

1,314,499.

Patented Sept. 2, 1919.
 2 SHEETS—SHEET 1.

Fig. 1.

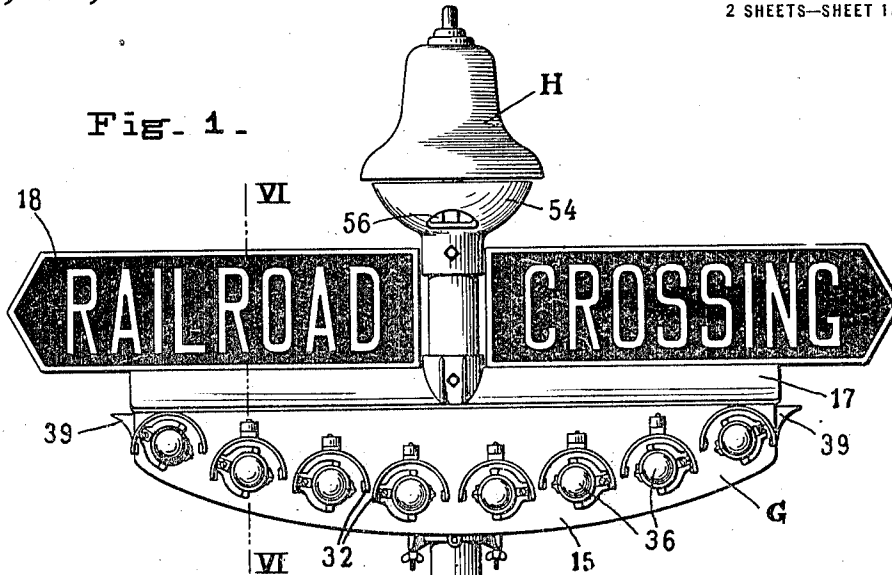
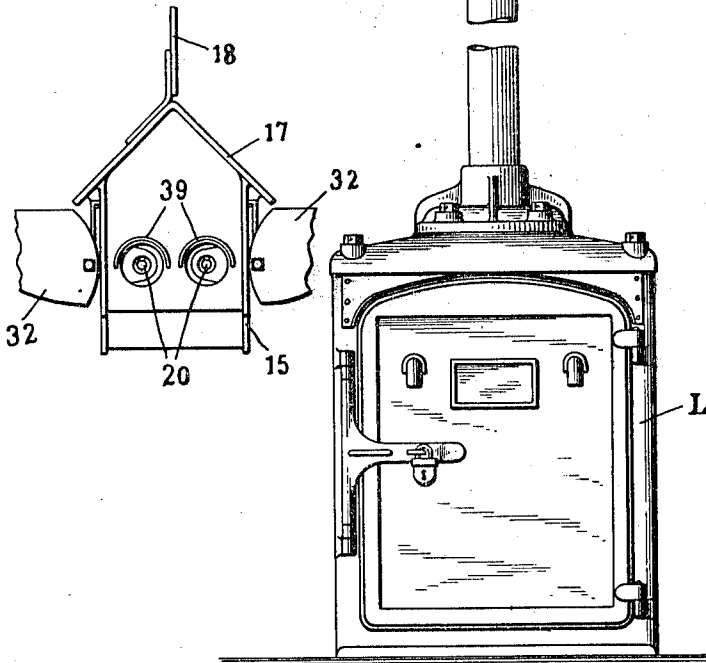


Fig. 10.

