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ELECTRIC IRON CONSTRUCTION

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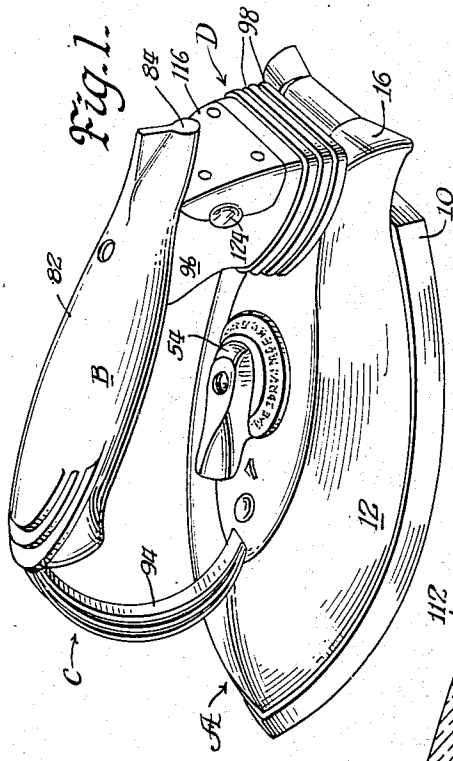


Fig. 1.

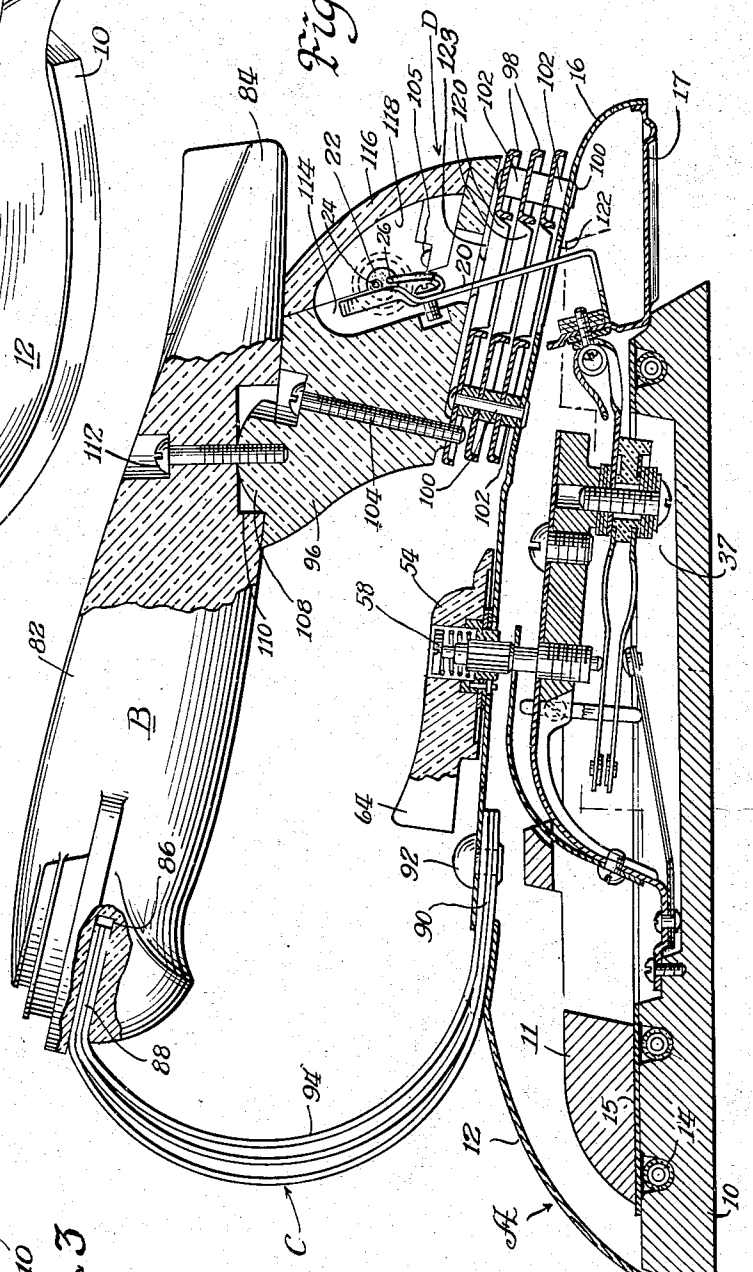


Fig. 2.

