Jan. 19, 1943. H. J. LOWE 2,308,525

TRAFFIC CONTROL SIGN

Filed Aug. 27, 1941 2 Sheets-Sheet 1

FIG. 1.

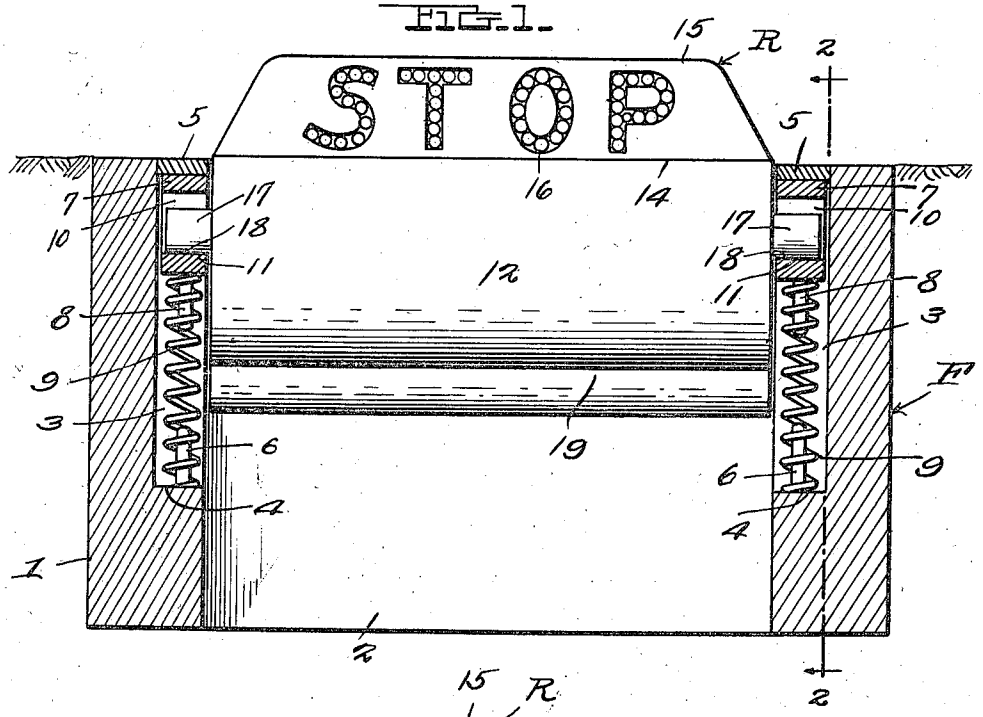
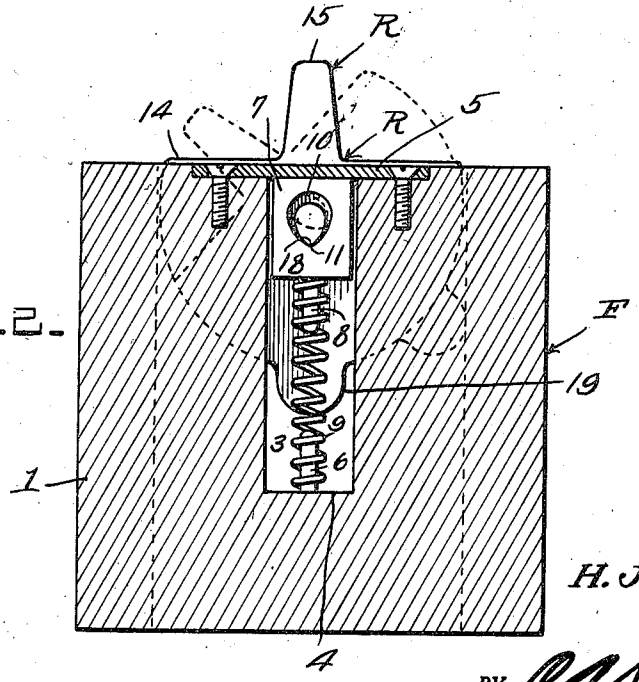


FIG. 2.



