Feb. 7, 1933. L. O. WHITE ET AL 1,896,928

ADVERTISING PROJECTOR

Original Filed July 3, 1928 2 Sheets-Sheet 1

Fig. 1.

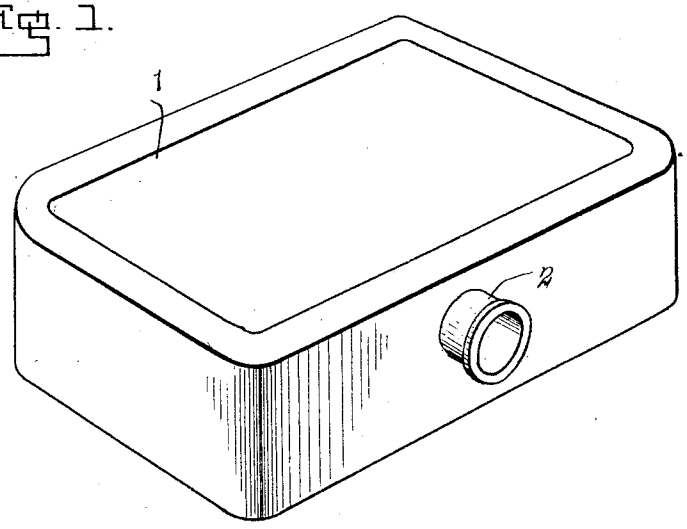


Fig 5.

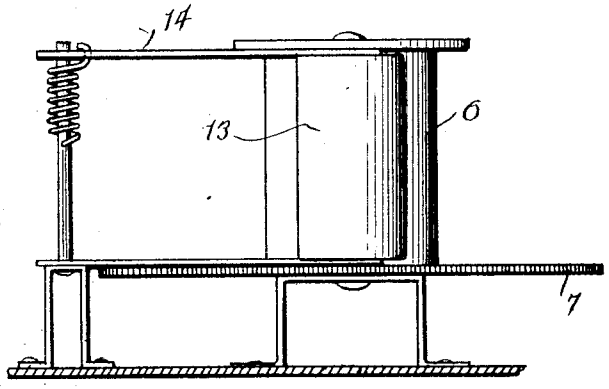
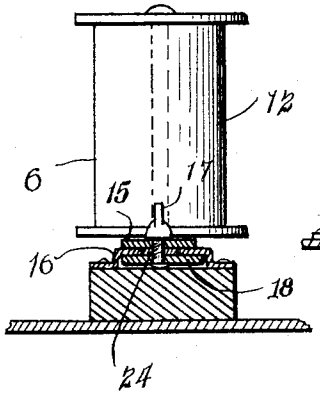


Fig. 6.



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Fig. 2.

