Sept. 15, 1936. E. C. W. GEISTERT ET AL 2,054,698

DISPLAY DEVICE

Filed Jan. 23, 1933

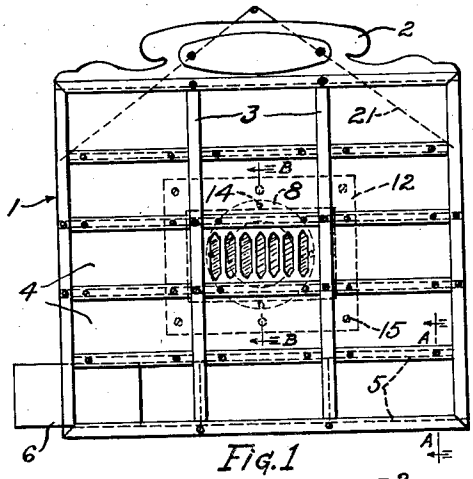


Fig. 1

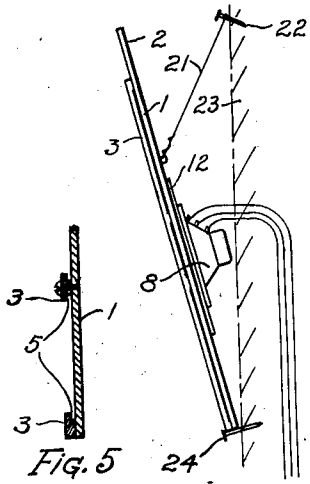


Fig. 5

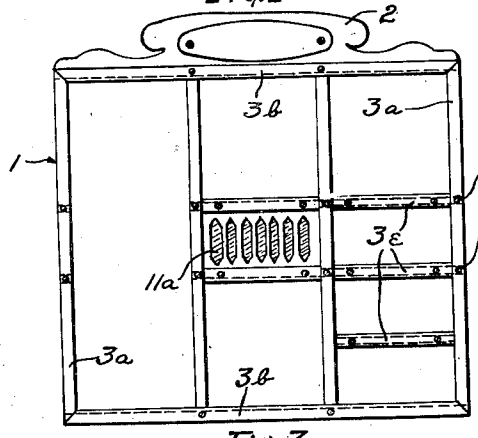


Fig. 3

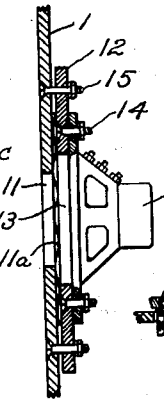


Fig. 6

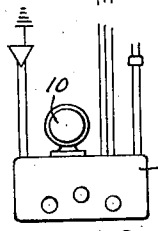


Fig. 2



Fig. 7

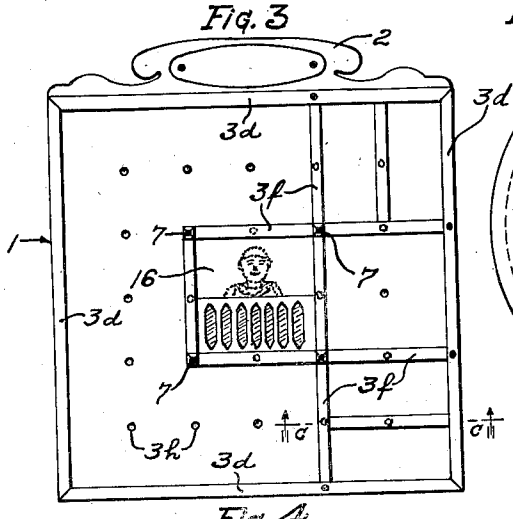


Fig. 4

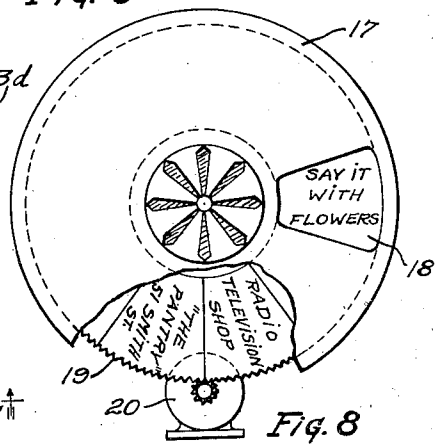


Fig. 8

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DISPLAY DEVICE

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6 Claims. (Cl. 40—28)

This invention has to do with display devices. More particularly it relates to an improved bulletin board arranged to carry one or more public notices, advertising or the like, and to which attention is forcibly attracted. It is among the objects of the invention to provide a novel display device which acts on the human nerve system to increase the likelihood of notice being taken of the material presented for observation.