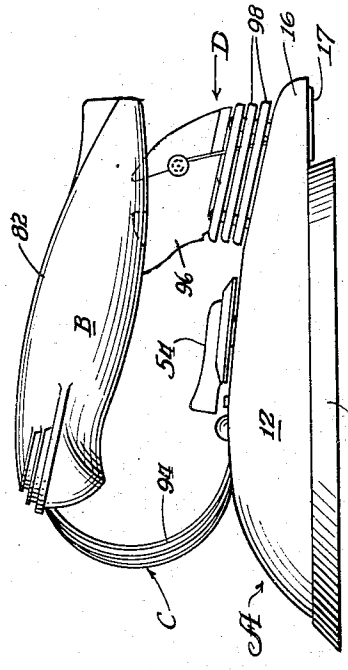


Fig. 3

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ELECTRIC IRON CONSTRUCTION

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6 Claims. (Cl. 38—90)

My invention relates to electric appliances and attachments therefor and particularly those used on sadirons or such other appliances as may be subjected to a high degree of heat.

Among the objects of my invention is the provision of a new and improved appliance construction which is of simple rugged construction and relatively inexpensive to manufacture.

Another object of my invention is the provision of a new and improved sadiron or the like which is constructed so as to take advantage of a variety of heat insulating features which can be built into the device in order to increase its convenience in use while at the same time reducing the cost and number of operations necessary to manufacture it.

Another object is the provision of a sadiron wherein the handle grip comprising an insulating material is secured to the main portion of the iron by means of handle brackets which themselves are so constructed that they not only insulate the handle grip from the iron portion, but are instrumental in rapidly dissipating heat so that in many instances the brackets themselves are reasonably cool when the iron is in operation.

Another object is the provision of a new and improved sadiron wherein an extension of the handle grip forms one of the supports for holding the iron in an upended position.

With these and other objects in view my invention consists in the construction, arrangement and combination of the various parts of my device whereby the objects contemplated are attained, as hereinafter more fully set forth, pointed out in my claims and illustrated in the accompanying drawing, in which:

Figure 1 is a perspective view of the iron completely assembled with all parts in place.

Figure 2 is an enlarged vertical elevation partly in section showing the various attachments in place.

Figure 3 is a vertical side elevation.

In the construction of electrical appliances it is always necessary to consider the heating factor and to so insulate the appliance that it may be rested upon a table or other surface without damaging the surface by reason of bringing excessive heat into contact with it or if the appliance is to be lifted or handled, handle means must be provided which are effectively insulated from the body of the appliance so that the user will not be burned when the appliance is being manipulated. It must also be borne in mind that electrical appliances and particularly household appliances must be built to withstand a great deal of use and abuse by persons with a relatively limited knowledge of mechanical contrivances and must also be built to be absolutely safe when carrying the customary load of 110 v. of electric current. Not only must these qualities be built into such an appliance but in so doing, the cost of manufacture must be kept as low as possible due to keen competition in the trade and because of this condition even minor improvements, the utility of which may at first glance be deemed somewhat obvious, are often the result of many months of painstaking research to enable the manufacturer to take advantage of every possible simplification of his device while still building in it the requisite qualities of durability, safety and convenience.

