Jan. 30, 1962 R. L. BUXMAN 3,018,784

VENTILATED ROOFS FOR BOATS

Filed Sept. 29, 1958

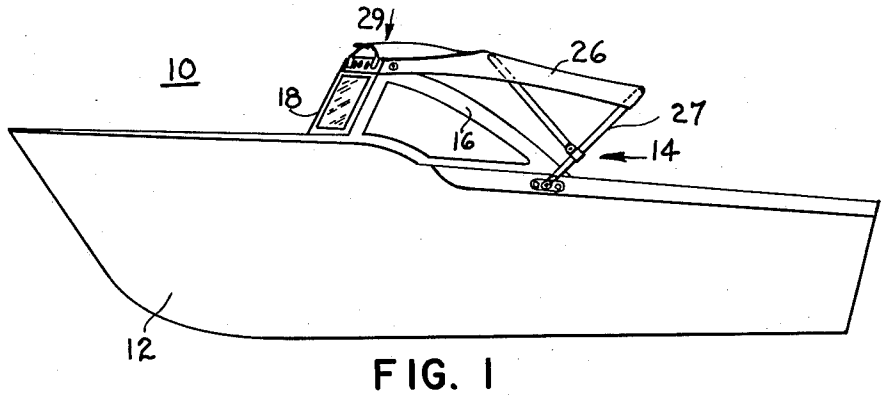


FIG. 1

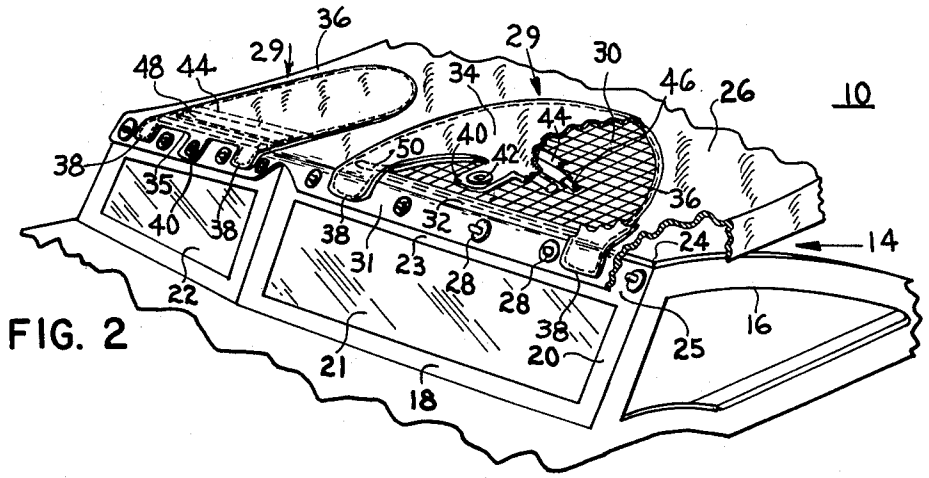


FIG. 2

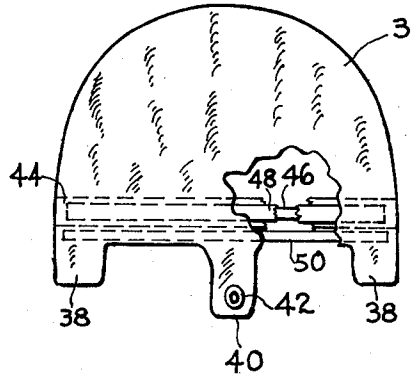


FIG. 3

INVENTOR.
RICHARD L. BUXMAN
BY Robert A. Green
ATTORNEY

United States Patent Office 3,018,784
Patented Jan. 30, 1962

3,018,784

VENTILATED ROOFS FOR BOATS

Richard Louis Buxman, Howe St., Point Pleasant, N.J.

Filed Sept 29, 1958, Ser. No. 764,030
3 Claims. (Cl. 135—6)

This invention relates to protective roofs for open-cockpit boats and particularly to such roofs having adjustable air scoops and ventilating means.

Generally, motorboats and the like which have open cockpits are provided with canvas tops for protection from sun and weather. However, it has been found that canvas top of the type which are presently in use have no satisfactory means for ventilating the cockpit and for providing a flow of air therethrough. In particular, the industry has been confronted by the problem of providing suitable air scoop and ventilating means which are properly functional both when a boat is at rest and when it is proceeding at high speed.

The principles and objects of the present invention are concerned with the provision of an improved roof for open-cockpit boats and a ventilating arrangement therefor.

