Oct. 2, 1956 R. S. WOODRUFF, SR 2,764,765

BOAT COVER

Filed Nov. 22, 1954. 3 Sheets-Sheet 1

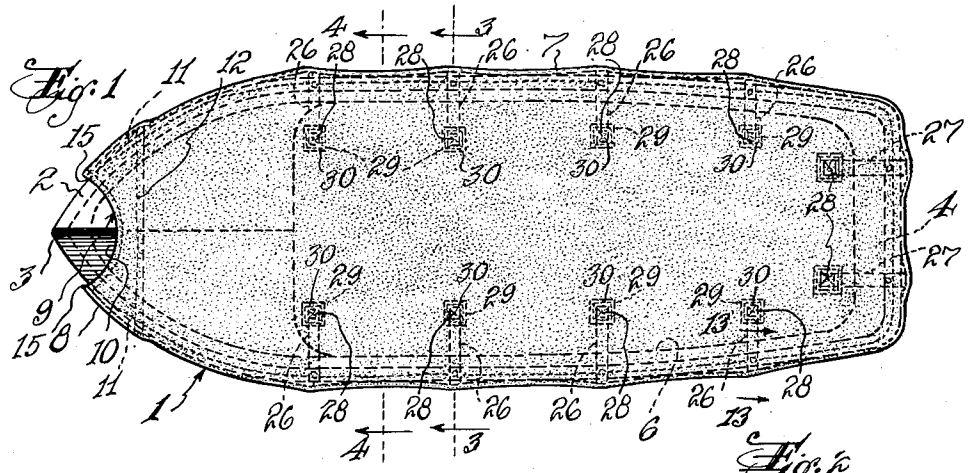


Fig. 1

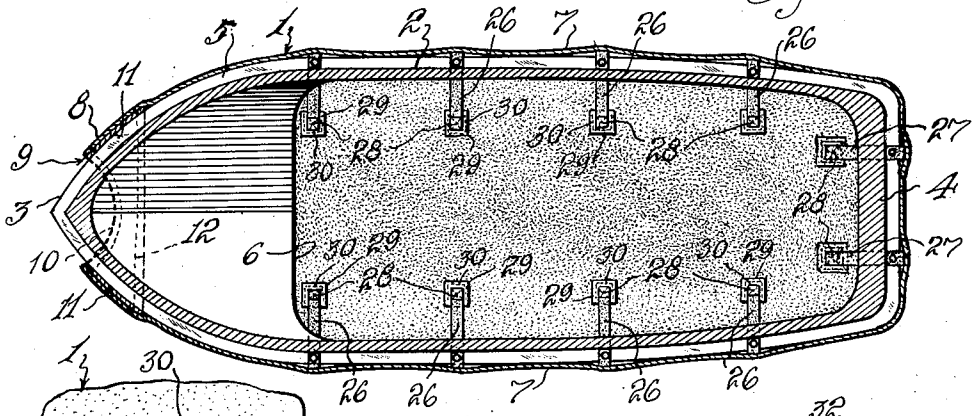


Fig. 2

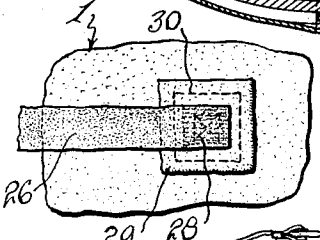


Fig. 11

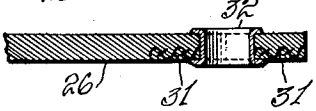


Fig. 12

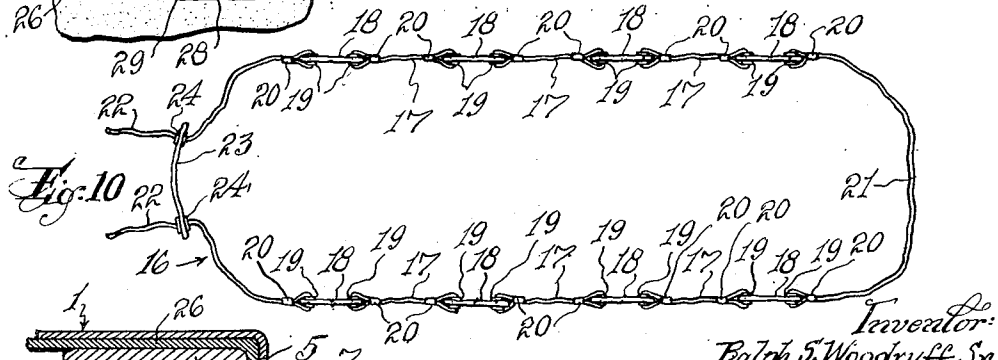


Fig. 10

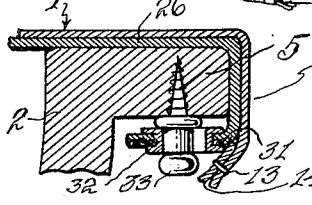


Fig. 13

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Fig. 3

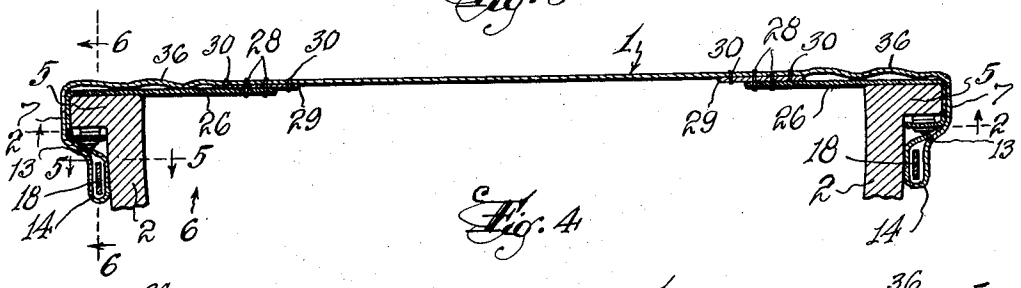


Fig. 4

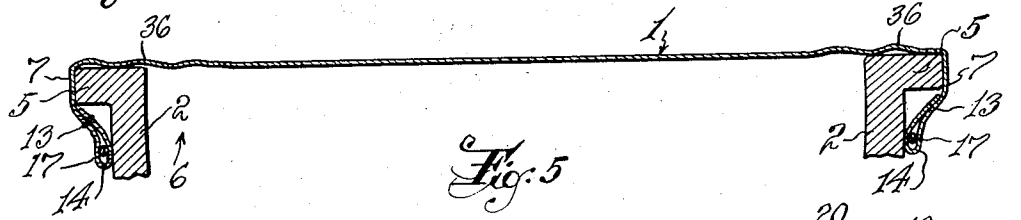


Fig. 5

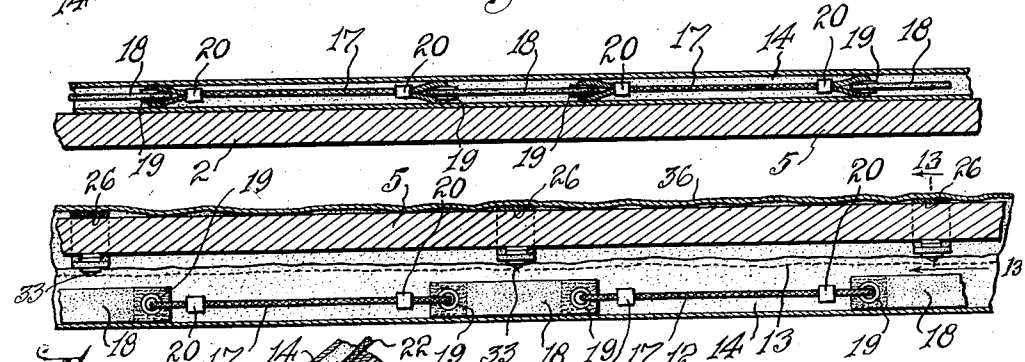


Fig. 6

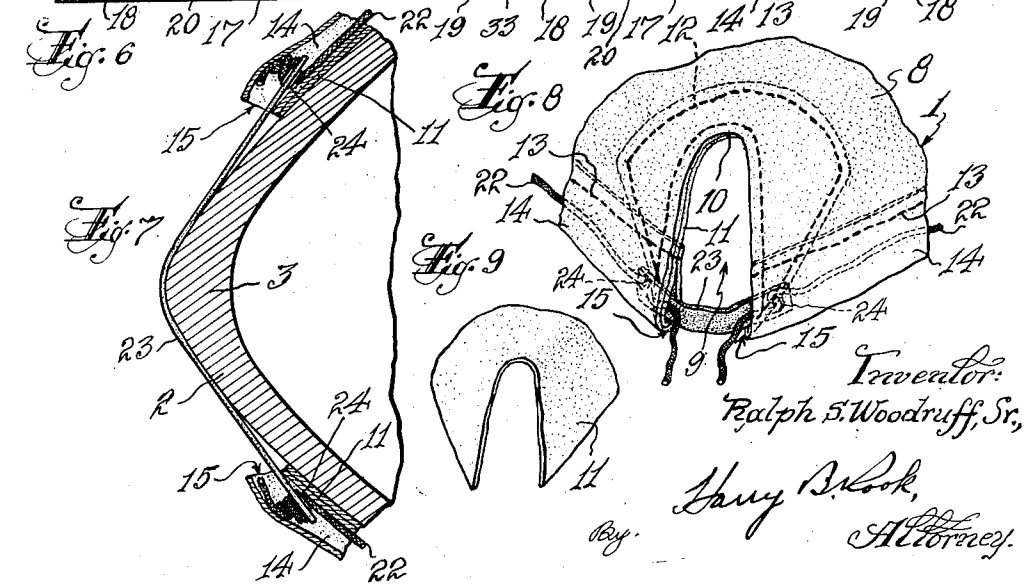


Fig. 7

Fig. 8

Fig. 9

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Fig. 14

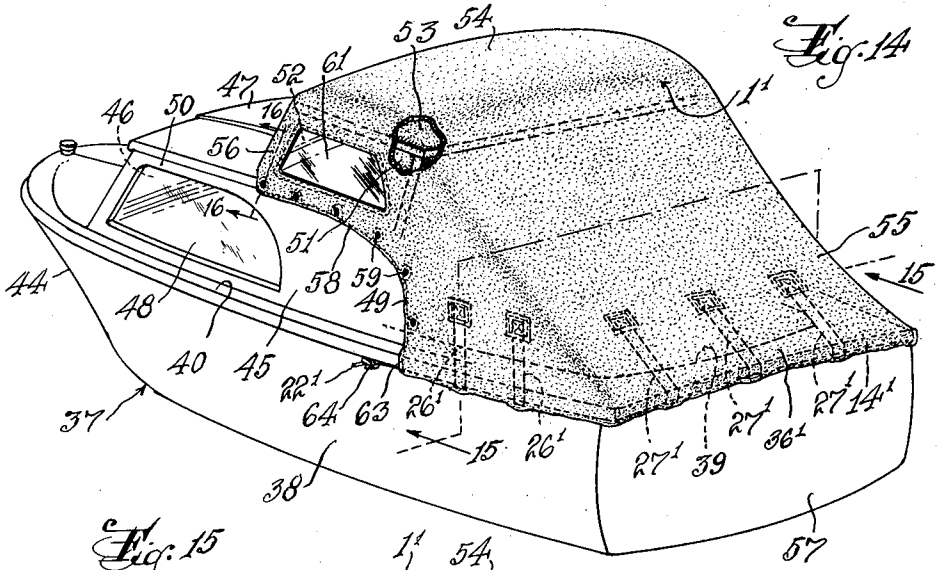


Fig. 15

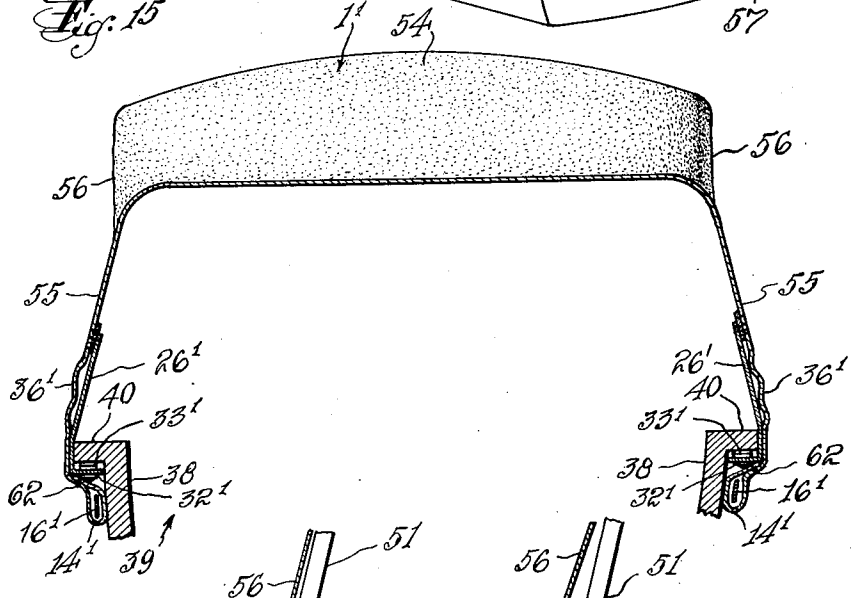


Fig. 16

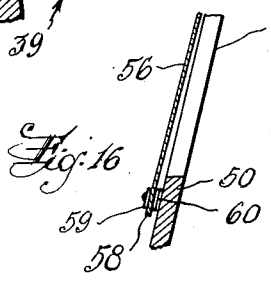
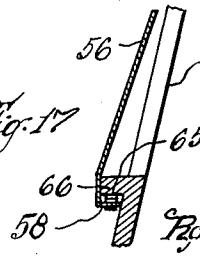


Fig. 17



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BOAT COVER

