

[54] REMOVABLE DOCK

[76] Inventor: **Billy K. Hufford**, R.R. 1, Ansonia, Ohio 45303

[22] Filed: **Sept. 10, 1973**

[21] Appl. No.: **395,428**

[52] U.S. Cl. **61/48, 403/101**

[51] Int. Cl. **E02b 3/22**

[58] Field of Search 114/0.5 BD; 61/48, 67; 403/101, 102

[56] **References Cited**

UNITED STATES PATENTS

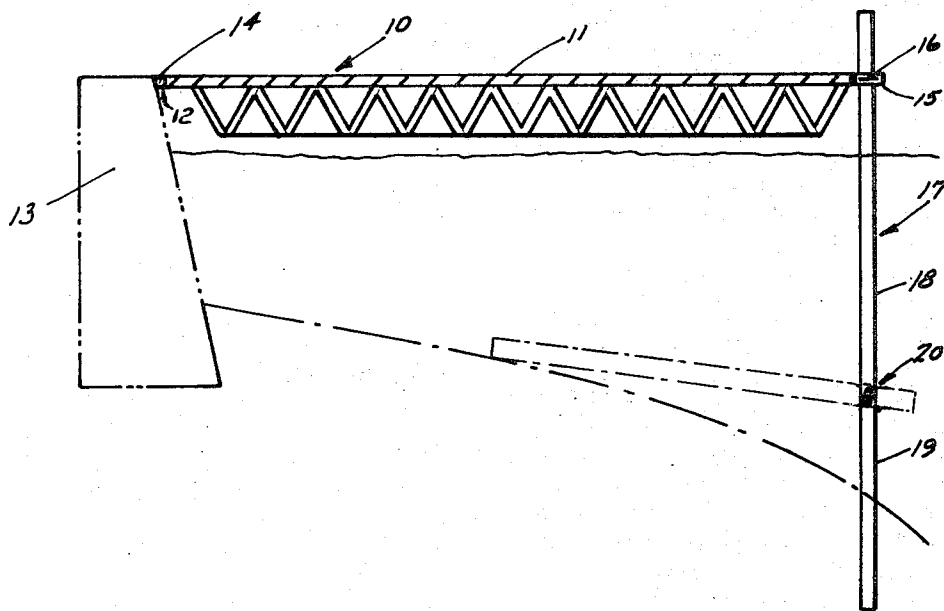
3,158,003	11/1964	Dally.....	61/48
3,161,973	12/1964	Hastings.....	403/102
3,572,045	3/1971	Owen.....	61/48
3,655,297	4/1972	Bolen et al.....	403/102
3,680,448	8/1972	Ballingall et al.....	403/102

Primary Examiner—Trygve M. Blix
 Assistant Examiner—Charles E. Frankfort
 Attorney, Agent, or Firm—Irvin V. Gleim; Edward M. Tritle

[57] **ABSTRACT**

A dock structure that is easily assembled and/or dismantled for winter storage includes foldable support posts that are readily removable from a gangplank. When disassembled the gangplank is adapted for on shore storage. The shore end of the gangplank is removably connectable to an on shore support. At its opposite end the gangplank is removably connected to and supported by posts which are secured at their lower ends to the bottom formation of a body of water. Submerged, pivotal couplings between the upper and lower ends of the post allow the upper post portions to rotate relative to the lower portions for submerged in water storage of the posts when the dock is disassembled, and maintain the upper and lower post portions in relative rectilinear relationship for supporting the offshore end of the gangplank when the dock is assembled.