In accordance with these aims and objectives, the novel structures and attachments forming the subject-matter of this invention are shown incorporated in an electric sadiron which presents many of the problems above referred to and which has been the subject of a great deal of development in recent years. A sadiron because of its weight must be especially rugged in construction and the handle used to manipulate it must be attached in such a manner that it will not readily become loosened during use and also must be insulated to guard against the very high temperatures present in the base or sole plate.

The electric iron shown in the accompanying drawing is provided with a base A, having a handle B for manipulating it, which is attached to the base by means of a bracket C at the forward part and a corresponding bracket D at the rearward part of the appliance.

The base A comprises a customary sole plate 10 upon which is positioned a weight 11 securely held thereon by suitable screws and a shell or casing 12 secured to the weight by means of a pair of screws, not shown. Imbedded in the sole plate are coils 14 of a heating element which are protected by a cover plate 15. The shell itself extends toward the rear of the iron in the form of a heel rest 16, arranged to engage with a plate 17 when in assembled position which in turn supports a series of contact strips as shown at 20 in insulated relation thereto.

A cord 22 carries the electric wires 24 and 26 by means of which current enters the iron. The iron may be equipped with a conventional type of heat control featuring the usual bimetallic strip, electric contacts and temperature control operating through a control handle means 54, 64, 68 on the casing underneath the handle B.

The handle B, which has been previously described, is connected to the appliance by means of brackets C and D, and is itself composed of a handle grip portion 82 which is rounded and shaped to fit the grasped hand of a user. The grip tapers toward the rear, terminating in an extension 84 which, when the iron is tilted in an upended position, serves as a support together with the heel rest 16 in order to hold the hot sole plate upward out of contact with an ironing board.

At the forward end of the grip there is an elongated recess 86 and in it is inserted the upper end 88 of the bracket C. This bracket is composed of three resilient strips bound together at the upper end 88 and at the lower end 90 where they are secured to the casing by a rivet 92. At the mid portion 94 the strips are separated one from another so as to provide a resilient connection between the handle and the casing and furthermore to enable heat to be more readily dissipated as from a finned surface. The large outward curve of the bracket at the point 94 also serves to enlarge the space under the handle normally occupied by the fingers of a user so that there will be less likelihood of burning the hand when the iron is in use.

The rear bracket D is composed primarily of a block 96 of insulating material bound together with a pile of metallic fins 98 and attached to the casing immediately above the heel rest. The metallic fins are attached together by means of rivets 100 and are thermally insulated to some extent from each other by the washers 102 of insulating material. The block 96 is attached to the topmost fin in the pile by means of a screw 104 and secured additionally by rivets 105 separated from the rivets 100 which attach the pile of fins to the casing. This is an insulating feature which interposes a great resistance to the flow of heat from the base of the iron to the handle.

At the top of the block 96 there is a hollow recess forming a cradle running longitudinally across the top adapted to receive a transversely curved section of the handle grip 82 and located within the recess is an upwardly extending projection 108 which is rounded at the forward end. In the handle grip opposite the projection there is an elongated recess 110 having straight sides into which the projection 108 may fit. The handle grip and the block are held rigidly in contact with each other by a screw 112. It will be noted that for the forward bracket C there is only a loose slip fit connection with the handle at the upper end. When the handle portions are assembled with the brackets, the forward bracket C may be first inserted into the handle grip so that the latter may be pressed down upon the block 96 and any misalignment may be readily corrected when the curved projection 108 is drawn into the recess 110.

The rearward bracket D in addition to serving the purpose of a support for the handle grip serves also as a connection for the cord and a mounting for a telltale light 124. In the block 96 at the rear is a pocket 114 and fitting over the pocket is a cap 116 similarly provided with a complementary pocket 118. The closed pocket thus formed provides space for an incandescent lamp which forms a part of the aforesaid telltale light and for the connections between the wires 24 and 26 and their corresponding strips shown at 20. Each of the fins 98 is provided with a central aperture 120 forming a passage through which the strips shown at 20 pass in order to form a connection from the wires and from the lamp to the other electrically operated portions of the iron. The apertures 120 are made especially large in order to provide together with an enlarged aperture 122 in the heel rest a ready means of expelling heat from the base of the iron outward into the atmosphere. To keep the bracket D as cool as possible there is also provided a passage 123 to the pockets 114 and 118 which are of relatively large volume in order that heat generated at the contacts within may be passed off.

