

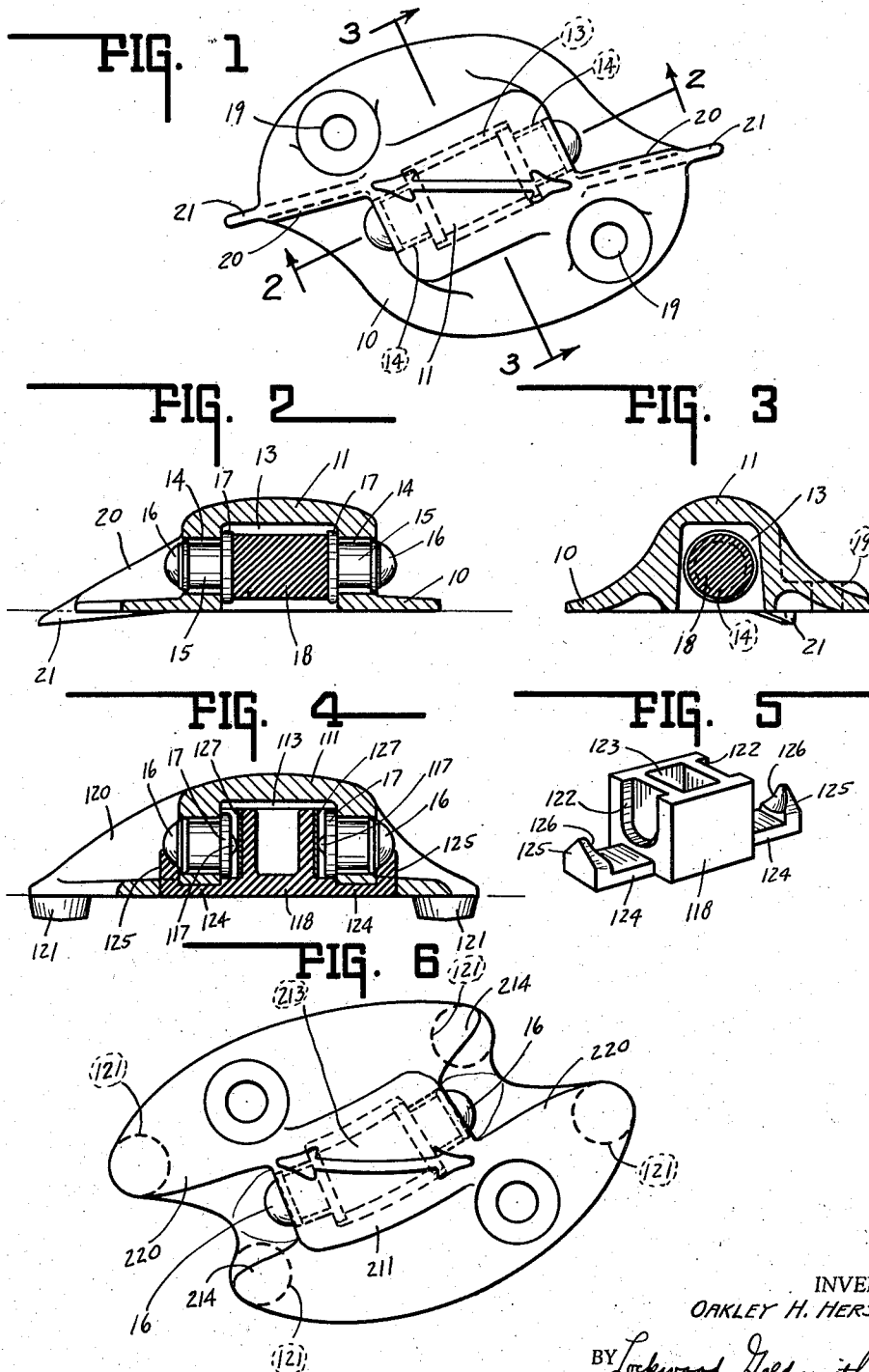
Oct. 5, 1937.

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2,094,652

MOISTUREPROOF STREET MARKER

Filed May 17, 1935



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UNITED STATES PATENT OFFICE

2,094,652

MOISTUREPROOF STREET MARKER

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Application May 17, 1935, Serial No. 21,925

5 Claims. (Cl. 88-79)

This invention relates to a street marker or traffic signal device, particularly that type of reflector mounting adapted for use on pavements to indicate the center or dividing line of the traffic lanes.

