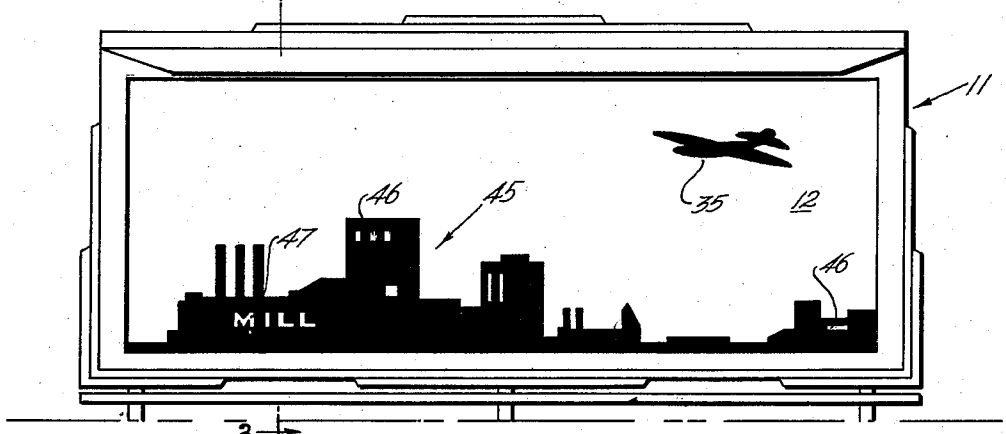
June 27, 1939. H. S. RAY 2,163,763

ADVERTISING DEVICE

Filed May 3, 1938

FIG. 1



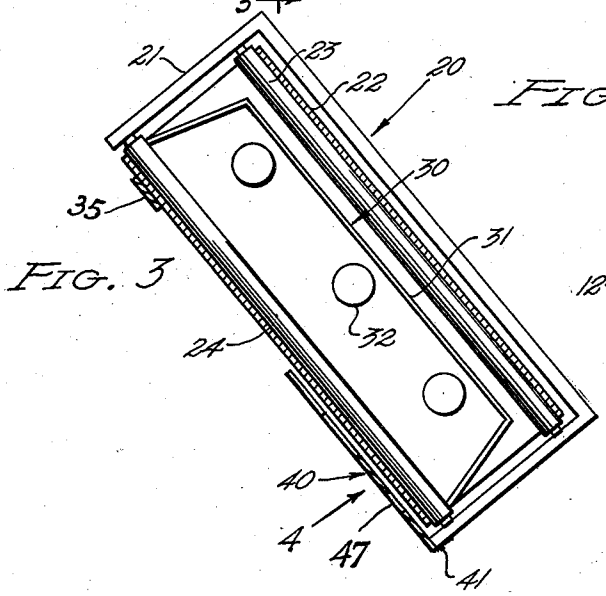




FIG. 3

FIG. 2

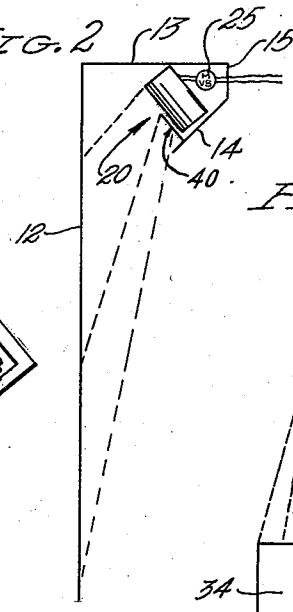



FIG. 5

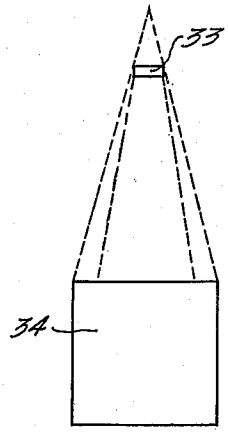
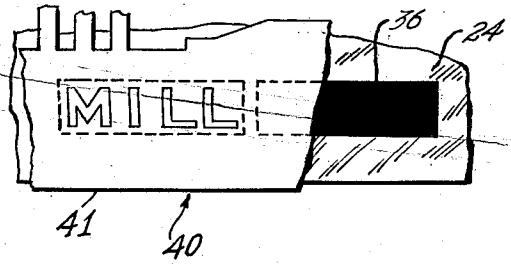



FIG. 4




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2,163,763

# UNITED STATES PATENT OFFICE

2,163,763

## ADVERTISING DEVICE

Harry S. Ray, Los Angeles, Calif.

Application May 3, 1938, Serial No. 205,709

8 Claims. (Cl. 40—130)

My invention relates principally to bill-board type of advertising and in which by a combination of projected stationary and moving shadows on a white ground a type of animation is given to the advertising. My invention also comprehends that instead of using silhouettes or shadows I may project white or colored outlines and use the combination of a stationary outline in conjunction with a moving outline to produce the animation.

