March 10, 1942. H. A. YBANEZ 2,275,711

SAFETY SIGNAL

Filed April 2, 1941

Fig. 1.

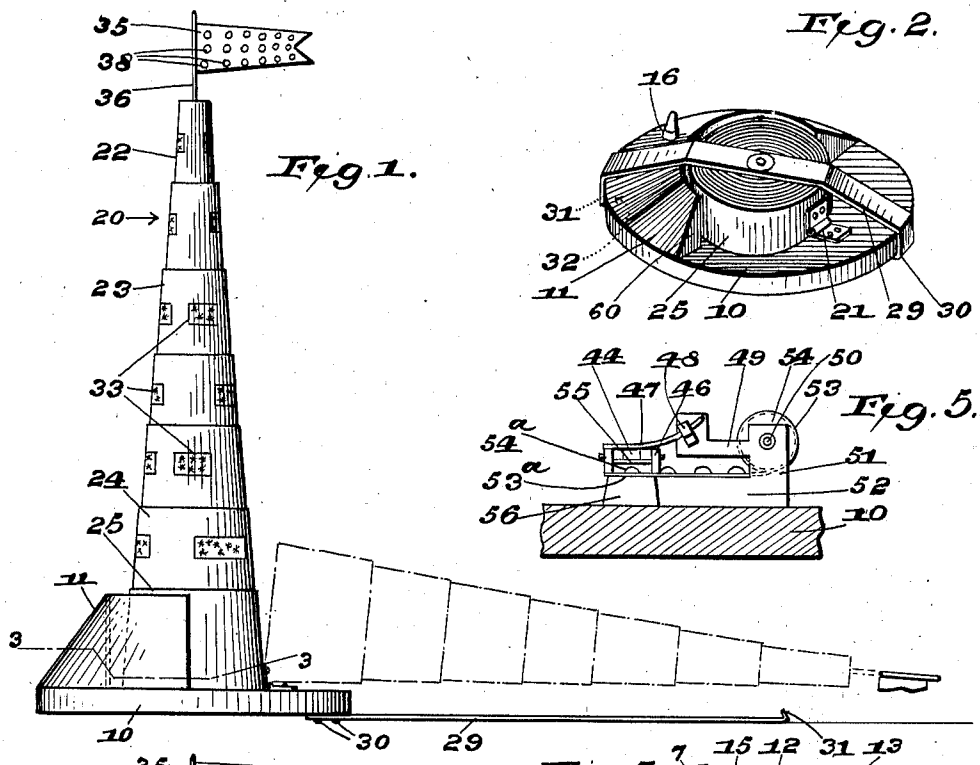



Fig. 2.




Fig. 5.




Fig. 4.

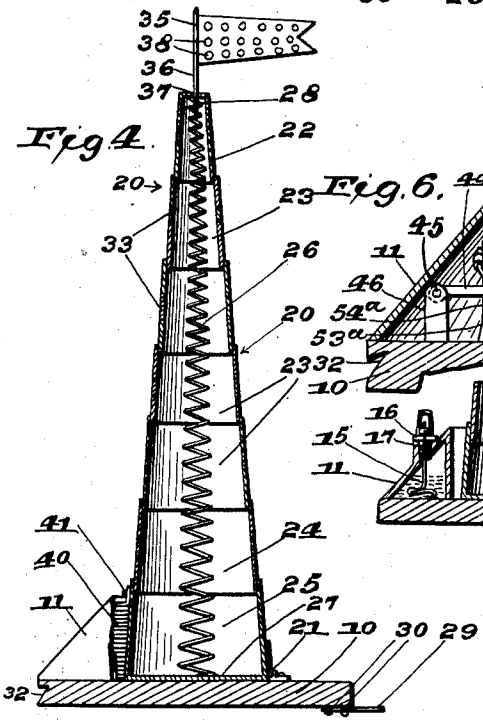



Fig. 3.

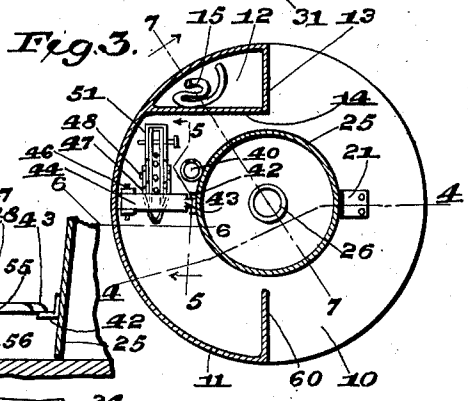



Fig. 6.

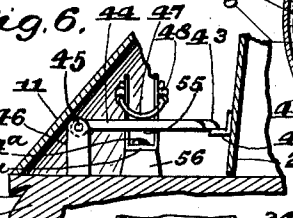
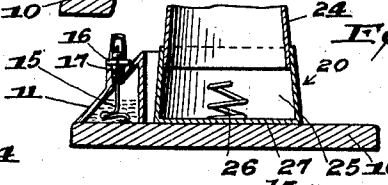



Fig. 7.