3 Claims, 3 Drawing Figures



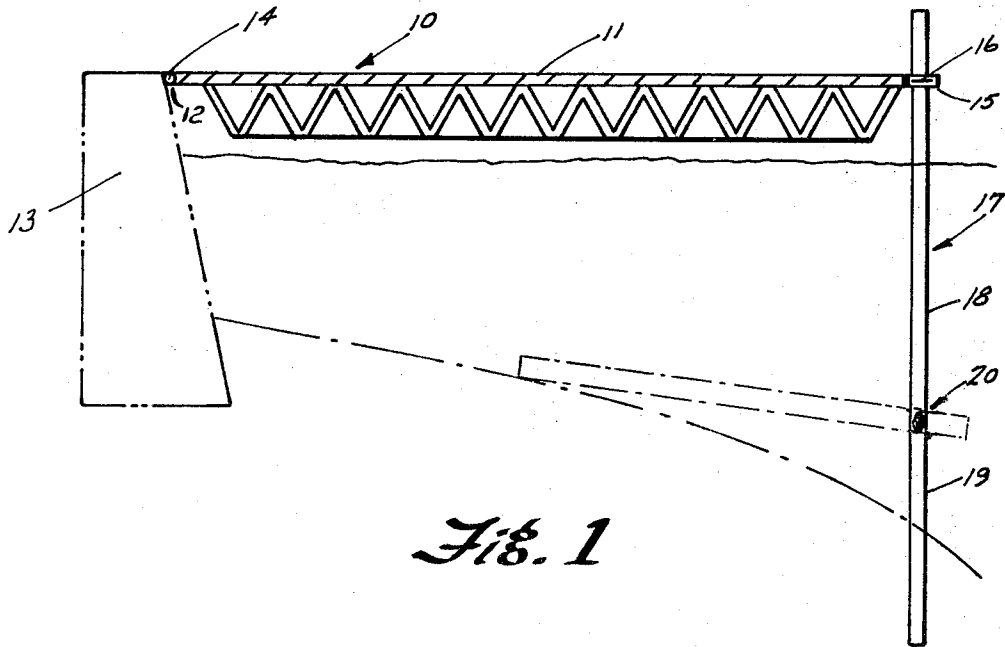


Fig. 1

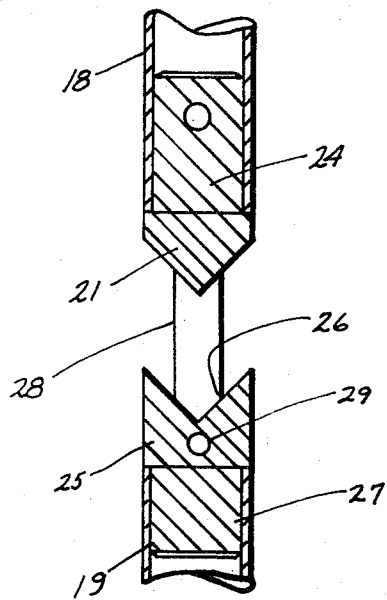


Fig. 3

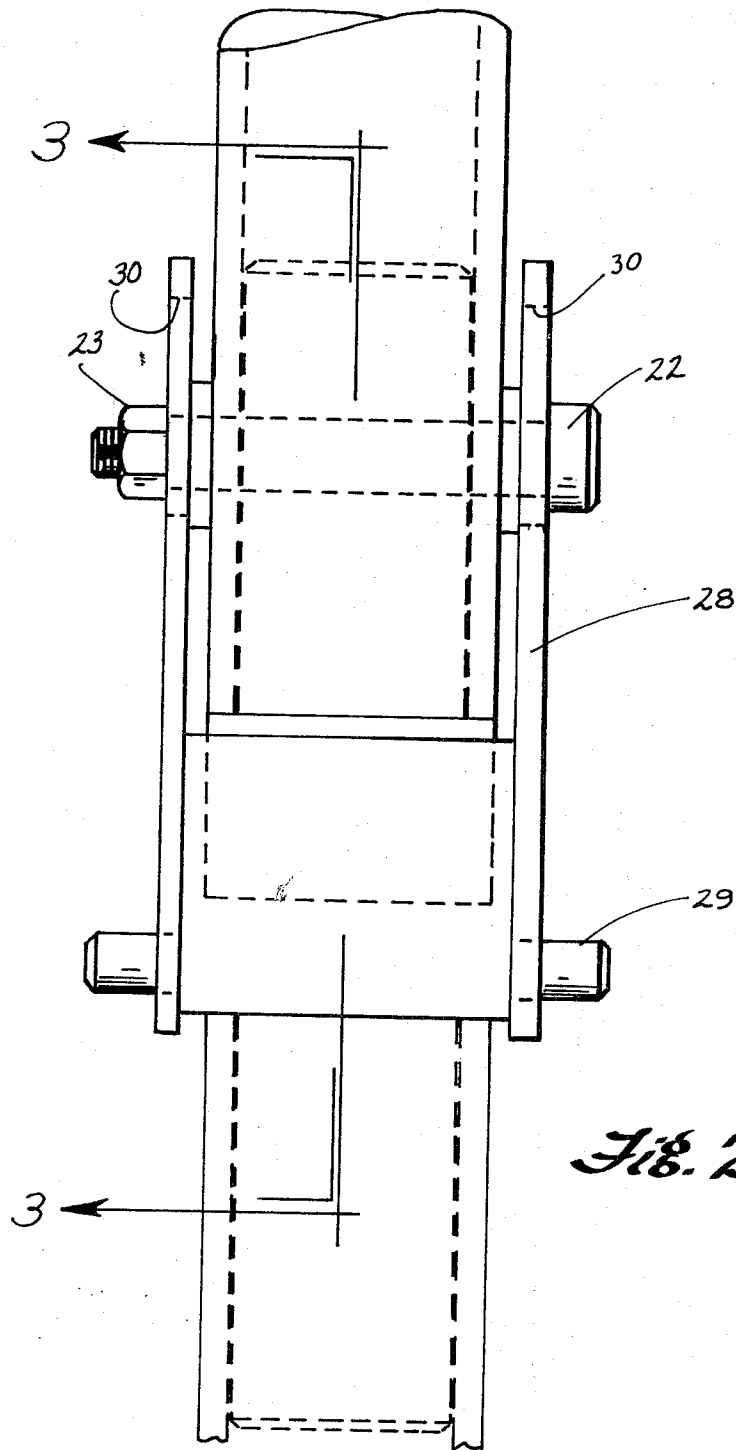


Fig. 2

1

REMOVABLE DOCK

BACKGROUND

The present invention relates generally to structural framework and, more particularly to improved framing members that can be assembled and disassembled easily to form various types of structures for supporting boat docks and the like.

In rural and resort areas, it is frequently necessary or desirable to provide various types of outdoor structures that are relatively inexpensive and can be quickly assembled or disassembled. As example of such a structure is a boat dock or pier. In resort areas adjacent to a body of water such as a river or lake, in connection with boating activities it is necessary to provide some sort of boat dock or pier.

The provision of suitable facilities of this type presents a difficult problem for the owner of riparian property particularly since permanent piers with driven piling and heavy timbers are rather expensive and require more or less constant maintenance. Heavy damage occurs over the winter seasons when such installations are subject to the forces of winds, storms, and water. Accordingly, it is desirable to provide a boat pier or dock which can be easily dismantled for on-shore storage during the winter season.

SUMMARY

A primary object of the present invention is to provide means obviating such difficulties. This is accomplished in accordance with the present invention by the provision of frame work supporting a boat dock or similar structure that can be easily and quickly set up or taken down and provides a structural framework that is self-locking in the assembled condition.

DESCRIPTION

Other objects and advantages of the present invention will become apparent from the following description taken in connection with the accompanying drawings in which:

FIG. 1 is a side elevational view of a single-section boat dock embodying the present invention;

FIG. 2 is a fragmentary elevational view illustrating the details of a connecting joint between several portions of the supporting structure of FIG. 1; and

FIG. 3 is a sectional view taken along the lines 3—3 of FIG. 2.

