Feb. 27, 1934. A. F. DEAN 1,949,295

TRAFFIC SIGNAL

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Fig. 1.

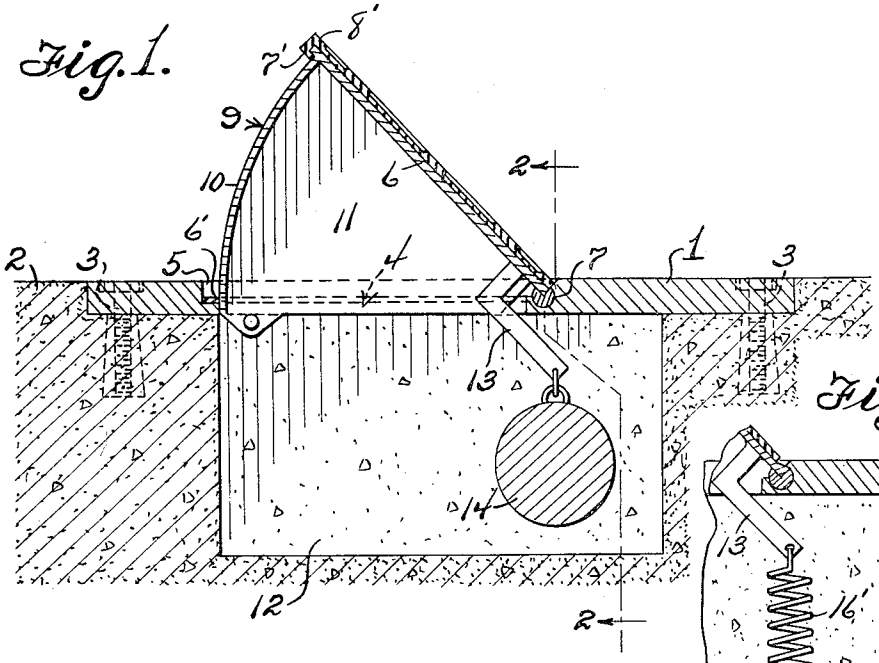


Fig. 13.

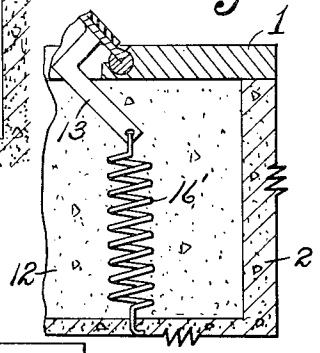


Fig. 2.

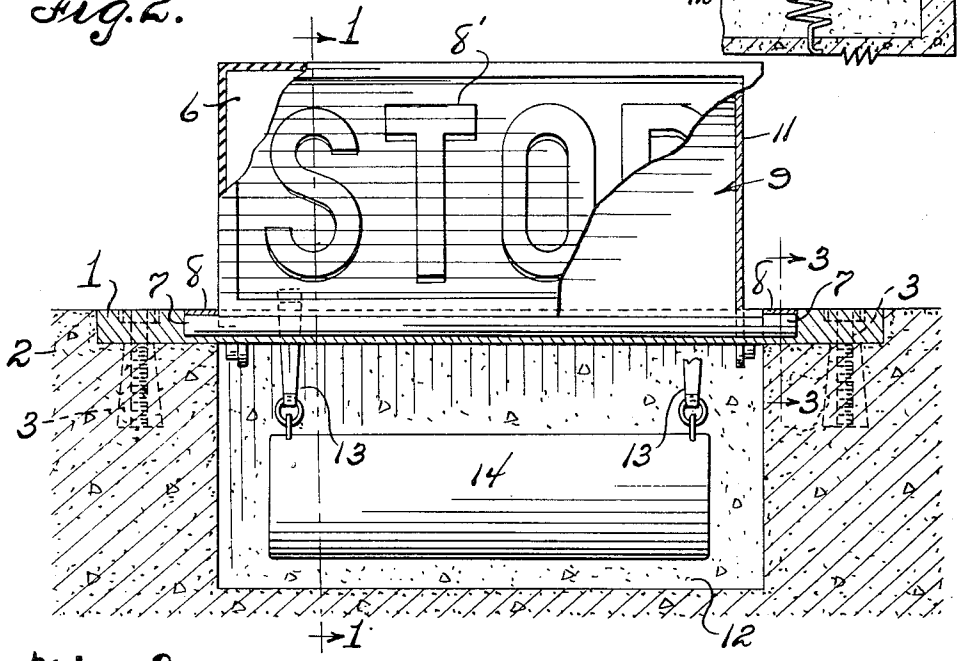
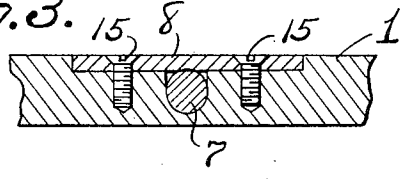


