March 10, 1964 R. W. DORST 3,123,909

METHOD OF MAKING A RUB RAIL FOR BOAT HULL

Filed June 13, 1960 2 Sheets-Sheet 1

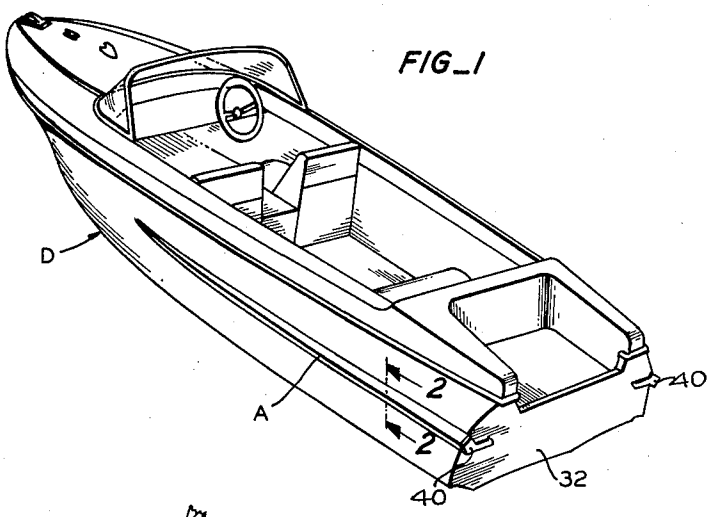


FIG_1

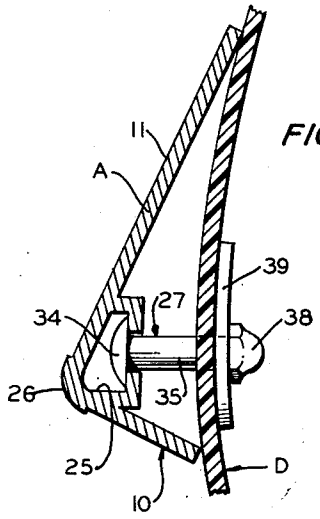


FIG_2

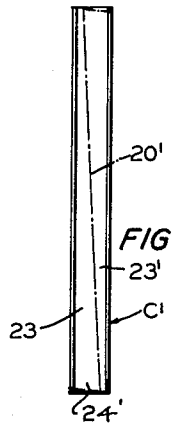


FIG_5

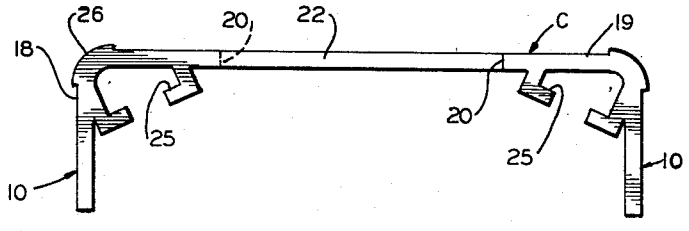


FIG_3

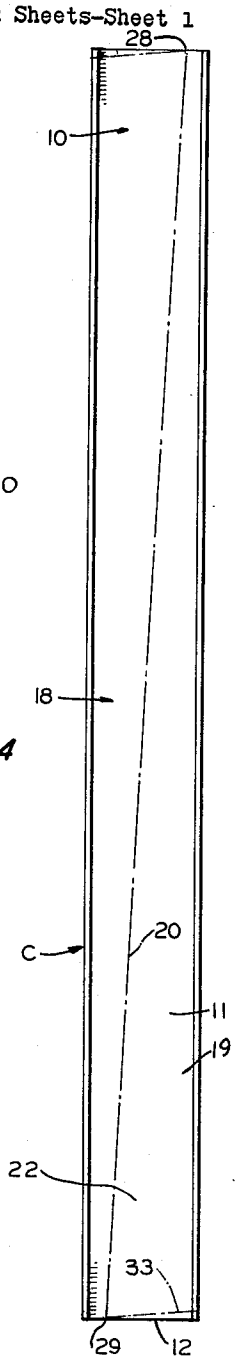