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Application November 22, 1954, Serial No. 470,204

4 Claims. (Cl. 9—1)

This invention relates to protective covers for vehicles and more particularly to a cover for a boat and the like.

When vehicles, such as boats, are not in use it is desirable to cover them in order to protect them from damage by the elements, namely, rain, sleet, snow and sun. Such covers are usually formed of fabric, such as canvas, to fit over the cockpit in the boat and are usually detachably fastened to the boat by complemental fastening elements along the marginal edges of cockpit of the boat and along the marginal edge of the cover. Fabric covers, however, when applied to the boat and become wet tend to shrink, resulting in tearing the cover and sometimes damaging and disconnecting the fastening elements so that the covers become loose and ineffective.

The present invention aims to overcome this difficulty by compensating for such shrinkage so that there shall be a minimum of stress or strain on both the cover and the fastening elements during such shrinkage and the cover shall remain in protecting position on the boat without local tearing of the cover.

Another object of the invention is to provide a cover for a boat which can be readily applied to and removed from the boat and which shall be not only adjustable to fit boats of different overall dimensions but also may be snugly fitted thereto at the points of principal contour variations.

Yet another object of the invention is to provide a boat cover which utilizes the customary pointed bow of the boat as a centering means for facilitating installation of the cover.

A still further object is to provide novel means for tensioning the cover both transversely and longitudinally of the boat when the cover is in position on the boat.

It is further proposed to produce a boat cover which is simple and durable in construction and which can be manufactured and sold at a reasonable cost.

Other objects and advantages of the invention will be apparent from the description thereof to follow taken in connection with the accompanying drawings in which—

Figure 1 is a top plan view of a motor boat with a cover embodying one form of my invention applied thereto.

Figure 2 is a horizontal sectional view taken on the plane of the line 2—2 of Figure 3 and looking in the direction of the arrows.

Figure 3 is an enlarged vertical sectional view taken on the plane of the line 3—3 of Figure 1.

Figure 4 is a similar view taken on the plane of the line 4—4 of Figure 1.

Figure 5 is a horizontal sectional view taken on the plane of the line 5—5 of Figure 3.

Figure 6 is an enlarged vertical sectional view taken on the plane of the line 6—6 of Figure 3 and looking in the direction of the arrows.

Figure 7 is an enlarged horizontal sectional view of the bow of the boat showing the cover in fastened condition thereon.