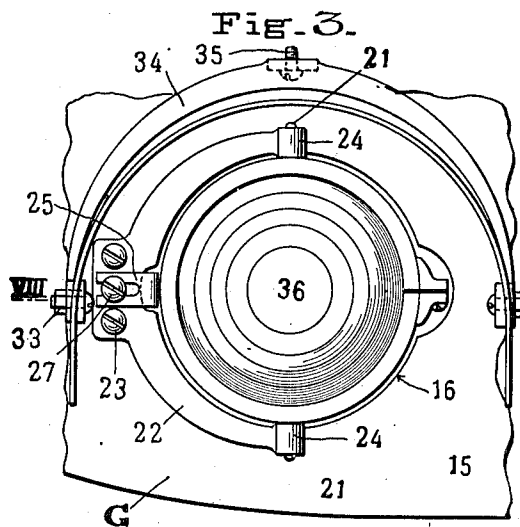
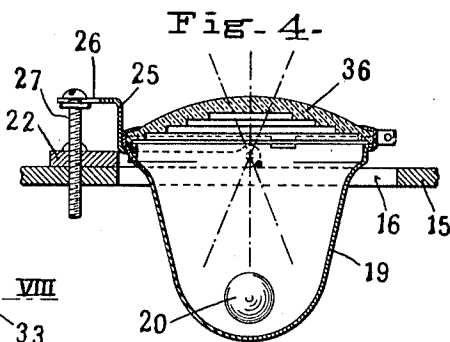
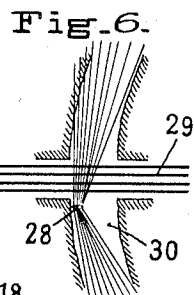
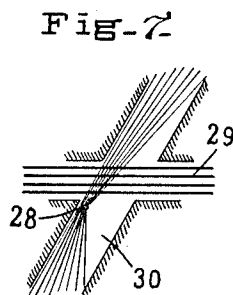
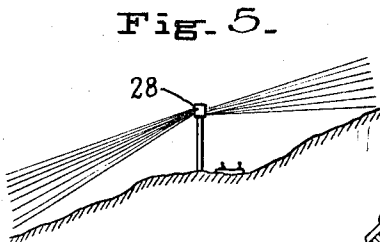
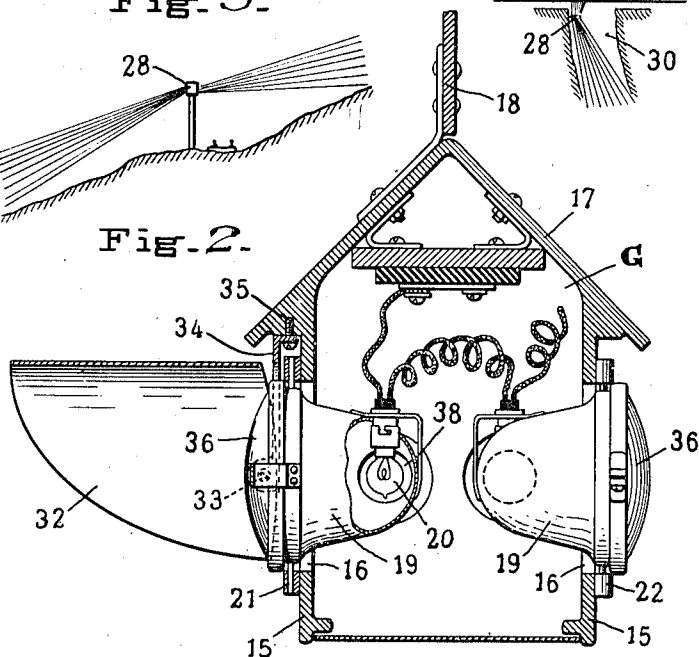
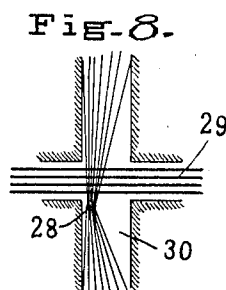
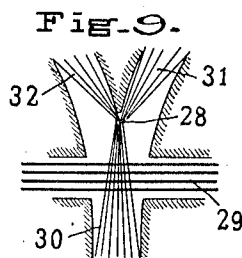


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SIGNALING MEANS.

1,314,499.

Specification of Letters Patent.

Patented Sept. 2, 1919.

Application filed April 20, 1915. Serial No. 22,587.

To all whom it may concern:

Be it known that I, LEON S. BRACH, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Signaling Means, of which the following is a specification.

This invention relates to a signal device for use at railway crossings or other similar localities.

The object of the invention is to provide an improved form of signal device for this purpose.

A further object is to provide means included in the device for rendering the signaling qualities of the device relatively more conspicuous in certain given directions, and moreover to make this means adjustable so that the particular direction or directions from which the signal device is relatively more conspicuous, may be adjusted to suit various requirements.

A further and more particular object is to provide a signal device comprising one or more luminous members and to provide adjustable means associated therewith for directing the light rays therefrom in any adjusted direction, as for instance, straight down a roadway leading to the locality being guarded by this device irrespective of whether the roadway approaches at right angles to the locality being guarded, or at an obtuse or acute angle, or whether it extends uphill or down-hill.

