March 23, 1937. A. F. OTIS 2,074,420

DISPLAY DEVICE

Filed June 3, 1935

Fig. 1

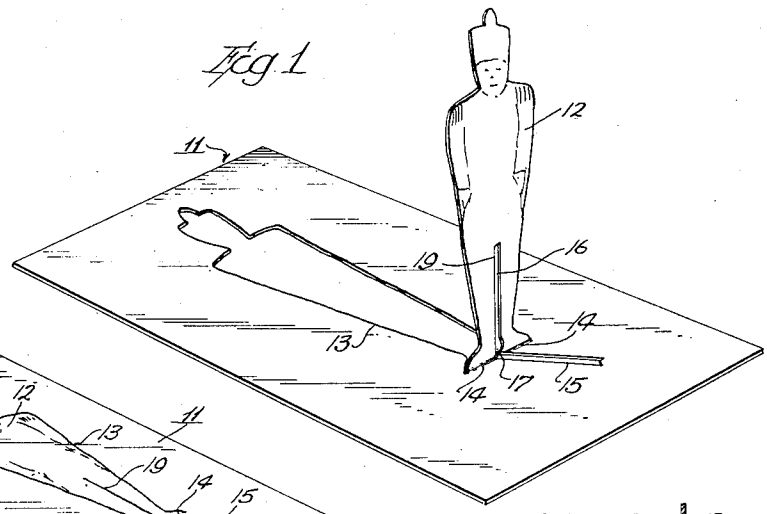
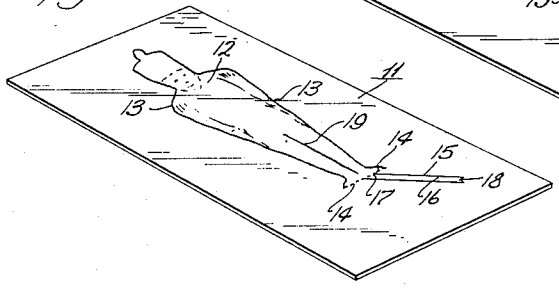


Fig. 3



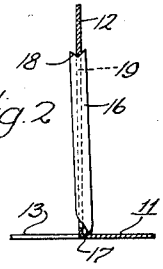


Fig. 2

Fig. 4

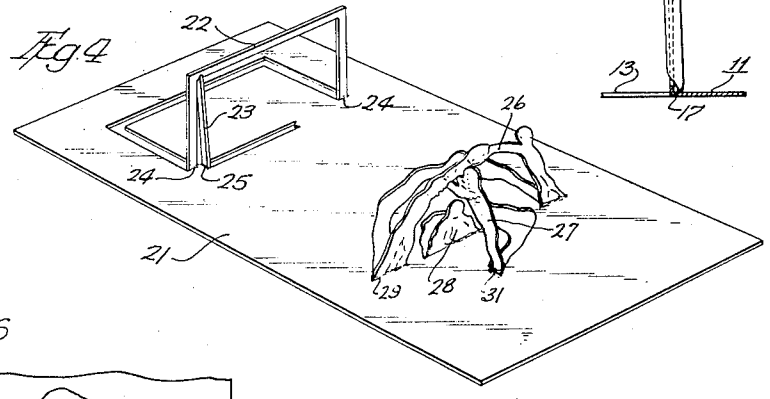


Fig. 6

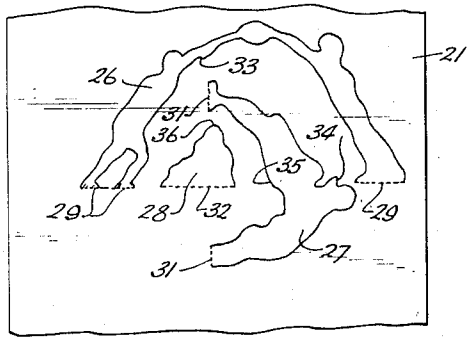
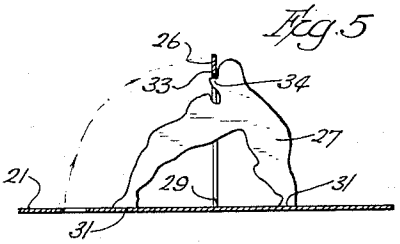


Fig. 5



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UNITED STATES PATENT OFFICE

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DISPLAY DEVICE

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Application June 3, 1935, Serial No. 24,639

3 Claims. (Cl. 40—126)

This invention relates in general to display devices and more particularly to a sheet of flexible material having a plurality of partially cut out portions so related to each other that upon being bent out of the plane of said sheet they will co-operate to maintain each other in such bent positions to produce a three dimensional effect in the form of any desired pictorial representation.

A principal object of the invention is the provision of a sheet of flexible material which is cut through along a portion of the outlines of two or more figures or pictorial representations of any desired shape, these figure portions being so positioned relative to each other that upon being displaced out of the plane of said sheet by folding along the uncut portions of their outlines they will be interlocked to maintain each other in such displaced positions.

Numerous other objects and advantages of the invention will be apparent as it is better understood from the following description, which, taken in connection with the accompanying drawing, discloses a preferred embodiment thereof.

In the drawing,

Figure 1 is a perspective view of a device embodying the features of the invention showing the cut out portions in raised position;

Fig. 2 is an enlarged detail vertical section of the device of Fig. 1;

Fig. 3 is a perspective view of the device of Fig. 1 with the cut out portions in their normal position in the plane of the sheet;

Fig. 4 is a view similar to Fig. 1 of a modified form of device;

Fig. 5 is an enlarged detail vertical section of the device of Fig. 4; and

Fig. 6 is a plan view of a portion of the sheet of the device of Fig. 4 showing the outline of some of the cut out portions.

