Aug. 15, 1967 J. EDIE ETAL 3,336,004

RAILING CONSTRUCTION

Filed Oct. 7, 1965

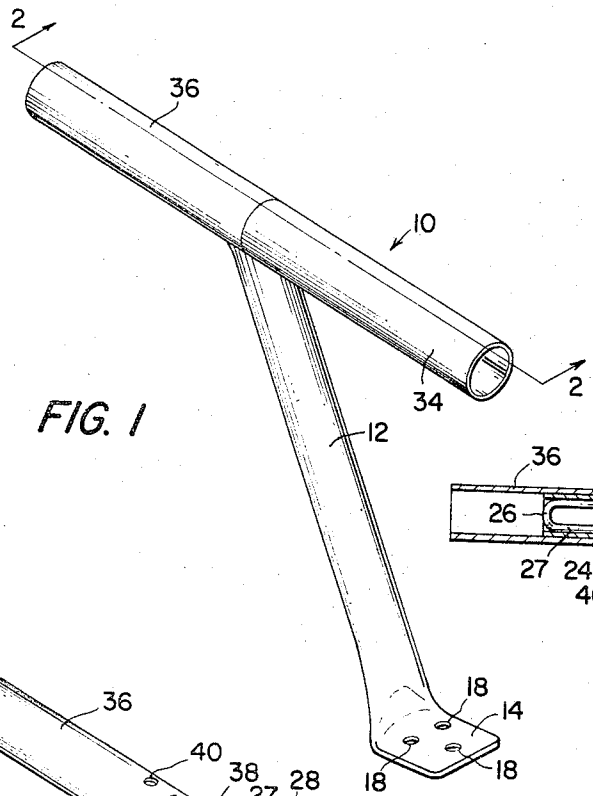


FIG. 1

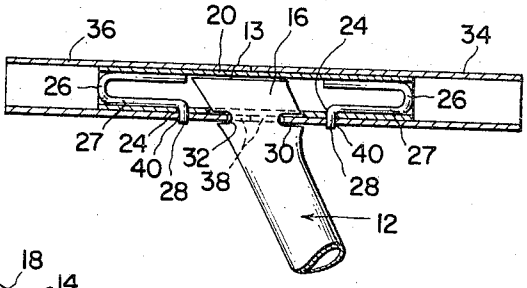


FIG. 2

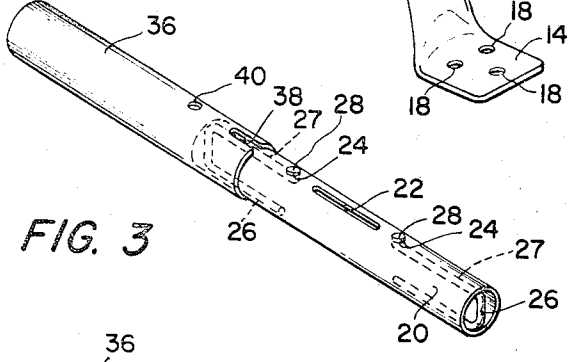


FIG. 3

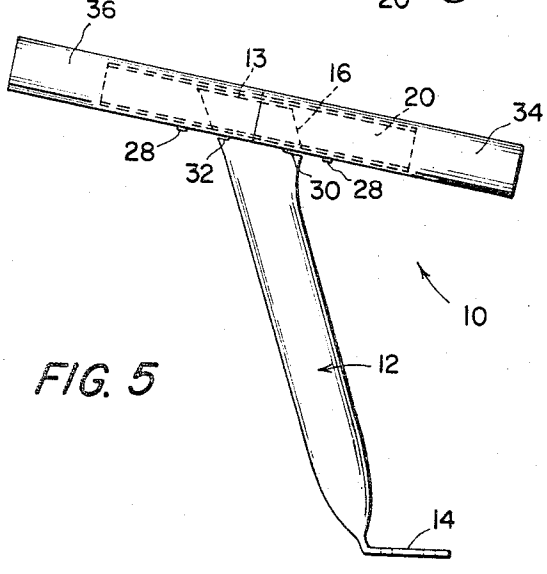


FIG. 5

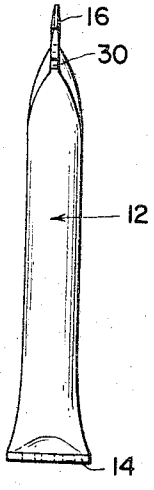


FIG. 4

INVENTOR.
JOHN EDIE
FRED BURMANN
BY Jerome Bauer
ATTORNEY.

