

June 2, 1942.

LE ROY W. KELSAY

2,285,034

COVER FOR CABLE TERMINAL HOUSINGS

Filed May 25, 1940

2 Sheets-Sheet 1

FIG. 1

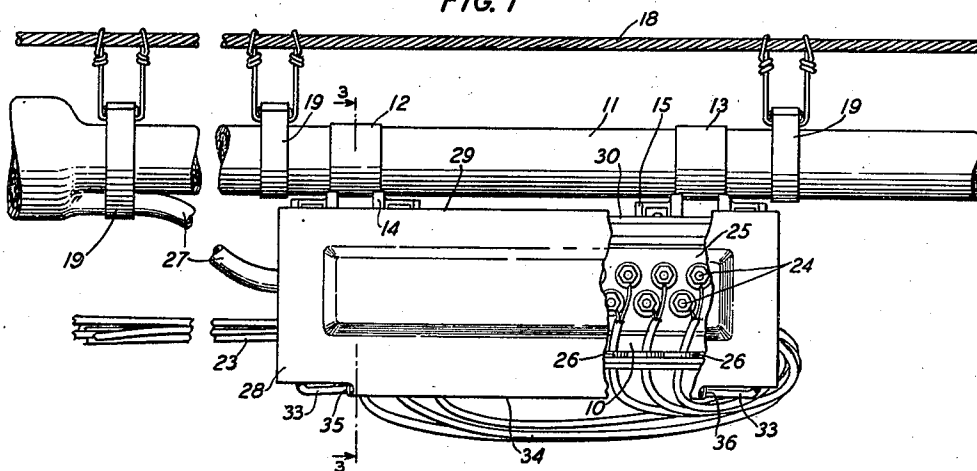
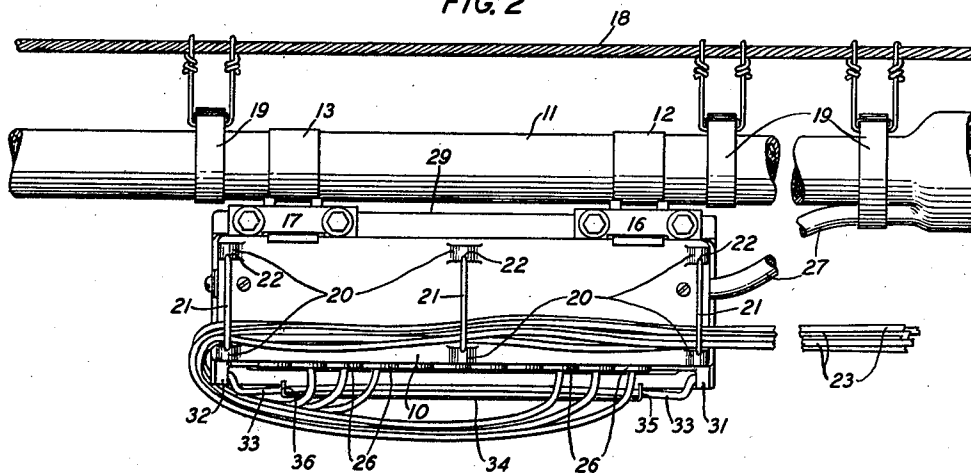


