

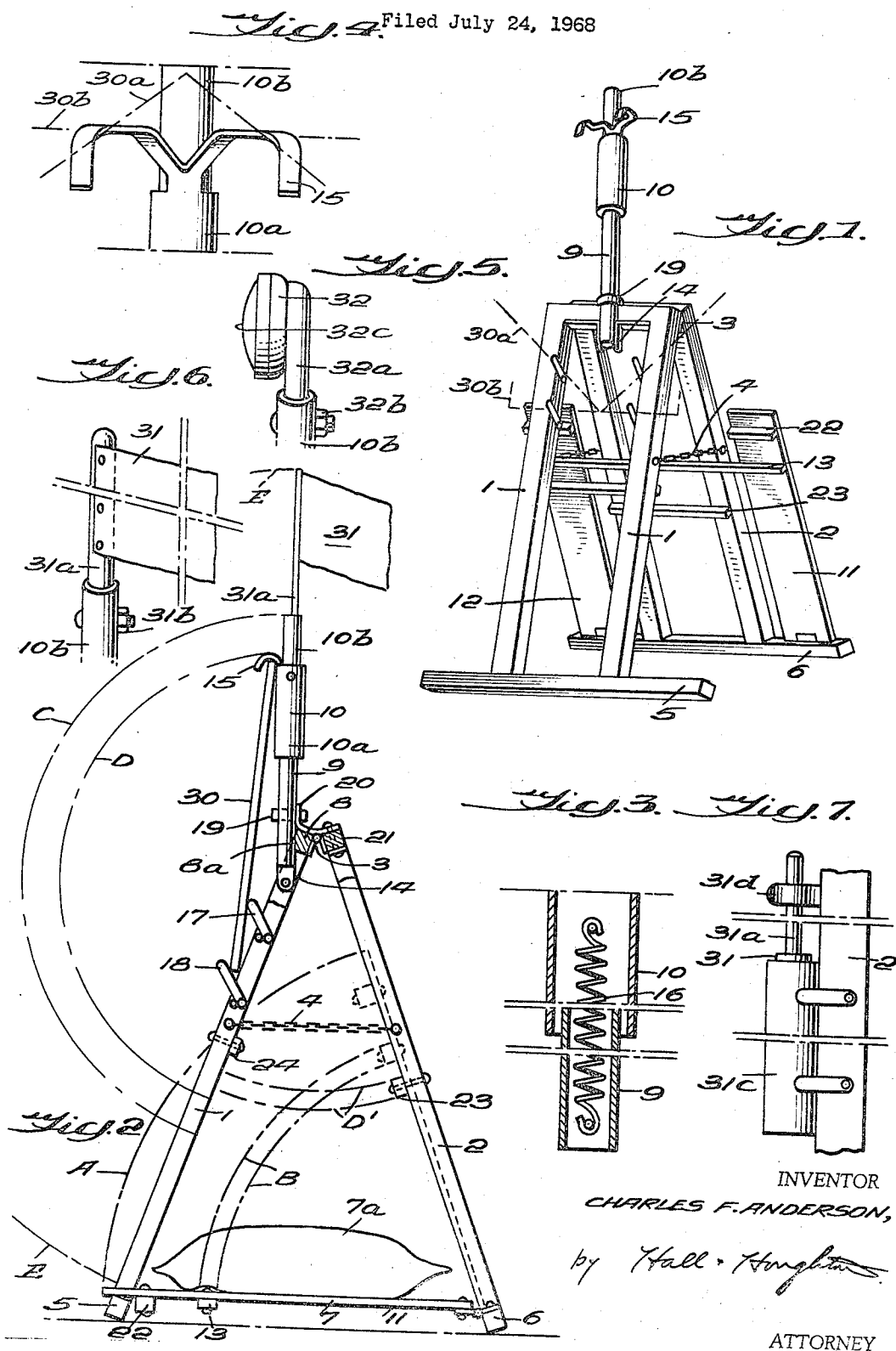
Jan. 20, 1970

C. F. ANDERSON

3,490,749

FOLDABLE BARRICADE AND DISPLAY HOLDER ESPECIALLY FOR HIGHWAY USE

Filed July 24, 1968



INVENTOR

CHARLES F. ANDERSON,

by *Hall & Houghton*

ATTORNEY

1

2

3,490,749

FOLDABLE BARRICADE AND DISPLAY HOLDER ESPECIALLY FOR HIGHWAY USE

Charles F. Anderson, 701 W. Main St.,

Decorah, Iowa 52101

Filed July 24, 1968, Ser. No. 747,333

Int. Cl. E04h 17/14

U.S. Cl. 256-64

7 Claims

ABSTRACT OF THE DISCLOSURE

A foldable barricade and display holder comprises as features: hinged members closing together bookwise and opening to inverted-V configuration and cooperable therewith; laterally extended foot portions and a hinged load supporting platform; means controlling the opening and closing thereof; a hinged display supporting means; sign supports cooperable with the latter; the supporting means carrying an adjustably positionable bracket; such bracket with cooperating elements of the members maintaining the assembly in closed position.

BACKGROUND OF THE INVENTION

Field of the invention

This invention relates to foldable barricade and sign and/or signal holders (Class 40-125) particularly, but not exclusively, for highway use, and aims generally to improve the same.

Description of the prior art

To date, in the practical art, devices of this class have been proposed of folding A-frame or "sandwich-board" construction, but such devices have had various deficiencies, and have failed to include various desirable features to better adapt them for their intended purposes.

SUMMARY OF THE INVENTION

By the present invention, an improved collapsible barricade and display holder means is provided, in which the frame is particularly adapted to cooperate with other parts for producing a rugged and efficient assembly that is readily erected and removed. In preferred embodiments, the assembly is especially adapted for loading for securing the device in place as a barricade not easily blown down by wind or upset by traffic movement; is especially adapted for housing all damageable parts thereof in a secure and protected manner; and is particularly adapted for assuming a flat configuration and occupying a minimum depth of space when collapsed for storage or transportation.

BRIEF DESCRIPTION OF THE DRAWINGS

In the accompanying drawings of illustrative embodiments of the invention:

FIG. 1 is a perspective view of a preferred embodiment partially erected, with modes of supporting signs and signals thereon indicated in phantom;

FIG. 2 is a side elevation of such embodiment, partly cut away, erected and provided with a sign, flag and loading means;

