

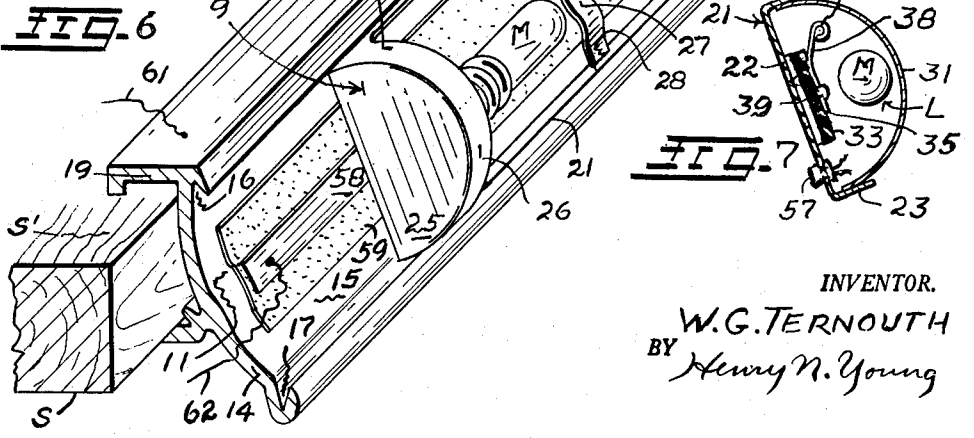
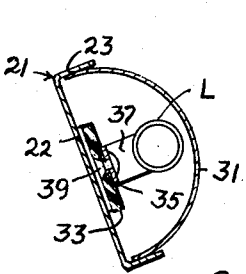
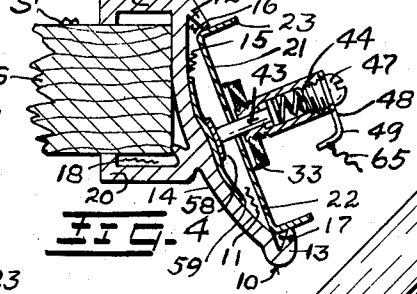
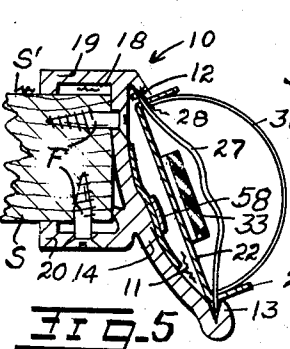
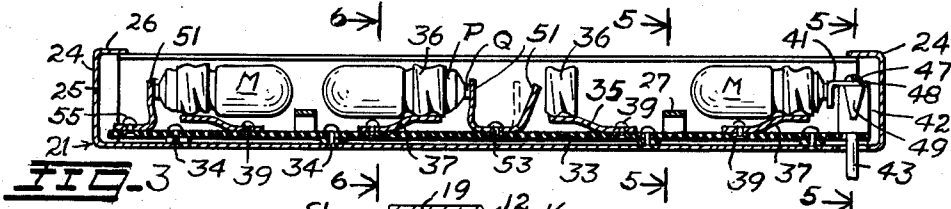
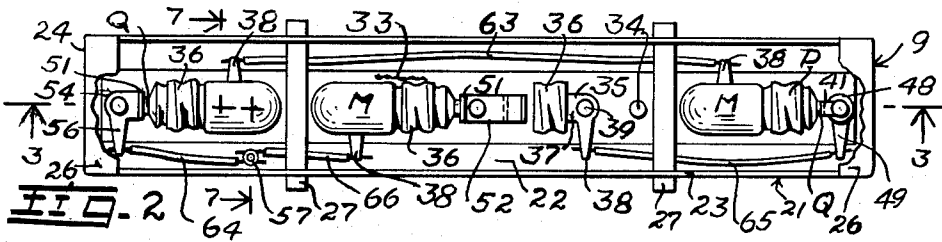
April 23, 1963

W. G. TERNOUTH

3,086,308

SHELF-EDGE SIGN

Filed June 29, 1959



INVENTOR.
W.G. TERNOUTH
BY Henry N. Young

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3,086,308

SHELF-EDGE SIGN

Westlake G. Ternouth, 4664 Geranium Place,
Oakland 19, Calif.

