Sept. 24, 1940. R. A. GRAY 2,215,550

SIGN

Filed March 15, 1939 2 Sheets-Sheet 1

FIG. 1

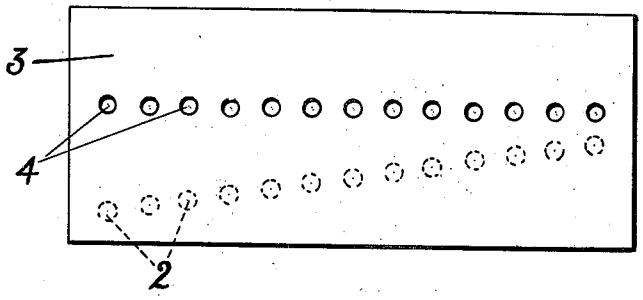


FIG. 2

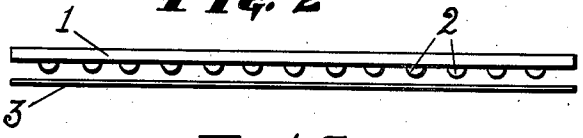


FIG. 3

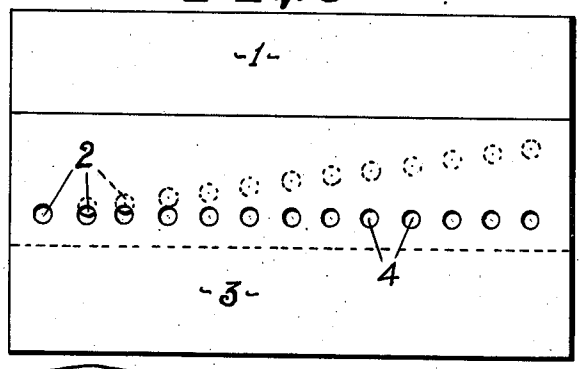
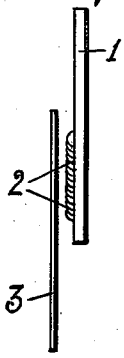


FIG. 4



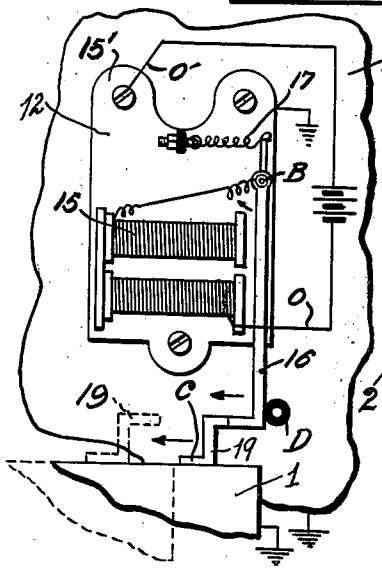
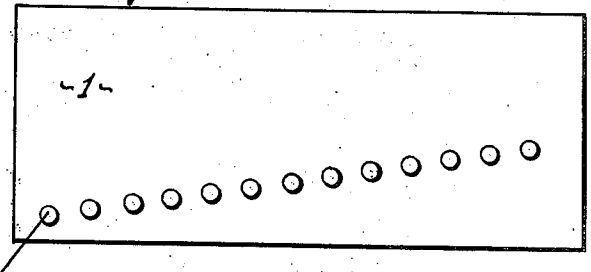


FIG. 9

FIG. 5



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Sept. 24, 1940. R. A. GRAY 2,215,550

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Filed March 15, 1939 2 Sheets-Sheet 2

