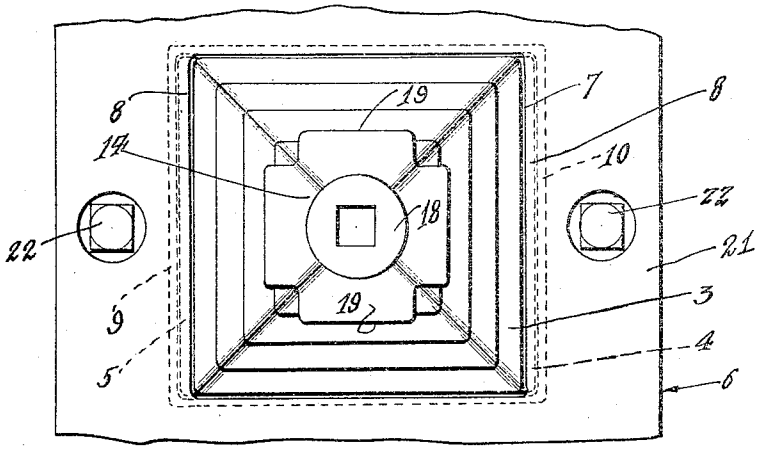
Nov. 22, 1932. J. T. BOATWRIGHT 1,888,447

COLLAPSIBLE TRAFFIC SIGNAL

Filed Nov 3, 1930

Fig. 1.



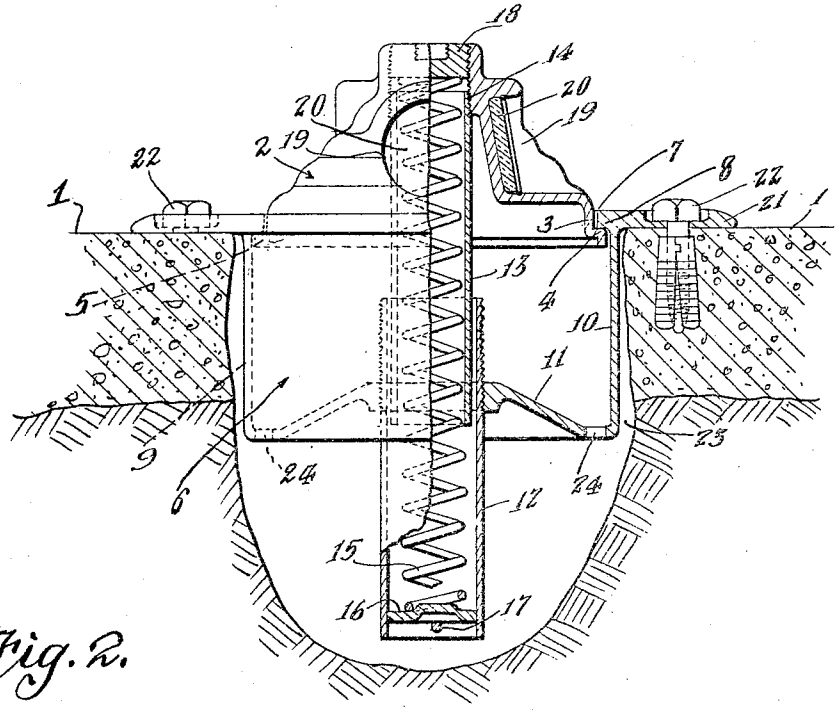


Fig. 2.

Inventor

John T. Boatwright

By Lyon & Lyon

Attorneys

Patented Nov. 22, 1932 1,888,447

UNITED STATES PATENT OFFICE

JOHN T. BOATWRIGHT, OF LOS ANGELES, CALIFORNIA, ASSIGNOR OF ONE-HALF TO GUS E. HEINZE, OF HUNTINGTON PARK, CALIFORNIA

COLLAPSIBLE TRAFFIC SIGNAL

Application filed November 3, 1930. Serial No. 493,003.

This invention relates to traffic signals and has particular reference to the type of signal known as a traffic button which is to be placed upon the surface of a roadway to act as a guide for automobiles traversing such roadway.

Traffic buttons mounted upon the surface of the roadway and extending a few inches above the level of the roadway are in common usage to indicate the division between the right hand side of a roadway and the left hand side of the roadway or to call attention to some hazardous condition which it is desired to call to the notice of drivers of automobiles.

Previously such traffic buttons were constructed in the form of a relatively solid substantially pyramidical or hemispherical shaped dome, the bottom of which was secured to the surface of the roadway so that the apex of the dome projected a considerable distance above the level of the roadway. Thus, automobiles which were being driven along the roadway were required to avoid striking these buttons since the height of the button was sufficient to constitute a substantial obstruction to the movement of an automobile wheel thereover and in the event that an automobile wheel was driven over one of these buttons, the shock to the passengers and to the mechanism of the automobile was extremely severe. Sometimes this shock was sufficient to break an axle or a spring or some other portion of the driving and steering mechanism of the automobile.