Fig. 3.



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Fig. 4.

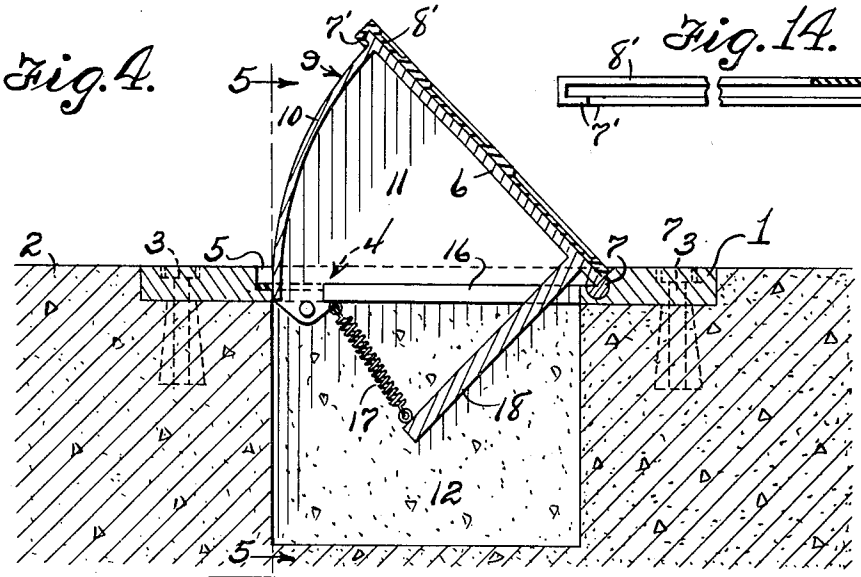


Fig. 14.

Fig. 5.

