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J. M. McBRIDE

3,363,560

FLARE ATTACHMENT

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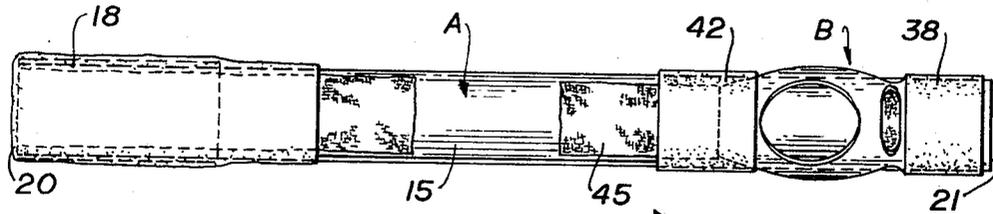


FIG. 1

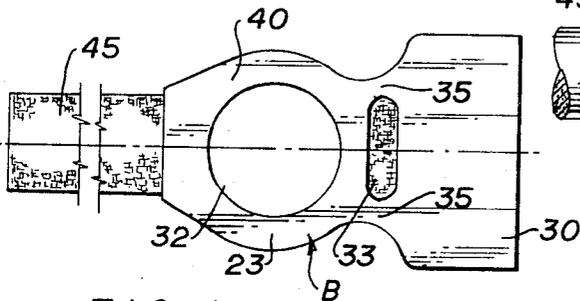


FIG. 4

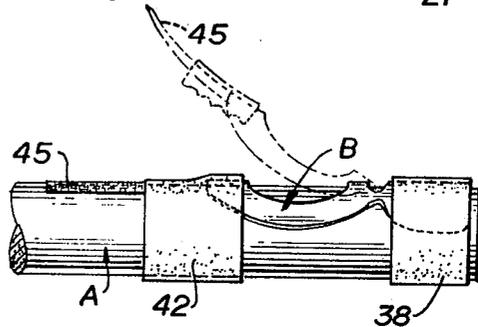


FIG. 2

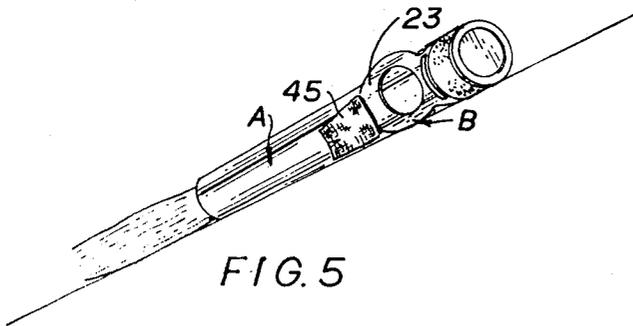


FIG. 5

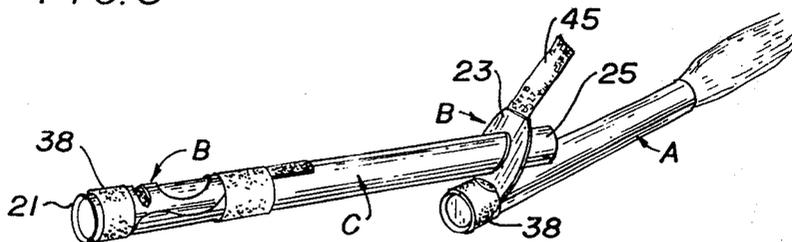


FIG. 3 INVENTOR. JAMES M. McBRIDE

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**FLARE ATTACHMENT**  
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 1 Claim. (Cl. 102-37.4)

**ABSTRACT OF THE DISCLOSURE**

A flare attachment having a tabular member hingedly mounted at the base of the flare with its upper end removably mounted to the flare body so that when removed the upper end can be bent transversely of the flare and carry the head of a similar flare in an aperture formed in the extending portion of the tabular member to cause sequential ignition of the flare held within the aperture of the tabular member.

This invention relates to an accessory for signal flares.

One type of incendiary flare in common use includes a tubular body of approximately ten inches in length with a diameter of approximately one inch. The body is formed of a burnable cardboard cylinder and has at one end a self-igniting cap by which the front end of the flare may be ignited. The aforesaid flare and others of a similar character generally burn with a brilliant red flame for approximately fifteen minutes. Such flares find their most common use in conjunction with automobile warning or signaling applications and are carried as conventional equipment in police patrol vehicles as well as by motorists in general.

In the case of automobile accidents, it is often necessary to provide signaling which extends substantially beyond the normal fifteen minute burning time flare. It has been conventional practice to ignite one flare and then lay it on the highway. A second flare is then laid on the rear end of the burning flare in such a way that the second flare will become ignited as the first flare reaches its burning termination. While this practice is generally satisfactory, it has been often found that the top flare will roll off the bottom flare prior to ignition thus frustrating the multiple ignition objective.

The object of the present invention is to provide a simple tabular attachment for the rear end of the flare which will firmly attach a second flare to the base end of the first flare in order to insure the two flares remaining in alignment for sequential ignition.

In the present invention, the tabular member is formed of a bendable material mounted around the outer body of the base of the flare. A portion of the tabular member is bendable outwardly from the flare and carries an apertured portion to receive the head end of a similar flare to hold the head end for ignition by flame at the base of the tab carrying flare.

