

May 14, 1963

F. J. AVES

3,089,455

CURB SIGNAL DEVICE

Filed Oct. 17, 1961

2 Sheets-Sheet 1

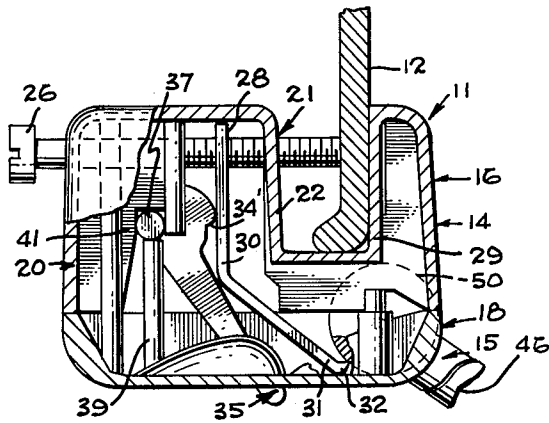


Fig. 2

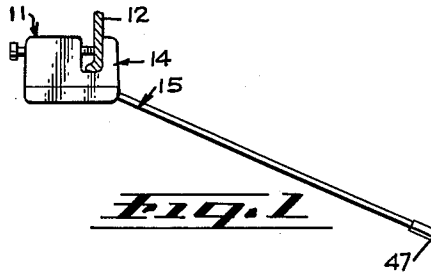


Fig. 1

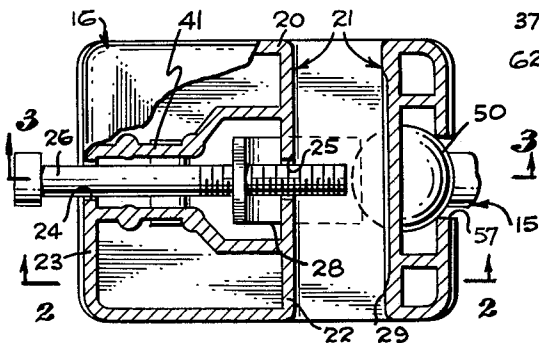


Fig. 4

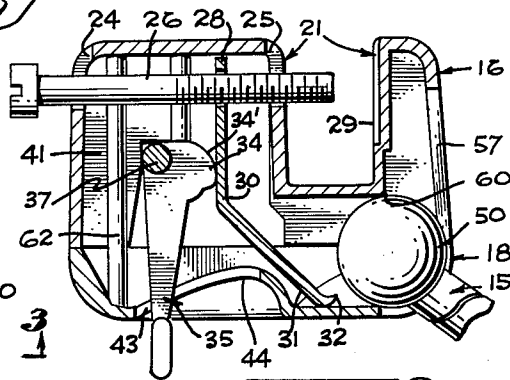


Fig. 3

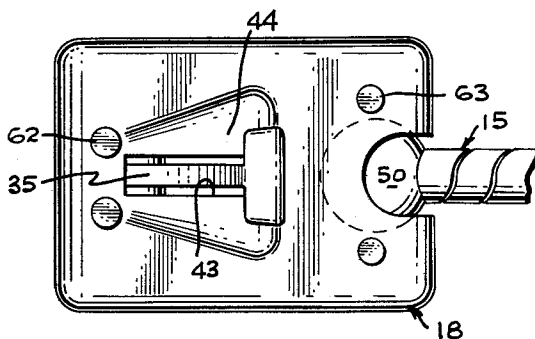


Fig. 5

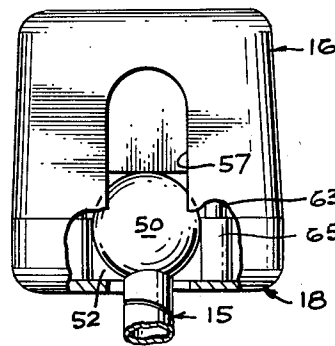


Fig. 6

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Fig. 7

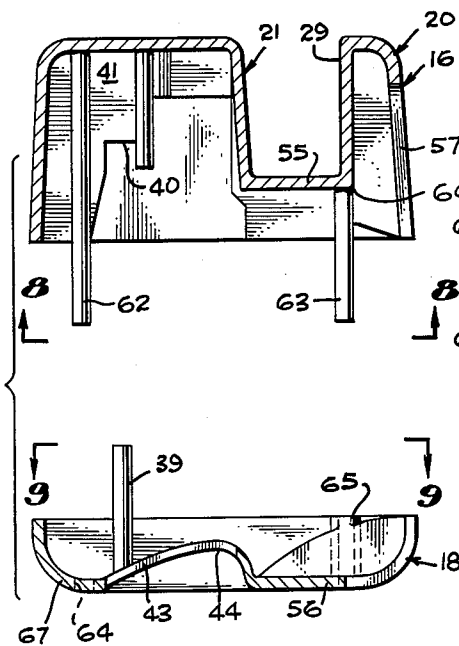


Fig. 8

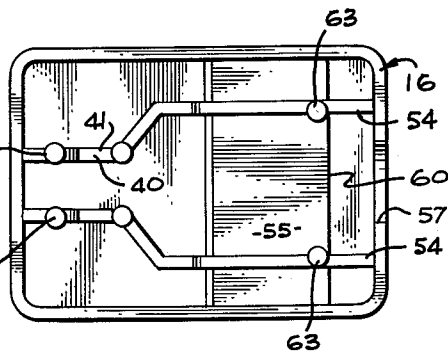
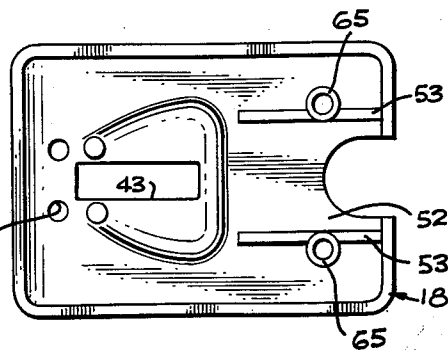


Fig. 9



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CURB SIGNAL DEVICE

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5 Claims. (Cl. 116—28)

This invention has to do with devices adapted to be mounted on automobiles for giving an audible signal of the approach of the vehicle to a curb.

An object of the invention is to provide a new and improved curb signal device which can be readily installed on a fender or bumper or other appropriate part of an automobile.

A particular object of the invention is to provide a device of the type indicated incorporating an adjustable feeler element and means for securing the feeler element in adjusted position after the device has been attached to the automobile. In this connection, one of the difficulties of devices which have heretofore been used is the fact that they either do not employ an adjustable feeler, or, where they do, the same means is used for anchoring the device as a whole and for securing the feeler, thereby making it difficult to adjust the feeler once the device has been mounted on the automobile. Furthermore, such prior devices usually require the use of a tool for making the adjustment. Therefore it is a further object of the invention to provide a curb signal device having an antenna or feeler which can be adjustably positioned without resort to any tools and in this connection it is an object to provide a manually operable lever for locking the feeler in adjusted position which is accessible when the device is mounted.

Another object is to provide a novel housing construction of interfitting sections which can be secured together without extraneous fastening means, after the working parts have been assembled within the housing.

These and other objects will be apparent from the drawings and the following description. Referring to the drawings:

FIG. 1 is a side elevational view of a device embodying the invention as it would appear mounted on the lower edge of an automobile fender;

FIG. 2 is a view in elevation of the interior of the device as it would appear from the side with the near side wall of the housing broken away, the view being substantially in the plane designated by line 2—2 of FIG. 4;