Filed June 29, 1959, Ser. No. 823,723

3 Claims. (Cl. 40—130)

The invention relates to sign units designed for use upon the front edges of merchandise-carrying shelves or the like.

Recalling that it is a common practice to provide moldings of channel section along the front edges of merchandising shelves in self-help stores for carrying sign tags bearing price and/or other indicia, a present general object is to provide electrically self-illuminated advertising sign units for mounting on shelf-carried moldings in mutually independent adjusted positions therealong.

Another object is to provide sign units of the character described which are mountable upon usual tag-supporting moldings in lieu of unilluminated tags which are mountable thereon.

A further object is to provide a particularly simple and effective power circuit for energizing the lamps of a present molding-carried lamp unit.

The invention possesses other objects and features of advantage, some of which, with the foregoing, will be set forth or be apparent in the following description of a typical embodiment thereof, and in the accompanying drawings, in which,

FIGURE 1 is a fragmentary perspective view showing the sign unit of present invention mounted on the outer edge of a shelf-carried molding.

FIGURE 2 is a front face view of the unit having certain elements thereof broken away or removed.

FIGURE 3 is a longitudinal sectional view taken generally at the line 3—3 in FIGURE 2.

FIGURE 4 is an enlarged section taken at the line 4—4 in FIGURE 3.

FIGURE 5 is an enlarged section taken at the line 5—5 in FIGURE 3.

FIGURE 6 is a section taken at the line 6—6 in FIGURE 3.

FIGURE 7 is a section taken on the stepped line 7—7 in FIGURE 2.

As particularly illustrated, a sign unit 9 embodying my invention is shown as arranged for its mounting on a metallic molding 10 of uniform cross-section carried on and along the forward edge of a shelf S and providing an outwardly-directed channel 11 defined between mutually inturned upper and lower flanges 12 and 13 of a connecting web plate 14 and usable as a conductor in a lamp-energizing circuit for the unit. The outer face 15 of the web 14 is of generally cylindrically concave form, and the upper and lower edge flanges 12 and 13 of the molding are cooperative with its web face 15 to define opposed V grooves 16 and 17 which may directly receive the upper and lower edges of usual price or sign tags (not shown) between them, with said tags preferably flexed to either an inwardly-bowed or outwardly-bowed condition for their retained mounting in adjusted positions on and along the molding 10 in a usual arrangement for the direct mounting of such tags. Since a sign carried by a shelf-mounted molding is usually to be viewed from in front of and above it, it is advantageous to have the common plane of the molding flanges 12 and 13 sloping downwardly and outwardly from the top molding edge as shown, and a suitable means is provided for so mounting the molding on the front edge portion of a shelf, the present shelf S being shown as of wood to therefore insulate the molding as a conductor.

If the sign-carrying molding solely comprises the web

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plate 14 and its upper and lower edge flanges 12 and 13, it will be understood that such a molding might be mounted directly on the forward edge of a wooden shelf with its top edge substantially flush with the top face S' of the shelf by transversely applying fastening screws F through the upper portion of the curved web 14 and into the opposed shelf edge, whereby said plate may be fixedly mounted on the shelf to depend obliquely outwardly from its top edge in its preferred illustrated relation to the shelf. Also, a further or alternative means for mounting a sign-carrying molding comprises the illustrated provision at the back of the web 14 of a rectangular channel 18 defined between upper and lower flanges 19 and 20 extending integrally and rearwardly from the web 14 and arranged to closely receive the forward edge portion of the shelf between them, and the present molding 10 may be fixedly fastened to the shelf as by applying screws F through the lower rear flange 20. It will be understood that, in case a shelf edge of other cross-section and/or electrically-conductive material is to mount a present molding 10, appropriate fastening elements would be utilized in lieu of the wood screws F, and the molding 10 would be suitably insulated from a metallic shelf mounting it.

It will now be noted that the portion of the present molding 10 comprising the cylindrically concave web 14 and its inturned edge flanges 12 and 13 is utilized for mounting a present sign unit 9 on the shelf-carried molding, and that a present sign unit 9 includes a unitary base element 21 which cooperatively mounts the other elements of the unit assembly and comprises a flat and more-or-less elongated rectangular base plate portion 22 of appropriate width provided with opposed outturned side flanges 23 connecting corresponding outturned element ends 24 which comprises like flat and substantially segmental (semi-circular) element portions 25 having their chords in the plane of the base plate portion 22 and provided at their arcuate edges with mutually opposed and aligned flanges 26. Preferably, and as illustrated, the present element 21 may be conveniently shaped from a blank of suitable sheet metal, whereby said element is electrically conductive and has its portions comprising the base plate portion 22 and side flanges 23 and flanged ends 24, integrally related.

