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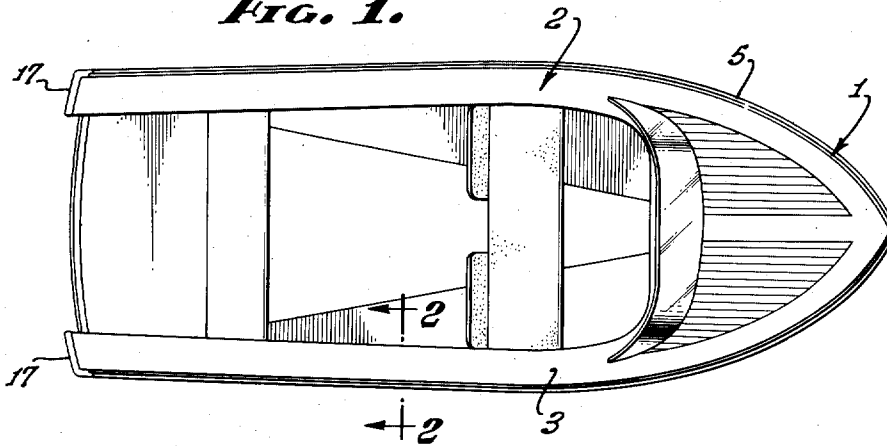
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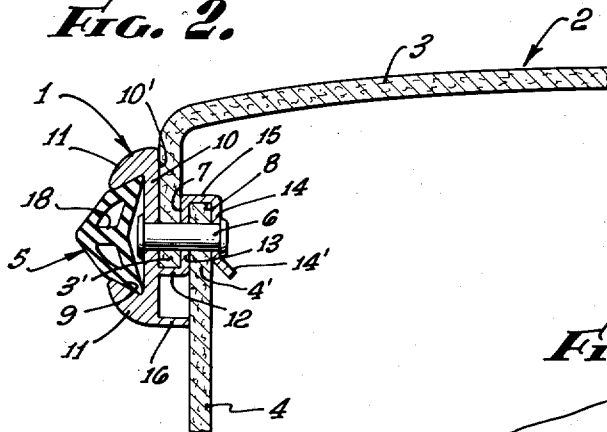
DECK AND HULL JOINT FOR BOATS

Filed May 12, 1959

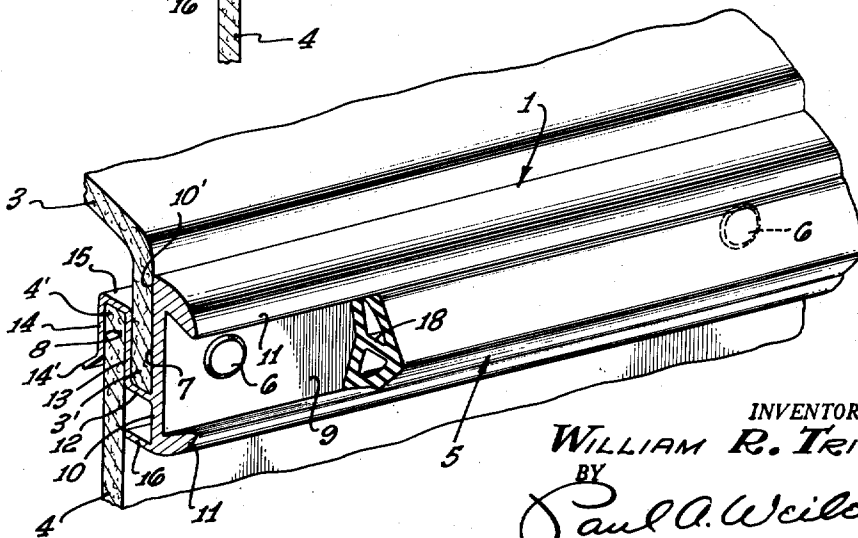
**FIG. 1.**



**FIG. 2.**



**FIG. 3.**



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## DECK AND HULL JOINT FOR BOATS

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This invention relates to boats, and more particularly to means for joining the hulls and decks thereof.

