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WIRE SUPPORT DEVICE
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FIG. 1

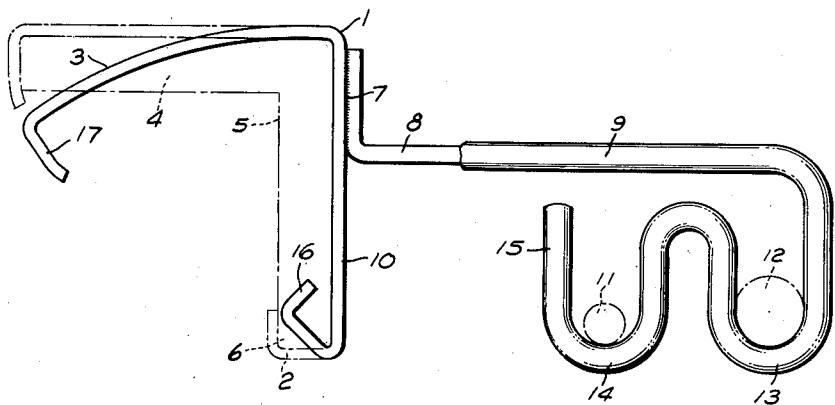
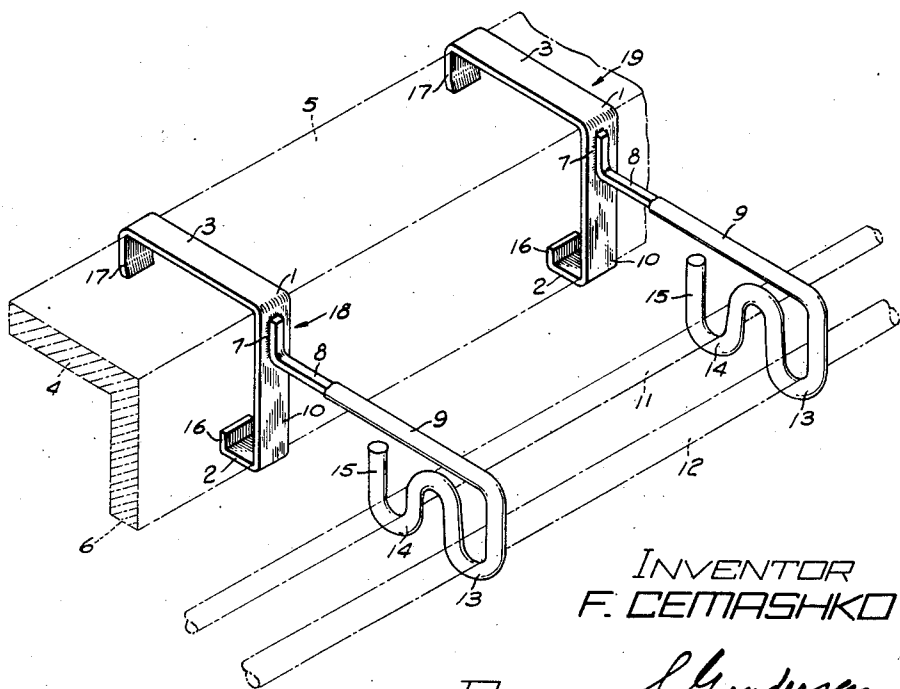


FIG. 2



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WIRE SUPPORT DEVICE

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6 Claims. (Cl. 248—72)

This invention relates to wire support devices, and particularly to such devices used for the suspension of fire detection wire from telephone equipment frames having angle iron members.

In connection with telephone equipment frames, such as frames for central office switching equipment or frames for electronic carrier equipment, a specially designed pair of wires is disposed along the length of the frame to serve as a fire warning. This pair consists of a fire detection wire and a return wire, to complete the circuit, parallel to each other along the length of the frame. In the event of fire, the detection wire melts breaking a circuit and actuating an alarm. In the past such fire detection wires have been supported from frame angle iron members by a complex three-part device, including a separate cardboard insulating support. This three-part device was time consuming to assemble at the point of installation and involved the possibility of loss, prior to assembly, of one or more of the parts. In addition, it was possible for parts to become separated after assembly and the fire detection wire to thereby lose its support.

The object of this invention is a wire support device of simple and cheap construction to support wires from equipment frames in a predetermined spaced relation from each other.

A further object of this invention is a wire support device capable of rapid and simple installation on the angle iron members of telephone equipment frames.

According to the invention, V-shaped flexible metal clasps are installed on the angle iron members of telephone equipment frames, with fire detection and return wires suspended from insulated supports permanently affixed thereto.

In a preferred embodiment of the invention a more secure installation of the metal clasps is obtained by the addition of retaining ends to the clasps.

These and other features of the invention will be more fully understood from the following detailed description when taken in conjunction with the accompanying drawing, in which:

FIG. 1 is a front view of the fire wire support shown in clasped and unclasped positions on an angle iron member, a pair of wires being shown diagrammatically in the spaced troughs of the support, and

FIG. 2 is a perspective view showing two fire wire supports clasped onto an angle iron member, the supports holding a pair of wires in a predetermined spaced relationship.

