Feb. 3, 1959 G. J. PAWELKA 2,871,598

DISPLAY SIGN

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FIG. 1.

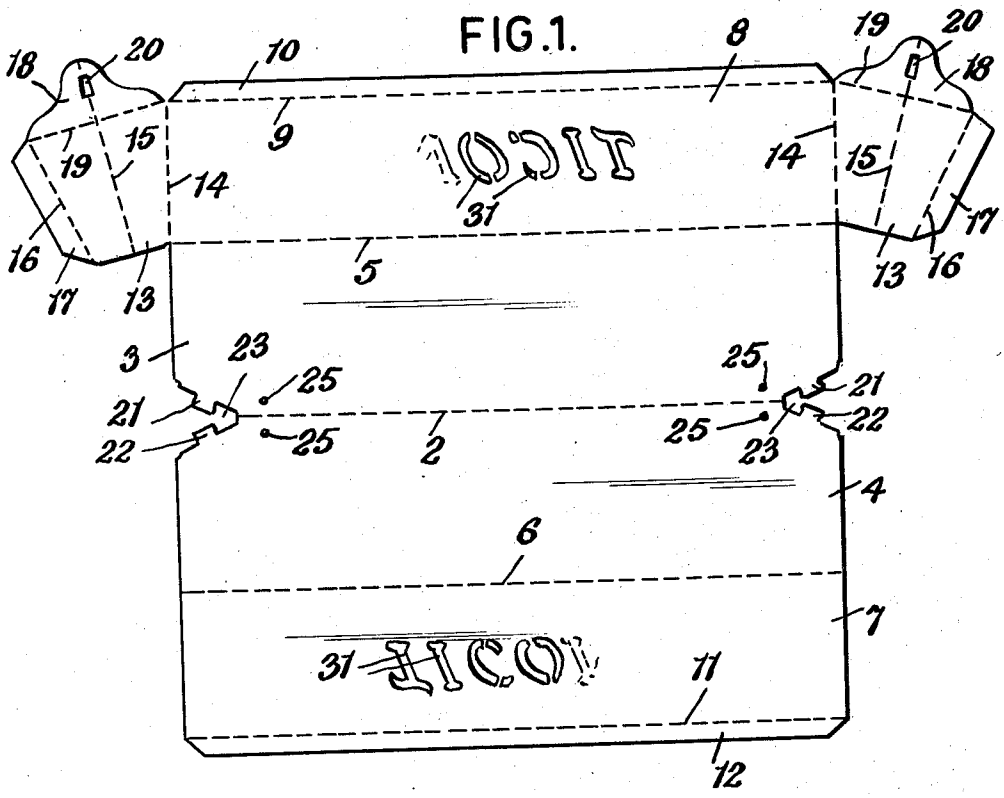


FIG. 2.

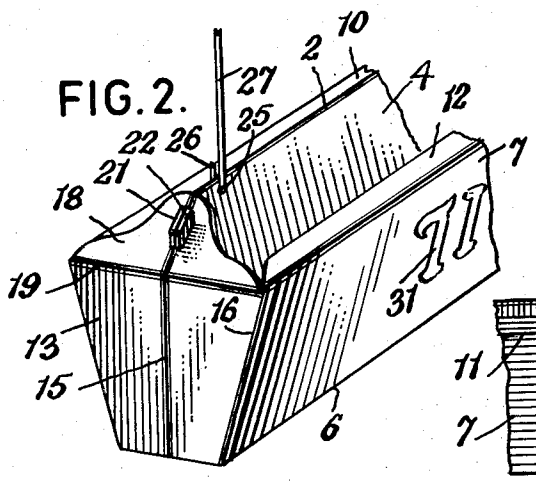
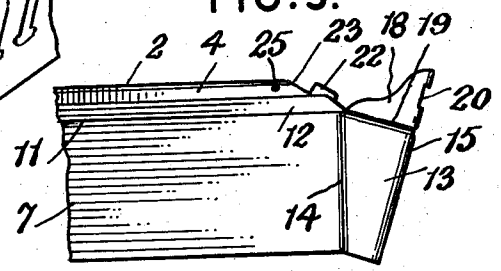


FIG. 3.



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FIG.4.