A feature and advantage of this invention lies in the fact that the tabular member is in normally tight juxtaposition to the outer face of the flare so that the flares with the tab attached can be stored and packaged in the conventional mode and may be utilized in the conventional manner with little or no interference by the tabular member should it not be required in a particular application.

A further feature and advantage of this invention lies in the fact that the tabular member is formed of inexpensive materials and can be readily attached to a flare either during or subsequent to manufacturing operations without in any way affecting the conventional operation of the flare.

Another object of the invention is to provide a tabular member attached to the base of flares which in addition

to providing a lock or holder for an additional flare provides a tab which when bent outwardly will prevent the flare from rolling. As has been previously noted, the conventional flare is formed with an elongate, cylindrical body and, as such, normally will roll if placed on an inclined plane. With the provision of the tabular member of the present invention, the rolling action is completely frustrated.

Other objects, features, and advantages of the present invention will be more apparent after referring to the following specification and attached drawings in which:

FIG. 1 is a top plan view of a conventional flare having the tabular member of the present invention attached thereto;

FIG. 2 is a side elevation of the tabular member showing a fragmentary portion of the flare;

FIG. 3 is a schematic view showing a pair of flares in which the tabular member of one flare is engaged with the head end of an adjacent flare;

FIG. 4 is a view showing the tabular member separate and apart from the flare; and

FIG. 5 is a view showing a single flare in which the tabular member is bent outwardly to prevent the flare from rolling on an inclined plane.

As shown in FIG. 1, there is provided a conventional flare A having an elongate cylindrical cardboard body 15. Mounted at the head end of the body is an igniter mechanism 18 by which the flare can be ignited at the tip end 20.

The present invention includes a tab member B which is rigidly affixed to the rear end 21 of the flare in such a way that the forward end 23 of the tab can be bent upwardly to receive the front end 25 of another similar flare C. The tab member is formed of a bendable and, preferably, burnable material, such as, cardboard and has a base portion 30 which is adapted for conforming to the contour of the rear end 21 of the flare. The forward end 23 is formed with an aperture 32 having a diameter approximate the diameter of the front end 25 of a flare.

A central portion of the tab between aperture 23 and base 30 is formed with a cutout 33 to allow more effective hinging on both sides of the cutout thereby forming a hinged portion 35.

To connect tab member B to flare A, base portion 30 is bent to conform to the outer contour of the rear portion 21 of the flare. An adhesive bearing tab 38 is thence taped around the base portion 30 to fixedly secure the base portion of tab B to the flare. The front end 40 of tab B is similarly secured by a tape 42 wrapped around the front portion 40 and the body of the flare. The tape 42, however, is formed of a light, severable material, such as paper, so that it may be easily severed to remove the front portion from engagement with the flare in order that the tab can be bent upwardly as indicated in FIGS. 2, 3, and 5.

A cloth tab pull member 45 can be glued to the inside face of the tab member which extends outwardly to provide the tab pull function by extending outwardly beyond the paper tape 42. The cloth tab pull 45 can then be pulled upwardly to tear the paper tape 42 for utilization of the tab member.

In operation, it can be seen that with the tab member installed, the flare can be used in the conventional manner by simply lighting the tip end 20 of the flare and using it for signal purposes. The conformity of the tab with the contour of the flare allows the flares to be packaged together in the conventional mode without the tab acting in any way to frustrate such packaging or storage.

It is also noted that the tab being formed of burnable material is completely consumed as the flare burns to termination.

When it is desired to prevent the flare from rolling, as when the flare is being placed on an incline, the tab member is pulled outwardly severing the paper tape 42 so that the tab extends normal to the longitudinal axis of the flare. This is done simply by pulling tab pull member 45. As can be seen in FIG. 5, the tab forms an outward extension which prevents the flare from rolling down the inclined slope.

When it desired to attach an additional flare for sequential ignition, tab member B is bent outwardly in a similar manner and the front end 25 of another flare C is inserted into aperture 32. The limited hinge area 35 on both sides of the formed cutout 33 allows the tab member to be bent laterally so that flare C can extend at various angular positions to flare A. It is also noted that flare C while housed within aperture 32 is in nesting engagement on the top face of flare A so that the physical contact between the two flares will cause ignition of flare C when the flame has reached the rear portion of flare A. It is believed obvious that as many flares as necessary can be mounted in sequence for a virtually infinite burning sequence without additional attention.

The material from which the tab member B is formed may be of any flexible material and preferably should be burnable so that there will be a minimum of residue remaining after use.

While one embodiment of this invention has been shown and described, it will be apparent that other adaptations and modifications can be made without departing from the true spirit and scope of the invention.

What is claimed:

1. A device for tubular type signal flares having a bottom end and an igniting opposite end comprising: a tabular member, means to mount a first end of the tabular member against the outer wall adjacent the bottom end of said flare with the tabular member bent to conform to the contour of the flare wall, means removably mounting the second end of said tabular member against the outer wall of said flare to maintain the tabular member in contoured juxtaposition with the outer wall of the flare, said tabular member being bendable adjacent said first end and to allow the member to swing transversely of the flare when the removable means is removed and said second end formed to define an aperture adapted to receive the igniting end of a similar second flare to support the igniting end of the second flare against the bottom end of said first flare whereby said second flare will be positioned for ignition from continued burning of the first flare.

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