UNITED STATES DISTRICT COURT
MIDDLE DISTRICT OF FLORIDA
ORLANDO DIVISION

PACIFIC COAST MARINE WINDSHIELDS LIMITED, a foreign corporation, Plaintiff, v. MALIBU BOATS, LLC, a California limited liability company; TRESSMARK, INC. d/b/a LIQUID SPORTS MARINE, a Florida corporation, MARINE HARDWARE, INC., a Washington corporation, MH WINDOWS, LLC, a Washington limited liability company, and JOHN F. PUGH, an individual, Defendants.	Case No.: 6:10-CV-1285-28-DAB

SECOND AMENDED COMPLAINT FOR PATENT INFRINGMENT, TORTIOUS INTERFERENCE, TRADE LIBEL AND UNFAIR BUSINESS PRACTICES JURY DEMANDED

Plaintiff Pacific Coast Marine Windshields, Ltd., by and through its attorneys of record, hereby alleges as follows:

Jurisdiction and Venue

1. This is an action for patent infringement. It arises under the patent laws of the United States, specifically 35 U.S.C. §§ 271 and 281.

2. This Court has jurisdiction pursuant to 28 U.S.C. §§ 1331 and 1338(a).

3. The Court also has jurisdiction pursuant to 28 U.S.C. § 1332 as this is an action between citizens of a State and a citizen of a foreign state where the amount in controversy exceeds $75,000.00 exclusive of interest and costs.

4. Venue is proper in this judicial district under 28 U.S.C. §§ 1391 and 1400(b).

The Parties

5. Plaintiff Pacific Coast Marine Windshields, Ltd. ("Pacific Coast Marine" or "Plaintiff") is a Canadian corporation with its principal place of business in Vancouver, British Columbia, Canada. Pacific Coast Marine manufactures windshields for small boats and personal watercraft.

6. Defendant Malibu Boats, LLC ("Malibu Boats") is a California limited liability company with its principal place of business at 1 Malibu Court, Merced, CA 95341. Malibu Boats manufactures small boats such as ski boats.

7. Defendant MH Windows, LLC ("MH") is a Washington limited liability company.

8. John F. Pugh is an individual. He controls MH.

9. Defendant Tressmark, Inc. d/b/a Liquid Sports Marine ("Liquid Sports Marine") is a Florida corporation with its principal place of business at 8650 E. Colonial Drive, Orlando, Florida 32817.

10. Defendant Marine Hardware, Inc. ("Marine Hardware") is a Washington corporation with its principal place of business at 5 Aviator Way, Ormond Beach, Florida 32174. Marine Hardware manufactures, imports and supplies marine windshields.

Background

11. Since 1989, Darren Bach, through his company Pacific Coast Marine, has been in the business of designing and manufacturing windshields for small boats and personal watercraft. Over the years Mr. Bach has created a large number of innovative designs. One such innovative design invented by Mr. Bach was the hidden marine windshield mounting system. The invention provides a curved windshield mounting system for small boats in which, among other things, the mounting hardware is hidden behind the windshield.

12. Mr. Bach applied for a United States patent on April 3, 2007, and on October 28, 2008 the application resulted in U.S. Patent No. 7,441,510 (the "'510 patent"). Exhibit A. The '510 patent was licensed exclusively to Pacific Coast Marine. Among other things, the exclusive license grants "all substantial rights in and to the Patents...including the right to sue for and collect past, present and future damages and to obtain injunctive and any other relief for infringement of the Patents."

13. Mr. Bach also applied for a United States design patent on April 27, 2006, and on November 13, 2007 the application resulted in U.S. Patent No. D555,070 (the "'070 patent"). Ex. B. The distinctive ornamental design for a marine windshield disclosed in the '070 patent was based upon a design for a marine windshield with corner posts conceived by Mr. Bach in early 2005. In June of 2011, Mr. Bach exclusively licensed the '070 patent to Pacific Coast Marine. Among other things, the exclusive license grants "all substantial rights in and to the Patents...including the right to sue for and collect past, present and future damages and to obtain injunctive and any other relief for infringement of the Patents." 14. Malibu Boats became aware of Pacific Coast Marine's new design, and was very eager to include the design in Malibu's new line of small boats in 2006. Malibu Boats is a very large customer, and exerted a great deal of pressure on Pacific Coast Marine to rush its design into commercial production. Production began in the spring of 2006, and the first shipment of six units was in June 2006. Very quickly, Pacific Coast Marine was supplying up to 200 windshields a month to Malibu Boats.

15. Pacific Coast Marine developed manufacturing drawings for the windshields using computer-aided drafting ("CAD") software. The CAD software files containing Pacific Coast Marine's manufacturing drawings and information were registered with the United States

Copyright Office, and have registration numbers VAu 956-510 and TXu 1-571-279. The CAD software files also contained trade secrets belonging to Pacific Coast Marine.

16. During the winter of 2006/2007, it was discovered that cold weather could cause cracking problems with the new hidden mounting window systems. Pacific Coast Marine and Malibu Boats began working together to find a solution to the problem. In the course of attempting to solve the problem and effect repairs for the damaged windshields. Pacific Coast Marine gave the CEO of Malibu Boats, Robert Alkema, access to its current manufacturing drawings and specifications in its CAD files. Pacific Coast Marine Windshields also provided Mr. Alkema with access to its plant and to its manufacturing techniques which were trade secrets. Mr. Alkema knew that the CAD files were the confidential property of Pacific Coast Marine. In addition, Mr. Alkema knew that the manufacturing techniques were trade secrets and also belonged to Pacific Coast Marine.

17. In addition, in December 2006, Pacific Coast Marine sent drawings of the corner post for its vent wing windshields to Marine Hardware so that Marine Hardware could provide a quote for an injection molded corner post.

18. Pacific Coast Marine developed a solution to the cracking problem, and replaced the damaged windshields previously installed on Malibu Boats. Nevertheless, without Pacific Coast Marine's permission, Robert Alkema and Malibu Boats copied the CAD files and provided the confidential manufacturing drawings and manufacturing trade secrets to John F. Pugh, Marine Hardware and/or MH to manufacture and sell duplicates of Pacific Coast Marine's windshields to Malibu Boats. John F. Pugh formed MH for the purpose of misappropriating Pacific Coast Marine's intellectual property. John F. Pugh and Marine Hardware transferred or caused to be

transferred Pacific Coast Marine's confidential drawings and trade secrets to MH to manufacture and sell duplicates of Pacific Coast Marine's windshields to Malibu Boats.

19. On information and belief, the windshields or components of the windshields are being manufactured by Marine Hardware and MH in China using Pacific Coast Marine's registered copyrighted drawings and trade secrets. Marine Hardware and MH imports the infringing windshields into the United States, or imports the windshield components into the United States and assembles them in the United States. Marine Hardware and MH sells the windows to Malibu Boats for installation on Malibu's boats. Malibu Boats subsequently distributes boats with infringing windshields nationwide, including in this district, through Malibu Boat's well-established distribution system. One such distributor is Liquid Sports Marine.

20. The actions of Malibu Boats, John F. Pugh Marine Hardware and MH Windows have been and are being taken with full knowledge of the '510 and '070 patents. and constitute infringement of the '510 and '070 patents.

21. As recently as February 2011, Malibu Boats has been disparaging PCMW by falsely telling its dealers and customers that PCMW went out of business. Malibu Boats knows full well that PCMW is fully operational, and has absolutely no intention of ceasing business operations. Malibu Boats appears to be spreading such false information in retaliation for the patent infringement suits PCMW has filed against it.

22. After telling its customers and dealers that PCMW is out of business, Malibu Boats has been informing its dealers and customers that it is now working with Taylor Made to produce the marine windshields that had been manufactured by PCMW. Furthermore, Malibu Boats has been fulfilling customer and dealer orders for PCMW's products with an equivalent product

made by Taylor Made. Consequently, PCMW has lost substantial sales as a direct result of the lies being spread by Malibu Boats.

First Cause of Action: Patent Infringement - Malibu Boats (35 U.S.C. §271)

23. Plaintiff repeats the allegations of paragraphs 1 through 22.

24. Malibu Boats has been infringing and continues to infringe the '510 and '070 patents under 35 U.S.C. §271(a) by making, using, offering for sale and selling without authorization products including Defendants' windshields which embody one or more claims of the '510 and '070 patents. Models of Malibu boats incorporating infringing windshields include, but are not limited to, the Sunscape, Response, Wakesetter and Axis series.

25. Plaintiff also alleges that the Malibu Boats has intentionally induced others, including the customers of Malibu Boats and dealers of Malibu Boats, and including Defendant Liquid Sports Marine, to infringe Plaintiff's patents under 35 U.S.C.§271(b), nationally and in this district by establishing a network of distributors offering for sale to customers boats which Malibu Boats knows are infringing, by selling, offering for sale and otherwise supplying boats which Malibu Boats knows are infringing to those distributors for sale to customers, and by advertising boats which Malibu Boats knows infringe Plaintiff's '510 and '070 patents. Defendant Malibu Boats will continue to make, use, sell, and offer for sale infringing products and to induce others to infringe unless restrained by this Court.

26. Even if Malibu Boats' products do not literally infringe the '510 and '070 patents, they are substantially similar to the inventions claimed in the '510 and '070 patents and therefore infringe under the doctrine of equivalents.

27. Malibu Boats has derived and will continue to derive and receive from the above alleged acts of infringement, profits and revenues in an amount that is not presently known to Plaintiff.

Further, with respect to the '510 and '070 patents, such acts of infringement were made with knowledge of the patents and thus were committed intentionally and willfully. By reason of the above acts of infringement, Plaintiff has been and will continue to be damaged in an amount to be determined at trial.

28. This is an exceptional case under 35 U.S.C. § 284.

Second Cause of Action: Patent Infringement – Marine Hardware, MH and John F. Pugh (35 U.S.C. §271)

29. Plaintiff repeats the allegations of paragraphs 1 through 28.

30. Marine Hardware and MH have been infringing and continue to infringe the '510 and '070 patents under 35 U.S.C. §271(a) by importing, making, using, offering for sale and selling without authorization products, including Marine Hardware and MH's windshields, which embody one or more claims of the '510 and '070 patents. The windshields manufactured by Marine Hardware and MH that infringe are incorporated and sold in the Sunscape, Response, Wakesetter and Axis series of boats manufactured by Malibu Boats.

31. Plaintiff also alleges that Marine Hardware and MH have intentionally induced others, including the customers of Malibu Boats and dealers of Malibu Boats, and including Defendant Liquid Sports Marine, to infringe Plaintiff's '510 and '070 patents under 35 U.S.C. §271(b) in this district and elsewhere by selling and otherwise supplying windshields knowing they infringe Plaintiff's patents to Malibu Boats for incorporation into its boats which are offered for sale and sold through a network of distributors. Plaintiff alleges, on information and belief, that Marine Hardware and MH will continue to make, use, sell, and offer for sale infringing products unless restrained by this Court.

32. John F. Pugh has been infringing and continues to infringe by causing Marine Hardware and MH to import, make, use, sell and offer for sale without authorization products, including

Marine Hardware and MH's windshields, which embody one or more of the claims of the '510 and '070 patents.

33. Even if Marine Hardware and MH's products do not literally infringe the '510 and '070 patents, they are substantially similar to the inventions claimed in the '510 and '070 patents and therefore infringe under the doctrine of equivalents.

34. Marine Hardware and MH have derived and will continue to derive and receive from the above alleged acts of infringement, profits and revenues in an amount that is not presently known to Plaintiff. Further, with respect to the '510 and '070 patents, such acts of infringement were made with knowledge of the patent and thus were committed intentionally and willfully. By reason of the above acts of infringement, Plaintiff has been and will continue to be damaged in an amount to be determined at trial.

Third Cause of Action: Patent Infringement - Liquid Sports Marine (35 U.S.C. §271)

35. Plaintiff repeats the allegations of paragraph 1 through 34.

36. Liquid Sports Marine has been infringing and continues to infringe the '510 and '070 patents under 35 U.S.C. §271(a) by offering for sale and selling without authorization products, including boats made by Malibu Boats, which embody one or more claims of the '510 and '070 patents. Models of Malibu boats incorporating infringing windshields include, but are not limited to, the Sunscape, Response, Wakesetter and Axis series

37. Even if Liquid Sports Marine's products do not literally infringe the '510 and '070 patents, they are substantially similar to the inventions claimed in the '510 and '070 patents and therefore infringe under the doctrine of equivalents.

38. Liquid Sports Marine has derived and will continue to derive and receive from the above alleged acts of infringement, profits and revenues in an amount that is not presently known to

Plaintiff. Further, with respect to the '510 and '070 patents, such acts of infringement were made with knowledge of the patent and thus were committed intentionally and willfully. By reason of the above acts of infringement, Plaintiff has been and will continue to be damaged in an amount to be determined at trial.

Fourth Cause of Action: Tortious Interference – Malibu Boats

39. Plaintiff repeats the allegations of paragraph 1 through 38.

40. PCMW has enjoyed excellent business relationships with the dealers and/or customers of Malibu Boats for a number of years.

41. Malibu Boats has knowledge of PCMW's relationships with its dealers and/or customers.

42. Malibu Boats has intentionally and unjustifiably interfered with those long-standing relationships by telling its dealers and/or customers that PCMW has gone out of business, even though Malibu Boats knows that statement to not only be false, but a complete fabrication on the part of Malibu Boats.

43. Malibu Boats' intentional and unjustified actions have caused PCMW to suffer damages in the form of lost sales.

Fifth Cause of Action: Trade Libel – Malibu Boats

44. Plaintiff repeats the allegations of paragraph 1 through 43.

45. Malibu Boats has stated to its customers and/or dealers that PCMW is out of business, despite the fact that Malibu Boats knew such statements to not only be false, but completely fabricated by Malibu Boats.