FIG. 3 is a detail of the telescoping support member of said embodiment;

FIG. 4 is a detail of the sign securing means of said embodiment;

FIG. 5 is a detail of a flasher mounting cooperable with said embodiment;

FIG. 6 is a detail of a flag mounting means cooperable with said embodiment;

FIG. 7 is a detail of a flag storing means cooperable with said embodiment.

DESCRIPTION OF PREFERRED EMBODIMENTS

In the forms shown in FIGS. 1 and 2 of the drawings, the foldable device of the barricade and display holder class is particularly adapted for displaying signs of various sizes and shapes, especially for temporary or emergency purposes, and its construction is such that it is particularly compact for storage and transportation and readily erected and re-folded, and particularly adapted to resist being blown down by wind or traffic movement.

In this form, the stand comprises a frame made up of front and back frame members 1 and 2 which are hinged together at their upper ends 3 to fold into a closed position in substantially parallel juxtaposition to each other, and to open into an inverted-V configuration as shown. Means, one form of which is shown as a chain 4, is provided which is inter-engaged with said frame members 1 and 2 for limiting the extent of opening of said frame.

The frame members 1 and 2 are provided with transversely extending bases or foot portions 5 and 6, which in the preferred form extend laterally at both sides of the frame members, outwardly beyond the remainder or rectangular portions of the frames 1 and 2 in outrigger fashion as shown in FIG. 1. The outrigger-like foot portions thus assist in widening the base and stabilizing the support of the frame when erected. In addition, the bases 5 and 6, respectively, form a support for a weighting platform means 7, which is hinged to the lower part of one of the frame members, preferably to the back base 6 as shown, for folding into a closed position in substantially parallel juxtaposition to said frame member (as indicated in dotted lines and by the dotted arc A in FIG. 2) and for opening into a position to bridge across said foot portions (as indicated in solid lines in FIG. 2), and which in the latter position is adapted to be loaded by weight means 7a in the form of sand bags, cement blocks, rock, timber, etc., thus making it unlikely that the assemblage will be blown down under adverse conditions. Thus, a great amount of weight can be added quickly, as circumstances require, although the device may be used with or without weighting.