FIG_4

INVENTOR.
RICHARD W. DORST

BY Dorsey and Lane

ATTORNEYS

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FIG_6

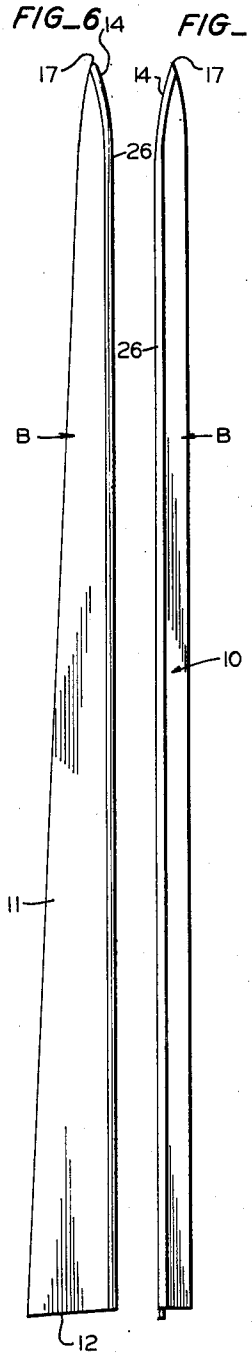


FIG_7

FIG_8

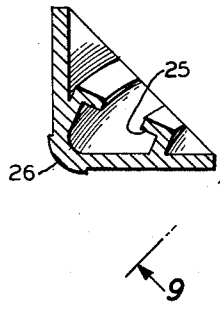


FIG_9

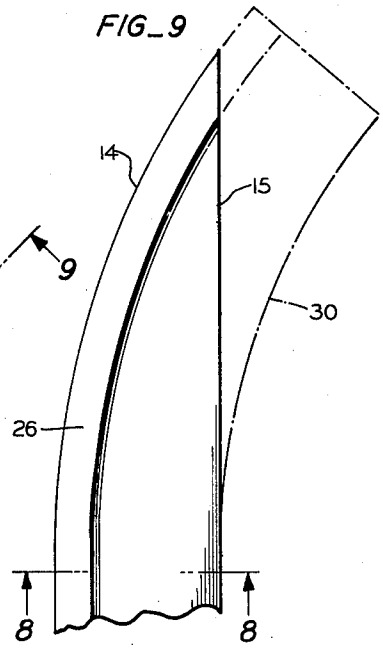


FIG_10

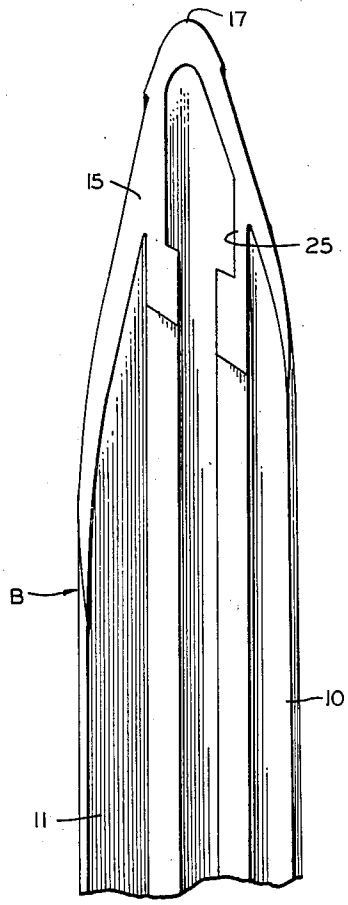
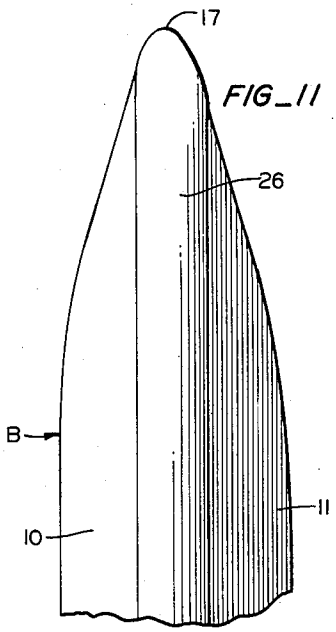