46. Malibu Boats knew or should have known that such false statements would discourage its dealers and/or customers from conducting business with PCMW.

47. Indeed, the falsehoods spread by Malibu Boats played a material part in discouraging its dealers and/or customers from dealing with PCMW, thereby injuring PCMW.

48. Specifically, Malibu Boats' false statements caused PCMW damages in the form of lost sales to the customers and/or dealers of Malibu Boats.

Sixth Cause of Action: Deceptive And Unfair Trade Practices – Malibu Boats (Fla. Statute § 501.201 *et seq.*)

49. Plaintiff repeats the allegations of paragraph 1 through 48.

50. Malibu Boats committed a deceptive act or unfair practice by fabricating and disseminating falsehoods about PCMW being out of business.

51. As a direct result of the deceptive actions of Malibu Boats, PCMW has lost sales of its products.

Demand for Relief

Wherefore Plaintiff prays for relief as follows:

a) that the Defendants be judged to have infringed the '510 and '070 patents;

b) that this be adjudged to be an exceptional case, and that as such Plaintiff be awarded its attorneys' fees;

c) that Defendants and their officers, agents, servants, employees, attorneys and all other persons acting in concert, participation or privity with them who receive actual notice of the order by personal service or otherwise, and dependants, successors and assigns, be permanently restrained and enjoined from directly or indirectly infringing the '510 and '070 patents;

d) for an award for Plaintiff's damages to be determined at trial;

e) for an award of punitive damages and attorneys' fees by reason of Defendants' intentional patent infringement;

f) for an award of attorney fees pursuant to Fla. Statute 501.2105, as to Malibu Boats;

g) for a declaratory judgment that Malibu Boats' unfair and deceptive practices violate Fla. Statute 501.201, *et seq.*;

h) for an injunction prohibiting Malibu Boats' from further violating Fla. Statute 501.201, *et seq.*; and

i) for such other and further relief as this Court shall deem just.

JURY DEMAND

Plaintiff requests a jury trial on all issues so triable.

Dated this 5th day of July 2011.

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CERTIFICATE OF SERVICE

I hereby certify that on July 5, 2011 I electronically filed the foregoing using the Management/Electronic Case Filing ("CM/ECF") system, which will send a notice of electronic filing to the following CM/ECF Participants:

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s/Ava K. Doppelt

EXHIBIT A

US007441510B1

(12) **United States Patent**
Bach

(10) **Patent No.: US 7,441,510 B1**
(45) **Date of Patent: Oct. 28, 2008**

(54) **MARINE WINDSHIELD FRAME AND METHOD OF MANUFACTURE**

(76) Inventor: **Darren Ashley Bach**, 7993 Progress Way, Delta, British Columbia (CA) V4G 1A3

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **11/732,022**

(22) Filed: **Apr. 3, 2007**

(51) **Int. Cl.**
B63B 17/00 (2006.01)

(52) **U.S. Cl.** **114/361**

(58) **Field of Classification Search** 114/361
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

3,304,657 A * 2/1967 Singleton 49/399
3,427,776 A * 2/1969 Box et al. 52/204.591
4,970,946 A * 11/1990 Ivey 454/130
5,906,697 A * 5/1999 Hasegawa et al. 156/108

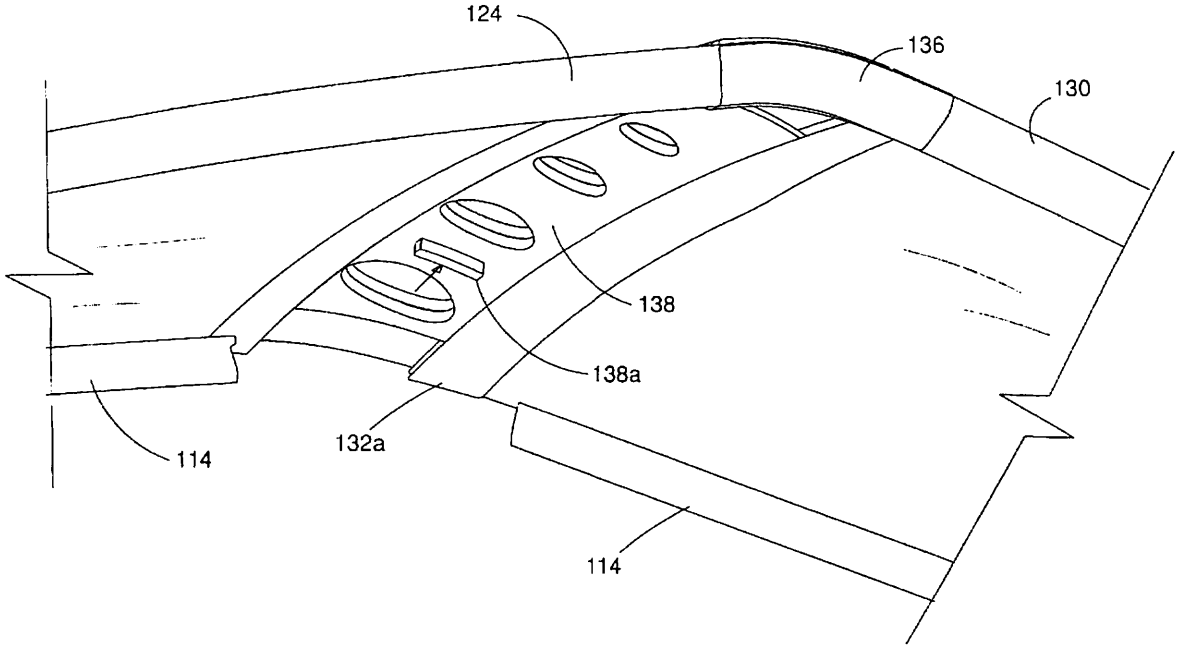
* cited by examiner

Primary Examiner—Sherman Basinger

(57) **ABSTRACT**

A marine windshield frame for curved or straight windshield glass having a top frame rail mounted inward of the windshield glass and substantially flush with frontal surface of the windshield glass. The top frame rail is mounted onto the windshield glass edge by adhesive. The windshield frame may also include a pair of vertically oriented corner posts. The corner posts are preferably manufactured by die-cast molding. An alternate manufacturing method is to stretch-form an aluminum alloy extrusion, matching vent holes therein, and machined a taper thereon an edge.

