

Aug. 29, 1950

H. N. CARVER

2,520,236

SIGNALING DEVICE

Filed Dec. 30, 1946

Fig. 1.

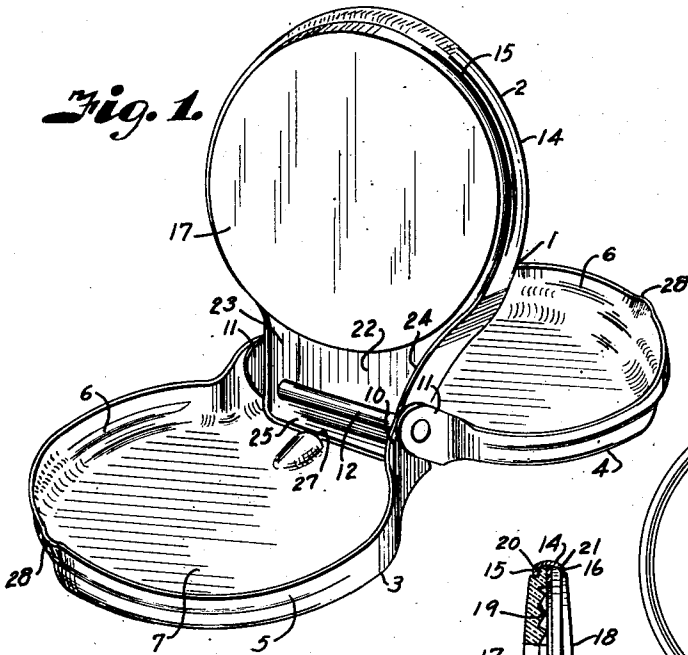


Fig. 2.

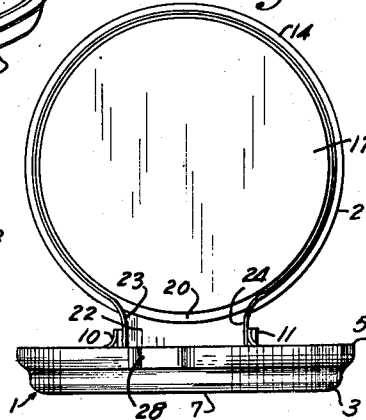


Fig. 3.

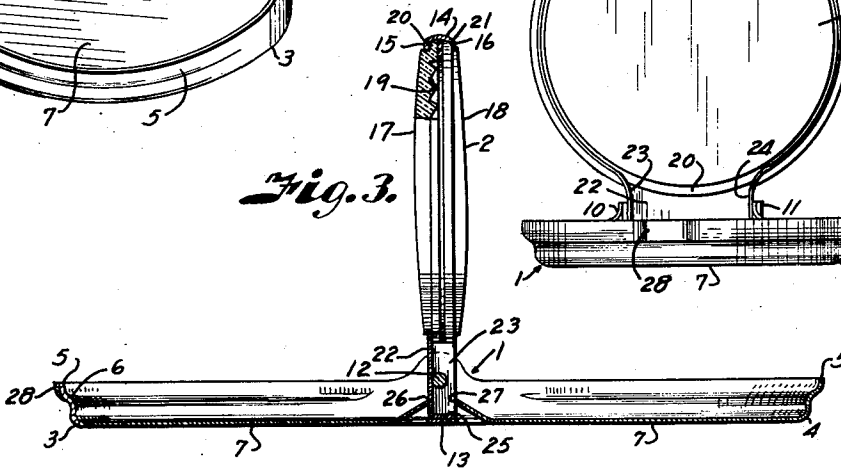


Fig. 5.

