

July 15, 1958

J. B. VIDACH
ILLUMINATED SIGN

2,842,881

Filed Feb. 27, 1956

2 Sheets-Sheet 1

FIG. 1

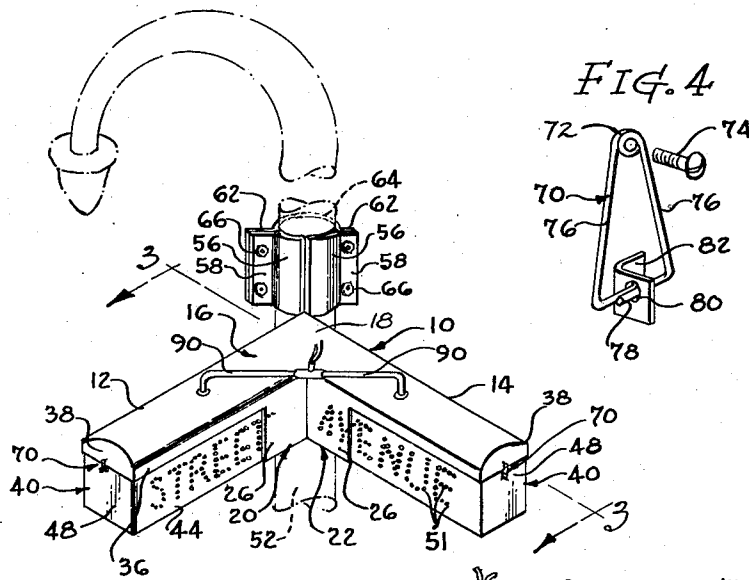


FIG. 4

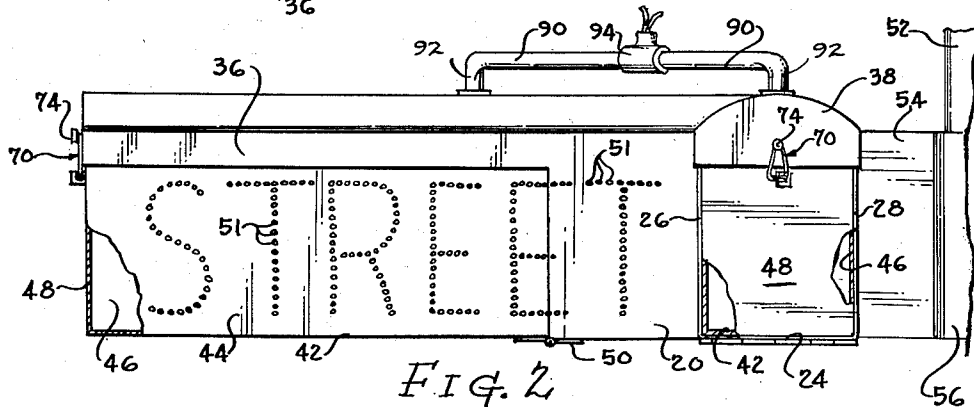
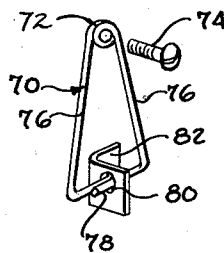


