Jan. 30, 1934. W. G. BARTENFELD 1,944,915

CHANNEL CONSTRUCTION FOR THE TOPS OF TANKS OF VESSELS

Filed May 7, 1931

Fig. 1

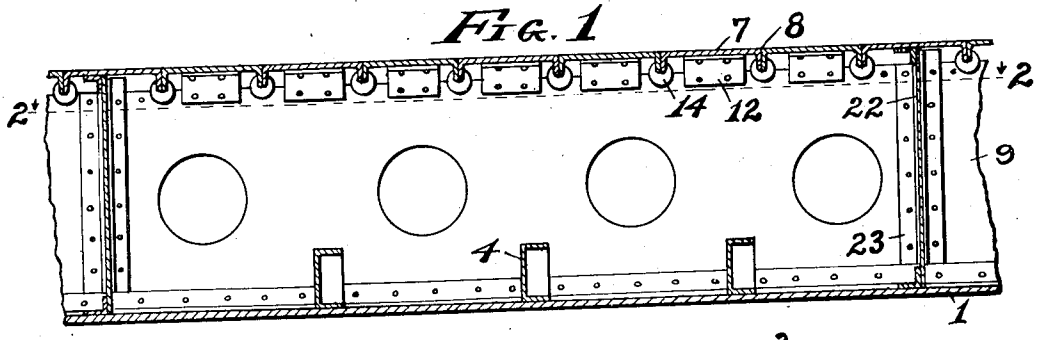


Fig. 2

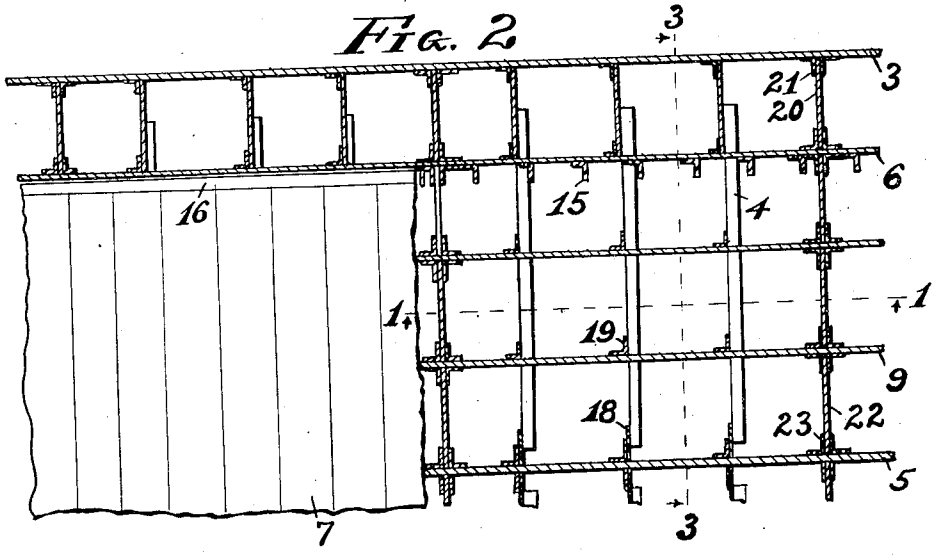
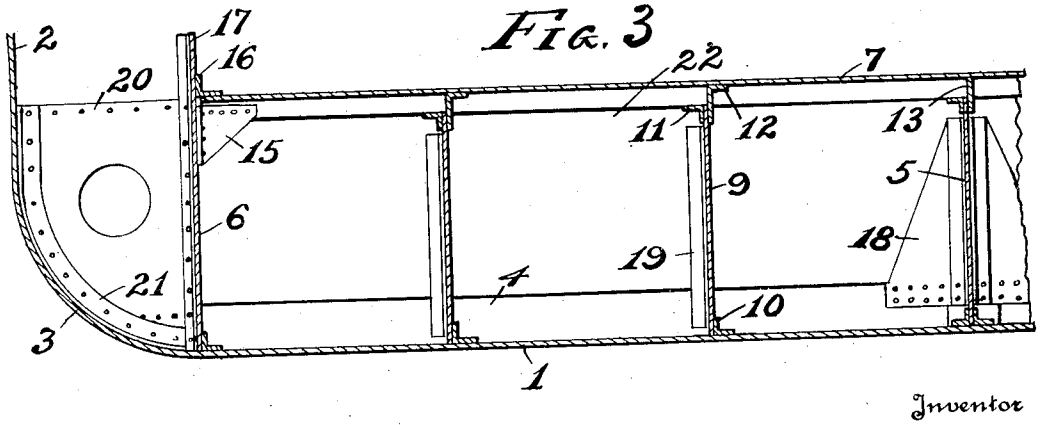