24 Claims, 14 Drawing Sheets



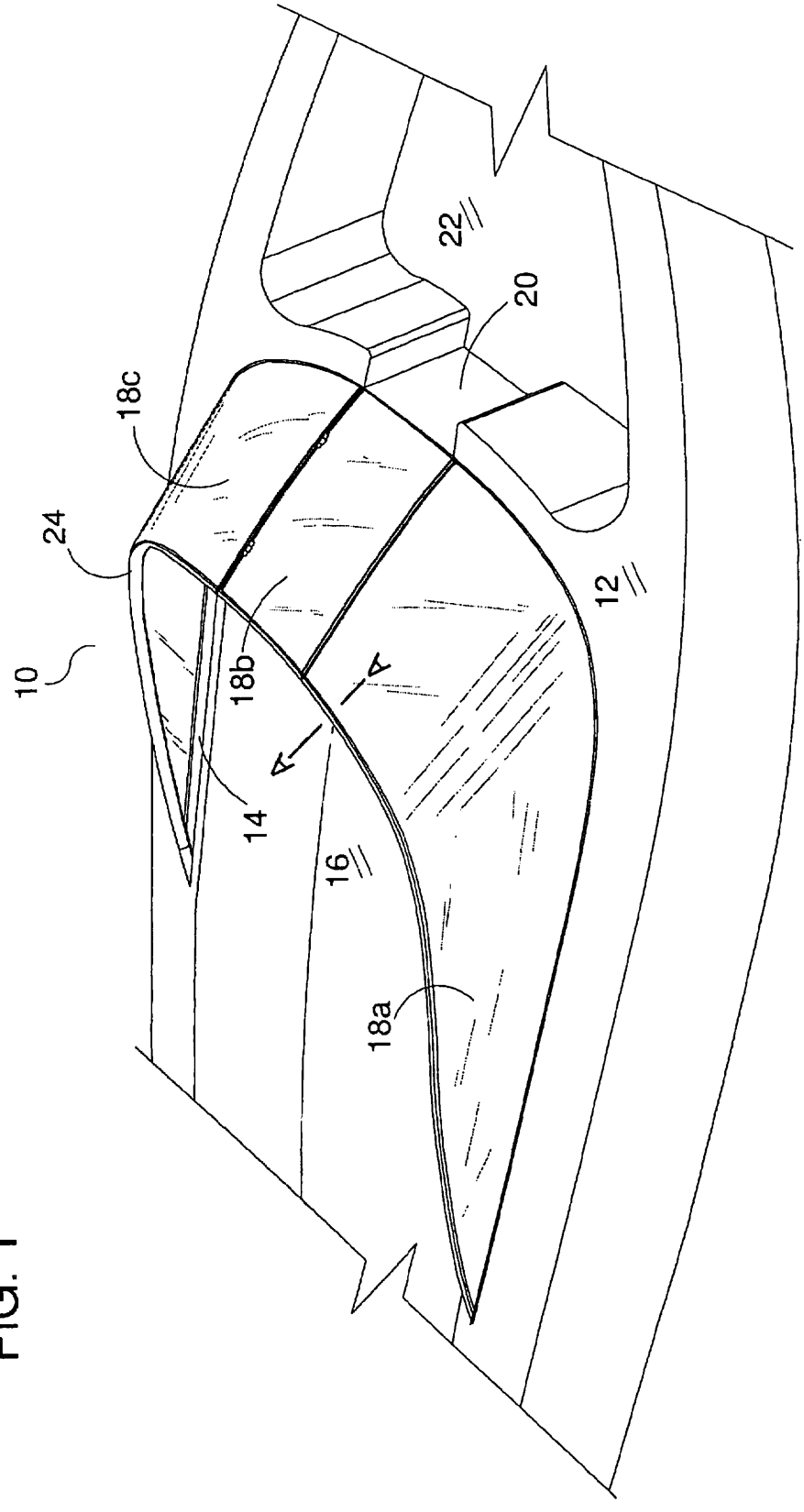


FIG. 1

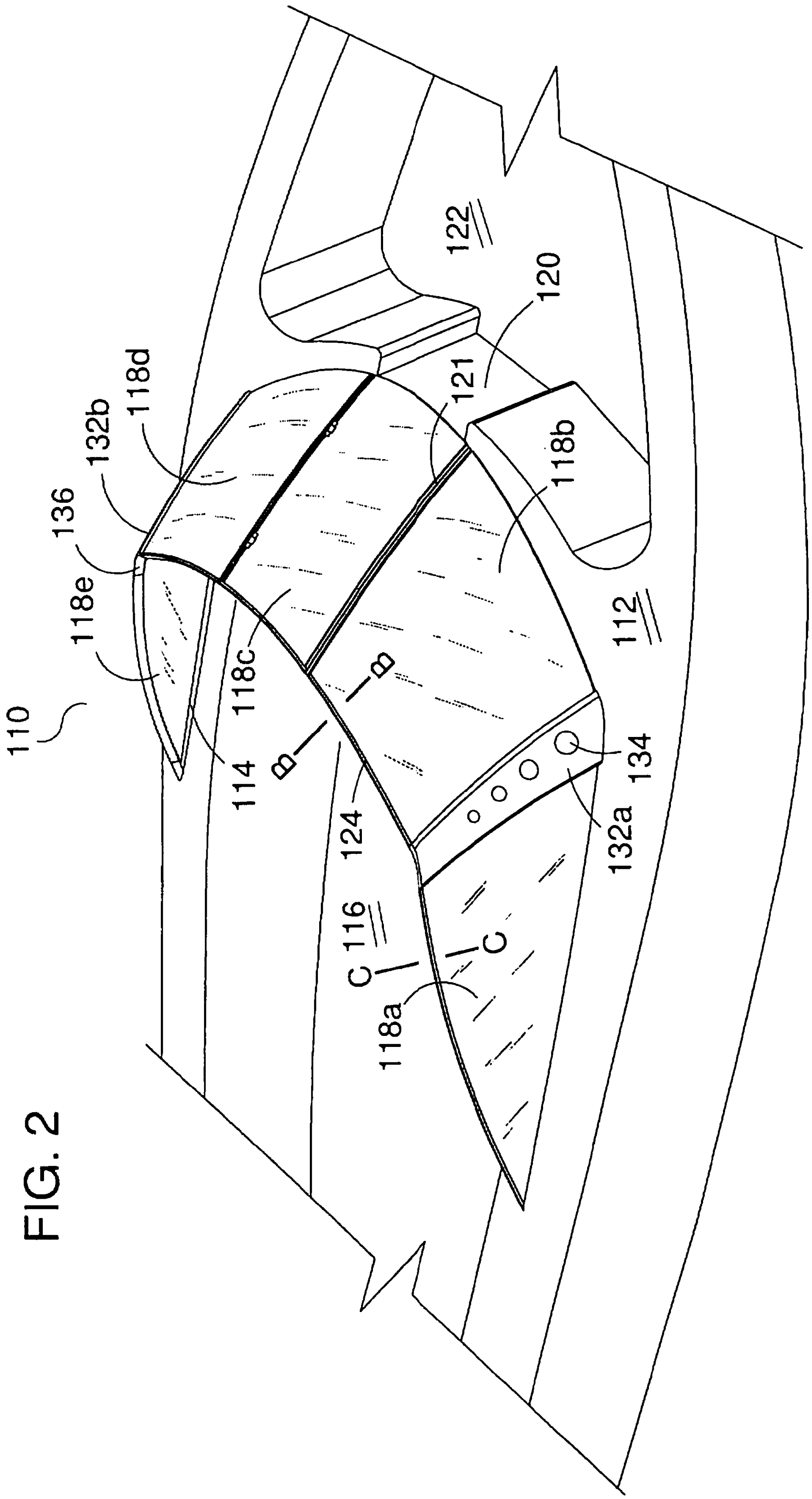

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FIG. 2

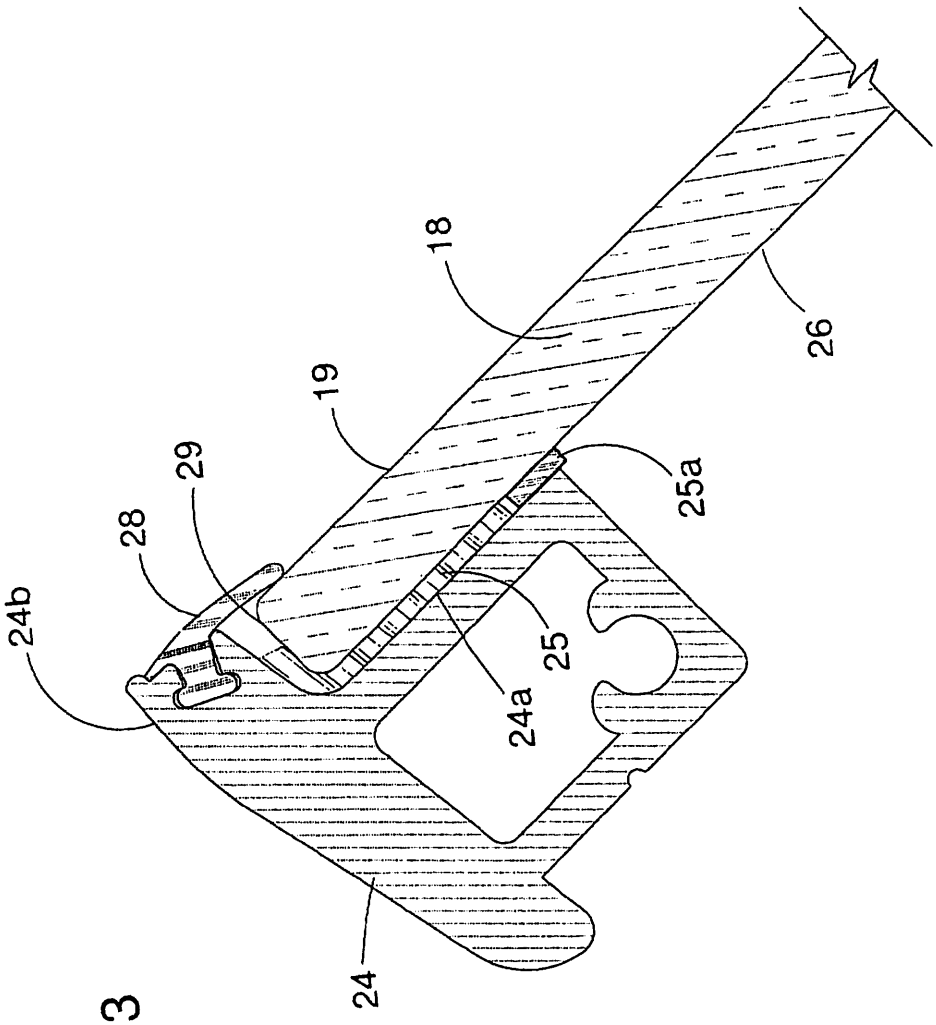


FIG. 3

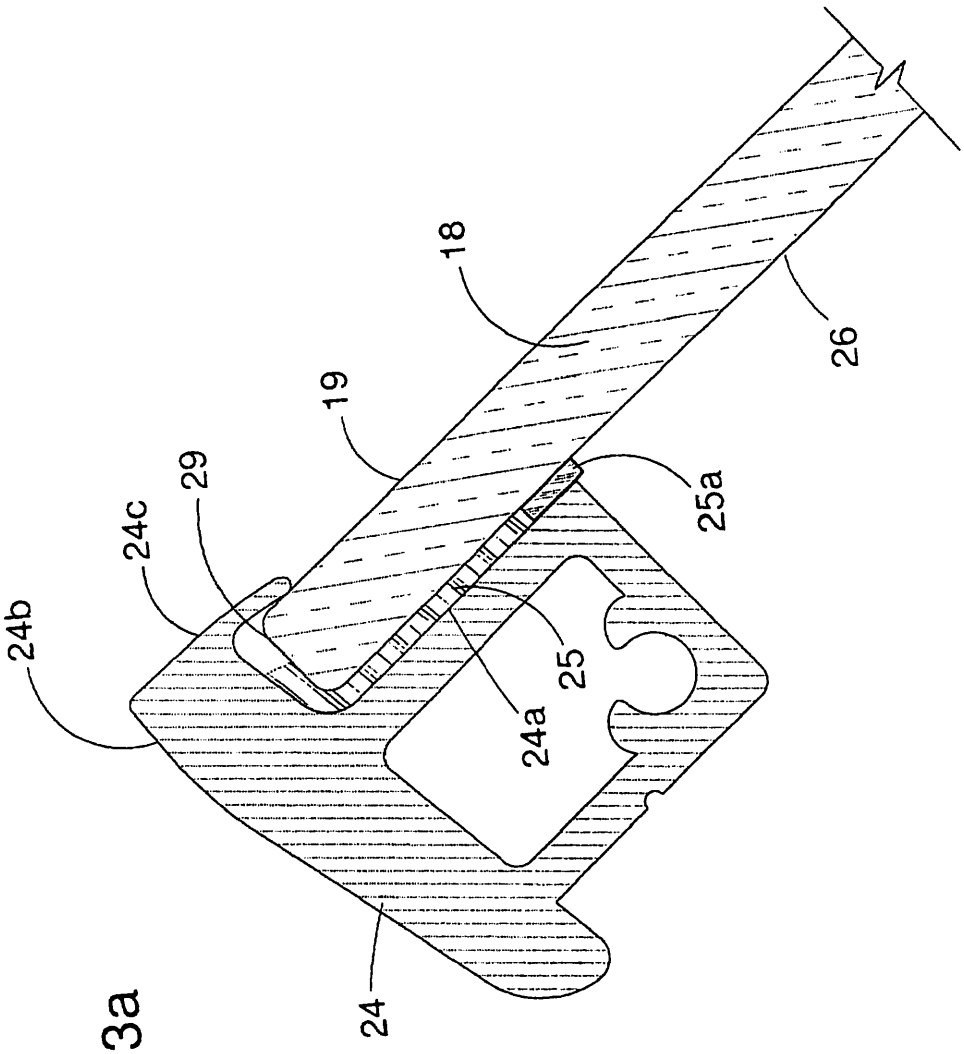


FIG. 3a

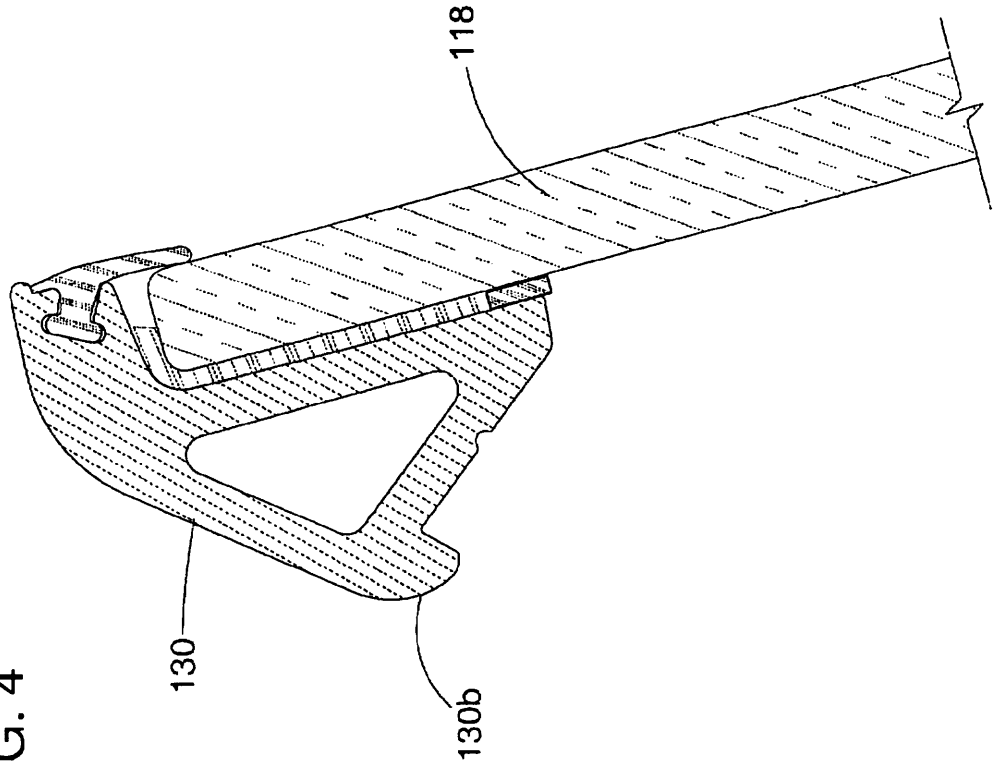


FIG. 4

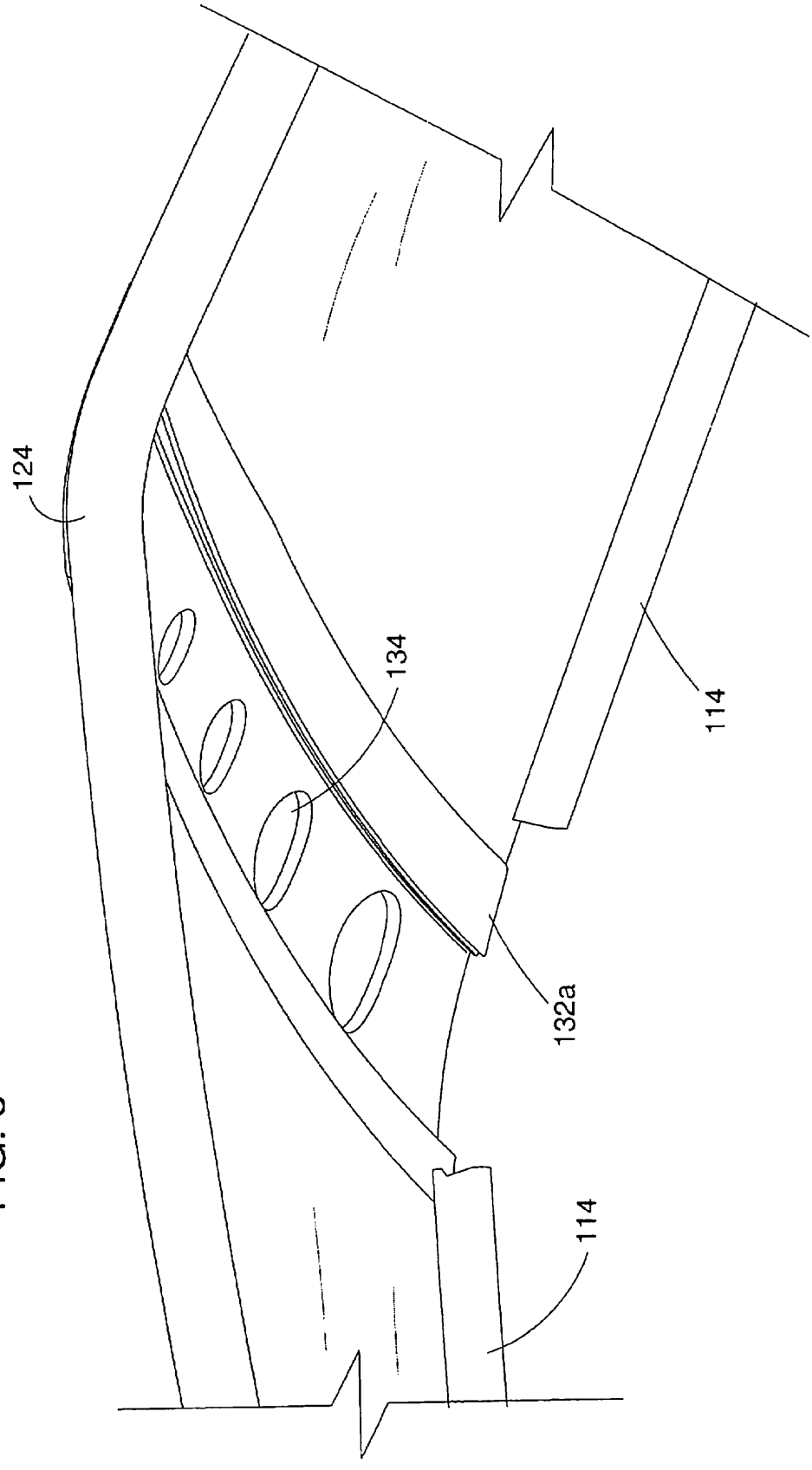


FIG. 5

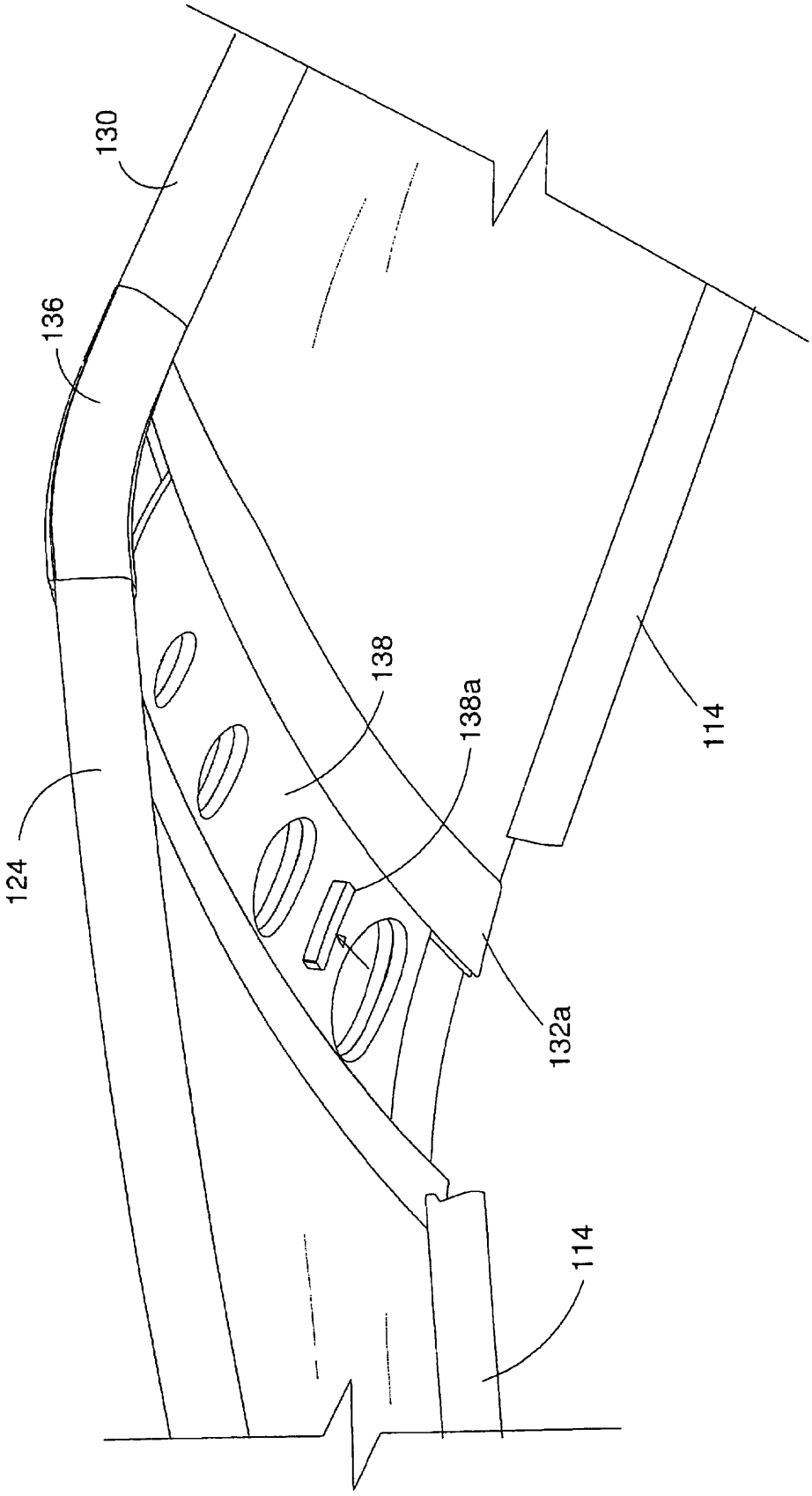


FIG. 6

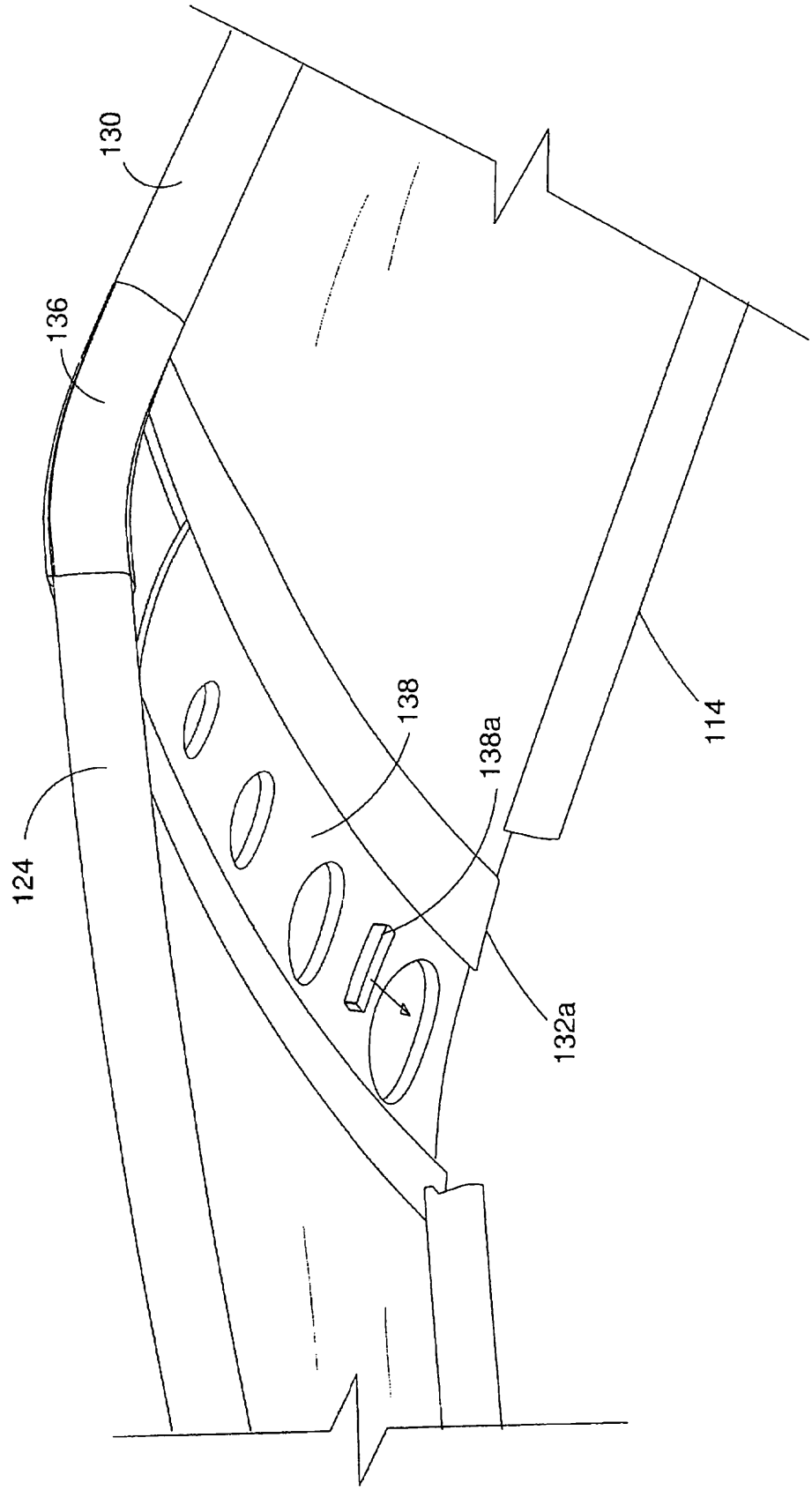


FIG. 7

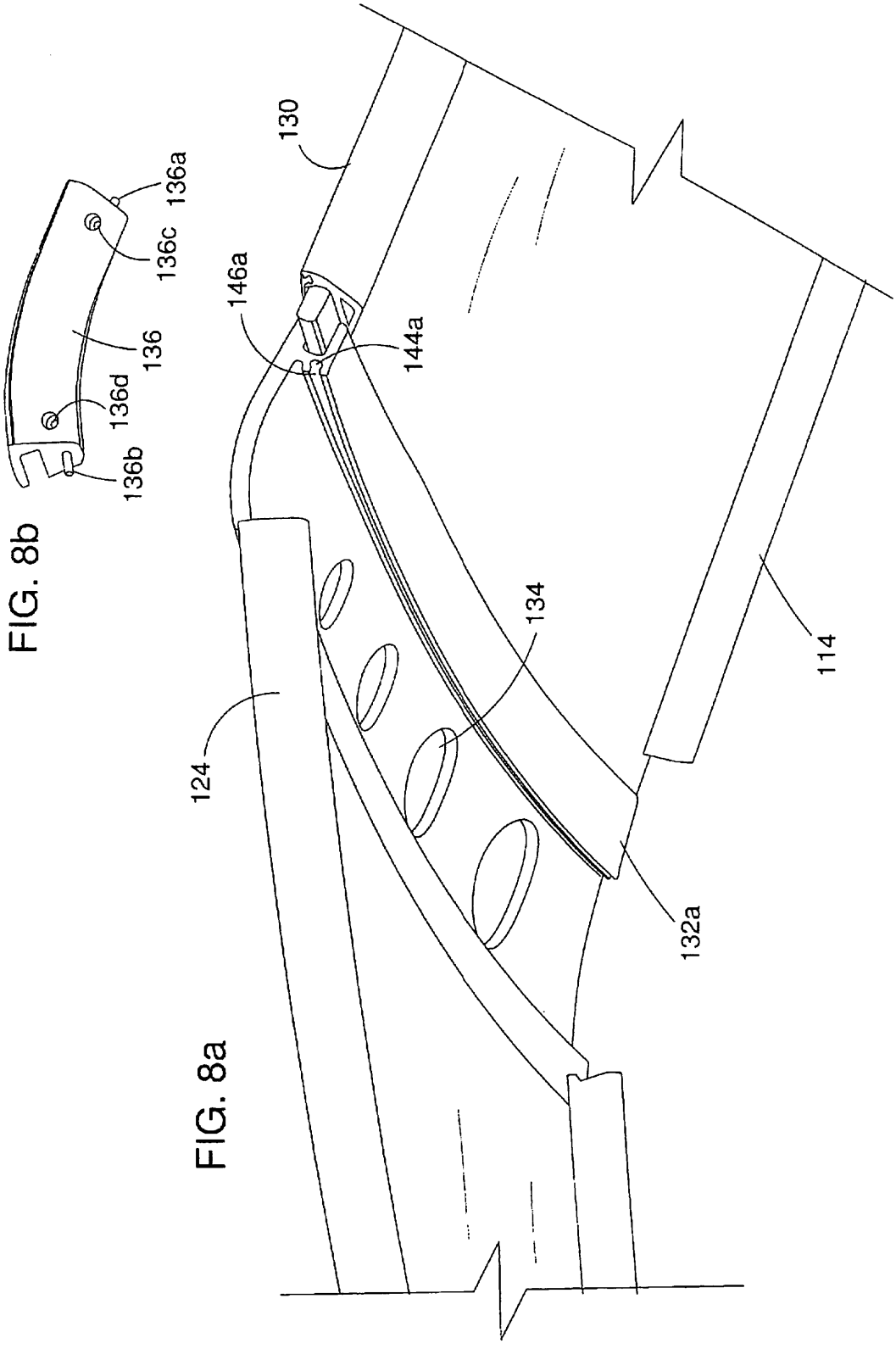


FIG. 8b

FIG. 8a

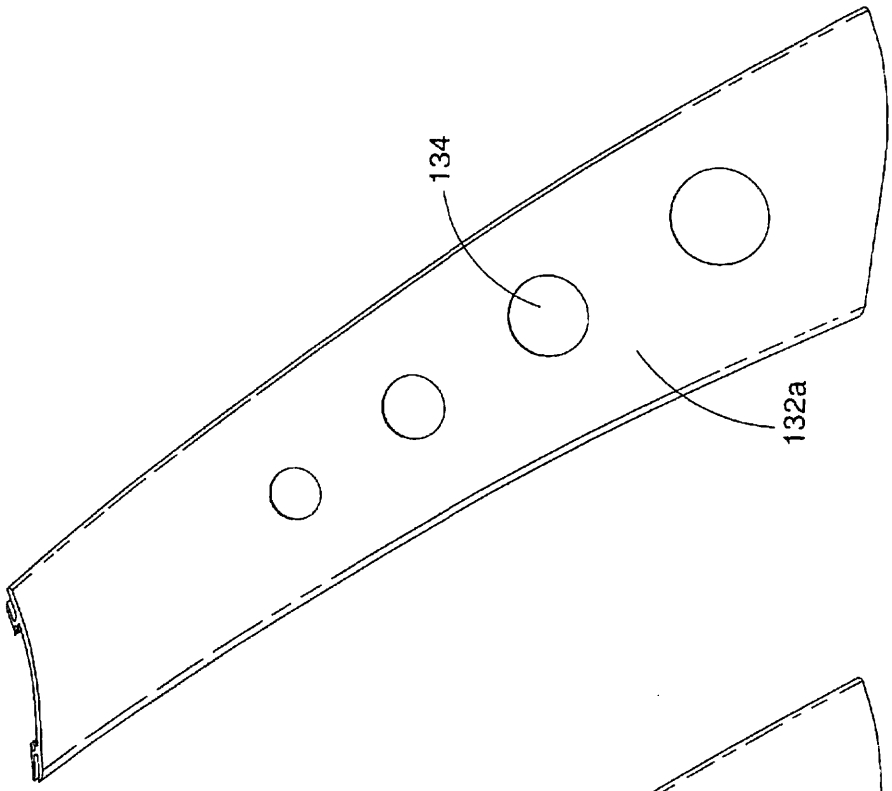


FIG. 10

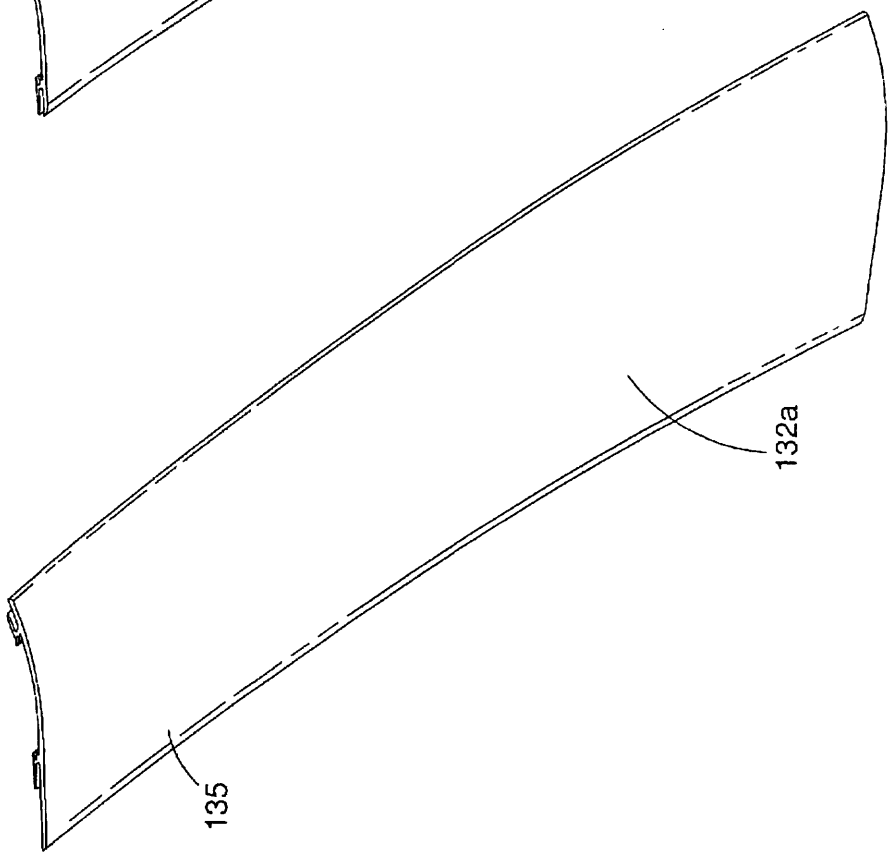


FIG. 9

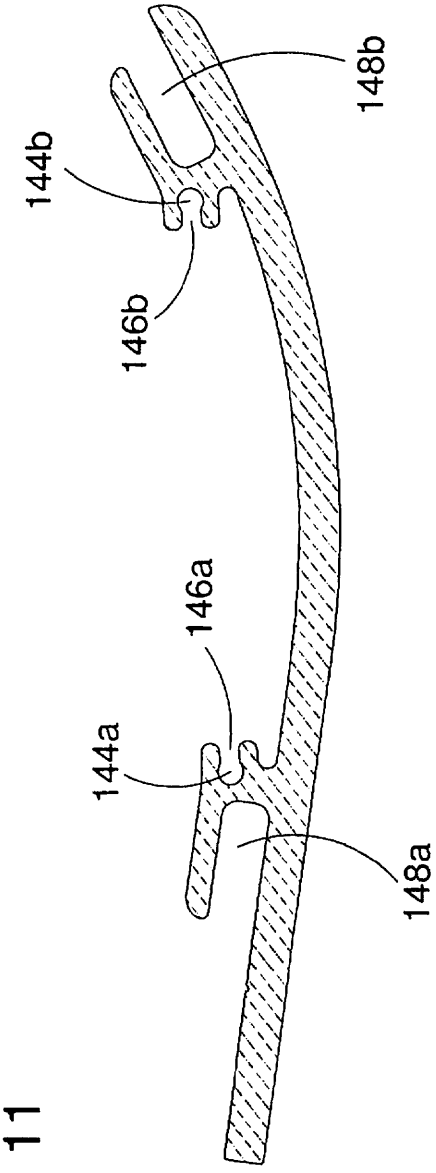


FIG. 11

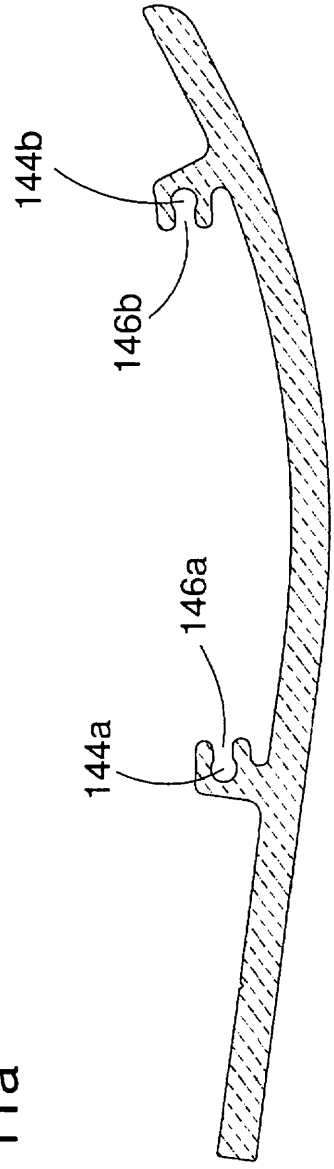


FIG. 11a

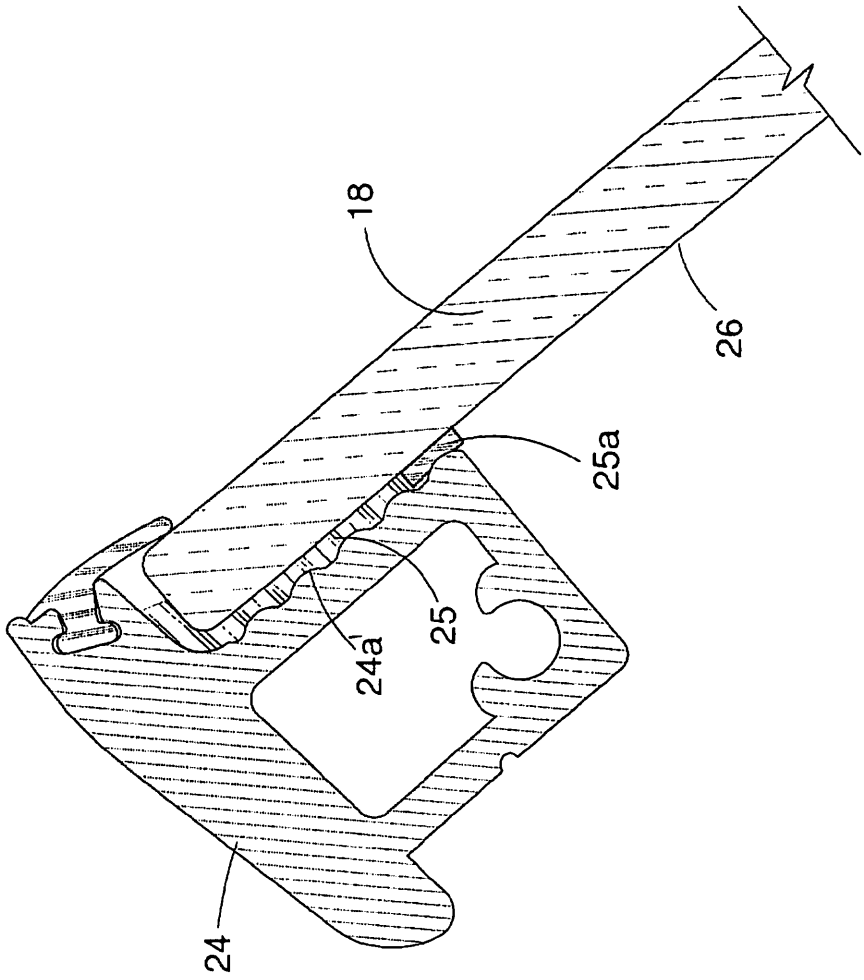


FIG. 12

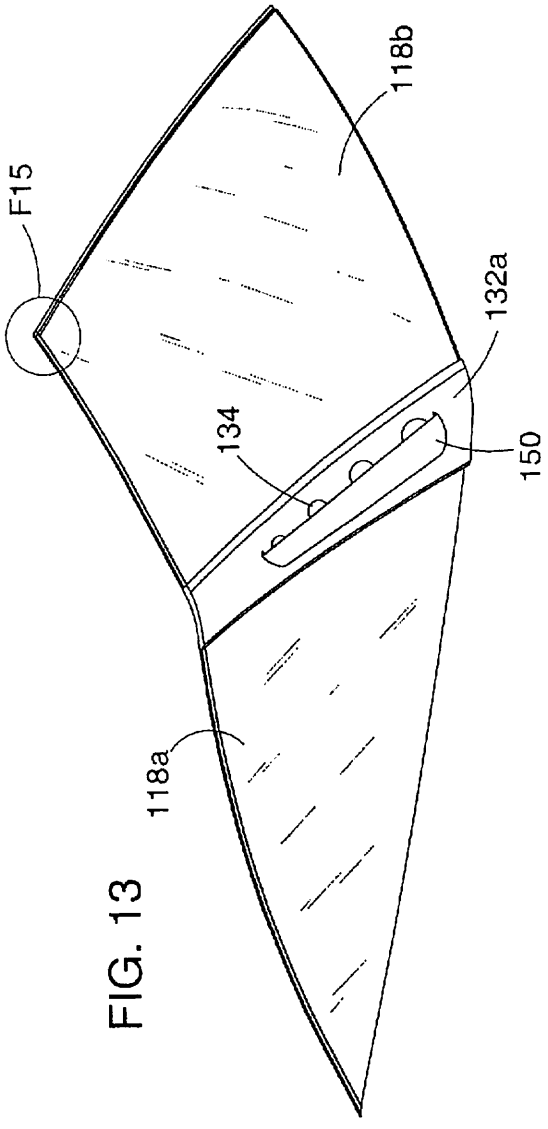


FIG. 13

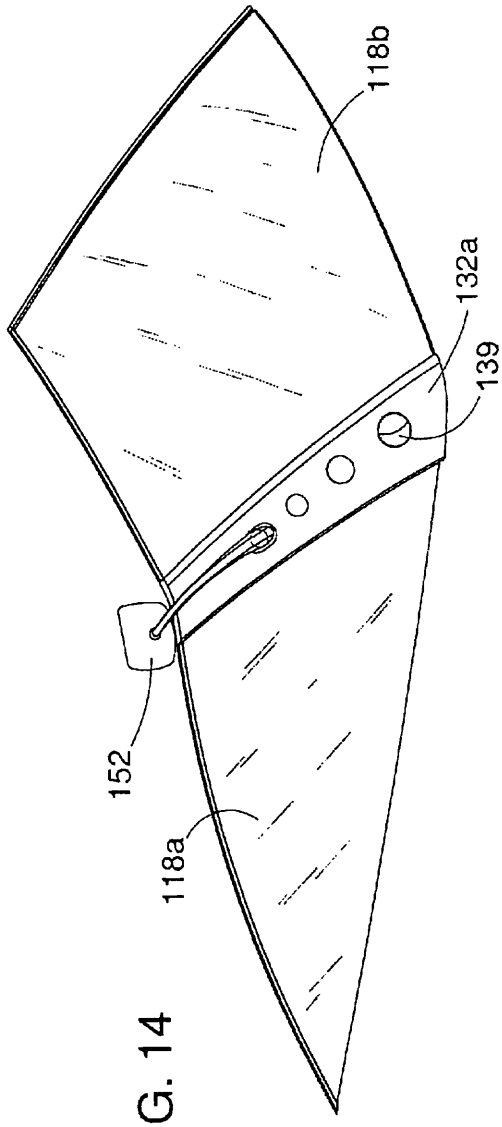


FIG. 14

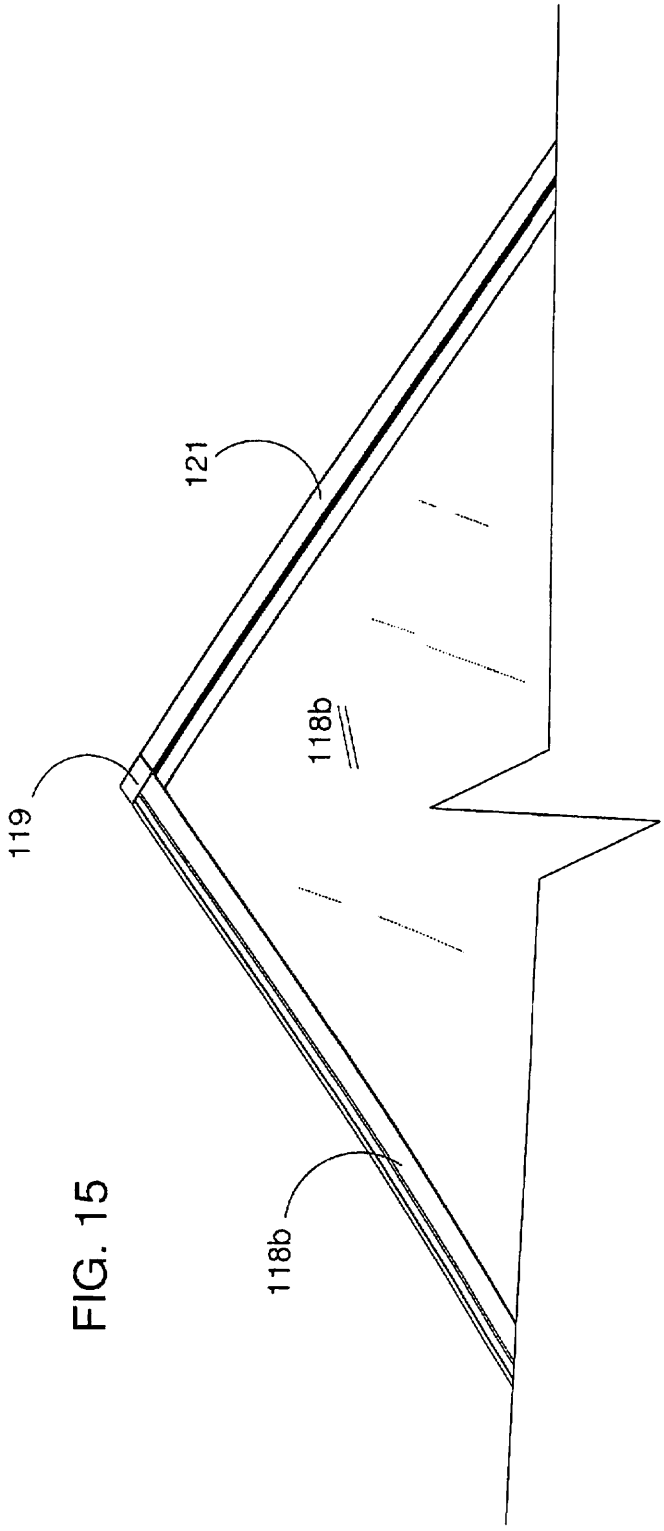


FIG. 15

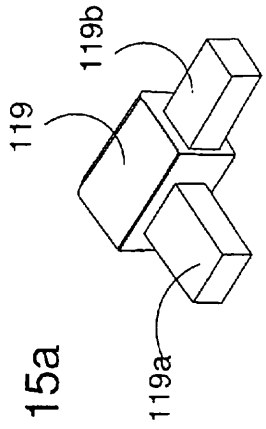


FIG. 15a

MARINE WINDSHIELD FRAME AND METHOD OF MANUFACTURE

TECHNICAL FIELD

The invention relates to a marine windshield frame and method of manufacture, and more specifically to a narrow adhesive mounted top frame rail, substantially flush with the frontal surface of the windshield glass and may also employ a pair of dramatically tapered corner posts.

BACKGROUND OF THE INVENTION

Mounting, trimming or finishing the edges of marine windshields has become more complex over the years as the windshield shapes have progressed from simple rectangular panes to complexly gently curved, dramatically curved and obliquely oriented windshields, some of which are segmented and also allowing access to a forward seating area through a windshield hatch.

The most common approach currently in use is to employ an extrusion, which is stretch-formed on a die set to the curved shape of the edge of the windshield glass to be mounted. Usually the mounting and edge trimming extrusions are formed from aluminium extrusions and usually have a windshield receiving longitudinally extending channel therein. A gasket, such as a vinyl or thermoplastic gasket, is mounted between the windshield channel in the extrusion and the glass, so as to seal and cushion the windshield edge within the assembly.

Typical marine windshield frame extrusions that extend along the top and bottom edge, and sometimes, corners of the windshield, are as set forth in U.S. Pat. Nos. 6,800,160; 6,647,914; 5,601,050; 4,970,946; 3,654,648 and 3,016,548.

Accordingly, it is an object of the present invention to provide a windshield frame and method of manufacturing, which is well suited for use as a frame for most boat windshield glass including, curved, semi-curved, straight and corner posted boat windshields.

Another object of the present invention is to provide a method of manufacture of a vented corner post allowing different vent hole configurations.

Yet another object of the present invention is to provide a method of manufacture of a vented corner post.

A further object of the present invention is to provide a vented corner post with added visibility through the vent holes.

Still a further object of the present invention is to provide a windshield frame with a significantly tapered shape for improved visibility and aesthetic values.

The marine windshield frame and method of manufacture of the present invention has other objects and features of advantage which will become apparent from and are set forth in more detail in, the accompanying drawings and following details.

DISCLOSURE OF THE INVENTION