FIG. 2

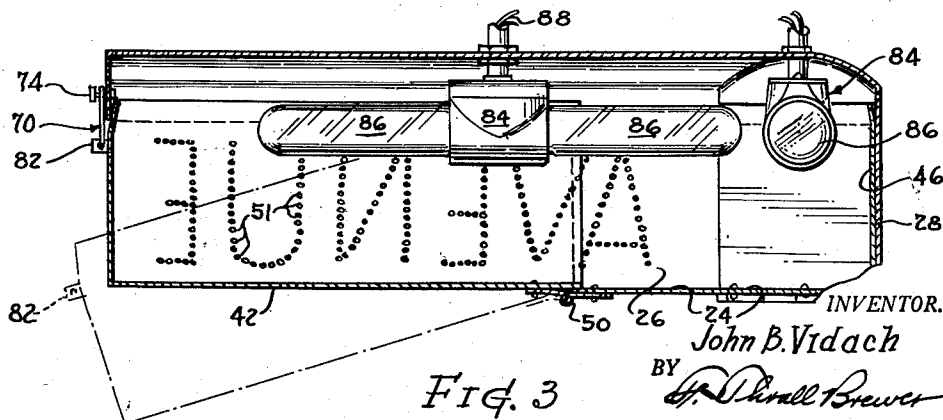


FIG. 3

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2 Sheets-Sheet 2

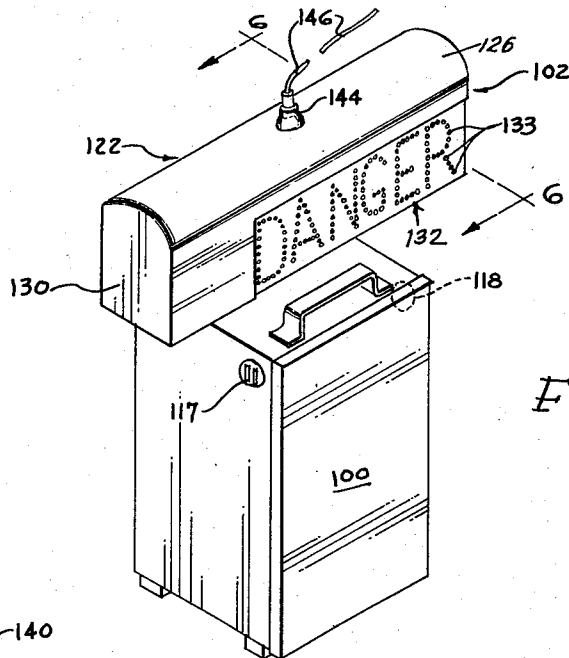


FIG. 5

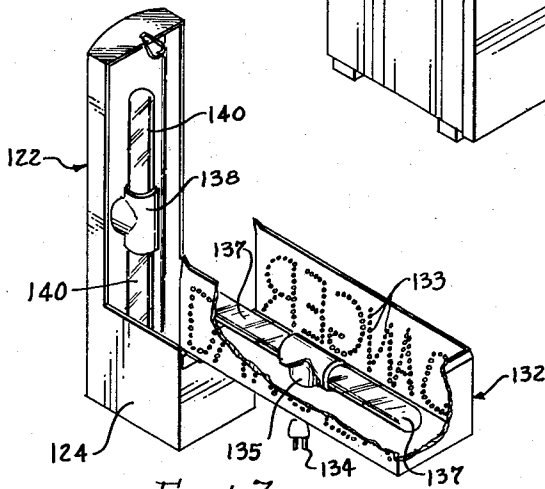


FIG. 7

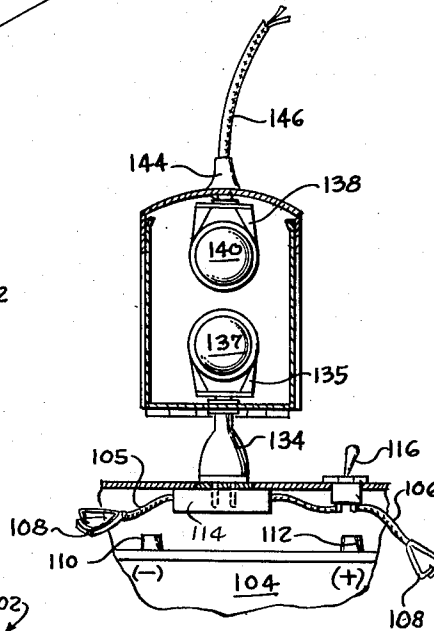


FIG. 6

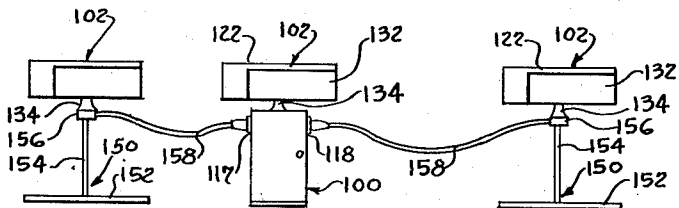


FIG. 8

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2,842,881

ILLUMINATED SIGN

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6 Claims. (Cl. 40—133)

The present invention relates to illuminated signs, particularly those which are energized by electrical means, either self-contained, external or both.

The improved illuminated sign comprising the present invention has been designed primarily for use either as a street sign or as a warning or danger signal, suitable modifications being possible to adapt the sign to the particular selected use. The sign is also capable of other outdoor uses, as for example as a railway signal or the like, or as an advertising display.