One feature of the invention resides in the water-proof, resilient backing mounted within the housing or casting for yieldingly maintaining the reflector buttons in position. In this connection, the principal problem inherent in such markers is due to the accumulation and packing of street dirt in and about the markers. If the reflector buttons are extended to protrude beyond the surface of the marker, as illustrated herein, it is necessary that they be free to reciprocate therein so that they may readily give in event of being struck by the traffic, and breakage thereby avoided. It has been common practice to back them up with a spring, but the accumulation of water and dirt in and about the spring soon renders it inoperative and prevents yielding movement of the button. The result thereof is that the traffic striking the button will crack and break it. If the button is placed sufficiently back into the housing to prevent it from being struck by the traffic, the concavity in which it is seated soon becomes clogged with mud so as to destroy its reflecting properties. Furthermore, since it is essential that the button be free to reciprocate, it must be loosely mounted within the casting so as not to lock therewith by reason of corrosion and the packing of dirt accumulated thereabout.

It is, therefore, one object of this invention to provide a resilient backing for the buttons which will serve as a yielding support and at the same time be unaffected by accumulation of dirt and water, the backing serving as a seal against such accumulation adjacent the button or between oppositely disposed buttons. This is accomplished by providing a rubber spacing or sealing block, as will be hereinafter more specifically set forth and described.

Another object of the invention is to provide a wiper associated with the lens of the button in such manner that it will resiliently press against a portion of the surface thereof. The arrangement of the button and mounting is such that as traffic passes over it and the tires of the vehicle engage the surface of the button it will be caused to slightly rotate. As it rotates, the wiper will remove dirt or dust accumulated on the lens and polish it so as to keep it clean at all times. This arrangement is very essential to preserve the reflecting efficiency of the marker.

Another feature of the invention resides in the provision of a projection or lug extending downwardly from the body and base of the casting to a point below the road surface and, accordingly, protecting the casting against destruction by road scrapers or snow plows. Thus, without such lip, the scraper or snow plow, striking the edge of the marker, will tear it from the pavement, whereas, by reason thereof, the scraper will be carried over the marker.

Another feature of the invention resides in the shape and positioning of the marker to best protect it against destruction by traffic, scrapers and the like, while, at the same time, providing a reflecting surface effective over a wide area in the direction best suited to the oncoming traffic.

Where the marker is employed on curves, its form is so arranged as to meet the required conditions by providing the bumper or intermediate resilient sealing member and housing therefor with a slight and corresponding curvature.

The full nature of the invention will be understood from the accompanying drawing and the following description and claims:

Fig. 1 is a plan view of the marker as applied to a straight roadway. Fig. 2 is a sectional view taken on the line 2-2 of Fig. 1. Fig. 3 is a section taken on the line 3-3 of Fig. 1. Fig. 4 is the same as Fig. 2 showing a modified form. Fig. 5 is a perspective view of the sealing bumper of Fig. 4. Fig. 6 is the same as Fig. 1 showing a modified form of the marker adapted for a curved roadway.

In the drawing, there is illustrated a road marker comprising a casting formed with a base 10 and a central housing 11 enclosing a chamber 13. Formed in the housing there are oppositely disposed cylindrical ports 14 in which the reflector buttons are freely and slidably mounted.

The reflector button comprises a cylindrical metal barrel 15 having a lens 16 on one end and a flanged base 17 on the other end. The housing 11 is provided with such a button at each end thereof, between which there is a cylindrical solid rubber bumper 18 mounted in the chamber 13 and extending longitudinally thereof. Said rubber bumper is slightly compressed between the flanged bases 17 of the buttons so as to exert an outward pressure thereagainst, thus holding them in operative position with their lenses protruding from the housing 11. Oppositely disposed to one side of the respective buttons there are the necessary bolt openings 19 in the base 10 for securing the marker to the pavement.

Extending outwardly from the upper portion 55

of the housing 11 and sloping downwardly to the extended portion of the base there is provided a rib or shoulder 20 which acts as a guard to protect the button against the ordinary passage of traffic over the marker. As will be noted in Fig. 1, this shoulder extends slightly at an angle to the line of traffic instead of being in the same direction thereof. This is for protective purposes so that traffic operating in a direct line will strike the marker to one side of the shoulder and be carried up over the housing 11 instead of striking the end of the housing and button just to one side of the shoulder, as would result if the shoulder extended in the direct line of the traffic.

Formed on the underside of the casting and extending substantially to the line of the shoulder 20 there is a lip 21 adapted to be sunk in a groove cut in the pavement so that the forward end thereof will be imbedded. This lip acts as a protection to the casting for preventing snow scrapers and the like from striking the edge of the base 10 and tearing the casting from the pavement. Thus, by reason of the lip 21 being imbedded, such scraper will first engage the lip, striking the inclined surface so that it will not engage the edge of the base.

In the modified form of Figs. 4 and 5, in place of the cylindrical rubber bumper 18, there is a box-like bumper 118 having recessed ends 122 and hollow on the inside, as indicated at 123. The chamber 113 and bumper 118 are formed rectangular in shape so that said bumper fits snugly and tightly within the chamber with the open side thereof adjacent the top. The entire chamber 113 is sealed and protected from water, dirt and the like, while the relatively thin wall separating the recess 122 from the open part 123 provides a resilient bumper for the buttons.

