June 2, 1970 W. M. SPICER 3,515,364

RETAINER CLIPS FOR TEMPORARY WIRING

Original Filed Nov. 16, 1966

FIG-1

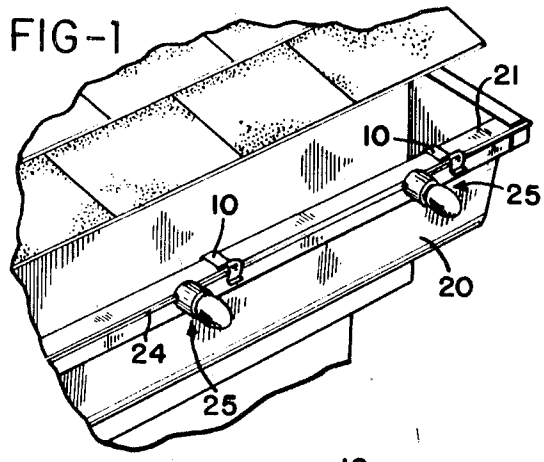


FIG-5

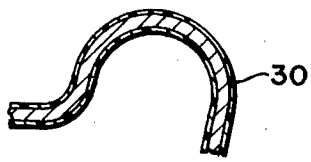


FIG-6

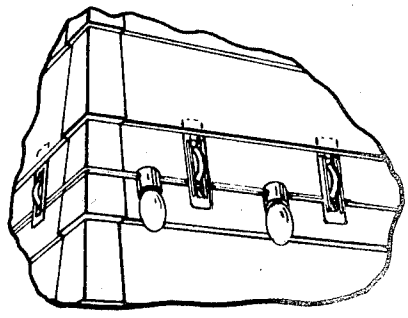


FIG-2

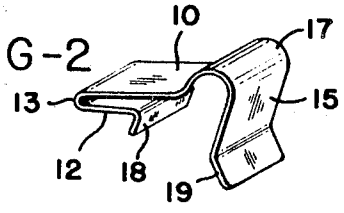


FIG-3

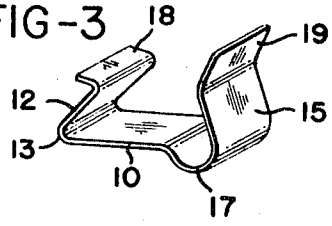


FIG-7

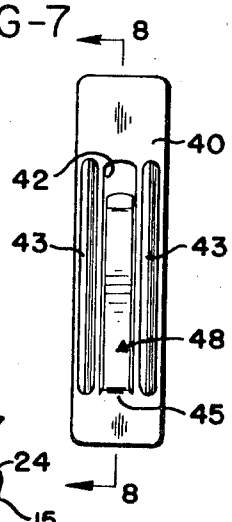


FIG-8

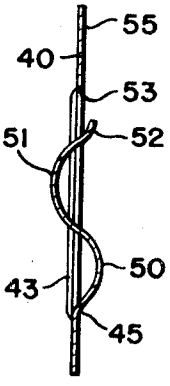


FIG-4

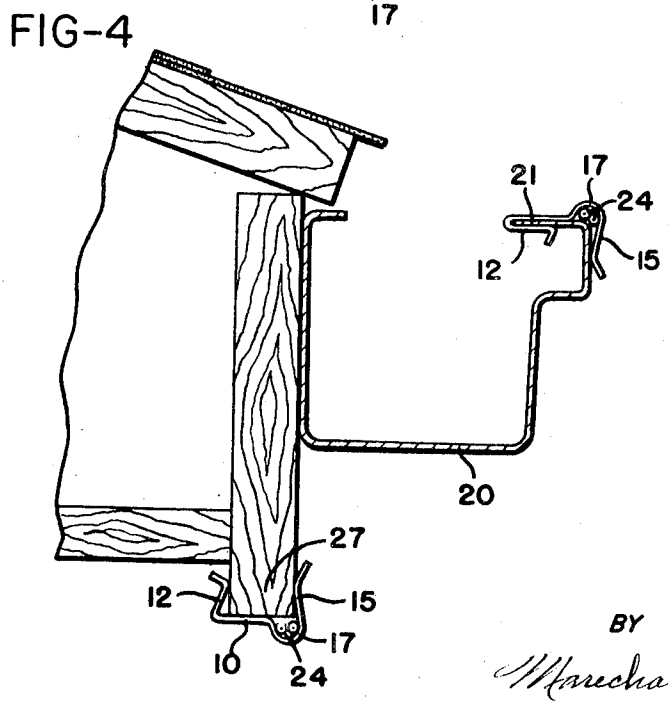
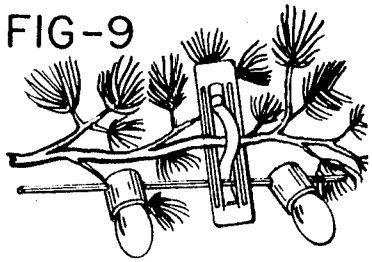