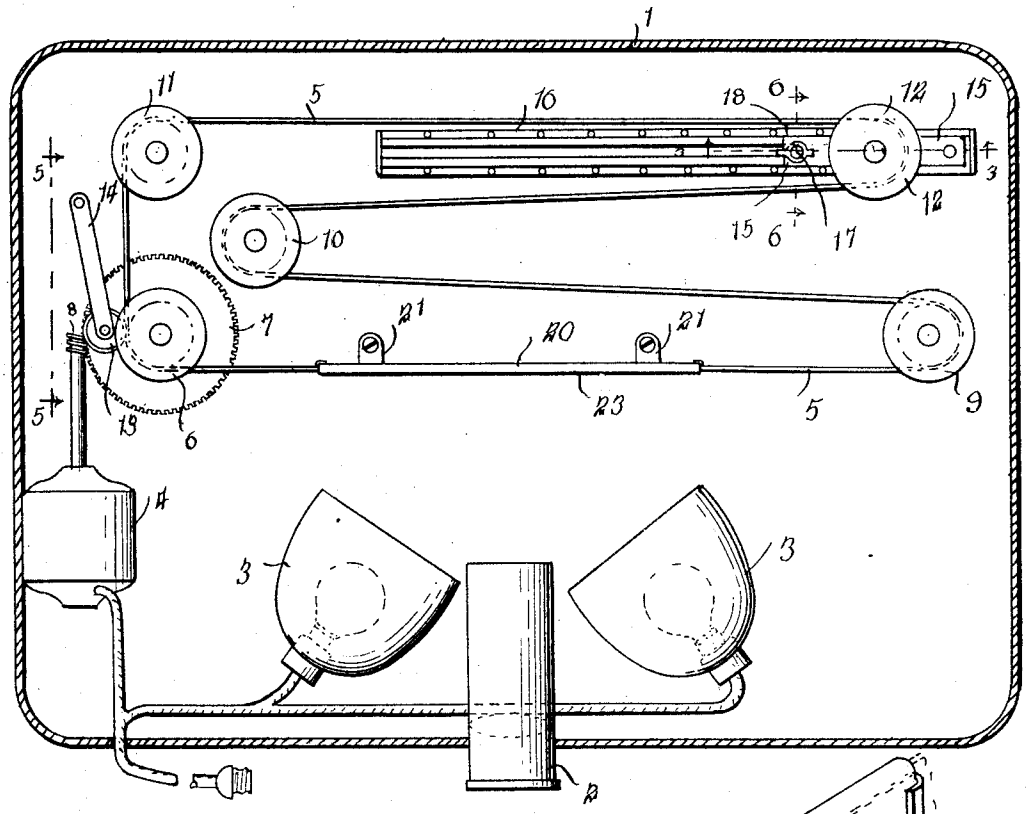


Fig. 3.

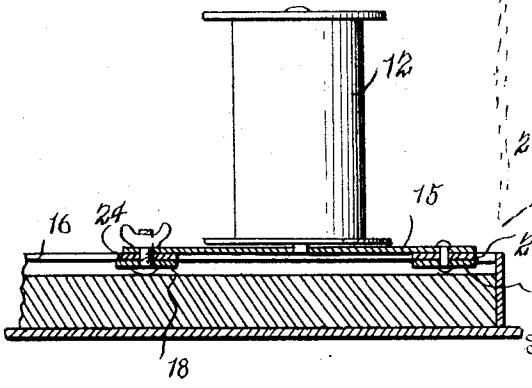
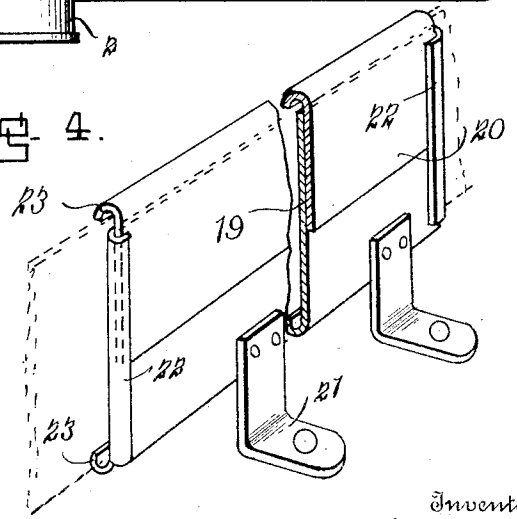


Fig. 4.



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UNITED STATES PATENT OFFICE

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ADVERTISING PROJECTOR

Application filed July 3, 1928, Serial No. 290,086. Renewed February 23, 1932.

The invention relates to apparatus based upon the well known principle of reflecting surfaces, and provides a device of this character embodying a traveling web, or strip, bearing the matter to be displayed and which is adapted to be projected upon a suitable screen positioned for convenient and ready observation.

The object of the invention is the provision of a device which gives an animated effect to the matter displayed, thereby attracting the attention and engaging the interest of the observer which are items of importance in an advertising appliance.

While the drawings illustrate a preferred embodiment of the invention, it is to be understood that in adapting the means to meet specific needs and requirements, the design may be varied and changes in the minor details of construction may be resorted to within the scope of the invention, as claimed, without departing from the spirit thereof.

For a full understanding of the invention and the merits thereof, reference is to be had to the following description and the drawings hereto attached, in which:—

Figure 1 is a perspective view of a practical embodiment of the invention.

Figure 2 is an enlarged horizontal sectional view of the casing showing the interior arrangement of parts.

Figure 3 is an enlarged fragmentary sectional view on the line 3—3 of Figure 2.

Figure 4 is a detail perspective view of the web guide and support, the intermediate portion being broken away and the dotted lines indicating the position of the web.

Figure 5 is a fragmentary sectional view on the line 5—5 of Figure 2.

Figure 6 is a fragmentary sectional view on the line 6—6 of Figure 2 showing the parts on a larger scale.

Corresponding and like parts are referred to in the following description and designated in the several views of the drawings by like reference characters.

The numeral 1 denotes the casing which receives and houses the working parts. This casing is in the form of a box and is provided in a side with a centrally disposed opening in which is fitted a projecting cell 2 which may be of any construction. The numeral 3 designates a source of light which is located at each side of the projecting lens 2 and disposed to focus the rays of light upon the web, or strip, at a point in line with the axis of the projecting lens. The source of light preferably consists of an incandescent electric lamp. A suitable motor 4 is conveniently positioned within the case 1 and operates the advertising web, or strip. It is preferred to utilize an electric motor which is included in circuit with the source of light.

