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ADVERTISING DISPLAY DEVICE

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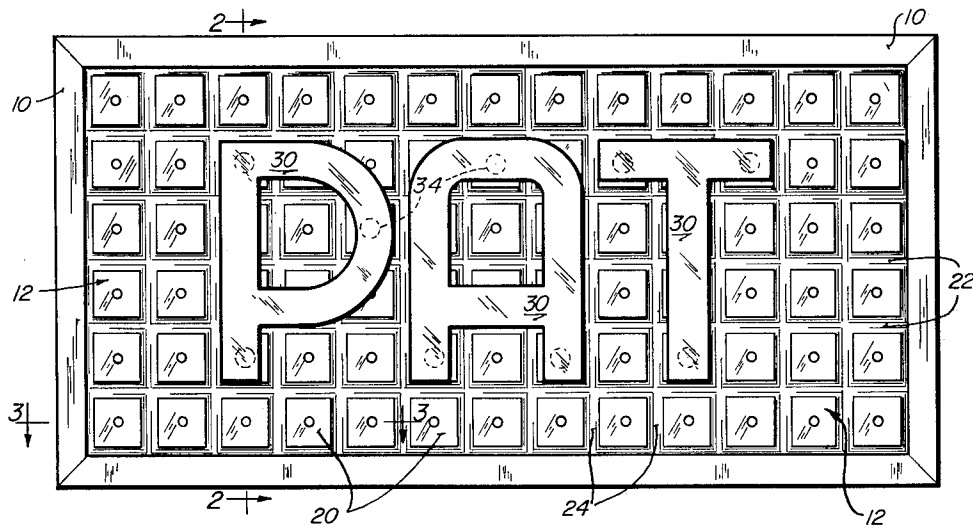


Fig. 1

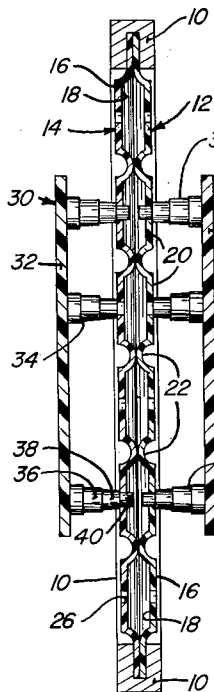


Fig. 2

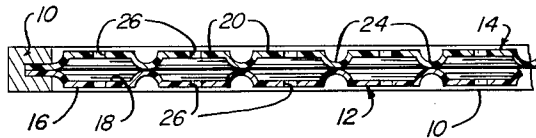


Fig. 3

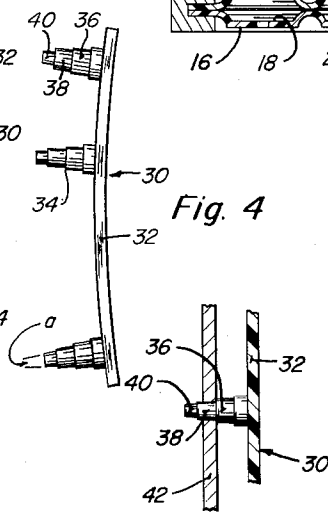


Fig. 4

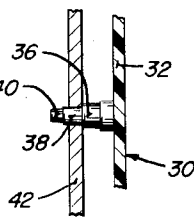


Fig. 5

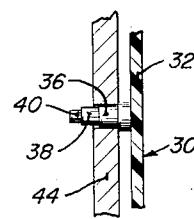


Fig. 6

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ADVERTISING DISPLAY DEVICE

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The present invention relates to a display device and more particularly to an advertising or merchandising display device having interchangeable characters or letters.

It is an object of the present invention to provide an eye-catching display device for merchandising, advertising and like uses.

Another object of the present invention is to provide a display device having a three dimensional effect.

Still another object of the present invention is to provide a display device on which the message portrayed will be easily visualized and ascertained by the eye.

A further object of the present invention is to provide a display device on which the messages or characters may be quickly and easily interchanged.

A still further object of the present invention is to provide a two sided display device upon which messages may be detachably secured on the opposite sides without interference with one another.

Still another object of the present invention is to provide a display device which can be manufactured inexpensively from attractive and inexpensive plastic materials.

Still other objects and advantages of the invention will become more apparent hereinafter.