On a blank-faced bill-board I project a stationary shadow or silhouette which for instance could represent the skyline of a city or town showing the shadows and other features in cut-outs showing the outline as if there were lights in the building. In conjunction with this I utilize moving shadows. For instance for advertising airplane service or travel I may have the shadow or outline of an airplane passing across the bill-board. Another characteristic of my invention is having both the stationary and the moving shadow constructed in miniature and distorted as to normal appearance so that when a light is projected obliquely on the face or panel of the billboard and the silhouettes cast a shadow, such shadows have the normal appearance to identify the objects desired.

Another characteristic of my invention is exhibiting and blocking out advertising matter in the stationary shadow or silhouette, thus for instance a name or word may be made in cutouts or transparencies in the stationary silhouette. Then in normal projection such word or other device appears brilliant by contrast with the shadow. In order to call attention to such advertising word or device this is periodically blocked out leaving a complete shadow. A feature of my invention comprises accomplishing this by having an opaque surface or section of the transparent belt or screen and causing this to be moved across the stationary outline or silhouette in order to periodically block out the transparencies of such word or device. This blocking out opaque area is mounted on the same transparent screen on which the moving silhouette is also mounted.

My invention is illustrated in connection with the accompanying drawing, in which:

Fig. 1 is a front elevation of a bill-board showing one type of advertising.

Fig. 2 is a vertical section on a reduced scale showing in diagram the equipment.

Fig. 3 is a vertical section through the projector system taken substantially on the line 3—3 of Fig. 1 in the direction of the arrows and presuming the aeroplane device has been moved to align with this section, such section showing in vertical cross section a portion of the stationary miniature silhouette device and the section of the moving belt.

Fig. 4 is a partial elevation of Fig. 3 taken in the direction of the arrow 4 showing a portion of the stationary miniature silhouette device and back of this a portion of the moving screen or transparency having an opaque or blocked out section.

Fig. 5 is an optical diagram illustrating the manner in which a small and distorted miniature for silhouette casts the desired outline and shadow.

In my invention I employ a bill-board 11 having a face or panel 12 on which the shadows or illuminated outlines are shown or exhibited. A substantially horizontal hood 13 is illustrated at the top, this having a downwardly inclined canopy 14 connected thereto, preferably by an ornamental cap surface 15. Within the canopy I employ the projection equipment designated by the assembly numeral 20. Such equipment employs a suitable frame 21 in which if an endless belt is used designated 22, rollers 23 are mounted at each end of the frame. In the illustration I show small rollers in which there are a front set supporting the lower or projection run 24 of the belt facing the panel 12 of the bill-board at an inclination. Of course it will be understood that a single large roller at each end might be used or the belt or transparency might be in the form of an elongated band wound on rollers at opposite ends of the bill-board in which case the reversal of the direction of the rollers will reverse the direction of the movement of the shadows. The driving rollers may be operated by any suitable device indicated in diagram by the electric motor and drive designated 25.

The projector light mounting 30 includes a suitable reflector 31 located in the space between the two runs of the endless belt and this has a bank of lights 32 preferably using elongated lighting tubes or a mass of small electric lamps, these being so positioned that the light is projected as from an illuminated area rather than from an individual source of light. The reflector and the lamps are positioned so that the rays of light are projected obliquely towards the face of the bill-board and pass obliquely through the transparent endless belt, that is, the lower run of such belt. On this belt I provide miniature silhouettes, one of which is illustrated in Fig. 5 and designated 33. While this is shown as a small rectangle in Fig. 5 it casts or projects a

shadow indicated at 34 as being square, hence by having a small figure on the transparent belt of the proper outline, I may project a shadow or silhouette indicated by the airplane silhouette 35 of Fig. 1. In addition on the endless belt I also have opaque areas 36 (note Fig. 4) and as the belt is moving these opaque areas pass across the bill-board.

The stationary shadow is formed by the stationary silhouette device 40. This is a cut-out structure in wood, metal or any suitable flat material and has its base 41 secured in the frame 21 or to the canopy 14. Such device is located between the lower run of the endless or transparent belt and the face or panel of the bill-board and is placed obliquely to such surface and preferably parallel to the face of the lower run of the belt.

In the illustration of Fig. 1 this stationary silhouette or shadow device is of such a shape that it casts a silhouette or shadow 45 representing the skyline of a town or a series of buildings such as they would appear before a bright background. In order to give the appearance of buildings being illuminated at night, the shadow device 40 has a series of cut-outs or transparencies representing windows 46. Further to represent an illuminated word or sign I provide further cut-outs or transparencies forming in the illustration the word "Mill" indicated at 47. This may be a word or device formed in the stationary shadow structure 40 and as the light projects through this the letters of the word or device show by their brilliant illumination and contrast with the dense shadow of the other parts of the stationary silhouette. The blocking out opaque area 36 on the endless belt is so located that in the travel of the belt it blocks out the light through the cut-outs or transparencies which form the word or device 47 and periodically by obstructing the light cause this advertising matter to disappear. This occurs periodically depending on the number of blocking out areas on the endless belt. Thus with my invention I may have the actual moving shadows or silhouettes visible on the panel of the bill-board or have stationary illuminated matter or devices which is periodically blocked out by an opaque area on the endless belt.