Fig. 6

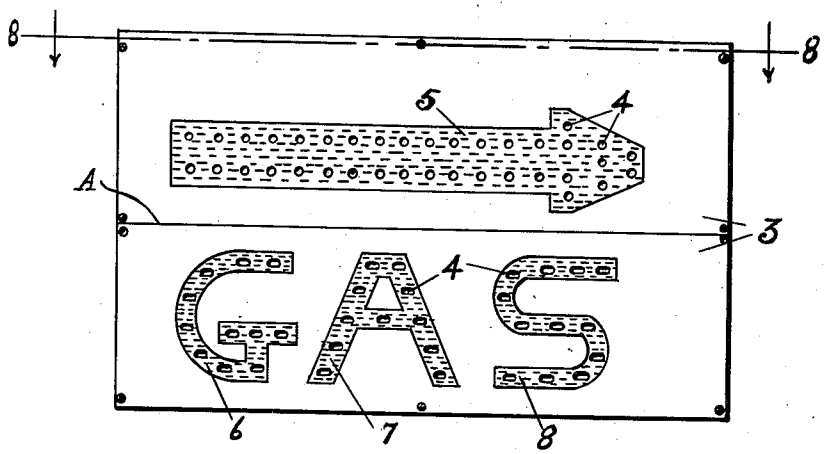


Fig. 7

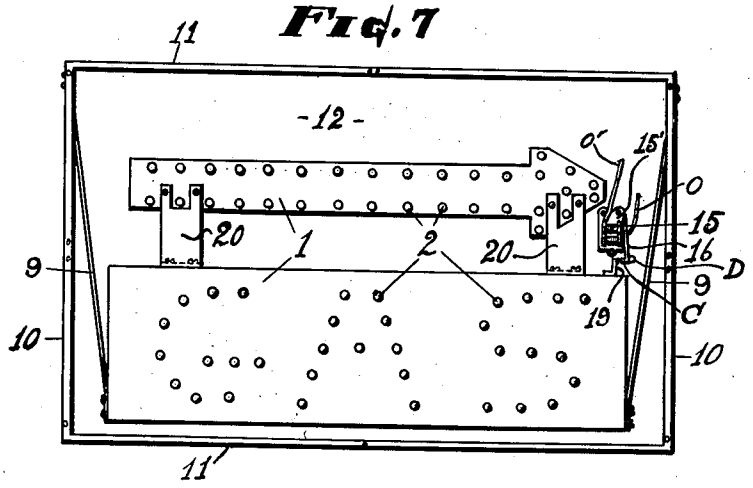
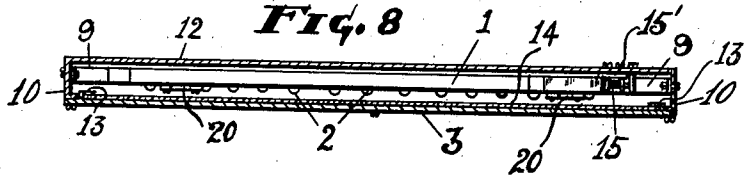


Fig. 8



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2,215,550

SIGN

Raymond A. Gray, Rock, Kans.

Application March 15, 1939, Serial No. 261,984

2 Claims. (Cl. 40—138)

My invention relates to new and useful improvements in signs, and has for its principal object a reflective element and means to reveal and conceal the same selectively or in consecutive order to indicate a line of travel by mechanical movement arranged in a structure embodying said reflective element, said elements hereinafter referred to as jewels.

A further object of my invention is to provide a means that will visibly disclose a series of jewels, one at a time in consecutive order, whereby the contour of a figure design will be followed or the entire design may be disclosed instantly.

A still further object of my invention is that, under the principle herein disclosed, the contour as well as intermediate features of a design or indicia will be revealed, and more conspicuous in the dark or subdued light, in which case, the jewels are caused to respond by the approach of an artificial light; furthermore, by reciprocating movement of the jewel panel is meant to bring the jewels and apertures into and out of alignment at intervals.

These and other objects will hereinafter be more fully explained, reference being had to the accompanying drawings, forming a part of this specification, and in which like characters will apply to like parts in the different views.

Referring to the drawings:

Figs. 1 through 5 inclusive, illustrate the basic principle of my invention, and in which Fig. 1 is an elevation of the apertured front plate, the jewels of a rear plate being shown by dotted lines on one side of the aligned apertures, said plates being in registry peripherally; Fig. 2 is an edge view of Fig. 1; Fig. 3 is a front view of the plates, displaced from registry by vertical movement whereby the jewels are positioned on the other side of said aligned apertures; Fig. 4 is an end view of Fig. 3; Fig. 5 is a front view of the rear plate, showing the jewels slantingly aligned from a horizontal plane, and being carried thereby as a preferred position to illustrate the object of my invention.