It is among the principal objects of this invention to provide an illuminated sign having a novel form of housing or casing which is so designed as to shed moisture under adverse weather conditions in such a manner that neither the electrical wire or other connections within or leading to the sign housing, nor the energizing battery which may be enclosed within the housing, will be adversely affected by such moisture. A similar and related object is to provide such a sign housing which relies upon the heat of energization of the illuminating means within the housing for defrosting or melting any ice accumulation that may collect on the sign before it has become illuminated or for preventing such ice accumulation after the sign has become illuminated. A further kindred object is to provide a sign housing of this sort having associated therewith sign indicia which is protected from obliteration by moisture, either in the form of ice or water so that the indicia will at all times be clearly legible and visible.

Another object of the invention is to provide a sign housing in which the characters or numbers forming the sign indicia consist solely of rows of closely aligned perforations, the perforations being of sufficiently small diameter that during inclement weather horizontal wind gusts will not carry rain drops or other moisture into the housing, yet which are of adequate size to display their message clearly both during daylight hours when the sign is not illuminated as well as during the illuminated night hours.

A further object of the invention is to provide a sign housing which is comprised of a cover part and one or more door parts hingedly connected to the cover part, the cover part being provided with suitable supporting means whereby the same may be suspended or otherwise supported from a suitable standard such as a street post, together with releasable interlocking means between the cover and door parts so that an end of each door part may be suspended from the cover part and held thereagainst in closed relation with no likelihood of accidental opening movement of the door parts.

Yet another object of the invention, in one form thereof, is to provide a directional street sign designed for use at street intersections and having a sign housing provided with angularly disposed parts which may be employed to designate the names of the intersecting streets, together with reinforcing means for the two angularly disposed parts whereby the parts may be held against possible relative angular swinging movements

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and in which the reinforcing means is comprised of the tubular wire or bus bar fittings through which the electrical conductors for the sign energizing means extend.

Still another object of the invention is to provide an illuminated sign assembly which is readily capable of attachment to and removal from a wide variety of street posts or standards, thus enabling the sign to be transported to the factory, repair shop or the like for servicing rather than necessitating servicing in the field.

A still further object of the invention, in a modified form thereof, is to provide an illuminated danger signal device capable of receiving its energization from a portable source such as a battery or the like and having associated therewith a series of similar danger signal devices, the various devices being capable of selective placement and connection to the portable source so that they may effectively be positioned at a danger area, as for example near an excavation or the like so as to enclose the area and provide a warning from all approaches thereto.

Other objects and advantages of the invention, not at this time enumerated, will become more readily apparent as the nature of the invention is better understood.

In the accompanying two sheets of drawings forming a part of this specification, several embodiments of the invention have been shown.

In these drawings:

Fig. 1 is a perspective view of a directional street sign constructed in accordance with the principles of the present invention and showing the same operatively mounted on a street post;

Fig. 2 is an enlarged side elevational view of the sign shown in Fig. 1;

Fig. 3 is a sectional view taken substantially along the line 3—3 of Fig. 1;

Fig. 4 is an enlarged fragmentary exploded perspective view of a releasable locking means employed in connection with the present invention;

Fig. 5 is a perspective view of a danger signal device constructed in accordance with the principles of the present invention;

Fig. 6 is a sectional view taken substantially on the vertical plane indicated by the line 6—6 of Fig. 5;

Fig. 7 is a perspective view of a portion of the structure shown in Fig. 5 and showing the sign housing in its open condition, with portions thereof removed to show the arrangement of lights therein; and

Fig. 8 is a side elevational view, somewhat schematic in its representation, showing a series of interconnected danger signal devices capable of selective placement within or about a danger area.

Referring now to the drawings in detail, and in particular to Figs. 1 to 4 inclusive wherein the invention is shown as being operatively embodied in a directional two-way street sign, the sign involves in its general organization a generally L-shaped sign casing 10 having casing portions 12 and 14 which may be disposed at right angles to each other to accommodate a street intersection wherein the two streets are similarly related. It will be understood, of course, that where the streets intersect at an angle other than a right angle, the angularity between the portions 12 and 14 will be varied accordingly.

The sign casing 10 includes a main body part 16 which is common to portions 12 and 14 and which, because it incorporates the entire cover portion of the casing, will hereinafter be referred to as the cover part. The body part 16 is essentially L-shaped, and at the intersection of the portions 12 and 14 extends downwardly on both sides and then across to form two legs 20 and 22 of hollow construction and preferably rectangular cross section. Thus, each leg has a bottom wall 24, inside and outside side walls 26 and 28 respectively, and a top wall formed

by body 16, the latter being preferably arcuate in cross sectional configuration for reasons that will be made clear presently.