A further object is to provide a series of luminous members and to provide means whereby the light rays from some of said members may be directed in one direction and whereby the light rays from others of said members may be directed in another direction.

Other objects and aims of the invention, more or less specific than those referred to above, will be in part obvious and in part pointed out in the course of the following description of the elements, combinations, arrangements of parts and applications of principles, constituting the invention; and the scope of protection contemplated will be indicated in the appended claims.

In the accompanying drawings which are to be taken as part of this specification, and in which I have shown a merely preferred form of embodiment of the invention:

Figure 1 is a side elevational view of a sig-

nal device constructed in accordance with the provisions of this invention.

Fig. 2 is an enlarged, detailed, sectional view taken substantially upon the plane of line VI—VI of Fig. 1.

Fig. 3 is a further enlarged, detailed, elevational view of the portion shown in Fig. 6.

Fig. 4 is a similarly enlarged, horizontal sectional view taken upon the plane of line VIII—VIII of Fig. 3.

Figs. 5, 6, 7, 8 and 9 are diagrammatical illustrations of numerous possible adjustments of direction for the light rays from the luminous members.

Fig. 10 is an end view of the casing shown at the upper part of Fig. 1 for containing the luminous members.

Referring to the structure illustrated for a detailed description thereof, the reference character L indicates a lower casing, for containing the controlling device. The reference character G indicates the upper casing, for containing the luminous members comprising the visual signal. The reference character H indicates the bell which is arranged to surmount the whole structure and comprises an audible signal.

The upper casing G is formed with opposite side walls 15 preferably arranged parallel to each other and each having a series of openings 16 therethrough extending longitudinally thereof, said series of openings being preferably arranged in arcuate disposition about as shown in Fig. 1. A V shaped water shedding upper wall or roof portion 17 connects the side walls 15 and may serve to support a sign board 18 thereabove.

Within each of the openings 16 a funnel shaped reflector 19 is arranged, carrying an incandescent bulb 20 or other form of lamp therein.

These funnel shape reflectors are arranged with their larger ends within the openings 16 and with the remainder of their bulk projecting within the casing G. Their means of support preferably comprises a pair of trunnions 21 arranged at diametrically opposite points in a vertical plane. These trunnions may pivotally engage suitable bearings formed in the side walls 15 but such bearings are preferably provided in a separately formed member 22 detachably connected to the side wall as by means of screws 23, said members each being in the

form of a yoke and having bearing parts 24 at the opposite end thereof. By this means the reflectors may be bodily detached with their pivotal supports, for any purpose
 5 desired, by merely removing the screws 23. The reflectors are free to pivot in a horizontal plane about their supports.

Any means may be employed for retaining the reflectors in their adjusted, horizontal positions but preferably each reflector
 10 is provided with an arm 25 projecting laterally therefrom and slotted as at 26 at its outer end to engage an adjusting screw 27 which extends through the member 22 and
 15 may also extend through the casing if desired. By rotating the screw 27, the reflector may be turned upon its pivots to project the light rays from the lamp 20 in any horizontal direction.

The mountings, and means of adjustment, of each of the reflectors is independent of the others, not only on one side of the casing G but also on the other side thereof. Any one or more of the reflectors may project
 25 its rays in one direction while one or more of the others project its rays in another direction. This is particularly useful as it enables the projection of the light rays into the most desirable and effective
 30 directions along the roads being projected. This is illustrated in Figs. 4 to 9, in which figures the casing is indicated by the reference numeral 28. 29 indicates railway tracks, or the like and 30 indicates the roadway being protected. The reflectors are adjusted
 35 in the different views so as to project the light rays in directions best suited to the direction of the roadway, as will be readily understood. In Fig. 9 an adjustment is illustrated in which the light rays
 40 from some of the reflectors at one side of the casing are directed in one direction, as at 31, and others of the reflectors at the same side of the casing are adjusted to direct
 45 the light rays therefrom in another direction, as 32. A fork in the road may thus be protected.