Referring now to the drawings which illustrate a practical embodiment of the present invention, a boat dock embodying the present invention is indicated generally at 10. The dock comprises a gangplank 11 having bearing members 12 affixed to the shore end of the gangplank for connection to a sea wall 13 by suitable connecting means such as pivots 14.

Other bearing members 15 are connected at the boat end of the gangplank for receiving and connection to suitable supporting means by suitable connection means such as pins 16.

As shown in FIG. 1, supporting means in accordance with the present invention comprises a pair of uprights or posts or pilings 17, preferably formed of steel or the like and being somewhat tubular shaped in cross section, and each comprising upper and lower post portions, and a hinge portion indicated generally at 20.

2

A plug-like member 21 is connected to upper post portion 18 by bolt 22 and secured by nut 23. The plug-like portion 21 includes a shank portion 24 having a reduced diameter to enable it to be received within post portion 18. As best shown in FIG. 3, the portion of the plug-like member 21 that extends beyond post portion 18 is V-shaped for a purpose that will appear presently.

A complimentary receptacle-like member 25 includes a V-notch 26 for receiving member 21, and has a shank portion 27 of reduced diameter for reception into lower post portion 19.

Post portions 18, 19 are connected together by link members 28 pivotally connected at their opposite ends by pins 29 and bolt 22. Bolt 22 is received by an elongated slot 30 provided in link member 28 adjacent its upper end.

Use, assembly, and operations of the device is believed to be apparent from the foregoing. Initially, post or piling 17 is driven into the lake or river bed in a substantially vertical position at an appropriate distance from the sea wall. The gangplank is connected to piling member 17 by pin 16, and to the sea wall by pivot pin 14. The dock is then disposed as illustrated in FIG. 1 and is ready for normal use as a dock.

To remove the dock for winter storage, the gangplank is disconnected by removing pins 14 and 16 and the gangplank portion 11 is placed in a suitable storage area. Upon removal of the gangplank, the piling member 17 remains in an upright position as is shown in the drawing, but the upper portion thereof 18 is lifted, thereby raising bolt 22 in slots 30 until the projecting V-shaped portion of member 21 clears the notch 26, at which time upper post portion 18 is pivoted to the position indicated by the dotted lines in FIG. 1 where it remains submerged below water level while the gangplank portion remains in storage on shore. To reassemble the dock, the upper post portion is again swung to a vertical position and the V-shaped projection of member 21 is received into notch 26, thereby reestablishing post or piling member 17 in a vertical position. The gangplank is again connected to the post and to the sea wall by inserting pins 14, 16, and the dock is again available for normal dock use.

While a particular embodiment of the invention has been illustrated and described, it will be obvious that various changes and modifications can be made without departing from the invention and it is intended in the appended claims to cover all such changes and modifications that fall within the true spirit and scope of the invention.

What is claimed is:

1. A removable boat dock comprising an elongated gangplank adapted for on-shore storage when disassembled and adapted when assembled to extend between an on-shore support disposed adjacent the shoreline of a body of water and a boat afloat therein, said gangplank having at the shore end thereof means readily detachably connecting said end to said support when said dock is assembled, a plurality of support posts each having an upper end readily detachably-connected to said gangplank at locations spaced apart from said shore-end connecting means when said dock is assembled and extending downwardly through said water with the

3

lower ends of individual posts secured to the bottom formation of said body of water, each of said posts having upper and lower post portions pivotally connected together below the surface of the water at a location between the upper and lower ends of individual posts for relative rotational movement of said post portions, and means readily detachably-connecting and releasably maintaining said upper and lower post portions in rectilinear relation relative to one another when said dock is assembled and permitting said relative rotational movement and submerged in-water stor-

4

age of said posts when said dock is disassembled.

2. Structure according to claim 1 wherein said connecting and maintaining means includes notched and projecting members in registry with one another in at least one position of said upper and lower post portions.

3. Structure according to claim 2 and additionally including a member pivotally connected to and between said notched and projecting members.

* * * * *

15

20

25

30

35

40

45

50

55

60

65