The overall width of the base plate portion 22 of the element 21 is slightly less than that of the mutual spacing of the free edges of the molding flanges 12 and 13 which define the grooves 16 and 17 respectively between them and the molding web 14, whereby the base plate portion 22 may be disposed and secured opposite the outer face 15 of the molding web between said molding flanges. For securing the base element 21 of the unit 9 in mounted position on the molding 10, this element carries at least two laterally spaced leaf-spring strips 27 across it and opposite its outer face for the simultaneous engagement of their extremities in the molding grooves 16 and 17 to secure the element 21 to the shelf-mounted molding 10. As shown, the springs 27 have end portions thereof engaged through and extending from corresponding slots 28 provided through the side flanges 23 of the element 21 in parallel adjacency to the outer face of the portion 22 of the element, and the holding springs 27 are arranged to be sprung and intermediately arched into operative positions to have their extending end portions engaged in the mutually opposed side grooves 16 and 17 of the molding 10 to removably fix the base element 21 on the molding.

A resiliently flexible sign panel or pane element 31 of rectangular outline is provided with appropriate sign characters 32 on a face thereof, and is so dimensioned and constituted that it may be laterally flexed to have its

side edge portions retainedly engaged behind the side flanges 23 of the base portion 22 of the element 21 while its end portions are complementarily engaged with the inner faces of the flanges 26 of the ends 24 of said element. As illustrated, the length of the panel 31 is preferably less than the distance between the mutually parallel end parts 25 of the element 21 and is greater than the distance between the opposed edges of the flanges 26 of said parts, whereby a mounting or dismounting of the sign panel 31 with respect to the element is facilitated, it being noted that the side edges of the mounted sign panel 31 are disposed transversely outwardly of the springs 27 which then secure the base element 21 to the shelf-mounted molding 10. Noting that a present sign panel 31 is arranged for an illuminated presentation of its characters 32, said characters are preferably defined within, or on the inner face of, the panel, which is preferably of transparent, or at least translucent, material to provide for a display illumination of the sign from behind the panel 31 which is of a usual type.

An illumination of the sign of a sign panel 31 is arranged to be effected by energizing a line of electric lamps L mounted within the space defined between the base portion 22 of the element 21 of the unit 9 and the mounted sign panel 31, with said lamps and their immediate energizing connections suitably carried on a strip 33 of a suitable electrically-non-conductive (insulation) material fixed to and along the portion 22 of the base element 21. A present lamp L is of a usual incandescent type and comprises a generally cylindrical sealed lamp globe M extending from within an electrically-conductive screw-plug P comprising a shell fixedly enclosing the base end of the globe and conductor which is coaxial with and insulated from the shell and provides a terminal contact Q which extends axially from the opposite end of the plug P from the globe M.

The lamp-mounting insulation strip 33 is conveniently fixed to the portion 22 of the base element 21 in slightly spaced parallel relation thereto by spacing rivets 34, and mounts mutually insulated similar bracket members 35 carrying tubular screw sockets 36 for receiving the conductor screw bases P of lamps L to engage the lamp contacts Q with spring contacts which are also mounted on the strip 33, the axes of the mounted lamps being coaxial in a line parallel to the strip 33. In the present sign assembly, a socket-carrying bracket member 35 is of electrically-conductive material, is generally L-shaped in plan, and has angularly related and generally coplanar arm portions 37 and 38, with the extremity of its arm 37 fixed to and longitudinally along the outside of a socket 36 at the socket side nearest the mounting strip 33 to which the portion of the member 35 at the juncture of its arms 37 and 38 is suitably fixed, as by a rivet 39. The arm 38 of each member 35 extends laterally beyond a side edge of the strip 33 for its suitable connection, as by soldering, with a conductor wire of the lamp-energizing circuit.

