Dec. 2, 1924. 1,517,682

R. McINTOSH

SHIFTING BOARD

Filed Aug. 30, 1922 2 Sheets-Sheet 1

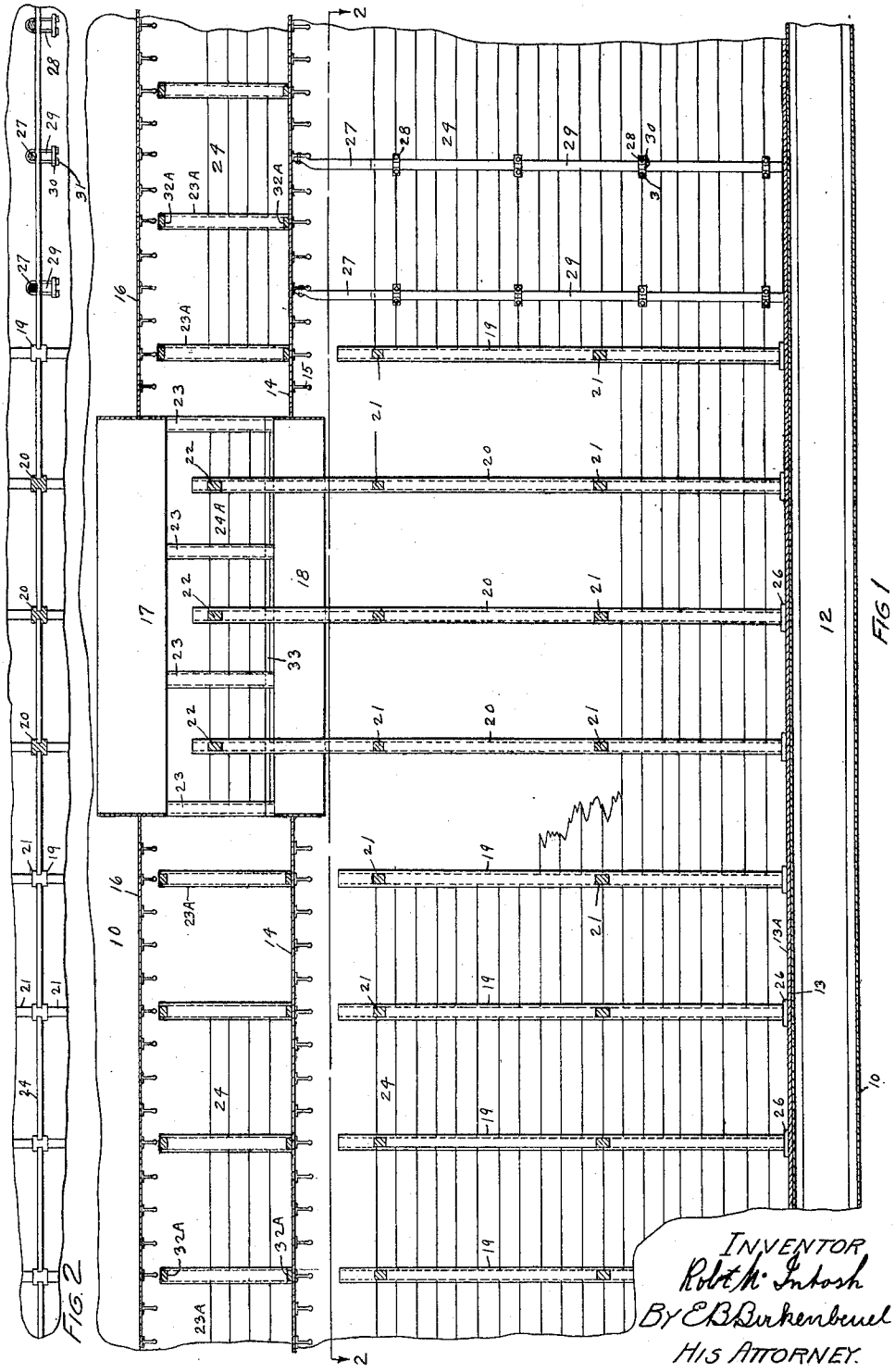


FIG 1

FIG 2

INVENTOR
Robt. McIntosh
