March 8, 1938. O. F. TALLMAN 2,110,407

WIRE CONNECTER

Filed June 24, 1935

Fig. 1

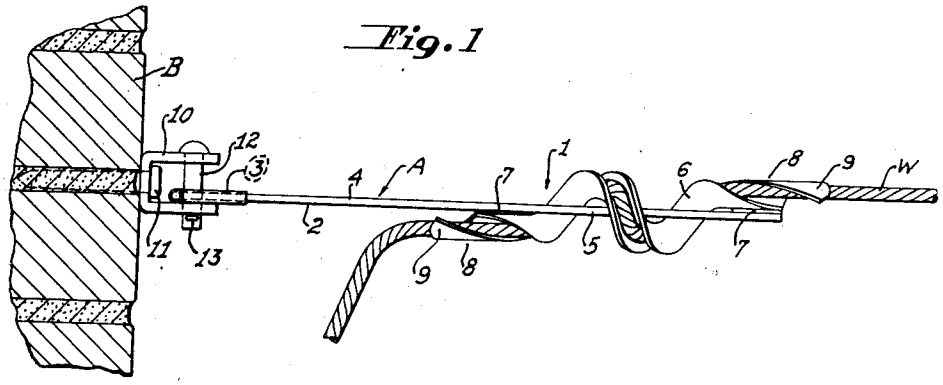


Fig. 2

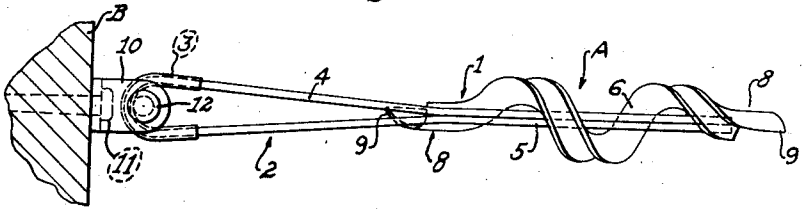
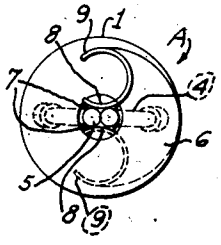


Fig. 3



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WIRE CONNECTER

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3 Claims. (Cl. 24—123)

This invention relates generally to wire connecters of the type employed to mechanically attach telephone or other wires to houses, buildings or other structures, and more specifically to a connecter for drop or service wires, which is so constructed and is capable of such use that the several disadvantages of the clamping devices formerly employed for this purpose are eliminated; the predominant object of the invention being to provide an improved wire connecter which holds a drop or service wire in accordance with the snubbing principle instead of through the use of clamping pressure applied to the insulation of the wire, as was usually the case heretofore.

Prior to this invention drop or service wires leading to houses or buildings were attached to the houses or buildings by rigidly positioned tie-in devices which gripped the wires by clamping pressure applied thereto. The rigid tie-in devices referred to have never proved entirely satisfactory, due to the fact that wear resulting from the whip and vibration of a drop or service wire was centered at the point of tie-in and this condition very materially shortened the life of the drop wire because of slippage of or injury to the insulation thereof resulting from said centered wear.

The improved connection disclosed herein is so constructed and so employed that a drop wire is tied-in by the use of the well-known snubbing principle, the wire being wound spirally around a spirally arranged portion of the connecter. This spiral relationship of the wire and the connecter provides the power for holding the wire and because the frictional contact between the spirally arranged portion of the wire and the connection extends a considerable distance longitudinally of the wire, said wire is very securely held without application of any clamping pressure which would tend to do injury to the insulation of the wire.

An extremely important feature of the invention is that the improved connecter is secured to a house, building or other structure in such nonrigid manner that the wire-receiving portion of the connecter may move with respect to the structure to which it is attached. Thus whip and vibration does not subject the drop wire to concentrated wear at the point of tie-in of the wire, but instead said whip and vibration of the drop wire is taken up by the movably attached connecter. By providing a connection which is so constructed and used that centered wear at the point of tie-in is eliminated, a drop wire is held by the improved connecter to the breaking strength of the wire and not to the tensile strength of the insulation only, as is the case when rigidly positioned clamps are employed as tie-in devices.

In the drawing,

Fig. 1 is a side elevation of the improved connecter, showing same attached to a fragment of a building;

Fig. 2 is a plan view of the improved connecter, parts thereof being shown in section; and

Fig. 3 is an end elevation of the connecter illustrated in Figs. 1 and 2.

In the drawing, wherein is shown for the purpose of illustration, merely, one embodiment of the invention, A designates the improved connecter generally and B designates a building to which the connecter A is attached. The connecter A includes a wire-receiving portion 1 which includes a bail 2 formed of relatively heavy wire bent to provide a loop 3 at one end thereof, as shown in Fig. 2. The bail 2 is shaped to provide a pair of portions 4 which extend from the loop 3 and converge toward each other, said convergent portions of the bail merging into a pair of elongated bail portions 5 which are arranged in parallel contacting relation. At the looped end of the bail the wire which produces the bail is inclosed within a protective sleeve of metal or other suitable material which gives added wear-resisting properties to said looped end of the bail.