The marine windshield frame and method of manufacture of the present invention is designed to be stretch or die formed so as to fit along the frontal area of a boat deck, and comprises briefly, an elongated base member, longitudinally extending along the front and somewhat along the sides of the boat deck and including a windshield mounting rail. The windshield mounting rail includes an elongated windshield glass adhesion area, as described in U.S. patent application Ser. No. 11/155,942. The windshield frame assembly includes a longitudinally extending top windshield edge receiving structural rail, which also includes an elongated windshield glass adhesion area, where this top windshield edge receiving structural rail is affixed to the top rearward edge of the glass so as to be substantially flush with the frontal glass surface.

The windshield assembly may also include a pair of corner posts, where the corner posts may include vent holes therein. The vent holes can also be opened or closed from the cockpit, by sliding a cover up or down if desired. The vent cover fits into slots or tracks that run up and down the length of the corner post. The top of the corner post may be covered by a continuous top rail being bent around the top corner area, or by a cap that is screwed to the top of the corner post.

When the windshield frame includes a hatch to access the front deck of a boat, a corner connector is used to improve rigidity of the connection of the top windshield frame rail and vertically oriented hatch rail. The connector is made of plastic or other material. The corner connector block includes tabs, where the tabs insert into both the top windshield frame rail and the vertically oriented hatch rail during assembly.

The design of the corner post vent holes naturally provides a negative pressure in behind the windshield to vent the cockpit area. If a positive pressure is desired, an air scoop can be provided on the frontal surface of the corner post. This can be in the form of an external air scoop or an integrated hemispherical scoop that can be rotated within a vent hole.

The top vent hole on the starboard side is used to mount an optional mirror, where the mirror bracket is attached using a fastener that extends through the vent hole to a bracket that spans the inside of the vent hole. The mirror bracket mounts without any modification to the corner post.

The windshield frame rail members are typically made using suitable aluminium alloy extrusions, which are stretch-formed to the desired shape and then cut to length. The corner post can be made of a stretch-formed aluminium extrusion, or die-cast aluminium, or die-cast plastic, such as ABS plastic. The final part can be finished by a coated, using a variety of coatings methods and types for either the metal or plastic parts, adding most any desired aesthetic finish to the part.

In another aspect of the present invention, the manufacturing process, where the corner post is made of an aluminium alloy extrusion. The extrusion is then stretch-formed, and trimmed to length. To finished the shape a taper is created on at least one upper edge by machining off material. This trimming process is preferably executed robotically, and is done after the stretch-forming process. Thereby allowing a complex shaped part to be relatively inexpensive for smaller manufacturing runs.

It should be noted that the inward shape—towards the cockpit area—of the top rail can change depending on the angle of the windshield glass and the desired appearance, without the need to change the connection area and connection means, as well as the uppermost of the frontal area—towards the windshield glass—of the top rail.

BRIEF DESCRIPTION OF THE DRAWINGS

Advantages of the present invention will become more fully appreciated as the same becomes better understood when considered in conjunction with the following detailed description of an illustrative embodiment and accompanying drawings, in which like reference characters designate the same or similar parts throughout the several views, and wherein:

FIG. 1 is a perspective view of the preferred embodiment showing the invention mounted onto a boat deck and having a hatch segment for passage to the front deck area.

