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SIGNS  
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Fig. 1.

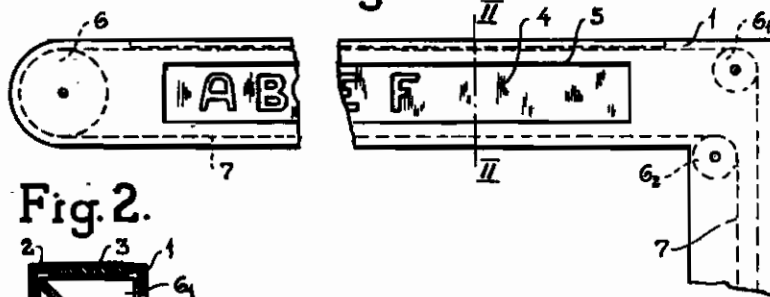


Fig. 2.

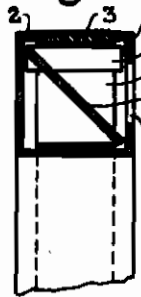


Fig. 3.

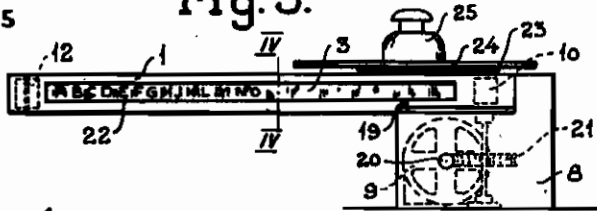


Fig. 4.

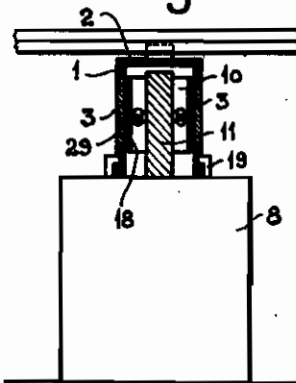


Fig. 5.

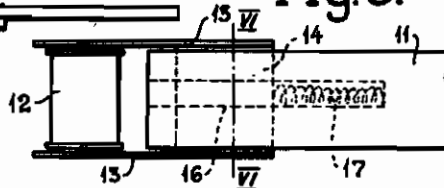


Fig. 6.

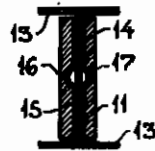
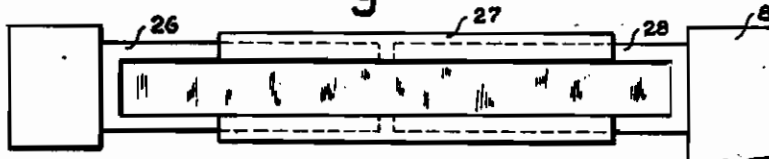


Fig. 7.



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# ALIEN PROPERTY CUSTODIAN

## SIGNS

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My present invention relates to signs, more particularly to signs having a movable text or display strip inserted in the path of light rays, either daylight or artificial light.

The invention has for its objects first to produce a sign in which a long movable text can be used, which is gradually moved past a window, in which the text will be visible either directly or indirectly in a mirror; second to construct the sign in a manner making it possible to place the same for advertising purposes in a shop window, in street cars and other places, where a small, but effective sign is desired; third to build up a sign, which needs no care and will run continuously when first started, only using a little amount of electric current; fourth to produce a sign, by means of which it is possible in combination with the advertising text to display the goods in a very effective and attracting way.

With these objects in mind, the sign can, in accordance with the invention be constructed in more different ways.

A text strip may be used which is guided over two rollers in one single bight, but also strips passing over several rollers may be used, or the major part of the strip may be coiled so as to form an annular coil supported, on the inside, by several rollers driven by a motor, the inner part of the strip being connected to the outer part, without being twisted. In this case the ring is rotated in such a manner that there is always supplied to the outer side thereof the same length of strip as the length removed from the inner side during the same time. In this manner the advantage is attained that a very long strip with a correspondingly long text can be used in a relatively small space.

In order to attain as brilliant an effect as possible, especially when a perforated strip is used, I may fit the glass pane of the window with optically acting projections or the like, preferably small hemispheres of about the same size as the perforations, and thereby the advantage is attained that the small projections on the front face of the pane will have the effect of small luminous lamps which owing to the motion of the strip will have a gleaming appearance. The mirror should be adjustable, in such a manner that the light reflected towards the pane will be as favourable as possible. It may be of special advantage to arrange the mirror to be swung in such a manner that during daytime it can catch the daylight and project the same through the holes in the perforated strip, while during the night it can be swung into such a position that

it will catch the light from lamps disposed either within the casing of the sign, or outside the same. The mirror may be partly transparent, if desired, in such a manner that light from the rear side of the mirror can also be taken into use, and the mirror may be connected to contacts serving to close and break the electric-current supply to the lamp, in such a manner that the same will be extinguished when the sign acts as a daylight sign.

The sign is thus especially suited to utilize the daylight coming from above during daytime. Instead of daylight, lamps may be disposed above the sign so as to project the light downward towards the mirror. Such lamps should preferably be shaded, so that they do not project the light forward in the same direction as the mirror.

The lamps serving to illuminate the sign may at the same time be utilized for other purposes, for instance for lighting a vending machine.