A further and important object of the invention is to provide an improved announcement carrying panel of neat and pleasing appearance, and which is of simple design, easy and inexpensive to construct, and of sufficient size without bulkiness to afford an abundance of saleable space.

While not limited in its field of usefulness, the invention may be employed advantageously for advertising purposes, in which case the available space for reading matter is sold, and the device conspicuously positioned in some public building, restaurant, or other such place where people congregate or pass by.

The invention according to a preferred embodiment will be best understood upon reference to the accompanying drawing, in which Figure 1 is a face view of the device; Figure 2 is a side elevation, illustrating a satisfactory installation of the parts; Figure 3 is a view corresponding to Figure 1, but showing an alternative grouping of the exhibit space; Figure 4 illustrates a modification; Figures 5 and 6 are detail sectional views taken on line A—A and B—B, respectively, of Figure 1, Figure 7 is a detail section view taken on line C—C of Figure 4, and Figure 8 illustrates a slightly modified form of the invention.

Referring to the drawing, the numeral 1 indicates a panel of any desired shape and size, and which for convenience, may be of relatively thin wood or like material. The panel here shown is a plate like rectangular board, carrying at its upper edge an ornamental header 2, either integral therewith or suitably secured thereto. The space afforded by the central portion of the header 2 may be utilized for carrying decorative design and/or the manufacturer's or trade label applied directly or through a separate plate.

It is proposed to employ the front face or panel for the display of advertising, or for any matter to be offered for public notice. While, obviously, reading matter could be painted or otherwise placed on the surface, it will be more satisfactory and less expensive to provide the board with suitable holders for mounting removable placards, which can be made up at a convenient point and transported to the place of display. This plan has the advantage that one or more of several cards can be easily and quickly and inexpensively replaced without disturbing others. With this in mind, the board, as shown in Figure 1, is provided with a skeleton framework, comprising a series of spaced strips or ribs 3 extending both vertically and horizontally so as to divide the area into a group of spaces 4, each of a given size, to be covered by an advertising or like card of corresponding size. The horizontally extending and vertically spaced strips, fastened by spring catches, screws or otherwise, may be rabbeted or undercut, or put together with shims to get an undercut effect, as clearly shown in Figure 5, for cooperation with the front face of the board 1, to provide grooves or ways 5 for slidably receiving display cards from either or both sides, while the vertical strips extending across the horizontal ribs help to complete and define the borders of the saleable spaces or subdivisions, and conceal the ends of the cards carried within the grooves 5. To illustrate the manner of inserting cards, one is shown at 6 partly slid into position.

Since the rental charges for space will be governed by the area occupied, it is to be expected that some advertisers will ask for more space than others. Any such demands can be easily taken care of, since the size of individual spaces or the grouping of the several spaces may be easily varied by the mere rearrangement of the relation of the strips in the supporting framework. By way of explanation, attention is called to Figure 3, where the space between the vertical ribs on the left-hand side is devoid of cross ribs so as to take a large card, while the remainder of the area is variously divided into spaces of smaller sizes. This figure also shows the use of continuous vertical ribs 3*a*, spaced by suitably positioned shims or washers 3*c* on the face of the board, together with continuous top and bottom horizontal ribs 3*b*, and any required number of short length horizontal ribs 3*e* of equal length extending between the vertical strips in the desired arrangement. In this connection it may be stated that instead of sliding the cards from the side, as heretofore described, they can be snapped into place by first bowing the card to allow its edges to enter within the holding grooves or seats and then causing it to resume its original flat shape.

Alternatively the spaces may be defined by the use of a series of strips, each of standard length, somewhat in the fashion shown in Figure 4. Here the board 1 is provided with border strips 3*d* and with the required number of standard

length strips 3f mounted to give a desired spacing. A fixed space shown centrally of the board for a purpose to be hereinafter mentioned, is presented within a square made up of four of such strips 3f in cooperation with fixed stops or square bosses 7 at the corners thereof. The distances between adjacent stops 7 and between such stops and the nearest border strips 3d are in every case the same, and, therefore, the standard ribs 3f may be interchangeably employed to divide the board area into various combinations of spaces, only one of which is here shown.