FIG. **2** is a perspective view of an alternate windshield assembly having vented corner post, showing the invention mounted onto a boat deck.

FIG. **3** is a segmented cross-sectional view of the top rail of the windshield frame taken along line A from FIG. **1** and as taken along line B from FIG. **2**.

FIG. **3***a* is a segmented cross-sectional view of an alternate top rail of the windshield frame taken along line A from FIG. **1** and as taken along line B from FIG. **2**.

FIG. **4** is a segmented cross-sectional view of an alternate top rail of the windshield frame taken along line C from FIG. **2**.

FIG. **5** is a segmented perspective view as viewed from above the cockpit area showing a continuous top rail.

FIG. **6** is a segmented perspective view as viewed from above the cockpit area showing the top rails and corner post, with a corner post cap in place, and showing the vent cover open.

FIG. **7** is a segmented perspective view as viewed from above the cockpit area showing the top rails and corner post, with the corner post cap in place, and showing the vent cover closed.

FIG. **8***a* is a segmented perspective view as viewed from above the cockpit area showing the top rails and corner post, with the corner post cap removed.

FIG. **8***b* is a perspective view showing the corner post cap, away from attaching frame members.

FIG. **9** is a perspective frontal view of a corner post extrusion after stretch-forming and trimming, and before machining.

FIG. **10** is a perspective frontal view of a finished corner post with vent holes.

FIG. **11** is a cross-sectional view of the corner post extrusion.

FIG. **11***a* is a cross-sectional view of an alternate corner post.

FIG. **12** is a segmented cross-sectional view of the top rail of the windshield frame taken along line A from FIG. **1** and as taken along line B from FIG. **2**, showing an alternate ribbed surface of top frame rail that extends the adhesive contact surface area.

FIG. **13** is a perspective frontal view of a windshield assembly showing an air scoop attached rearward of the corner vent holes.

FIG. **14** is a perspective frontal view of a windshield assembly showing a mirror attached to the upper corner vent hole and a hemispherical vent is shown attached within the lower corner vent hole.

FIG. **15** is a sectional perspective frontal view of the windshield assembly taken from circle F15 in FIG. **13** showing a corner connector block attached.

FIG. **15***a* is a perspective frontal view showing a corner connector block unattached.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

The marine windshield frame is generally referred to as **10** as shown in a perspective view in FIG. **1**. A boat is shown in partial view where a deck **12** has windshield **10** mounted thereon deck **12**, by means of windshield base frame rail **14**. Windshield **10** is segmented, dramatically curved and swept back along the front sides of a cockpit area **16**.

Windshield **10** includes windshield glass **18**, where windshield glass **18** includes peripheral sections **18***a*, **18***b*, and **18***c*. Windshield section **18***b* is attached to a hatch door **20**, where hatch **20** allows access to the front deck seating area **22**. On top of glass sections **18***a*, **18***b* and **18***c* is longitudinally extending top windshield frame rail **24**.

Alternate marine windshield frame as shown in a perspective view in FIG. **2**, is generally referred to as **110**. A boat is shown in partial view where a deck **112** has windshield **110** mounted thereon. Windshield **110** is segmented, gently curved and swept back along the front sides of a cockpit area **116**.