It is an object of this invention to provide a novel joint construction for boats wherein a single member of simple form makes it possible to produce, with less parts and labor than heretofore required, a finished joint of the deck and hull of a boat including a resilient and compressible protective bumper disposed exteriorly of the joint.

It is also an object of this invention to provide a novel unitized joint and trim member that is constructed and arranged to be flexed to conform to the shape of a boat from bow to stern where the deck and hull are to be joined, and which, with the aid of simple fastenings, will form a finished joint including provision for mounting a resilient, compressible bumper so that it will project laterally from the hull at the joint.

Another object of this invention is to provide a joint member such as described which will simplify the operation of assembling the hull and deck of a boat, in that it will provide for automatic alignment of the deck with the hull and a finished joint thereof with a minimum of parts and labor.

Another object is the provision of a joint member such as described which readily lends itself to being formed of aluminum or other suitable metal or material, as by being extruded in the form of a strip having a novel arrangement of channels therein for receiving and joining portions of the hull and deck of a boat, and with a resilient and compressible bumper element anchored in one of the channels and disposed exteriorly of the hull.

Further, it is an object hereof to provide a joint member such as described wherein the bumper element serves as a protective cover and seal for fastenings which secure the joint member to the portions of the deck and hull mounted in the channels.

An additional object hereof is to provide a joint member such as described which serves as an effective reinforcing element for the hull and deck at the joint thereof, as well as a decorative and protective gunwale.

Other objects and advantages of the invention will be hereinafter described or will become apparent to those skilled in the art, and the novel features of the invention will be defined in the appended claims.

Referring to the drawings:

FIG. 1 is a top plan view of a boat embodying the present invention;

FIG. 2 is an enlarged sectional view taken on the line 2—2 of FIG. 1; and

FIG. 3 is an enlarged fragmentary perspective view of a part of the hull and deck joint with portions thereof shown in section and broken away for clarity of illustration.

The illustrative embodiment of this invention as shown in the accompanying drawing, generally comprises an elongate joining member 1 which is constructed and arranged as a strip so that it may be extended from the bow to the stern of a boat 2, as shown in FIG. 1, to provide a finished joint of the deck 3 and the hull 4, as well as to provide a gunwale formation including a resilient and compressible bumper strip 5. Fastenings, here shown in the form of rivets 6, are extended at suitable intervals through the member 1 and the portions of the hull and deck and engaged therewith, to fasten the deck and hull

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together. The bumper strip 5 serves as a protective cover and seal for these fastenings.

The member 1 may be formed of aluminum or any other suitable metal or material provided the member will be sufficiently rigid and strong for securely joining the deck and the hull, yet capable of being flexed to conform to the shape of the boat from the bow to the stern in a position for joining the deck to the hull.

The shape of the joining member 1 is such that it may be extruded or otherwise formed in strip lengths sufficient to be wrapped around the bow of the boat and extended to the stern, although, obviously, separate strips suitably joined may be provided.

The joining member 1 is provided with three channels designated 7, 8 and 9 for reception of the downwardly extended edge portion 3' or flange of the deck 3, the upper marginal portion 4' of the hull 4 and the bumper strip 5, respectively.

The channel 7 for the deck portion 3' is formed between the channels 8 and 9 and faces upwardly, whereas the channel 8 for the hull portion 4' is innermost and faces downwardly, thereby providing for a secure fastening of the hull and deck together in overlapping relation, with the marginal portions thereof tightly fitted in the channels 7 and 8 and held therein by means of the fastenings 6.

The channel 9 for the bumper strip 5 faces laterally outwardly from the hull and, after the fastenings 6 are inserted through aligned openings in the member 1 from the outer side of the channel 9, the strip 5 is fitted into the channel 9 and forms a seal over the fastenings to protect them from water and weather deterioration.