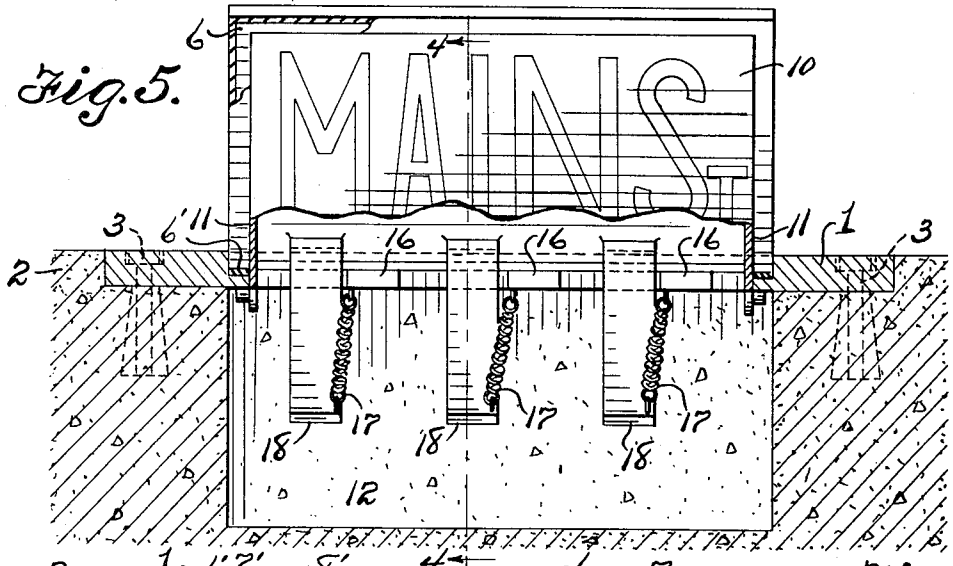
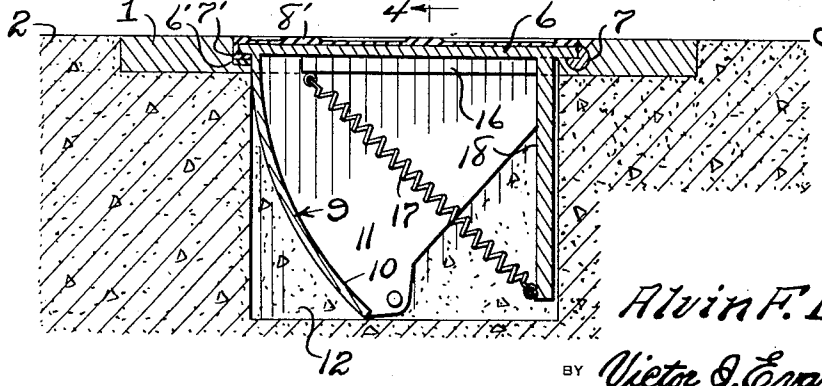


Fig. 6.



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Fig. 7.

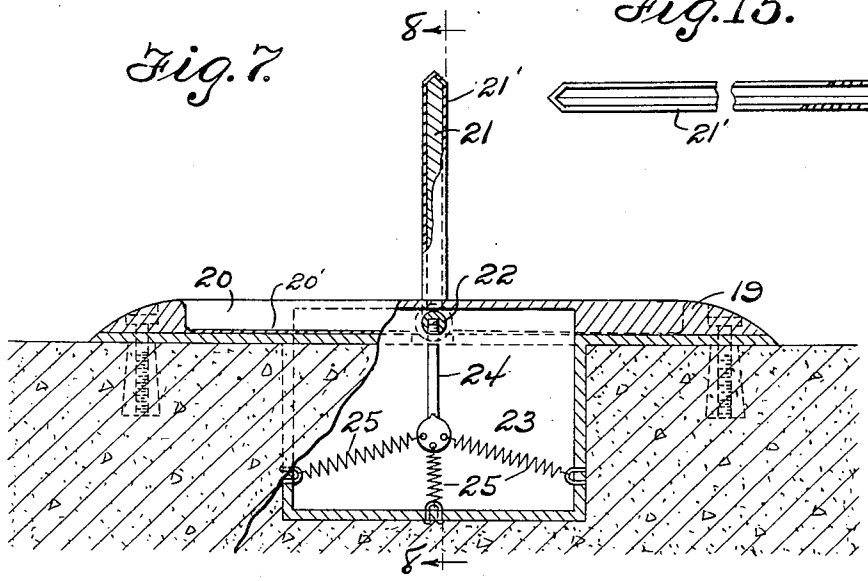


Fig. 15.

Fig. 8.

