March 6, 1962 R. H. MUSE 3,023,524

ILLUMINATABLE DISPLAY SIGN CASINGS

Filed April 13, 1959

Fig. 1.

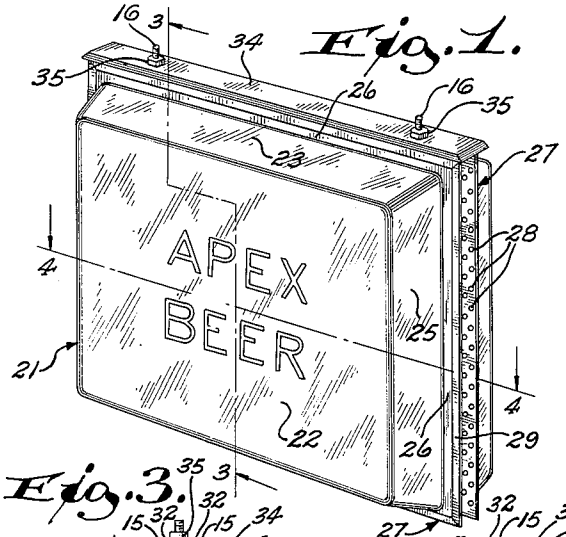


Fig. 2.

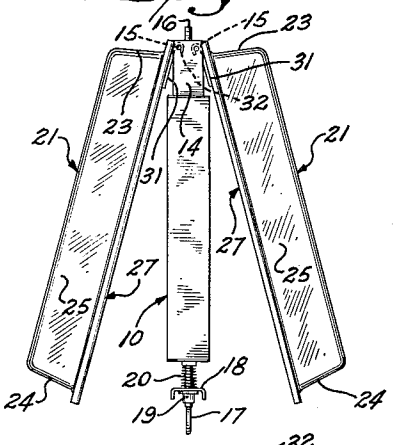
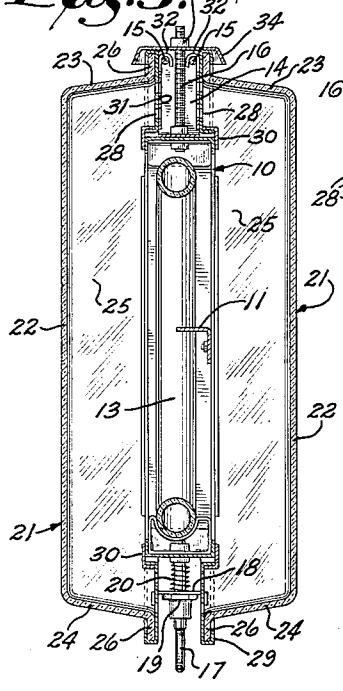


Fig. 3.



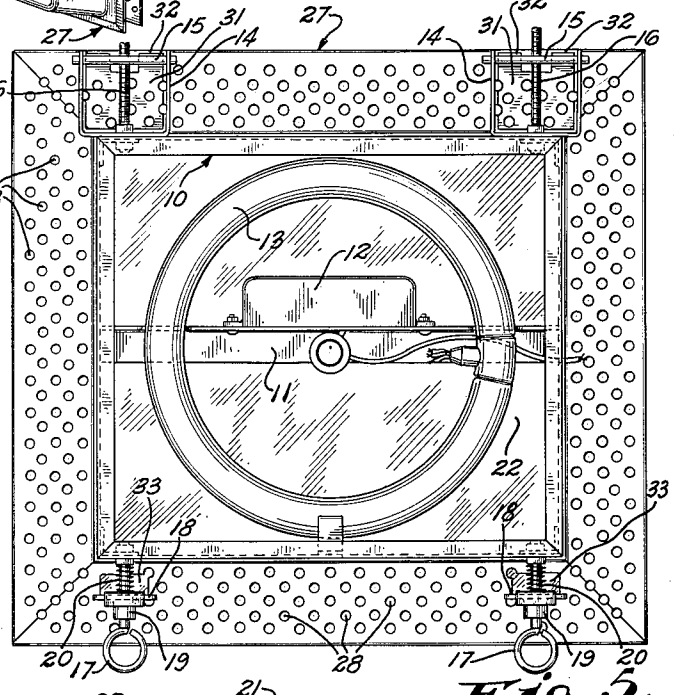
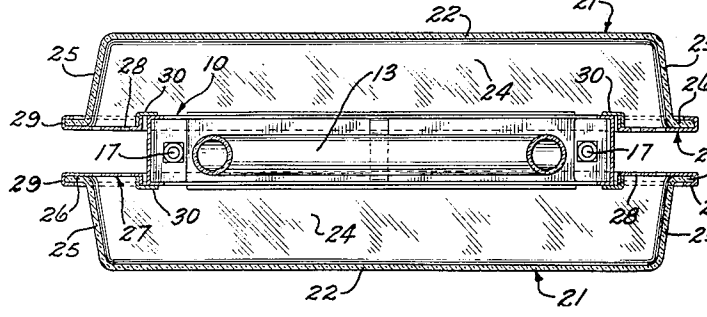


Fig. 5.