Fig. 3



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CHANNEL CONSTRUCTION FOR THE TOPS OF TANKS OF VESSELS

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Application May 7, 1931. Serial No. 535,671

1 Claim. (Cl. 114—79)

This invention relates to channel construction for the tops of the tanks or the bottoms of the hoppers of vessels, and has for its main object to provide a practical and economical construction for the tops of the tanks or the bottoms of the hoppers by the use of channels.

Another object of the invention is to use inverted channels for the tops of the tanks or the bottoms of the hoppers, which channels extend transversely from side keelson to side keelson, have their flanges riveted or welded together, and providing a rigid continuous beam construction which eliminates all intermediate floors for supporting said channels.

A further object of the invention is to provide means for rigidly supporting said transversely extending channels forming the tops of the tanks, which means saves weight and also expense in said construction.

With the above and other objects in view, the invention will be hereinafter fully described as illustrated in the accompanying drawing, and the novel features thereof will be distinctly pointed out in the appended claim.

In the drawing, similar characters of reference are used to indicate corresponding parts.

Figure 1 is a longitudinal sectional view on an enlarged scale, taken on line 1—1 of Fig. 2, illustrating my invention,

Fig. 2 is a plan view of the top of the tank of the vessel constructed in accordance with my invention, the cross sectional view being taken on line 2—2 of Fig. 1, and

Fig. 3 is a cross sectional view, on an enlarged scale, taken on line 3—3 of Fig. 2.

Referring to the drawing, 1 the hull of the vessel is constructed in any suitable manner, as for instance, plates 1 forming the bottom, plates 2 forming the sides and curved plates 3 forming the bilge. The bottom shell frames consist of transverse channels 4 extending from the center keelson 5 through the side keelsons 6 and are connected to the bilge bracket plates as is the usual construction. The top of the tank consists of transversely extending inverted channels 7 arranged side by side and their flanges are riveted or welded together forming water tight joints at 8. The channels 7 are supported by their flanges resting upon the center keelson 5, and extending to and being connected to the side keelsons 6, and having their flanges also resting upon the intermediate keelsons indicated by 9. The center and side keelsons 5 and 6 and the intermediate keelsons 9 are fixed to the bottom plate 1 by angle bars as at 10. Angle bars indicated by 11 are fixed to the keelsons 5, 6 and 9 for stiffening the upper edges of same and for providing better support for the tank top channels 7. Angle lugs 12 are employed to fix the tank top channels 7 to the intermediate keelsons 9, and plates 12 are riveted to the center keelson 5 and welded to said channels between the flanges thereof for preventing water flowing transversely from one side of the center keelson to the other. Plate clips 14 are used to hold the flanges of the tank top channels 7 together prior to being welded together, and said clips are welded to the keelsons for making connection thereto. Channel flange brackets 15 support and connect the tank top channels 7 to the side keelsons 6, and corner angle bars as at 16 connect upper side of the webs of said channels to the side longitudinal plates 17. Center keelson brackets as 18 and vertical bars as 19 are employed in the usual manner in connection with the keelsons 5, 6 and 9. The usual bilge bracket plates 20 and bounding angles 21 arranged at proper intervals are employed. High plate floors 22 are arranged at suitable and the usual distance apart and are connected to the keelsons by vertical angle bars indicated by 23. No intermediate plate floors are necessary in this construction.

From the drawing and description, it is seen that by constructing the tops of tanks of vessels of inverted continuous channels and arranging said channels transversely from side keelson to side keelson that the top of the tank is of a very rigid construction, and that said channels are well supported without any intermediate floors thus saving expense and weight.

It is obvious that the tank top channels 7 may extend to the sides 2 of the vessel instead of terminating at the side keelsons 17 as shown. It will be understood that other slight changes in the details of construction may be made within the scope of the claim.

Having fully described my invention, what I claim is:

In a channel construction for the tops of the tanks of vessels, the combination of channels, the channels being inverted, a center keelson, side keelsons, said channels extending transversely from one side keelson to the other, said channels having their flanges resting upon the upper edges of said center keelson, and plates fixed to said center keelson and extending upwardly between the flanges of said channels for preventing water flowing transversely from one side of said keelson to the other.

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