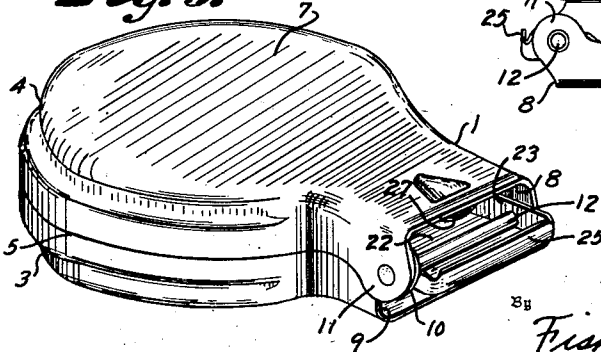
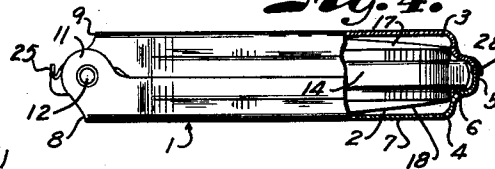


Fig. 4.



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UNITED STATES PATENT OFFICE

2,520,236

SIGNALING DEVICE

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Application December 30, 1946, Serial No. 719,253

2 Claims. (Cl. 248—33)

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This invention relates to signaling devices, and more particularly to a portable signal adapted to be conveniently placed on highways and similar thoroughfares for warning motorists and the like of obstructions on a highway.

Very often it is difficult for operators of vehicles to pull entirely off the highway when it becomes necessary to make repairs on the vehicle and particularly in the changing of tires, when the vehicle becomes stalled or otherwise when the vehicle is stationary, creating a hazard on the road, particularly to approaching motorists.

It is the principal object of the present invention to provide a signal of the character commonly known as a "road flare" particularly adaptable for passenger car use, which is capable of reflecting and/or refracting light rays generated by the lights of approaching vehicles back to approximately their source to warn the occupants of such vehicles of the presence of obstructions on the road.

Other objects of the present invention are to provide a collapsible light reflecting and/or refracting signal of simple construction, sturdy and durable, and capable of withstanding shocks and jars without damage to the signal; to provide a one-piece structure for holding the signal element; to provide a signal element having engagement with the plate element for holding the signal element in vertical position when the device is in position on a highway; to provide a signal which will not be easily tipped over; to provide a housing for the signal element which acts as a standard for holding the signal element in vertical position; to provide an arrangement of the parts of the reflector housing so as to interlock the same when closed; and to provide improved parts and arrangement of parts making up a signaling device according to the present invention.

In accomplishing these and other objects of the present invention, I have provided improved details of structure, the preferred form of which is illustrated in the accompanying drawings wherein:

Fig. 1 is a perspective view of a signaling device embodying the features of the present invention showing the device in open condition ready for use.

Fig. 2 is an end elevation of my device.

Fig. 3 is a cross sectional view through the device, particularly illustrating the mounting of the signal element.

Fig. 4 is a side view of my device shown in

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closed condition and parts broken away to better illustrate the invention.

Fig. 5 is a perspective view thereof showing the device in closed condition.

Referring more in detail to the drawings:

The invention generally includes a two-part cover or housing member 1 forming an enclosing base or standard for a light reflecting and/or refracting signal element 2, the housing member and signal element being interconnected in such a manner that the housing is adapted to enclose the signal for suitable storage, the housing when opened automatically raising the signal to operative position and forming a rigid standard for adequately supporting the signal to reflect and/or refract light rays in opposite directions back to approximately their respective sources of incidence.

The housing member is shown to preferably include substantially duplicate plates 3 and 4 cast, stamped or otherwise suitably formed in substantially circular shape, each having a substantially continuous peripheral laterally turned flange 5 provided with an offset portion forming an annular shoulder 6 on the inside of the plate; the plane surface 7 of the back of the plate members being of smaller diameter than the flanges 5 as best illustrated in Fig. 3 for housing the signal element. The flanged plates are provided with spaced recesses 8 and 9 extending into the body of each of the plates and each flange having upstanding ears or bosses 10 and 11 provided with mating openings adapted to receive a pin 12 for hingedly connecting the plates 3 and 4 together, the ends of the recesses of the respective plates being straight and adapted to contact each other when the device is in operative position as indicated at 13 (Fig. 3).