Body 16 extends outwardly from the divergent ends of each hollow leg portion 20 and 22 in the form of a hood, each extension being provided with depending side walls 36 and an end wall 38 which constitute an apron depending from the three sides of the cover extensions. This apron is adapted to telescope over the upper end of a box-like door structure the nature and function of which will be made clear presently.

Still referring to Figs. 1 to 4 inclusive, the box-like door structure 40 has a bottom wall 42, upstanding side walls 44 and 46 and an upstanding end wall 48. The other end of the structure 40 is open. The open end of each door structure 40 extends into the free or open end of one of the hollow legs 20 or 22, as the case may be, in such manner that the free edge of the bottom wall 42 overlaps the bottom wall 24 of the elbow portion 18. A conventional leaf hinge 50 has one leaf thereof secured as by rivets to the bottom wall 42 and its other leaf similarly secured to the wall 24 so that the door structure or closure member 40 is pivoted to the body part 16 for swinging movement from the closed position shown in Fig. 3 through the intermediate position shown in dotted lines in this view to a fully open position wherein the interior of the casing portion 12 or 14, as the case may be, is exposed and completely accessible. It may be noted that the hinge part on the closure member is vertically offset from the hinge part on the hollow member so that bottom wall 42 may overlap the bottom wall of the hollow member in the closed position of the closure member.

The opposed inner faces of the casing portions 12 and 14, as well as the remote outer faces thereof, constitute the sign fields on which the readable indicia are displayed. The characters, i. e., the letters or numerals, which constitute the sign proper are produced by rows of perforations 51 which are closely aligned and which assume the form of the desired reading material such as the designations of the intersecting streets. The characters thus produced are readily visible in daylight and it will be understood that these characters are likewise visible at night when the interior of the sign housing is illuminated by electrical means subsequently to be described. The perforations 51 are of sufficiently small diameter that cross currents or drafts of air will not readily pass through the sign casing and they are preferably small enough that the average rain drop cannot enter the same in rolling down the sides of the sign.

It will be observed that, as clearly shown in Fig. 2, the perforations 51 constituting the indicia of the sign proper may be placed on the side walls 44 and 46 of the closure members 40 and such portions of the matter as cannot conveniently be wholly contained on these side walls may be placed on the inner and outer side walls 26 and 28 of the hollow leg portions 20 and 22, respectively, of the body part 16.

The sign casing is adapted to be supported in a generally horizontal position as shown in Fig. 1 from a conventional street post or a street lamp having a vertical supporting standard such as the standard shown at 52 in broken lines in Fig. 1. Accordingly, the apex of the body part 16 is provided with a pair of contiguous laterally extending webs 54 which may be secured together by a soldering or welding operation and which terminate in laterally turned curved portions 56 having clamping flanges 58 formed thereon. A strap 64 having clamping flanges 62 together with suitable clamping nut and bolt assemblies 66 completes the attachment means whereby the body part 16 is supported from the standard 52.

In order to maintain the closure members 40 in their closed nested positions within the extensions of the body part 16, cooperating releasable locking means are provided on the end walls 38 and 48. This locking means

is in the form of a generally triangular loop of spring wire 70 (Fig. 4) twisted at its apex as at 72 around a stud 74 carried on the wall 38 and having diverging sides 76 the free ends of which are turned inwardly as at 78 and extend in overlapping relation so that they may be passed through an opening 80 provided in an eyelet member 82 in the form of an angle piece welded or otherwise secured to the wall 48. By spreading the arms 76 apart until the ends of the overlapping portions 78 become separated, these portions may be aligned with the eyelet opening 80 and passed therethrough when spring tension on the arms 76 is released. The overlapping relation of the portions 78 insures engagement between the wire and eyelet member 82 under conditions of vibration due to the passage of heavy vehicles near by, or vagaries of the elements, or tampering by unauthorized persons.

