June 3, 1941. L. A. PRESTON 2,244,117

TRAFFIC MONITOR

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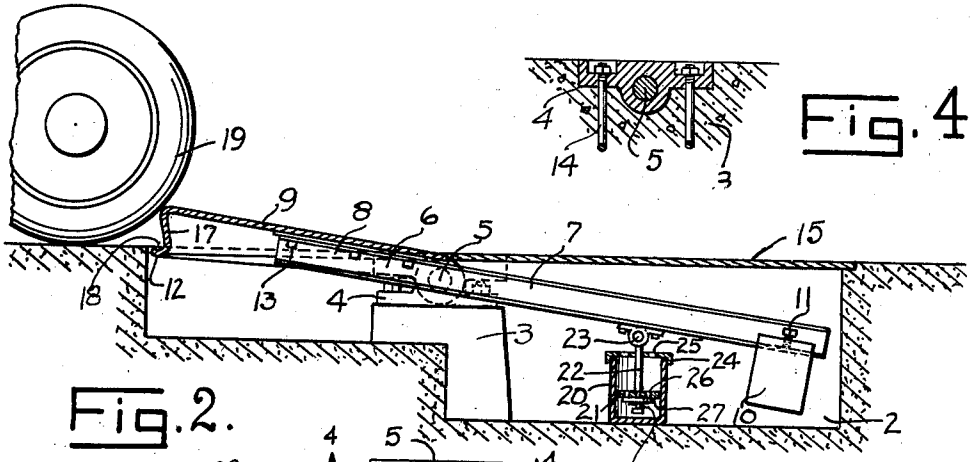


Fig. 2.

Fig. 4.

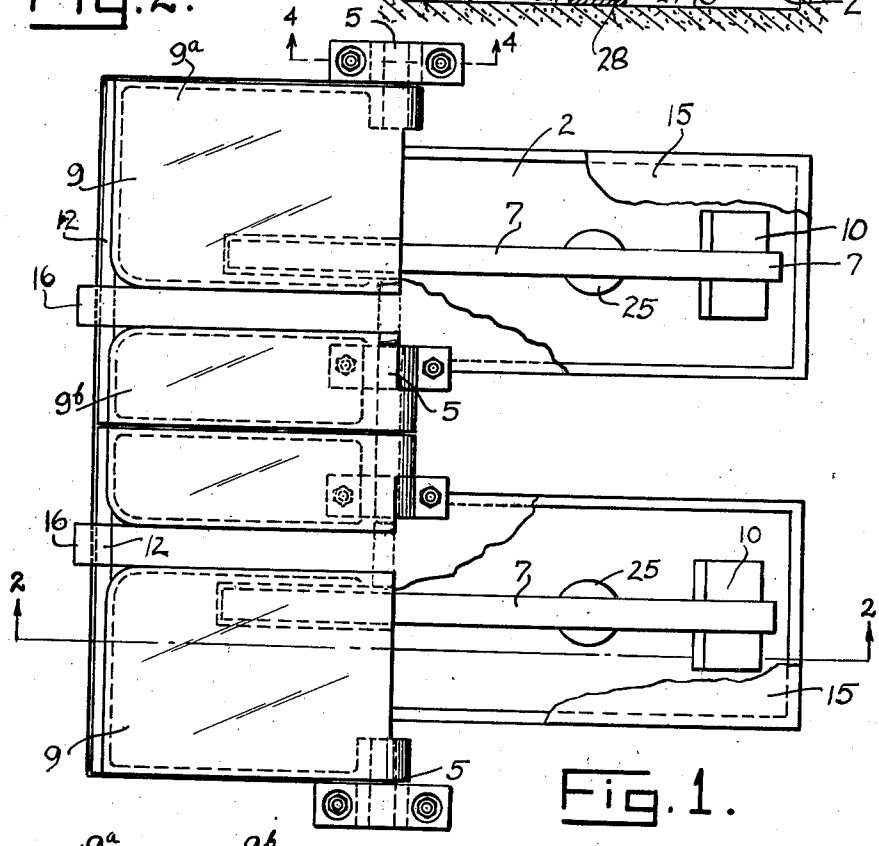


Fig. 1.