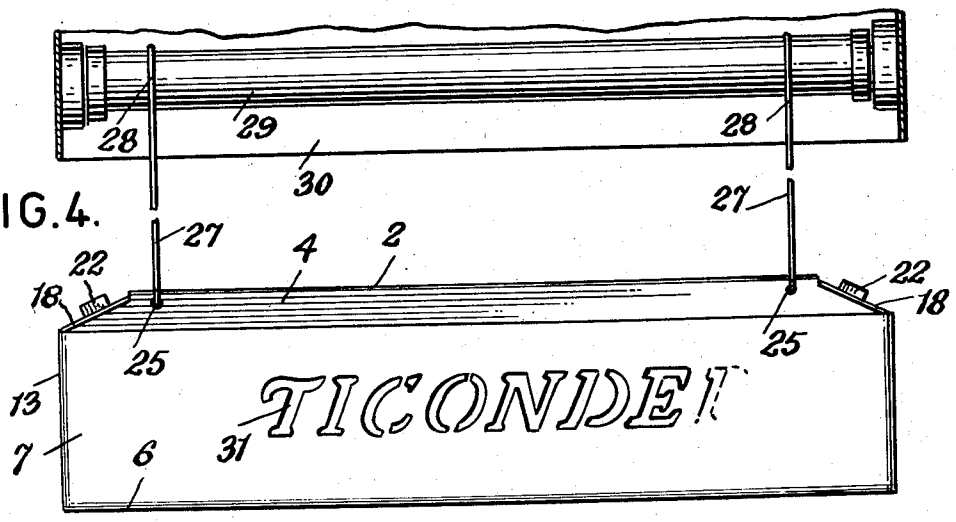


FIG.5.

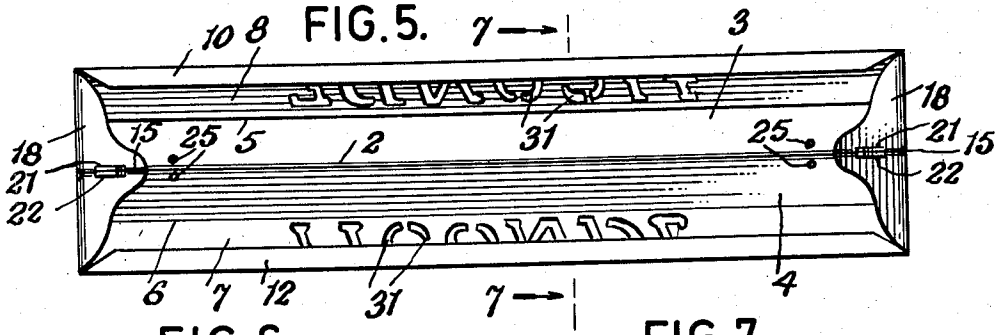


FIG.6.

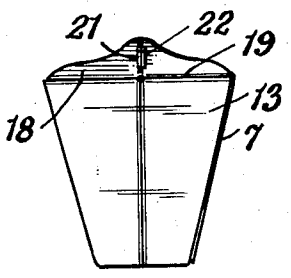


FIG.7.

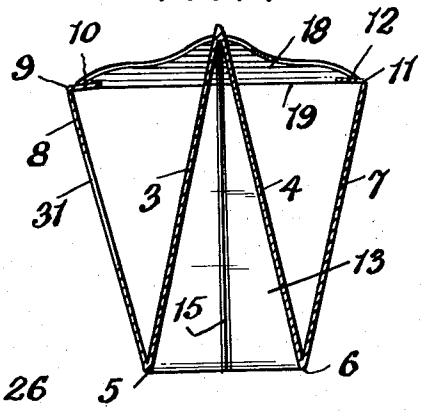
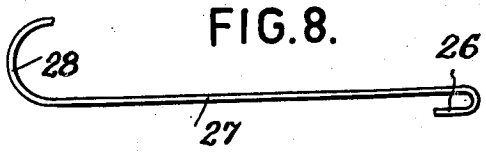


FIG.8.



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2,871,598

DISPLAY SIGN

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Application October 1, 1957, Serial No. 687,542

5 Claims. (Cl. 40—130)

This invention relates generally to display devices, and has particular reference to a display sign specially adapted to utilize the lighting obtained from a conventional lighting fixture such as a fluorescent lamp, to secure illumination for the sign.