It is obvious that instead of having silhouettes or shadows of the moving type, that I may employ an opaque endless belt with cut-outs or transparencies so that an outline of brilliant illumination is projected on the panel of the bill-board and moves thereacross from side to side. In this case with the fixed shadow device 40 giving a fixed shadow on the bill-board, the effect will depict a moving brilliant outline which may be in color moving across the bill-board in the desired relation to the fixed shadow. It is also manifest that I may provide a fixed brilliant illuminated device such as a transparency which gives the stationary outline on a bill-board and in conjunction with this, either employ the silhouettes by using opaque figures or transparencies giving brilliantly illuminated figures or outlines passing across the bill-board.

Various changes may be made in the details of the construction without departing from the spirit or scope of the invention as defined by the appended claims.

I claim:

1. An advertising device comprising in combination a bill-board having an advertising vertical face, a projection equipment including a longitudinally movable belt positioned adjacent the top and spaced forward of the face of the board, the belt forming an acute angle with the face of the board, such belt having light pattern forming devices thereon and an illuminating means positioned on the side of the belt remote from the face of the board whereby such devices cause light patterns to be developed on the face of the board moving with the belt.

2. An advertising device comprising in combination a bill-board having a vertical face, a hood or canopy extending outwardly from the upper edge of the face at a downward inclination and enclosing a projection equipment, such projection equipment including a frame having rollers at least one of which with the driving means and an endless belt operated over such rollers, the lower run of the belt considered transversely forming an acute angle with the face of the board, the belt having a series of light pattern devices, illuminating means with a reflector positioned in the frame between the lower and upper runs of the belt whereby as the light pattern devices move longitudinally of the board, complementary light patterns are formed on the board.

3. An advertising device as claimed in claim 2, a stationary silhouette figure device mounted between the illuminating means and the face of the bill-board whereby light projected from said source outlines a stationary shadow on the face of the bill-board.

4. An advertising device comprising in combination a bill-board having a vertical face, a source of projection light, a fixed shadow device positioned between the source of light and the bill-board and arranged whereby the light from the said source is directed at an angle other than a right angle to the board and thereby forms a fixed shadow or silhouette, the fixed shadow device having transparencies whereby light is projected through such transparencies showing brilliant illuminations in the shadow or silhouette on the face of the board and a moving opaque blocking out area device mounted to move between the source of the light and the fixed shadow device to obstruct the light through the cut-outs or transparencies and thereby block the illumination exhibited on the fixed shadow.

5. An advertising device comprising in combination a bill-board having a vertical face, a fixed shadow device positioned adjacent the upper part of said face and at an angle to said face, a source of light positioned beyond the said shadow device relative to the face of the board and adapted to cast a shadow downwardly obliquely on the board and thereby produce a fixed shadow on the board, the outline of the shadow being materially different in shape from the outline of the shadow device due to the oblique projection of light, a movable shadow forming device located between the source of light and the fixed shadow device, means to move said movable shadow forming device from one end of the bill-board towards the other whereby the shadow cast on the bill-board overlaps the fixed shadow and thereby changes the appearance of such fixed shadow.

6. An advertising device comprising in combination a bill-board having a vertical face, a fixed shadow device positioned adjacent the upper part of said face and at an angle to said face, a source of light positioned beyond the said shadow device relative to the face of the board and adapted to cast a shadow downwardly obliquely on the board and thereby produce a fixed shadow on the board, the outline of the shadow being

materially different in shape from the outline of the shadow device due to the oblique projection of light, a movable transparent medium of sheet form with means to move same longitudinally of the bill-board and between the fixed shadow device and the source of light, said transparency having a silhouette thereon positioned above the fixed shadow device to cast a shadow on the face of the bill-board above the fixed shadow.

7. An advertising device comprising in combination a bill-board having a vertical face, a light projection equipment including a source of light, a belt having a run between the projection light and the bill-board, the face of the belt being inclined to the face of the board, said belt having one or more light pattern forming devices thereon whereby the light projected forms a light pattern on the face of the bill-board, means to move the belt and thereby move the pattern across the board, a shadow forming device interposed between the light source and the face of the board to cast a fixed shadow on the board.

8. An advertising device as claimed in claim 7, the shadow forming device having transparencies and thereby projecting illuminated portions of the fixed shadow depicting advertising matter and the belt having an opaque blocking out area which in the movement of the belt obscures the light transmitted through the said transparencies.

HARRY S. RAY.