The signal element 2 preferably comprises a substantially circular-shaped band 14 having its respective edges flanged as indicated at 15 and 16 as best illustrated in Fig. 3 for receiving oppositely disposed plates 17 and 18 each preferably formed of colored rolled glass or similar substantially transparent material having suitable outer faces and preferably prismatic inner faces 19 for reflecting and/or refracting light rays impinging against the outer faces back approximate their sources of incidence. Lustrous backings (not shown) may, if desired, be provided on the prismatic backs of the signal plates 17 and 18 which not only serve the purpose of enhancing the reflecting properties of the signal plates but also prevent the collection of dust in the pockets formed at the junctures of the sides of the

prisms, thus rendering the signal effective over long periods of time.

The signal plates are provided with peripheral shoulders 20 and 21 adapted to be engaged by the flange portions 15 and 16, the signal plates being preferably of substantially circular or ring shape of a size adapting them for fitting within the flanges 5 of the housing plates.

The lower or base portion of the ring member 14 is flattened as indicated at 22 (Fig. 2) and provided with laterally turned side flanges 23 and 24 and a transverse flange 25 forming a mounting frame for the signal element. The side flanges 23 and 24 are provided with openings adapted to receive the pin 12 for hingedly mounting the signal element on the base plate as best illustrated in Fig. 1.

A slight distance from the mating edges of the plates 3 and 4 as indicated at 13 are shoulders 26 and 27 formed by striking out of the metal in the recesses of the base plates 2 and 3, the shoulders 26 being adapted to engage against the back of the flat surface 22 and the shoulder 27 engaging against the edge of the bottom flange 25 to hold the signal element in vertical position and to provide a rigid structure when the device is in operative condition.

The extreme outer edges of the flanges 5 of the housing plates 3 and 4 are provided with struck-out portions 28 to provide a thumb or finger hold to open the device when in closed position, the thumb holds being offset slightly from each other.

It will be obvious from the foregoing that I have provided an improved signaling device having few working parts which is simple, economical to manufacture and efficient in operation.

What I claim and desire to secure by Letters Patent is:

1. A road signal including a pair of mating housing members having recesses provided with bosses having mating openings therein, a frame adapted to carry a signal element, said frame including an arcuate member having edges adapted to engage said signal element, said arcuate member terminating at its ends in spaced substantially parallel flanges having less spacing than the diameter of the arcuate member, a web connecting the flanges, said flanges having openings mating with the openings in the bosses on said plate members, and a pin for hingedly connect-

ing the frame and housing members relative to each other, said housing members having mating shoulders intermediate said bosses adapted to engage said web portion of the frame when said frame is substantially perpendicular to the housing members, said shoulders clamping the frame therebetween when the housing members are swung to co-planar relationship for maintaining said frame in erected condition relative to said housing members.

2. A road signal including a signal element having oppositely directed reflecting faces, a peripheral flange on said signal element, a frame having an aperture adapted to receive said signal element, said frame engaging the peripheral flange on said signal element, an arcuate flange on the frame having clamping engagement with the peripheral flange for securing the signal element in the frame, said arcuate flange terminating at its ends in spaced substantially parallel ears having aligned openings therein, a web connecting said spaced ears, a pair of mating housing members having recesses provided with bosses having mating openings therein adapted to align with the opening in the frame ears, a pin extending through the openings for hingedly connecting the frame and housing members relative to each other, and means on the housing members adapted to engage the frame for retaining the signal elements spaced from said housing members, said housing members having mating shoulders intermediate said bosses and engageable with portions of the frame in response to movement of a housing member outwardly relative to the other housing member to position said frame substantially perpendicular to said housing member, said mating shoulders clamping the frame therebetween when the housing members are swung to co-planar relationship for maintaining said frame in erected condition relative to said mating members.

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The following references are of record in the file of this patent:

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