June 16, 1925. 1,541,989

J. G. MILLER

DOUBLE DECKED CAR FERRY

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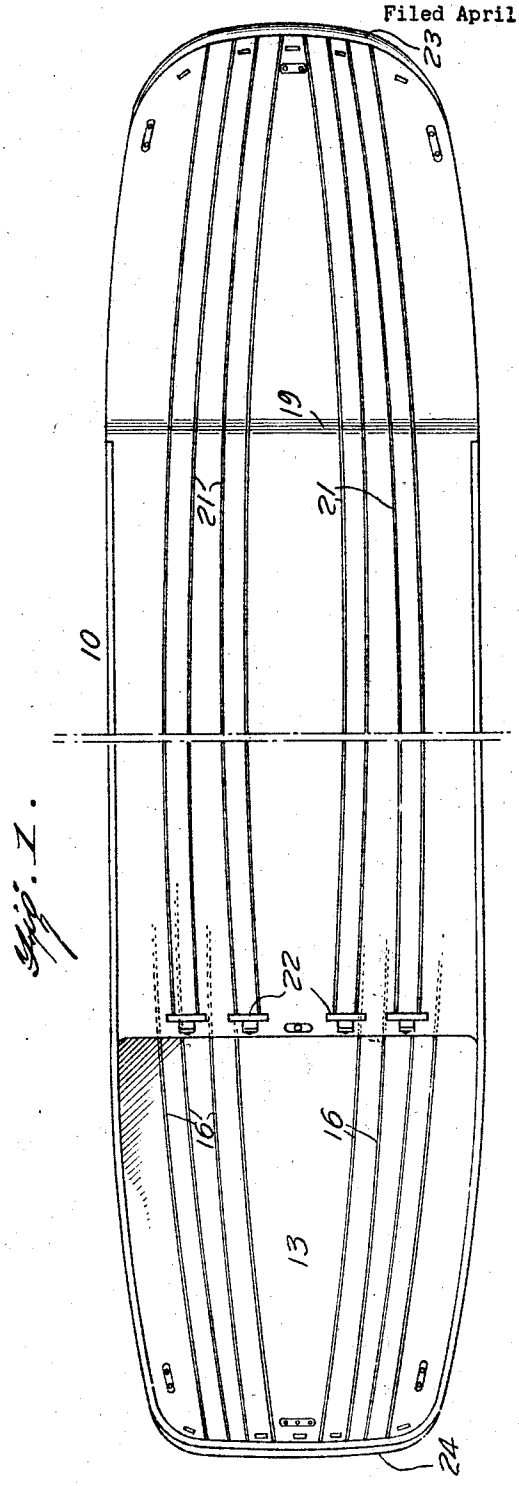


Fig. 1.

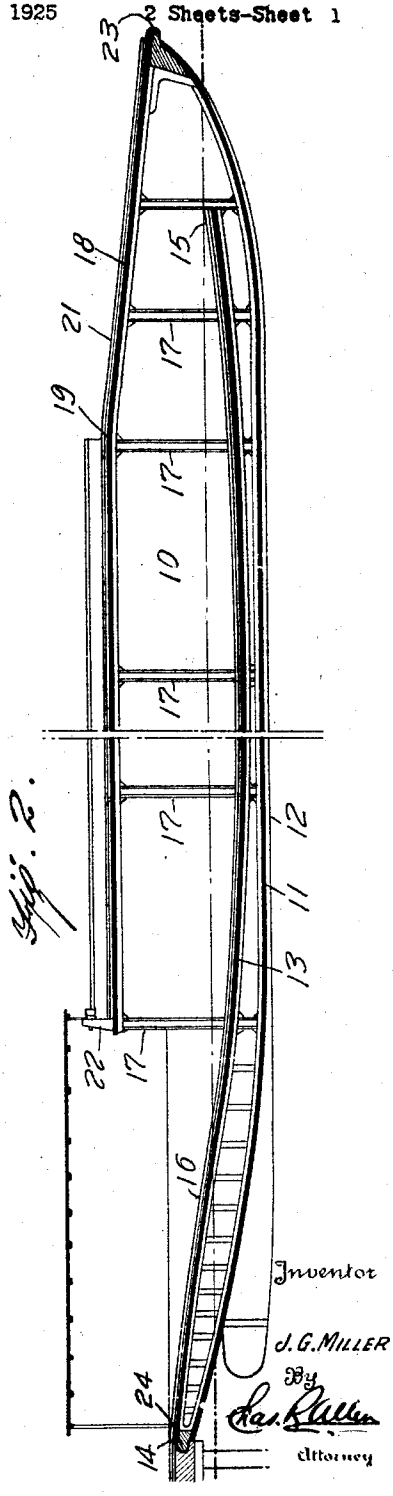


Fig. 2.

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Fig. 3.