FIG. 2



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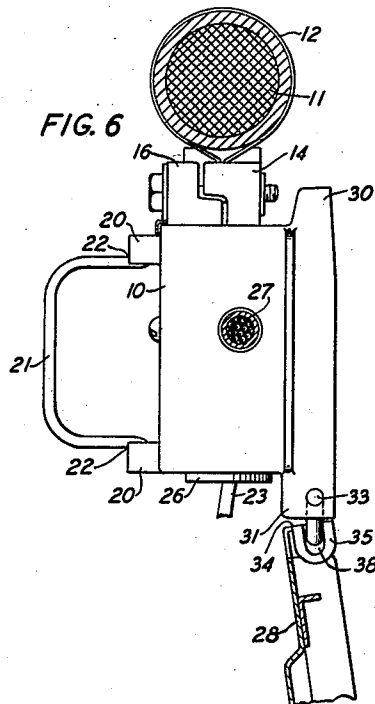
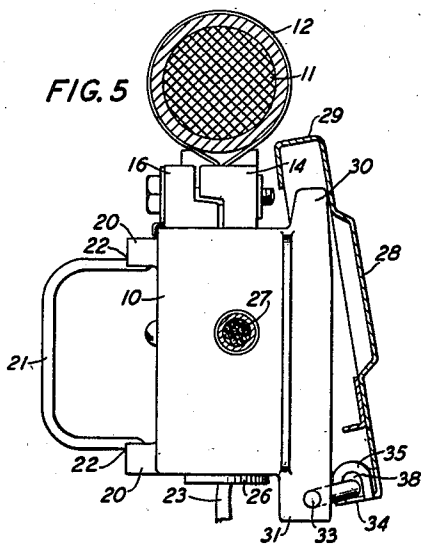
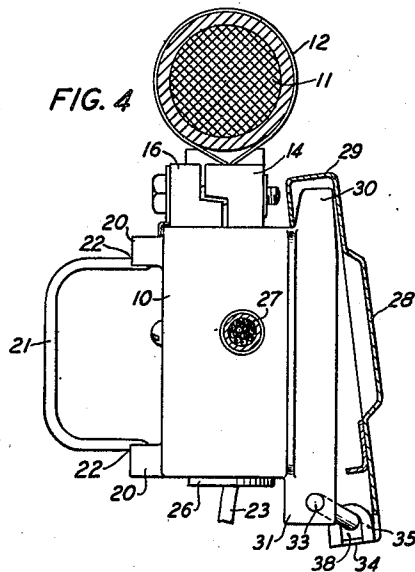
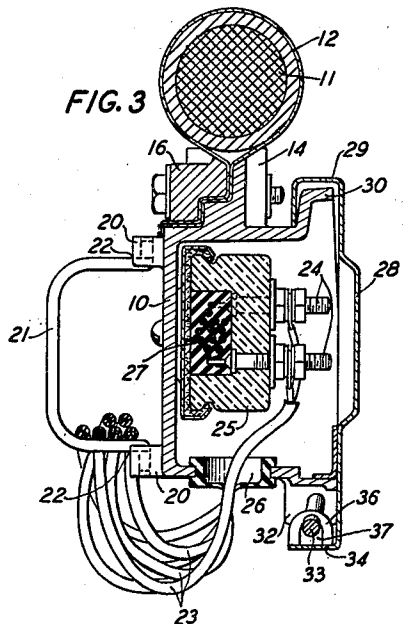
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2 Sheets-Sheet 2



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2,285,034

COVER FOR CABLE TERMINAL HOUSINGS

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Application May 25, 1940, Serial No. 337,192

1 Claim. (Cl. 220—3.8)

This invention relates to cable terminal housings and more particularly to weather-proof closures or covers for said housings.

An object of the present invention is to provide a type of door or cover for cable terminal housings in which the hinge for the cover also acts as a locking means for securing the cover in its closed position.

Another object of this invention is the provision of an improved door or cover which when opened swings downwardly and out of the way, thereby permitting ready access to the interior of the housing.

A further object is to provide a cable terminal housing in which the cover not only acts as a closure for the housing, but one which, while it is simple to open for an authorized person, such as the lineman, is so ingeniously designed that it is extremely difficult indeed for the average person to determine how it can be opened.

In general, the small size outdoor cable terminal housings in use today are provided with a cover or door hinged at the upper edge and which swings upwardly when opened. Though this method of hinging the covers has been found somewhat objectionable due to the fact that the cover has a tendency to drop down and injure the hands of the worker, it affords an easy way to make a weather-proof joint. Consequently little thought has been given to provide a more convenient type of door and yet preserve the weather-proof characteristics of the present door.

The applicant has given considerable thought to the development of a closure or cover for terminal housings which, when opened, will swing out of the way, cannot slam shut to cause injury to the workman and yet when closed will be substantially weather-proof and be locked against accidental opening.

In the terminal housing closure of this invention applicant has not only provided a cover which is hinged at the bottom so that it will swing downwardly and out of the way, but has combined in his hinge a novel locking means whereby the cover, when it is closed, provides a weather-proof closure.

In the drawings:

Fig. 1 is a front elevational view of a cable terminal equipped with the novel type of cover of this invention in its closed position;

Fig. 2 is a rear elevational view of the improved terminal housing shown in Fig. 1 illustrating the novel type of hinge and the method of securing the housing to the cable and the

method of supporting the drop wires on the rear of the housing;

Fig. 3 is a cross-sectional view of the terminal housing taken on line 3—3 of Fig. 1 showing the cover locked securely in place;

Fig. 4 is an end view of the terminal shown in Fig. 1 with the cover partly in section and unlocked;

Fig. 5 is a view similar to Fig. 4 wherein the cover has been raised to disengage the bent-over portion on the top of the cover from the flange on the top of the housing; and

Fig. 6 is a view similar to Fig. 5 with the cover rotated about the hinge and hanging downwardly to expose the interior of the housing.

As shown in the accompanying drawings, the terminal housing to which applicant has applied his improved cover, comprises a casing 10 which is secured to the cable 11 by means of a pair of metal straps 12 and 13. These straps encircle the cable and have their end portions secured between the bosses 14 and 15 and the adjustable lugs 16 and 17, as shown in detail in Fig. 3. The cable 11 in turn is secured to the messenger strand 18 by means of the hangers 19.

Located on the rear of the housing 10, as shown in Figs. 2 to 6, are a plurality of lugs or bosses 20 in which the drop wire rings 21 are pivotally mounted. These rings are sprung into position and are maintained at right-angles to the housing 10 by means of their engagement with the grooves 22 in the upper and lower surfaces of the lugs 20.