Windshield **110** as shown in FIG. **2**, where windshield glass **118** includes peripheral sections **118***a*, **118***b*. **118***c*, **118***d* and **118***e*. Windshield section **118***c* is attached to hatch door **120**, where windshield section **118***c* and hatch door **120** allows access to the front deck seating area **122**. On top of glass sections **118***b*. **118***c*. **118***d* and **118***e* is longitudinally extending top windshield frame rail **124**.

As shown in FIG. **3** a partial cross-sectional view taken along line A from FIG. **1**, and also an identical section as taken along line B from FIG. **2**, where the elongate top frame rail **24** is shown mounted substantially flush with windshield glass **18**'s exterior surface **19**. The windshield glass **18** is shown adhesively fastened, or glued, where adhesive fastener **25** is shown between top rail **24**'s adhesive application surface **24***a* and windshield glass **18**'s interior surface **26**. Also, a double adhesive strip **25***a* is used where double adhesive strip **25***a* is applied during assemble to control adhesive spread, thereby creating a clean glue edge on the interior surface **26** of windshield glass **18**.

Also shown in FIG. **3** is a pliable strip **28**, where strip **28** is attached to form a clean transition of upper glass edge **29** with the top rail **24**, therefore creating a substantial flush seam between the front exterior surface **19** of windshield glass **18** and the upper surface **24***b* of top rail **24**.

As shown in FIG. **3***a* the top rail **24** includes a lip **24***c*, where lip **24***c* creates a substantial flush seam between the front exterior surface **19** of windshield glass **18** and the upper surface **24***b* of top rail **24**.

Also, as best viewed in FIG. **2**, alternate windshield frame **110** includes a pair of vertically oriented corner posts **132***a* and **132***b*, where corner posts **132***a* and **132***b* mate with base frame rail **114** and top frame rail **124**.

As shown in FIG. **4** a partial cross-sectional view taken along line C from FIG. **2** of windshield frame **110**, where an alternate rearward top frame rail **130** is utilized to reduce protrusion of top rail inner edge **130***b* towards cockpit area **116**, on the lesser sloped peripheral rearward windshield sections **118***a*.

As shown in FIG. **5** a partial perspective view of windshield frame **110** as viewed from just above the cockpit area **116**, showing a continuous top rail **124**.

As shown in FIG. **6** a partial perspective view of windshield frame **110** as viewed from just above the cockpit area **116**, where right-hand corner post **132***a*, mates with base frame rail **114**, top frame rail **124** and alternate rearward top frame rail **130**. Corner post is shown having vent holes **134** and vent hole cover **138**, where vent hole cover **138** includes vent hole cover handle **138***a*. In this view vent cover **138** is in the open position.

As shown in FIG. **7** a partial perspective view of windshield frame similar to FIG. **5**, where in this view vent hole cover **138** is in the closed position.

As shown in FIG. **8***a*, a partial perspective view of windshield frame **110** as viewed from just above the cockpit area **116**, right-hand corner post **132***a* is shown with corner cap **136** removed. As shown in FIG. **8***b*. cap **136** is shown away from corner post **132***a*. Corner post cap **136** may include alignment pins **136***a* and **136***b*, to support alignment of cap

136 with top frame rail 124 and alternate top frame rail 130. Corner post cap 136 may also screw holes 136*c* and 136*d*.

As shown in FIG. 9 in a perspective view, corner post 132*a* is shown after stretch-forming and trimming, and before machining.

As shown in FIG. 10 in a perspective view, corner post 132*a* is shown finished, including with an outward upper edge taper 135, and with vent holes 134 therein.