For the purpose of wiping the lens and thereby maintaining its surface free of dirt and mud to preserve its reflecting character the bumper 118 is provided with oppositely extending resilient rubber plates 124 having their ends upturned as indicated at 125 and provided with the concave wiping surfaces 126. The surfaces 126 are adapted to bear against the surfaces of the buttons under a resilient tension. Thus, the distance between the surfaces 126 is a little shorter than the distance between the surfaces of the buttons so that there is always a tension therebetween, as will be readily understood. As a vehicle passes over the marker, the rubber tires engage one side of the lens, pressing it down and causing a partial rotation. Such repeated partial rotations resulting from traffic passing over the marker will result in the wiping action above referred to. In order that the button may more freely rotate, a metal disc 127 may be inserted in the recess 122 and the rear end of the button may be provided with a thrust bearing projection 117. As distinguished from the lips 21, shown in Fig. 2, the base of the casting may be provided with a cleat 121 adapted to extend under the surface of the pavement and be anchored therein. With this arrangement, the shoulder 120 is caused to slope downwardly to the surface of the pavement so as to be directly engaged by any road scraper.

In the modified form illustrated in Fig. 6, the marker is shown designed for a curved line of traffic, wherein the chamber 213 is slightly curved as well as the housing 211. As a result thereof, the rubber bumper mounted in the chamber, naturally, takes a curved position, which it may readily do. With this form, the buttons 16, and shoulders 220 are disposed in planes extending at a

slight angle to each other so as to be accommodated to the curved traffic line.

As illustrated herein, oppositely disposed shoulders 214 may be formed on opposite sides of the buttons with respect to the shoulders 220 to provide a further guard therefor when the marker is used with other than straight line traffic.

As illustrated in the several modifications, either a straight arrow or a curved arrow, as in Fig. 6, may be cast upon the upper surface of the housing to indicate the line of traffic, for enabling the marker to be properly positioned and directed.

By reason of the above described construction, the difficulty resulting from packing of mud, dirt and the like within the housing or surrounding exterior of the buttons is eliminated so far as it affects the proper operation and resiliency of the buttons and their mountings. Further protection is given to the buttons by reason of the shoulders and protection is also given to the marker itself by reason of the lip 21 and cleats 121.

The invention claimed is:

1. A traffic marker comprising a housing provided with an opening at each end, an exposed reflector button slidably mounted in each of said openings, means on said buttons engageable with said housing to limit their outward movement and a compressible rubber member mounted within said housing between said buttons and yieldingly wedging said buttons in exposed position while permitting retraction thereof, said member being adapted to prevent accumulation and packing of matter intermediate said buttons for permitting their free retractive movement.

2. A traffic marker comprising a casting having a central barrel-like housing provided with an annular opening at each end thereof, and an intermediate chamber open at the bottom, cylindrically formed reflector buttons slidably mounted in said openings and provided with flanged base portions abutting the interior of said housing to limit the outward movement of said buttons while permitting retraction thereof, and a rubber sealing member wedged under compression between the enlarged base portions of said buttons to yieldingly permit inward retractive movement thereof while preventing obstruction thereto by the packing of dirt or the like within the chamber.

3. A traffic marker comprising a casting having a central barrel-like housing provided with an annular opening at each end thereof and an intermediate chamber open at the bottom, cylindrically-formed reflector buttons slidably mounted in said openings and provided with flanged base portions abutting the interior of said housing to limit the outward movement of said buttons while permitting retraction thereof, and a block of compressible expanding material wedged under compression between the enlarged base portions of said buttons to yieldingly permit inward retractive movement thereof while causing one of said buttons to yieldingly maintain the other button in its outward exposed position.

4. A traffic marker for a paved surface comprising a housing and a reflector button mounted therein, said button including a cylindrical support mounted in said housing for rotation about its longitudinal axis and a protruding lens carried thereby, said button extending from said housing in position to be engaged by the vehicle wheels in such manner as to cause rotation there-

of, and a wiping member carried by said housing and extending into wiping engagement with a portion of the front surface of said lens, whereby rotation of said lens will cause its surface to be wiped and cleaned thereby.

supported thereby in a position to be engaged and rotated by the vehicle wheels, a yielding member mounted within said housing for yieldingly maintaining said buttons in spaced relation and in their respective forward positions while permitting retraction thereof, and a wiper carried by said housing for engagement with a portion of the front surface of each of said lenses for wiping and cleaning the same upon rotation of the buttons.

5 5. A traffic marker for a paved surface comprising a barrel-like housing, a reflector button mounted in each end of said housing, each reflector button being provided with a cylindrical support mounted in said housing and rotatable about its longitudinal axis, said button also including a lens projecting from said housing and

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