It will now be noted that, for providing a uniform distribution of sign-illuminating light along it, the present sign unit 9 is arranged to utilize a set of four axially aligned lamps L which are replaceably supported in their line in sockets 36 of bracket members 35, and in a paired arrangement in which the globes of the mounted lamps of each pair extend toward each other with the terminal lamp contacts Q disposed at mutually opposite ends of the lamps of a pair. The lamps so mounted are arranged for the individual engagement of their contacts Q with suitable spring contacts fixedly mounted on the socket-carrying element 33 at points in the line of the lamp contacts Q, and, for reasons which will hereinafter become apparent, said contacts are provided by mutually different members. As is particularly brought out in FIGURES 2 and 3 and 4, a leaf-spring contact arm 41 is engaged by the contact Q provided by the base of a lamp mounted in an end socket 36 of the line thereof, with said spring

contact arm comprising part of a power-connecting assembly 42 mounted on the lamp-mounting strip 33 and providing the power connection for the lamp mounted in said socket through a spring-loaded contact pin 43 extending freely through and from the base portion 22 of the element 21 for the sliding engagement of its free end as a contact brush with and along an electrically-conductive strip mounted in the trough of the mounting molding 10 beneath the sign unit 9 in insulated relation to the molding, as said unit is adjusted along said molding.

As particularly shown in FIGURE 4, the power-connecting assembly 42 comprises a cylindrical cup-shaped body 44 extending from the strip 33 in fixed relation thereto and slidably carrying the pin 43 in and through an axial opening provided through the base end of the body 44. The pin 43 carries a piston-like head slidably and guidedly fitting the bore of the body 44, and the outer end portion of the body bore threadedly receives a screw 47 which is engaged through and clampedly secures a member 48 against the outer end of the body 44, with said member providing angularly related arms comprising the spring contact member 41 and an arm 49 which are both turned downwardly opposite the body 44. A helical compression spring engaged directly with and between the head of the pin 43 and the inner end of the screw 47 constantly and yieldingly urges an extended disposal of the pin 43 beyond the plate portion 22 of the base element 21, and the pin 43 and the spring and the screw 47 and the member 48 are all of electrically-conductive material whereby the member 48 may distribute electric energy received from the pin 43 through both its extending spring contact arm 41 and its arm 49.

Spring contacts 51 are mounted on the lamp-carrying strip 33 for engagement by the contacts Q of lamps engaged in the other three sockets 36 which are mounted on said strip. As particularly shown, a generally U-shaped conductor member 52 provides contacts 51 for the two intermediate lamps L of their line at terminal portions thereof and has its intermediate portion fixed to and against the strip 33 by a rivet 53. The contact 51 for the lamp at the opposite end of the line of lamps from the lamp which engages the contact 41 is provided by an L-shaped conductor member 54 having its base portion fixed to the insulation strip 33 by a rivet 55 and provided with a lateral arm 56 for use in connecting this member in a lamp-energizing circuit. Also, the base plate portion 22 of the sign unit 9 mounts an electric terminal 57 at its outer side and laterally of the lamp-mounting strip 33 for use in connecting this plate element of the unit 9 in the lamp-energizing circuit portion within the unit in an hereinafter-described manner.

It will now be noted that the lamps L are provided in an energizing circuit including the molding 10 and a conductor strip 58 mounted in the bottom of the trough of the molding in insulated relation thereto and engageable therealong by the spring-loaded contact pin 43 of the described power connection 42 carried on the lamp-carrying strip 33 of the unit 9. The metallic conductor 58 may be of aluminum foil and be fixed to and along the outer side of an insulation tape 59 (as a polyester) adhesively engaged between it and the molding face 15 to secure the strip 58 to the molding, it being noted that the required transverse spacing of the conductor strip 58 from the metallic base plate 22 of the sign unit 9 is provided by reason of the cylindrical concavity of the molding face 15. The end portions of the springs 27 securing the unit 9 to the molding 10 are operative to provide an electrical connection between the element 21 and the engaged molding thereat, it being understood that the required lamp-energizing power circuit may be readily completed by including the terminal 57 in the lamp circuit and by connecting the molding 10 and the insulated conductor strip 58 carried therein by leads 61 and 62 respectively to the terminals of an appropriate source (not

shown) of electrical power, such as a transformer secondary or an electric battery, preferably supplying electrical energy at not over twelve volts, whereby standard power sources may be safely utilized with a present unit 9.

