April 11, 1933. R. TATLOCK 1,903,739

DEPRESSIBLE TRAFFIC SIGNAL

Filed March 19, 1930

Fig. 1

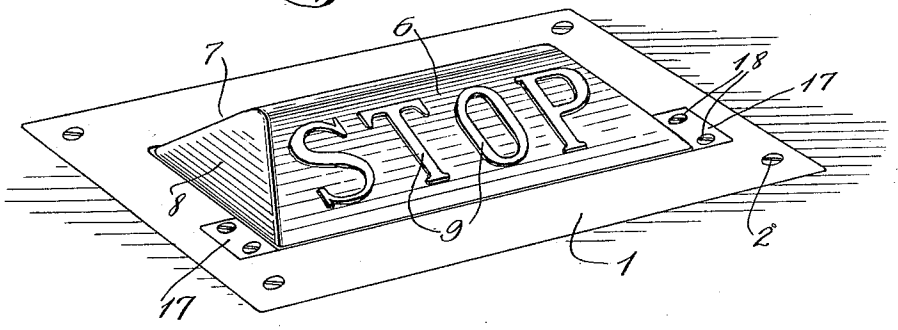


Fig. 2

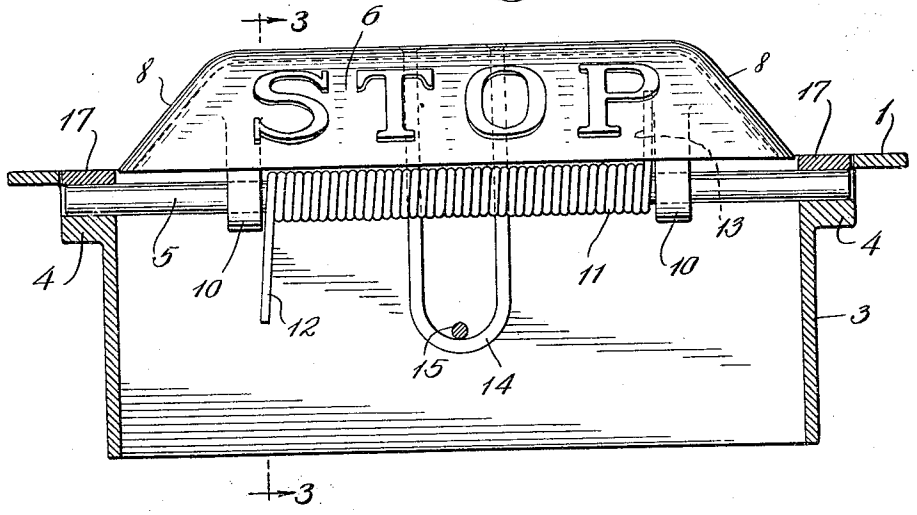
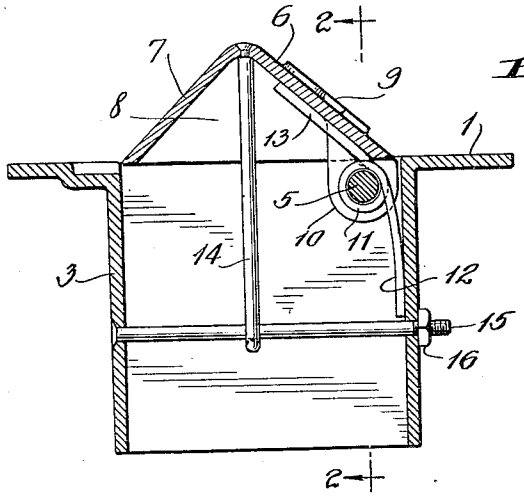


Fig. 3



INVENTOR.
ROBERTS TATLOCK
BY Meyers & Jones
ATTORNEYS.

Patented Apr. 11, 1933

1,903,739

UNITED STATES PATENT OFFICE

ROBERTS TATLOCK, OF GASTONIA, NORTH CAROLINA, ASSIGNOR TO E. E. GROVES AND GEORGE R. POSTON, BOTH OF GASTONIA, NORTH CAROLINA

DEPRESSIBLE TRAFFIC SIGNAL

Application filed March 19, 1930. Serial No. 437,215.