FIG_11



INVENTOR.
RICHARD W. DORST

BY Warren and Lane

ATTORNEYS

United States Patent Office

3,123,909

Patented Mar. 10, 1964

3,123,909

METHOD OF MAKING A RUB RAIL FOR BOAT HULL

Richard W. Dorst, Menlo Park, Calif., assignor to Textron Inc., Providence, R.I., a corporation of Rhode Island

Filed June 13, 1960, Ser. No. 35,748
2 Claims. (Cl. 29—531)

The present invention relates to boats, and pertains more particularly to decorative and protective rub rails for boat hulls and to a method for making the same.

In recent years boating has increased greatly in popularity, and there has been a tremendous increase in the number of boats built each year. Among the most popular of the new boats are the small, fast runabouts, either outboard or inboard powered.

An object of the present invention is to provide an improved decorative and protective rub rail for applying, one to each side of the hull of a small power boat, between the water line and the sheer thereof. Said rub rails extend from the transom forwardly, and taper from their after ends forwardly.

The invention also provides an improved rub rail for application to the side of a boat hull, each rub rail being of angular cross sectional shape and having an under-cut groove extending lengthwise of its inner apex to receive and retain a headed fastener for attaching the rub rail to the hull of a boat. One side flange of each rub rail tapers from its after end forwardly, the other side flange thereof being of uniform width throughout its length with the exception of a short distance at its forward end.

A further object of the invention is to provide a simple and inexpensive method for making a tapered rub rail for application to the side of a boat hull.

These, and other objects and advantages of the invention, will be apparent from the following description and the accompanying drawings, wherein:

FIG. 1 is a perspective view of a motorboat having a pair of decorative and protective rub rails embodying the invention applied thereto.

FIG. 2 is an enlarged, fragmentary, sectional view taken along line 2—2 of FIG. 1.

FIG. 3 is an end view of a channel member from which two port rub rails, such as that shown in FIGS. 1 and 2, are constructed, a diagonal cut line being shown along the channel web.

FIG. 4 is an elevational view in reduced scale of the top, or closed, side of the channel member shown in FIG. 3, the diagonal cut line for severing the channel member into two blanks for the making of port or left hand rub rails being shown thereon in dash-dot lines.

FIG. 5 is a view in reduced scale, generally similar to FIG. 4, but showing the diagonal cut line for severing the channel disposed diagonally oppositely to that of FIG. 4 for providing two blanks for the making of starboard rub rails.

FIG. 6 is a side elevational view of a completed starboard or right hand side rub rail, showing the outer side of the tapered flange thereof in elevation.

FIG. 7 is a right hand side elevational view of FIG. 6.

FIG. 8 is a sectional view taken along line 8—8 of FIG. 9.

FIG. 9 is an enlarged, fragmentary, side elevational view of the upper end portion of the starboard rub rail shown in FIGS. 6 and 7, but taken looking in the direction of the arrows 9—9 in FIG. 8, the dash-dot lines indicating the end portion of the angle blank after it has been bent to curved shape, and before it has been cut away along a plane defined by the free edges of the straight portions of both flanges of such angle blank.

FIG. 10 is a fragmentary plan view showing the inner side of the tip portion of a completed rub rail such as that shown in solid lines in FIG. 9.

FIG. 11 is a fragmentary plan view showing the outer, or opposite, side of the tip portion from that shown in FIG. 10.