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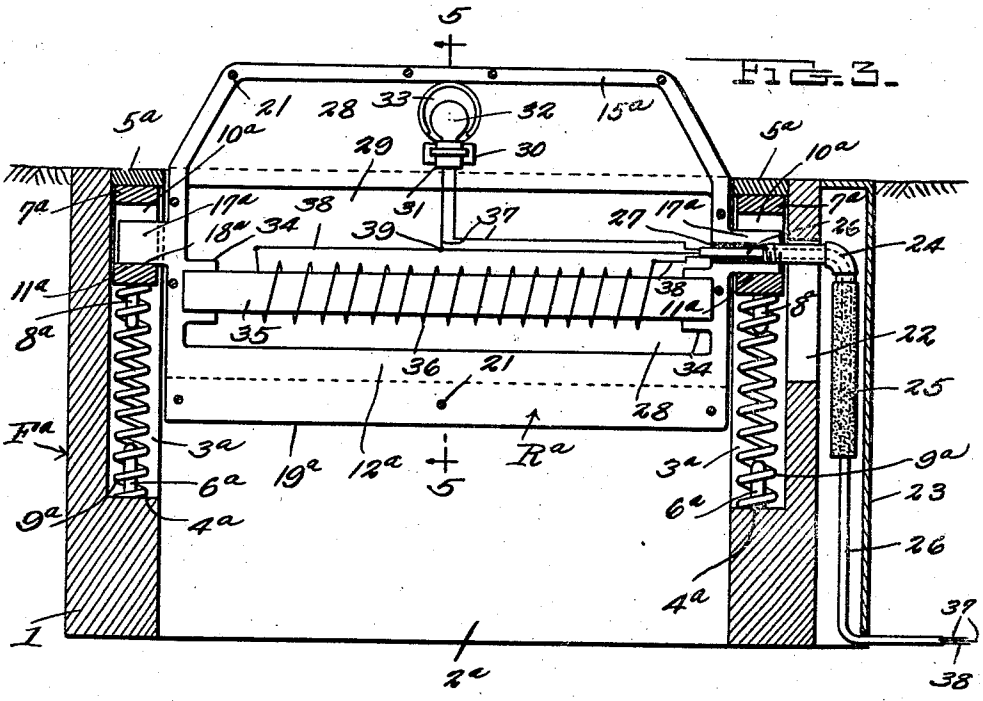


FIG. 3.

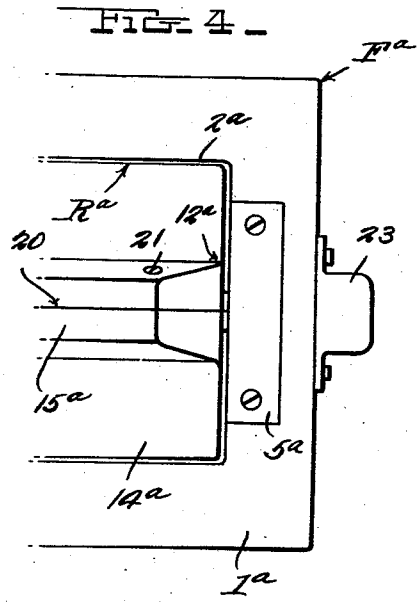


FIG. 4.

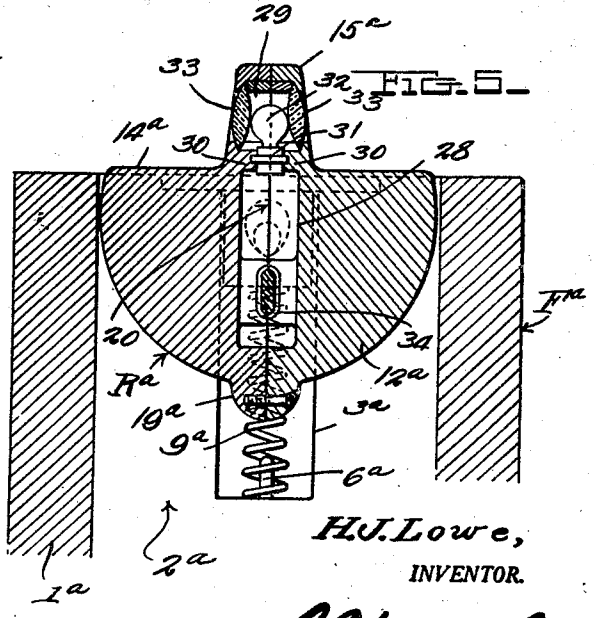


FIG. 5.