BY E. B. Burkenbuel
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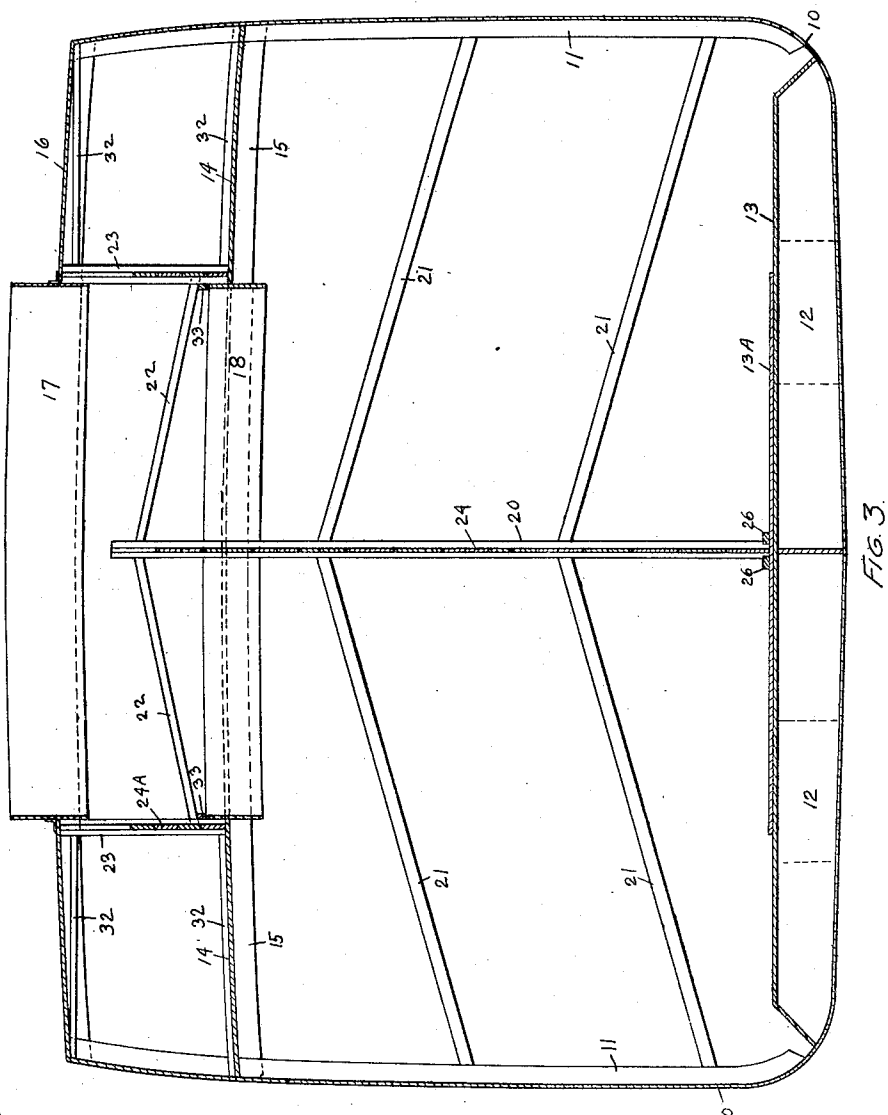


FIG. 3.

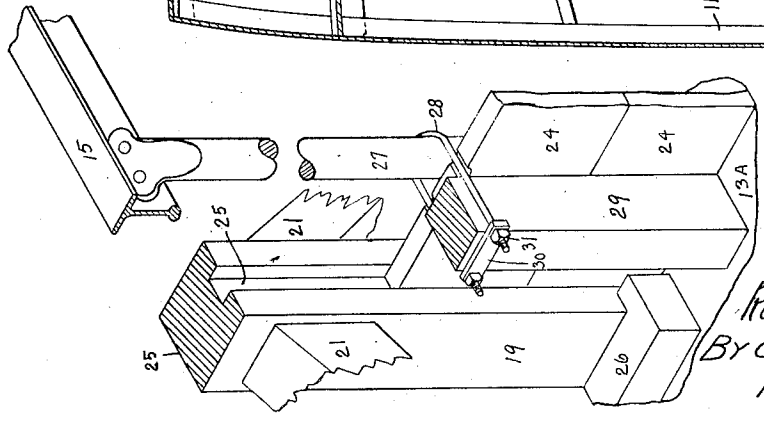


FIG. 4.

