

Feb. 16, 1960

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2,925,458

TRAFFIC SIGNAL DISCONNECTING HANGER

Filed April 1, 1957

3 Sheets-Sheet 1

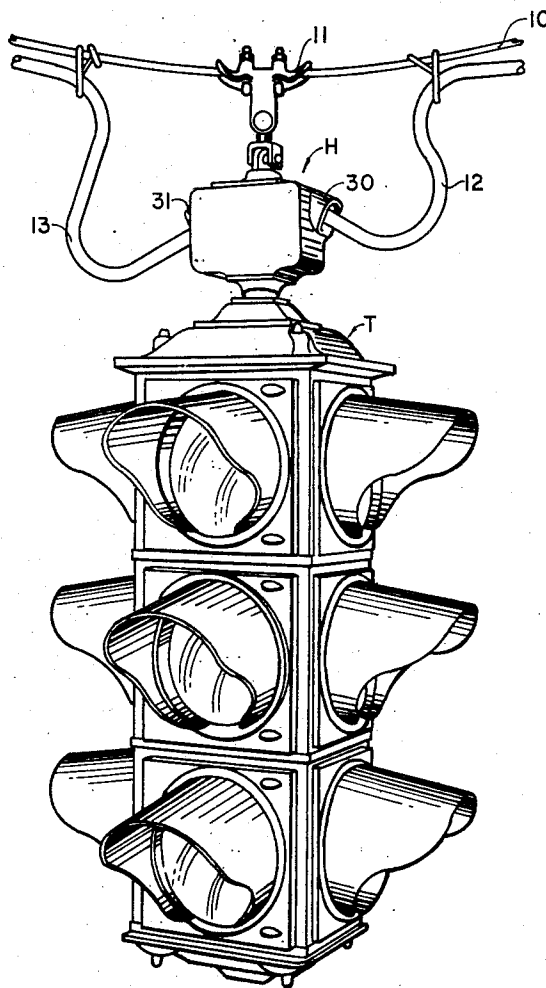


FIG. 1-

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3 Sheets-Sheet 2

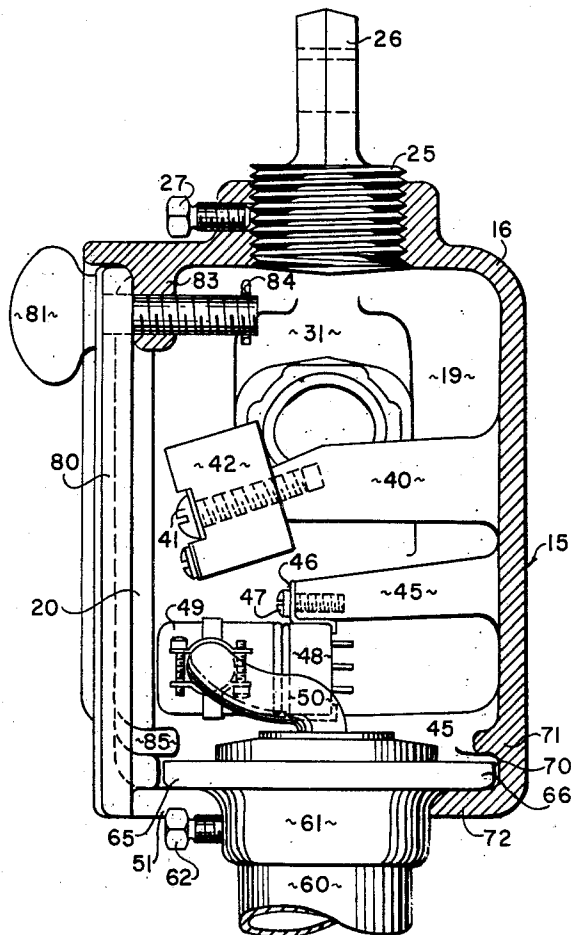


FIG. 2.

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TRAFFIC SIGNAL DISCONNECTING HANGER

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Application April 1, 1957, Serial No. 649,737

1 Claim. (Cl. 174—61)

This invention relates to a disconnecting hanger to be used in connection with traffic signals.

Prior to this time, such traffic signals were suspended over an intersection by being fixed to a span wire, and the current carrying wires of the signal were spliced to the cable which connected the signal to the controller, so that when it became necessary to install a new signal, it was necessary to break, or cut, the splice and then remake the joints. This had the disadvantage that it took a considerable amount of time to remove the traffic signal for maintenance, repair, etc., and further that the supporting cable was shortened each time such an operation was necessary so that the supporting cable eventually become too short and had to be replaced.

It is an object of this invention to provide a traffic signal disconnecting hanger of the type wherein the traffic signal may be readily and conveniently removed from the hanger when it is necessary to replace the traffic signal, or to repair or paint the signal.

Figure 1 is a perspective view of my invention with a traffic signal attached thereto.

Figure 2 is a cross section of a side elevation of my invention.