Referring more particularly to Figs. 1 to 3, reference numeral 11 indicates a sheet of a suitable flexible material, such as paper, cardboard or the like, which may be of any desired size or shape. A figure 12, here represented as a soldier, is printed on one surface of the sheet 11, it being readily understood that the particular characteristics of the figure 12 may be varied as desired. The sheet 11 is cut through along the outline 13 of the figure 12, as represented by the heavy solid lines in Fig. 3, that portion of the outline as represented by dotted lines at 14 not being cut. At the same time the sheet 11 is cut through along the portion of the outline 15, represented by solid lines in Fig. 3, of a substantially rectangular portion 16, a part of the outline of said rectangular portion indicated by the broken line 17 in Fig. 3 not being cut. The longitudinal axis of the portion 16 is angularly displaced relative to that of the figure 12, and the end of the portion 16 farthest removed from the figure 12 is provided with a notch 18.

The cutting of the sheet 11 along the lines 13 and 15 may be done in any suitable manner, as by means of steel dies or the like. At the same time that this operation is being performed, the outline of the sheet 11 may be cut, and also the sheet may be scored along the lines 14 and 17, if desired.

Upon displacing the cut out portions 12 and 16 from the plane of the sheet 11 by folding the same on the lines 14 and 17 and giving a slight twist to the portion 16, the latter may be inserted in the slot 19 forming a part of the outline 13 of the figure 12, and the notch 18 will engage the figure 12 at the upper end of the slot 19. In this way the two cut out portions will be interlocked to maintain them in raised position, and the sheet 11 acts as a supporting base therefor.

Referring to Figs. 4 to 6, a plurality of groups of cut out portions are shown on the same sheet, in one of which groups more than two cut out portions co-operate with each other in their raised positions. A sheet 21, similar in composition to the sheet 11, has provided adjacent one end two cut out portions 22 and 23. The cut out portions 22 is substantially U-shaped, the ends being scored at 24 so that it may be bent at such points to simulate a football goal post. The cut out portion 23 is substantially rectangular in shape, with its longitudinal axis parallel to the base of the U, and is preferably provided at its free end with a notch.

When folded at its other end, as at 25, into a substantially upright position relative to the sheet 21, this notch is adapted to interlock with the cross bar of the goal post 22 so that the two cut out portions are effectively maintained in an upright position.

Toward its other end the sheet 21 is provided with three cut out portions 26, 27 and 28 so shaped and related to each other that when displaced from the plane of the sheet 21 into a position substantially vertical thereto by folding on the lines 29, 31 and 32, which comprise the uncut portions of their outlines, respectively, each cut out portion will co-operate with the portion next adjacent thereto to maintain all of them in proper raised position. For example, the part 33 of the portion 26 will firmly engage the part 34 of the

cut out portion 27 (Figs. 5 and 6), and the lower surface of the cut out portion 27 will engage at 35 the upper surface 36 of the cut out portion 28.

The cut out portions 26, 27 and 28 are printed to represent a football and several football players in action, and in conjunction with the upstanding goal post 22 at the other end of the card 21 they provide a diorama-like, three dimensional, pictorial representation of a football game.

It will be readily understood that with a device of the above described type having a plurality of partially cut out portions, with those parts of the outlines thereof which are not cut out preferably scored for folding, any desired scene or pictorial representation may be obtained by displacing the cut out portions from the plane of the base sheet and interlocking the same to maintain them in such displaced positions. In this manner a novel display device is provided which is easily and cheaply constructed and may be readily mailed or carried about in its normally flat or collapsed condition.

The upper surface of the sheets 11 and 21 may also have printed thereon any desired scenic background and/or advertising matter, and the cut out portions may be given any desired shape, so long as they will co-operate to maintain each other in their desired positions when displaced from the plane of the base sheet.

It is thought that the invention and many of its attendant advantages will be understood from the foregoing description, and it will be apparent that various changes may be made in the form, construction and arrangements of the parts without departing from the spirit and scope of the invention or sacrificing all of its material advantages, the form hereinbefore described being merely a preferred embodiment thereof.

I claim:

1. A display device, comprising a base sheet of flexible material, and a plurality of figures cut from said sheet along a portion of their several outlines and folded along the uncut portions of their outlines to displace them out of the plane of said base sheet into positions at substantially right angles thereto, said figures being interlocked with each other to maintain them in such displaced positions with the main portion of said sheet acting as a supporting base therefor.

2. A display device, comprising a horizontally disposed base sheet of flexible material, and a plurality of figures cut from said sheet along a portion of their several outlines and folded along the uncut portion of their outlines to displace them out of the plane of said base sheet into substantially vertical position, said figures being interlocked with each other by having points on the cut out portion of each of their outlines contacting with each other to maintain them in such displaced positions, such contacting points of the cut out portion of the outlines being on the periphery of a circle on the base sheet, when the figures are in the plane of the base sheet, the center of which circle falls on a line defined by the uncut portion of the outline of one of the figures.

3. A display device, comprising a horizontally disposed base sheet of flexible material, and a plurality of figures cut from said sheet along a portion of their several outlines and folded along the uncut portion of their outlines to displace them out of the plane of said base sheet into substantially vertical position, said figures being interlocked with each other to maintain them in such displaced positions, the folded or uncut portions of the outlines thereof being substantially at right angles to each other and the horizontally disposed portion of said sheet comprising a supporting base therefor.

ARTHUR FREDERIC OTIS.