Where interchangeable space defining ribs are employed any suitable means for removably mounting the ribs on the board may be used. For example, ordinary wood screws will serve the purpose although a quick detachable fastening may be utilized. One such quick detachable connection may involve the provision of a number of properly located openings 3h through the board, as in Figure 4, to receive a spring clip 3g carried by each rib 3f. This clip is shown in Figure 7 as a U-shaped fork, with the end portions of the prongs of substantially semi-circular formation to provide camming surfaces which ride on the edge of the receiving openings to spring the fingers inwardly upon insertion or withdrawal and act either through frictional engagement or as stops against the back of the board to preclude accidental displacement. One or more of such clips can be associated with each rib, and ordinarily one will be sufficient, particularly if the opposite ends of the ribs are held against warping or outward bending. A simple way of fixing the ends is to provide thereon a slight taper to fit under an overhanging edge of an abutting rib as clearly illustrated in Figure 7. To mount a rib between a pair of parallel ribs the spring clip is first pushed through one of the board openings and the rib is then swung into proper position to enter its tapered ends under the overhanging edges of the cooperating ribs.

It is proposed to associate with the panel some attention attracting means, preferably in the nature of a device or devices which in operation affects the human nerve system so that persons in the vicinity, through curiosity or otherwise are drawn toward the panel and become interested observers of the matter on display. Such attention attracting means can be provided to act on either or both the auditory or optical senses. The drawing illustrates the use of a sound reproducing mechanism or loud speaker 8, which can be actuated, for example, by remotely located radio receiving apparatus, illustrated at 9 in Figure 2, the microphone 10 being optionally associated with the radio apparatus or independently useable. Phonograph reproducing mechanism likewise could be employed.

The loud speaker or acoustic radiator is mounted on the rear face of the panel 1 and preferably at the center, in line with the opening 11, so that the panel serves as a baffle or sounding board to improve or insure clear tone quality of the sound produced. While ordinarily a baffle board should be sufficiently thick and of a construction that its vibratory period will not interfere with sound waves set up by the speaker, it has been found that satisfactory results are had with an inexpensive and light board by interposing between the main panel and speaker a smaller board, preferably of cushioning material such as fiber composition, as illustrated in the detail sectional view, Figure 6. This auxiliary board, indicated at 12 and provided with a central opening 13, may be fastened by bolts 14 or otherwise to the loud speaker 8, in turn secured by bolts 15 to the larger board 1, with its opening alined with the opening 11 for the free passage of sound waves. A decorative grille which can be integral with or fastened to the main panel and/or a decorative grille cloth cover at the openings 11a will improve the appearance and conceal the sound producing mechanism. If it is desired to attract the eye as well as the ear, a television apparatus may be substituted, in which case an image receiving screen 16 in Figure 4 will be incorporated as a part of the display device.

As a further modification, there is shown in Figure 8, a circular baffle board 17 having a central opening or grille for a loud speaker and an additional opening or window 18, and a rotatable ring 19 behind the baffle board, which may be driven either continuously or intermittently through suitable gearing or escapement mechanism from an electric motor 20 or the like. In this case the advertising or other displaying material will be placed on the ring 19 and will be presented for attention through the window 18 as the ring is moved. Additional advertising or visual matter could be placed on the front face of the stationary board 17. For some cases, it has been proposed to add lighting equipment, suitably arranged on the display device as a further attention attracting expedient. This may consist of one or more Neon tubes adapted to be lighted either continuously or periodically. For example, with the construction of Figure 8, as the ring is intermittently operated the lighting can be effected in predetermined timed relation with ring movement.

A recommended installation involves placing the device overhead in inclined position and near a supporting wall where it will be out of the way and occupy practically no space that otherwise would be useful. Thus in Figure 2 the device is hung by picture wire 21 from a nail 22 in the wall 23 and rests at the bottom edge on one or more nails 24. By changing the length of the wire 21 the correct slanted relation can be effected to secure the proper blending of sound waves and direct the delivery of sound into the field of hearing. The overhead position is preferred since it eliminates reflection from furniture or other obstacles and insures unmolested delivery in a straight line to the listener.

It is pointed out that the speaker mechanism is not enclosed within a box-like structure according to conventional practice and that for this reason there is no multiple reflection of sound waves from enclosing walls to merge in out of phase relation. The speaker being wholly in the open gives the full volume from both front and rear of the baffle, and an unhindered delivery of clear tones, the baffle board being of such size as to obstruct or preclude interference between the sounds emitted behind the board with those sent out at the front.

With the apparatus described, it will be possible to establish a definite relation between the matter presented for observation and the sound delivered, by merely selecting a broadcast to fit appropriately with the display. Vocal announcements can be made through the sound mechanism to augment or direct attention to the material carried by the board.

While the above description has been specific in character, it is to be understood that the in-