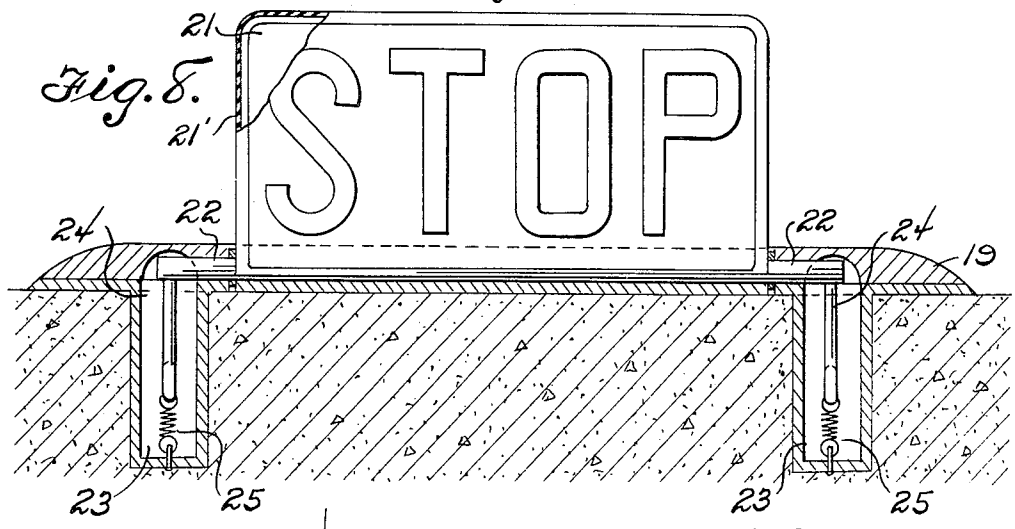
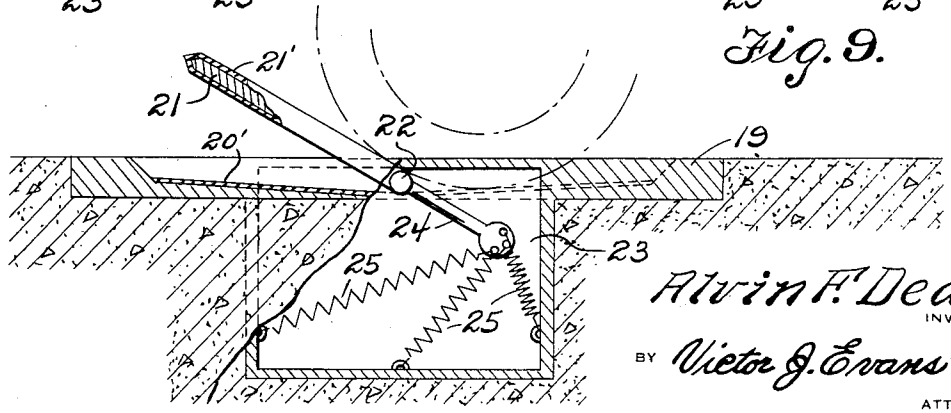


Fig. 9.



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Fig. 10.

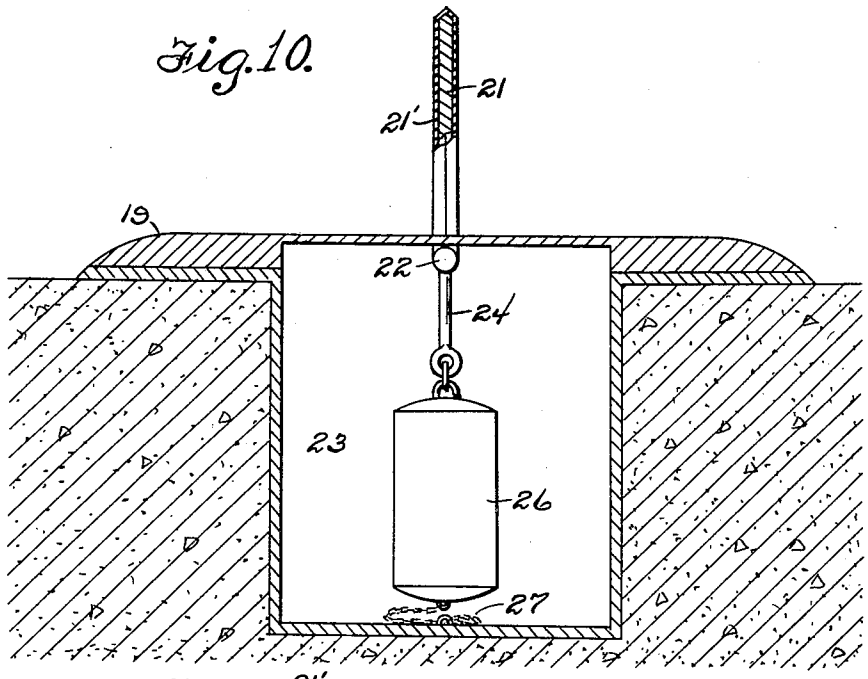


Fig. 11.