Shown in FIG. 11 is a cross-section of corner posts 132*a* and 132*b*. Corner posts 132*a* and 132*b* include a pair of screw chases 144*a* and 144*b* and where external area of screw chases 144*a* and 144*b* include slots 146*a* and 146*b*, for vertical sliding of vent cover 138, to open and close vent cover 138. Corner posts 132*a* and 132*b* also includes a pair of windshield glass receiving slots 148*a* and 148*b*, and outward upper edge 135.

In FIG. 11*a*, a cross-sectional view shows an alternate corner post, where no glass receiving slots are required. This is employed when adhesive is used to attach the corner post to the windshield glass.

As shown in FIG. 12 a partial cross-sectional view taken along line A from FIG. 1, and also an identical section as taken along line B from FIG. 2, where the elongate top frame rail 24 is shown mounted substantially flush with windshield glass 18's exterior surface 19. The windshield glass 18 is shown adhesively fastened, or glued, where adhesive fastener 25 is shown between top rail 24 and windshield glass 18's interior surface 26, and where an alternate ribbed surface 24*a*' of top frame rail 24 is used to extend the adhesive contact surface area.

As shown in FIG. 13 in a perspective frontal view of a windshield assembly, an air scoop 150 is attached over the corner vent holes.

As shown in FIG. 14 in a perspective frontal view of a windshield assembly, a mirror bracket 152 is attached using the upper vent hole.

Also shown in FIG. 14, a hemispherical vent 139 is attached within the bottom vent hole, where the vent can be open or closed by rotation of the hemispherical vent 139 to provide a stream of air to the cockpit area.

As shown in FIG. 15 in a segmented perspective frontal view of the windshield assembly taken from circle F15 in FIG. 13, shows a corner connector block 119 attached to the top windshield frame rail and the vertical oriented hatch door rail 121.

As shown in FIG. 15*a* is a perspective frontal view showing a corner connector block 119 unattached. Corner connector 119 includes tabs 119*a* and 119*b*. Where tab 119*a* inserts into top windshield frame rail 118*b* and tab 119*b* inserts into vertically oriented hatch rail 121.

The foregoing descriptions of specific embodiments of the present invention have been presented for purposes of illustration and description. They are not intended to be exhaustive or to limit the invention to the precise forms disclosed, and obviously many modifications and variations are possible in light of the above teaching. These modifications may include forming the base members separately and reversing male and female members. The embodiments were chosen and described in order to best explain the principles of the invention and its practical application, to thereby enable others skilled in the art to best utilize the invention and various embodiments with various modifications as are suited to the particular use contemplated.

It is intended that the scope of the invention be defined by the Claims appended hereto and their equivalents.

What is claimed is:

1. A marine windshield frame for curved or straight windshield glass, mounted to a boat deck having a frontal, middle and rearward area and a cockpit substantially within said boat deck middle area, where said cockpit has a frontal and rearward area, comprising:

an elongate base frame member rail mountable onto said boat deck substantially around the frontal area of said cockpit, where said elongate base frame member rail longitudinally extends around bottom of said windshield glass;

an elongate top frame member rail longitudinally extending around top of said windshield glass, where said elongate top frame member rail is mounted substantially inward of said windshield glass and oriented toward said cockpit, where said elongate top frame member rail is mounted substantially flush with frontal area of said windshield glass, where said windshield glass is adhesively fastened to said top frame member rail, where said top frame member rail and said windshield glass include multiple sections, and further comprising a pair of vertically oriented corner posts, where said vertically oriented corner posts each includes a bottom end, an outboard side edge, a frontal surface, an inboard side edge, a rearward surface and a top end, where said corner post bottom end mates with said base frame member rail, said inboard side edge and said outboard side edge mate with said windshield glass sections; and where said corner post top end aligns to said top frame member rail.

2. The marine windshield frame of claim 1 where said top frame member rail having multiple sections is continuous to matingly cover said vertically oriented corner post top end.

3. The marine windshield frame of claim 1 where said pair of vertically oriented corner posts, include a top cap to cover said corner post top end, where said top cap aligns flush with said top frame member rail sections.

4. The marine windshield frame of claim 1 where said pair of vertically oriented corner posts are made of castings.

5. The marine windshield frame of claim 1 where said pair of vertically oriented corner posts are made of a stretch-formed aluminium alloy extrusion.

6. The marine windshield frame of claim 1 where said pair of vertically oriented corner posts have vent holes therethrough.

7. The marine windshield frame of claim 6 where said pair of vertically oriented corner posts have air scoops mountedly fixed thereon said fontal surface.

8. The marine windshield frame of claim 6 where said pair of vertically oriented corner posts have air scoops mounted therein said vent holes, where said air scoops are hemispherical and are rotatable for opening and closing of said air scoops.

9. The marine windshield frame of claim 6 where said pair of vertically oriented corner posts have a mirror bracket mountedly fixed therein at least one of said vent holes.

10. The marine windshield frame of claim 6 where said pair of corner posts have a pair of inward facing tracks for guiding a slidable cover therein, for slidably opening and closing said vent holes.

11. The marine windshield frame of claim 1 where said pair of vertically oriented corner posts have substantially vertical tapers.

12. The marine windshield frame of claim 1 where said pair of vertically oriented corner posts have a longitudinal semicircular shape thereon said frontal surface.

13. The marine windshield frame of claim 12 where said pair of vertically oriented corner posts have a longitudinal segmented chamfered shape thereon said longitudinal semi-circular frontal surface.

14. A marine windshield frame for curved or straight windshield glass, mounted to a boat deck having a frontal, middle and rearward area and a cockpit substantially within said boat deck middle area, where said cockpit has a frontal and rearward area, comprising:

an elongate base frame member rail mountable onto said boat deck substantially around the frontal area of said cockpit, where said elongate base frame member rail longitudinally extends around bottom of said windshield glass;

an elongate top frame member rail longitudinally extending around top of said windshield glass, where said elongate top frame member rail is mounted substantially inward of said windshield glass and oriented toward said cockpit, where said elongate top frame member rail is mounted substantially flush with frontal area of said windshield glass, where said windshield glass is adhesively fastened to said top frame member rail, where said elongated top frame member rail has an elongated ribbed surface oriented towards inward glass surface, so as to extend the adhesive contact surface area.

15. A method of manufacturing a marine windshield frame corner post for curved or straight windshield glass sections, comprising the steps of;

a) extruding an aluminium alloy shape, having a widened frontal area;

b) forming said aluminium extrusion to correspond with said windshield glass;

c) milling a taper on at least one side of said formed extrusion;

d) trimming said formed aluminium extrusion to length;

e) mounting said corner post to at least two windshield glass members; and

f) mounting said corner post and said windshield glass members together with at least one bottom windshield frame rail and at least one top windshield frame rail.

16. The method of manufacturing a marine windshield frame corner post of claim 15 further comprising machining at least one vent hole therethrough mid section of said frontal area of said corner post.

17. The method of manufacturing a marine windshield frame corner post of claim 15 further comprising forming said top windshield frame rail around said windshield glass sections, inclusively over said corner post therebetween.

18. The method of manufacturing a marine windshield frame corner post of claim 15 further comprising adding a top finishing cap onto top of said corner post to matingly align with said top windshield frame rails.

19. A marine windshield frame for curved or straight windshield glass, mounted to a boat deck having a frontal, middle and rearward area and a cockpit substantially within a boat deck middle-area, where said cockpit has a frontal and rearward area, comprising:

an elongate base frame member rail mountable onto said boat deck substantially around the frontal area of said cockpit, where said elongate base frame member rail longitudinally extends around bottom of said windshield glass;

an elongate top frame member rail longitudinally extending around top of said windshield glass, where said top frame member rail and said windshield glass include multiple sections;

a pair of vertically oriented corner posts, where said vertically oriented corner posts each include a bottom end, an outboard side edge, a frontal surface, an inboard side edge, a rearward surface and a top end, where said corner posts bottom end mates with said base frame member rail and, said inboard side edge and said outboard side edge mate with said windshield glass sections, and said corner posts top end aligns to said top frame member rail, and;

further comprising a substantial vertically oriented longitudinal semi-circular shape, having substantially vertical tapers thereon said frontal surface, with vent holes therethrough said vertically oriented corner posts.

20. The marine windshield frame of claim 19 where said top frame member rail having multiple sections is continuous to matingly cover said vertically oriented corner post top end.

21. The marine windshield frame of claim 19 where said pair of vertically oriented corner posts have air scoops mountedly fixed thereon said fontal surface.

22. The marine windshield frame of claim 19 where said pair of vertically oriented corner posts have air scoops mounted therein said vent holes, where said air scoops are hemispherical and are rotatable for opening and closing of said air scoops.

23. The marine windshield frame of claim 19 where said pair of vertically oriented corner posts have a mirror bracket mountedly fixed therein at least one of said vent holes.

24. The marine windshield frame of claim 19 where said pair of corner posts have a pair of inward facing tracks for guiding a slidable cover therein, for slidably opening and closing said vent holes.

* * * * *

EXHIBIT B

US00D555070S

(12) United States Design Patent

Bach

(10) Patent No.: US D555,070 S
(45) Date of Patent: ** Nov. 13, 2007

(54) MARINE WINDSHIELD

(76) Inventor: **Darren A. Bach**, 7993 Progress Way, Delta, British Columbia (CA) V4G 1A3

(**) Term: **14 Years**

(21) Appl. No.: **29/258,753**

(22) Filed: **Apr. 27, 2006**

(51) **LOC (8) Cl.** **12-06**
(52) **U.S. Cl.** **D12/317**
(58) **Field of Classification Search** D12/300, D12/304, 310, 315, 317, 318, 182; 114/242, 114/249, 253, 353, 361
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

3,016,548 A *	1/1962	Taylor	114/361
3,843,982 A *	10/1974	Lane et al.	114/361
4,970,946 A	11/1990	Ivey	
D313,220 S	12/1990	Winn, Jr. et al.	
D331,560 S	12/1992	Ivey	
5,203,277 A *	4/1993	Norman	114/361
D337,094 S	7/1993	Bernstein	
5,309,860 A *	5/1994	Shearer	114/361
D348,040 S *	6/1994	Shearer et al.	D12/317
D410,890 S *	6/1999	Consaul	D12/317

* cited by examiner

Primary Examiner—Holly H. Baynham
Assistant Examiner—Cynthia Chin

(57) **CLAIM**

The ornamental design for a marine windshield, as shown and described.

DESCRIPTION

FIG. **1** is a right frontal elevated perspective view of a marine windshield

FIG. **2** is a left rear elevated perspective view thereof;

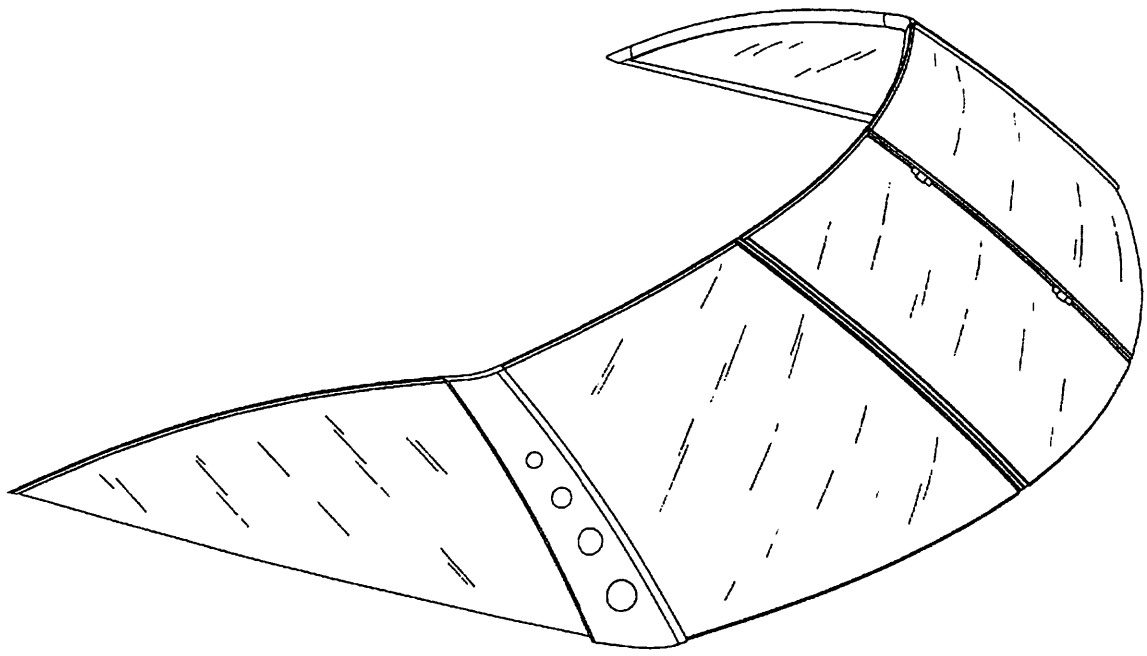
FIG. **3** is a top plan view thereof;

FIG. **4** is a left side elevation view thereof;

FIG. **5** is a right side elevation view thereof; and,

FIG. **6** is a front elevation view thereof.