Fig. 4.



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ILLUMINATABLE DISPLAY SIGN CASINGS

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This invention relates to improvements in illuminatable display sign casings, and more particularly to an illuminatable display sign casing which is peripherally illuminated and ventilated.

Conventional illuminatable sign casings for display purposes are customarily large, bulky and heavy and are usually mounted in elevated positions. The hollow interior of a sign casing of this type houses the tubes, ballast and electrical connections, and means must be provided to afford access to the interior of the sign casing for servicing or replacing the elements housed therein and for cleaning the interior surfaces of the translucent faces of the sign casing. In conventional sign casing structures of the type mentioned the opposed translucent faces of the casing are formed as the outer walls of pan-like facing members which are mounted for movement to permit access to the interior of the casing, and the movement of such facing pans is customarily relative to an annular, intermediate drum or divider, which drum or divider carries certain of the sign components.

In the field under consideration it is, of course, desirable to construct the sign casings as flat and compact as possible, but this may result in a restricted interior space which will become overheated by the lamps or tubes, when the sign is being illuminated. Also, in conventional sign casings of the type under consideration the light rays pass outwardly through the translucent faces of the pan-like side members and adequately illuminate these plane surfaces, but there is no illumination for the peripheral portions of the sign casing. Peripheral illumination of the sign casing becomes an increasingly greater problem as the bulkiness or breadth of the sign is increased.

With the foregoing in mind it is, therefore, a primary object of the present invention to provide an illuminatable display sign casing formed of a pair of companion pan-like facing members which close relative to an interposed intermediate drum or divider, wherein the breadth and bulkiness of the sign casing is kept to a minimum, with the provision of adequate and efficient means for both ventilating the interior of the sign casing and illuminating its entire periphery.

Further objects of the invention are to provide an illuminatable display sign casing which is of very compact and flat construction, which is strong and rigid, which is weatherproof, which is simple to manufacture and assemble, which may be easily opened for servicing, which provides for the simple and effective hinged mounting of the opposite facing pans of the casing, which provides for thorough ventilation of the interior of the sign casing to permit the dissipation of heat, which provides for illumination of the display faces of the sign as well as for novel peripheral illumination of the casing, which presents a neat and attractive appearance, and which is well adapted for the purposes described.

With the above and other objects in view, the invention consists of the improved illuminatable display sign casing, and its parts and combinations as set forth in the claims, and all equivalents thereof.

In the accompanying drawing, in which the same reference characters indicate the same parts in all of the views:

FIG. 1 is a side and end perspective view of the improved peripherally illuminated and ventilated display sign casing;

FIG. 2 is an end view of a display sign casing showing the manner in which the facing pans may be hinged outwardly from the drum or divider to provide access to the interior of the casing;

FIG. 3 is a vertical sectional view taken approximately on line 3—3 of FIG. 1 and on a larger scale;

FIG. 4 is a horizontal sectional view taken approximately on line 4—4 of FIG. 1 and on a larger scale; and

FIG. 5 is an enlarged face view of the display sign casing with one of the facing pans removed.

Referring now more particularly to the drawing, it will appear that the drum or divider of the improved illuminatable display sign casing is indicated generally by the numeral **10** and the same takes the form of an open rectangular frame of secured-together metallic elements. Secured within the drum **10** is a support **11** which may provide a mounting means for a ballast **12** (omitted from FIG. 3) and other suitable electrical connections. The drum also serves as a support or mounting means for a high output fluorescent lamp **13**, or the like, which is illustrated as being of circular contour, but which may be of any desired shape to suit the requirements of the casing and sign.