FIG-9



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RETAINER CLIPS FOR TEMPORARY WIRING

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Original application Nov. 16, 1966, Ser. No. 594,852. Divided and this application Oct. 23, 1968, Ser. No. 769,929

Int. Cl. F16g 11/02

U.S. Cl. 248—74

2 Claims

ABSTRACT OF THE DISCLOSURE

Metal retainer clips, preferably plastic coated and zinc plated, are provided for temporarily attaching wiring, as for outdoor decorations, to structure such as trim on the exterior of a dwelling, or to fencing, trees, i.e., to tree limbs, siding, shingles, or the like.

CROSS REFERENCE TO RELATED APPLICATION

This application is a division of copending application Ser. No. 594,852, filed Nov. 16, 1966, now Pat. No. 3,438,604, dated Apr. 15, 1969.

BRIEF SUMMARY OF THE INVENTION

This invention relates to simple inexpensive retainer clips which are useful for temporarily attaching wiring and the like to the exterior of a dwelling, to trees or shrubbery, for example in placing outdoor Christmas lighting.

Various devices have been proposed for attaching temporary outdoor wiring to house structure, particularly for a decorative effect such as at Christmas time. These devices generally require that some permanent or semi-permanent attachment be made to the structure of the dwelling, or in some cases metal clips are provided on the lighting for attachment to bushes and the like. Since the arrangement is temporary, it is particularly desirable that clips as provided by this invention should be easy to apply and to remove, without requiring tools for this purpose, and the clips should grip the supporting member or structure firmly, yet they should not embed in or abrade the structure in any way, since this would leave a damaging scar, or perhaps scrape away protective paint, when the clip is removed. Also, since clips of this type are most often used to support electrical wiring, it is desirable that the clips be electrically insulated if they are constructed of metal, in order to assure that no short circuit is created inadvertently, as by scraping through the insulation on the wires.

The present invention provides a form of such retainer clip, particularly adapted for attachment to roofing, siding, or shrubbery.

The present invention, therefore, has for its principal object the provision of novel, inexpensive, and easily manipulated clips for the temporary support of electrical wiring and the like, particularly for decorative purposes; to provide such clips which are constructed from steel which is sufficiently ductile to be bent to a desired shape and to retain that shape with some spring effect; to provide such clips which preferably are coated with a protective and electrically insulating material; to provide such clips where the steel body is zinc plated to minimize corrosive action as with other metals to which the clips may be attached; and to provide such clips which are readily adapted to attachment to roofing, siding, or shrubbery.

Other objects and advantages of the invention will be apparent from the following description, the accompanying drawings and the appended claims.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view illustrating the use of the form of clip provided by the invention covered in said parent application, to attach decorative lighting temporarily to a rain gutter;

FIG. 2 is a perspective detail view of one of the clips shown in FIG. 1;

FIG. 3 is a perspective view of essentially the same clip structure, with the clamp shown in an alternative position;

FIG. 4 is a detail view showing a clip as in FIG. 2 attaching wiring to the lip of a rain gutter, and a clip as in FIG. 3 attaching wiring to the bottom of a facia board;

FIG. 5 is an enlarged sectional view through a portion of one of the clips, showing the protective coating thereon;

FIG. 6 is a perspective view of a portion of a dwelling, showing the form of clip claimed herein, securing decorative lighting and wires to siding;

FIG. 7 is an elevational view of one of the clips shown in FIG. 6;

FIG. 8 is a longitudinal sectional view taken on line 8—8 in FIG. 7; and

FIG. 9 is a perspective view showing application of the clip of FIG. 7 to shrubbery or trees.