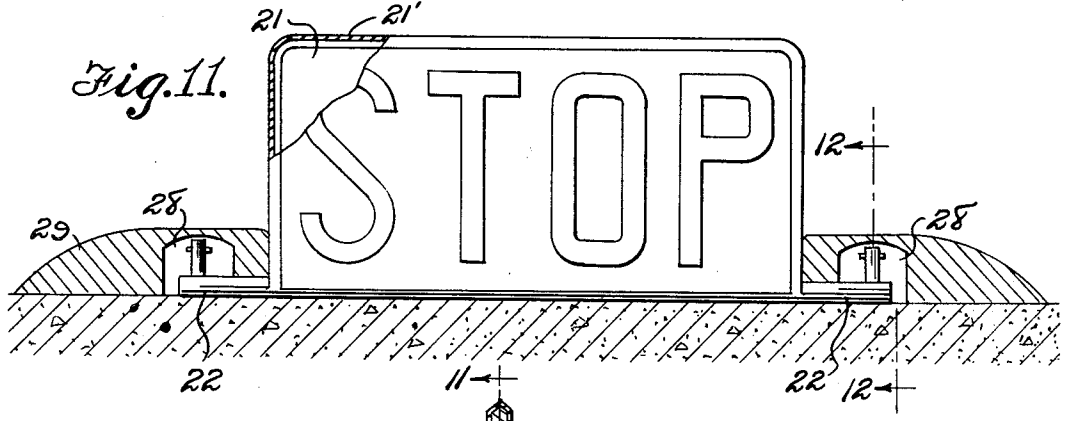
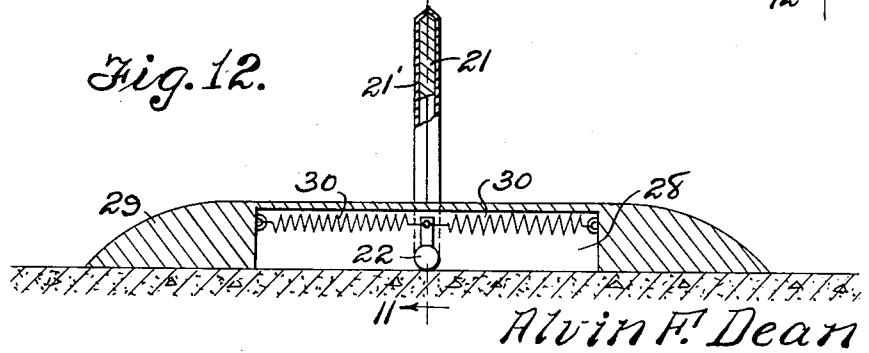


Fig. 12.



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Patented Feb. 27, 1934 1,949,295

UNITED STATES PATENT OFFICE

1,949,295

TRAFFIC SIGNAL

Alvin F. Dean, New Orleans, La.

Application December 27, 1932
Serial No. 649,027

4 Claims. (Cl. 40—125)

This invention relates to signals of the character especially adapted for controlling vehicle traffic at road or street intersections or wherever a traffic rule is to be displayed and has for the primary object, the provision of a device mounted in a road or street directly in the line of vision of approaching traffic so that the indicia thereon may be easily and clearly observed and is so constructed as to swing downwardly when engaged by the wheels of passing vehicles and permit said vehicles to proceed without creating obstructions thereto.

Another object of this invention is the provision of a mounting for the signal which may be easily and quickly installed by unskilled labor and having means to maintain the signal in an upright position until forced downwardly by a vehicle and is so constructed as to assure proper operation of the signal under all conditions free of inoperativeness and permitting maintenance cost to be reduced to a minimum.