In the preferred form shown, the platform 7 is formed in two sections 11 and 12 hinged to the outrigger-like lateral extensions of the base 6 at the respective sides of the frame 2, and respectively bridged, in open position to the outrigger lateral extensions of the base 5 the platform sections 11 and 12 lying laterally outwardly of the members 1 and 2, as shown in FIG. 1. The platform 7 also comprises a cross member means 13 which lies between the frame members 1 and 2 and swings upwardly and is embraced therebetween (as indicated by dotted lines B in FIG. 2) in the closed position of the frame for retaining the platform 7 in substantially parallel juxtaposition to the frame members 1 and 2 in the closed position thereof. Furthermore, in this preferred form, the cross member means 13 are in the form of a bar which connects the two platform members together so that they act in unison. This bar 13 thus enables manipulation of the divided platform one side of the frame, and transfers the effect of a load applied to one platform section, e.g., 11, at one side of the frame to the other section, e.g., 12, at the other side of the frame, adding in stabilizing the assembly when it is not convenient to apply loads to both sides of the frame.

A display supporting means, shown as formed of two telescoping members 9 and 10, is hinged to the upper part of one of the frame members, herein the member 1, for swinging (as indicated by dotted arc C in FIG. 2) into a

closed position in substantially parallel juxtaposition to said frame member and for opening into a position extending vertically above the upper ends of the frame members 1 and 2. In the form shown, the member 9 is hinged to a holder or bracket 14 mounted underneath the top cross member 8 of frame 1, and the top frame member 8 is recessed at 8a to provide for vertical disposal of the means 9-10 while allowing the hinge therefor to be positioned within the outer plane of the member 1 and quite close to member 8. The telescoping member 9 which is hinged to the bracket 14 may be either smaller or larger than the member 10. In the preferred form, however, the member 10 is made the larger so that it will depend skirt-wise around the member 9, as is illustrated in FIG. 3, to minimize the washing of rain and dirt into the telescoping sections. The upper section 10 in the form shown, is provided with a sign clamp 15 in the form of a bifurcated or winged and hooked bracket the legs of which are spaced apart for engaging and holding onto the top of any sign 30 which may be inserted therein, whether of rectangular or diamond shape, as indicated in FIG. 2, and in phantom at 30a and 30b in FIGS. 1 and 4. The sign clamp or bracket 15 is located a short distance from the extremity of the sign supporting means 10, i.e., at the top of the section 10a thereof in the form shown, and the part 10b protruding beyond the clamp 15 is preferably adapted as a flag or flasher socket, as hereinafter more fully described.

As is best shown in FIG. 3, the telescopic sections 9 and 10 in the illustrative embodiment are drawn together under tension by the bias of a tension spring 16 attached to pins passing through said sections, which pins may also serve to assemble the bracket carrying portion 10a and the remainder 10b of the member 10, and to form the hinge of the bracket 14, if desired. When the larger member 10 is positioned uppermost, as illustrated, the socket portion 10b is preferably sealed in the bracket carrying portion 10a, to prevent entry of rain, wind, and dust between them. If member 10 is made to telescope inside member 9, as above described, the bracket 15 can be secured thereto in any suitable way, as by the spring anchoring pin, of desired.

For cooperating with the sign clamp 15, the frame is provided, preferable on the side thereof on which said hinged display supporting means 9-10 is swingable (as indicated in FIG. 2 by the dotted line arc C) with complementary bracket or sign supporting means 17, 18 which preferably are mounted in laterally spaced pairs as shown, to adapt them for supporting either rectangular or diamond shaped signs or the like, as best illustrated in FIG. 1. Such means 17, 18 may be of any suitable form, such as dowels driven into the frame member, notches cut therein, or pivoted fingers adapted to lie below the outer plane of the member 1 for storage and to be swung out against stops, as shown, for use. The forms which do not project beyond the outer plane of the frame during storage and transportation are preferred.

