No. 857,264. PATENTED JUNE 18, 1907.

E. C. WEST & A. F. WOLTHER.

DEVICE FOR TRANSPORTING SHIPS.

APPLICATION FILED JUNE 27, 1906.

3 SHEETS—SHEET 1.

Fig. 1.

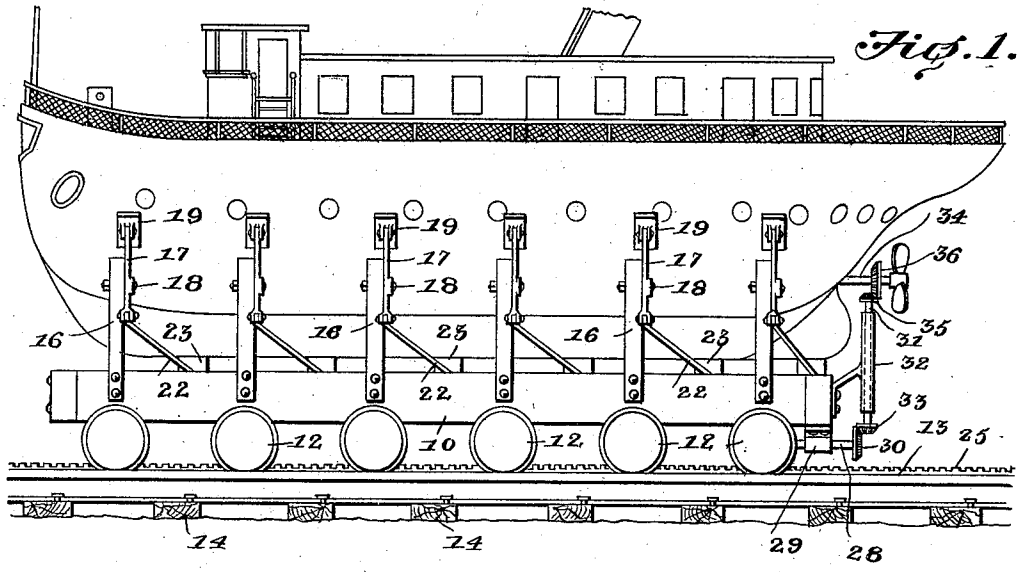
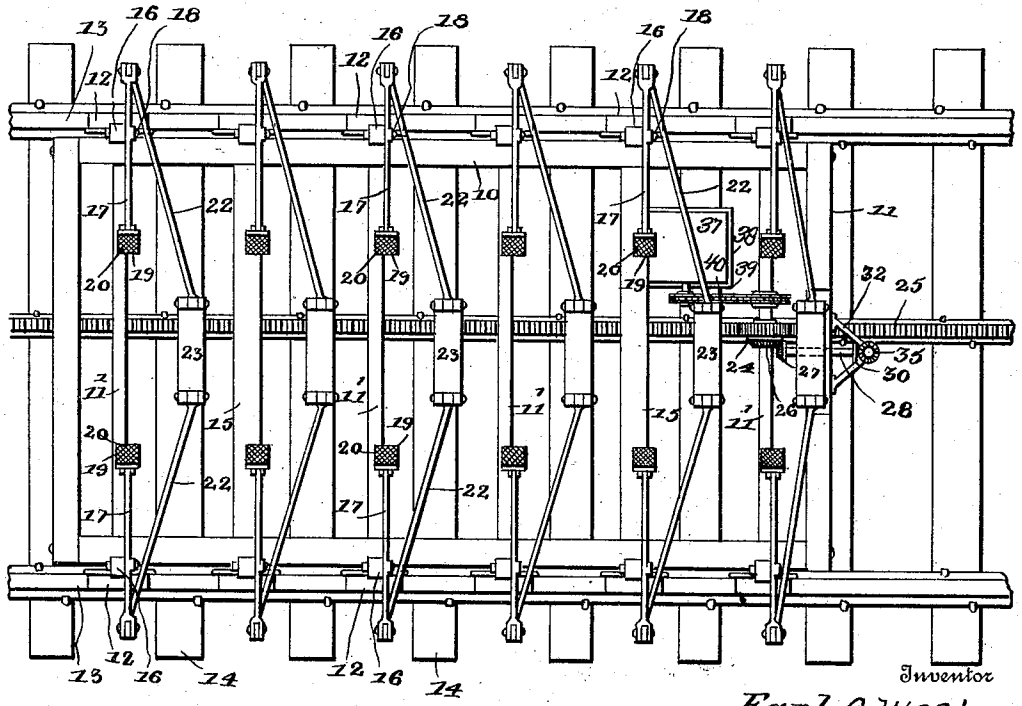


Fig. 2.