Fig. 6 is an elevation of a sign.

Fig. 7 is a similar view as that of Fig. 6 with the sign plate removed, showing the structure of the jewel supporting mechanism and its rockable arrangement.

Fig. 8 is a sectional view looking in the direction of arrows 8—8 in Fig. 6.

Fig. 9 is an enlarged side view of the magnet actuating means to cause rocking movement of the jeweled plates, reciprocatingly.

The principle of my invention herein set forth, for example, resides in a plate 1 having a series of aligned jewels 2, secured therein, the alignment of which slants from a horizontal plane, and a plate 3 having a series of horizontally aligned apertures through said plate. The said apertures and jewels are adapted to register in consecutive order as the plates are moved vertically to and from each other, the movement of which may be equal to the aligned slant of the jewels from a horizontal plane, by which means the reflection of each jewel as it moves to registry with its respective aperture will be visible, producing the effect of a movable light from one end to the other of the aligned apertures reciprocatingly, the function of which may be by the reciprocating vertical movement of either of said plates, it being understood that the said jewels are adapted to reflect the rays of an artificial light. Furthermore, said jewels may be brilliantly colored to function in the absence of an artificial light. In case of the latter, a flat disc form may substitute the jewels, in which event, the assemblage of its component parts should place said disc-like elements in close proximity to their respective apertures for movement to and from registry.

In Fig. 6 is shown a sign arrangement embodying the jewels, apertures and plates to carry the same, and said arrangement does not depart from or exclude the essential features heretofore described. The said Fig. 6 through 9 inclusive embody metallic plates 1 and 3, in which the apertures and jewels are placed to conform with arrow 5 and the letters 6, 7 and 8 respectively, the arrow and letters being outlined to distinguish an unbroken contour for visibility aside from the apertures aligned with respect to the contour of each, and the said arrow, letters, or other indicia have a distinction of color varying from the field or background formed by the plates. Being thus arranged, they will produce a visible sign regardless of reflection, heretofore described, as required for night or subdued light service. In case of the latter, the sign is illuminated by the rays from the head lights of an approaching vehicle, and by mechanical arrangement later described, the arrow and word "gas" being alternately illuminated as energized by said head lights. The alternate arrangement is through the medium of plates 1, each of which has jewels positioned thereon, conforming to the arrow and letters respectively, but varying with respect to vertical alignment so that the swinging movement of said plates will bring to registry the

arrow for a moment and then extinguish by further rocking movement, disaligning the jewels with their respective apertures, and simultaneously bringing into registry the jewels and their respective apertures of the letters. In other words, an alternate flash is obtained for the said arrow and letters the arrow being a directional guide and the letters as a commodity sign.