1 Claim, 4 Drawing Sheets



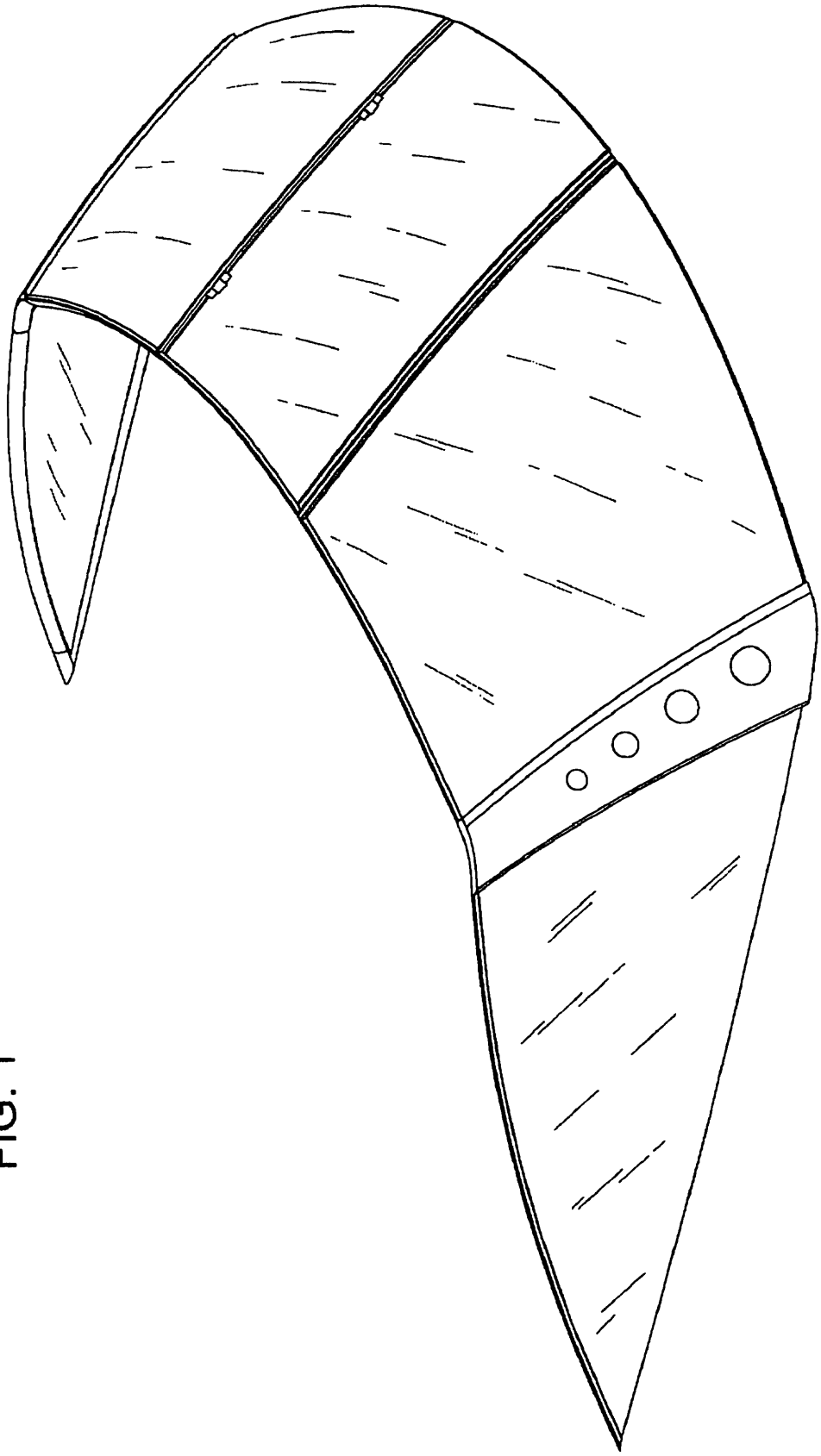


FIG. 1

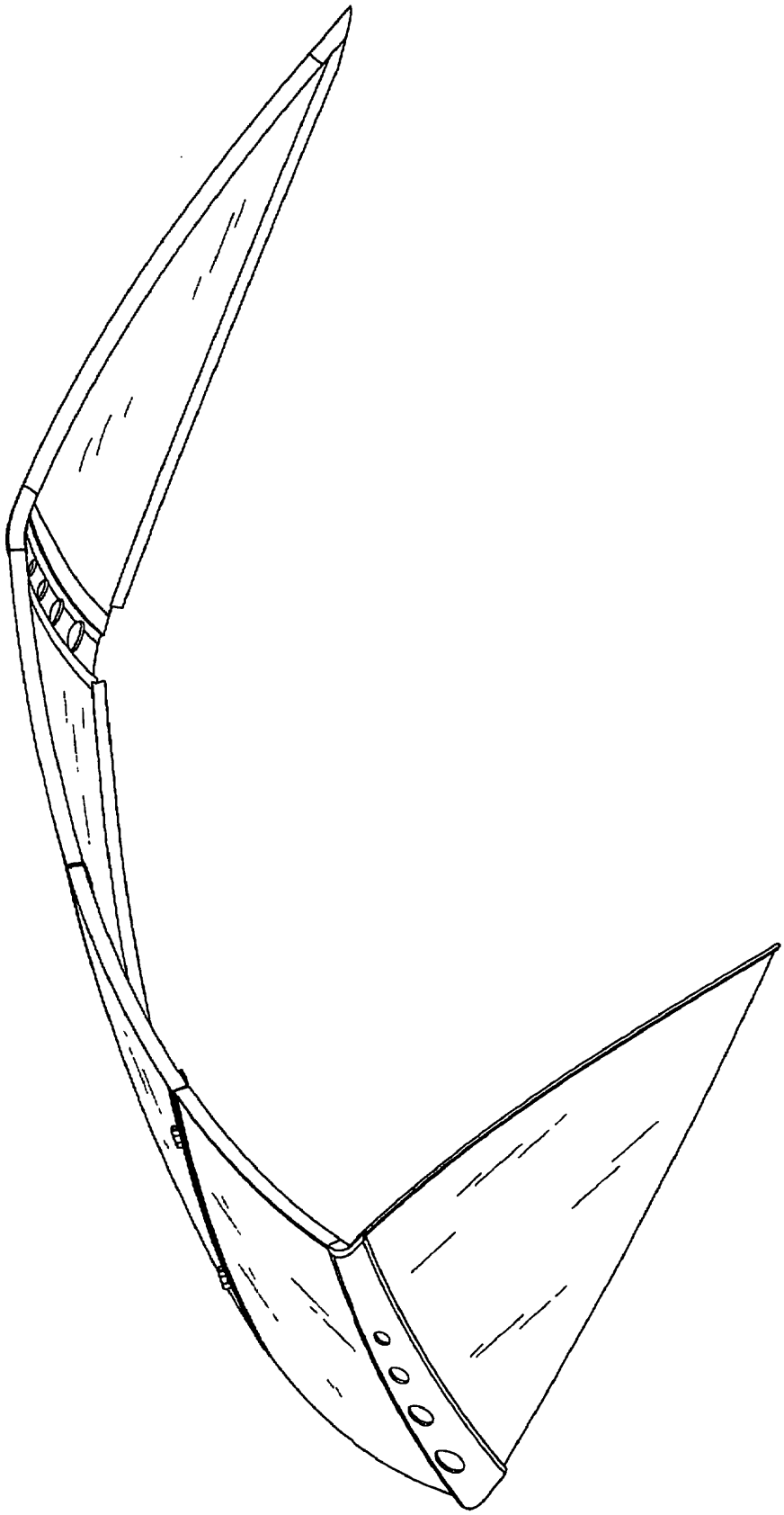


FIG. 2

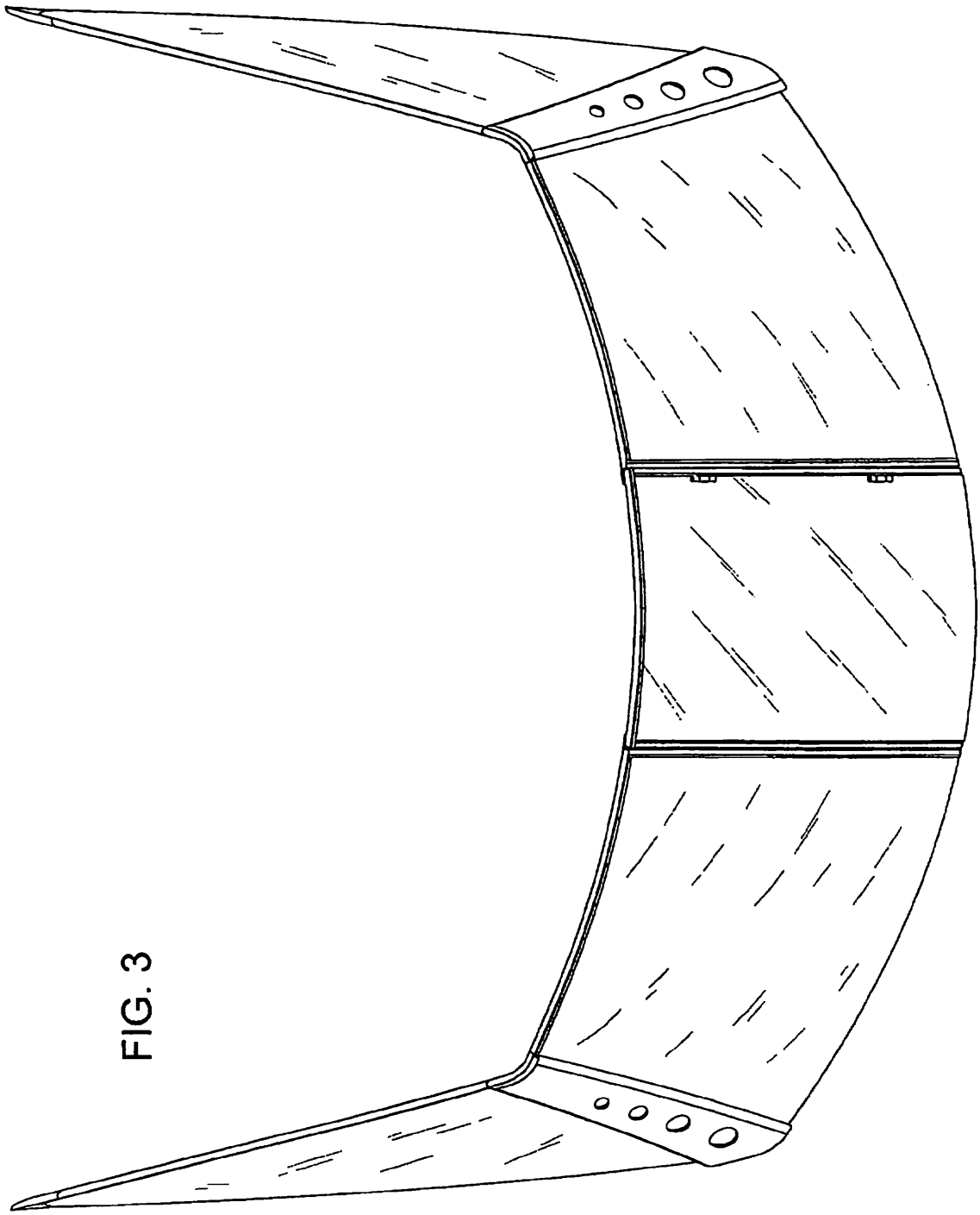


FIG. 3

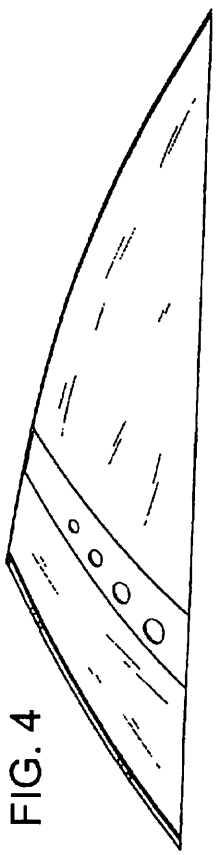


FIG. 4

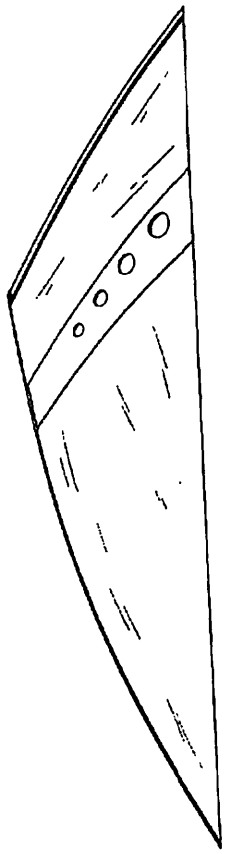


FIG. 5

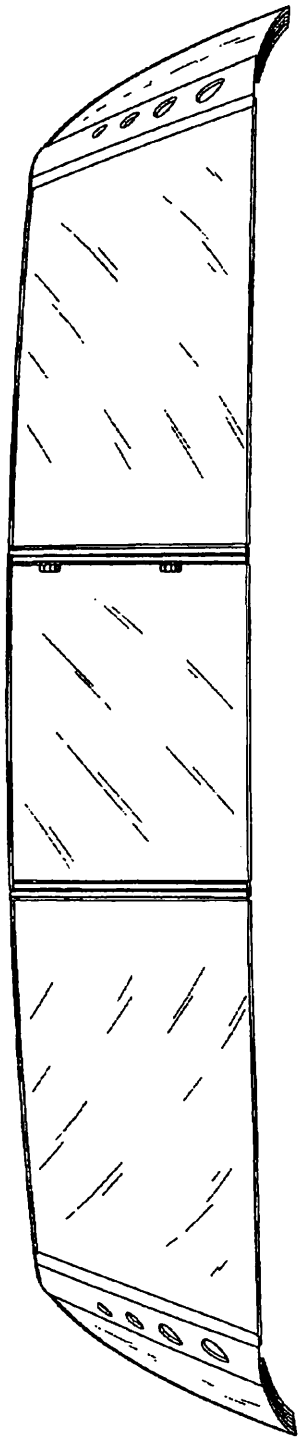


FIG. 6