In order to render the sign indicia on the various sign fields visible at night, a conventional electric lamp socket 84 of the double ended variety is suitably suspended substantially centrally from the curved top wall portions of each casing portion 12 and 14. These socket members have mounted therein in axial alignment elongated lamps 86 which may be connected in electrical parallel within the sockets themselves as well as through suitable conductors 88 which extend through tubular fittings leading to a source of current (not shown) which may be the same source employed for illuminating the street lamp associated with the standard 52. The conductor fittings just referred to preferably include two L-shaped tubular members 90, the downwardly turned ends 92 of which extend into the lamp housing 10 and serve to support the respective socket members 84. These members 90 are connected at adjacent ends by a T-fitting 94 which constitutes a lead-in for the conductors 88. The tubular fittings thus form a rigid assembly which constitutes a reinforcing brace or strut by means of which the two diverging housing sections 12 and 14 are maintained against relative swinging movement.

From the above description it will be apparent that due to the curved nature of the top wall surfaces of the lamp housing, there will be a tendency for moisture in the form of rain or the like which may fall on this surface to flow downwardly in opposite directions across the top wall surfaces and downwardly across the apron or side walls of the cover extensions. The cover extensions will serve as a hood so that the moisture will drip from the lower edge of the apron, thus maintaining much of the moisture out of contact with the side walls and end wall of the closure members 40. In this manner protection is afforded the various sign fields against accumulation of moisture. Additionally, during sub-freezing weather, any ice formation which may have accumulated on the sign housing, particularly the top wall portions thereof, during daylight hours when the sign is not illuminated, will become transformed into water when the sign is illuminated because of the heat given off by the lamps 86 and the moisture thus formed will be shed from the apron portion of the cover extensions in the manner previously described.

In the form of the invention shown in Figs. 5, 6 and 7, the principles set forth in connection with the street sign of Figs. 1 to 4 inclusive have been applied to a danger or warning signal device including a portable battery cabinet 100 and a sign assembly 102. The cabinet 100 is of more or less conventional design and no claim is made herein to any novelty associated with the same, it being deemed sufficient to state that the same may be in the form of a rectangular metal box-like structure having a hinged front door and adapted to contain a suitable source of current supply such as a series of dry cell batteries, or a storage battery, such as is illustrated at 104. Conductors 105 and 106, having associated therewith suitable clamping devices 108 for attachment to the

battery terminals 110 and 112, respectively, lead to an outlet socket 114, a suitable manual switch 116 being interposed in one of the conductors. Additional outlet sockets may be provided for the cabinet structure 100, two such sockets 117 and 118 being shown as disposed on the side walls thereof for purposes that will appear subsequently.

The sign housing assembly 102 is similar in its design and construction to one of the casing portions 12 or 14 of the sign housing 10 of Fig. 1, and includes a body portion 122 having a hollow part 124 provided with an extension 126 on one side and with a transverse end wall 130 closing the other side. The body portion 122 has associated therewith a hinged closure member 132 similar to the closure members 40 previously described and similarly hingedly secured to the bottom wall of the body part for swinging movements into and out of telescopic relation with respect to the cover extension 126. Indicia 133 are perforated in the door sides as in the form of the invention shown in Figs. 1 to 4 inclusive.

Whereas in the form of the invention shown in Fig. 1, the body part 16 is adapted to be fixed to a stationary support such as the standard 52 and the door structure 40 is movable relative thereto, in the form shown in Figs. 5 to 8 the closure member 132 is adapted to be fixedly supported from the battery cabinet 100 while the hollow body part 124 is movable. Toward this end, a conventional male plug connector 134 is secured to and projects downwardly from the bottom wall of the closure member 132 centrally thereof and is designed for detachable connection to the female receptacle 114 for the dual purpose of supporting the sign assembly 102 in a slightly elevated position above the cabinet 100 as well as for establishing electrical connection between the illuminating means within the sign assembly 102 as will be described presently.

The connector 134 communicates with a lamp socket member 135 of the double-ended type and which may be identical with the lamp socket member 84 in the form of the invention previously described. The socket member 135 is positioned in close proximity to the bottom wall of the closure member 132 and is adapted to receive therein a pair of lamps 137 having electrical characteristics commensurate with the voltage delivered by the battery 104.

The extension 126 may carry interiorly and centrally thereof a double ended lamp socket assembly 138 adapted to receive therein a pair of lamps 140 which may be of the 110 volt variety or which otherwise have electrical characteristics which will adapt them for energization by a commercial source of current. The socket assembly 138 may have associated therewith the usual female socket part designed for connection to a male plug 144 carried at the end of a conductor 146 by means of which current may be supplied to the lamps 140. The electrical system associated with the lamps 140 may be entirely independent of the portable electrical system which supplies low voltage current to the lamps 137, and either system may selectively be employed for illuminating the sign.

