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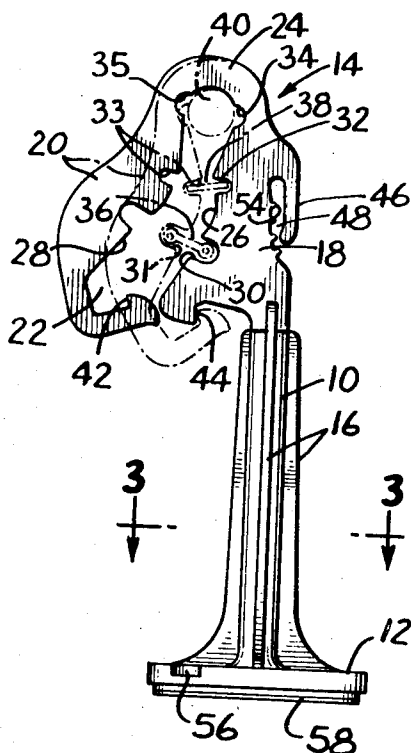
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[54] **CABLE MOUNTING**
7 Claims, 7 Drawing Figs.

[52] U.S. Cl..... **248/68,**
 174/156, 248/71, 248/229
 [51] Int. Cl..... **F161 3/22**
 [50] Field of Search..... **248/68,**
 229, 71, 227; 174/154, 156

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ABSTRACT: A standoff mounting for cables and the like includes an elongated post constructed to be fastened at one end to a surface of a building structure and having a resilient head at the other end. The head includes a pair of spaced half portions, one of which is resiliently moveable with respect to the other, and the head also includes a plurality of notches for receiving the cables. A clamp is formed on the head for maintaining the spaced half portions positioned so as to firmly hold the cables in the notches.



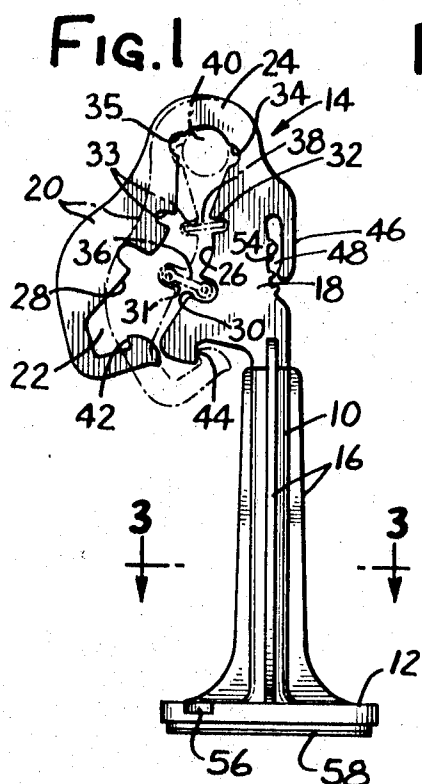
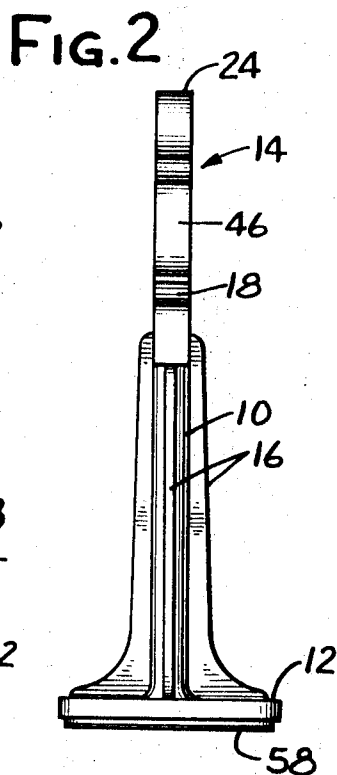
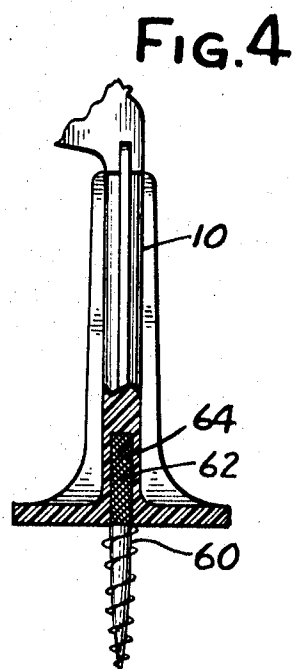
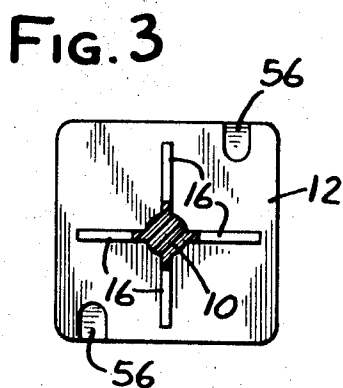
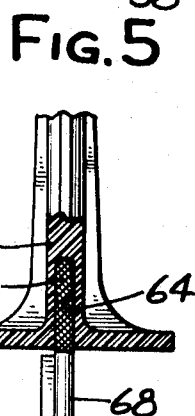
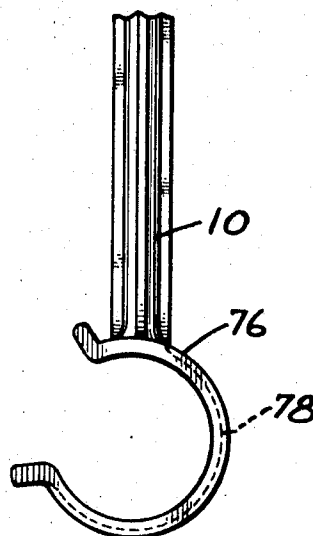
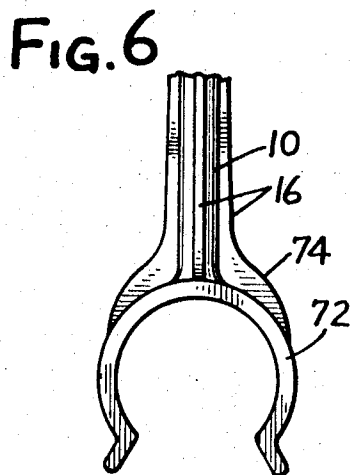
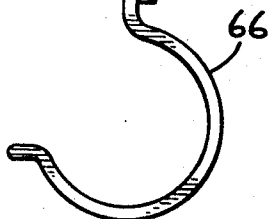