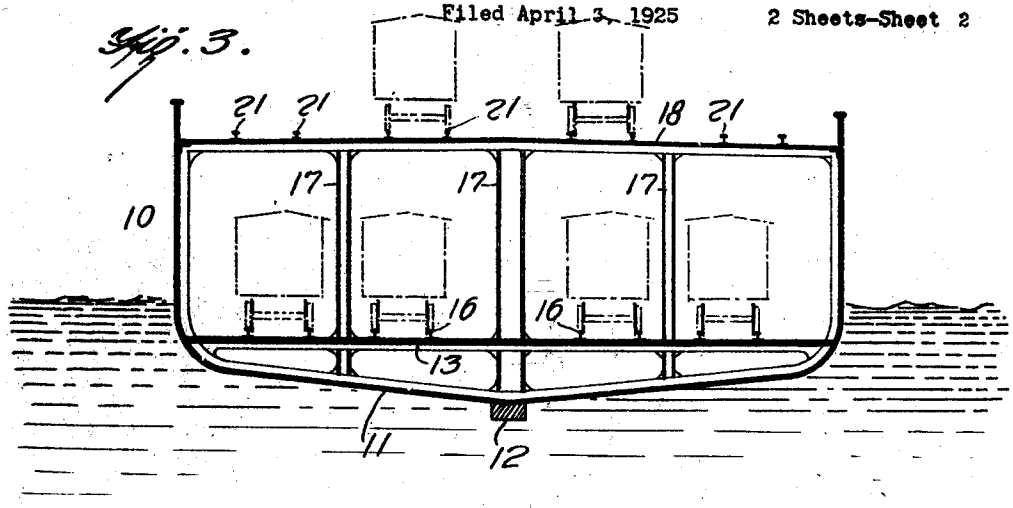


Fig. 4.

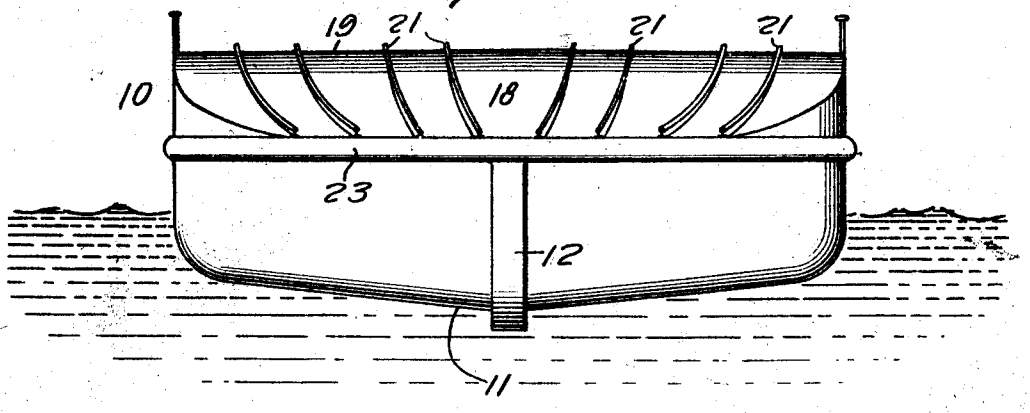
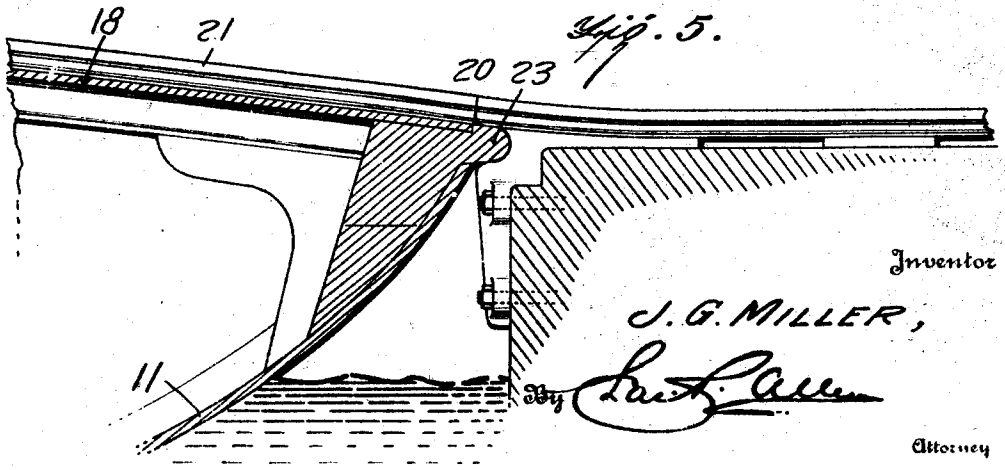


Fig. 5.



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Patented June 16, 1925. 1,541,989

UNITED STATES PATENT OFFICE.