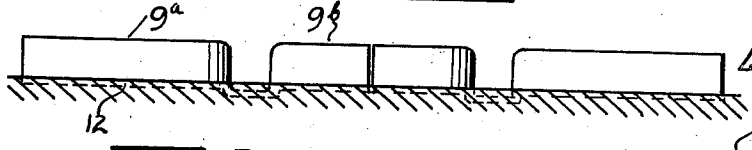


Fig. 3.

Inventor
Laurence A. Preston.
By Jesse R. Stone
&
Lester B. Clark
Attorneys

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TRAFFIC MONITOR

Laurence A. Preston, Houston, Tex.

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1 Claim. (Cl. 238—3)

My invention relates to traffic regulating devices to be employed on highways. It is intended for use at dangerous places along the highways such as street intersections, railroad crossings and the like.

It is an object of the invention to provide adjacent a dangerous place in the highway, where the vehicle is required to stop, an obstruction which will make it desirable for the car to come to a halt before entering the dangerous portion of the highway. I desire to provide an obstruction in the highway at the point where the car should stop which will be depressible by the wheels of the vehicle without a shock to the car if the wheels of the vehicle contact the obstruction slowly but which will cause a substantial jar to the vehicle and perhaps injury to the tires of the car where the car passes over the obstructions at a high speed. I further desire to provide in connection with such an obstruction means to cause the return thereof to normal operated position slowly so that the rear wheels of the car will have time to pass after the obstruction has been depressed.

It is a further object of the invention to provide an obstruction of this character with an open passage therethrough down the center of the highway to allow the passage of an emergency vehicle such as a fire truck or an ambulance.

My invention will be more clearly understood in connection with the drawing herewith wherein

Fig. 1 is a top plan view of an installation for the roadway embodying my invention, certain parts being broken away for greater clearness.

Fig. 2 is a longitudinal section on the plane 2—2 of Fig. 1.

Fig. 3 is a front elevational view of the device.

Fig. 4 is a sectional detail on the plane 4—4 of Fig. 2.

In carrying out my invention I contemplate installing a depressible obstruction which will make it necessary for the car to come to a stop before passing the same. I desire to place such construction adjacent highway intersections in particular where it is employed in connection with a stop sign. It is intended to make it undesirable for the driver of the vehicle to disregard the stop sign and cause the driver to come to a full stop as contact is made with the traffic regulating device. The device is also for use at railway crossings or other dangerous locations where the vehicle is required to come to a stop.

Referring particularly to Fig. 1, I have shown two units side by side which together cover the full width of the highway. Each unit is countersunk in a recess in the roadway. The forward side 1 of the recess is of shallower depth than the rearward portion 2 of the recess. Within this recess is mounted a support or base 3 for a bearing plate 4 within which is mounted a cross pin 5 which pivotally supports a bearing member 6 on the beam 7, which supports the operating mechanism of my device.

The beam 7 may be of any preferred construction. I have shown an I beam the forward end 8 of which supports the baffle plate 9, which forms an obstructing member in the roadway. The rearward end of the beam 7 has thereon an adjustable weight 10, which may be secured to the lower web of the beam 7 and is adjustable to different positions thereon and may be secured in fixed position by a set screw 11. This weight will be made sufficiently heavy to normally hold the baffle plate 9 in raised position.

With reference particularly to Fig. 1 it will be seen that the baffle plate 9 has two sections thereto which are connected together by a forward frame member 12, said frame member extending from one side of the recess in the roadway to a point midway of the road. On one side remote from the center of the roadway is a large section 9*a*. This section is connected directly with the forward end of the beam 7 by means of bolts or other equivalent means, as shown at 13. The inner portion 9*b* of the plate 9 is mounted at its forward end upon the cross member 12 and at its rearward end it is pivoted at 5 as previously described. The outer plate 9*a* is also pivoted at its outer end as shown at 5. With reference particularly to Fig. 4, it will be seen that the lower plate 4, which is attached to the supporting cement block 3, is held within the support by anchor irons 14.