FIG. 7



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CABLE MOUNTING

BACKGROUND OF THE INVENTION

This invention relates to a mounting and, more particularly, to a new and improved standoff for maintaining various conductor cables spaced from a building structure or the like.

Standoffs of various constructions have been employed for maintaining the coaxial ribbon and other antenna lead cables of television antennas in spaced apart relationship from the building structure on which the antenna is mounted to firmly retain and prevent damage to the cables and guide the cables over their run. Prior standoffs are frequently difficult and time consuming to manipulate into affixed correlation with the cables and are not readily adaptable to be mounted on building structure surfaces of varied compositions and shapes, the latter variation being a common occurrence along the course of the cable run. Such building structure variations frequently require the use of two or more standoffs of varied construction to enable fastening of the standoffs to the building over the entire length of run of the cable. Moreover, such prior standoffs were frequently of necessity formed, in major part, of metal subjecting the transmission line to certain electronic cable losses and also subjecting the standoffs themselves to rust due to exposure. In the advance of relatively complex modern antenna constructions in which a plurality of cables must be run to the antenna, frequently a plurality of standoffs of the prior construction are required to mount each of the individual wires, particularly in view of the fact that each of the cables generally differs in cross-sectional configuration from other ones of the cables.

The standoff constructed in accordance with the principles of my invention overcomes these difficulties. My standoff generally may be moulded of all plastic construction eliminating rust problems and obviating the possibility of interfering fields which might cause cable losses in the transmission line. Moreover, my standoff is capable of rapid and selective affixation of one or a plurality of cables of varied cross-sectional configurations and thus a single standoff at any one location along the cable run is operative to simultaneously hold all the cables of a multiple cable run. Once the various cables have been affixed in the standoff of my invention, a major portion of them may be simultaneously, rapidly and firmly locked in the standoff by a single clamping motion and arrangement. The standoff of my invention may also be readily and easily mounted on any one of a number of differing building structure surfaces which might be encountered along the run of the cable without necessitating the provision of individual standoffs of varied specialized construction or the extensive modification of the standoff for adaptation to each of the various surfaces. Finally, the standoff of my invention is relatively simple in construction and may be easily and inexpensively manufactured.