Figure 8 is an enlarged view in perspective showing the front portion of the cover with the fastening harness untied.

Figure 9 is a view in perspective of a fragment of the reinforcing insert shown in Figure 8.

Figure 10 is a view in plan of the cover fastening harness of Figure 1.

Figure 11 is an enlarged fragmentary view in plan showing the manner of attaching one end of an elastic tensioning strap to the cover.

Figure 12 is an enlarged view in section through the center of the other end of the elastic strap of Figure 11.

Figure 13 is an enlarged detail sectional view showing the fastening elements for fastening a tensioning strap, taken on the line 13—13 of Fig. 6.

Figure 14 is a view in perspective of a cabin type boat with a cover embodying a modification of the invention applied thereto.

Figure 15 is an enlarged view in section taken on the plane of the line 15—15 of Figure 14 and looking in the direction of the arrows.

Figure 16 is an enlarged view in section taken on the plane of the line 16—16 of Figure 14 and looking in the direction of the arrows.

Figure 17 is an enlarged view in section similar to Figure 16 but showing a modified arrangement for fastening the cover to the boat.

Referring to the drawings in detail and particularly to Figures 1 to 13, inclusive, a cover 1 embodying the first form of the invention is illustrated as applied to a known motor boat 2 having the usual pointed bow 3, stern 4, gunwale 5 and cockpit 6. Preferably the cover is made of a sheet of flexible fabric such as canvas. The cover is elongated and approximately corresponds in shape to the top side of the boat, the cover having a peripheral edge portion 7 that extends at right angles to the general plane of the body of the cover when the latter is in protective position on the boat. At one end, the cover tapers or curves to a blunt point as indicated at 8 to conform to the shape of the bow 3 of the boat and at the extreme point of said end is cut away to form a gap 9 disposed in line with the longitudinal center line of the cover and extending from said end edge to a point inwardly thereof where it is formed with a curved inner edge 10. The material around the gap 9 may be reinforced by a fabric strip 11 fastened to the inner surface of the cover by stitching 12.

The marginal edge of the cover is turned upon itself and stitched along the line 13 to form a tubular hem or loop 14. The ends 15 of the hem terminate at both sides of the gap 9 and are open.

An elongated loop-like sectional fastening device or harness indicated generally at 16 and shown in detail in Figure 10 is loosely mounted in the hem 14 of the cover for gathering or constricting the hem in order to fasten the cover to the boat. This harness consists of alternate short lengths or sections of rope 17 and elastic tapes or straps 18 flexibly connected together. The ends of the rope sections 17 are looped through grommets 19 fitted in openings in the ends of the elastic straps 18 and are secured in such looped formation by metal sleeves 20. The section of rope midway the ends of the harness and indicated at 21 is elongated and is positioned in the portion of the hem 14 which encircles the stern 4 of the boat, when the cover is in protective position thereon. The end rope sections 22 are elongated and are connected by an elastic strap or tape 23, the rope sections extending loosely through grommets 24 fitted in openings in the ends of the tape 23.

In placing the cover 1 on the boat, the end of the cover with the gap 9 is placed over the bow 3 of the boat with the bow projecting therethrough and with the connecting strap 23 straddling the bow. The gap 9 thus serves to center the cover on the boat. The hem 14

of the cover with its enclosed harness is pulled downwardly to a position underneath but adjacent the gunwale 5 as shown in Figures 3 and 4 in order to cover the cockpit of the boat. The free ends of the end rope sections 22 are then grasped and pulled tightly in order to take up any slack in the hem. Each rope section 22 is then separately knotted as indicated at 25, in order to fasten the hem around the boat and to prevent withdrawal of the rope section through the connecting strap 23.

