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WIRE CLAMP AND HOLDER

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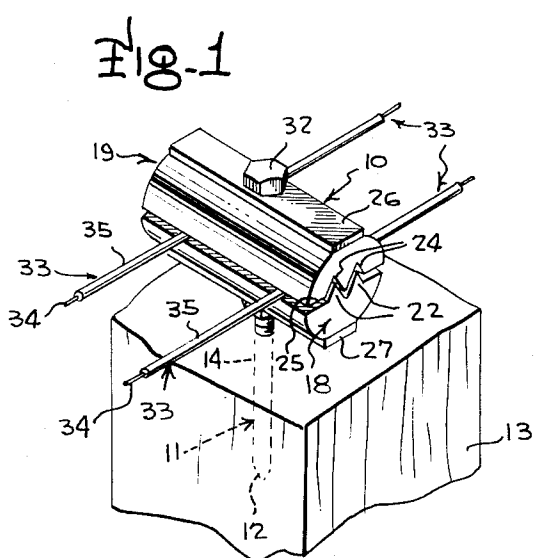
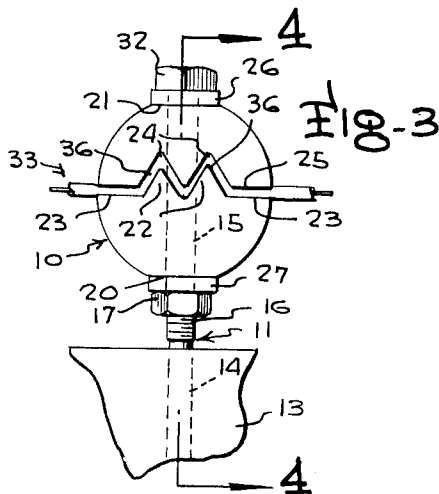
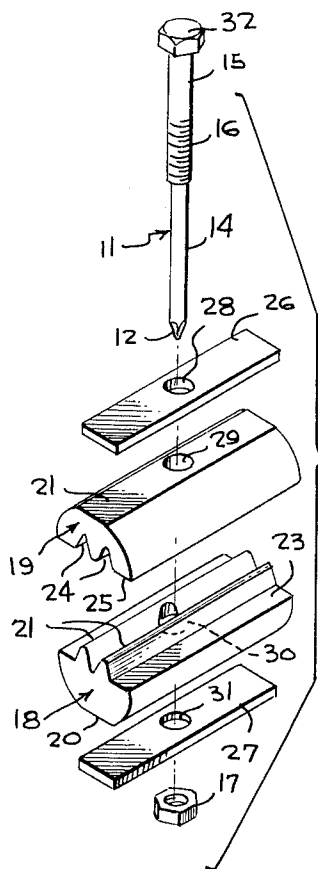


Fig-2

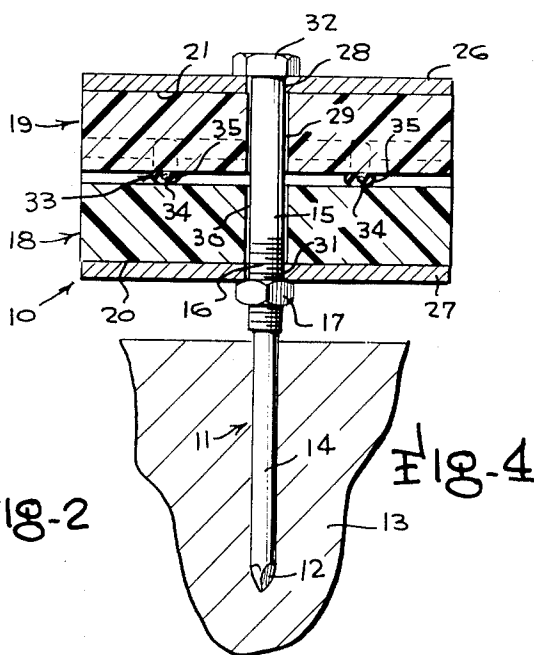


Fig-4

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3,246,076

WIRE CLAMP AND HOLDER

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3 Claims. (Cl. 174-157)

This invention relates to a device for holding or clamping wires in place, and more particularly to a holder or clamp for antenna wires such as antenna wires used in conjunction with television sets.

