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COMBINED EXTENSION CORD AND HANDLE FORMING MEANS

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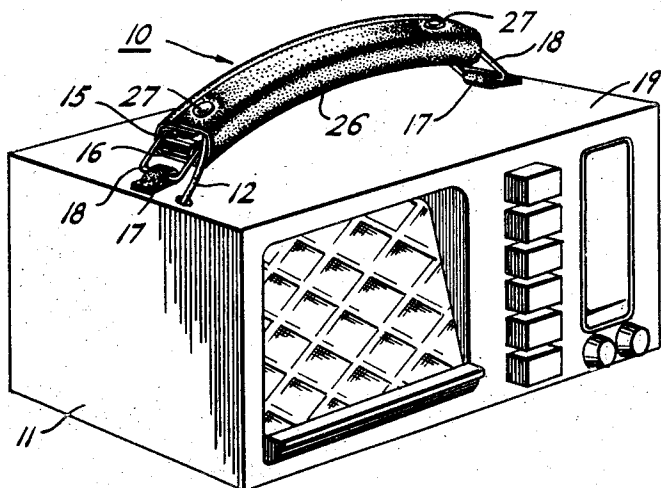


FIG. 1.

FIG. 2.

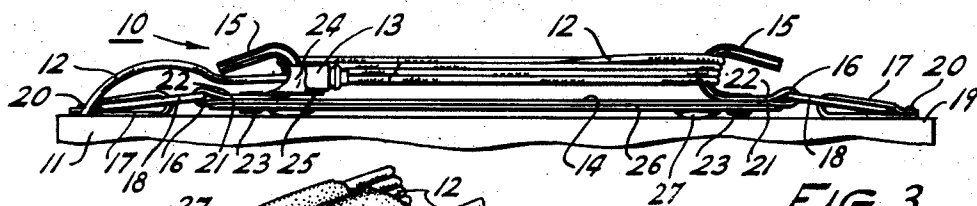
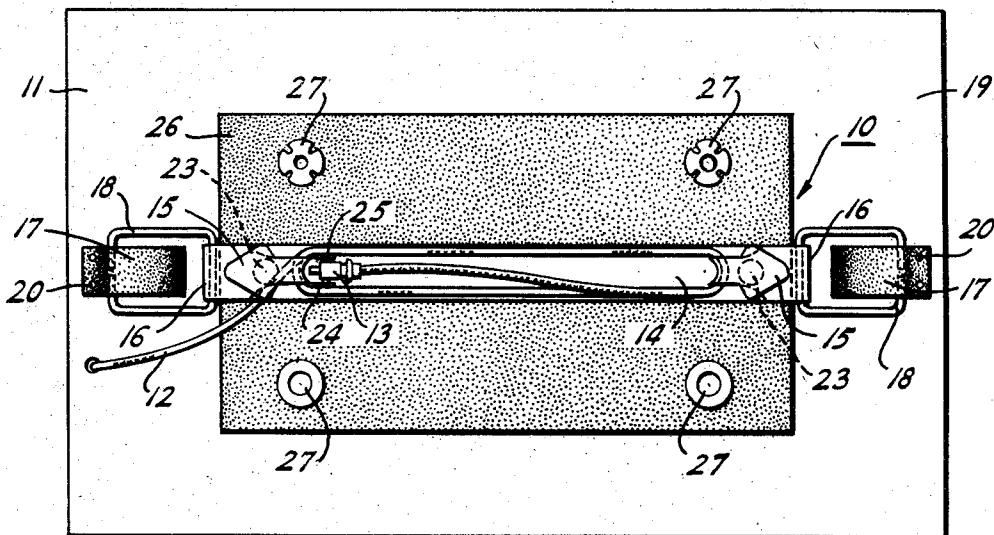


FIG. 3.

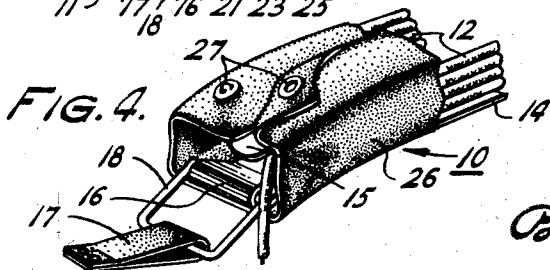


FIG. 4.