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Patented Mar. 10, 1942

2,275,711

# UNITED STATES PATENT OFFICE

2,275,711

## SAFETY SIGNAL

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Application April 2, 1941, Serial No. 386,534

4 Claims. (Cl. 116—67)

This invention relates to a portable signal.

An object of the invention is the provision of a signal for use on a roadway or other path for warning approaching automobiles that there is an obstruction of some kind in the way, the signal being collapsible so that it may be folded into a neat compact unitary structure and easily transported.

Another object of the invention is the provision of a non-inflammable safety signal for warning approaching automobiles of dangerous travel on a highway in which a collapsible tower or post is mounted on a rigid base member which if struck will be moved from its vertical position while at the same time releasing a trigger that will explode a torpedo to provide a loud report as an additional warning to the driver of the automobile, the tower being provided with a plurality of reflectors for a visual signal.

A further object of the invention is the provision of a safety signal in which a collapsible tower or post is mounted on a base member in such a manner that if it is struck by an approaching automobile said tower will be knocked over, a latch member for retaining the tower in a vertical position being also made operative to strike a torpedo or cap when the tower is tilted for giving a loud report as a warning to a driver of an automobile, the tower or post being collapsible so that the signal may be folded in a neat, compact mass, reflectors being provided on the surface of the tower which are illuminated by a flare mounted in the base.

This invention will be best understood from a consideration of the following detailed description, in view of the accompanying drawing forming a part of the specification; nevertheless, it is to be understood that the invention is not confined to the disclosure, being susceptible of such changes and modifications as define no material departure from the salient features of the invention as expressed in the appended claims.

In the drawing:

Figure 1 is a view in elevation of a safety signal constructed in accordance with the principles of my invention.

Figure 2 is a view in perspective of the signal folded in a compact mass for transportation.

Figure 3 is a horizontal section taken on the line 3—3 of Figure 1.

Figure 4 is a vertical section taken on the line 4—4 of Figure 3.

Figure 5 is a fragmentary vertical section taken on the line 5—5 of Figure 3.

Figure 6 is a fragmentary vertical section taken on the line 6—6 of Figure 3.

Figure 7 is a fragmentary vertical section taken on the line 7—7 of Figure 3.

Referring more particularly to the drawing, 10 designates a base member from which rises a shell or upstanding protecting flange 11 and the base member and shell are preferably formed of cast iron and are cast as one piece. The flange 11 is inclined inwardly towards the center at an acute angle from the periphery of the base member, but the flange projects from a portion only of the periphery. The remaining portion of the base member is devoid of the flange.

At one end of the flange 11 is formed a chamber 12 by means of the additional walls 13 and 14. This chamber is adapted to be supplied with fuel into which is inserted a wick 15. The outer end of the wick is received by the usual wick operating means 16 which is threaded into an opening 17 in the flange 11.

A tower or post, generally designated by the numeral 20, is pivotally mounted on the base member 10 by means of a hinge 21. This post is composed of a plurality of telescopic sections 22 to 25, inclusive. The telescopic sections are maintained in extended relation by a coil spring 26 which rests upon a bottom 27 of the lower section 25. The upper end of the coil spring presses against a top 28 of the extreme upper section 22. These sections may be collapsed by forcing downwardly on the top section so that they will be telescoped into a compact mass as shown in Figure 2 within the lowermost section 25. When they have been compressed to the position shown in Figure 2 a metal strap, generally designated by the numeral 29 which is secured at 30 to the bottom of the base member 10, is drawn tight over the top of the compressed section and a hook 31 on the free end of the strap is engaged within a notch 32 formed in the side wall of the base member 10 diametrically opposite the connected part 30. As the section 22 is moved downwardly the sections 23 are moved within each other against the tension of the spring 26 until the next to the last section 24 together with the uppermost sections are forced within the lower section 25. It will be noted that when the sections are completely telescoped they will be disposed in protected relation by the flange 11 which terminates short of the upper edge of the lowermost section 25.

Each of the sections as shown in Figures 1 and 4 are provided with a plurality of reflectors 33 which are embedded in the faces of the sec-

tion so that when the wick 15 is lighted these reflectors will be illuminated whereby the driver of an approaching vehicle should not only see the reflector by the reflected light from his headlights, but he should also see the flare from the lighted wick and also the reflected light from the flare.

A flag 35 is provided with a stem 26 which is adapted to be inserted within a perforation 37 in the top 28 of the uppermost section 22. This flag is likewise provided with a plurality of reflectors 38 which will reflect light back to the driver of an approaching automobile.

A coil spring 40 is secured to the base member 10 and also to the lowermost section 25, as shown at 41, so as to cause the post 20 to spring back into vertical position when it has been tilted to one side as when it is struck by an approaching automobile and when the automobile has been moved away from the post.