With these and other objects in view, this invention consists in certain novel features of construction, combination and arrangement of parts to be hereinafter more fully described and claimed.

For a complete understanding of my invention, reference is to be had to the following description and accompanying drawings, in which

Figure 1 is a sectional view illustrating a traffic signal constructed in accordance with my invention and taken on the line 1—1 of Figure 2.

Figure 2 is a sectional view taken on the line 2—2 of Figure 1.

Figure 3 is a fragmentary sectional view taken on the line 3—3 of Figure 2.

Figure 4 is a sectional view similar to Figure 1 showing a slight modification of my invention wherein springs are employed for maintaining the signal in operative position and taken on the line 4—4 of Figure 5.

Figure 5 is a sectional view taken on the line 5—5 of Figure 4.

Figure 6 is a sectional view illustrating the signal assuming a signalling position parallel with the surface of a roadway as when engaged by a wheel of a vehicle.

Figure 7 is a sectional view similar to Figure 4 showing a modified form of spring arrangement for maintaining the signal in operative position.

Figure 8 is a sectional view taken on the line 8—8 of Figure 7.

Figure 9 is a sectional view showing a modified form of my invention, wherein the signal is engaged by the wheel of a vehicle and forced downwardly to permit the wheel of the vehicle to pass freely thereover.

Figure 10 is a sectional view showing a modified form of means for maintaining the signal in signalling position consisting of a depending weight.

Figure 11 is a sectional view showing a modified form of mounting for the signal and taken on the line 11—11 of Figure 12.

Figure 12 is a sectional view taken on the line 12—12 of Figure 11.

Figure 13 is a fragmentary sectional view illustrating a tension element for normally supporting the signal element in signalling position and may be employed in lieu of the weight shown in Figure 1.

Figure 14 is a detail sectional view illustrating a cushioning element for the signal plate.

Figure 15 is a similar view showing a slight modified form of cushioning element.

Referring in detail to the drawings, the numeral 1 indicates a supporting plate secured within a recess formed in a road bed 2 by anchoring means 3 preferably in the form of expansion bolts, the heads of which seat within recesses in the plate 1 and have their stems suitably anchored within the roadway. The top face of the plate 1 is flush with the surface of the roadway and has an opening 4 surrounded by a recess 5. A metallic plate 6 has one edge hinged to the plate 1 within one end of the opening 4 by pintles 7 fitting in suitable sockets or bearings 8. A covering 8' of rubber or other cushioning material is suitably secured to the plate 6. Impressed or otherwise formed on the covering are signal characters and the covering is preferably flanged, as shown at 7', to fit over the edge of the plate 6 and the latter has formed integrally therewith a shield 9 consisting of a curved wall 10 and segmental shaped side walls 11 movable through the opening 4 into a chamber 12 formed in the roadway directly under the plate 1 and the opening of said plate. Substantially L-shaped arms 13 are carried by the hinged end of the plate 6 and operate within the chamber and have pivoted thereto an elongated weight 14 adapted to normally maintain the plate 6 in an upwardly inclined position so that the signal characters may be easily read. When the plate is engaged by a vehicle wheel the same may move downwardly into the recess 5 and permit the vehicle to pass over the device unobstructed. The covering 8' when striking the plate 1 will have a sound deadening effect, also a cushioning strip 6' may be located in the recess 5 to further

aid in deadening the sound when the parts strike together under the weight of the vehicle.

It will be seen from Figure 13, that spring 16' may be connected to the arms 13 in lieu of the weight 14 for supporting the plate 6 in signalling position. The bearings 8 for the pintles of the plate 6 are preferably secured to the plate 1 by screws or like fasteners 15 whereby the plate 6 may be conveniently removed without detaching the plate 1 from the roadbed.