Briefly, a typical protective roof for an open-cockpit boat embodying the invention includes a large area main sheet of canvas or the like which covers the cockpit of the boat and is supported both on a suitable frame mounted on the boat and on the windshield of the boat. According to the invention, air scoop and ventilating means are provided which allow air to circulate through the cockpit with the roof in position. According to the invention, the ventilating means includes one or more panels of screen material which are sewed into and comprise an integral part of the canvas top adjacent to the windshield. An auxiliary panel of canvas having an area slightly larger than that of the screen is sewed over the screen on the outer surface of the canvas. The auxiliary panel thus comprises a cover for the screen. The greater portion of the front edge of the panel adjacent to the windshield is not sewed to the main sheet and is left free to be raised and lowered with respect to the screen. However, the end portions of the front edge of the auxiliary panel project beyond the screen and over the top edge of the windshield and are secured either to the portion of the canvas which extends over the top edge of the windshield or to this portion of the windshield itself. Thus, when the flap is open and the boat is running against the wind, the flap remains open and is not collapsed by the wind. The front free edge of the auxiliary panel is provided with a pocket in which is positioned a length of a resilient metallic reinforcing member. The reinforcing member is substantially of the same length as the pocket. The reinforcing member is preformed so that, in its normal state, it is curved. Thus, in the pocket it curves away from the screen and holds the free end of the auxiliary panel away from the windshield and the screen so that air may enter through the space provided thereby. Auxiliary closure means are provided on the auxiliary panel by which the panel may be closed over the screen and secured in position. When the panel is closed, the resilient metal strip is flattened and held under considerable tension. Thus, when the closure means is released, the cover flap readily flies open and the air scoop is available for operation.

The invention is described in greater detail by reference to the drawing wherein:

FIG. 1 is a side elevational view of a boat having a canvas roof embodying the invention;

FIG. 2 is a perspective view, partly in section, of a portion of the canvas roof of FIG. 1; and

FIG. 3 is an enlarged plan view, partly in section, of the cover flap of the air scoop of the invention.

Referring to the drawings, the principles of the invention are applicable to canvas tops for many types of boats. In a typical construction, a boat **10** includes a hull **12** and a cockpit **14** defined by side members **16** (one is shown) and a front windshield **18**. The windshield **18** includes a frame **20** in which two windows **21** and **22** are mounted, and the frame includes a top frame member **23**. The top frame member **23** has a top edge **24** and a front edge **25**. The cockpit thus formed has an open top which is covered by a large-area, air-tight and waterproof sheet **26** of canvas or the like. The canvas roof **26** is supported by a suitable tubular metallic frame member **27** and is secured to the sides and back of the cockpit and to the top of the windshield by suitable snap fasteners **28**. The front end of the canvas roof **26** includes an edge portion **31** which extends over the top edge **24** of the top frame member **23** and across at least a portion of the front edge **25** thereof on which the snap fasteners **28** are mounted.

According to the invention, air scoop and ventilating means **29** are provided in the canvas sheet adjacent to the windshield. One or more of such ventilating means may be provided, depending on the size of the canvas sheet itself. The ventilating means includes a generally semi-circular panel **30** of screening material which comprises an integral portion of the main canvas sheet **26**. The sheet of screen material **30** is sewed into, or otherwise suitably secured to the main canvas sheet. The screen panel **30** includes a generally straight front edge **32** which is parallel to the windshield and which is positioned closely adjacent thereto. The remainder of the periphery of the screen extends rearwardly from the windshield and may be semicircular or may have any other suitable shape.

An auxiliary air-tight flap or panel **34** of canvas or the like is provided which has the same general shape as the screen and is adapted to serve as a water-tight cover therefor. Thus, the flap is slightly larger in area than the screen. The auxiliary flap **34** includes a front or leading edge **35** and a curved portion **36**. The flap **34** is positioned with its front edge aligned with the front straight edge **32** of the screen **30** and with its curved edge aligned with the corresponding portion of the screen. The curved portion of the auxiliary flap is sewed, or otherwise secured, to the main canvas sheet **26**.

The front edge **35** of the flap **34** is irregular in shape and includes comparatively short projecting end portions **38** which extend forwardly over the top of the windshield and are sewed or otherwise secured to the portion of the canvas sheet which covers the front edge **25** of the top member **23** of the windshield. The end portions **38** are provided and secured in this way to insure that the flap remain open when the boat is running into the wind. Thus, the end portions need only be long enough to perform this function. As an example, with a flap having a front edge length of about 17 inches, the end portions **38** may be about two inches long. It has been found that if these end portions are not provided, the flap may collapse and cover the screen when the boat is in rapid motion. Between the two end portions **38**, the front edge of the flap **34** extends rearwardly so that it lies closely adjacent to the front edge of the screen and so that it, in effect, just covers the screen when lying flat. This portion of the front edge of the flap **34** is designed so that the screen is not obstructed when the flap is in its open position. A locking tab **40** extends forwardly from about the center of the front edge of the flap **34** and carries a locking member **42** adapted to engage a snap fastener **28** on the front of the canvas. Thus, the flap may be held closed tightly over the screen and provides a water-tight closure. In FIG. 2, one flap is shown open and one is shown closed.