Figure 3 is a front elevation of the invention shown partly broken away, and partly in section.

Referring to Figure 1, a traffic signal T is supported in the disconnecting hanger, generally indicated at H, the hanger H being supported on a messenger or spanner wire 10 by means of a bracket 11. A pair of cables 12, 13, are fed into the hanger H from the signal controller.

Referring now to Figure 2, it will be seen that the hanger H is made up of a housing having a rear wall 15, top wall 16, bottom wall 17, side walls 18, 19 and an open front 20.

Mounted in a threaded aperture 25 in the top wall 16 is a connector 26. The connector 26 is fixed against rotation in the threaded aperture 25 by means of a set screw 27. Connector 26 provides the means for attaching the hanger H to the bracket 11 mounted on the supporting wire 10.

Referring now to Figure 3, it will be seen that the side walls 18 and 19 of the housing are provided with a pair of apertured bosses 30 and 31 for the reception of the controller cables 12 and 13 containing the wires for supplying power to the signals in the signal housing. Mounted in each of the bosses 30 and 31 is an insulating bushing 35 for effecting a weather-proof seal of the cables 12 and 13 to the housing.

Mounted in the housing on a rib 40, as by fasteners 41, is a terminal block 42 which receives the necessary electrical leads from the control cables 12, 13. Below the rib is a rib 45 of U-shaped configuration on which a bracket 46 is mounted, as by fasteners 47. A plug receptacle 48 is mounted on the bracket 46 for the reception of a plug 49 affixed to the end of the traffic signal cable 50. A suitable connection not shown is provided between the terminal block 42 and the plug receptacle 48.

The lower bottom wall 17 of the housing is formed

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with a slot 51 which extends from the forward open side 20 of the housing to the rear wall 15 of the housing. The housing has a pair of laterally offset upstanding shoulders 52 formed in the bottom wall 17 adjacent the slot 51, the shoulders and slot forming a pair of ledges 53 for a purpose hereinafter described. The signal T has a tubular shaft 60 extending upwardly therefrom, and a supporting collar 61 is fixed to the upper end thereof. The collar is affixed against rotation on the tube 60 by means of a set screw 62. The collar 61 is formed with laterally extending flanges 63, 64, 65 and 66. As will be seen from Figure 3, the flanges 63 and 64 are received on the ledges 53.

Referring now to Figure 2, it will be seen that the rear wall of the housing 15 has a groove 70 formed therein by means of the rib 71 and the ledge 72 positioned in the plane as the ledges 53 and the flange 66 is received in the groove 70 so that the signal is prevented from tipping or "rocking" in the housing by the rib 71.

A door or closure 80 is provided for the front opening 20 and is removably fixed to the housing by means of a thumb screw 81. The thumb screw is threadably received in a depending lip 83 on the housing and the internal end of the thumb screw has a cotter pin 84 inserted there through to prevent the thumb screw from being backed out of the housing.

As will be obvious, when it becomes necessary, or is desirable, to remove the signal T for repairs, maintenance, or the like, it is merely necessary to back the thumb screw 81 out of the lip 83 and rotate the door 80 upwardly (in Figure 2) to permit access to the interior of the housing, so that the plug 49 may be removed from the plug receptacle 48 and the signal carrying collar 61 and signal T, may be slidably removed from the housing. A new signal, or repaired signal, may be inserted in the housing and the door 80 rotated to the position shown in Figures 2 and 3, and the thumb screw threaded into the housing to fix the door against movement and consequently removably lock the signal carrying collar 61 in the housing. As will be seen from Figure 2 the door 80 is formed with an inwardly extending rib 85 which extends over the flange 65 on the collar 61. Rib 85 cooperates with the rib 71 to prevent the collar 61 and the signal T from tipping or rocking when the signal is subjected to winds having a high velocity.

It will therefore be seen that by my new disconnecting housing I have provided a means whereby traffic signals may be simply, quickly and conveniently removed from the housing should it become necessary to replace the traffic signal, or repair it.

What I claim is:

A traffic signal casing disconnecting hanger comprising a rectangular box-like housing open at the front side, means attached to the top wall of said housing for suspending the same from a spanner cable, a closure detachably secured to the open front side of the housing, the bottom wall of said housing being formed with a slot extending inwardly from the front side of the housing and terminating adjacent the rear wall of the housing a pair of laterally offset shoulders positioned adjacent said slot, said shoulders and slot forming a pair of ledges, a signal casing supporting collar slidably mounted in said slot and having an outwardly extending flange overlying said ledges, the rear wall of the housing having an inwardly extending projection overlying the inner portion of the flange of said collar, said closure having a rib overlying and engaging the forward side of said collar to maintain said inner portion of the flange of the collar between said ledges and said rib and projection, the side walls of the housing being formed with power cable receiving apertures, a receptacle mounted in said housing for connection to said

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power cable, and a plug for said traffic signal received
in said receptacle.

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