Witnesses

W. W. Rockwell

F. B. MacMab

Inventor

Earl C. West

& A. F. Wolther

By Brandlee & Brandlee

Attorneys

No. 857,264. PATENTED JUNE 18, 1907.

E. C. WEST & A. F. WOLTHER.

DEVICE FOR TRANSPORTING SHIPS.

APPLICATION FILED JUNE 27, 1906.

3 SHEETS—SHEET 2.

Fig. 3.

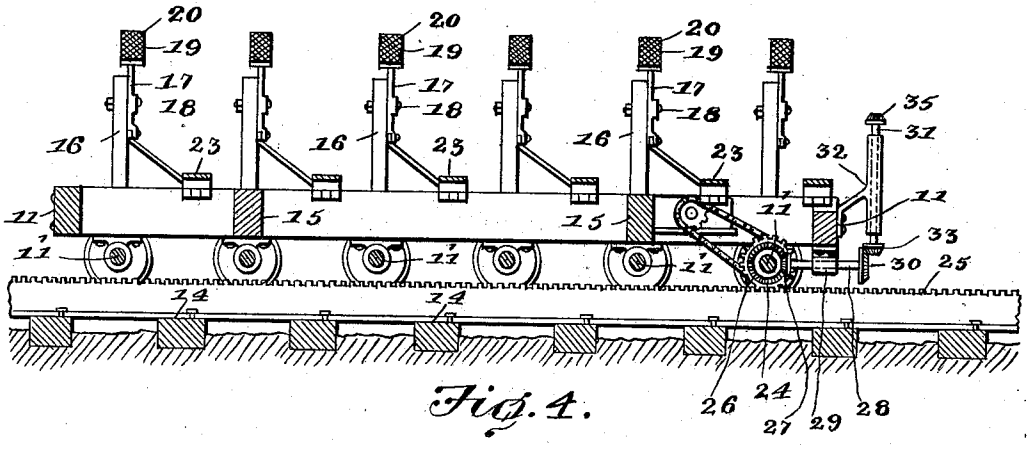
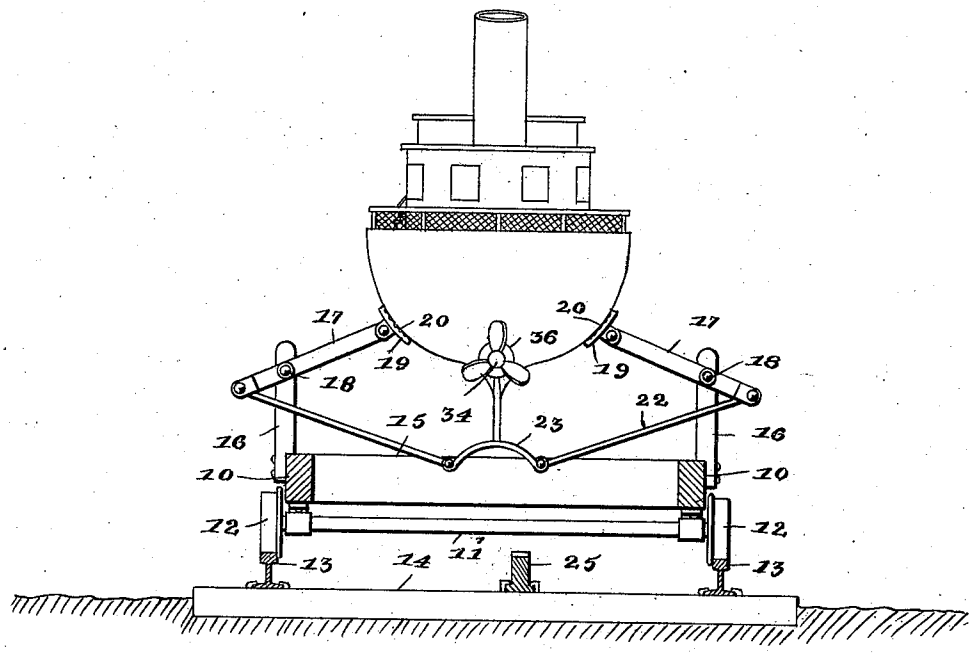


Fig. 4.