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UNITED STATES PATENT OFFICE

2,308,525

TRAFFIC CONTROL SIGN

Herbert J. Lowe, Galesburg, Ill.

Application August 27, 1941, Serial No. 408,543

7 Claims. (Cl. 40—125)

The device forming the subject matter of this application is a signal for the drivers of vehicles, and is adapted to be placed in a roadway, the construction being such that if a wheel of the vehicle encounters the signal, the signal will turn over, thereby avoiding hindrance to the advance of the vehicle.

The invention aims to improve the construction of the signal and to improve the means for mounting it, the signal being so mounted that it will first swing transversely and then move downwardly, the signal rising after a vehicle wheel is clear of it.

The invention aims, further, to provide a signal which will be so constructed that its presence will be indicated after nightfall, means being provided whereby the signal may be heated, at the will of an operator, to keep it free from snow, ice and moisture.

It is within the province of the disclosure to improve generally and to enhance the utility of devices of that type to which the present invention appertains.

With the above and other objects in view, which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed, may be made within the scope of what is claimed, without departing from the spirit of the invention.

In the accompanying drawings:

Fig. 1 shows, in vertical section, a device constructed in accordance with the invention, parts remaining in elevation;

Fig. 2 is a vertical section on the line 2—2 of Fig. 1;

Fig. 3 is a vertical section showing a modification;

Fig. 4 is a top plan of the device depicted in Fig. 3, Fig. 4 being applicable, to some extent, to the form shown in Figs. 1 and 2;

Fig. 5 is a transverse section on the line 5—5 of Fig. 3.

Referring to Figs. 1 and 2, there is shown a foundation F, comprising a block-like support 1, the upper surface of which is flush with the upper surface of a roadway. Intermediate its ends, the support 1 has a vertical chamber 2, of approximately rectangular form, the outline of the chamber being readily discernible when Fig. 1 is compared with Figs. 4 and 5, although Figs. 4 and 5 relate to a modification.

The support 1 is supplied in its ends with vertical recesses 3. The recesses 3 open inwardly into the chamber 2 and extend upwardly through the upper surface of the support 1. The recesses 3 terminate in spaced relation to the lower surface of the support 1, to define lower shoulders 4. Upper shoulders are formed by removable closure plates 5, secured to the support 1 and flush with the upper surface of the support. The lower shoulders 4 carry spring-retainers 6, which may be in the form of upstanding pins.

Vertically slidable bearings 7 are disposed in the guide recesses 3 and have depending spring-retainers 8. The bearings 7 abut against the upper shoulders 5, under the impulse of compression springs 9, located in the recesses 3 and abutting against the bearings and the lower shoulders 4, the springs being kept in place by the retainers 6 and 8. The bearings 7 are provided with seed shaped openings 10, defining V-shaped seats 11.

The letter R designates a solid rocker, including a body 12, shaped to fit closely but easily in the chamber 2. The body 12 of the rocker R is approximately semi-cylindrical in cross section, and has a flat upper surface 14, disposed approximately flush with the flat upper surface of the support 1. Along a median longitudinal plane, the body 12 of the rocker R is furnished with an upstanding fin or sign board 15, carrying a warning mark of any desired sort, such as the word "Stop," formed by buttons 16, adapted to be lighted by the lamps of an approaching vehicle, or otherwise.