When fabric covers, such as the canvas cover 1, become wet they shrink and in the shrinking operation are liable to become loose from their anchoring members, become torn or otherwise damaged and often damage the anchoring members. According to the present invention, this difficulty is eliminated by providing devices for compensating for such shrinkage when it occurs. Such devices comprise a plurality of elongated elastic straps 26, preferably formed of rubber, spaced along the longitudinal edge portions of the cover and extending transversely thereof as shown in Figures 1 and 2, and similar straps 27 spaced along the rear end of the cover and extending longitudinally of the cover. Each of the straps 26 and 27, at one end, is secured by stitching 28 to a reinforcing patch 29 of canvas secured to the cover 1 by stitching 30 (see Figure 3) at a point inwardly of the hem 14 thereof. The other end of each strap 26 and 27 is free or unattached, preferably terminating short of the hem and has embedded therein a reinforcing strip of fabric indicated at 31 in Figure 12. This reinforced end is formed with an opening in which is fitted a grommet 32 as shown most clearly in Figure 12. The elastic straps 26 and 27 are detachably fastened to the boat by slipping the eyelets or grommets 32 over headed studs 33, suitably secured to the gunwale 5 of the boat and extending downwardly from the underside thereof, so that each of said grommets 32 becomes interlocked between the base portion 34 and head portion 35 of the stud 33 as shown most clearly in Figure 13.

As shown in Figure 3, each strap 26 or 27 extends from its inner point of attachment to the cover outwardly to a point remote from the hem 14 so that the hem extends outwardly beyond the outer ends of the straps whereby when the hem is secured in position beneath but adjacent to the gunwale 5 of the boat, a fullness or gathering as indicated at 36 in Figures 3 and 4 is provided in the cover, in the area thereof outwardly of such points of attachment. This construction provides the necessary tautness of the cover over the cockpit 6 of the boat, and at the same time provides the necessary fullness and gathering to permit the cover to shrink in all directions and to take up the slack afforded by the gathering 36, against the action of the elastic straps and the fullness of the cover 26 and 27, the straps thus serving to compensate for the shrinking action of the cover.

In Figure 14, a modified form of protective cover 1' is illustrated as applied to a cabin type boat 37 having a conventional hull 38 provided with a cockpit 39, a gunwale 40 extending around the hull, and a cabin rearwardly of the bow 44. The cabin includes a wooden panel 45 at each side thereof, a front glass windshield 46 and a roof 47 supported on the side panels. Each side panel 45 is provided with a glass pane 48 and with a curved rear end edge converging with its top end edge 50. A top canopy construction is supported on and above the rear end of the roof 47 of the cabin and includes a glass pane frame 51 at each side, a front glass windshield 52 and a roof 53 supported on the side frames 51.

The cover 1' is formed of a single sheet of canvas having a body shaped as shown in Figure 14, with a front portion 54, a rear portion 55 and side portions 56. The front portion 54 is adapted to be stretched over the roof 53 of the top canopy of the boat, each integral side portion 56 is adapted to hug the adjacent glass pane frame 51, and the integral rear portion 55 is adapted to extend from the roof 53 to the stern 57 of the boat for covering the cockpit 39 of the boat. The bottom edge 58 of each side portion 56 is curved to conform to the curvature of the rear and upper end edges 49 and 50, respectively, of the adjacent side panel 56 and is secured to the side panel by snap fastener elements 59 spaced along said bottom edge 58 cooperating with complemental snap fastener elements 60 secured to and extending from the top end edge and rear end edge 50 and 49, respectively, of the adjacent side panel 56. Each side portion 56 is provided with a pane 61 of transparent material to afford visibility therethrough.

The peripheral edge of the rear portion 55 of the cover is turned upon itself throughout its length and stitched along the line 62 to form a tubular hem or loop 14', each end 63 of the hem being open. A harness, similar in construction to the harness 16 of the form of the invention of Figures 1 to 13, inclusive, and indicated generally at 16', is loosely mounted in the tubular hem 14' for fastening the rear portion 55 of the cover to the boat, underneath the gunwale 40. In this form of the invention, however, each end rope section 22' of the harness 16' is tied to an anchoring stud 64 secured to the underside of the gunwale 40 at each side of the boat.

