

FIG 1

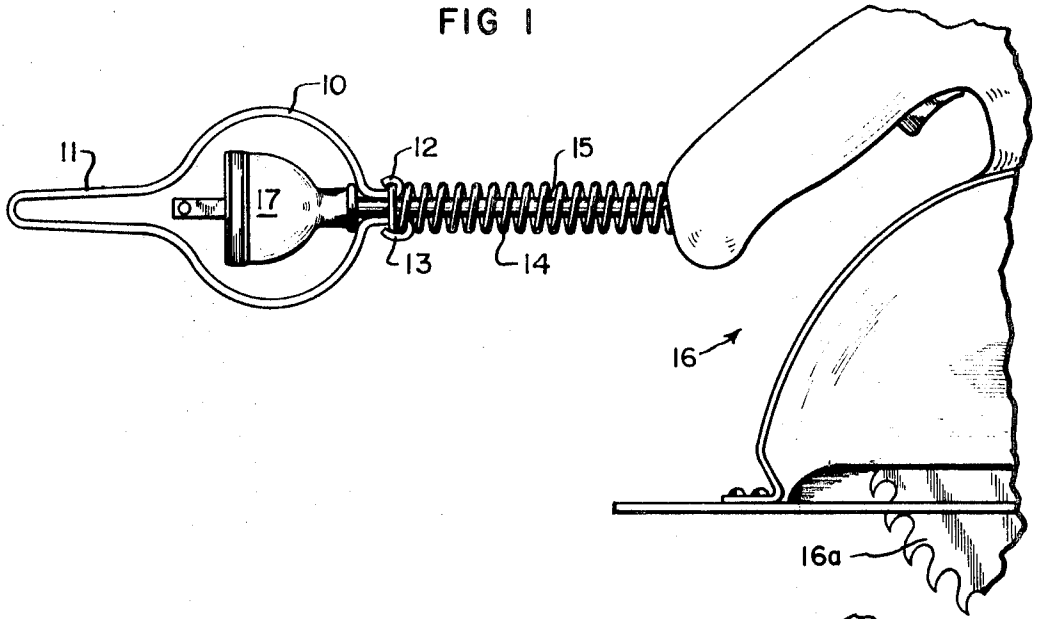


FIG 2

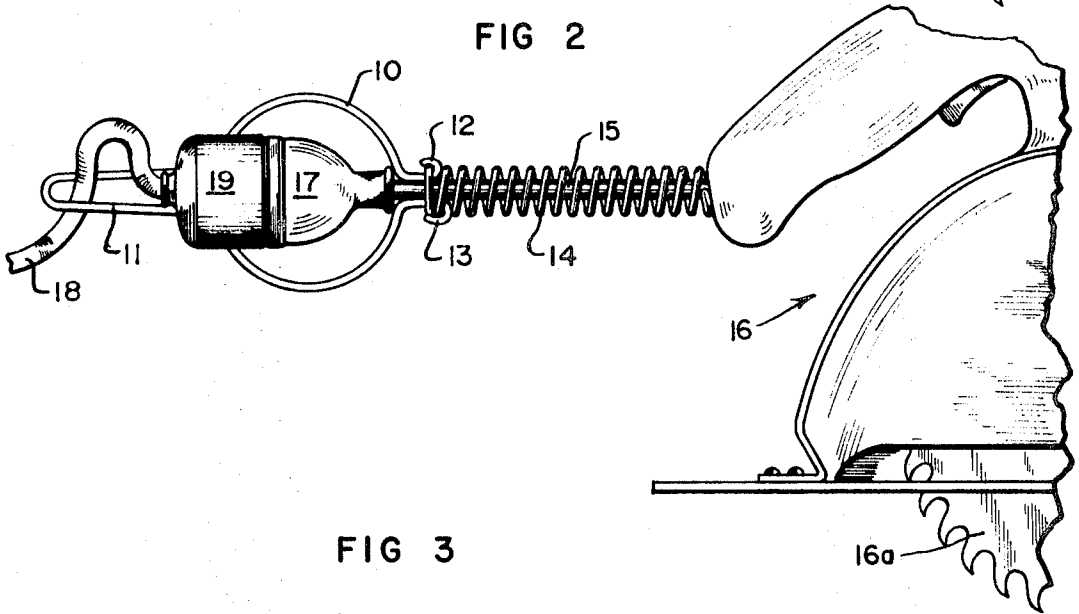
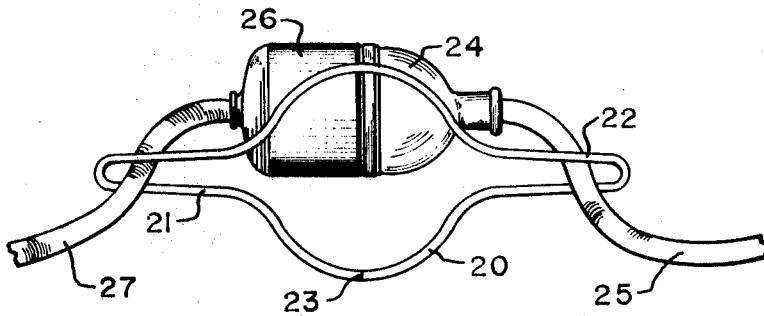