SUMMARY OF THE INVENTION

In a principal aspect, the mounting constructed in accordance with the principles of my invention includes a post having a fastening means at one end to fasten the post to a structure and having a head at the other end. The head includes a first portion which is attached to the post and a second portion which is spaced from the first portion and which is connected to the first portion by a flexible connection such that the second portion may be selectively moved toward or away from the first portion. The portions include a plurality of notches which cooperate with each other to receive selective ones of the cables and a clamping means is provided on the portions to maintain the portions in a position relative to each other that the cables are firmly held in the notches.

These and other objects, features and advantages of the present invention will be more clearly understood through a consideration of the following detailed description.

BRIEF DESCRIPTION OF THE DRAWING

In the course of this description, reference will frequently be made to the attached drawing in which:

FIG. 1 is a side elevation view of a preferred embodiment of standoff constructed in accordance with the principles of my invention;

FIG. 2 is an end elevation view of the standoff of FIG. 1;

FIG. 3 is a cross sectioned plan view of the standoff taken along line 3-3 of FIG. 1;

FIG. 4 is a partially broken elevation view of the base portion of a standoff showing a preferred embodiment of screw fastener;

FIG. 5 is a partially broken elevation view of the base portion of a standoff showing one embodiment of clamp fastener;

FIG. 6 is a partial elevation view of the base portion of a standoff showing another embodiment of clamp fastener; and

FIG. 7 is a partial elevation view of the base portion of a standoff showing still another embodiment of clamp fastener.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring to FIGS. 1-3, a preferred embodiment of standoff constructed in accordance with the principles of my invention is shown. The standoff comprises a post 10 which is attached at one end to a substantially rectangular base 12 and which carries a head 14 at the other end. A plurality of reinforcing ribs 16 extend from the upper surface of the base 12 axially along the length of the post 10 to reinforce the post. The head, post, base and ribs are preferably moulded in integral one-piece construction, the standoff being formed of a suitable polymeric material, such as polyethylene or polypropylene.

The head 14 comprises a substantially flat irregular-shaped element having a pair of half portions 18 and 20 which are separated from each other by a space 22 of irregular shape. Portion 18 is moulded to top of the post 10 and portions 18 and 20 are integrally moulded together at their tops to provide a resilient bridging connector 24. Since half portion 18 is resiliently connected to half portion 20, the dimensions of the space 22 may be readily varied by bending portion 20 toward or away from portion 18, as shown in the solid and dot and dash lines positions in FIG. 1. The inner peripheral edges 26 and 28 of portions 18 and 20 are provided with a plurality of notches 30 and 31, 32 and 33, and 34 and 35, respectively, selected ones of the notches on one portion being arranged to cooperate with selected other ones of the notches on the other portion to form a plurality of slots for containing in clamping engagement the various sized and shaped cables. For example referring to FIG. 1, notches 30 and 31 are adapted to confine a coaxial cable or a ribbon-type television antenna cable 36 which is generally barbell-shaped in cross section; notches 32 and 33 are adapted to contain a flat ribbon-shaped cable 38; and notches 34 and 35 are generally constructed to retain a tubular or oval-shaped cable 40. A resilient barb 42 is carried at the end of portion 20 and a complimentary shoulder 44 is carried on portion 18 for firmly clamping the half portions together.

To install the various cables in their respective notches, half portion 20 is spread apart from portion 18 to increase the size of space 22, as shown in the solid line configuration of FIG. 1. The various individual cables are then inserted between the open barb 42 and shoulder 44 and positioned adjacent their respective notches. When the cables have been so positioned, the half portions are pressed together and the resilient barb 42 is snapped over the shoulder 44 firmly clamping the portions together to retain the respective cables in their respective notches.

