

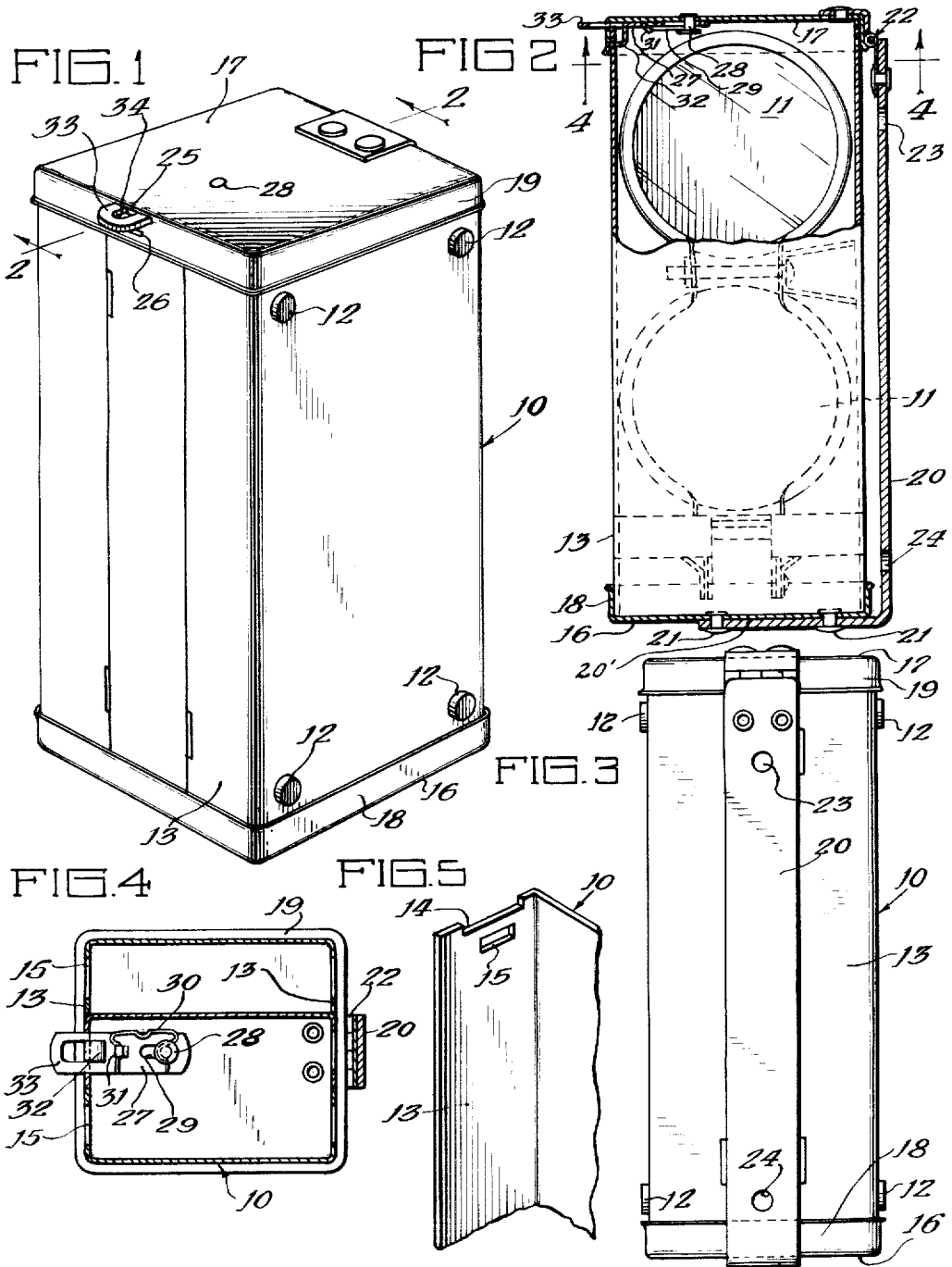
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SIGNAL FLARE PACKAGE

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SIGNAL FLARE PACKAGE

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4 Claims. (Cl. 206—65)

This invention relates to a holder for carrying a plurality of folded vehicle signal flares. The signal flares illustrated are of the retractable type shown in my copending application, Serial No. 297,899, entitled "Foldable Signaling Device," and filed July 9, 1952. The flares are carried in highway vehicles for use in time of emergency to warn traffic of a temporary highway obstruction.

The primary object of the present invention is to provide a new and improved holder for conveniently housing signal flares when not in use and protect them from damage or theft.

Another object is to provide a holder in which a plurality of signal flares are held together, the base frames of the signal flares cooperating to form the major portion of the structure protecting the flares.

Another object is to provide a holder having a locking means which cooperates with a base frame of one of the flares within the holder to secure the flares and the holder together as a single unit.

A preferred embodiment of the present invention is illustrated in the accompanying drawings, in which:

Figure 1 is a perspective view of the holder and the signal flares secured together in locked position;

Figure 2, a sectional view taken as indicated on line 2—2 of Figure 1;

Figure 3, a rear elevational view of the structure shown in Figure 1;

Figure 4, a sectional view taken as indicated on line 4—4 of Figure 2; and

Figure 5, a broken perspective view of a portion of a signal flare base frame showing a slot and notched portion to accommodate a locking means.