In accordance with the illustrated embodiment, the present invention comprises a waffle like panel of plastic material, said panel having a plurality of coplanar portions defined by longitudinally and transversely extending, curved strengthening ribs. The coplanar portions are pierced with regularly spaced openings which are adapted to receive pegs extending from letters or characters enabling the letters or characters to be removably mounted upon the panel. The pegs are designed to space the characters or letters a predetermined distance from the face of the panel to give a three dimensional effect and render the characters or letters easily visible. The pegs also have the same spacing as the openings enabling the characters to be positioned in any location upon the panel.

For a more detailed description of the invention, reference is made to the accompanying drawing wherein:

FIG. 1 is a plan view of a display device made in accordance with the invention;

FIG. 2 is an enlarged sectional view taken substantially along line 2—2 of FIG. 1;

FIG. 3 is an enlarged fragmentary sectional view taken substantially along line 3—3 of FIG. 1;

FIG. 4 is a side view of a character showing a preferred configuration thereof; and

FIGS. 5 and 6 illustrate the adaptability of characters made in accordance with the invention.

Referring now to the drawings, the display device illustrated comprises a frame 10 in which is mounted a pair of sheets 12, 14 molded of a suitable plastic, the sheets 12, 14 are substantially identical to one another, each having a front surface 16 and a rear surface 18. As shown in FIG. 2, the sheets are mounted in the frame 10 in back-to-back relation. Sheets 12, 14 are of waffle like configuration, each comprising a plurality of regularly spaced coplanar portions 20 and a plurality of regularly spaced substantially semicircular longitudinal rib portions 22 and transverse rib portions 24 which curve rearwardly a predetermined distance from the front surface 16 of the sheets. As indicated in FIGS. 2 and 3, the sheets 12, 14 are preferably mounted in the frame 10 with the ribs of the sheets juxtaposed one another. Each of the sur-

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face portions 20 is provided with a centrally positioned opening 26 therethrough, the openings being spaced equidistantly from one another in both the longitudinal and transverse directions as is shown in FIG. 1.

The display device of the invention also comprises a plurality of characters or letters such as the letters 30 shown in the drawings and which may comprise a body portion 32 which may be molded of a plastic material. The body portion 32 is substantially flat but preferably is slightly bowed in its longer dimension as shown with slight exaggeration in FIG. 4 for a purpose to be explained. Suitably secured to each letter body 32 such as by molding therewith are a plurality of peg means 34 comprising a series of coaxial stepped portions 36, 38 and 40 of decreasing diameter. For reasons to be explained, the portion 36 is preferably of approximately $\frac{1}{4}$ inch diameter, the portion 38 of approximately $\frac{3}{16}$ inch diameter and the portion 40 of approximately $\frac{1}{8}$ inch diameter. Preferably each of these portions is formed so as to be a few thousands of an inch under its nominal diameter at the end of the portion and each portion diverges at a small angle α of about 5° . In the embodiment of the invention shown, the openings 26 of the sheets 12, 14 are preferably of $\frac{1}{8}$ inch diameter snugly to receive the portions 40. Thus, the portions 40 comprise a mounting portion adapted to project through the sheet openings 26 and to be snugly engaged therein so as to support the letters 30 upon the display board. The peg means 34 are spaced apart on the letters 30 in even multiples of the spacing of the openings 26. Since as mentioned above the body portion 32 is slightly bowed the peg end portions 40 will be of a slightly different spacing than that of said openings 26. Accordingly, in mounting a letter 30 upon a panel the body 32 will have to be stressed slightly to flatten it and bring the peg end portions 40 into alignment with the panel openings 26. As will be apparent, the tendency of the body 32 to straighten after a letter is mounted will urge the pegs thereof apart so as to effect a binding of the pegs in the panel to help secure the letter in place. Preferably, the portion 40 of a peg is of a length greater than the thickness of the sheets 12, 14, but is of lesser length than the rearward protrusion of the ribs 22, 24 so that, when two letters 30 are mounted in back-to-back relation upon the sheets with the shoulder between the peg portion 38 and portion 40 abutting the front surface of the corresponding sheet, the pegs of oppositely mounted letters will not interfere with one another, as may be seen in FIG. 2.

The panels 12, 14 and letters or characters 30 will preferably be molded of plastic of contrasting colors so as to render the letters more visible. The sign or display made in accordance with the invention will, in any case, have a three dimensional effect and will be eye-catching by reason of the forward displacement of the letters 30 from the surface of the mounting panel.