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## COMBINED EXTENSION CORD AND HANDLE FORMING MEANS

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The present invention relates, generally, to means providing a handle for electrically operated apparatus and, particularly, to handle forming means for small compact apparatus, such as a portable radio receiver.

From the standpoint of expedience in manufacturing and convenience in using radio receivers of the compact portable A.-C./D.-C. battery type, it is desirable and it has become common practice to provide receivers of the mentioned type with a fixedly attached line cord, used when the receiver is operated from an external power supply. However, this line cord becomes a source of annoyance and inconvenience when the apparatus is in use as a battery-operated, portable set. To overcome this objection, means have been provided for the storage of the cord within or upon the housing of the apparatus, but such means require the undesirable presence of cumbersome elements and have the disadvantage that these elements, together with the stored cord, needlessly occupy space in or about the housing.

It is, therefore, the primary object of this invention to avoid the annoyance and inconvenience which the presence of the line cord usually causes when an internal power supply is used, without having recourse to means which entails the above stated undesirable and disadvantageous results. To that end, the invention provides a device of simple construction, which device not only serves as a convenient space-saving storage area for the cord, but further utilizes the cord to perform a useful function in the carrying of the apparatus in transport.

Another object of the invention is to eliminate the unsightly appearance which is presented by the exposed portion of a cord wound on or about the housing of the apparatus being transported. In accordance with this object, the invention employs an arrangement whereby the cord may be neatly wrapped and covered, and when so wrapped and covered becomes a functional part of a handle used to carry the apparatus.

Still another and more specific object of the invention has to do with the provision of a combination line cord storage and handle forming arrangement for small compact apparatus, such as portable radio receivers or the like. The arrangement is such that the cord, when stored, forms an important part of the handle.

These and other objects, and the manner in which they are obtained, will more clearly appear from the following description based on the accompanying drawing, in which:

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Figure 1 is a perspective view illustrating a portable radio receiver equipped with a line cord storage and handle forming device constructed in accordance with the invention;

5 Figure 2 is a top view of the line cord storage and handle forming device with the cord covering sheet open;

Figure 3 is a side elevational view of the device as shown in Figure 2; and

10 Figure 4 is a fragmentary perspective view of one end of the line cord storage and handle forming device with a corner portion of one flap of the cord covering sheet open.

Referring more particularly to the drawing, the cord storage and handle forming device of the invention is shown, generally, at 10. This device is illustrated in Figure 1 as applied to a portable radio receiver, but it will be understood that the invention is also capable of use with any similar type of electrically operated apparatus which includes a housing 11 enclosing the component parts of the apparatus, and which is provided with an extended line cord 12 adapted to provide electrical connection between the apparatus and a service power supply. As is customary, one end of the line cord is fixedly connected to the electrically operated means within the housing, and the other or exposed end of the cord is provided with a plug 13 (Figures 2 and 3) for connection to the power supply outlet.

In accordance with the invention, when it is desired to use the apparatus as a portable receiver, under which condition an external power supply is not used, the cord which is disconnected from the service outlet, is used as part of a handle to carry the apparatus. For that purpose, the invention provides a rack structure on which the cord is wound or coiled so as to cooperate with said rack to form a grip adapted to be firmly grasped in the hand.

As clearly seen in Figures 2 and 3, the rack structure comprises an elongated narrow base member or flat strip 14 of semi-rigid material, such as spring metal. Each of the opposite end portions of said member or strip is provided with a generally U-shaped hook 15. These hooks are disposed in spaced longitudinal alignment, and face in opposite directions so that the cord, when coiled in engagement with the hooks, is retained in position to span the distance between said hooks. Each hook has a loop 16 adapted for loose connection with a folded strap 17, the connection between said loop and associated folded strap being obtained by means of a link 18. The folded straps are secured in proper spaced relationship on a wall 19 of housing 11, by means of

suitable fastening elements 20. In practice, the hooks 15 and loops 16 are conveniently formed by reversely bending the end portions of elongated member or strip 14, and by affixing overlying sections 21 and 22 (see Figure 3) with the aid of suitable fastening means, such as rivets 23.