In the embodiment illustrated, each of the signal flares is shown having a tray-like base member, generally designated 10, and two sets of reflecting lenses 11 which are mounted on a linkage system secured to the base member for folding the lenses into retracted position within the base member. The linkage system and movement of the lens structure are as shown in my copending application. The base member 10 has a bottom wall and sidewalls 13 forming an open-top box into which the lenses are folded when not in use. As illustrated in Figures 1 and 3, the flares may be placed in juxtaposition (side by side) with the adjacent sidewalls 13 in a common plane in edge-to-edge relation to form a housing closed on four sides and open at either end. When so positioned, the lenses of the flares are protected against damage by the enclosing tray-like base members 10. The outer flares are positioned with the bottom of the base member facing outwardly, thus exposing, on all four corners, a rubber button 12 upon which the flare may be set when in use.

The holder for the assembled flares includes an elongated metal bracket 20 provided with spaced holes 23 and 24 which may be used to secure the bracket to a part of a vehicle by screws, bolts or other fasteners. The lower end portion 20' of the bracket is turned outwardly so as to extend substantially normal to the main portion of

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the bracket. A cap member 16, secured to the outwardly turned portion by rivets 21, is of a size to receive the end portion of the housing formed by the juxtapositioned flares. The cap is formed of sheet metal with upstanding sidewalls 18 slightly flared at their upper periphery so as to easily receive the flares when placed therein. This cap member thus encloses the open bottom end of the assembled flares when placed therein.

A similar cap member 17 having downwardly directed sidewalls 19 is secured by hinge 22 to the upper end of the bracket 20. Cap member 17 may thus be swung from a position embracing the upper end of the housing formed by the flares upwardly so as to release the upper end of the flares. When cap member 17 is swung away from the housing to inoperative or open position, the flares may be conveniently placed in the holder or removed therefrom.

Each tray-like base member of the flares has its sidewall 13 formed at each end with a locking notch to receive a locking bolt mounted in the upper cap 17. As illustrated in Figure 5, the end portion of the sidewall 13 is formed with a transversely extending notch 14 and a closely adjacent locking element in the form of a locking slot 15. As best illustrated in Figures 2 and 4, a locking bolt or latch member 27 has an outwardly extending thumb piece 33 of a width to ride in the notch 14 when the cap is placed over the end of the assembled flares. A finger 32 pressed downwardly from the locking bolt extends into the slot 15 in the flare side wall and through an opening 26 in the side wall of the cap 17 which will be aligned with the slot when the cap is positioned in locking position over the end of the flares. A rivet 28 in the cap member impales the locking bolt 27 and rides in an elongated opening 29 in the locking bolt permitting movement of the bolt toward and away from the hinge. The bolt extends through a slot 25 in the cap member and thus is guided in its movement. A U-shaped wire spring 30 yieldingly urges the bolt outwardly of the cap 17. One end of the spring bears against the rivet 28 and the opposite end bears against a boss 31 pressed out of the face of the locking bolt. The exposed end 33 of the bolt may be used to lock the flares in the holder by inserting the bail of a padlock through the opening 34 vacated by the locking finger 32.

The locking notch and slot of one of the flares always will be positioned properly opposite the locking bolt when the flares are placed in the holder. This is insured by forming each end of each sidewall 13 with the notch and slot. It thus does not matter which of the flares is placed in the middle of the assembly of three flares as illustrated since each will have the structure required to cooperate with the locking bolt.

The holder illustrated in the accompanying drawings is of a size to receive three flares although a greater number or a lesser number could be accommodated. Ordinarily three flares are carried by a vehicle in order that one may be placed adjacent the vehicle when stopped on the road and one at a distance from the vehicle in either direction. To place the flares in the holder so that they are in a position to protect the lenses against breakage, each flare is folded to its retracted position. The tray-like base members are then manually placed side by side with the base of the outer flares facing outwardly. In this manner, the flares are all inside of a housing formed by the assembled base members of the flares themselves. While holding the flares in juxtaposition, they are first placed in the cap member 16 and thereafter the cap member 17 is swung downwardly over the upper end of the housing. The locking bolt is depressed and allowed to spring outwardly so that the finger 32 reposes in the notch 15 in the central flare. The sidewalls 18

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and 19 on the cap members are of sufficient depth to embrace the ends of the housing and securely hold the flares from being accidentally removed. The lenses are protected against road shock since the bases of the flares are held tightly together by the cap members.

The foregoing detailed description is given for clearness of understanding only and no unnecessary limitations should be understood therefrom, for some modifications will be obvious to those skilled in the art.

I claim:

1. A signal flare package, comprising: a pair of signal flares, each having a base frame comprising a bottom wall and opposed sidewalls, said frames being positioned with their sidewalls in edge-to-edge relation to form a housing closed on four sides; a bracket provided at each of its opposite ends with a cap member, each of said cap members enclosing an end of the housing, one of said cap members being hinged to the bracket for swinging movement from inoperative position to locked position enclosing one end of the housing; and a latch member on said one cap member engaging a locking element on one of said base frames to secure the flares between the cap members.

2. A signal flare package as specified in claim 1, in which one of the base frames has a slot in its end adjacent the hinged cap member and the latch member includes a spring-urged bolt slidably mounted on said hinged cap member, one end of said bolt extending through the slot in said one base frame to secure the flares in juxtaposition between the cap members.

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3. A signal flare package, comprising: a pair of signal flares, each having a base frame comprising a bottom wall and opposed sidewalls, said frames being positioned with their sidewalls in edge-to-edge relation to form a housing closed on four sides, one of said base frames having a slot in one end; a holder structure including a bracket provided at each of its opposite ends with a cap member, each of said cap members enclosing an end of the housing formed by the juxtaposed base frames, one of said cap members being hinged to the bracket for swinging movement from an inoperative position to a locking position enclosing one end of the housing; and a latch member on the hinged cap member removably engaged in said slot to secure the flares between the cap members.

4. A signal flare package as specified in claim 3, in which each of the flare base frames has a similar slot located in one of its ends so that each flare may be interchangeably positioned to receive the latch member.

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