INVENTOR
Robt McIntosh
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Patented Dec. 2, 1924. 1,517,682

UNITED STATES PATENT OFFICE.

ROBERT McINTOSH, OF PORTLAND, OREGON.

SHIFTING BOARD.

Application filed August 30, 1922. Serial No. 585,167.

To all whom it may concern:

Be it hereby known that I, ROBERT McINTOSH, a subject of the King of Great Britain, and a resident of Portland, in the county of Multnomah and State of Oregon, have invented new and useful Shifting Boards, of which the following is a specification.

This invention relates more particularly to the installation of shifting boards in bulk cargo vessels.

The objects of my invention are to provide an exceedingly simple and efficient means for preventing cargo from shifting during the rolling of a vessel. A further object is the production of shifting boards and supporting stanchions which can be installed or removed at any stage of loading or unloading of the vessel. A still further object is to permit the use of short shifting boards which are easy to handle. Another object is to so construct same that they may be installed in connection with round stanchions sometimes used to support the decks of a vessel.

While it will be understood that these shifting boards are generally employed to prevent the shifting of loose cargoes, they may also be used to divide a hold in other directions without departing from the spirit of my invention.

I accomplish these results in the manner set forth in the following specification and illustrated in the accompanying drawing in which Figure 1 is a longitudinal section of a portion of a vessel including a hatchway with minor details omitted. Figure 2 is a partial plan of Figure 1 showing the shifting boards, stanchions and parts of the shores. Figure 3 is a cross section of a vessel through a hatch. Figure 4 is a perspective of my improved form of shifting boards and stanchions and showing the manner in which round stanchions may be used to assist in supporting the boards.

Similar numbers of reference refer to the same or similar parts throughout the several views.

Referring in detail to the drawings, I have illustrated my device in connection with a vessel having the usual outer shell 10 secured to the frames 11 and to the floors 12 upon which is placed the tank top 13. The usual main deck 14 on the beams 15 and the upper deck 16 are illustrated with the upper hatchway 17 and the main hatchway 18 whose details of construction vary greatly in the art.

Referring more particularly to my invention, it is pointed out that I have employed the grooved stanchions 19 below the main deck 14 and the longer grooved stanchions 20 within the hatchway 18.

Shores 21 are placed between the stanchions and the frames 11. Smaller shores 22 are placed between the upper ends of the stanchions 20 and the stanchions 23 along the hatchway 18. The shifting boards 24 are held in the grooves 25 of the stanchions 19, 20 and 23. Cleats 26 are secured to the planking 13^A on the tank top 13 and hold the feet of the stanchions in position.

When round stanchions 27 are employed, as is often the case, they are used as supports for the boards 24 by placing a U-bolt 28 around the stanchion 27 and around the vertical timber 29 to which it is secured by the strap 30 and the nuts 31. In this case the grooved stanchions are used only to join the ends of the boards 24.

The stanchions 23 extend from the deck 14 to the deck 16 and are held against the hatchway coamings by the horizontal shores 32. It is also desirable to secure a spacing piece 33 to the stanchions 23 directly above the coaming of the hatchway 18 which holds the stanchions 23 until the shifting boards 24^A are in place and also to support the ends of the shores 22.

The stanchions 23^A extend from the deck 14 to the deck 16 between the hatchway coamings and are held in place by the horizontal shores 23^A.

I am aware that many forms of shifting boards have been employed in the past. I therefore do not claim my device broadly but intend that it shall cover only such forms and modifications as fall fairly within the appended claim.

What I claim as new is:

The combination of a round ship stan-

chion with a plurality of shifting boards bearing against said stanchion and joined at their ends by grooved wooden stanchions, some of said boards having pairs of notches in their edge opposite said round stanchion, an upright timber between said notches, a U-bolt around said round stanchion and passing around said upright timber, and a yoke across the ends of said U-bolt adapted to clamp said shifting boards between said timber and round stanchion without passing said U-bolt through said shifting board.

ROBERT McINTOSH.