FIG. 3 is a central sectional elevational view on line 3—3 of FIG. 4 showing the locking lever in released position;

FIG. 4 is a sectional plan view with the top wall of the housing substantially broken away;

FIG. 5 is an inverted plan view;

FIG. 6 is an end elevational view of the inner end of the device with the casing wall partially broken away;

FIG. 7 is a sectional exploded view of the two parts of the housing, the plane of the view being indicated on FIGS. 8 and 9 by the lines 7—7 thereon;

FIG. 8 is an internal plan view of the upper cover member on line 8—8 of FIG. 7; and

FIG. 9 is a plan view on line 9—9 of FIG. 7.

More particularly describing the invention, in FIG. 1 a curb signal device 11 is shown attached to the lower edge of a fender or other part 12 of an automobile. In general device 11 includes a housing 14, and an antenna or feeler 15. The latter is adapted to strike and scrape along the conventional street curb as the automobile approaches and drives near the curb, thereby inducing vibrations in the feeler which are transmitted to the fender or other part of the automobile to which the device is attached and producing a readily audible signal.

The housing 14 comprises an upper housing member 16 and a lower housing member 18. The upper housing

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member comprises a shell 20 which is formed to provide a transverse groove or channel 21 to receive the edge portion of a fender or other part 12 of the automobile. Wall 22, which forms one side of the channel, and the inner end wall 23 of the upper housing member are apertured at 24 and 25 respectively to receive freely a screw 26. The screw is threadedly mounted in a keeper 28 and serves to anchor the device to the part 12 of the automobile by clamping the part between the screw and wall 29.

The parts consisting of the keeper 28 and screw 26 are loosely assembled with reference to the housing and remain so until the screw is tightened against part 12 of the automobile. When so tightened, the keeper, which is in the form of a plate having a vertical upper section 30 depending from the screw and an inclined lower section 31 terminating in an offset sharp toe portion 32, is forced backward against a cam section 34 formed on a locking lever 35. The latter is pivotally mounted in the housing, being provided with trunnions 37 which are received and journaled between posts 39 formed on the lower housing member and downwardly open recesses 40 formed in internal walls 41 of the upper housing member. Lever 35 projects through a slot 43 in the lower housing member, the latter having an upwardly indented wall 44 in this region. The cam section 34 of the lever provides a cam surface 34' which is eccentric to the axis of rotation of the lever.