For energizing the present set of four sign-illuminating lamps, pairs thereof are particularly shown as connected in series-parallel in a branched energizing circuit portion provided entirely on the sign unit 9 between the member 48 of the connector 42 and the terminal 57 provided on and for the base plate 22 of the unit 9. More specifically, and by particularly reference to FIGURE 2, it will be noted that, starting from the member 48, one circuit branch includes, in order, the contact 41 of the member 48, the lamp engaged by the contact 41, the bracket 35 carrying the engaged lamp, a conductor wire 63 connecting the arm 38 of said bracket 35 to the arm 38 of the bracket 35 mounting the lamp at the other end of the line of lamps, the lamp carried by the latter bracket, the spring contact 51 engaged by the latter lamp, the member 54 providing said contact 51, and a conductor wire 64 connecting the arm 56 of the member 54 with the terminal 57. Simultaneously, the other circuit branch includes in order the arm 49 of the member 48, a conductor wire 65 connecting the arm 49 to the arm 38 of an intermediate lamp-carrying bracket 35, the lamp carried by the latter bracket 35, the double-contact member 52, the other intermediate lamp, the mounting bracket 35 for the latter lamp, and a conductor wire 66 connecting the arm 38 of the latter bracket with the common terminal 57 for both circuit branches.

From the foregoing description taken in connection with the accompanying drawings, the advantages of the present shelf-edge sign will be readily understood by those skilled in the art to which the invention appertains. While I have shown and described a structure and operative arrangement which I now consider to comprise a preferred embodiment of my invention, I desire to have it understood that the showings are primarily illustrative, and that such changes and developments may be made, when desired, as fall within the scope of the following claims.

I claim:

1. In combination with a store shelf or the like, a sign-support molding mounted on and along the shelf opposite the forward shelf edge and having a channel formation of uniform cross-section defined between mutually inturred side flange portions bounding a web portion at the shelf side thereof and defining mutually opposed groove along the molding and outwardly of said web portion of the molding, a sign unit for mounting on said molding between said flange portions thereof and comprising a base member comprising a plate having outstanding flanges extending integrally from mutually parallel side edges thereof for their disposal opposite and between said molding flange portions, a sign element mounted on the outer side of said base plate and cooperative therewith to enclose an electric lamp for illuminating the sign element, a lamp-energizing circuit portion provided on the plate, means mounting said base members on said molding between the molding flanges and comprising leaf spring elements extending across the base plate opposite its forward face and through and from said

flanges of the base member for the simultaneous sliding engagement of the extending spring end portions in said grooves of the base strip for mounting the unit on the molding for its adjusted positioning therealong, and means on said base plate of the sign unit providing power connections for energizing the lamp-energizing circuit portion carried by the sign unit plate.

2. The structure of claim 1 having the shelf-mounted molding of electrically-conductive material, a conductor strip mounted on and along the molding web at its forward side in electrically insulated relation to the strip, means for connecting said molding and said conductor strip with a source of energizing power for the lamp, and terminal contacts for the lamp-energizing circuit portion of the unit slidably engaged with said molding and with said conductor strip for connecting the molding-carried unit in the power circuit for the lamp to provide for an adjusted positioning of the sign unit along the molding.

3. In combination with a store shelf or the like fixedly carrying a molding of electrically conductive material on and along the forward shelf edge in electrically insulated relation to the shelf and comprising a channel strip of uniform cross-section having flange portions laterally bounding a web portion thereof and providing mutually opposed grooves forwardly of the web portion, a conductor strip mounted on and along said molding web portion at its forward side in electrically insulated relation to the web, a sign unit for mounting on said molding and comprising a base member of electrically conductive material having mutually parallel side edges and carrying a sign element and an illuminating lamp for the sign element, said base member comprising a plate having outstanding flanges extending from its side edges and mutually spaced for a disposal of the unit between the molding flanges, means for mounting said base member on said channel strip comprising electrically-conductive leaf spring elements extending through and from said member flanges in electrical contact therewith for the resilient and sliding engagement of the extending spring end portions in and adjustably along said grooves of the base strip for mounting the unit on the molding for its adjusted positioning therealong while electrically connecting the said base member of the unit with the molding, means connecting a terminal of said lamp with said base member, a spring-loaded contact carried by the sign unit for slidably connecting the other terminal of said lamp with said conductor strip on the channel web to provide for the adjusted disposal of the energized sign unit along the molding, and means for connecting said molding and said conductor strip with a source of energizing power for the lamp.

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