Fixedly associated with the bail 2 is a wire-receiving member 6 which is in the form of a strip of metal, or other suitable material, of channel shaped cross-section, which is bent spirally about the parallel portions 5 of the bail. The wire-receiving member 6 is secured by means of solder or otherwise to the parallel portions 5 of the bail as illustrated at the points designated by the reference character 7, said soldered joints serving also to secure the parallel bail portions 5 together. It will be noted that portions 8 at opposite ends of the wire-receiving member 6 are substantially straight and are disposed parallel with the parallel portions 5 of the bail, while the portion of said member intermediate of said opposed straight end portions thereof is of spiral arrangement. Also it will be noted that at each end of the wire-receiving member 6 a side of the channel-shaped member is extended beyond the opposite side of said channel-shaped member, as indicated most clearly at 9 in Fig. 1, so as to extend the wire-contacting face of the member 6.

The wire-receiving section 1 of the improved

connecter is connected to the building B through the instrumentality of a bracket 10 of substantial U-shaped formation. This bracket is secured to the building by a spike 11 which passes through an opening formed through the base portion of the bracket and is driven into a convenient part of the building, mortar between bricks or stones of the building, for instance. The wire-receiving portion 1 of the connecter is movably attached to the bracket 10 by a headed pin 12 which passes through apertures formed through the outstanding legs of the bracket and extends between said outstanding legs and through the loop 3 of the wire-receiving portion of the connecter, as shown most clearly in Fig. 2. The pin 12 is retained in place by a cotter pin 13.

The drop wire W which is tied-in with the aid of the improved connecter is arranged in the spirally extended channel of the wire-receiving member 6, as shown in Fig. 1, and because of the spiral arrangement of the wire and the wire-receiving member 6, said wire is held immovable relative to the wire-receiving member in accordance with the snubbing principle. It is obvious, therefore, that the drop wire is held very securely against movement relative to the wire-receiving member 6 and this holding action is obtained entirely without application of clamping pressure which, as already pointed out herein, tends to shorten the life of the wire by destroying the insulation thereof.

It is important to note that the improved connecter does not have any parts or pieces which must be dis-assembled in order to associate the drop wire with the connecter, and because a continuous run of wire may be applied to the connecter by merely winding a portion of the wire about the connecter and seating said portion of the wire in the channel of the wire-receiving member 6, it is not necessary to cut a wire so as to thread an end thereof through the connecter, as was the case with many of the tie-in devices heretofore employed. Also the improved connecter may be used with either of the prevailing types of drop wires; that is, the paired out side drop, or the parallel straight laid type of drop wire. Finally, because of the simple manner of loosely attaching the wire-receiving portion 1 of the connecter to the bracket 10, the wire-receiving portions of connecters may be salvaged and used a number of times.

It is obvious that whip and vibration of the drop wire is taken up by the loosely attached wire-receiving portion of the connecter and therefore there is no centering of wear due to such whip and vibration at the tie-in point of the wire, as is the case when rigid tie-in devices are used. As a result of this situation, the life of a drop wire is greatly prolonged inasmuch as the drop wire is not held by the connecter to the tensile strength of the insulation, but to the breaking strength of the wire.

I claim:

1. A wire connecter comprising a spirally arranged wire-receiving member, said wire-receiving member being so formed that the axis of all of the convolutions thereof extends in one direction only, and a bail to which said wire-receiving member is attached, said bail being of integral and substantially rigid construction throughout its entire length and comprising an elongated leg portion provided at one end with a fixed loop, the axis of said elongated leg portion of said bail and the axis of the convolutions of said spiral wire-receiving member being substantially parallel throughout the entire length of the wire-receiving member and said leg portion of said bail being extended through the convolutions of said wire-receiving member, one end of said wire-receiving member being located in close proximity to the axis of said leg portion of said bail at a point adjacent to the end of the leg portion of the bail remote from the loop of said bail, and the opposite end of said wire-receiving member being located in close proximity to the axis of said leg portion of the bail at a point spaced longitudinally of the bail from the loop thereof.

2. A wire connecter comprising a spirally arranged wire-receiving member, said wire-receiving member being so formed that the axis of all the convolutions thereof extends in one direction only, and a bail to which said wire-receiving member is attached, said bail being formed of a single length of substantially rigid material bent double to provide a fixed loop at one end of the bail from which fixed, substantially parallel legs are extended, the axis of the bail portion provided by the parallel legs thereof and the axis of the convolutions of said spiral wire-receiving member being substantially parallel throughout the entire length of the wire-receiving member and said parallel leg portions of said bail being extended through the convolutions of said spiral wire-receiving member, one end of said wire-receiving member being located in close proximity to the axis of the bail portion provided by the parallel legs thereof at a point adjacent to the end of the bail which is remote from the loop of said bail, and the opposite end of said wire-receiving member being located in close proximity to the axis of the bail portion provided by the parallel legs thereof at a point spaced longitudinally of the bail from the loop thereof.

3. A wire connecter comprising a spirally arranged wire-receiving member, said wire-receiving member being so formed that the axis of all of the convolutions thereof extends in one direction only, a bail to which said wire-receiving member is attached, said bail being formed of a single length of substantially rigid material bent double to provide a fixed loop at one end of the bail from which fixed, substantially parallel legs are extended, the axis of the bail portion provided by the parallel legs thereof and the axis of the convolutions of said spiral wire-receiving member being substantially parallel throughout the entire length of the wire-receiving member and said parallel leg portions of said bail being extended through the convolutions of said spiral wire-receiving member, one end of said wire-receiving member being located in close proximity to the axis of the bail portion provided by the parallel legs thereof at a point adjacent to the end of the bail which is remote from the loop of said bail, and the opposite end of said wire-receiving member being located in close proximity to the axis of the bail portion provided by the parallel legs thereof at a point spaced longitudinally of the bail from the loop thereof, and means for securing the opposite ends of the wire-receiving member to the bail portion provided by the parallel legs thereof.

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