The primary object of this invention is to provide a wire clamp and holder which includes a securing element that is adapted to be connected to a suitable support such as a post, building or the like, and wherein wires such as television antenna wires are adapted to be clamped between coating pieces of the device in such a manner that breakage or damage to the wires will be prevented, and wherein accidental slippage or movement of the wires from their proper location will be minimized or prevented.

A further object is to provide a wire clamp and holder that is adapted to be used for maintaining wires such as television antenna wires in a suitable location such as in the vicinity of farm lands or the like, and wherein the clamp or holder of the present invention can be readily attached to a post or other member so that the wires will be held in the desired manner.

Still another object is to provide a wire clamp and holder of the type stated that is rugged in structure and foolproof in use and which is economical to manufacture and efficient in operation.

These and other objects of the invention will become apparent from a reading of the following specification and claims, taken together with the accompanying drawing, wherein like parts are referred to and indicated by like reference characters, and wherein:

FIG. 1 is a perspective view illustrating the wire clamp and holder of the present invention and showing the device being used.

FIG. 2 is a perspective view showing the parts of the wire clamp and holder separated.

FIG. 3 is an end elevational view.

FIG. 4 is an enlarged sectional view taken on the line 4-4 of FIG. 3.

Referring in detail to the drawings, the numeral 10 indicates the wire clamp and holder of the present invention which comprises a securing element that is indicated generally by the numeral 11, FIG. 4, and the securing element 11 has a pointed end 12 which is adapted to engage a support member such as the post 13. The securing element 11 includes a shank which embodies a first smooth cylindrical portion 14 as well as a second portion 15, and the portion 15 is of slightly greater diameter than the portion 14. The portion 15 has a threaded section 16 thereon, and the numeral 17 indicates a fastener or lock nut which is arranged in threaded engagement with the threaded section 16 for a purpose to be later described.

There is further provided a pair of coating body pieces 18 and 19 which are adapted to be made of a suitable insulated material such as a suitable plastic material. The body pieces 18 and 19 are provided with flat outer surfaces 20 and 21, and the body piece 18 has flat inner portions 23. The body piece 18 also has a pair of longitudinally extending tapered teeth 22 which are arranged intermediate the sides thereof and which extend from one end of the body piece 18 to the other end thereof. The other body piece 19 has a pair of longitudinally extending tapered grooves or recesses 24 for coaction with and for receiving the tapered teeth 22 when the parts are properly assembled.

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There is further provided a pair of similar plates 26 and 27 which are arranged contiguous to the outer flat surfaces 21 and 20 of the body pieces 19 and 18, and the numerals 28, 29, 30 and 31 indicate registering centrally disposed openings or apertures in the plate 26, body piece 19, body piece 18, and plate 27 respectively, and these registering openings are adapted to have the portion 15 of the securing element 11 extended therethrough as shown in the drawings.

The outer end of the securing element 11 is provided with a head 32. The numeral 33 indicates wires which are interposed between the coating body pieces 18 and 19, and the wires 33 include inner conductors 34 which may have insulation 35 thereon, and as shown in FIG. 3 the wires 33 are properly positioned, crimps 36 are adapted to be formed in the wires, due to the interfitting and interengaging teeth 22 and grooves 24.

From the foregoing, it will be seen that there has been provided a wire clamp and holder, and in use with the parts arranged as shown in the drawings, the securing element 11 is adapted to be connected to a suitable support member such as a post 13, and it is to be understood of course that a plurality of the clamps 10 can be used where needed or desired. In outlying areas where it is desired to support television antenna wires to improve reception for television sets, the clamps 10 can be connected to members in the field such as posts 13 and due to the provision of the pointed end 12, the securing element 11 can be readily driven into a member such as the post 13. Instead of connecting the device to a post, the device can be fastened to any other suitable member and, for example, the clamps can be suitably connected to a side of a house, building or the like.