The several reflectors might also be mounted to swing in a vertical plane so that
 50 the rays therefrom may be projected upwardly or downwardly in case the roadway extend up-hill or down-hill as in Fig. 5, but such adjustment of the reflectors is unnecessary where suitable hoods 32 are employed,
 55 said hoods being movable in a vertical plane independently of any movement of the reflectors. These hoods are pivotally supported upon pivot members 33 carried at the ends of a yoke 34 which is attached
 60 by its central portion to the casing preferably directly above the reflector as at 35. The members 33 are arranged in a common horizontal plane directly at opposite sides of the reflectors.

5 The pivot members 33 are provided with

nuts or other clamping means whereby the hoods may be retained in any adjusted vertical position.

By this means the light rays from the reflectors may be directed upwardly or
 70 downwardly to a sufficient extent for all practical purposes.

The hoods also serve to shield the lenses 36 in the front ends of the reflectors so that the illumination thereof by the lamp 20 is
 75 rendered conspicuously visible even during the day time, as well as during the night. The hoods might be mounted directly upon the reflectors so as to have movement in horizontal plane with the reflectors if desired,
 80 but where the separate yoke 34 is employed, said yoke may be pivotally connected to the casing so that the hood may be adjusted in a horizontal plane to correspond with the adjustment of the reflector. The pivotal support
 85 for the yoke 34 may take any form, but for simplicity the means of attaching it to the casing at the point 35 may comprise only a single "air screw". This may be loosened, so as to permit adjustment, and may be tight-
 90 ened to retain the adjustment.

The casing G is of course to be arranged with its length approximately transverse to the length of the roadway and parallel to the line of the railway tracks or the like.
 95 The driver of the railway train or other vehicle has a view approximately only of one or the other of the ends of the casing. For his benefit, each end of the casing is formed with one or more openings 37, closed by suitable lenses if desired, and the adjacent end
 100 reflectors 19 are formed with openings 38 so that the illumination of the lamps 20 in said end reflectors may be readily observed through the openings 37. Suitable hoods 39
 105 similar to the hoods 32 may be provided for the openings 37 if desired.

As many changes could be made in this construction without departing from the scope of the following claims. It is intended
 110 that all matter contained in the above description or shown in the accompanying drawings shall be interpreted as illustrative only and not in a limiting sense.

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

1. In apparatus of the class described, in combination, a casing, said casing having each of its lateral sides provided with a plurality of apertures, a plurality of lamps
 120 mounted within said casing, there being a row of lamps opposite the apertures in each side of said casing, and means for independently adjusting said lamps so that the rays
 125 thereof may be directed in different directions.

2. In apparatus of the class described, the combination with a casing, each of the lateral sides of which is provided with a row
 130

of spaced apertures, a plurality of lamps within said casing, there being a lamp opposite each aperture of the lateral walls thereof, and independent means for adjusting each of said lamps so that the rays thereof may be directed in one or more directions and for holding the said lamp in its adjusted position.

3. In apparatus of the class described, the combination with a casing, one wall of which is provided with a row of spaced apertures, an illuminating device comprising a reflector carrying a lamp disposed opposite each of said apertures, independent means for adjusting each of said illuminating means so that the rays thereof may be directed in different directions, a plurality of hoods mounted upon the casing adjacent each aperture, and means for independently adjusting each of said hoods.

4. In apparatus of the class described, in combination, a casing, one wall of which is provided with a plurality of spaced apertures, a plurality of illuminating devices, each of which comprises a reflector, a lamp disposed within said casing, there being an illuminating device disposed opposite each aperture of said casing and extending partially through the same, means for inde-

pendently adjusting each of said illuminating devices for holding the same in its adjusted position, a plurality of hoods carried by the casing, there being a hood provided adjacent each of said apertures, and means for independently adjusting each of said hoods, whereby the boundaries of the dispersion of light from each of said illuminating devices may be limited to definite bounds.

5. In apparatus of the class described, the combination with a casing having a row of spaced apertures in one of its lateral walls, a plurality of illuminating devices located within said casing, there being an illuminating device disposed opposite each of said apertures and extending partially there-through, said casing being also provided with end apertures, and certain of said illuminating devices being adapted to emit light through the lateral as well as the end apertures of said casing.

In testimony whereof I affix my signature in the presence of two witnesses.

LEON S. BRACH.

Witnesses:

L. GERSFORD HANDY,
LOUIS BRANDWEIN.