June 6, 1939. C. DU PREE ET AL 2,161,145

ELECTRIC IRON

Filed May 13, 1938

Fig. 1.

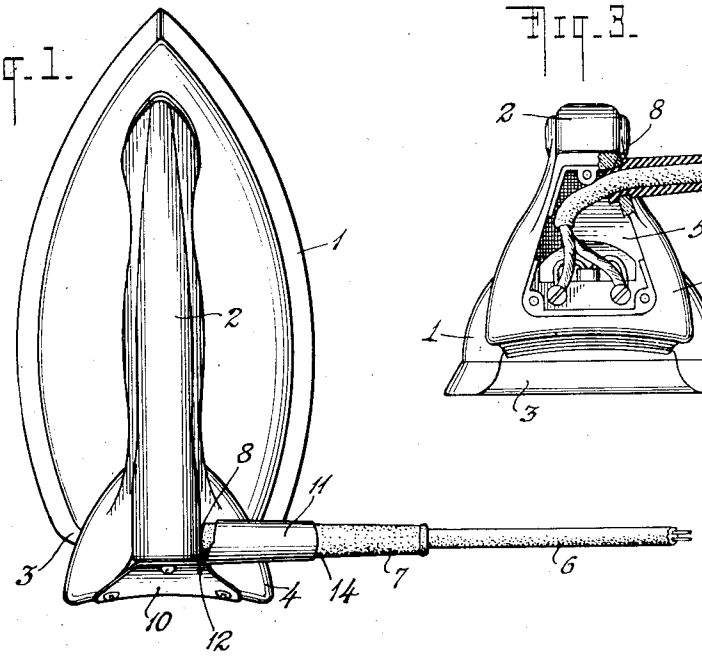


Fig. 3.

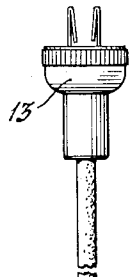


Fig. 2.

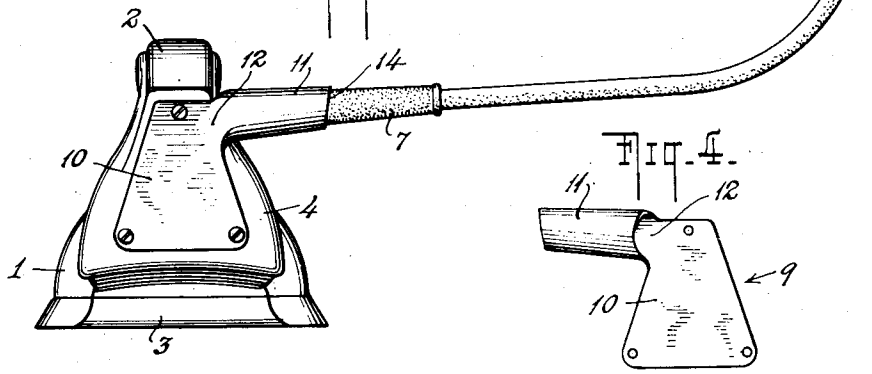


Fig. 4.

WITNESS

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ELECTRIC IRON

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Application May 13, 1938, Serial No. 207,678

1 Claim. (Cl. 219—25)

This invention relates to electric irons and more particularly to that type which is used for commercial and domestic purposes in connection with the pressing of men's and women's clothing. Electric irons have been in extensive use for many years in the factories of garment manufacturers, for instance, manufacturers of men's shirts and ladies' dresses and the like, for the purpose of pressing such garments in order to make them presentable upon the counters of the retailers. Such electric irons are used by the pressers practically continuously during the whole of a day's work, and are therefore subjected to considerable use. It has been found that such electric irons ultimately short-circuit by reason of the fact that the electric cord and its coverings, by reason of the constant pulling, swaying and movement in use, break or crack at the point of entry into the iron and utimately across the current-carrying wire, resulting in the operator often obtaining serious burns on the underside of the hand which is closest to the point of entry of the cord into the interior of the iron. It has been found that electric irons as they have been in use for years, develop such short-circuiting and consequent annoyance, practically within a month after the iron is put in use.

The object of this invention is to correct the foregoing disadvantages, eliminate short-circuiting and protect the operator against burns.

In the drawing, Fig. 1 shows a plan view of an electric iron embodying this invention; Fig. 2 is a rear end view of the iron embodying this invention; Fig. 3 is a rear end view of such iron with the internal electrical connections exposed and also showing part of the cable connection into the interior of the iron in section, and Fig. 4 is a view of the underside of an attachment secured to the rear of the opening and around the cord.