United States Patent Office 3,336,004 Patented Aug. 15, 1967

3,336,004

RAILING CONSTRUCTION

John Edie, 53 11th St., and Fred Burmann, 26 Arrow Lane, both of Hicksville, N.Y. 11801

Filed Oct. 7, 1965, Ser. No. 493,752
7 Claims. (Cl. 256—65)

ABSTRACT OF THE DISCLOSURE

A railing construction having an interfitting arrangement of elements that includes a railing member connected to a support by the interposition of a member therebetween, and the use of fastening means to releasably fasten the railing member and the interposed member together and to the support for easy and rapid assembly and disassembly of the construction.

This invention relates generally to a railing construction and to a method of assembling the same and, more particularly, pertains to a prefabricated railing construction that is well adapted for use on boats, although not limited thereto.

Railing structures are normally used on boats, such as sailboats, motor boats and the like, as a safety precaution to prevent people from falling overboard. Conventionally, the railing structure is made up of interfitting elements that include railing members which surround the boat deck in conformity with the edge thereof. The railing members are maintained above or in spaced relation to the deck by railing supports. The railing supports, in turn, are slidably received in a central bore in a deck plate that is screwed to the boat deck as is disclosed in United States Letters Patent to Gaffey, No. 2,905,126. However, in actual practice, it has been found that the railing supports slip out of the deck plates thereby weakening the railing structure and making it unsafe for use. In order to eliminate this disadvantage, some deck plates are provided with set screws that engage the railing supports thereby to fixedly connect these elements together. However, the eccentric forces applied to these type of deck plates through the railing supports have caused the deck plates to detach themselves from the boat deck thereby again seriously weakening the effectiveness of the overall structure.

An object of the present invention is to provide a railing construction which comprises interfitting elements that include an upwardly extending support member adapted to be affixed to the boat deck at one end and supports the railing members on the other end. Hence, the danger associated with the above-mentioned type of railing construction that includes a separate base plate thereby is eliminated. Moreover, the elements comprising the railing construction of the present invention may be made in different stock sizes so that the railing members may be made to conform to any size or shape of boat deck.

In carrying out the railing construction of the present invention, another object is to provide a novel method of assembling the interfitting elements to form the aforesaid railing construction wherein the elements are easily assembled in a minimum interval of time.

Additional objects and of this invention reside in the structures and arrangements hereinafter more fully described with reference to the accompanying drawing in which:

FIG. 1 is a perspective view of an elemental section of the railing constructed according to the invention,

FIG. 2 is a sectional view of the railing taken along the line 2—2 in FIG. 1,

FIG. 3 is a perspective view of elements of the present invention,

FIG. 4 is a side elevational view of the support member shown in FIG. 1, and

FIG. 5 is a front elevational view shown in FIG. 1.

An elemental section of the railing construction of the present invention is illustrated in FIG. 1 and is designated generally by the numeral **10**. The elements comprising the device **10** are generally tubular in construction, although need not be so limited in shape, and include a tubular support member **12** having a flat bottom foot portion **14** extending rearwardly of the central portion at an angle with respect thereto. A flat upper narrowed portion **16** lies in a plane substantially perpendicular to the plane of the portion **14**. The foot portion **14** is provided with a plurality of apertures **18** that are adapted to receive screws (not shown) therethrough to securely affix the member **12** to a boat deck with the under surface of the foot portion **14** in flat engagement therewith. Accordingly, the support member **12** will be inclined upwardly, toward the left as taken in FIG. 5. However, this inclination is by way of example only and it is not to be interpreted as a limitation of the present invention as the member **12** may be perpendicular to or at an acute angle to the boat deck.

Mounted on the top of the support member **12** is a tubular central member **20** that extends outwardly from the member **12** in opposed directions. More specifically, the wall of the member **20** is provided with an approximately centrally located elongated slot **22** (FIG. 3) that slidingly receives and accommodates therein the length of the upper portion **16** of the support member **12** therethrough. The slot **22** is slightly longer in length than the width of the face of the portion **16** and is sized to prevent longitudinal movement of the member **20** relative to the member **12** but is sized to provide for the easy insertion therein or removal therefrom of the top portion **16**.