It is an object of the invention to provide a sign which can be suspended from or supported adjacent to a fluorescent lamp or other source of light and which will receive the light rays upon special reflecting surfaces that project it through apertures in the body of the sign and thus produce the effect of a brightly-illuminated sign. It is a feature of the improved construction to make it of such a shape, size and weight that it may be suspended from a conventional straight fluorescent tube at a distance beneath the tube and parallel thereto.

It is a general objective to provide a display sign of the type mentioned which can be economically fabricated from inexpensive sheet material such as cardboard; which can be formed from a single sheet of the cardboard; which will collapse into flat form for convenient packing and shipping; and which can be set up or assembled quickly and readily placed into operative position.

It is another object of the invention to provide a sign which can be selectively used with various sources of illumination and which will be attractive, attention-attracting, and useful to a merchant or storekeeper and in various environments.

With these objects in view, I have devised the arrangement of parts now to be described and more particularly pointed out in the claims appended hereto.

In the accompanying drawing, wherein an illustrative embodiment of the invention is disclosed,

Fig. 1 is a face view of the blank from which the improved sign may be produced;

Fig. 2 is a perspective view showing one end of the erected sign;

Fig. 3 is a view of one end of the sign in its flattened condition;

Fig. 4 shows the sign suspended from an illuminating source such as a fluorescent lamp;

Fig. 5 is a top plan view of the sign;

Fig. 6 is an end view of the same;

Fig. 7 is a sectional view, taken substantially on the line 7—7 of Fig. 5; and

Fig. 8 shows one of the suspension hooks by which the sign may be suspended from a fluorescent tube or other source of illumination.

The improved sign consists generally of a trough-shaped cardboard body provided with an open top through which light rays from an adjacent light source may enter to reach reflecting surfaces located within the body. The side walls of the body are provided with lettering or designs in the form of cut-outs through which the light rays are projected to create the effect of a sign illuminated from a light source located within the body.

The sign may be made from a single section of cardboard. In Fig. 1, is shown a single-piece blank from which the body of the sign may be made. It is provided

with a central, longitudinally-extending score line **2** on either side of which is a panel constituting a reflecting surface. One of these panels is indicated at **3** and the other similar panel at **4**. The panel **3** is composed of the area located between the score line **2** and a parallel score line **5**, while panel **4** consists of the area located between the score line **2** and a parallel score line **6**. The panels **3** and **4** are similar in size and shape. Beyond the score line **6** is a section **7** constituting one of the outer side walls of the body. A similar outer side wall is located beyond the score line **5** and is shown at **8**. Near the end of the outer wall **8** there is a score line **9** and beyond score line **9** there is an edge flange **10**. Similarly adjacent to the end of the side wall **7** there is a score line **11** and beyond this is the edge flange **12**.

Extending laterally and angularly from each end of the wall **8** is a wing **13** connected to the wall **8** by the score line **14**. The wing **13** is provided with a central score line **15** as well as with an outer score line **16** beyond which is located a securing strip **17** carrying an adhesive by which it can be secured to the end of the other outer wall **7**. At its upper end, each of the wings **13** is formed with an integral flap **18**, foldable on the score line **19**. Each of the flaps **18** is formed with a slot **20** for engagement with tabs **21**, **22** provided on the edges of a notch **23** located on the score line **2** at opposite ends of the blank.

In the production of the sign, the blank is folded on the several score lines **2**, **5**, **6**, **9** and **11** to form the blank into a substantially W-shape as shown in Fig. 7. The wings **13** are now folded on the central score lines **15** in a manner to bring them across the opposite ends of the blank and permit the securing flaps **17** to be adhesively attached to the inner face of the wall **7** adjacent to the opposite ends of the latter. Each end of the blank thereupon appears as shown in Fig. 3, with the blank in flattened condition, so that it can be conveniently stored or shipped. When it is desired to erect the sign to place it in operative condition, the wings or end walls **13** are folded on the score lines **14** and **16** to extend these wings flatly across the ends of the body and thus cause the inner panels **3** and **4** to extend divergently downward at an acute angle (with apex up). The side walls **7** and **8** then extend obliquely upward at an acute angle to the reflector panels **3** and **4** from the lower ends of the panels **3** and **4**, substantially as shown in Figs. 2 and 7. The body is then maintained in this distended condition by infolding the flaps **18** on the score lines **19** and engaging the slots **20** with the tabs **21** and **22** provided on the upper edges of reflector panels **3** and **4**.