The body 1 of the iron is provided with the usual handle 2, the handle extending substantially from the nose of the iron rearwardly and overhanging the heel 3 thereof. The overhanging or rear portion 4 of the handle provides a housing for the electrical connection which is accessible through the opening 5. The electrical connecting cord 6 is provided at that portion thereof which passes through the body of the handle, with a tapered rubber sleeve 7 which, in the usual 4½ pound iron, is about four inches long and has an under-cut portion 8 which enters through an aperture into the chamber which contains the electrical connection. A peculiar form of safety device 9 is applied to the rear end of the iron. This safety device 9 is provided with a plate 10 shaped to conform to the surface contour of a portion of the rear end of the iron and preferably having a peripheral configuration conforming to the opening 5 so that it may be used to close the same, and a tubular extension 11 substantially of the same general configuration as the tapering sleeve 7 but being in total length less than the length of the sleeve 7. The length of the tubular extension is preferably in length equal to one-half of the length of the tubular member 7 in order that it should cover or surround the butt end half of the sleeve 7. The safety member 9, that is, the plate 10 and the tubular extension 11, are made of one piece of metal stamping, the tubular extension being connected by a neck 12 with the plate 10, thereby providing an area of resiliency, permitting slight movement of the tubular extension 11.

The plate 10 is secured by screws to a portion of the rear end of the iron and the tubular extension 11 extends at substantially right angles from the axis of the handle 2. In the assembled condition, the tubular extension 11 surrounds the sleeve 7 and the sleeve 7 in turn surrounds the cord 6. The tubular extension 11 is shorter than the sleeve 7 and the sleeve 7 is materially shorter than the cord 6, the latter being provided at its end with a plug 13 which makes contact with an overhead source of current. The tubular extension 11 is preferably made slightly larger in its internal taper than the sleeve 7 in order that the sleeve 7 shall have slight movement as the iron is manipulated independently of the tubular extension 11. In the type of device shown in Fig. 3, it has been found that the sleeve 7 at its butt end, the cord 6, and the wire therein contained, will, from constant use, crack or fracture crosswise after about a month's continuous use, causing a short-circuit and often resulting in the burning of the operator's hand. With the safety attachment herein described, applied to the iron, it has been found that the life of the tubing is considerably extended and the burning of the operator's hand is overcome.

It has been observed in the practical use of the old form of iron that, by reason of the constant backward and forward motion of the iron when in use, particularly in that type of connection where the electrical supply line is overhead, that the cord 6 sways or whips backwardly and forwardly between the point of entry of the cord into the iron and the plug 13. This constant sway has been found to be the primary cause of fracture of the cord and the result of the short-circuit. With the safety device of this inven-

tion incorporated in the iron, fracturing action of the cord caused by its sway is transferred away from the point of entry of the cord into the iron and is absorbed primarily between the free end of the tubular extension 11 and the free end of the sleeve 7. Slight movement of the sleeve 7 within the tubular extension 11 is permitted in order to avoid sharp bending of the sleeve 7 where it contacts the edge 14 of the tubular extension 11, which, if the tubular extension 11 were firmly pressed against the sleeve 7, would set up a plane tending to cause fracture. There is also a tendency of the resilient neck 12 to move slightly in unison with the sway or whip of the cord.

We claim:

In an electric iron, a chamber arranged in the rear end of the body of the iron and housing the contacts, a handle, a safety device arranged to protect the operator's hand against being burned should the electric connecting cord break and cause a short circuit, said safety device having a substantially flat plate, said plate being positioned at the rear end of the iron and normally covering the opening into said chamber and having a peripheral configuration conforming to said chamber, an aperture in the side wall of the chamber between the said plate and the point of the iron, an electric cord adapted to be attached to a source of electric current supply, said cord being covered on the outside with a flexible, non-conducting sleeve formed around said cord for a portion of its length at and in advance of the point of entry of said cord into said aperture, said plate having integrally formed therewith a tubular extension, said extension extending in a sidewise direction from said plate and being turned around said flexible, non-conducting sleeve and aligned with said aperture, said extension directly supporting said non-conducting sleeve, said plate supporting said extension when the plate is secured over the opening to said chamber, said extension being wholly supported by its integral relation to said plate by a resilient neck.

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