June 6, 1933. A. M. McDOUGALL 1,913,207

VESSEL

Filed Jan. 2, 1932

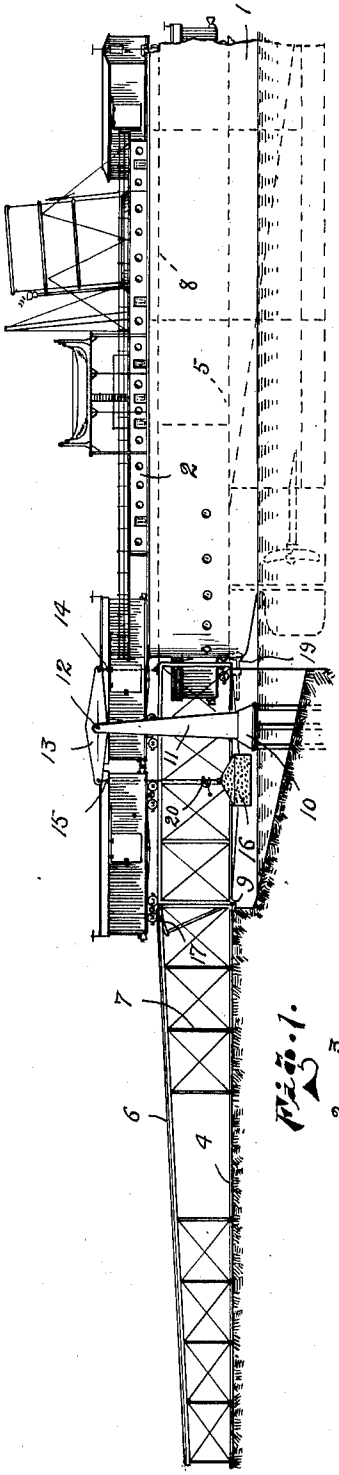


Fig. 1.

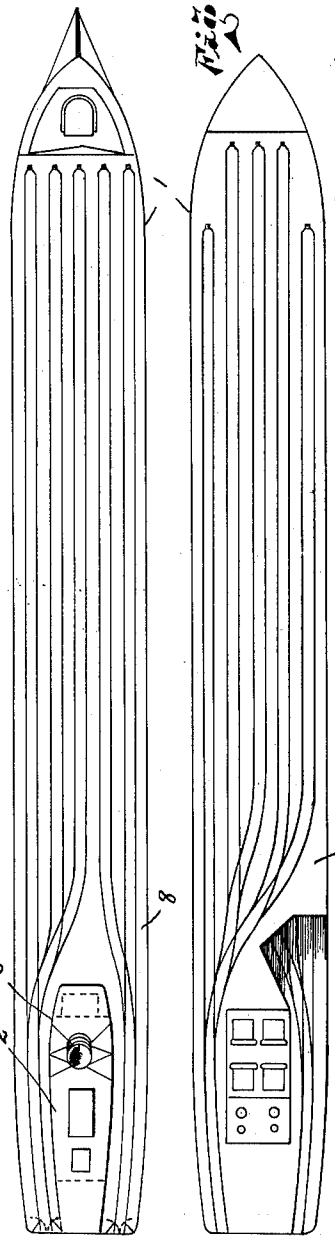


Fig. 2.

Fig. 3.

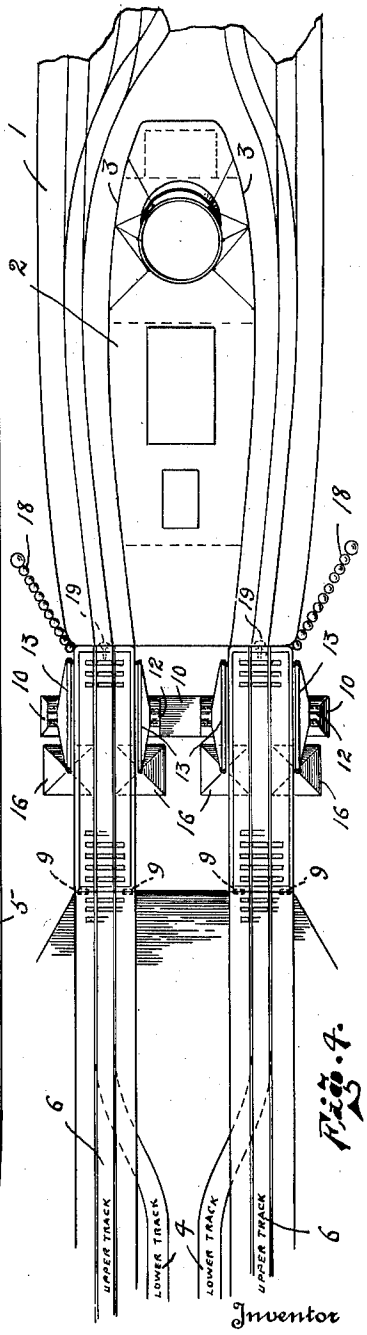


Fig. 4.