The front edge of the auxiliary flap **34** includes a concealed pocket which extends along the length of the front edge thereof. The pocket may be formed by an auxiliary strip of canvas **44** sewed, or otherwise secured, to the under side of the front of the flap. A strip **46** of resilient metal is positioned in the pocket and has a total length substantially equal to the total length of the pocket. The strip is preformed so that it is curved in shape and, as a result, unless forcibly straightened, it tends to adopt its curved form and bend upwardly away from the screen **30**. The strip **46** is oriented in the slot so that its natural tendency is to bend upwardly away from the screen and thus hold the front edge portion of the flap **34** away from the windshield. In this position of the auxiliary flap **34**, air may enter the cockpit through the screen **30**. When the flap is thus open and the metal strip **46** is bent, its ends do not project into the extreme ends of the pocket. When it is desired to close the flap, pressure is applied to the metal strip which is thereby straightened and its ends extend into the extremities of the pocket and the flap is closed in this position by the locking tab **40** being secured to the appropriate fastener **28** on the windshield.

The metal strip **46** is preferably enclosed in a plastic sheath **48** so that the strip slides freely in the pocket and does not tear the canvas.

If desired, the seal between the closure flap **34** and the screen **30** may be reinforced by the provision of a length of tubular insulating material **50**, for example, rubber or the like provided adjacent to the leading edge of the flap **34** and on the botom surface thereof. The insulating tube has substantially the same length as the front end of the flap and provides a tight seal between the flap and the screen when the flap is closed.

It is to be understood that many of the features described above may be varied as desired within the scope of the invention. For example, the top sheet may be made of other materials than canvas, such as plastic, leather, or the like. The top may also be convertible or fixed. In addition, the shapes of the screen and cover flap may be other than semicircular as described and shown. The tie members for closing the flap over the screen may take many different forms, and the particular shape is not critical.

What is claimed is:

1. A roof for an open cockpit on a boat which has a windshield having

a top edge to which the roof is secured,

said roof comprising a large-area sheet of air-tight material having a front end including an edge portion adapted to fit over the top of the windshield and adapted to be secured thereto,

a screen panel in said sheet near the front end thereof,

a movable flap covering said screen panel and having a front edge adjacent to the front end of said sheet,

all of the edge of said flap except the portion comprising the front end being secured to said sheet,

a pocket formed in said flap at the front thereof adjacent to and parallel to said edge portion,

a normally curved flexible metal strip disposed within said pocket and adapted to bend away from the sheet and to hold the front edge of said flap up and away from said screen to allow air to pass therethrough,

said strip also being capable of being straightened out to allow said flap to meet and cover said screen panel to prevent air from flowing therethrough,

a pair of tabs spaced apart at the front end of the flap and extending forwardly therefrom,

said tabs being secured to the edge portion of the large-area sheet which overlays the top of the windshield,

said tabs serving to prevent the movable flap from collapsing under the pressure of air when the boat is running at high speed against a strong wind,

and a locking tab fastened to said flap and adapted to be secured to said sheet to hold said flap down and closed over said screen.

2. The roof defined in claim 1 and including a strip of insulating material secured to the front end of said flap adjacent to said pocket and adapted to provide a seal between the movable flap and the large-area sheet when the flap is closed.

3. The roof defined in claim 1 wherein said movable flap is generally semi-circular in form and includes a curved portion and a straight portion,

the curved portion of its periphery being secured to the large-area sheet and the straight portion being free,

said tabs extending from the sides of the straight portion of the flap adjacent to the curved portion thereof.

References Cited in the file of this patent

UNITED STATES PATENTS

1,242,541	Gage	Oct. 9, 1917
1,531,622	Parsons	Mar. 31, 1925
1,792,191	Smith	Feb. 10, 1931
2,230,454	Friesner et al.	Feb. 4, 1941
2,391,871	Benson	Jan. 1, 1946
2,821,989	Shepard	Feb. 4, 1958
2,833,296	Woodruff	May 6, 1958
2,839,986	Herman	June 24, 1958

FOREIGN PATENTS

207,382	Great Britain	Nov. 29, 1923