In Fig. 8 a series of the sign assemblies 102 is shown as being operatively connected in electrical parallel to the battery source of a single cabinet 100. In addition to the assembly 102 which is mounted directly on the cabinet 100, two additional assemblies of identical construction are shown as being mounted on suitable standards 150, each of which comprises a base portion 152 and an upstanding post 154, the latter carrying at its upper end a female socket 156 for reception of the male plug 134 associated with its respective assembly 102. The various socket members 117, 118 and 156 may be interconnected by suitable cables 158 in the usual manner of connection of such elements so that all of the low voltage lamps associated with the sign assemblies 102

may be electrically connected in parallel to the battery source within the cabinet 100.

The arrangement of sign assemblies 102 illustrated in Fig. 8 will be found useful in guarding a danger area such as an excavation or the like. The various assemblies may be strategically positioned in or around the excavation or danger area so as to give adequate warning from all approaches thereto. The various indicia 133, being visible from both sides of each sign assembly, facilitate convenient placement of the assemblies for maximum visibility of the overall display from all directions particularly when illuminated as at night.

It is understood that the foregoing description is merely illustrative of preferred embodiments of the invention and that the scope of the invention therefore is not to be limited thereto but is to be determined by the appended claims.

I claim:

1. In combination, a sign casing including a cover part and a closure part, said cover part including a hollow body portion having a bottom wall, upstanding side walls and a crowned top wall, said top wall and the upper regions of said side walls being extended longitudinally to provide a hood portion the top wall of which is a continuation of said top wall of the body portion and depending side flanges which are continuations of said side walls of the body portion, an end wall at the outer end of said hood portion, said closure part comprising a box-like structure having a bottom wall, upstanding side walls and an upstanding end wall, an open top and an open end opposite said upstanding end wall, and a leaf hinge having one leaf thereof secured to the edge region of the bottom wall of said hollow body portion and having its other leaf secured to the bottom wall of the closure part a slight distance inwardly from the free edge thereof whereby when said bottom walls are in parallel relation the two walls overlap each other a slight distance, said closure part being movable from a closed position wherein the upper edge regions of the end and side walls thereof are telescopically received between said depending side flanges and within said hood portion to an open position wherein the interior of said hollow body portion is exposed, and cooperating means on said cover and closure parts for releasably locking said closure part in its closed position.

2. The combination set forth in claim 1 wherein the side walls of said cover part are longitudinally coextensive with the bottom wall thereof whereby when said closure part is in its closed position the open end of the latter is slightly telescoped into the hollow body portion of the cover part.

3. In combination, a sign casing comprising a cover part and a closure part, said cover part including a hood portion having a crowned top wall and depending side flanges, said closure part being in the form of a box-like structure having an open upper end, means hingedly connecting said cover part and closure part for relative swinging movement whereby the closure part may be moved between a closed position wherein it is telescopically received within the side flanges of said cover part and an open position wherein said open upper end is withdrawn from such telescopic reception, sign indicia on said closure part immediately below said hood portion of the cover part, said indicia being in the form of a plurality of rows of closely spaced perforations in at least one wall of the closure part, said rows in combination constituting the indicia pattern, and means for illuminating the interior of said closure part at will.

4. The combination set forth in claim 3 wherein said illuminating means comprises a fixture including an electric lamp fixedly secured within the closure part and movable therewith in unison.

5. In combination, a sign casing comprising a cover part and a closure part, said cover part including a hood portion having a crowned top wall and depending side

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flanges and at least one end flange, said closure part being in the form of a box-like structure having a bottom wall, upstanding side walls and at least one end wall, and an open upper end means hingedly connecting said cover part and closure part for relative swinging movement whereby said closure part may be moved relative to the cover part between a closed position wherein its open end is telescopically received within the flanges of said cover part and an open position wherein said open end is withdrawn from such telescopic reception, sign indicia on said side walls of said closure part immediately beneath the side flanges of the hood portion, said indicia being in the form of a plurality of rows of closely spaced perforations extending through the side walls of the closure part, said rows of perforations, in combination, con-

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stituting the indicia pattern, and means for illuminating the interior of said sign casing.

6. The combination set forth in claim 5 wherein said illuminating means comprises a fixture including an electric lamp fixedly secured within the closure part for movement bodily in unison therewith.

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