Means is provided for holding the display supporting means 9, 10 in its upright opened position. In the arrangement of FIG. 6, this means may be comprised by the sign 30 clamped between the fixedly positioned brackets 17, or 18, and the adjustably positioned clamp 15, which sign 30 in such arrangement becomes an angled brace for propping the display supporting means 9, 10 in its vertically extended position. Alternatively, or additionally, the means for holding the display supporting means 9, 10 in its upright position may comprise releasably engageable latch and keeper means 19, 20, shown as a sliding sleeve and lug or fastener strip, one carried by the frame and the other by the display supporting means. In the form shown, the fastener strip 20 is solidly secure to the upper cross member 21 of the back frame member 2 and extends across the upper cross member 8 of the front frame member 1, and thence upwardly, all in position so that

when the sleeve 19 is engaged therewith the display supporting means 9, 10 will be held vertical, and the front and back frame members 1 and 2 will be held at a fixed angle, as shown in FIG. 2. As an alternative or additional means for holding the frame members open, and for also reinforcing the platform elements 11 and 12, the platform near its free end or ends may be provided with block or cleat means 22 for engaging with the foot portion or portions of the frame member 5 when the frame is in open position to obstruct movement of the frame member toward closed position during use or while moving the open assemblage from one location to another.

Means is also provided for securing the frame 1, 2, platform 7 and display supporting means 9, 10 in flat folded position for storage or transportation. To this end, in the illustrative embodiment the frame member 1 is provided with a cross-bar or stop 24 against which the telescoping members 9, 10 rest when in folded position, and the frame member 2 is provided with a cross-bar or keeper 23 positioned (as indicated by the dotted arc D' in FIG. 2) to be engageable by the legs of the bracket member 15 which swings down into position to engage the same (as indicated by the dotted arc D in FIG. 2). Thus, when the sign 30 is removed and the sleeve 19 is disengaged the platform pieces 11 and 12 can swing upwardly, sections 1 and 2 can then fold together, and by swinging down the means 9, 10 to engage the cross-bar 24 and hooking the bracket 15 on the cross-piece 23, all parts of the assembly 1, 2, 7, 9-10 may be locked in substantially parallel juxtaposition between the planes of the outer faces of the members 1 and 2, greatly facilitating handling, stacking, and storage.

As above mentioned, the portion 10b of the display supporting means 9, 10 is preferably formed as a socket for supporting a flag 31 (shown in FIGS. 2 and 6) or a flasher signal 32 (FIG. 5). The flat stick or handle 31a may simply be slipped into the socket, as shown in FIG. 2, or if sufficiently short to clear the member 5 when in folded condition (as indicated by dotted arc E-E in FIG. 2) may be rather permanently secured in the socket, as by nut and bolt means 31b (FIG. 6). The flasher device 32 may be similarly mounted and with the handle or stick 32a constituting its supporting means is preferably sufficiently short to clear the member 5, as aforesaid. The flasher is mounted in the socket 10b in such orientation that when the members 9, 10 are swung downwardly the flasher will project inwardly from the stick 32 and lie entirely between the planes of the outer faces of frame members 1 and 2 and within the perimeters thereof as indicated in FIGS. 2 and 5, so that its lens face 32c will be afforded maximum protection against breakage.

For carrying a spare flag, or for carrying a flag which is too tall to clear the member 5, one of the frame members 1 and 2 may be provided on its inner face, to lie between the outer planes of the members 1 and 2 when folded, with a flag retaining means. As shown in FIG. 7, the means may comprise a cup-like member 31c to receive the rolled up flag and/or a clip member 31d to grasp and to hold the flag or flag stick.

It will be appreciated that the device can be adapted for holding two signs facing in opposite directions by adding duplicate holding means to the rear frame member 2, and that it can be used as a barricade only if desired, without mounting a sign, but preferably with a flag or flasher carried by the display supporting means 9-10 as aforesaid.

While there have been described herein what are at present considered preferred embodiments of the invention, it will be obvious to those skilled in the art that minor modifications and changes may be made without departing from the essence of the invention. It is therefore understood that the exemplary embodiments are illustrative and not restrictive of the invention, the scope of which is defined in the appended claims.