Inventor

A. Miller McDougall.

By Geo. Stevens.

Attorney

Patented June 6, 1933 1,913,207

UNITED STATES PATENT OFFICE

ALEXANDER M. McDOUGALL, OF CHICAGO, ILLINOIS

VESSEL

Application filed January 2, 1932. Serial No. 584,458.

This invention relates to car transporting vessels and serving mechanism therefore, the principal object being to provide an improved form of vessel, as well as serving mechanism having means whereby automatic adjustment of the mechanism occurs during the process of loading and/or unloading the vessel.

Another object is to provide such a mechanism which will materially expedite such process, and the novel arrangement of tracks on the vessel assist in such expedition.

Other objects and advantages of the invention will appear in the following description thereof.

Referring now to the accompanying drawing, forming part of this application, and wherein like reference characters indicate like parts:

Figure 1 is a side elevation of the after end of a vessel being served at a dock equipped with the improved loading mechanism:

Figure 2 is a plan view of the spar deck of the vessel:

Figure 3 is a plan view of the 'tween deck: and

Figure 4 is a plan view of Figure 1, portions thereof being shown in section.

It will be noted that the vessel is an improvement upon somewhat similar constructions of ships illustrated in my Patents No. 1,772,612 of August 12, 1930, and 1,773,368 and 1,773,369 of August 19, 1930, and that such modification of vessel forms an essential part of my present invention, obviously rendering possible novel results in the art.

The numeral 1 represents the vessel, which is of the freight carrying type, having the engines and boilers as far aft as possible, and centrally of the ship, and having an abnormally wide stern portion, especially above the water line thereof, so as to permit of at least two decks having ample room on either side of the after deck house for a line of car tracks. The deck house in this instance is illustrated at 2, and one essential thereof is that the forward end of said house is tapered or narrowed materially as at 3 for some considerable distance to further accommodate the switching of cars thereabouts; it being noted that the full thwartship width of the vessel extends well aft of the forward end of the after deck house and then is contracted but comparatively slightly to the extreme after end or stern. Thus there is afforded ample room for the single track at the extreme after portion and the Y parallel with the forward portion of the deck house thereby providing ample switching room for cars to a plurality of tracks on the main portion of the decks.

The serving instrumentalities for the vessel comprises the line of shore tracks 4 on an approximate level with the 'tween deck 5 of the vessel; it being noted that in such vessels where the fuel and machinery are carried well aft there is but comparatively slight change in draft respecting a vessel that is either loaded or light, so that a substantially uniform height above the water level is maintained. An elevated track 6 is also shown upon suitable trestle construction 7 to substantially register with the spar deck 8 of the vessel. The track 6 may incline downwardly to that of the lower track 4, as convenience may dictate. These fixed tracks extend to a point some considerable distance inwardly of the outermost dock line at which the vessel is moored, and between such dock line and the termini of the fixed tracks is installed the pivotally mounted pair of ramp sections of tracks, each pair of which is pivotally mounted as at 9 in any suitable manner so that the free end of each pair is free to raise or lower as required by the draft of the after end of the vessel.

As a means for the support of the free end of each ramp; each ramp as before stated comprising a pair of tracks one above the other connected as by trestle construction, clearly illustrated; I provide a foundation support as at 10 for the upright supporting member 11, which may be in the form of a post or other suitable construction as piling or the like if preferred, and upon the upper end of the post as at 12 is pivotally mounted the walking beam 13, it having a line 14 depending from the forward end thereof, supporting in any desired manner the free end of the ramp, while at the opposite end of the

beam 13 is attached, as by the line 15, a suitable counterweight 16. Now the temporary connection of the free end of the ramp to the stern of the vessel is not shown in detail as the same may vary materially under different circumstances, and that a short connection of chain may be employed which forms linked connection, adjustable manually, for holding the ramp and the vessel together, and still permit of considerable movement therebetween. Or the end of the ramp may be provided with a ball like projection or plunger 19 cushioned as by a spring or rubber and engageable within a suitable socket in the stern of the vessel, so that when the latter is brought fully astern and held as by breast lines or the like in such position the ramps cannot be dislodged therefrom by the weight of the cars or the motion of the vessel, thus virtually providing a ball and socket joint between the free end of the ramp and the vessel.