Referring to my modified form of invention, as shown in Figures 4 to 6, inclusive, the plate 1 is provided with spaced arms 16 located within the opening 4 and have attached thereto coil springs 17 which are in turn attached to arms 18 carried by the hinged end of the plate 6. The springs 17 act to maintain the plate 6 in signalling position or at an angle of approximately 45° with respect to the plate 1. The curved wall 10 of the shield 9 in either of the described forms of my invention may have applied to its outer face the name of a street.

Referring to my modified form of invention, as shown in Figures 7 and 8, inclusive, a supporting plate 19 is anchored to the surface of the roadway, as shown in Figure 7, and is provided with a recess 20 in which is pivotally mounted a plate 21 of substantially rectangular shape provided with a cushioned covering 21' having traffic signal characters upon one face and the opposite face provided with characters setting forth the name of the street. The plate 21 is provided with pintles 22 journaled in the plate 19 and extend into chambers 23 formed integrally with the plate 19 and embedded in the roadway. Arms 24 are secured to the pintles and each has attached thereto a series of coiled springs 25 secured to walls of the respective chamber. The normal action of the springs 25 is to maintain the plate 21 in a vertical position, as shown in Figure 7, and when said plate is engaged by the wheel of a vehicle, said springs are adapted to give and permit the plate to move downwardly into the recess 20 and thereby permit the vehicle wheel to pass over the device and when the plate is disengaged by the vehicle wheel it automatically assumes a vertical position by the action of the springs 25. The plate 19 instead of being positioned upon the surface of the roadbed as shown in Figures 7 and 8, may be embedded within the roadbed, as shown in Figure 9.

A sound deadening cushion 20' may be located in the recess 20 to aid in quieting the action of the device when in operation.

Referring to my modified form of invention as shown in Figure 10, the springs 25 are omitted and weights 26 are attached to the arms 24 for the purpose of normally maintaining the plate 21 in a vertical position. Flexible elements 27 are connected to the weights 26 and to the bottom wall of the chambers 23 and have sufficient slack to permit the weights to move upwardly and downwardly in accordance with the movements of the plate.

Referring to my modified form of invention as shown in Figures 11 and 12, the plate 21 has the pintles 22 thereof extending into horizontally arranged chambers 28 formed in a plate 29 suitably secured to the surface of the roadbed.

Oppositely extending coiled springs 30 are attached to arms on the pintles 22 and to the end walls of the chambers 28 to normally maintain the plate 21 vertically and to permit the latter to move into a horizontal position when engaged by the wheel of a vehicle.

It is desirable that the plate in all forms of my invention as well as the plates 1, 19 and 29 be constructed of a non-destructible metallic material and the various characters of the signals may be colored as desired to meet with traffic rules or requirements and also the characters may be in the form of glass prisms so as to reflect the light rays from headlights of approaching vehicles, thereby rendering the characters readily readable at night time.

While I have shown and described the preferred embodiment of my invention, it will be understood that minor changes in construction, combination and arrangement of parts may be made without departing from the spirit and scope of my invention, as claimed.

Having thus described my invention, what I claim is:

1. A signal comprising an attaching plate mounted in a roadway and provided with an opening surrounded by a recess, a signal plate hinged to the attaching plate, arms carried by the signal plate, spring means connected to the arms to elevate the signal plate into signaling position, and a hood carried by the signal plate and including a curved wall and segmental shaped side walls and movable through the opening when said signal plate moves into the recess when engaged by a wheel of a vehicle.

2. A signal comprising a supporting plate having an opening disposed over a pit in a roadway, a signal plate hinged to the supporting plate, arms on the supporting plate, arms on the signal plate, and spring means between the arms.

3. A signal comprising a supporting plate having an opening disposed over a pit in a roadway, a plate hinged to the supporting plate, means for normally maintaining the second-named plate in signalling position, a cushioned cover carried by and overlying the second-named plate and having signal characters thereon.

4. A signal comprising a supporting plate having an opening disposed over a pit in a roadway and provided with a recess about said opening, a cushioning element in said recess, a signal plate hinged to the supporting plate, means for normally maintaining the signal plate in signalling position, and a cushioned cover mounted on the signal plate and having signal characters.

ALVIN F. DEAN.