The feeler 15 may be of any conventional type throughout most of its length and it has been shown as made of a helically coiled metal strip to provide a tubular body 46 which is fitted with a metal tip 47 at its outer end. The inner end of the feeler is secured in a mounting ball 50 received in a cavity 52 within the housing and formed in part by parallel partition walls 53 of the lower housing and in part by parallel partition walls 54 of the upper housing. The wall 55 of the upper housing and wall 56 of the lower housing limit the mounting ball against vertical movement. The feeler body 46 projects through a wide slot 57 in the inner end wall of the housing which permits of pivotal adjustment of the feeler throughout a range of several degrees vertically and laterally.

When the lever 35 is in the position in which it appears in FIG. 3 there is nothing to restrain the mounting ball 50 against pivoting and thus the feeler can be readily pivoted to desired position. However, with the screw 26 tightened against the automobile part 12 and the lever 35 moved to the position of FIG. 2, the keeper plate is forced forward so that the toe or lower end portion 32 firmly engages the mounting ball 50 to anchor it against movement. In this connection it should be noted that the mounting ball, which is preferably of a material which is somewhat softer than the material of the keeper plate, is forced up against the wall 55 and the sharp edge 60 at the intersection of walls 29 and 55, and is thus firmly clamped. Thus once the device has been firmly mounted, the feeler may be adjustably positioned at any desired angle with the lever in retracted release position of FIG. 3 and then the feeler may be secured in adjusted position by moving the lever to the position of FIG. 2 where the high point of the cam is above center with respect to the pivotal axis of the lever.

One of the features of the invention involves the construction of the housing whereby the two housing sections can be fitted together and secured without resorting to any additional fastening means. Thus the upper housing member is provided with two pins 62 and two pins 63 which project below the plane of the lower edge of the shell of the member, and the lower housing member is provided with two holes 64 to receive the pins 62, respectively, and with two bosses 65 to receive the pins 63, respectively. The pins of the upper housing are sufficiently long that they project through the shell 67 of the lower

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housing and, when the parts are assembled, the ends of the projecting pins are flattened or upset to secure the parts.

Although I have illustrated and described preferred forms of my invention, I contemplate that various changes and modifications can be made therein without departing from the invention, the scope of which is indicated by the following claims.

I claim:

1. In a curb signal device, a housing providing a wall against which to clamp a part of an automobile thereby to secure the housing to the automobile, a keeper member loosely mounted in the housing, a screw threaded through said keeper member for axial movement toward and away from said wall, a feeler having an inner end portion movably mounted in said housing, said keeper member having a portion adapted to engage the inner end portion of said feeler, and a locking lever pivotally mounted in the housing operable for forcing said keeper member into firm engagement with said inner end portion of the feeler for securing the same against movement.

2. In a curb signal device, a housing providing a wall against which to clamp a part of an automobile thereby to secure the housing to the automobile, an independent keeper plate loosely mounted in said housing, a screw threaded through said keeper plate near one end thereof for axial movement, when turned, toward and away from said wall of the housing, a feeler extending from the housing and including a mounting ball at its inner end seated in said housing, the other end of said keeper plate being adjacent said mounting ball, and means independent of said screw engageable with said keeper plate intermediate its ends on the side thereof opposite said mounting ball for forcing said plate into firm engagement with said mounting ball whereby to lock the same against movement by clamping it against the housing.

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3. A curb signal device as set forth in claim 2 in which the means engageable with the keeper comprises a lever pivotally mounted in the housing having a cam section engageable with said keeper plate and movable to an over-center position to releasably retain said plate in firm engagement with the mounting ball.

4. A curb signal device as set forth in claim 2 in which said housing is formed to provide a transverse channel to receive the part of the automobile to which the device is clamped and in which said screw is mounted loosely in the housing normal to said channel and projecting thereinto.

5. In a curb signal device, an upper housing member having a transverse channel in its upper wall to receive part of an automobile to which it is to be attached, a lower housing member beneath the upper housing member, one of said members having integral pins projecting through an outer wall of the other member and enlarged therebeyond to secure the members together, a screw mounted in the upper housing member and extending into said channel for clamping said part of the automobile therein, a curb feeler having an inner end portion within said housing, said housing having a slot through which said feeler projects, a lever pivotally mounted within the housing and projecting therefrom, an element interposed between said lever and the inner end portion of said feeler, and interengaging means on said lever and said element operable, when said lever is moved to a given position to move said element into firm engagement with the feeler and lock the same against movement.

References Cited in the file of this patent

UNITED STATES PATENTS

2,731,935	Aves	Jan. 24, 1956
2,986,113	Frees et al.	May 30, 1961