According to the invention, elastic tensioning straps 26' and 27', similar in construction to the elastic straps 26 and 27, respectively, of the form of the invention of Figures 1 to 13, inclusive, are similarly mounted along the rear portion 55 of the cover 1', adjacent its hem 14', and are similarly fastened to the underside of the gunwale 40 by means of the grommets 32' and studs 33' on the straps and gunwale, respectively, so as to leave a fullness or gathering 36' in the area adjacent the hem 14' of said rear portion 55 of the cover. The straps 26' and 27' are so disposed that when the cover is in position on the boat as shown in Figure 14, such straps extend respectively transversely and longitudinally of the boat. This construction permits the cover 1' to shrink in all directions, without either disturbing the fastening elements or damaging the cover as the elastic straps and fullness serve to compensate for the shrinking; and the cover remains in protective position over the cockpit of the boat.

A modified arrangement for fastening the side portions 56 of the cover 1' is illustrated in Figure 17 wherein the lower edge 58 of the side portion is fastened to a stud 65 on the underside of the overhanging edge 66 of the side frame 51 of the cabin.

It will be understood that changes might be made in details of construction without departing from the principle of the invention, and I desire to be limited only by the state of the prior art and the appended claims. Obviously the invention may be embodied in covers for other structures or articles.

Having thus described my invention what I claim as new and desire to secure by United States Letters Patent is:

1. The combination with a boat having an outwardly projecting gunwale, of a protective cover therefor comprising an elongated body of flexible sheet fabric material of a size and shape to overlie the portion of the boat to be covered and with the edge portions of said body overhanging said gunwale, said body being provided with a tubular hem along its edge portions disposed beneath said gunwale and having a gap therein, an elongated flexible loop-like fastening device extending through said hem with its ends projecting freely from the hem into said gap, said fastening device being taut and holding said hem beneath said gunwale to fasten the cover on the boat, and elongated elastic tension members disposed transversely of the body, each tension member being secured at one end to the body at a point distantly spaced from said hem and the remainder of each tension member being free from said body, fastening elements on the outer side of said boat beneath said gunwale, and a fastening element secured to the other free end of each tension member complementary to the first-mentioned fastening elements and connected to one of said first-mentioned fasten-

ing elements with the tension element under tension, the body having a fullness between said hem and said points of securement of the tension members to the body when the tension members are fastened to the boat, said tension members and said fullness serving to compensate for shrinkage of the body.

2. A protective cover for a boat comprising a flexible sheet of fabric of a size and shape to overlie a portion of a boat to be covered, means for separably connecting the marginal portions of said sheet along the edges of said portion of the boat, and a plurality of elastic tension members, each having one end secured to said sheet at a point distantly spaced from the margin of the sheet, the remainder of each tension member extending outwardly toward the margin of the sheet and being free from said sheet, and a fastening element on the other end of each tension member for cooperation with a complementary fastener element on a boat to be covered.

3. The combination with a boat having an outwardly projecting gunwale, of an elongated flexible fabric sheet of a size and shape to overlie the portion of the boat to be covered, means for separably connecting the marginal portions of the sheet to the boat and a plurality of elastic tension members each secured at one end to the sheet at a point distantly spaced from the margin of the sheet, the remainder of the tension member extending outwardly toward the margin of the sheet and being free from said sheet, a fastening element secured on the free end of each tension member, and a fastening member on the boat separably cooperating with said fastening element on each of said tension members for

fastening the tension members to the boat, the sheet having a fullness between its marginal portions and the points of securement of the tension members to the sheet when the tension members are fastened to the boat, said tension members and said fullness compensating for shrinkage of the sheet.

4. The combination with a boat having an outwardly projecting gunwale of an elongated flexible fabric sheet of a size and shape to overlie the portion of the boat to be covered, and means for separably connecting the sheet to the boat including a plurality of fastening elements on the boat and spaced along the margins of said portion of the boat to be covered, a plurality of resilient tension members spaced apart along the marginal portions of the sheet and each connected at one end to the sheet, the other end of each tension member being free from the sheet and connected to one of said fastening elements on the boat.

References Cited in the file of this patent

UNITED STATES PATENTS

115,972	Mason	June 13, 1871
307,952	Janes	Nov. 11, 1884
1,938,610	Robertson	Dec. 12, 1933
2,028,454	Johnson	Jan. 21, 1936
2,570,533	Elliott	Oct. 9, 1951

FOREIGN PATENTS

22,720	Norway	Oct. 28, 1912
533,557	Germany	Sept. 16, 1931