A resilient extension finger 46 is also carried on the outer edge of portion 18, the finger being spaced along a major portion of its length from the edge of the portion to define an elongated slot 48. The configuration of the slot allows a flat ribbon multiconductor cable, for example a cable of the sort used to control the rotor of a rotatable television antenna, to be carried therein. A plurality of raised projections 54 are formed in the slot 48 on the edge of the portion 18 and cooperate with the somewhat enlarged end 50 of the slot to maintain the cable positioned in the slot.

In order to attach the standoff to surfaces of the building structure or the like of varying nature, several fastener embodiments are shown. Referring to FIGS. 1—3, the base 12 includes slots 56 in diagonally opposite corners for the purpose of receiving an appropriate nail or screw for affixing the standoff to the surface after positioning the standoff in the desired location on the surface. Also a double faced adhesive pad 58 may be carried on the flat underside of the base 12 and the standoff and pad pressed against and adhesively secured to the surface of the building structure.

Referring to FIG. 4, another embodiment of fastener arrangement is shown which comprises a masonry nail or wood screw 60 having a knurled end 62 which is press fitted into a passage 64 extending axially into a portion of the length of the post 10. The fastener 60 may be either preinserted in the passage 64 and the entire assembly screwed into the building structure or the fastener may be first installed in the building structure in the desired location and the standoff press forced into the knurled end 62 of the fastener.

Referring to FIG. 5, a clamp fastener arrangement is shown which comprises a resilient spring clamp 66 which is attached at one end to an elongated pin 68. The pin is knurled at one end 70 and is received in press fitted relationship in the passage 64 in a manner similar to that previously described with respect to the embodiment of FIG. 4. It will be appreciated that the standoffs shown in FIGS. 1—5 may be easily and rapidly mounted on building structure surfaces of varied physical as well as geometrical characteristics without the necessity of major reconstruction of the standoff or the provision of a plurality of different standoffs of specialized construction for each of the individual surfaces.

Referring to FIGS. 6 and 7, two additional embodiments of clamp-type fasteners are shown which are integrally moulded with the post 10 in place of the base 12. In FIG. 6 a downwardly facing resilient clamp 72 is provided, the reinforcing ribs 16 extending downwardly over a portion of the periphery of the clamp surface at 74 to provide increased resiliency. In FIG. 7 a side facing clamp 76 is shown having a groove extending about a major portion of its surface periphery for receiving spring metal band 78 to increase the resiliency of the clamp.

It should be understood that the embodiments of the invention which have been described are merely illustrative of a few of the applications of the principles of the invention. Numerous modifications may be made by those skilled in the art

without departing from the true spirit and scope of the invention.

I claim:

1. A mounting for cables and the like comprising: an elongated post having fastening means at one end adapted for mounting the post to a structure; a head having a first portion formed integrally at the other end of the post, a second portion extending in spaced relationship to said first portion, and a flexible connecting means connecting said first and second portions for selective movement of said second portion to a first position toward and a second position away from said first portion; a plurality of notches defined on said portions, selected ones of said notches on said first portion cooperating with selected ones of said notches on said second portion to receive selected ones of the cables therein; clamping means on said first and second portions spaced from said connecting means for maintaining said second portion in said first position, whereby the cables are firmly held by said notches; and a third resilient portion carried on one of the portions on a side opposite said notches, said third portion being spaced from the portion which carries it to define a notch for receiving and holding another of the cables.
2. The mounting of claim 1 wherein said fastening means includes a flat base formed integrally at said one end of said post, said base including means for fastening said base in substantially flush relationship with the structure.
3. The mounting of claim 1 wherein said fastening means includes stud means insertable in the structure, and a passage defined in said one end of said post for receiving a portion of said stud means in fast relationship thereto.
4. The mounting of claim 1 wherein said fastening means comprises a resilient clamp carried at said one end of said post.
5. The mounting of claim 4 wherein a passage is defined in said one end of said post for receiving a portion of said clamp in fast relationship thereto.
6. The mounting of claim 1 wherein said head and said post are moulded of a nonmetallic material in an integral one-piece construction.
7. The mounting of claim 1 wherein said notches are constructed and arranged to receive cables of varied cross-sectional configurations.