into the recess 28 wherein the conductor wires from said cord are connected to the conductors 29 and 29—*a* by means of screws 33 and 34. The said cord 32 is prevented from pulling out of the extension 31 by means of a suitable strain relief member 35.

In order to provide for an auxiliary supply of water or steam to the reservoir 10, I provide a tube 36 which is connected to the cover 13 by means of a suitable fitting 37 that may be secured to said cover by a nut 38. The said tube extends horizontally between the outer cover 19 and the inner cover 13 and then extends vertically through the rear portion of the handle and the extension 31 and preferably terminates slightly above the projection 39 on said member in close proximity to the cord 32. When it is desired to use said tube 36, for supplying steam or water to the chamber 10, a flexible tube 40 may be attached to the end of the tube 36, as clearly illustrated in Fig. 1, and the said tube may be connected to the cord 32 by means of suitable detachable clamps 41.

If desired, the said cord and tube may be bound together within a common covering 41—*a* of woven material as shown in Fig. 7.

When the said steam iron is to be used as a self-contained unit, with steam generated from water within the reservoir 10, the said flexible tube 39 may be detached from the iron and the cap, such as indicated at 42, may be placed over the end of the tube 36. The said cap provides a safety means for preventing accumulation of excessive pressure within the steam iron since such pressure will tend to blow the cap off the end of the tube. In order to prevent violent blowing of said cap and possible accident to the user of the iron, I provide an opening 43 in the tube which is closed by said cap but which is uncovered as the cap begins to rise under pressure and thereby permits the steam to escape through said opening and prevent the blowing off of the cap 42.

In the modified form illustrated in Fig. 4, the tube 36 ends within the extension 31, which is preferably constructed of rubber or other suitable material, and a plug 44 is inserted into the opening 45 which continues through said extension 31. In this form, a release opening 46 is provided in the extension 31 so that, when excessive pressure lifts the plug 44, the said pressure will be released through the opening 45 and thereby prevent blowing off of the plug 43.

From the above description it will be clearly understood that my invention provides means for the connection of an auxiliary supply of water or steam to a steaming iron and whereby such a connection is conveniently provided through a portion of the handle so that the cord, for the electric container and the flexible tube for the water or steam, are led into the iron together and thus eliminate undue obstruction and interference during the use of the iron, such as encountered otherwise where the auxiliary supply tube is connected to the iron at a distance from where the electric cord connection leads into the iron, and further, permits the binding of the tube with the electric cord, along their length, so that, if desired, the said electric cord and tube may be enclosed in a single cover and thereby form a single line extending from the iron.

I claim:

1. A steaming and pressing iron of the character described comprising a body portion having a steam chamber therein, a sole plate, a heating element, means for conducting steam from said steam chamber to the ironing surface of said sole plate, a handle, a flexible member extending from said handle, an electrical conductor extending through said flexible member and connected to said heating element, and a tube also extending through said flexible member and communicating with said steam chamber.

2. A steam iron of the character described comprising a body portion having a steam chamber therein, a sole plate, a heating element, means for conducting steam from said steam chamber to the ironing surface of said sole plate, a handle having a recess in a rear portion thereof, a cover in said recess, an electrical conductor extending through said cover and connected to said heating element, and a tube extending through said cover in proximity to said conductor and communicating with said steam chamber.

3. A steaming iron of the character described comprising a body portion having a steam chamber therein, a sole plate, a heating element, a handle having a recess therein, an electrical connection for said heating element located in said recess, a cover over said recess, a flexible extension on said cover, an electrical conductor running through said extension to said electrical connection, a tube running through a portion of said extension and communicating with said steam chamber, and a flexible tube running parallel with said conductor and connected thereto and extending therefrom to the end of the first tube.

4. A steaming iron of the character described comprising a body portion having a reservoir therein, a steam chamber above said reservoir, a baffle plate between said reservoir and steam chamber, a sole plate, means for conducting steam from said steam chamber to the ironing surface of said sole plate, a heating element, an electrical conductor extending through a portion of said handle and connected to said heating element, a tube extending through a portion of the handle and communicating with said steam chamber at a position directly above said baffle plate, and a flexible tube connected with the first tube and running parallel with and connected to said electrical conductor.

5. A steaming iron of the character described comprising a body portion having a reservoir therein, a sole plate, a heating element, means for conducting steam from said reservoir to the ironing surface on said sole plate, a handle for said body having a rear portion with a recess therein, an electrical connection for said heating element located in said recess, a tube communicating with said steam chamber and extending through said recess, a cap for covering said recess, said cap

having an opening therein through which the said tube projects, and an electrical conductor extending through said cap and connected to said electrical connection.

FRANK E. WOLCOTT.

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