Means which advantageously take the form of fingers 24 and 25 extending from at least one of the hooks 15, serve as a clip engageable with the cord plug 13 to hold said plug in position and against displacement within the coil formed by the windings of the cord. In order to cover the wound or coiled cord and to complete the handle, a sheet 26 of foldable material, such as leather or fabric, is attached to the member or strip 14, as by means of the mentioned rivets 23. If desired, other rivets or like elements may be used at spaced points along the strip 14 and adjacent portions of sheet 26 to provide additional connection between said strip and sheet.

The sheet is attached to the strip so as to provide a pair of flaps, one on each side of said strip. These flaps, when folded over the coil which is formed by the wound layers of the cord, cover the sides of said coil, and the free marginal edge portions of said flaps overlap over the top of said coil, as more clearly seen in Figure 4. These overlapping marginal edge portions are provided with separable fasteners 27 which cooperate to retain the folded flaps in snug enveloping engagement with the cord and associated rack structure.

It is to be noted that in winding the cord about the hooks 15, the layers assume a position wherein one layer lies atop the preceding layer. In this manner, the coil formed by the layers of the wound cord, rises over and in a plane substantially perpendicular to the base member or strip 14. Thus, the coil which is covered by the sheet 26, provides a good padding and contributes to the formation of a handle adapted properly to fit in the hand of a person carrying the apparatus. Moreover, because the cord winds about hooks 15, and because these hooks are attached to the housing wall 19, through links 18 and straps 17, no strain is imposed upon that end portion of the cord which is connected with the apparatus when the latter is carried by the above described handle means.

From the foregoing description, it will be appreciated that by using the arrangement which the invention provides, the line cord, which is attached to a portable electrically operated apparatus, may be conveniently stored so as to be out of the way when the apparatus is carried about. Particularly, the fact that the invention makes it possible to put the stored cord to useful purpose in forming the handle, will be recognized as a most desirable and advantageous feature.

I claim:

1. For portable electrically operated apparatus, a combination line cord storage and handle forming device comprising a rack structure having means for attachment to the apparatus and for retention of the line cord in a wound coil cooperating with said structure to form a handle, and sheet material attached to said structure and foldable over said coil to cover the same, said rack structure taking the form of a strip having reversely bent end portions to provide hooks on which the cord is wound and said material having overlapping marginal edge portions

provided with fastening means to maintain said sheet material in enveloping engagement with the wound cord.

2. For portable electrically operated apparatus, a combination line cord storage and handle forming device comprising an elongated narrow member having reversely bent end portions to provide relatively spaced and longitudinally aligned hooks and loops, means in engagement with said loops to attach said member on said apparatus, said hooks being constructed to receive and to retain layers of the line cord wound about said hooks in the form of a coil spanning the distance between the hooks and rising over and in a plane substantially perpendicular to said member, said coil cooperating with said member to form a handle for the apparatus, a sheet of foldable material attached to said member to provide a pair of flaps, one on each side of said member, said flaps wrapping about the sides of said coil and having marginal edge portions arranged for overlapping relationship over the top of said coil, and separable fastening means on said portions of the flaps to maintain the sheet in snug enveloping engagement with said coil.

3. For portable electrically operated apparatus, a combination line cord storage and handle forming device comprising a rack structure having means for attachment to the apparatus and for retention of the line cord in a wound coil cooperating with said structure to form a handle, and sheet material attached to said structure and adapted to be wrapped around said coil to cover the same, said sheet material having portions provided with means for separably securing said portions together when said sheet material is so wrapped.

4. For portable electrically operated apparatus, a combination line storage and handle forming device comprising an elongated base member, means at the end portions of said member to attach it to the apparatus, hooks spaced along said member to receive and to retain layers of the line cord wound about said hooks in a coil cooperating with said member to form a handle for the apparatus, a sheet of foldable material attached to said member to provide a pair of flaps, one on each side of said member, said flaps wrapping about the sides of said coil and having marginal edge portions arranged for overlapping relationship over the top of said coil, and separable fastening means on said portions of the flaps to maintain the sheet in enveloping engagement with said coil.

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