It is an object of my invention to provide a traffic button which will be amply effective to signal all of the indications which are signalled by the present type of traffic button or dome but which when struck will disappear or collapse below the surface of the road to permit the automobile to pass thereover without injury or discomfort to the car or passengers riding therein.

Another object of my invention is to provide a collapsible traffic signal of the traffic button or dome type in which there is a minimum number of parts.

Another object of my invention is to provide a traffic signal of the button or dome type in which a hollow base casting is provided with an open top thereto and one or more flanges extending inwardly of the periphery of the top, with a signal member which is in the form of a traffic button or dome snugly fitting within the hollow casing, the lower edge of the signal member being provided with a flange which fits under the flange upon the hollow base member.

Another object of my invention is to provide a traffic signal of the dome or button type in which the traffic dome is inserted in a hollow base member adapted to be swung below the surface of the roadway and in which a central tubular support connects the signal member and the base member to act as a guide during the depressing and extending movements of the signal member.

Other objects of my invention will be apparent from a reading of the following description when read in connection with the accompanying drawing, in which

Figure 1 is a top plan view of one of my traffic signal devices, showing a portion thereof broken away for the purpose of reducing the size of the illustration, and

Figure 2 is a side elevational view partly in section of my traffic signal illustrating the manner in which the signal will be assembled and secured to the surface of a roadway.

Referring to the drawing, I have illustrated a roadway, the surface of which is indicated at 1 upon which the traffic button or dome is to be placed. The traffic signal illustrated comprises a signal member or dome 2 which may be of any desired configuration but preferably has a substantially pyramidical or hemispherical shape in order to provide substantial height therefor. That is, the height at which the dome projects above the roadway should be substantial relative to the area covered by the base of the dome. The dome 2 is illustrated as being hollow and having the bottom edge 3 thereof provided with a flange 4 extending somewhat beyond the outer periphery of the bottom 3 on one side of the dome while a similar flange 5 is arranged to extend outwardly upon the opposite side of the dome.

The dome 2 is arranged to telescope within

a suitable housing member 6 which I have illustrated as being substantially cubical in configuration having an open top 7 of such configuration as to substantially fit the periphery of the bottom 3 of the dome 2.

A flange 8 formed upon the open top 7 of the base 6 extends slightly inwardly of the side walls 9 and 10 of the base 6 so as to engage the flanges 4 and 5 of the dome 2 when the dome 2 is in its uppermost position within the base 6. The inter-engaging flange constructions just described constitute a limiting means preventing the movement of the dome 2 completely out of the base 6. The base 6 is provided with a bottom 11 which is preferably depressed inwardly of the hollow base 6 so as to constitute a support for a tube 12 which extends upwardly through substantially the central point of the base 11. The tube 12 may be secured to the base 11 in any suitable manner as by means of threaded engagement therewith. A similar tube 13 is arranged to be secured to the upper portion or apex 14 of the dome 2 and extends downwardly therefrom, the tube 13 being of such size and proportions as to telescopically engage the lower or the base tube 12. Thus, the tubes 12 and 13 constitute a relatively sliding bearing permitting the dome 2 to be depressed downwardly into the hollow base 6, and guiding the movement of the dome during such downward motion and also during a reciprocating up-motion to prevent substantial tipping of the dome 2 as it moves up and down.

Within the telescopically engaged tubes 12 and 13 I have illustrated a spring 15 which normally bears against a lower plate 16 which is secured in the lower end of the tube 12 as by means of a cross pin 17, the other end of the spring 15 bearing against a plug member 18 which is secured in the upper portion or apex 14 of the dome 2. The spring 15 is normally under compression so that it normally tends to hold the dome 2 in its extended position as illustrated in Figure 2 while upon the impact of an automobile upon the sides of the dome 2 the dome will be depressed telescopically within the base 6 against the force of the spring 15. The dome 2 may be provided with any suitable signal indicia. For example, I have illustrated the dome as being provided with a plurality of recesses 19 extending a substantial distance within the outer limits of the sides of the dome 2, and I have illustrated a reflector 20 in each of the recesses 19. These reflectors may be of any suitable character so arranged in the recesses as to reflect back to the light from an automobile headlight which may fall thereon so that such reflection attracts attention to the signal dome 2.

It will be understood that any suitable means may be provided for securing the signal dome 2 and the base 6 to the surface of the roadway though I prefer to arrange a flange 21 which extends completely around the periphery of the base 6 and which extends outwardly therefrom. This flange may be placed upon the road surface 1 and secured thereto as by means of suitable expansion bolts or other suitable securing devices 22.