The body 12 of the rocker R is provided with stub shafts 17, received in the openings 10 of the bearings 7. The stub shafts 17 are seed-shaped in cross section, to define knife edges 18 cooperating with the seats 11 of the bearings 7. The openings 10 of the bearings 7 are appreciably larger than the cross section of the stub shafts 17, to the end that the member R may have rocking movement with respect to the bearings 7. Along its median, longitudinal plane, the body 12 of the rotor R is equipped with a depending stop rib 19 which, engaging the side walls of the chamber 2 in the support 1, limits the rocking movement of the part R.

In practical operation, the rocker R swings from the solid line position of Fig. 2 to the dotted line position therein, when the wheel of a vehicle encounters the fin 15. The rocking movement of the rotor R is accomplished the more readily because of the provision of the V-shaped seats 11 and the knife edges 18. The vehicle wheel first swings the rocker R from the solid position

of Fig. 2 to the dotted position thereof, without appreciable shock to the vehicle, and without damaging shock to the rocker. The rocking movement of the member R is limited by engagement between the rocker-rib 19 and the side wall of the chamber 2, the rib being of rounded cross section, so as to travel downwardly without difficulty on the said wall of the chamber. The rocker R moves downwardly until it affords no appreciable resistance to the passage of a vehicle wheel, the springs 9 being compressed. After the vehicle wheel has cleared the rocker R, the rocker swings to the solid line position of Fig. 2, because the center of mass of the rocker is low enough, with respect to the stub shafts 17, to accomplish that end. In this connection, it is noted that the rib 19 furnishes additional weight, promoting the erection of the fin 15. The springs 9 restore the rotor into solid line, elevated position of Fig. 2.

In Figs. 3, 4 and 5, parts hereinbefore described have been designated by reference characters already used, with the suffix *a*.

In the form under discussion, the rocker, for convenience in assembly, is composed of laterally separable parts 20, held together by securing elements 21. The support 1 is provided at one end with a vertically elongated slot 22. A vertically elongated housing 23 is removably secured to the said end of the support 1. The slot 22 opens outwardly into the housing 23, and inwardly into the corresponding recess 3*a*.

The stub shaft 17*a* which is adjacent to the slot 22 is tubular, and in the outer end of the aforesaid stub shaft is fixed the horizontal arm of an angular conduit 24, the horizontal arm of the conduit projecting through the slot 22 of the support 1*a*, into the housing 23. The vertical, depending arm of the conduit 24 is disposed in the housing 23 and carries a tubular, flexible sleeve 25, made of rubber or the like. An electrical cable 26 extends into the lower part of the housing 23, upwardly through the sleeve 25, and inwardly, through the horizontal arm of the conduit, and through the adjacent, tubular stub shaft 17*a*, the cable being rendered watertight, by means of cement 27, disposed in the tubular stub shaft 17*a*. The purpose of the flexible and resilient sleeve 25 is to prevent the cable 26 from being folded sharply across the lower end of the depending arm of the conduit 24, when rocking movement is imparted to the rocker, of which the body 12*a* constitutes the chief part.

In the body 12*a* of the rocker arm there is formed a lower compartment 28, an upper compartment 29 being formed in the fin 15*a*, the compartments being in communication, as Fig. 3 shows. The constituent parts of the fin 15*a* carry inwardly projecting jaws 30, which cooperate to grip a socket 31, wherein is held an electrical signal 32, such as a lamp or flasher, the signal being disposed in the upper compartment 29. Lenses or the like, indicated by the reference character 33, are held in the fin 15*a*, on opposite sides of the signal 32.

At its ends, the body 12*a* of the rocker has internal sockets 34, receiving the ends of the core 35 of an electrical heater, disposed in the lower compartment 28, the winding of the heater being marked by the numeral 36. The cable 26 embodies a circuit 37, in which the signal 32 is interposed. The cable 26 includes a conductor 38, joined at 39 to one side of the circuit 37. The winding 36 of the electrical heater is interposed in the conductor 38. Remote switches under the control of an operator may be provided, for opening and closing the circuit 37 of the signal 32, and for opening and closing the circuit of the heater 35—36, so that the heater and the signal need not be in operation at the same time, unless conditions call for such an operation. The structure under immediate consideration is not shown in the drawings, or need it be shown, because it is a common and well known electrician's expedient.