It will be seen that with the pair of body pieces 18 and 19 shaped as shown in the drawing and made of a suitable insulating material such as a suitable plastic substance, the pair of spaced apart wires 33 will be securely held in place between the body pieces 18 and 19, and due to the provision of the tapered teeth 22 and tapered grooves 24, the wires 33 will be crimped as at 36, FIG. 3, when the parts are properly tightened and this construction serves to insure that the wires 33 will not slip or move from their proper location. Also, since the pieces 18 and 19 are made of a suitable plastic substance, damage to the wires will be prevented.

The fastener 17 threadably engages the section 16, and the head 32 and fastener 17 have arranged therebetween the plates 26 and 27, and the plates 26 and 27 have interposed therebetween the pair of body pieces 18 and 19 so that with the fastener 17 properly tightened, the wires 33 will be clamped with the desired and proper amount of pressure thereon. Then, with the parts in their assembled position, a hammer or the like can be used to drive the securing element 11 into a member such as the post 13 so that the wires can be supported in the desired manner.

The parts can be made of any suitable material and in different shapes and sizes.

When using the present invention to support antenna wires, there will be a minimum amount of interference signals and wherein reception from the television set will be improved. Because the body pieces 18 and 19 are made of a yieldable material such as a suitable plastic, the wires will not be damaged or cut as is the case when porcelain or metal clamps are used. In addition, the provision of the plates 26 and 27 and the other parts insures that there will be a uniform pressure on the wires to properly hold the wires. Instead of making the body pieces out of plastic, hard rubber or the like can be used. When using the device, the wires such as the wires 33 are positioned between the pieces 18 and 19, and then the securing element 11 is extended through the openings 28

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and 29, 30 and 31 and the fastener 17 is tightened and then the entire device is hammered or driven into a member such as the top of a post 13. The fastener 17 functions as a lock nut. The present invention can be used for supporting various types of wires and can be used for holding or supporting wires of different sizes and by making the device in a large enough size, the need for a wire clamp to initially crimp the wires may be eliminated. The tapered teeth 22 fit in the tapered recesses 24 so that the pieces 18 and 19 will be maintained properly aligned, and when using the present invention to support television antenna wires, transmission signals being broadcast from distant locations can be more readily picked up as compared to other types of antenna wire holders.

The present invention can be used on various articles or structures including vehicles such as automobiles, and it can also be used for various purposes such as in conjunction with wires such as electric wires or conductors, and the like. In addition, screws, nails, bolts or other fasteners of any type can be used. In certain instances the device may be provided with grooves or recesses to receive wires of different sizes therein. For small wires, the present invention will form a crimp in the wire, but when larger size wires are being handled, grooves may be provided to receive such wires. In addition, the pair of body pieces 18 and 19 may be held or fastened together by suitable securing elements or the like.

Minor changes in shape, size and rearrangement of details coming within the field of invention claimed may be resorted to in actual practice, if desired.

What is claimed is:

1. In a wire clamp and holder, a securing element including a shank having a pointed end adapted to engage a support member, said shank including a first smooth

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cylindrical portion, a second portion of greater diameter than said first portion, said second portion having a threaded section thereon, a fastener arranged in threaded engagement with said threaded section, first and second coating body pieces of insulated material each having flat outer surfaces and flat inner portions, said first body piece being provided with spaced apart longitudinally extending tapered teeth, said second body piece having tapered longitudinally extending grooves for receiving said teeth, a pair of spaced parallel plates arranged contiguous to the outer flat surfaces of said body pieces, there being centrally disposed registering apertures in said plates and body pieces for the projection therethrough of the second portion of said securing element, a head on the outer end of said securing element, and spaced apart wires interposed between said body pieces and said wires having their longitudinal axes perpendicular to the longitudinal axes of said body pieces.

2. The structure as defined in claim 1 wherein said wires are crimped between the body pieces due to the interfitting teeth and grooves.

3. The structure as defined in claim 1 wherein the wire clamp and holder is adapted to be used for supporting television antenna wires.

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