Briefly, the invention provides pairs of similar, but opposite, decorative and protective rub rails A (FIGS. 1 and 2) and B (FIGS. 5 and 6) for application one to each side of a boat hull D. The rub rails A and B of each pair thereof are similar, but opposite to each other.

Each rub rail B (FIGS. 5 and 6) is of angular cross sectional shape. One flange 10 thereof is of uniform width throughout its length, and the other flange 11 thereof is tapered from its rear end 12 forwardly. The extreme forward end portion 14 of each rub rail B is bent to curve inwardly toward the open side of the angle blank from which it is made, and is trimmed off along a plane defined by the line 15 of FIG. 9 to terminate in a point 17.

The blanks for making two of the starboard rub rails B are made by severing a channel member C (FIGS. 3 and 4) into two similar angle blanks 18 and 19 along a diagonal cut line 20, while the blanks for making two of the port rub rails A are made by severing a similar channel member C' along an oppositely inclined diagonal cut line 20' (FIG. 5).

Referring to the drawings in greater detail, the pair of identical angle blanks 18 and 19 (FIGS. 3 and 4) for making a pair of starboard rub rails B, are provided by severing the web 22 of a channel member C (FIGS. 3 and 4) along the diagonal cut line 20 extending lengthwise of the channel web 22.

A pair of similar, but reversed, angle blanks 23 and 23' (FIG. 5) for making a pair of port rub rails A, are provided by severing a similar channel member C' along a similar, but reversely sloping, diagonal cut line 20'.

The similar channel members C and C', which may be, for example, of extruded aluminum, each have similar side flanges 10 of uniform width throughout their lengths, and a web portion 22 which also is of uniform width throughout its length. The web portion 22 is substantially wider than twice the height of a channel side flange 10. An under-cut groove 25 is preferably provided along the interior of the angle between each channel side flange 10 and the web 22 to receive the heads of fasteners, such as the bolt 27 (FIG. 2), for attaching the rub rails to a boat hull D. A decorative head 26 may be provided exteriorly along each angle of juncture of the channel side flanges 10 with the web 22.

In making the angle blanks 18 and 19 from a channel member C, the diagonal cut line 20 (FIGS. 3 and 4) extends from a point 28 on the channel web 22 at the upper end of the channel member C as illustrated in FIG. 4, and spaced from the right side of the channel by a distance substantially equal to the width of the channel side flanges 10, to a point 29 on the channel web 22 similarly spaced from the other side of the channel, and at the lower end thereof. When cut in two along this line 20, the channel C is divided into the two similar angle blanks 18 and 19, each with one uniform width flange 10 and one tapered flange 11.

To complete a starboard rub rail B (FIGS. 5 and 6) from each of the angle blanks 18 and 19 (FIGS. 3 and 4) the narrow end portion of each angle blank is bent to curved shape inwardly toward the open side of the angle of the blank to the shape indicated by the dash-dot lines 30 of FIG. 9.

The dash-dot line portion 30 is then cut away along a plane defined by the straight portions of the free edges of both flanges 10 and 11 of the blank, such plane being defined by the line 15 in FIG. 9. This operation completes

the curved, pointed, forward portion of the rub rail B as shown in FIGS. 6–11.

In the event that the transom 32 of a boat hull D (FIG. 1) to which a pair of the rub rails is to be applied is at an angle other than a right angle to the side of the hull adjacent thereto, the rear, or wider end of the blanks, such as the blank C (FIG. 4) are trimmed off along a plane defined by the dash-dot line 33 (FIG. 4) so as to be co-extensive with the transom when applied to the boat hull.

Two port rub rails A are made, in a manner similar to that described for making the starboard rub rails B, one from each of the blanks 23 and 23' provided by severing the web 24' of the similar channel member C' (FIG. 5) along the oppositely sloping, but otherwise similar diagonal cut line 20'.