When the device is erected in the manner described, it will form a trough-shaped structure of considerable rigidity and stiffness, the upper edges of the outer walls **7** and **8** being reinforced and stiffened by inturning of the flanges **10** and **12** on the respective score lines **9** and **11**.

Provided in the panels **3** and **4** near the central score line **2** are holes **25**. The hooked ends **26** of two suspension rods **27** may be inserted through these holes. Each suspension rod **27**, shown in Fig. 8, is provided at one end with a larger hook **28** which can be fitted over a fluorescent tube **29** mounted in the conventional manner in a lighting fixture **30**, substantially as shown in Fig. 4. Provided in the outer side walls **7** and **8** of the sign are cut-outs **31** which may be in the form of lettering, designs or other indicia.

From the foregoing, the structure and use of the improved sign will be apparent. It can be shipped to the user in the flattened form herein described and as shown in Fig. 3, and when received by him it can be quickly erected by distending the panels and bringing the end walls into transverse disposition at the ends of the body,

then infolding the flaps 18 and engaging their slots 20 with the tabs 21 and 22. The hooks 26 are engaged with the holes 25, and the device can then be suspended from a fluorescent tube as shown in Fig. 4, so that the light rays will enter the open top of the trough-shaped body and impinge upon the reflector surfaces 3 and 4. These surfaces may be painted or otherwise coated with a suitable high-reflective material to increase their brightness. The rays of light striking these surfaces will be reflected through the cut-outs 31, thus creating the effect of illuminated lettering.

Since the device may be made economically of inexpensive cardboard and requires no expense for operation, since its source of illumination is obtained from a conventional lighting fixture, the display sign is capable of many uses for advertising or other purposes. It is staunch and wear-resistant and can be used for long periods of time without deterioration. When its usefulness is at an end it may be collapsed and compactly stored, or (because it is so inexpensive) it may be discarded.

Although I have described only a single embodiment of the invention, it is obvious that the invention is not to be restricted thereto but is broad enough to cover all structures coming within the scope of the annexed claims.

What I claim is:

1. A display sign comprising a trough-shaped body provided with an open top through which light rays enter, said body being composed of hingedly connected sections of cardboard, said sections including a pair of inner panels arranged to form an acute angle with its apex up, said panels constituting reflecting surfaces, a pair of upwardly diverging outer walls, said walls being provided with cut-outs defining indicia through which light rays are directed by said reflecting surfaces, said panels and outer walls being collapsible into flat facing engagement with each other, a pair of end walls each hingedly connected to said outer walls and collapsible outward upon collapse of said panels and outer walls, an inturned flap upon each of said end walls, and retaining means on said panels for releasable interlock with said inturned flaps to retain said end walls inward against collapse, whereby said panels and outer walls are retained against collapse by the interlock of said end flaps and retaining means.

2. A collapsible sign composed of a W-shaped cardboard trough-like body having a pair of panels disposed at an acute angle to one another and extending divergently downward, the trough being open at the top to permit the admission of light rays, the panels constituting reflectors for light rays entering into the trough, the trough having outer walls consisting of upward extensions from the lower ends of the panels, said outer walls being apertured so that light rays will be directed through the apertures, end walls at the opposite ends of the trough and each connected to the adjacent ends of said outer walls, said end walls being each provided at its top with an inturned slotted flap, each of the panels being provided on its top and adjacent to each of its opposite ends with an upstanding tab, the tabs entering the slots in the flaps to thereby hold the end walls against buckling and maintain the panels and outer walls in distended angular relation.

3. A display sign according to claim 1, each of said end walls having a medial fold affording said collapsibility.

4. A display sign according to claim 1, each of said end walls having a medial fold affording said outward collapsibility, said inturned flaps each being hingedly connected to its respective end wall by a fold extending across said medial fold, and said retaining means comprising tabs projecting from said panels at an upward angle with respect to said end walls and engageable by said flaps.

5. A display sign according to claim 1, in which said reflector panels are provided with apertures adjacent to their upper edges, and suspension rods entering said apertures, and extending straight upward, their upper ends being provided with means for engaging a fluorescent light tube.

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