Provided in the wall of the member **20**, adjacent to each end of the slot **22**, are respective apertures **24**. Received in each end of the tubular central member **20** are substantially U-shaped biasing members **26**. The end of the bottom leg **27** of each of the U-shaped members **26** is provided with a depending extension or pin **28** that is adapted to be slidingly received through a respective one of the apertures **24** and projects radially beyond the wall of the central member **20**. The members **26** are preferably fabricated from a flexible and resilient or spring material so that the lower arm **27** of the respective U-shaped members **26** may be flexed and displaced toward the respective upper arms thereof.

A pair of opposed open-ended coaxial slots **30** and **32** are provided on opposite ends of the width of the portion **16** of the member **12**. The slots **30** and **32** are formed to be located immediately below the central member **20** and are parallel to the axis of the member **20**. They are positioned on the portion **16** a distance from the edge **13** equal to the external diametric dimension of the member **20** so they are exposed immediately beneath the member **20** when the portion **16** is received therein through the slot **22**.

Slidingly received over each end of the central member **20** are respective tubular railing members **34** and **36**. Each of the members **34** and **36** is similar in construction and is provided with an open-ended slot **38** that extends inwardly from an edge of the respective railing member (FIG. 3). Longitudinally spaced further inward from the end wall of the slot **38** is a through aperture **40**. The members **34** and **36** are adapted to be telescopically mounted on the central member **20** by sliding the same over the opposite ends thereof so that their respective slots **38** slidingly align with and receive the slots **30** and **32** of the portion **16** of the support member **12** therein. At the same

time, the respective slots **30** and **32** slidingly receive and interlockingly engage with the respective walls of the bodies at the rear of the slots **38** of the railing members **34** and **36**.

Accordingly, with the slots of the support and railing members so interengaged and interlocked, the central member **20** will be clamped on the support member **12**. That is, the central member **20** cannot be lifted off the upper portion **16** of the support **12** because the wall of the members **34** and **36** would respectively engage the upper edges of the respective slots **30** and **32** thereby to prevent such movement. Additionally, the length of the slots **30**, **32** and **38** is such that the facing edges of the members **34** and **36** will be in flush engagement with each other as seen in FIGS. 1 and 5 and with the outer surfaces thereof forming a contiguous and continuous railing.

When the railing members **34** and **36** abut each other as in FIGS. 1 and 5 and their respective slots **38** each cooperatively interlock with the slots **30** and **32** on the portion **16**, the apertures **40** are automatically positioned so that they will be in registry with the apertures **24** on the member **20**. Thus, the respective extensions or pins **28** that extend through their respective apertures **24** and beyond the walls thereof will flex radially inward wihle the members **34** and **36** are being slid toward each other over the tube **20**, ride against the inner walls of the respective members **34** and **36**, and then snap back out into the aperture **40** that is subsequently brought into alignment with its own aperture **24**. When this occurs, the extensions **28**, engaging the walls of the apertures **24** and **40**, releasably locks the members **34** and **36** positively to the member **20**, which connot be lifted off the member **12** because of the interfitting slots **38** engaging the slots **30** and **32**.

In practice, the railing members **34** and **36** may be provided in a plurality of different stock lengths so that the construction of the present invention may be used in conjunction with a boat deck having any size or shape. Additionally, it is to be understood that both ends of the railing members are provided with the slots **38** and the apertures **40** so that each railing member will be supported between two upstanding support members in the finished structure.

If it is desired to dismantle the railing construction of the present invention, the lower arm **27** of the U-shaped members **46** may be flexed radially back or upwardly, as by pressing inwardly on the extensions **28**, until the extensions **28** are displaced out of and are no longer received within the apertures **40**. Thereafter, railing members **34** and **36** may be slid back off of the tubular member **20**. When the interengagement between the slots **38**, **30** and **32** is removed, the member **20** can then be lifted off the end **16** of the support **12**.