In many cases it is important that the portion of the sign that contains the opening, through which the text of the sign can be read, should have very small dimensions, in such a manner that it easily can be disposed at a point at which the text is desired to be read. The motor with driving pulley belonging thereto and serving to feed the ribbon forward may then be disposed at a hidden place. Hereby it becomes feasible to dispose such signs at points where otherwise they could not be placed, owing to the space they would otherwise occupy. This applies especially to the mounting in store windows or similar places.

According to the invention, this object is attained in that the casing or box is fitted with a long and narrow box part enclosing narrowly the forward running and returning parts of the ribbon, and which contains the openings through which the text can be read.

The invention comprises also special constructions of the narrow box part by which the field of usefulness of the same is increased.

The box part may thus be detachably fastened to the casing encircling the driving motor, and may enclose a rod disposed thereon and supporting, at its free end, a spring-actuated supporting roller for the ribbon part running forward and back through the box part.

Hereby an easy exchange of the ribbon is rendered possible, if it is desired to alter the text.

In order that the sign may easily be adjusted to windows of various sizes, it is preferable to let the box part be telescopic, so that the same can be pulled out or pushed in, all according to the

conditions of space at the place where the sign is to be placed.

The box part may further be fitted with lighting devices of a kind known per se. Outside of the box part the ribbon may run, in a manner known per se, as many bights passing over many rollers, in such a manner that a very long ribbon with a correspondingly long text can be contained in the box enclosing the driving motor. It is, however, also feasible to dispose a long ribbon forming several bights and passing over several rollers, in the long and narrow box part.

The entire sign with the driving mechanisms belonging thereto may also be disposed in a drawer adapted to be pulled forward, and again pushed into position, in the apparatus in which the sign is disposed, for instance a vending machine.

A few constructions of the invention are illustrated on the drawing, in which

Fig. 1 shows a sign in side elevation,

Fig. 2 section II—II in Fig. 1,

Fig. 3 shows a sign in side elevation,

Fig. 4 section IV—IV in Fig. 3,

Fig. 5 the extreme end of a supporting bar for the ribbon, to a larger scale,

Fig. 6 section VI—VI in Fig. 5, and

Fig. 7 a sign in side elevation.

The sign consists essentially of a box 1 fitted with a cover 2 which in the construction shown in Figs. 1 and 2 does not cover the entire upper side of the box, but leaves an opening with a window-pane 3 free, so that light from above can strike an obliquely disposed mirror 4 provided in the box, in such a manner that the same will project the light rays forward through an opening 5 in the front face of the box. Just behind the pane 3, a strip 7 is passed over rollers 6, 6<sub>1</sub> and 6<sub>2</sub>. The strip 7 may preferably be made from an opaque material, for instance black paper, in which a text is produced by perforation.

The strip 7 should preferably be endless, and be moved forward past the pane 3 by means of a motor, disposed in the lower part of the box 1 not shown on Figs. 1 and 2.

Instead of perforated letters or the like on the strip, transparent letters or dark letters on a transparent background may be used.

On account of the strip 7 being directed quite closely past the pane 3, no light can escape through the pane, without having passed the strip.

As it may be of importance, in many cases, that the box enclosing the window with the strip and the mirror should take up as little space as possi-

ble, the driving motor for the same may be disposed outside of the box. The box may then be dimensioned in such a manner that it does not take up much more space than the strip, neither vertically nor horizontally, and the strip may be returned along the box, on the other side of the mirror, as shown in Figs. 1 and 2.

The sign shown in Figs. 3-6 consists mainly of a box 8 in which a driving motor 9 for a driving pulley 10 is disposed. To the top side of the box a long bar 11 is attached which at its free end carries a supporting roller 12 which is journaled in two plates 13 united by a transverse plate 14 inserted in a slot 15 formed in the end of the bar 11 and terminating in a hole 16 in which a spring 17 is inserted which tends to press the plate 14 and, thereby, the roller 12 outward. An endless text ribbon 18 passes around the rollers 12 and 10. On the upper side of the box 8 keys 19 are provided which can engage corresponding grooves in the side of the long narrow box part 1 which tightly encloses the ribbon parts passing around the rollers 12 and 10, and is fitted with openings with corresponding panes 3 through which the letters 22 on the ribbon 18 can be read.

When the motor 9 through the gearing 20, 21 sets the roller 10 into a rotary motion, the text ribbon will be moved forward past the opening panes 3, and the advertising text can then be read through the same. The box 8 can be disposed in a hidden place, so that merely the long narrow box part 1 will be visible.

The driving roller 10 may support a friction roller 23 disposed outside of casing 8 or a gear-wheel, which is in contact or engagement with a disc 24 which is rotatably disposed on the top side of the sign, and thus will be rotated simultaneously with the motion of the text ribbon. On the disc, articles 25 to be displayed can be placed, and the public can thus observe the same from all sides during their rotary motion. The advertising value will be enhanced by displaying on the disc 24 the articles nearer described in the movable text. In order to make the text visible electric lamps 29 are disposed in the box 1.

In the construction shown in Fig. 7, there is provided, on the upper side of the motor box 8, a box consisting of three parts 26, 27 and 28 forming a telescoping long and narrow box part enclosing the text band. By this construction the advantage can be attained that the length of the sign can easily be adjusted according to the space conditions at hand, as the box part 26-28 can be pulled out or pushed together.

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