This invention is an improvement in depressible traffic signals, and more particularly in a signal adapted to be mounted flush with the surface of a highway, and to be depressed by engagement with the wheels of vehicles, and to automatically return to upright or signalling position.

In the usual construction of such signals, an upstanding member is provided, in the form of a signal, which is supported to be swung to one side or the other by contact with the wheels of a vehicle.

The signal is subjected to a blow more or less severe, in accordance with the speed and weight of the vehicle, and it will be apparent that deterioration of the apparatus is rapid, and damage is very liable to result from contact with a heavy vehicle, as for instance, a loaded truck.

Furthermore, the signal offers at its ends a fixed obstruction, and when struck in endwise direction, there is a liability not only to damage to the signal, but to the vehicle which strikes it.

One of the primary objects of the present invention is the provision of a signal of the character in question wherein the signal, spring supported, presents an inclined plane to the wheels of vehicles approaching from any direction, so that when struck by a wheel, either sidewise or endwise, the signal will be depressed easily and gradually without a severe blow.

Another object is to provide a signal which may be produced at a relatively low cost, and which is composed of a minimum of parts, and of parts which may be easily replaced, if for any reason they are damaged or worn out.

With these and other objects in view the invention consists in the construction and novel combination of parts fully described hereinafter, illustrated in the accompanying drawing, and pointed out in the claims appended hereto, it being understood that various changes in the form, proportion, size and minor details of construction within the scope of the claims, may be resorted to without departing from the spirit of the invention.

In the drawing forming a part hereof:—

Fig. 1 is a perspective view looking from above of the improved signal.

Fig. 2 is a section on the line 2—2 of Fig. 3.

Fig. 3 is a section on the line 3—3 of Fig. 2.

In the present embodiment of the invention, the improved signal comprises a base plate in the form of a substantially rectangular frame 1, adapted to be placed in the roadway, with its upper face flush with the surface of the pavement, and the base plate has openings for receiving means 2, for securing it in place on the roadway, the said means being shown in the present instance as screws.

A housing 3 of tubular form is integral with the frame, and depends below the same, the inner face of the housing being flush with the inner edge of the frame, and at one side edge of the opening, the ends of the housing are provided with bearings 4, for receiving a hinged rod or pintle 5. It will be understood that the signal is placed with the housing in a pit of suitable size, and the signal proper is supported by the pintle.

The signal includes an inverted trough shaped member, composed of converging side walls 6 and 7, and converging end walls 8. The walls 6, 7 and 8 are arranged at angles of substantially 45°, and the end walls are triangular as shown, the apices thereof merging into the meeting line of the converging side walls 6 and 7. The walls 6, 7 and 8 constitute an integral structure and one of the side walls, the wall 6 in the present instance has a signal indication 9, in the present instance, the word "Stop".

The side wall 6 of the member 6—7—8, has depending ears 10, which are journaled on the pintle 5, thus providing a hinge or pivotal mounting for the member. A coil spring 11 encircles the pintle between the ears 10, one end 12 of the spring bearing against a side wall of the housing, and the other end 13 of the spring bearing against the inner face of the wall 6. The spring acts normally to move the signal upward, and the upward movement is limited to the position shown in the drawing by a stop.

The stop is constituted by a U-shaped

member 14, connected with the depressible signal at the meeting line of the converging side walls 6 and 7, and depending into the housing. A rod 15 is arranged transversely of the housing, the said rod passing through the U-shaped member, as shown in Fig. 3. The rod passes through openings in the opposite side walls of the housing, and is engaged by a nut 16 to secure it in place.

Preferably the ends of the pintle pin 5 are arranged in depressions in the bearings 4, and plates 17 are secured to the base plate over the depressions, the said plate having its upper surface rabbeted to receive the plates as shown. Thus by removing the plate 17, the pintle and associated parts, including the depressible signal, may be removed, the rod 15 first being released. The plates 17 are held in place by screws 18, as shown.

In operation, the improved signal being arranged as shown in Fig. 1, always stands with the indication 9 visible and above the surface of the roadway. It will be apparent that another indication may be arranged on the opposite side if required. When a car approaches from any direction, an inclined surface is presented to the wheel, so that the signal will be depressed, without any considerable shock or jar. As soon as the pressure is removed, the spring returns it to normal position, this position being determined by the stop. If a wheel strikes the end of the signal, the same operation results, the signal being depressed without shock or jar.