Referring more specifically to the formation of the joining member 1, it is seen that it includes an elongate plate-like body 10 provided along longitudinal edges with flanges 11 projecting laterally from the outer face of the body to form therewith the channel 9. The opposed faces of the flanges 11 are oppositely inclined to give the channel a dovetail formation whereby the resilient and compressible bumper strip 5, after being compressed or placed in the channel 9, and then released, will expand into a tight fit with the flanges and so remain as a result of the inherent resiliency thereof.

The upwardly facing channel 7 is formed by means of a bottom wall 12 integral with the body 10 and with a side wall 13 extending upwardly from the wall 12 in parallel relation to the body, which latter forms the outer side wall of the channel. The bottom wall 12 extends laterally inwardly from the inner face of the body 10 and as here shown, may be well upwardly spaced from the lower edge of the body.

The downwardly facing channel 8 is formed by a side wall 14 joined to the upper end of the side wall 13 by means of a lateral extension 15, which latter forms the closed end of the channel. The lower end of the wall 14 may be flared as at 14' to provide a wide mouth facilitating entry of the marginal portion 4' of the hull into the channel 8.

As here shown, the width of the body 10 is such that it extends well above and well below the upper and lower extremities of the channels 7 and 8. The portion 10' of the body 10 extending above the upper end of the channel 7 serves as a bearing wall for a part of the downwardly directed deck flange 3'.

The lower edge of the body 10 is disposed as here shown, well below the lower ends of the channels 7 and 8, and an inwardly directed flange 16 is formed on this lower edge so as to abut the outer side of the hull and thereby reinforce and stabilize the body 10 and channel forming elements integral therewith.

The flanges 11 on the body 10 have rounded exterior

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surfaces and may be somewhat thicker than the body which may also be of greater thickness than the other wall portions forming the channels 7 and 8, thereby providing desired rigidity and strength in those portions of the member 1 that are exposed for bumping or jarring contact with objects in the operation of the boat. This arrangement, including the bumper strip 5, provides a gunwale formation having a neat and attractive appearance and capable of withstanding shocks and bumps without damaging the joint of the hull and deck.

It should be noted that the bumper strip 5, as here shown, is concavo-convex in cross section and hollow, there being a web or rib 18 centrally of the hollow portion to reinforce and stiffen the strip. The strip is formed so that it may be compressed so that the longitudinal edges may be fitted into the channel 9 to engage the flanges 11. The inherent resiliency of the strip 5 maintains it in tight engagement with the flanges and in such a position that a space is provided between the concave face of the strip and the member 10. This space permits the bumper strip to be compressed or forced inwardly against the body 10 and yet, in view of the thickness of the strip, it will present a bumping surface projecting laterally outwardly beyond the flanges to protect the latter.

The joint member 1, although applicable to boats of various designs and construction where it is desired to join those portions of the deck with the boat hull that are capable of being fitted into the channels 7 and 8, is particularly adapted for use in connection with boats made of a plastic and glass fiber composition and other sheet material in which marginal portions of the hull and deck are shaped and arranged to be seated tightly in the channels 7 and 8.

While specific structural details have been shown and described, it should be understood that changes and alterations may be resorted to without departing from the spirit of the invention as defined in the appended claims.

I claim:

1. A structure for joining the hull and deck of a boat comprising: an elongate member; means joined to and forming along said member a pair of channels opening in opposite directions and laterally spaced from one another on one side of said member for reception of portions of the deck and hull, respectively; and means joined to and forming along the other side of said member a third channel opening laterally of said member for supporting along the exterior of said hull a bumper element.