It will be also observed that the main body portion of the base member 6 depends below the surface 1 of the roadway through a suitable opening 23 sunk into the roadway. Also, it will be observed that the opening 23 extends considerably beyond the bottom 11 of the base 6 to permit of the use of a relatively long spring as by means of the downwardly extending portion of the tube 12. Also, by extending the tube 12 downwardly below the bottom 11 of the base 6 a greater bearing surface may be obtained between the tubes 13 and 12 to achieve a greater rigidity between these members.

Moreover, the inwardly projecting central portion of the base 11 provides that the lowermost part of the interior of the base 6 occurs at the junction of the side walls 9 and 10, etc. with the base 11 and I prefer to provide a plurality of openings 24 arranged around the periphery of the bottom 11 so that any dust or trash which may collect within the base 6 will readily sift through the openings 24 to the relatively great space permitted by the opening 23 sunk into the roadway.

It will be observed that I have provided a traffic signal of the bottom or dome type in which a button of substantial proportions, extending above the roadway, may be provided with suitable indicia which may be readily visible to automobiles passing along the road, while should automobiles be inadvertently driven into contact with one of these buttons the button or dome 2 will be depressed without injury to the automobile and without discomfort to the passengers therein.

While the illustrated form of my invention is the preferred embodiment, I do not desire to be limited to any of the details shown or described herein, except as defined in the appended claims.

I claim:

1. In a collapsible traffic signal, a hollow base member having an open top, a flange extending inwardly of the periphery of said top, a dome member telescopically fitted into said base member having a periphery greater than the periphery of said flange, a vertically extending tube secured to said bottom of the base member, a tube depending from said dome member telescopically engaged in said base tube, and a spring within said tubes for normally extending said dome member into abutting relation with said flange.

2. In a collapsible traffic signal, a hollow base member having an open top, a flange extending inwardly of the periphery of said

top, a hollow dome member of a configuration having an apex at the center thereof and having a base of greater periphery than said flange, telescopically mounted in said base member, a tube extending downwardly through the apex of said dome member, a tube extending upwardly from said base member to telescopically engage said first named tube, and a spring within said tubes for normally extending said dome member into engagement with said flange.

3. In a collapsible traffic signal, a hollow base member having an open top, a flange extending inwardly of the periphery of said top, a hollow dome member of a configuration having an apex at the center thereof and having a base of greater periphery than said flange, telescopically mounted in said base member, a tube extending downwardly through the apex of said dome member, means for closing the upper end of said tube, a tube extending upwardly from the base member telescopically engaging said first named tube, means for closing the end of said base tube, and a spring within said tubes bearing against said closing means for normally extending said dome member into abutting relation with said flange.

4. In a collapsible traffic signal, a hollow open topped base member having an inwardly extending bottom and having a flange extending inwardly of the open top thereof, a tube secured to the apex of said bottom and extending vertically therefrom, a dome member having a configuration forming an apex at the center thereof and having its periphery larger than the periphery of said flange, said dome member being telescopically fitted within said base member, a second tube secured to the apex of said top member and extending downwardly therefrom to telescopically engage said base tube, and a spring within said tubes for normally maintaining said dome member extended into abutting relation with said flange, and one or more openings through the bottom of said base member near the side walls thereof.

5. In a collapsible traffic signal, a hollow open topped cubical base member having a flange extending inwardly of the periphery of said top, a pyramidical dome member the periphery of the base of which is greater than the periphery of said flange, said dome member being telescopically mounted in said base member, a tube depending from the apex of said dome member, a second tube extending upwardly from said base member, telescopically engaging said first tube and a spring within said tubes for normally extending said dome member into abutment with said flange.

6. In a collapsible traffic signal, a hollow open topped cubical base member having a flange extending inwardly of the periphery of said top, a pyramidical dome member, the periphery of the base of which is greater than the periphery of said flange, said dome member being telescopically mounted in said base member, a tube depending from the apex of said dome member, a second tube extending upwardly from said base member, telescopically engaging said first tube, a spring within said tubes for normally extending said dome member into abutment with said flange and signal indicia on the sides of said dome member.

7. In a collapsible traffic signal, an open top housing member adapted to be imbedded in the ground with the open top substantially flush with the surface of the roadway, a dome telescopically fitted within said open top, said dome having a base lying in a horizontal plane and having side walls converging from their juncture with the base toward a common center above the base, a flange on said housing member extending inwardly of the open top thereof to engage the dome immediately above the lowermost portion of the base of said dome, a vertically extending tube secured to said housing member, a vertically extending tube secured to said dome member telescopically engaged with said housing tube and a spring within said tubes for holding said dome in extended position with the flange and said dome in abutting relation.

Signed at Los Angeles, California, this 28th day of October, 1930.

JOHN T. BOATWRIGHT.