A highway safety aid for automobiles, boats, trailers and the like, having an arm and hook for fitting securely over the upper edge of a glass window or the like, the arm extending outwardly from the window and receiving a channel formed in the edge of a sheet, indicia disposed on the sheet for an emergency sign, a further channel in the opposite edge of the sheet for receiving a rod tending to hold the sheet in out-stretched relation, and a back-supporting member resiliently snapped onto the channels containing said arm and rod for holding the edges of the sign in generally parallel relation.

6 Claims, 9 Drawing Figures
HIGHWAY SAFETY AID

CROSS-REFERENCES TO NON-RELATED PATENTS

This application is an improvement of the invention and disclosure found in each of the following patents:
MacLea, 3,024,552 — Mar. 13, 1962;
Wadsworth, 1,390,736;
Quinn, 1,859,599;
Davis, 2,445,606;
Madsen, 2,447,075;
Lawler, 2,933,841;
Flick, 2,534,117;
Frame, 2,546,855;
Boyd, 3,023,725;
Guthrie, 3,158,132.

BRIEF SUMMARY OF THE INVENTION

The present invention relates to an improved highway safety aid for use with automobiles, boats, trailers and the like, in which the safety aid is fitted over an upper edge of a window glass, or the like, and has an arm extending outwardly for receiving a sheet of flexible material on which characters or indicia are disposed for constituting an emergency sign. More particularly, the invention relates to providing channels in each side of the sheet for receiving a rod in the bottom channel tending to hold the sheet in outstretched relation, and the channel in the upper edge for receiving the rod which extends from the window, or the like. There is a back-supporting member disposed for resiliently snapping onto the channels containing the arm and the rod for holding the edges of the sign in open and parallel relation.

An object, therefore, of the invention is to provide a sign which is readily opened into a display position from a rolled and stored position, and which is not subject to being wrapped around the upper arm due to wind caused by inclement weather and drafts from passing vehicles.

Another object of the invention is to provide a sign or signal means which, while being highly wind-resistant when in position as described above, may be rolled into a relatively compact package for storage in a container when not in use.

The general object of the invention is to provide means whereby the necessity for a stranded operator of a vehicle, trailer, boat or the like, to get out of the vehicle and stand by the roadside may be avoided by using the emergency sign or signal means that is supported and conspicuously displayed from the vehicle window, or the like, with the window essentially closed, and which emergency sign may be completely assembled and installed from inside the vehicle by opening a window only a fraction of the size of the sign being displayed.

More particularly, there is provided an emergency sign comprising a sheet of flexible material having letters or indicia thereon and having a channel formed at the upper and lower edges of the sheet to receive a supporting arm and a support rod, respectively. At the support end of the arm, there is an inclined hook bent into the arm for supporting it from the upper edge of a window, or the like, or for being supported from the metal frame on the upper edge of such window. On the back of the sign, there is disposed a back-support means or bar for holding apart the arm and the rod from each other into a fixed relation so that they tend to become parallel to each other. Due to the support provided from the back-support means, the sheet is prevented from possibly being blown around and otherwise entangled with the main support arm.

It is a further object of the invention to provide the highway safety aid so that it can be rolled up and stored in a container that can be placed in a vehicle, or the like.

Another object of the invention is that an insert can be provided for the hook so that when the hook is not placed over a window having a metal frame, the hook need not be adjusted but the insert will provide spacing sufficient to securely affix the safety aid from the window, and when the window is closed, the hook will fit within the window sash of the vehicle.

Another feature of the invention is that there is provided a back-supporting means having resilient fingers at each end thereof for engaging with the arm and the rod, respectively, to assist in the erection of the safety aid into its flag position.

BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING

The above and other objects and advantages of the invention will become apparent upon full consideration of the following detailed description and accompanying drawings in which:

FIG. 1 is a side perspective view of an automotive vehicle showing the manner in which the highway safety aid according to the preferred embodiment of the invention is mounted on the vehicle window;

FIG. 2 is a front view of the highway safety aid in enlarged scale showing the manner in which it is mounted from an automobile window, or the like, shown in part in cross-section;

FIG. 3 is a cross-sectional view of a modification of the present invention showing an insert within the hook and in which the window is engaging the sash when the window is fully closed, according to another embodiment of the invention;

FIG. 4 is a cross-sectional view of an embodiment when the hook for engaging the window is sufficiently small in dimension and thus does not interfere with the closing of the window;

FIG. 5 is a cross-sectional view of a window showing the manner in which a hook of the highway safety aid directly engages the glass window according to another embodiment of the invention;

FIG. 6 is a side elevation view of the back-support member according to a preferred embodiment of the invention;

FIG. 7 is another embodiment of the invention showing the hook having a larger dimension and being hooked on a glass window having a metal frame;