The rearward section 2 of the recess which houses the walking beam 7 is housed on the upper side by a plate 15. This plate covers the recess 2 and has a forward extension 16 thereon which extends between the two sections of the plate 9 and is supported at its forward end upon the roadway, as will be seen from Fig. 1. The cross member 12 to which the two sections of the baffle plate 9 are secured is extended downwardly below the section 16 of the cover plate.

With reference to the baffle plate 9 it will be seen that its rearward end is secured to the beam and to the supporting hinge pin 5, as previously noted. At its forward end the plate is turned downwardly, as seen at 17 in Fig. 2, and its lower rim is curved forwardly at 18 where it is attached

to the cross member 12. Thus when the device is in operative position the forward end of the plate is inclined upwardly and will stand above the roadway the desired amount which ordinarily may be eight or ten inches, although it may be higher, if desired. The downwardly curved portion 17 of the plate serves to prevent material from being blown into the recess 1 in which the plate may operate.

The plate 9 may be depressed by the wheel of the vehicle indicated at 19 as the vehicle passes over the obstruction. When this is done I have means to prevent the plate from returning immediately to raised position after the passage of the wheel. This means comprises a dashpot including a cylinder 20 secured to the lower floor of the recess 2 and having therein a piston 21 mounted on the lower end of the rod 22, said rod 22 being pivotally connected at 23 to the lower side of the beam 7. The upper end of the cylinder is closed by a cap 24 having openings 25 therein to allow the passage of air. The piston has openings 26 therein which are closed on the lower side by a valve plate 27 held in closed position by a spring 28 on the lower end of the rod 22. Thus when the piston is raised in the cylinder due to the contact of the wheel 19 with the baffle plate 9 the air in the upper portion of the cylinder 20 may pass through the openings 26 into the lower portion of the cylinder but when the wheel has passed the weight 10 will not quickly depress the piston in the cylinder due to the fact that the air from the lower side of the piston can pass upwardly around the edges of the piston but slowly and the return to normal position will thus be delayed sufficiently to allow the passage of the rear wheel of the vehicle.

In the operation of this device the vehicles approaching the intersection will be warned, of course, by a stop sign. My device is intended to assure that the driver comes to a stop. If the vehicle comes to a stop with the forward wheel in contact with the baffle plate 9 and then starts up slowly the baffle will be depressed without any jar or injury to the wheel of the vehicle. The return of the plate to obstructing position after the passage of the front wheel will be so delayed that the rear wheel will pass without any material jar. If the vehicle does not come to a stop or go over the obstruction slowly a material jar will be experienced and the contact of the upper end of the obstructing baffle plate 9 will engage the tire in such manner that injury to the tire may result. Hence it becomes necessary for the vehicle to slow down either to a stop or to a very slow speed, thus materially lessening the danger to traffic at the crossing or intersection.

The passage along the extension 16 is to allow the passage of a fire truck or ambulance down the middle of the highway in case of emergency. If the vehicle is driven directly down the center of the highway it will be possible for the wheels to pass along the cover plate extension 16 without encountering any obstruction whatever. It will be obvious, however, that these depressions between the two sections of the baffle plate may be omitted where provision for emergency traffic is not necessary, such as in the open country or off of the through arteries of traffic.

It will be seen that if the vehicle is going in the opposite direction on the proper side of the highway driving over one of these obstructions will occasion but little inconvenience and if desired the obstruction may be placed only on the righthand half of the roadway in such manner that traffic in the opposite direction will be unimpeded.

It will be obvious that this device may be made to operate in conjunction with stop lights and in such case the baffle plate may be depressed by electrical means such as the solenoid or electromagnet while the green light is on but released to assume its normal obstructing position while the red light is on. This arrangement, however, forms no part of the present invention.

What is claimed is:

In a traffic monitor, a highway obstructing member, means normally holding said member in raised position above the highway level to obstruct traffic in one direction, and channels formed in said obstructing member to allow the wheels of a vehicle to pass therethrough in emergency traffic without obstruction.

LAURENCE A. PRESTON.