For mounting a pair of the rub rails A and B on a boat hull D, the heads 34 of a required plurality of bolts 27 (FIG. 2), are slidably inserted in the under-cut groove 25 in each of the rub rails A and B, and the shanks 35 of said bolts are inserted in holes provided therefor at required intervals along both sides of the hull D. Nuts 38 and washers 39 are then applied to the projecting inner ends of the bolts 27, and the nuts 38 are screwed down to draw the free edges of the flanges 10 and 11 of each rub rail A and B into snugly fitting relation with the hull D. In the event that the hull D is curved throughout the lengths of the rub rails to be applied thereto to such an extent that it would be difficult to draw the rub rails down into snugly fitting condition without distorting the shape of the hull, it is advisable before applying the rub rails to first bend or curve them by suitable means (not illustrated, but which are well known to those familiar with working with metal angle members) so that the rub rails will fit snugly onto the hull without the use of excessive force.

Both rub rails A and B are mounted with their pointed ends forward and their tapered flanges 11 uppermost, and since in ordinary use it is very seldom that one views the side of a small boat hull in any position except from angularly above it, the rub rails will have a pleasing, tapered appearance when so viewed, and the fact that the lower flanges 10 thereof are not tapered will not be apparent.

The invention provides an inexpensive and easily made decorative and protective pair of tapered rub rails, which may be easily and quickly applied to the sides of a boat hull, and which lend themselves readily to artistic blending with stern fittings of a boat hull, such as, for example, the lifting handles 40 of FIG. 1.

While I have illustrated and described a preferred embodiment of the present invention, it will be understood, however, that various changes and modifications may be made in the details thereof without departing from the scope of the invention as set forth in the appended claims.

Having thus described the invention, what I claim as

new and desire to protect by Letters Patent is defined in the following claims:

1. The method of making a rub rail for a motorboat which comprises severing a channel member having two relatively narrow side flanges and having a web portion wider than the combined width of both its side flanges, diagonally endwise along a line begining at one end of the web at a distance from one of the side flanges substantially equal to the width of such side flange to a point at the other end of the web similarly located with respect to the other side flange to thereby provide two angle members with one flange of each thereof of uniform width, and the other flange of each thereof tapered from one end thereof to the other, bending a short portion of the narrower end of each angle member inwardly in a curve toward the open side of the angle member, and cutting off each of the inwardly curved portions along a plane defined by the free edges of the two side flanges of each angle member, thereby causing each of the rub rails thus formed to terminate in a point at its narrower end.

2. The method of making a rub rail for a motorboat which comprises forming a channel member of rectangular cross sectional shape with a relatively wide web and two relatively narrow, similar, side flanges, and with an undercut groove extending lengthwise in the interior of the angle between each side flange and the web of such channel member, severing the web of such channel member diagonally endwise along a line beginning at one end of the web at a distance from one side flange substantially equal to the width of such side flange to a point at the other end of the web similarly located with respect to the other side flange to thereby provide two angle members with one flange of each thereof of uniform width, and the other flange of each thereof tapered from one end thereof to the other, bending a short portion of the narrower end of each angle member thus formed inwardly in a curve toward the open side of the angle member, and cutting off each such inwardly curved portion along a plane defined by the free edges of the two side flanges of each angle member, thereby causing each of the two rub rails thus formed to terminate in a point at its narrower end.

References Cited in the file of this patent

UNITED STATES PATENTS

1,405,042	Kraft	Jan. 31, 1922
1,498,176	Lachman	June 17, 1924
1,914,728	Plym	June 20, 1933
1,937,197	Hallady	Nov. 28, 1933
2,278,708	Miller	Apr. 7, 1942
2,543,404	Hardesty	Feb. 27, 1951
2,553,504	Judd	May 15, 1951
2,924,864	Holton	Feb. 26, 1960
2,935,855	Reid	May 10, 1960
2,959,146	Erkert	Nov. 8, 1960