It is further obvious that a hand manipulated drum or winch 20 may be used in conjunction with the weight suspending line 15 for raising and/or lowering the free end of each ramp for registration with the stern of the vessel as it is being positioned, and which winch is freed after such registration so that the ramps may fluctuate with the movement of the vessel. Inasmuch as there are two pairs of these ramps, one registering with each side of the vessel, when the latter at all lists during the process of loading or unloading, the ramps will automatically adjust themselves to such list, thereby obviating any inconvenience that might otherwise arise. It will be noted that I have provided a pair of counterweights 16 for each pair of ramps, and that this structure may be materially modified without departing from the spirit of the invention.

Furthermore that the upper track supporting girders of the ramps may at their innermost ends be formed arcuately as shown at 17, the center of said arc being the pivotal point 9 so that as the free end of the ramps raise or lower the tracks upon the upper portion thereof will remain in proper registration with the fixed portion of the tracks. The opposite or free ends of these upper tracks may be provided with any desired flexible connection for convenient traverse of the cars thereover, inasmuch as the after part of such vessels changes but slightly in its draft as before stated, but when such change of draft does take place, the forward end of the vessel of necessity must raise and lower proportionately, resulting in comparatively little change taking place respecting the relation of such track connection.

It will be noted that the entrance to the ramps is provided with the necessary common sheer or guide piling indicated at 18 which is common in the art so that little or no difficulty is experienced in positioning the stern of the vessel in respect to the ramp.

The principal novel feature in the vessel here illustrated is the fact that it is so constructed at the extreme stern thereof to permit of cars being loaded and/or unloaded simultaneously on two different levels, it being quite obvious that such convenience would assist materially in the expedition of same, and, while there is illustrated in my former patents referred to an inclined ramp for selective service on one side of the after house to either the 'tween deck or the tank top deck, there is not found the loading through the stern on the spar deck upon either side of the deck house to a single track communicating with a plurality of tracks on the main portion of the deck forward of the after deck house.

From the foregoing it is evident that I have provided a novel form of vessel in conjunction with a novel form of serving structure applicable not only to the transportation of railroad cars but to other forms of vehicles as well not necessarily requiring special forms of tracks upon the vessel.

Having thus described my invention, what I claim and desire to secure by Letters Patent, is:

1. In combination, a navigable vessel for transporting vehicles having a plurality of decks served through the stern thereof, a dock for said vessel, two sets of tracks upon the dock one above the other for conveying vehicles to or from the vessel, and an adjustable double deck ramp hingedly attached to the fixed termini of the tracks with the free ends thereof registrable with the decks of the vessel.

2. A serving ramp for vehicle carrying vessels having a plurality of decks served through the stern and upon either side of the center thereof comprising two pairs of tracks spaced horizontally from each other and the tracks in each pair spaced one above the other to register with the vertically spaced decks at the stern of the vessel, means for pivotally supporting the innermost end of each pair of tracks, and an automatically operable counterweight for the free ends of each pair of tracks.

3. A vessel comprising spaced decks and an after deck house, tracks upon the main portion of each deck thereof, a single track upon either side of said deck house and upon adjacent decks, means for the simultaneous ingress and/or egress of vehicles through the stern of the vessel to said single tracks upon a plurality of decks simultaneously.

4. A vessel for the transportation of vehicles comprising spaced decks and an after deck house, a single track upon either side of said deck house and upon adjacent decks, and means for the ingress and egress of ve-

hicles through the stern to the single tracks upon a plurality of decks simultaneously.

5. A vessel for the transportation of vehicles comprising spaced decks and an after deck house, a plurality of tracks upon the main portion of said decks, a single track upon either side of said deck house and upon adjacent decks, each of said single tracks communicating with a plurality of the tracks upon the main portion of the respective deck served, and means for simultaneously loading and/or unloading vehicles to or from said single tracks upon either or all decks simultaneously.

6. A vessel of the class described comprising spaced decks, tracks upon said decks, and means permitting simultaneously loading and unloading cars through the stern of the vessel to a plurality of said deck tracks upon a plurality of decks simultaneously.

7. A vessel of the class described comprising spaced decks for the transportation of vehicles, and means permitting simultaneously loading and unloading vehicles through the stern of the vessel to a plurality of said decks.

In testimony whereof I affix my signature.

ALEXANDER M. McDOUGALL.