Referring now to the drawing, the device consists of a U-shaped channel member 1, made generally of spring steel, having a bottom portion 10 and two side portions 2 and 3. The side portions 2 and 3 should have sufficient resiliency to grip a side 4 and a side 6 of angle iron member 5 to which it is affixed. In FIG. 1 sides 3 and 2 are shown in solid line in their unclasped position and in dashed lines when clasped onto angle iron member 5. Channel member 1 may, in the alternative, be viewed as a V-shaped channel with the sides of the channel being portions 3 and 10.

Extending from and permanently affixed to bottom portion 10, preferably by welding at 7, is wire support 8. Portion 9 of wire support 8, which portion holds fire detection wire 12 and return wire 11, is insulated.

In order to maintain fire detection wire 12 at a pre-

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determined spaced relation from return wire 11 double insulated troughs 13 and 14 are provided on support 8. These troughs take the general shape of an E disposed on its back. Wires 12 and 11 may be readily placed through the opening between side 15 of trough 14 and the bottom of support 8 and, except for a movement involving both raising and pulling the wires toward channel 1, the wires will not fall out of troughs 13 and 14.

To manufacture the fire wire support it has been found satisfactory to bend channel member 1 from one piece of spring steel, to bend support 8 using one piece of flat wire, to weld channel member 1 to support 8 at point 7 to dip portion 9 of support 8 into plastic insulating material in the liquid state, and then to set the insulating plastic adhering to portion 9.

To provide a more secure grip on the angle iron, channel 1 is provided with one or two ends 16 and 17 which are affixed to sides 2 and 3 respectively. Preferably, ends 16 and 17 are formed from the same piece of spring steel as channel member 1.

FIG. 2 illustrates two wire supports 18 and 19 positioned on angle iron member 5. Angle iron member 5 is part of a telephone equipment frame, not shown. Fire detection wire 12 and return wire 11 are held parallel to each other and parallel to angle iron member 5 by supports 18 and 19.

The above described device is simply illustrative of the invention. Numerous modifications may be readily devised by those skilled in the art which will embody the invention and be within its scope.

What is claimed is:

1. A support bracket for attachment to a horizontally disposed elongated member, the member having a V- or L-shaped cross section and one leg horizontal at the top, which comprises a bent generally rectangular strip of flat resilient material having two meeting legs of substantially equivalent length with an entrant angle of approximately 90°, at least one of the legs being curved towards the other for a major portion of its length, the bracket legs having lengths substantially equivalent to the external leg lengths of the member and having shallow hooked portions internally facing at the ends of the legs opposite the meeting position which may be snapped over the support member edges when the bracket legs are separated, substantially the entire interior flat surface of each leg being adapted to press against a leg of the supporting member at least one leg having secured on the external face thereof an elongated support which extends perpendicular at the external face and which forms at least one loop providing a horizontally disposed passage.

2. A wire guide device for clamping onto a horizontal support member having a V- or L-shaped cross section with one web disposed in a horizontal plane and the other web disposed downwardly from the first web in a vertical plane, which comprises a generally rectangular strip of resilient material formed in an approximate V-shape having two meeting arms of substantially equivalent length with at least one arm of the V curved inwardly towards the end of the other arm, the ends of the arms opposite the V apex having inwardly turning hooked portions for hooking around the edge of the support member, substantially the entire interior flat surface of each leg being adapted to press against a leg of the supporting member the leg of the device to be vertically positioned against the vertical portion of the support member having a wire support affixed to the face portion to extend substantially horizontally away from the vertical face thereby providing a wire support surface.

3. A device according to claim 2 in which the wire support curves at an end away from the vertical face to form one or more guide loops.

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4. In combination, a horizontally disposed elongated member having a V- or L-shaped cross section and one leg horizontal at the top and a support bracket for attachment thereto, the support bracket comprising a bent strip of flat resilient material having two meeting legs with an entrant angle of approximately 90°, at least one of the legs being curved toward the other for a major portion of its length, the bracket legs having lengths substantially equivalent to the external leg lengths of the member and having shallow hooked portions internally facing at the ends of the legs opposite the meeting position which may be snapped over the support member edges when the bracket legs are separated, substantially the entire interior flat surface of each leg being adapted to press against a leg of the supporting member, at least one leg having secured on the external face thereof an elongated support which extends perpendicular at the external face and which forms at least one loop providing a horizontally disposed passage.

5. In combination, a horizontal support member having a V- or L-shaped cross section with one web disposed in a horizontal plane and the other web disposed downwardly from the first web in a vertical plane and a wire guide device for attachment thereto, said wire guide device comprising a strip of resilient material formed in

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an approximate V-shape with at least one arm of the V curved inwardly towards the end of the other arm, the ends of the arms opposite the V apex having inwardly turning hooked portions for hooking around the edge of the support member, substantially the entire interior flat surface of each leg being adapted to press against a leg of the supporting member, the leg of the device to be vertically positioned against the vertical portion of the support member having a wire support affixed to the face portion to extend substantially horizontally away from the vertical face thereby providing a wire support surface.

6. The combination as in claim 5 wherein the wire support curves at an end away from the vertical face to form one or more guide loops.

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