The bottom section 25 of the post is provided with a catch 42 which is engaged by the free end 43 of a lever 44 pivoted at 45 to brackets 46 extending upwardly from the base member 10 and housed by the flange 11. A U-shaped spring 47 has its free end pressing upon the lever 44 while the ends of the arms of the spring are inserted in perforated lugs 48 projecting from the side walls of a pair of brackets 49. Thus, it will be seen that the lever 44 is pressed upon the catch 42 by the spring 47 at all times for retaining the post in elevated position.

A shaft 50 is mounted in a pair of brackets 51 from which the brackets 49 extend. These brackets rise from a block 52 which is secured to the base member 10. Upon the shaft is rolled a tape 53 carrying spaced torpedo caps 54. This tape, as shown at $53^a$, is adapted to be moved beneath a hammer 55 located on the under face of the lever 44 so that when the lever is released it will be rapidly snapped downwardly by the spring 47 so that the hammer 55 will strike the cap $54^a$ on the tape 53 which is resting upon an anvil 56 forming part of the block 52.

An inturned flange 60 on one end of the flange 11 is substantially in line with the wall 13 of the chamber 12 and substantially closes that portion of the space which is opposite the chamber 12.

The operation of my device is as follows: The assembled signals shown in Figure 2 are carried out to various places required and after they have been established on the roadway or on the ground the strap 29 is released whence the spring 26 will cause the sections of the post 20 to be extended. The stem 36 of the flag 35 is then inserted in the opening 37 in the section 22 of the post. In this position the post is maintained in a vertical position by means of the lever 44 engaging the catch 42 at the bottom of the post and also by the spring 40.

During the night the flare when desired may be lighted, although the reflectors 33 on the post 20 should be sufficient to warn the driver of an approaching automobile that it will be necessary for him to check his speed or stop to investigate before proceeding further.

However, if the automobile is traveling too fast for the driver to stop the same he will run into the post and tilt the post to the right from the position shown in Figures 1 and 4. When this occurs the catch 42 is moved up and thus forces the free end of the lever 44 upwardly against the tension of the spring 47. When the catch 42 passes the free end of the lever said lever will be forced downwardly substantially instantly whereby the hammer 55 will strike the cap $54^a$ and thus explode the same. The loud noise created by the explosion of the cap will be an additional warning to the driver of the automobile.

It will be seen by this last described construction that the post is so combined with the operating mechanism for causing a loud noise that the one is not effective without the assistance of the other. The lever operates to maintain the post in a vertical position at all times while the movement of the post will cause the lever to explode the torpedo or cap.

When the safety signal has been compressed into a compact mass as shown at Figure 2, the flag 35 is laid upon the base member 10 and maintained in place by the metal strap 29.

I claim:

1. A portable signal comprising a base, a vertical post mounted on the base, a hinge connecting the bottom of the post at a point along the periphery thereof to the base so that the post may be tilted to one side of the vertical, a catch on the post diametrically opposite the hinge, a detonating means on the base and including a lever pivoted on the base and having one end resting on the catch on the post for retaining said post vertically, a spring for retaining said end of the lever in engagement with the catch, means for supplying torpedo caps below a portion of the lever so that when the post has been struck by a car and tilted sufficiently the catch will be raised for instantly raising the first mentioned end of the lever against the tension of the spring until said end of the lever is released from the catch whence the spring will return the lever for violently striking the cap.

2. A portable signal comprising a base, a vertically disposed post, means hinging the post on the base so that said post may be tilted, a catch mounted on the post opposite the hinge, a lever pivoted on the base and having the free end resting on the catch to retain the post in a vertical position, said lever provided with a hammer, a spring pressing on the lever and holding said lever against the catch so that when the post is tilted and the catch is raised the lever will be raised until the free end of the lever slips off the catch whence said lever and hammer will be violently returned by the spring, and means for supplying torpedo caps beneath the hammer.

3. A portable signal comprising a base, a vertically disposed post, means hinging the post on the base so that said post may be tilted, a catch mounted on the post opposite the hinge, a lever pivoted on the base and having the free end engaging the catch to retain the post in a vertical position, said lever provided with a hammer, a spring urging the free end of the lever on the catch so that when the post is tilted, the catch and lever will be raised until the free end of the lever slips off the catch and said hammer and lever will be violently returned by the spring, a shell rising from the base in protective relation with the lever and means for supplying torpedo caps beneath the hammer.

4. A collapsible portable signal comprising a base adapted to be placed on the ground, a housing mounted on the base and composed of a plurality of telescoping conical sections, a coil spring rising from the base, located within the housing and adapted to maintain the sections in vertical extended relation, means for hingedly connecting the bottom section of the housing to the base member, a lug projecting from the lower section of the housing at a point diametrically

opposite the hinge means, a lever pivoted at one end on the base member, the free end of the lever resting upon the lug, a spring pressing the lever on to the lug, and a protective wall rising from the base member, the spring pressed lever being located between the protective wall and the lug on the housing so that when the housing adjacent the lug is struck by an automobile moving toward that part of said housing which carries the lug, the housing will be thrown to a horizontal position away from the lever and be protected from injury by the wall.

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