FIG 3



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FIG 4

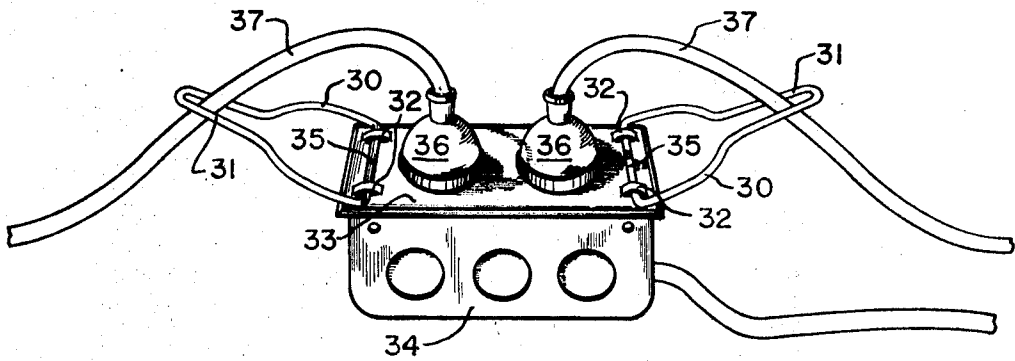


FIG 5

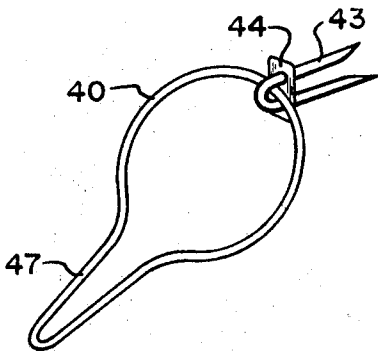
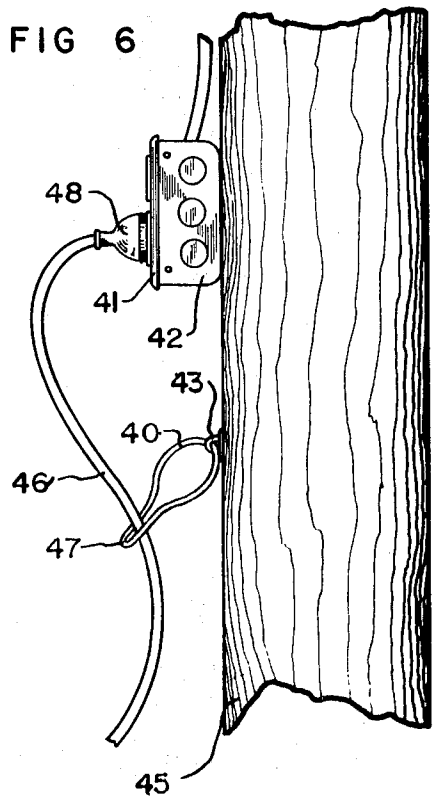


FIG 6



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CORD HOLDER

BRIEF DESCRIPTION

In the construction industry, it is not uncommon that when power tools and especially power saws are used, the electrical cords to the tools are cut or damaged by the tool. Also, when one or more long extension cords are used a great deal of time is frequently required on the part of the user of the power tool as he must repeatedly reconnect the electrical circuits at connectors which have been pulled apart.

In the past there have been a great many holders developed for use in holding electrical connectors together, but the ones with which I am familiar have not been adaptable for use with various sized connectors and cords and/or cannot be used for such diverse purposes as securing cords such that connected male and female connectors will not become separated, securing a cord such that a plug on the end thereof will not be pulled from an outlet and cooperating with a spring to extend a short cord on a tool such that an extension cord can be easily gripped thereby and held such that the connector on the extension cord will not become accidentally separated from the connector on the short cord.

In addition, many of the cord holders with which I am familiar are also more expensive to construct than is desired or than is justified, or require special adapters to surround the cord.

Principal objects of the present invention are to provide a cord holder that is very inexpensive to construct and that is very easy to use with any conventional electrical cord and connectors. It is also an object to provide a cord holder that is readily adapted for use with interconnected cords, or cords and outlets and that can be easily adapted for use in supporting the cords of power equipment such that they are not easily damaged or destroyed.

To accomplish these objects, I utilize a continuous spring element formed to have a large loop through which any conventional cord and any conventional connector can easily pass and at least one projection from the loop having an interior dimension tapered away from the loop such that any conventional size cord can be inserted therein to be securely clamped.

Additional objects and features will become apparent from the following detailed description and drawings, disclosing what is presently contemplated as being the best mode of the invention.