Referring to the drawings, which illustrate preferred embodiments of the invention, and particularly with reference to FIGS. 2 and 3, a novel clip is shown formed from an integral metal strip for providing a body having a base section **10**, a clamp section **12**, which is an integral part of the strip, connected to the base along the bend **13**, and a retainer section **15**. Both the clamp section and the retainer section extend generally outward from one side of the base section **10**, extending in the same direction to form a space between these sections into which the supporting structure is clamped. A retainer loop portion **17** is formed between the base section **10** and the clamp section **15**, and cooperates with the supporting structure to surround wiring passed through the loop portion. The ends of the clamp and retainer section are parts formed outwardly, as shown at **18** and **19**, such that the opening between the ends of these sections is somewhat greater in width than the narrower part of the space between them. The internal surfaces of the clamp, particularly those parts which may come into engagement with the supporting structure of a dwelling, are smooth surfaces which will not cut or abrade the structure to which the clip is attached.

As shown in FIG. 1 and in FIG. 4, and more fully described in said parent application Ser. No. 594,852, the type of clip shown in FIG. 2 can readily be attached to the lip of a rain gutter **20** on a dwelling.

FIGS. 6–9 show the embodiment of the invention claimed herein, where a clip is provided which is particularly adapted for temporarily attaching wiring to shrubbery, as in FIG. 9, or for supporting the wiring from house siding, shingles, or the like, as shown in FIG. 6. The clip is formed as an integral metal strip body **40** having an elongated generally rectangular opening **42**, approximately in its center. The body **40** is preferably flat, and at the opposite sides of the opening **42** there are stiffening ridges **43** formed upward from the material of the body.

The material struck from the body in the forming operation remains integrally attached to the body at one of the smaller edges of the opening, in the region designated by the reference numeral **45**. This strip is formed as a generally S-shaped retainer section **48** which is normally rigid enough to maintain its shape, as shown particularly in FIG. 8, while having a smaller flexible connection in the region **45** to the remainder of the strip. The retainer

section **48** thus is formed as an integral extension and projects outwardly from one side of the body. The portion **50** thence extends inwardly through the opening **42** and outwardly of the other side of the body and the portion **51**, backward through the opening again terminating in a free end **52** which is spaced from the other small edge **53** of the opening **42**.

The retainer member thus forms with the body two loop portions through which wiring, branches of shrubbery, or the like can be received and completely surrounded to guard against dislodging. In one type of use the wiring can be passed under the loop portion **50**, as shown in FIG. 6, by flexing the retainer section outwardly, to the right as shown in FIG. 8. The flat end **55** of the body can then be inserted under siding boards, shingles, or the like, or into other crevices, preferably with the free end **52** of the retainer section facing the surface to which the clip is attached. Thus, the wiring is securely engaged by the clip and cannot be dislodged without removing the clip from the point of attachment.

In another use of this clip, the wiring is engaged by the clip in the same manner, and the loop portion **51** is engaged around a branch of a tree, shrubbery, or some-other thin extended member, such as fence wire or the like. Again, the wiring is securely surrounded by the loop portion **50**, and in this case the branch or other member to which the clip is attached is also surrounded by the loop portion **51** and adjacent parts of the clip body.

In practice it has been found desirable to form the clip members of a plain carbon steel having a Rockwell hardness of about 90 on the B scale. This material is sufficiently ductile to be bent without great difficulty to a desired position, remain in that position, and retain sufficient spring to resist deformation and thereby provide an effective clamping action. In order to minimize corrosion and/or electrolytic action, since the clips will in most cases be used out of doors, the steel clips are zinc plated, and preferably they are then dipped or otherwise coated with a plastic material, such as a clear plastic, which provides additional corrosion protection and also provides an electrical insulation on the surface of the clip. A segment of a clip showing the plastic coating **30** is illustrated in FIG. 5. Likewise, the clip members can be colored as desired in order to conceal their appearance where this may be a factor to be considered.

While the forms of apparatus herein described constitute preferred embodiments of the invention, it is to be understood that the invention is not limited to these precise forms of apparatus, and that changes may be made therein without departing from the scope of the invention.

What is claimed is:

1. A clip for temporary attachment of electrical wiring to shrubbery, siding on a dwelling, and the like, said clip comprising an integral metal strip body formed to therein and a generally S-shaped flexible retainer section formed as an integral extension from one of the smaller edges of said opening and projecting outwardly from one side of said body, thence inwardly through said opening, and outwardly of the other side of said body and back through said opening to form a retainer loop portion on each side of the body, one of said loop portions being adapted to receive the wiring and the other loop portion adapted to engage the branches of shrubbery and the like, and stiffening ribs formed in said body alongside and outwardly of the longer edges of said opening.

2. A clip as defined in claim **1** wherein one of the ends of said body projects for a substantial distance beyond the edge of the opening therein to engage beneath siding and similar structure on a dwelling.

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U.S. Cl. X.R.

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