FIG. 8 shows an end view of a plastic reducing insert that may be provided within the hook of the highway safety aid, according to another embodiment of the invention; and

FIG. 9 shows a generally perspective view of the arrangement of the sheet material rolled up on the arm which is a further embodiment of the invention, so that the rolled arrangement may be stored in a container (not shown).
DETAILED DESCRIPTION

Referring now to the drawings, there is shown a highway safety sign or aid 10 for almost any automotive vehicle, boat, trailer and the like, in which such vehicle has a generally transparent member 12 being positioned near an operating sitting position of such vehicle and is generally disposed in a near vertical relation. The aid 10 is made up of a substantially rigid arm 16 of metal such as aluminum, the arm having a generally rectangular cross-section and in which one of the flat sides of an end of the arm is bent to form a hook or re-entry portion 18 (FIG. 8) fitting securely over an upper free edge of said member 12. The re-entry portion 18 is seen to engage directly with the member 12 in FIGS. 2 and 5, whereas in FIGS. 3, 4 and 7, there is an insert or filler element 20 interposed between the member 12 and the re-entry portion 18. The aid 10, of course, may be constructed of a rigid plastic material suitable for the purpose.

The arm is formed to provide substantially adjacent the hook or re-entry portion 18 with a twist portion 24 extending through a turn or bend of about substantially 90°-110° conveniently constructed and arranged so that accounting for the general inclination of the transparent member 12, the free portion 26 of the arm is essentially horizontal when in use to the ground surface.

While it is found not entirely essential, the free portion 26 of the arm 16, as shown in its preferred embodiment, has an added turn or bend 30 for the purpose of orienting the flat side of the arm throughout the major part of the free portion generally vertically with respect to its aforesaid horizontal orientation.

A sheet of cloth or plastic material 34 flexible in nature that may be rolled into a scroll, as shown in FIG. 9, is provided at two opposite edges with hems 36 at the top and 38 at the bottom (FIGS. 2 and 6) forming channels 42 for receiving the free portion 26 of arm 16 in the top hem 36, and for receiving a structural rod 44 (FIGS. 6 and 9) in the bottom hem 38. The rod 44 is provided for tending to hold the sheet in generally outstretched condition for preventing the aid 10 from being blown or folded about the outstretched arm 16.

To assure that the above condition prevails under general conditions, there is provided a back-supporting member 60 (FIGS. 2 and 6) formed of resilient material having terminating resilient fingers 62, 64 at each end thereof for providing ease in engaging and disengaging assembly of the back-supporting member 60 with the material 34 containing the free portion 26 of the arm and the rod 44 when disposed in inserted relation within the channels 40, 42 respectively. The back-supporting member completes the function of disposing the aid in its generally outstretched condition for preventing the aid from being blown or folded about under general conditions.

In FIGS. 3 and 4, there is shown the manner in which the hook or re-entry portion 18 of the arm 16 may securely interfit into a groove 70 within a window frame or sash of a vehicle where the glass or transparent member 12 is received therein.

Additional embodiments of the invention in this specification will occur to others and therefore it is intended that the true spirit of the invention be limited only by the appended claims and not by the embodiments described hereinabove. Accordingly, reference should be made to the following claims in determining the true spirit of the invention.

What is claimed is:

1. A highway safety aid for automotive vehicles, boats, trailer units and the like, having a generally near vertical transparent member positioned near an operating sitting position, comprising a rigid arm of metal having its flat side bent near its end near the transparent member into a hook constructed to engage securely over the upper edge of the transparent member with the arm extending generally substantially horizontally outward therefrom;

said arm having a twist adjacent the hook through a turn of substantially 90°;

a sheet of flexible material forming a sign for displaying indicia thereon and having a hem along the top and bottom, respectively, for forming a channel to receive in the top channel the free length of said arm, and in the bottom channel a supporting rod tending to hold the sheet in outstretched condition for preventing it from being blown or folded around the arm; and

a back-supporting means detachably snapped at each end onto an intermediate point of the top channel containing the arm and the bottom channel containing the rod to fix the arm and the rod into generally parallel relation.

2. The invention according to claim 1 wherein said hook is generally inclined to engage said transparent member, and the configuration of the hook adapted to inter-fit into a groove in a window sash of said vehicle when the transparent member is received therein.

3. The invention according to claim 2 wherein an insert is fixedly interposed between the hook and the transparent member.

4. The invention according to claim 1 wherein the disassembly of the back-supporting means from the channels of the sheet provides that the sheet, the arm and rod and the back-supporting means may be rolled up for storage in a container.

5. The invention according to claim 1 wherein the hook engages with a transparent member having a metal frame thereon.

6. The invention according to claim 1 wherein the back-supporting means includes resilient fingers at each end thereof for providing ease in engaging with the arm and the rod, respectively.