On the upper frame element of the drum **10** there are spacedly secured a pair of upwardly projecting stirrups **14**, each of which carries at its upper open end a pair of hinge pins **15**. Each stirrup **14** is bolted to the upper element of the divider **10** by an upright bolt **16** whose threaded shank portion extends substantially above the open end of its stirrup **14** for a purpose hereinafter to be set forth. The lower frame member of the drum **10** has secured therein the inner end portions of a pair of latch plate carrying bolts **17** having enlarged outer end portions to facilitate manual manipulation thereof. Slidably mounted on the shank portion of each of the bolts **17** is a latch plate **18** having downturned end flanges. Downward movement of the latch plates on the bolts **17** is limited by shouldered hubs **19** and said latch plates may be manually moved upwardly on the shanks of their bolts **17** against the tension of confined coiled springs **20**.

Each face of the open drum frame or divider **10** is adapted to be closed by a translucent pan-like facing member indicated generally by the numeral **21**. The major portion of each pan-like facing member **21** is formed of a sheet of translucent plastic material shaped to provide a flat front face **22** which in practice may bear lettering, pictorial representations or other advertising indicia to be illuminated by the tube or tubes **13** within the drum frame. Additionally, each pan-like facing member **21** includes integral top and bottom surfaces **23** and **24** extending angularly from the upper and lower margins of its front face **22**, and integral angularly outwardly directed end surfaces **25**. The peripheral portions of the pan-like facing members **21** are provided with flanges **26**.

The flanged peripheral portion of each pan-like facing member **21** is adapted to carry a rectangular or annular ventilating and illuminating collar designated generally by the numeral **27**. The major extents of the elements of each collar **27** are flat and in a plane parallel to the front face portions **22** of the facing members **21**. When the facing members **21** are closed on the drum frame or divider **10**, as in FIGS. 1, 3 and 4, to close the interior of the sign casing, the elements of the collars **27** extend laterally outwardly from the margins of the drum or divider **10**, as do substantial marginal portions of the pan-like facing members **21**. Around the periphery of the drum or divider **10**, between the laterally projecting portions of the closed pan-like facing member **21** there are open channels best shown in FIGS. 1 and 4, but the

open inner face peripheral portions of the facing members **21** are covered by the plane extents of the collars **27**, but said plane extents are provided with a plurality of small apertures **28** which, when the sign is in use with the tube **13** energized, serve to ventilate the interior of the closed sign casing, and permit the dissipation of heat to the atmosphere. Also, the various apertures **28** in the plane portions of the collar **27** permit light rays to pass therethrough outwardly for the effective illumination of the entire peripheral portion of the sign casing, as well as the translucent portions of the facings. Any convenient practical means may be provided for securing the outer peripheral portions of the collar **27** to the flanged edge **26** of the pan-like facing members **21**. A practical mode of attachment is to form reverse U-shaped flanges **29** on the marginal portions of the collars **27** and to clinch the same about the peripheral flanges **26** on the pan-like facing members. Also, the inner peripheral margins of the collars **27** are provided with right angular flanges **30** to overlap and make tight engagement with portions of the drum or divider **10**, as best shown in FIGS. 3 and 4.

The inner face portion of the upper element of each collar **27** has welded or otherwise secured thereto, so as to coincide with the positions of the stirrups **14**, upstanding hinge plates **31** which are also apertured. The upper ends of said hinge plates are formed with hooks **32** to engage the hinge pins **15** carried by the stirrups **14**. By this arrangement each pan-like facing member **21** is hingedly mounted at its upper end relative to the drum or divider frame **10** so that either or both of the pan-like facing members **21** may be hingedly moved to an open position, as shown in FIG. 2, to give access to the interior of the sign casing, or by disengaging the hook portions **32** of the hinge plates **31** from the pins **15** complete removal of a facing member **21** is possible.

In the lower elements of the collars **27** there are eccentrically shaped openings **33** (see FIG. 5) which register with the positions of the yieldingly mounted latch plates **18**. To releasably secure the lower portions of the pan-like facing members **21** to the bottom portion of the drum **10**, it is merely necessary to manipulate the locking plates **18** on their bolt shanks **17** so as to pass the flanged ends of the plates **18** through enlargements in the eccentric openings **33**, whereupon the flanged portions of the plates will lock against the inner surfaces of the stock adjacent the openings **33**, as in FIG. 3. The plates are yieldingly held in said latched positions by the springs **20**, and this serves to secure the lower ends of the hingedly movable facing members **21** in their closing positions. Unlatching of the facing plates is accomplished through a reverse manipulation of the plates **18** to disengage the same from their openings **33**.