2. A structure for joining the hull and deck of a boat comprising: an elongate plate-like body; said body having flanges projecting laterally from one face thereof and forming therewith a channel along said body and opening laterally of said body for reception of a bumper element; and an elongate channel forming member joined to the other face of said body and extending longitudinally thereof; said channel forming member having a cross sectional shape forming with said body an upwardly facing channel for reception of an edge of the deck; said channel forming member also having a cross sectional shape forming with said deck-receiving channel a downwardly facing hull-receiving channel disposed in laterally spaced relation to said upwardly facing channel.

3. A structure for joining the hull and deck of a boat comprising: an elongate plate-like body; said body having flanges projecting laterally from one face thereof and forming therewith a channel along said body for reception of a bumper member; an elongate channel forming member joined to the other face of said body and extending longitudinally thereof; said channel forming member having a cross sectional shape forming with said body a channel for reception of an edge of the deck; said channel forming member also having a cross sectional shape forming with said deck-receiving channel a hull-receiving channel; said body having a flange extending inwardly therefrom for abutting said hull.

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4. A structure for joining the hull and deck of a boat comprising: an elongate plate-like body; said body having flanges projecting laterally from one face thereof and forming therewith a channel along said body for reception of a bumper member; an elongate channel forming member joined to the other face of said body and extending longitudinally thereof; said channel forming member having a cross sectional shape forming with said body a channel for reception of an edge of the deck; said channel forming member also having a cross sectional shape forming with said deck-receiving channel a hull-receiving channel; said body extending below the channels for said deck and said hull; and an inwardly directed flange on said body for engaging said hull below the channels for said deck and said hull.

5. A structure for joining the hull and deck of a boat comprising: an elongate plate-like body; said body having flanges projecting laterally from one face thereof and forming therewith a channel facing laterally outwardly along said body for reception of a bumper member; and an elongate channel forming member joined to the outer face of said body and extending longitudinally thereof; said channel forming member having a cross sectional shape forming with said body a channel for reception of an edge of the deck; said channel forming member also having a cross sectional shape forming with said deck-receiving channel a hull-receiving channel spaced laterally outwardly from the channel which receives the edge of the deck; said body extending above and below the channels for said deck and said hull.

6. A member for joining portions of the deck of a boat to the boat hull comprising: an elongate plate-like body; an elongate channel forming member joined to said body and forming therewith on one side thereof a channel of less depth than the width of said body for receiving a portion of the deck; another elongate member joined to said channel of less depth than the width of said body forming member and forming to one side thereof a channel for receiving a portion of said hull; and members projecting laterally outwardly from longitudinal edges of said body forming a channel which opens laterally of said body.

7. A member for joining portions of the deck of a boat to the boat hull comprising: an elongate plate-like body; an elongate channel forming member joined to said body and forming therewith on one side thereof an upwardly facing channel for receiving a portion of the deck; another elongate member joined to said channel forming member and forming to one side thereof a downwardly facing channel for receiving a portion of said hull; said body and said members having aligned openings therein for fastenings to secure said deck and hull portions in said channels; and flanges formed on longitudinal edges of said body and extending outwardly and convergently therefrom to form a channel therebetween which opens laterally of said body.

8. A member for joining portions of the deck of a boat to the boat hull comprising: an elongate plate-like body; an elongate channel forming member joined to said body and forming therewith on one side thereof an upwardly facing channel for receiving a portion of the deck; another elongate member joined to said channel forming member and forming to one side thereof a downwardly facing channel for receiving a portion of said hull; and means on the other side of said body forming with said body a channel of dovetail form in cross section and which opens laterally of said body for reception of a resilient compressible bumper element.

9. A member for joining portions of the deck of a boat to the boat hull comprising: an elongate plate-like body; an elongate channel forming member joined to said body and forming therewith on one side thereof a channel for receiving a portion of the deck; another elongate member joined to said channel forming member

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and forming to one side thereof a channel for receiving a portion of said hull; means on the other side of said body forming with said body a channel for reception of a resilient compressible bumper element; and a flange on said body below said channels for abutting the outer side of the hull.