The advertising web, or strip 5, is supported by a plurality of rollers, one of which is positively driven to impart a movement to the web. The positively driven roller is designated by the numeral 6 and has a worm gear 7 fast to an end thereof and in mesh with a worm 8 on the drive shaft of the motor. A plurality of rollers 9, 10, 11 and 12 are provided to support and direct the web, or strip 5, in its movement. The roller 12 is adjustable to admit of taking up any slack in the web and maintaining it under proper tension.

A pressure roller 13 coacts with the positively driven roller 6 to hold the web 5 in contact therewith to insure motion being imparted thereto. A spring actuated frame 14 supports the pressure roller 13 and is movable to admit of placing the web 5 in posiiton or removing it from the roller 6.

A carriage 15 supports the take up roller 12 and is mounted on guides 16 and is retained in the required adjusted position by means of a clamp screw 17 and a clamp plate 18, portions of the guides 16 being disposed to be clamped between the parts 15 and 18, as shown most clearly in Figure 6 of the drawings.

A guide and support is provided for that portion of the advertising web, or strip 5, opposite the projecting lens 2 and between the rollers 6 and 9. The guide comprises a lower section 19 and an upper section 20. Brackets 21 attached to the lower section 19 provide means for connecting the guide to the bottom of the case. The lower section 19 is recurved at each end, as indicated at 22,

to receive the upper section 20, as indicated most clearly in Figure 4 of the drawings. The lower longitudinal edge of the section 19 and the upper longitudinal edge of the section 20 are recurved as indicated at 23, to engage edge portions of the web, or strip 5, and hold it in place.

The adjustable construction of the guide admits of readily adapting it to webs, or strips 5, of different widths.

The matter appearing upon the web, or strip 5, may be pictorial, descriptive, or of an illustrative nature depending upon the specific purpose for which the device is adapted. The web 5 may consist of a ribbon of paper, or other suitable material, and the matter may be delineated thereon or appear upon a sheet which may be pasted to the web. In the operation of the device the rays of light from the illuminators 3 strike the surface of the web, or strip 5, and are reflected through the projecting lens cell 2, and the matter thus reflected from the web may be projected upon a suitable screen, or surface, provided for reflection of the image. The web, or strip, being in motion gives an animated effect to the reproduction, thereby engaging the attention and serving to create an interest in the matter to be displayed.

The carriage 15 rests upon the guides 16, and fillers 24 are interposed between the edges of the guides and the elements 15 and 18 and coact with the guides to prevent lateral displacement of the carriage. The web 5 is trained about the guide rollers and different lengths of webs may be employed because of the adjustable feature of the take up roller 12. The guide readily conforms to webs of different widths because of the self adjusting feature of the top section 20 which gravitates to maintain its upper recurved edge 23 in contact with the top edge of the web.

Having thus described the invention, we claim:—

1. In an advertising device, the combination of a web disposed on edge, means for imparting a movement thereto, a projecting lens, a source of light coacting with the lens and web, and a flat guide and support for the web comprising sections arranged to engage opposite edge portions of the web, one of the sections being fixed and having a longitudinal edge portion projecting under the lower edge of the web and the other section being slidably mounted on the fixed section and having its upper longitudinal edge overlapping the upper edge of the web and engaged with the same by gravity.

2. In an advertising device the combination with a traveling web, of a guide therefor comprising a fixed section having opposite end portions and a longitudinal edge portion recurved, and a movable section engaging the recurved end portions of the fixed section and having its outer longitudinal edge portion recurved whereby to receive the web between the recurved longitudinal edge portion of the two sections.

3. In an advertising device, a case having a bottom and side walls, a projecting lens cell mounted in a side wall of the case, a plurality of guide rollers mounted on the bottom wall of the case, a web trained about said rollers and movable across the axis of said lens cell, a carriage, a guide roller on said carriage engaging a bight of the web, a track consisting of parallel rails on which the carriage rests, clamp plates bridging the track below the same, securing elements inserted through said plates and the carriage, fillers mounted on said elements between said plates and the carriage and fitting between the edges of the track rails and means coacting with one of the rollers for driving the web.

4. In an advertising device, guide rollers, a web trained about said rollers, and a guide for the web between two rollers embracing the upper and lower edges of said web and including a fixed member and a movable member slidably engaged at its ends with the ends of the fixed member, the more remote longitudinal edges of both members having lips for gently clamping the web between said members and maintaining the web flat through the length of the guide.

In testimony whereof we affix our signatures.

LEO O. WHITE. [L. S.]
EUGENE B. RENNER. [L. S.]