Obviously, the panels 12, 14 may be of any size or shape and because of the regular spacing of the openings 26 and pegs 34, the letters or characters can be positioned across the panels, or vertically, or diagonally, or in any combination as desired.

As will be apparent, the panel ridges 22, 24 help lend rigidity and strength to the panels, but, in addition, the ridges assist in the alignment of several small panels if it is desired to do so to lengthen a display since the ridges help in locating the panels relative to one another so as to maintain the accurate spacing between the holes 26.

Preferably, the openings 26 are punched in the sheets after molding of the same, the surface portions 20 of the sheets defining a flat surface to facilitate the punching.

While FIGS. 1, 2 and 3 illustrate the invention with sheets 12, 14 placed back-to-back, obviously a display

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device can be made with a single sheet with characters and letters 30 mounted solely upon the front surface thereof.

The characters 30 of the invention are preferably made with the stepped portions 38, 36 of $\frac{3}{16}$ and $\frac{1}{4}$ inch diameter, respectively, so that such letters may be alternately used in commercially available hardboard paneling which are punched with like size openings. FIG. 5 illustrates the mounting of a character in a hardboard 42 with a $\frac{3}{16}$ inch opening and FIG. 6 illustrates a character mounted on a hardboard 44 with $\frac{1}{4}$ inch opening therein and which may be either circular or square. All such boards are presently punched with openings on one-inch centers and the panels 12, 14 are also preferably punched with the openings 26 in one-inch centers. The letters or characters 30 are, of course, provided with the peg means correspondingly spaced. As will be apparent the tapered configuration of the stepped portions 36, 38 and 40 facilitates the insertion of a peg into a board opening and also facilitates engagement of the pegs in slightly oversize openings.

Having illustrated and described a preferred embodiment of the invention, it should be apparent to those skilled in the art that the invention permits of modification in arrangement and detail. I claim as my invention all such modifications as come within the true spirit and scope of the appended claims.

I claim:

1. An advertising display device comprising a pair of molded plastic sheets of uniform thickness each having a front surface and a rear surface, said sheets being waffle-like and comprising a plurality of regularly spaced coplanar portions and a plurality of regularly spaced, substantially semicircular rib portions extending lengthwise and transversely of the sheet, said rib portions being curved rearwardly a predetermined distance from said sheet front surfaces, means mounting said sheets back-to-back with the ribs of one of said sheets juxtaposed the ribs of the other of said sheets, said portions each having a centrally positioned opening therethrough, said openings being spaced equidistantly from one another, and a plurality of characters removably attached to said sheets, each of said characters comprising peg means having a mounting portion projecting through and removably engaged in certain of said sheet openings, each of said peg means comprising shoulder means abutting said sheet front surfaces, the length of each said peg means mounting portion being greater than said sheet thickness but less than said predetermined distance so that the peg means of oppositely mounted characters will not interfere with one another,

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2. An advertising display device comprising a pair of molded plastic sheets of uniform thickness each having a front surface and a rear surface, said sheets being waffle-like and comprising a plurality of regularly spaced coplanar portions and a plurality of regularly spaced rib portions extending lengthwise and transversely of the sheet, said rib portions protruding rearwardly a predetermined distance from said sheet front surfaces, means mounting said sheets back-to-back with the ribs of one of said sheets juxtaposed the ribs of the other of said sheets, said portions each having a centrally positioned opening therethrough, said openings being spaced equidistantly from one another, and a plurality of characters removably attached to said sheets, each of said characters comprising peg means having a mounting portion projecting through and removably engaged in certain of said sheet openings, each of said peg means comprising shoulder means abutting said sheet front surfaces, the length of each said peg means mounting portion being greater than said sheet thickness but less than said predetermined distance so that the peg means of oppositely mounted characters will not interfere with one another.

3. An advertising display device comprising a molded plastic sheet of uniform thickness having a front surface and a rear surface, said sheet being waffle-like and comprising a plurality of regularly spaced coplanar portions and a plurality of regularly spaced, substantially semicircular rib portions extending lengthwise and transversely of the sheet, said rib portions being curved rearwardly from said sheet front surface, said portions each having a centrally positioned opening therethrough, said openings being spaced equidistantly from one another, and a plurality of characters removably attached to said sheet, each of said characters comprising a body portion and a plurality of peg means extending from said body portion and having a mounting portion projecting through and removably engaged in certain of said sheet openings, each of said peg means comprising shoulder means abutting said sheet front surface to space said character body portions a predetermined distance from said front surface.

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