JAMES G. MILLER, OF NORFOLK, VIRGINIA.

DOUBLE-DECKED CAR FERRY.

Application filed April 3, 1925. Serial No. 20,416.

To all whom it may concern:

Be it known that I, JAMES G. MILLER, a citizen of the United States of America, residing at Norfolk, in the county of Norfolk and State of Virginia, have invented certain new and useful Improvements in Double-Decked Car Ferries, of which the following is a specification.

My invention relates to a vessel of the barge or ferry type for the transportation of railway cars on lake, bay or other inland waterways and is especially adaptable for long distance car transportation, an object of my invention residing in the novel constructions of a vessel for transporting the maximum number of cars with positive assurance of its stability and seaworthiness. The scope of my invention extends to whatever construction may be defined by or included within the terms or language of the appended claims.

In the drawings:

Figure 1 is a top plan view of a vessel or barge constructed in accordance with my invention;

Figure 2 is a longitudinal section thereof;

Figure 3 is a transverse sectional view taken through the approximate center thereof;

Figure 4 is a front elevation and

Figure 5 is an enlarged longitudinal section view taken through the front or bow of the vessel.

My invention, in the form or embodiment shown in the drawings and briefly described, comprises a vessel in the form of a barge or ferry, 10, whose hull is to be of modern approved construction, and the bottom, 11, which is, preferably, downwardly converging toward the center, is provided with the usual keel, 12, extending longitudinally along the bottom, 11, of the ship.

A substantially slight distance above the bottom, 11, I provide a track deck, 13, which extends from the rear or stern, 14, of the vessel, 10, to a point, 15, being just to the rear of the bow. The track deck, 13, declined longitudinally toward the center of the ship, is at its lowest point a substantial distance below the water level for the purpose of effectually lowering the center of gravity of the vessel when fully loaded.

The rails, 16, which are carried by the lower deck, 13, are curved outwardly on each side of the longitudinal center for the purpose of more equally distributing the load within the vessel and for readily permitting the placement of suitable columns, 17, which brace the upper deck, 18.

The upper deck, 18, is sloped as at 19, terminating adjacent to the extreme forward end or the bow, 20. The rails, 21, which are placed upon the upper deck, 18, are also curved or spread outwardly as are the rails, 16, of the lower deck or hold of the vessel, 10.

Numeral 22 indicates bumpers which are placed upon the upper deck for the purpose of forming a positive stop for the cars when loading and while being transported.

The bow and stern of my improved barge are provided with substantially semi-circular tongue or rib portions, 23 and 24, for the purpose of engaging in mating grooves so that the abutting rails upon the vessel and the wharves will be in alignment so that the cars may be readily rolled upon the vessel, or easily unloaded without difficulty. One form of such a wharf or docking device is illustrated in Figure 5 of the accompanying drawings and it is to be understood, of course, that such devices will be constructed so that they may be readily raised and lowered to properly engage the tongues or ribs, 23 and 24.

It is to be understood, of course, that a vessel of this construction may be easily arranged for accommodating passenger as well as freight-carrying facilities.

As an example of the economical handling of railroad cars, a barge constructed in accordance with my invention, 400 feet long with a sixty foot beam and ten foot draught, is capable of carrying or transporting fifty-seven (57) standard or thirty-eight (38) foot railroad cars.

It is to be understood, of course, that although this vessel is primarily intended for use as a ferry or barge, modifications may be resorted to for being self-propelled.

I claim:

1. A vessel of the character described, comprising an upper and lower deck, a plurality of sets of rails mounted upon the decks, a portion of said upper deck sloping forwardly and downwardly and the lower deck curving rearwardly and upwardly.

2. A vessel of the character described, comprising an upper and lower deck, a plurality of sets of rails mounted upon the decks, a portion of said upper deck sloping forwardly and downwardly and the lower

deck curving rearwardly and upwardly, the elevations of the front and rear extremities of the decks being substantially the same.

3. A vessel of the character described, comprising an upper and lower deck, a plurality of sets of rails mounted upon the decks, a portion of said upper deck sloping forwardly and downwardly and the lower deck curving rearwardly and upwardly, the elevations of the front and rear extremities of the decks being substantially the same, and means carried by the front and rear extremities of the decks associated with substantially stationary wharf portions, to effect a proper alignment therewith.

4. A vessel of the character described, comprising an upper and lower deck, a plurality of set of rails mounted upon the decks, a portion of said upper deck sloping forwardly and downwardly and the lower deck curving rearwardly and upwardly, the elevations of the front and rear extremities of the decks being substantially the same, and means carried by the front and rear extremities of the decks associated with substantially stationary wharf portions to effect a proper alignment therewith, comprising a substantially semi-circular rib extending along and conforming to the contour of said front and rear ends of said vessel.

JAMES G. MILLER.