10. A structure for joining the hull and deck of a boat comprising: an elongate, flexible, plate-like body adapted to conform to and extend along the boat between the deck and hull thereof; said body having flanges projecting laterally from one face thereof and forming therewith a channel of dovetail form in cross section for reception of a bumper member; a channel forming member joined to the owner face of said body and extending longitudinally thereof; said channel forming member having a cross sectional shape forming with said body an upwardly facing channel for reception of an edge of the deck; said channel forming member also having a cross sectional shape forming with said deck-receiving channel a downwardly facing hull-receiving channel; and an inwardly directed flange on said body for engaging the outer side of the hull below said deck-receiving channel.

11. In a boat having a hull and a deck: an elongate member having an upwardly facing channel in which a portion of said deck is mounted; said member having a downwardly facing channel adjoining said first named channel in laterally spaced relation thereto and in which a portion of said hull is mounted; said elongate member having outwardly extended flanges forming therewith a channel opening laterally of said elongate member; a resilient compressible bumper element mounted in said last named channel; and fastenings extending through said member and said portions of said deck and hull.

12. In a boat having a hull and a deck: an elongate member having an upwardly facing channel in which a portion of said deck is mounted; said member having a downwardly facing channel adjoining said first named channel and in which a portion of said hull is mounted; said elongate member having outwardly extended flanges longitudinally thereof and forming therewith a channel; a resilient compressible bumper element mounted in said last named channel; fastenings extending through said member and said portions of said deck and hull; and a flange on said elongate member extending inwardly therefrom and abutting the outer surface of said hull.

13. In a boat having a hull and a deck: an elongate joining member provided with an upwardly facing channel in which a portion of said deck is mounted; said member being also provided with a downwardly facing channel adjoining said first named channel and in which a portion of said hull is mounted; said member having outwardly extended flanges thereon forming therewith a channel; a resilient compressible bumper element mounted in said last named channel; said member extending above and below the upper and lower ends of the channels for

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said portions of the deck and hull; and an inwardly directed flange on said member extending inwardly therefrom and abutting said hull beneath said first named channel.

14. In a boat having a hull and a deck: an elongate joining member having an upwardly facing channel in which a portion of said deck is mounted; said member having a downwardly facing channel adjoining said first named channel in laterally spaced relation thereto and in which a portion of said hull is mounted; said elongate member having outwardly extended flanges thereon forming therewith a channel; a resilient, compressible bumper element mounted in said last named channel; and fastenings extending through said member and said portions of said deck and hull; said bumper element being arcuate in cross section and defining rearwardly thereof in the channel therefor a space permitting the element to be forced inwardly when encountered by an object.

15. In a boat having a hull and a deck: an elongate joining member having an upwardly facing channel thereon in which a portion of said deck is mounted; said member also having thereon a downwardly facing channel adjoining said first named channel in laterally spaced relation thereto and in which a portion of said hull is mounted; the outer wall of one of said channels having outwardly extended flanges forming therewith a channel; a resilient compressible bumper element mounted in said last named channel; and fastenings extending through said member and said portions of said deck and hull; said last named channel being of dovetail form in cross section; said bumper element being of concavo-convex form in cross section with its convex side outermost.

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UNITED STATES PATENT OFFICE  
CERTIFICATE OF CORRECTION

Patent No. 3,065,724

November 27, 1962

William R. Tritt

It is hereby certified that error appears in the above numbered patent requiring correction and that the said Letters Patent should read as corrected below.

Column 4, lines 37 to 39, for "of less depth than the width of said body forming member and forming to one side thereof a channel" read -- forming member and forming to one side thereof a channel of less depth than the width of said body --; column 5, line 14, for "owner" read -- other --.

Signed and sealed this 28th day of May 1963.

SEAL)

Attest:

ERNEST W. SWIDER  
Attesting Officer

DAVID L. LADD  
Commissioner of Patents

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