With reference to FIGS. 1 and 3, it will be observed that there is mounted on the projecting outer end portions of the upstanding drum carried bolts **16** an elongated flanged canopy plate **34**. This plate **34** is coextensive with the channel between the upper elements of the two separated collars **27** and the canopy plate **34** rests on the upper margins of the same in overhanging relation and completely covers and protects the channel or space along the upper margin of the closed sign casing. The plate is firmly clamped in position by nuts **35** threaded onto the bolts **16** but the canopy plate may be removed, if desired. When in use, and if the sign casing is installed out of doors, the plate **34** serves as a protection against rain, dirt and foreign matter.

From the foregoing description it will be seen that the construction of the improved display sign casing provides for a relatively flat and compact illuminatable sign which is of novel and attractive appearance because, not only are the sign facings illuminated, but a peripheral band around the sign casing is also illuminated by means which additionally serve the purpose of effectively ventilating the interior of the sign casing. The latter is a very important factor because of the compact, flat construction of the casing which, without means of adequate ventilation, would become internally overheated. In addition to the structural features of the sign casing which provide for peripheral ventilation and illumination, the pan-like facing members may be readily opened or removed to permit access to the interior of the casing for replacements, repairs, cleaning and servicing. The improved peripherally illuminated and ventilated display sign is of simple, inexpensive and novel construction, and is well adapted for the purposes set forth.

What is claimed as the invention is:

1. In an illuminatable display sign construction, a rectangular frame forming a drum, illuminating means housed within the drum frame, a pan-like member for closing a face of said drum, the longitudinal and transverse dimensions of the pan-like member being greater than those of the drum frame, said pan-like facing member including a dished sheet of translucent material with a rectangular flanged peripheral portion, an inwardly projecting collar carried by the flanged peripheral portion of the pan-like facing member to marginally abut the outer surface portions of the drum when the pan-like member is in closing relation to a face of the drum frame, the collar overlapping and covering open face portions of the pan-like member outwardly of the periphery of the drum frame and being apertured laterally outwardly of the periphery of the drum frame to permit the passage of light and heat from the interior of the display sign around the periphery thereof.

2. In an illuminatable display sign construction, a frame forming an intermediate drum, the walls forming the drum frame having their planes parallel to the drum axis, illuminating means housed within the drum frame, a pan-like member for closing each face of said drum and extending beyond the periphery of the interposed drum, each pan-like facing member including a dished sheet with a flanged, annular peripheral portion surrounding the inner open face of the pan-like facing member, an inwardly projecting collar carried by the flanged peripheral portion of each pan-like facing member, the plane of each collar being at right angles to the planes of the drum end walls, said collars abutting laterally spaced-apart outer surface portions of said drum walls when the pan-like members are in closing relation to the opposite faces of the drum frame, there being formed between said collars and outwardly of all sides of the drum frame a peripheral outwardly opening channel, the collars overlapping and covering marginal open face portions of the pan-like members outwardly of the periphery of the drum frame and being apertured to emit light into said outwardly opening channel and to ventilate and cool the interior of the display sign.

3. In an illuminatable display sign construction, a rectangular frame forming an open faced intermediate drum, high output electrical illuminating means completely housed within the drum frame, a pan-like member for closing each face of said drum and extending on all sides beyond the periphery of the interposed drum, each pan-like facing member including a dished sheet of translucent material with a flanged, annular peripheral portion surrounding the inner open face of the pan-like facing member, an inwardly projecting collar carried by the flanged peripheral portion of each pan-like facing member, said collars terminating adjacent laterally spaced outer surface portions of the drum walls when the pan-like members are in closing relation to the opposite faces of the drum frame to provide an outwardly opening peripheral channel, the collars overlapping and covering marginal open face portions of the pan-like members outwardly of the periphery of the drum frame and said portions of the collars being apertured to emit light and heat from the interior of the display sign and forming the side walls of said channel, means movably mounting the pan-like members on the drum frame, and a

canopy supported from a portion of the drum frame spacedly over a portion of the open side said peripheral channel.

4. A casing for an illuminatable display sign, comprising a pair of pan-like facing members, each including a dished sheet of light permeable material with a rectangular peripheral frame for its open face, the open faces of the dished sheets facing each other in spaced relation, an open rectangular drum frame of less size than the pan-like members spacedly interposed between the open faces of the pan-like facing members, the outermost margins of the drum frame being spaced inwardly from the margins of the open faces of the pan-like members, hinge means between portions of the pan-like members and the drum frame, illuminating means mounted within the drum frame, and a rectangular, apertured collar carried by and extending inwardly from the rectangular peripheral frame of the open face of each pan-like member and bridging the space between the same and the periphery of the drum frame, the collars being spaced apart to provide a peripheral channel for the casing through which light and heat from the interior of the drum frame is emitted through the exposed collar apertures.

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