If it is desired that the railing construction be inclined along a portion of its length, any desired one or more of the supports **12** may be angled at its foot **14** to the desired inclination. An example of this is illustrated in the figures of the drawing and, more particularly, in FIG. 5. Thus, it is to be understood that the supports **12** may be disposed vertically or at an angle to the vertical. If the support member **12** is disposed at an angle to the vertical, the top edge **13** of the portion **16** will be at an angle to the horizontal corresponding to the desired angle of inclination of the railing. This will be provided in order to support the inner surface of the tube **20** thereagainst when the portion **16** is inserted thereinto through the slot **22**.

While there have been shown and described and pointed out the fundamental novel features of the invention as applied to a preferred embodiment thereof, it will be understood that various omissions and substitutions and changes in the form and details of the device illustrated and in its operation may be made by those skilled in the art, without departing from the spirit of the invention. It is the intention, therefore, to be limited only as indicated by the scope of the claims appended hereto.

We claim:

1. In a railing construction,
an upwardly extending support member adapted to be affixed to a support surface,
a central member removably received on the upper end of said support member and extending therefrom,
a railing member slidably engaging said central member,
cooperating means on said support and railing members to enable interlocking said support, central and railing members together,
and resilient fastening means in said central member and yieldingly engageable with said central and railing members for maintaining said railing members in the interlocked position.

2. In a railing construction, in combination,
an upwardly extending support member having a substantially flat upper end portion and a lower end portion adapted to be affixed to a support surface,
a central member having a slot removably receiving the flat end portion of the support member therein to mount the central member on the support member.
a railing member in sliding engagement with said central member,
complementary formed means on said railing and support members engageable with each other for interlocking said central and support members together,
and fastening means engageable with said central and railing members for maintaining said railing member in a predetermined position.

3. In a railing construction as in claim **2**,
wherein said complementary formed means comprises at least one open-ended slot provided in the flat portion of said support member receiving a portion of the railing member therein to prevent separation between said central and said support members.

4. In a railing structure as in claim **2**,
and apertures through said central and railing members adapted to be in registry with each other when the railing members are in the predetermined position,
said fastening means comprising outwardly biased pin means in said central member received in the apertures in said central and railing members.

5. In a tubular railing construction,
a tubular support member having a flat upper portion and a flat bottom portion adapted to be affixed to a support surface,
a tubular central member having a slot approximately centrally located in the wall thereof for receiving the flat upper portion of the support member therein in a sliding engagement so that said central member is mounted on the support member and extends outwardly therefrom in opposed directions,
said flat upper portion having a pair of opposed open-ended slots therein positioned below said central member and extending in a plane parallel to the axis of said central member,
a pair of tubular railing members received over different ends of said central member so that a different one of said railing members is positioned on each side of said support member,
each of said railing members having an open-ended slot in the wall thereof which receive the flat upper portion of the support member,
the respective railing members being received in the opposed slots in the support member to clamp the central member on the support member,
and fastening means engageable with the central member and the respective railing members to maintain the railing members in a predetermined position.

6. The structure defined in claim **5**,
wherein the slots in said support member and the respective railing members are sized so that the outer

surfaces of the respective railing members are contiguous.

7. The structure defined in claim 5,

wherein said central member is provided with an aperture adjacent to each end thereof and each of said pair of railing members is provided with an aperture positioned to be in registry with a respective one of said apertures in said central member when the railing members are in the predetermined position,

said fastening means comprising a pair of yieldable substantially U-shaped members received in said central member and each having a depending end portion received in a respective one of said pair of apertures in the central member and the associated railing member aperture in registry therewith.

References Cited

UNITED STATES PATENTS

1,070,165	8/1913	Newlin	256—65
1,549,703	8/1925	Yeaton	287—54
2,117,798	5/1938	Gascoigne et al.	
2,150,651	3/1939	Ewing.	
2,571,382	10/1951	Raven	287—56 X
2,905,126	9/1959	Gaffey	256—65 X
2,914,190	11/1959	Geddes et al.	52—726 X
2,927,513	3/1960	Dove	256—13.1 X
2,950,015	8/1960	Pataky	256—13.1 X
3,193,228	7/1965	Chion	287—54

DAVID J. WILLIAMOWSKY, *Primary Examiner.*

D. L. TAYLOR, *Assistant Examiner.*