I claim:

1. A foldable device of the barricade and display holder class comprising, in combination
 - (a) a frame comprising front and back frame members hinged together at their upper ends to fold into a closed position in substantially parallel juxtaposition to each other, and to open into an inverted-V configuration,
 - (b) means inter-engaging said frame members for limiting the extent of opening of said frame,
 - (c) a display supporting means hinged to the upper part of one of said frame members for folding into a closed position in substantially parallel juxtaposition to said frame member and for opening into a position extending vertically above the upper ends of said frame members, and
 - (d) means for holding said display supporting means in its opened position comprising sign supporting means on the side of the frame on which said hinged display supporting means swings, a sign supported on said sign supporting means, and an adjustably positionable sign clamp carrier by said display supporting means to engage and hold said sign which thus becomes an angled brace for propping said display supporting means in its vertically extended position.
2. A foldable device as claimed in claim 1 in which the sign supporting means carried by the frame is in the form of a pair of laterally spaced supporting elements, and in which the sign clamp carried on the display supporting means is a bifurcated clamp the legs of which are spaced apart, whereby signs of different shapes may be accommodated.
3. A foldable device as claimed in claim 2, in which said bifurcated clamp is spring biased into sign engaging position.
4. A foldable device of the barricade and display holder class comprising, in combination
 - (a) a frame comprising front and back frame members hinged together at their upper ends to fold into a closed position in substantially parallel juxtaposition to each other, and to open into an inverted-V configuration, and
 - (b) means inter-engaging said frame members for limiting the extent of opening of said frame, and particularly characterized in that
 - (c) said frame members have transversely extending foot portions projecting outwardly beyond the remainder of the frame members in outrigger-like fashion thus widening the base and stabilizing the frame when erected, and
 - (d) said frame members are provided with platform means hinged to one of said outrigger-like laterally projecting foot portions and lying laterally outside the remainder of said frames for folding into a closed position in substantially parallel juxtaposition to said frame member and for opening into a position to bridge across said foot portions in out-rigger like fashion to the remainder of said frame members, and adapted to support a load bearing on said outrigger like foot members to anchor said device in open position.
5. A foldable device of the barricade and display holder class comprising, in combination
 - (a) a frame comprising front and back frame members

- hinged together at their upper ends to fold into a closed position in substantially parallel juxtaposition to each other, and to open into an inverted-V configuration,
 - (b) means inter-engaging said frame members for limiting the extent of opening of said frame,
 - (c) a display supporting means hinged to the upper part of one of said frame members for folding into a closed position in substantially parallel juxtaposition to said frame member within the perimeters thereof and for opening into a position extending vertically above the upper ends of said frame members,
 - (d) means for holding said display supporting means in its opened position, and
 - (e) a flasher device carried by said display supporting means, said display supporting means and flasher device being of such combined height that when said display supporting means and frame are moved to their closed position, said flasher device is housed between the outer planes of said frames within the perimeters thereof.
6. A foldable device as claimed in claim 1, said outrigger like platform comprising a cross-member which extends inwardly between said frame members and is embraced therebetween in abutting relation thereto in the closed position of said frame for retaining and laterally outwardly positioned platform in substantially parallel juxtaposition to said frame member in the closed position thereof.
7. A foldable device as claimed in claim 1, said foot members extending laterally in out-rigger fashion at both sides of said frame members, said platform being in two sections respectively hinged to the two outrigger like foot member extensions of one of said frame members, and respectively bridging, in open position, to the two outrigger like foot member extensions of the other of said frame members in out-rigger fashion, and said platform comprising a cross-member interconnecting the same and lying between said frame members and embraced therebetween in abutting relation thereto in the closed position of said frame for enabling manipulation or loading of both of said outrigger-like platform sections from one side of said frame while providing for retaining them in substantially parallel juxtaposition to said frame members in the closed position of the frame.

References Cited

UNITED STATES PATENTS

1,712,756	5/1929	Dixon	248—460 X
2,090,157	8/1937	Smith	248—460 X
2,090,783	8/1937	Chinn.	
3,015,804	1/1962	Nunn	256—64 X
3,080,139	3/1963	Caprioli	248—46
3,165,847	1/1965	Gunderson.	

FOREIGN PATENTS

612,211 11/1948 Great Britain.

DENNIS L. TAYLOR, Primary Examiner

U.S. Cl. X.R.

40—125; 116—63