As shown in Figs. 1 and 3 the drop wires 23 are connected to the binding posts 24 on the front of the binding post panel 25 and are brought out of the bottom of the housing 10 through the resilient grommets 26 which form a weather-proof closure therearound. The drop wires are positioned in the rings 21 as shown and continue on to the various substation equipment. A stub cable connection 27, to the rear of the binding post panel 25, connects the binding posts 24 to the wires of the cable 11 as shown in Figs. 1 and 2.

The foregoing description relates to the method in which the terminal housing is mounted and how the incoming and outgoing connections are made thereto.

Referring now to the structure of the terminal housing or casing and more specifically to the novel type of closure therefor, the housing 10 is preferably a casing having one side open and having a cover or door 28 hingedly secured at the bottom edge of said opening.

The upper edge of the cover 28 is provided with a return bend flange portion 29 which engages the cooperating lip 30 on the upper edge of the housing 10 to provide a weather-proof seal.

Located on the bottom edge of the housing 10, at each end thereof, are the bosses or lugs 31 and 32, see Fig. 3, in which is axially mounted the bellcrank member 33. This member, as shown in Fig. 2, is sprung into position between the two lugs so that the offset ends thereof register with apertures in the lugs and cause a slight bowing of the member 33.

The lower edge of the cover 28 is provided with an upturned flange 34 having ear portions 35 and 36 bent upwardly at the ends thereof. Located in these ear portions are elongated apertures 37 and 38 through which the bellcrank member 33 passes. Thus it is readily apparent that the cover 28 is free to rotate on the member 33 and the member 33 in turn is free to pivot on its centers which are located in the apertures in the lugs 31 and 32. Due to the fact that the member 33 is sprung into position between the lugs 31 and 32 it will assume a slightly bowed configuration, see Fig. 2, thus providing the necessary spring pressure to hold the cover firmly closed.

As shown in Fig. 3, the cover 28 is locked in its closed position by means of the bellcrank member 33. This member, which has its offset ends pivotally mounted in the lugs 31 and 32, is slightly off center, that is, the crank portion of the member 33 extends toward the rear of the housing 10 thereby exerting an inward pressure on the bottom of the cover 28 due to the fact that the cover is rotatably mounted on the member 33 by means of the ears 35 and 36 located on the upturned flange 34 on the bottom edge of the cover 28.

When it is desired to open the cover 28, to obtain access to the interior of the housing 10, the bottom edge of the cover 28 is pulled outwardly or toward the person opening the housing. As the bottom edge of the cover moves outwardly against the pressure of the bellcrank member 33, this member will, when it passes dead center, cause the cover to open and raise slightly, as shown in Fig. 4. As shown in Fig. 5 the cover then may be raised to disengage its upper edge 29 from the lip 30 on the upper edge of the housing 10. When the upper in-turned flange 29 of the cover 28 has become disengaged from the housing 10, as shown in Fig. 5, it may be swung downwardly and out of the way as shown in Fig. 6.

When it is desired to close the cover the proce-

dures described above is reversed. That is, the cover 28 is swung upwardly until the flange portion 29 of the cover 28 is in position above the lip 30 of the housing 10, as shown in Fig. 5. The cover is then pushed downwardly until the flange 29 engages the lip 30 as shown in Fig. 4. This action causes the bellcrank member 33 to move downwardly and assume a position slightly below the horizontal plane, see Fig. 4. Continued pressure on the cover 28 causes the bellcrank member 33 to pivot about its center, and due to the tension of this member, caused by the bowing thereof, as the crank portion passes dead center it will snap over toward the rear of the housing, as shown in Fig. 1, and securely lock the cover in position. Due to the interlocked joints at the top and bottom of the cover 28 a weather-proof cover is provided.

Due to the novel design of this cover and the locking means therefor, it would be extremely difficult for an unauthorized person to tamper with the equipment inasmuch as it is not readily apparent to the average layman how this cover may be opened. However, to an authorized person it is extremely simple both to close and to open and furthermore there is nothing in the structure of this cover which can cause injury to a person operating said cover.

While I have shown and described the preferred embodiment of my invention, it is to be understood that various changes and modifications may be made therein without departing from the spirit of the invention and I am to be only limited by the scope of the appended claim.

What is claimed is:

A closure for cable terminal housings having openings in one side to permit access to the interior thereof, comprising an elongated resilient bellcrank member having offset portions at each end thereof, said offset portions pivotally mounted in lugs on the bottom edge of said housing at each end thereof, the upper edge of said housing having an upwardly projecting flange, a cover for said housing, having a rearwardly and downwardly turned flange on the upper edge thereof and having ears on the lower edge thereof for hingedly securing said cover to the intermediate portion of said bellcrank member, said flanges of said housing and said cover cooperating with said bellcrank member to lock the cover in its closed position when pressure on the front of said cover causes the bell-crank member to rotate rearwardly past dead center and force the bottom edge of said cover into firm engagement with the lower edge of said housing.

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