From the foregoing description it will be perceived that many novelties in construction have been incorporated into an electric appliance here embodied in an electric sadiron. The advantages in construction it is believed have been clearly pointed out and again emphasis is laid on their extreme simplicity and time-saving characteristics from the point of view of manufacture. In addition to this it will be seen that every attempt possible has been made to provide an electric appliance well insulated in order to protect a user and at the same time of rugged and durable construction. The structure shown and described has made possible a household appliance particularly convenient and easy to handle and one extremely well adapted to modern demands for an efficient instrument of its sort.

Some changes may be made in the construction and arrangement of the parts of my device without departing from the real spirit and purpose of my invention, and it is my intention to cover by my claims, any modified forms of structure or use of mechanical equivalents, which may be reasonably included within their scope.

I claim as my invention:

1. In an appliance having a base comprising a base plate and a casing attached thereto, the combination of a handle member including a grip, a bracket for connecting one end of the grip to the base comprising a plurality of arcuate strips of different diameter lying one within another and joined at the ends only and connections from the ends of the bracket respectively to said grip and said base to form insulating connections for dissipating heat from the base before it reaches the grip.

2. In a sadiron having a base comprising a sole plate and a casing attached thereto, the combination of a handle member including a grip, a bracket for connecting one end of the grip to the base comprising a plurality of relatively thin resilient strips joined at the ends and connections from said ends of the bracket respectively to said grip and said base, said strips having intermediate portions thereof free and separated one from another at all points intermediate the ends, permitting relative movement between them to provide a cushioned connection between one end of the grip and the base.

3. In a sadiron having a base comprising a sole plate and a casing attached thereto, the combination of a handle member including a grip and brackets for connecting the respective ends of the grip to the base, one of said brackets comprising a plurality of resilient strips joined at the ends only and connections from said ends to said grip and said base respectively, the intermediate portions of said bracket being separated one from another to increase the surface for dissipating heat before it reaches the grip and to form simultaneously a cushioned con-

nection between one end of the grip and the base.

4. In a sadiron having a base comprising a sole plate and a casing attached thereto, the combination of a handle member including a grip and brackets for connecting the respective ends of the grip to the base, an elongated recess at the forward end of said handle, one of said brackets comprising a plurality of strips joined at the ends, one of said ends being received in the recess forming a connection with the bracket extending outwardly and downwardly therefrom, the other end having a connection with said base and intermediate portions of said bracket being separated one from another and bent into a large forward extending arc to provide a maximum of hand room under the grip and to form simultaneously a cushioned connection between one end of the grip and the base.

5. In an electric appliance having a base and a casing attached thereto, the combination of a handle member including a hand grip and a bracket for connecting one end of the grip to the base, said bracket comprising a block of heat retarding material joined to the grip and a plurality of separated metallic fins joining the block to the base, said fins, said block and the adjacent casing having open apertures therethrough of relatively large dimension substantially in alinement forming a passage between the block and the base from which heat may be readily dissipated.

6. A handle for an electric appliance comprising an elongated grip provided at one end with an elongated recess, a resilient bracket for permitting adjustment of the handle position during assembly having one end slidably receivable into the recess and the other end attached to the appliance, an insulated block rigidly mounted on the appliance having a top portion adapted to receive the grip and means for rigidly connecting together said grip and said block including flat faces forming the sides of a recess in one part, an outwardly extending projection on the other part having a rounded side engageable with one of said flat faces and a screw adapted to wedge said parts together against the resiliency of said bracket during assembly and to hold said parts permanently together.

GWILYM S. BRAUN.