What is claimed as new is:—

1. A signal device of the class described, comprising a base plate in the form of a substantially rectangular frame, adapted to be supported flush with the surface of the road bed, a housing depending from the frame and encircling the opening thereof, a signal member composed of converging relatively long side walls, and converging relatively short end walls, a hinge connection between one of the side walls and the frame, resilient means on said hinge and engaging said frame and one of said side walls to normally support the member with the bottoms of the side walls substantially flush with the base plate, whereby the said member offers an inclined surface to vehicles approaching from any direction, and a stop for limiting the upward movement of the member.

2. A signal device of the class described, comprising a base plate in the form of a substantially rectangular frame, adapted to be supported flush with the surface of the road bed, a housing depending from the frame and encircling the opening thereof, a signal member composed of converging relatively long side walls, and converging relatively short end walls, one of the side walls having a signal indication, a hinge connection between one of the side walls and the frame, resilient means to normally support the member with the bottoms of the side walls substantially flush with the base plate, whereby the said member offers an inclined surface to vehicles approaching from any direction, a stop for limiting the upward movement of the member, the hinge connection comprising a pintle detachably connected with the frame, and ears on the member journaled on the pintle, said resilient means being mounted on said pintle.

3. A signal device of the class described, comprising a base plate in the form of a substantially rectangular frame, adapted to be supported flush with the surface of the road bed, a housing depending from the frame and encircling the opening thereof, a signal member composed of converging relatively long side walls, and converging relatively short end walls, one of the side walls having a signal indication, a hinge connection between one of the side walls and the frame, resilient means to normally support the member with the bottoms of the side walls substantially flush with the base plate, whereby the said member offers an inclined surface to vehicles approaching from any direction, a stop for limiting the upward movement of the member, the stop comprising a cross rod in the housing, and a U-shaped member connected with the signal member and through which the rod passes.

4. A signal device of the class described, comprising a housing to be supported with its upper surface flush with the road bed, a signal member having walls converging above the housing and terminating substantially flush with the top of the housing, a pivotal connection between said signal member and housing whereby the signal member will be pivotally moved down into the casing upon contact by a wheel with any of its walls, resilient means bearing against one of said walls and the housing on opposite sides of the pivotal connection to normally hold the signal member above the housing.

5. The structure of claim 4 wherein a member is fixed in the housing and another member is carried by the signal member for engagement at a predetermined point to limit movement of the signal member.

6. A traffic signal comprising an open-topped housing to be supported in a road bed, a signal member having walls converging above the housing and terminating substantially at the top of the housing, a pivotal connection between said signal member and housing at the edge of said member whereby said member may be depressed into the housing, and resilient means bearing against the signal member and the side of the housing on opposite sides of the pivotal connection to hold the signal member normally above the housing.

7. A traffic signal comprising an open-topped housing to be supported in a road bed, a signal member having walls converging above the housing and terminating substantially at the top of the housing, the top of the housing and the bottom of the signal member having corresponding rectangular shapes, a pivotal connection between said housing and signal member at one of their edges, whereby the signal member may be depressed into said housing so that one of its walls is in substantially the same plane as the top of the housing, resilient means bearing against a wall of the signal member and the side of the housing on opposite sides of the pivotal connection to hold the signal member normally above the housing, stop means on said signal member and housing for limiting the movement of the signal member, and signal indicia on the side of said signal member adjacent the pivotal connection.

8. In a street traffic sign, the combination with a frame having an open bottom and having a horizontal flange extending outward around its upper edge, whereby it is fixedly supported in the street; a cover for said frame and supported thereby along one edge and being adapted to be depressed into said frame by a vehicle passing thereover; and a spring yieldably holding said cover above the frame and street.

9. In a street traffic sign, the combination with a frame comprising four vertical sides fixedly supported in the street pavement, a cover for said frame connected along one edge to said frame, and being adapted to be depressed into said frame by a vehicle passing thereover; a spring yieldably holding said cover above said frame and street; said frame having notches in two opposed upper edges and said cover having a pair of pivot trunnions extending laterally therefrom and received in said notches, and means on said frame and engaging said trunnions, whereby said trunnions are held down on said frame against the action of the spring.

Signed at Gastonia in the county of Gaston and State of North Carolina this 17th day of March A. D. 1930.

ROBERTS TATLOCK.