It will be seen that the rocking movement of said plates reciprocatingly is due to the pendant supporting means therefor, through the medium of a metallic leaf spring 9 secured to each end of the lower plate, while the upper end of each of said springs is secured to an end wall 10 of a frame, in which said plates are positioned, said frame having upper and lower walls 11 and a back 12 to receive said plates, while the front of the frame is closed by said plates 3 that are divided on line A as shown in Fig. 6, and the said plates have a flange 13 secured to each of their respective ends, the flanges being spaced outward to receive a glass 14 to close the apertures of their respective portion of the plate, said glass being severed in like manner to that of the plate. Being so arranged, the jewels of each plate are visible, alternately, through their respective apertures when in registry therewith as the plates rock reciprocatingly, the rocking movement of which is through an electrically operated magnet 15 having a feed wire O, and a ground wire O' as one side of the circuit to the swinging plate (later described), said magnet being secured to the back of said frame by a plate 15' in working relation to said swinging plates, the function of which is to rock said plates longitudinally a short distance reciprocatingly through the medium of an arm 16 that extends across the end of the magnet and spaced therefrom by a spring 17 connected to the upper end of the arm, whose fulcrum point is at B and rockable thereon, said point and spring being insulated from said plate 15' to which the magnet is connected. The other end of the arm has a right angle bent portion C and a stop D, the outer end of said portion C to contact a detent 19 that is secured to the lower member of said plates 1, it being understood that the upper portion of said plates constitutes the arrow that is connected to the lower plate by a bar 20 at each end thereof and rockable therewith, the rocking movement of the plates toward and in contact with the said arm through the medium of its detent is closing means for the circuit energizing the magnet, which, in turn through the medium of the arm, will drive said plate in the opposite direction sufficient to cause registry of the jewels and apertures at each extreme rock of said plates, disclosing the sign as a whole by reflected illumination or alternately with respect to the arrow and word "gas", in other words, the rocking movement of the swinging plates is accomplished as follows: it will be seen that 19 is a contact secured to the sign plate and that lever 16 serves as the movable contact and when said contacts are in snug engagement the circuit is closed energizing the magnet, at which instant lever 16 starts swinging the sign plate to the left, but due to its own inertia the sign plate swings farther to the left than the lever 16 moves it. The continued movement of the sign plate separates the two contacts whereupon lever 16 will, by action of spring 17, swing to the right against the stop D and will remain there until the sign swings to the right under the influence of leaf springs 9 whereupon contact 19 strikes the lever and again closes the circuit for a repeated movement of the sign plate and so on repeatedly.

While I have shown and described a sign having two indicia separately and alternately exercised with respect to visibility by horizontal movement of the jewel plate, I do not wish to be restricted to such alone, as the form of signs vary in such a way that rotary motion may be required or a rocking movement vertically or slantingly from a horizontal plane may be required, and such other modifications may be made as lie within the scope of the appended claims.

Having fully described my invention what I claim as new and desire to secure by Letters Patent is:

1. In a sign, in combination a commodity sign and a directional guide to a place of business consisting of a supporting frame, the frame being positioned to confront headlights of vehicles on a highway, of a plate pendantly carried by the frame and adapted to swing on a horizontal plane, of a magnetic means to actuate the swing of the plate reciprocatingly, of a plurality of reflective jewels selectively positioned and secured to the plate, of another plate rigidly carried by the frame as enclosing means for the first said plate and being in front thereof, last said plate having a plurality of apertures correspondingly spaced to register with the reflective jewels of the first said plate and through which the jewels are visible by light reflection as they register with the apertures, the apertures in registry with the directional guide being circular while the apertures for the commodity sign are elongated horizontally for prolonged visibility of the sign over that of the directional guide, the jewels of the directional guide and sign being staggered for alternate appearance as the first said plate swings.

2. In a sign, in combination a commodity sign and a directional guide to a place of business consisting of a supporting frame, the frame being positioned to confront headlights of vehicles on a highway, of a plate comprised of two members spaced apart and means to connect the plates rigidly, one part being arrow-like in contour, and a plurality of reflective jewels spaced thereon in parallelism with the contour of the arrow, the other member being rectangular in form, and a plurality of reflective jewels spaced apart and secured to the last said member in such a way as to form letters selectively for wording of a sign, the plate being pendantly carried by the frame, of a magnetic means to actuate the swing of the plate reciprocatingly, of another plate rigidly carried by the frame as enclosing means for the first said plate, the last said plate having a plurality of apertures correspondingly spaced to register with the reflective jewels and through which the jewels are visible by light reflection as they register with the apertures, the aperatures in registry with the directional guide being circular for short duration of vision while the apertures for the commodity sign being arranged to prolong visibility of the sign over that of the directional guide, the jewels of the directional guide and those of the commodity sign being staggered with respect to a vertical plane for alternate appearance as the first said plate swings, the said frame having a transparent glass in contact with the apertured plate at its inner side as sealing means against the unusual action of the elements.

RAYMOND A. GRAY.