THE DRAWINGS

FIG. 1 is a side elevation view of a cord holder of the invention, attached to power saw (Shown fragmentarily) and arranged to hold the cord such that it will not be cut during operation of the saw;

FIG. 2, a view like FIG. 1, but showing an extension cord attached to the power cord of the saw;

FIG. 3, a perspective view of another embodiment of the invention, shown holding two connectors against uncoupling;

FIG. 4, a perspective view of still another embodiment shown on the face plate of an outlet;

FIG. 5, a perspective view of yet another embodiment; and
FIG. 6, a side elevation view of the cord holder of FIG. 5, secured to a post and gripping a cord.

GENERAL DESCRIPTION

Referring now to the drawings:

In the illustrated embodiment of FIGS. 1 and 2, the cord holder of the invention includes a loop 10 and a projection 11, both formed from a continuous piece of strong, spring steel wire, having its ends 12 and 13 each looped around the end coils of a spring 14.

Spring 14 is coiled around a length of electrical cord 15 such that one end of the spring abuts the saw 16 to which the cord is connected and the other end extends to a point adjacent to the end of the cord, on which is fixed an electrical plug connector 17. The spring, abutting the saw housing thus

holds the short cord in an extended position such that it cannot fall beneath the saw to be cut by blade 16a.

Projection 11 is of generally V-shape, being wider at its connection with loop 10 and converging toward its other end. As best seen in FIG. 2, when an extension cord 18 is to be used to supply power to cord 15 the receptacle connector 19 on the end of the cord 18 and a portion of the cord itself are put through loop 10 and the connection between plug 17 and receptacle 19 is made. Either before or after the connection is made, a portion of the cord 18 is wedged between the spring wires forming projection 11 until the cord is tightly gripped thereby.

Any pulling force applied through use of the saw will not break the connection between plug 17 and receptacle 19 since it will be transmitted through the spring, loop 10 and projection 11 to the cord 18.

In FIG. 3, another embodiment of the cord holder is shown. In this embodiment, a large loop 20 and two opposing, elongate, V-shaped projections 21 and 22 are all formed from a single length of spring steel wire, having its ends welded or otherwise securely connected together at 23. In using this embodiment of the invention, the plug end 24 of one cord 25 and the receptacle end 26 of another cord 27 are put through the loop 20 and are interconnected. Either before or after the connection is made cord 25 is wedged into extension 22 and cord 26 is wedged into extension 21, so that both cords are securely clamped. It is simple matter to release the cords, when desired, by sliding them forward within their respective extensions, but any pulling force such as would normally tend to separate the connectors will have no effect since it will be transmitted through the extensions and the loops between the cords, rather than to the connectors.

In FIG. 4, the embodiment of the cord holder shown, comprises a large loop 30 having a single, V-shaped projection 31, extending therefrom. One side 31a of the loop 31 is made straight so that it can easily be pivotally attached at 32 to the face plate 33 of an electrical outlet box 34. As before, the loop and the projection are made of a single piece of strong, spring steel wire having its ends welded or otherwise connected at 35. In practice the plug 36 at the end of an electrical cord 37 is passed through the loop and is inserted through the face plate 33 into the receptacle. Either before or after the plug is inserted, the cord 37 is wedged tightly between the portion of wire making up the projection, such that it is securely gripped. Whenever either of the cords is pulled, the force is transmitted through the projection and the loop to the outlet box and does not act to pull the plug 36 from its receptacle.

The embodiment of cord holder shown in FIGS. 5 and 6 is much like that shown in FIG. 4. In this case however, the loop 40 is adapted to be pivotally connected to a member other than the face plate 41 of outlet box 42. Instead, the U-shaped nail 43 is used, with the legs of the nail straddling the wire of the loop. A sliding spacer 44 fits onto the legs 43a of the nail, so that when the nail is driven into a post 45 or other available member in the vicinity of the outlet box. As with the embodiments previously described the cord 46 is wedged into the space between the spring steel forming the projection 47 and is securely held so that when the plug 48 on the end thereof is inserted into the outlet box the plug is not pulled free.

Although preferred forms of my invention have been herein disclosed, it is to be understood that the present disclosure is by way of example and that variations are possible, without departing from the subject matter coming within the scope of the following claims, which subject matter I regard as my invention.

1. In combination
 - an electrical tool having an electric motor
 - a length of electrical cord connected to the motor and projecting from the tool;
 - an electrical plug on the end of the length of cord remote from the tool;
 - a coil spring surrounding the length of cord and abutting the tool;

3

a loop and elongate projection extending therefrom, said projection being spread more at an end connected to the loop than at an end remote therefrom, and said loop and said projection being formed of a single length of spring material; and

4

means coupling said loop to the end of said spring remote from the tool such that the said electrical plug is biased into the loop and the spring acts between the tool and the loop to extend the length of cord.

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