Apart from the functioning of the signal 32, and the heating of the device by the means shown at 35—36, the operation of the device depicted in Figs. 3, 4 and 5 does not differ from the operation of the structure shown in Figs. 1 and 2, the points of similarity and dis-similarity being obvious when the drawings are noted, in connection with the foregoing description.

Having thus described the invention, what is claimed is:

1. In a pavement signal, a hollow foundation, a rocker located partly in the foundation and comprising a member exposed for vehicle impact, mechanism for mounting the rocker in the foundation, for vertical movement in a fixed vertical plane, and for rocking movement on an axis in that plane, said mechanism comprising shafts at the ends of the rocker, bearings receiving the shafts and guided in the foundation for movement in said plane, and spring means for elevating the bearings, resilient means for raising the rocker, and means for restoring the rocker from a rocked position to one in which said member is disposed in a substantially vertical, upstanding position.

2. In a pavement signal, a hollow foundation, a rocker located partly in the foundation and comprising a member exposed for vehicle impact, mechanism for mounting the rocker in the foundation, for vertical movement in a fixed vertical plane, and for rocking movement on an axis in that plane, resilient means for raising the rocker, and means for restoring the rocker from a rocked position to one in which said member is disposed in a substantially vertical, upstanding position, said mechanism comprising guiding recesses in the foundation and opening through the upper surface of the foundation, removable closures secured to the foundation and forming upper shoulders, the lower ends of the recesses forming lower shoulders, bearings slidable in the recesses, compression springs interposed between the bearings and the lower shoulders and raising the bearings into engagement with the upper shoulders, and shafts mounted on the ends of the rocker and received in the bearings, for rocking movement.

3. In a pavement signal, a hollow foundation, a rocker located partly in the foundation and comprising a member exposed for vehicle impact, mechanism for mounting the rocker in the foundation, for vertical movement in a fixed vertical plane, and for rocking movement on an axis in that plane, resilient means for raising the rocker, and means for restoring the rocker from a rocked position to one in which said member is disposed in a substantially vertical, upstanding position, said mechanism comprising shafts at the ends of the rocker and having substantially V-shaped lower edges, bearings guided in the foundation for movement in said plane, the bearings having openings of appreciably larger size than the cross section of the shafts and defining V-shaped seats wherewith the lower edges of the shafts cooperate, and spring means for elevating the bearings.

4. In a pavement signal, a hollow foundation, a rocker located partly in the foundation and comprising a member exposed for vehicle impact, mechanism for mounting the rocker in the foundation, for vertical movement in a fixed vertical plane, and for rocking movement on an axis in that plane, resilient means for raising the rocker, and means for restoring the rocker from a rocked position to one in which said member is disposed in a substantially vertical, upstanding position, the restoring means including a depending rib on the rocker and constituting a counterweight, the rib engaging opposed internal surfaces of the foundation, one at a time, to limit the rocking movement of the rocker, the rib being rounded transversely, to facilitate sliding contact with said surfaces, when the aforesaid vertical movement is imparted to the rocker.

5. A pavement signal comprising a foundation, a rocker including a hollow body and a hollow fin in communication with the body and exposed for vehicle impact, means for mounting the rocker for rocking movement on the foundation, and including a tubular shaft, an electrical heater housed within the body, and circuit means for the heater, the circuit means extending outwardly through the tubular shaft.

6. A pavement signal comprising a foundation, a member including a hollow body and a hollow fin in communication with the body and exposed for vehicle impact, means for mounting said member for substantially vertical movement on the foundation, and including a tubular part, an electrical heater housed within the body, and circuit means for the heater, the circuit means extending outwardly through the tubular part.

7. A pavement signal comprising a foundation, a rocker including a part exposed for vehicle impact, means for mounting the rocker on the foundation for rocking movement, said means including a tubular shaft, a rigid conduit including a depending arm and a transverse arm connected to the shaft, a flexible sleeve carried by the depending arm and extended downwardly below the depending arm, an electrical heater housed in the rocker, and circuit means for the heater, the circuit means being extended through the shaft, the conduit and the sleeve.

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