Witnesses

W. S. Rockwell

F. B. MacNutt

Inventor

Earl C. West

& A. F. Wolther

By Chandlee & Chandlee

Attorneys

No. 857,264. PATENTED JUNE 18, 1907.

E. C. WEST & A. F. WOLTHER.

DEVICE FOR TRANSPORTING SHIPS.

APPLICATION FILED JUNE 27, 1906.

3 SHEETS—SHEET 3.

Fig. 5.

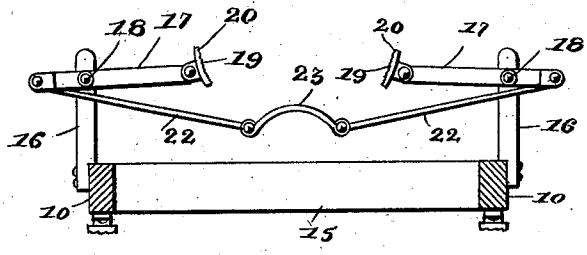
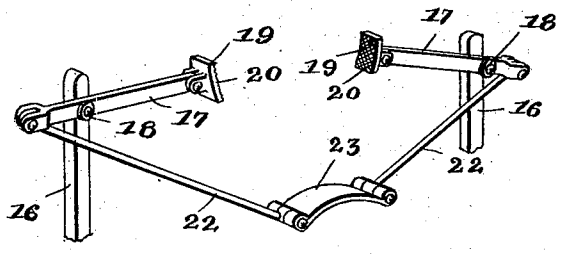


Fig. 6.



Witnesses
W. S. Rockwell
F. B. MacNab

Inventor
Earl C. West
& A. F. Wolther

By Chandlee & Chandlee
Attorneys

UNITED STATES PATENT OFFICE.

EARL C. WEST AND ALBERT F. WOLTHER, OF BROWNTON, MINNESOTA.

DEVICE FOR TRANSPORTING SHIPS.

No. 857,264. Specification of Letters Patent. Patented June 18, 1907.

Application filed June 27, 1906. Serial No. 323,738.

To all whom it may concern:

Be it known that we, EARL C. WEST and ALBERT F. WOLTHER, citizens of the United States, residing at Brownton, in the county of McLeod, State of Minnesota, have invented certain new and useful Improvements in Devices for Transporting Ships; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to devices for transporting ships over land from one body of water to another and has for its object to provide a construction of this nature which will securely hold a ship during transportation.

A further object of the invention resides in the provision of means for supporting upon the structure a ship of any size within certain limits, the said means being so constructed as to automatically grip the hull of the ship when the same settles into position upon the structure.

Furthermore, the invention includes a system of gearing which is so arranged that the structure may be propelled from the propeller shaft of the ship itself.

In the accompanying drawings, Figure 1 is a side elevation of the invention in use. Fig. 2 is a top plan view of the invention, the ship being omitted. Fig. 3 is a vertical longitudinal sectional view therethrough. Fig. 4 is a detail transverse sectional view therethrough showing the position of the ship-gripping members when a ship is in position upon the structure. Fig. 5 is a similar view showing the position of the gripping members after removal of the ship, and Fig. 6 is a detail perspective view of one of the pairs of gripping members.

The invention comprises a bed frame including side beams 10 and end beams 11 and upon the under edges of the frame are journaled axles 11′ carrying flanged wheels 12 which travel upon tracks 13 supported upon the usual form of ties 14. In practice the tracks extend over the route to be traveled and have their terminals extending into locks (not shown) into which the ship to be transported is propelled, the water being in any suitable manner withdrawn from the lock to allow the ship to settle into position upon the structure. The side beams 10 of the bed frame are braced by means of brace beams 15, the said beams serving to hold them against spreading.

Secured at corresponding intervals to the side beams 10 of the bed and extending upwardly therefrom are standards 16 which serve to support the hull gripping members of the structure which will now be described. Each of the gripping members comprises a pair of gripping arms 17 which are pivoted to their respective standards 16 as at 18 and have their inner ends directed toward each other and provided with head plates 19 which are secured thereto for rocking movement in any suitable manner and are provided upon their opposing faces with serrations 20 which enable the plates to positively grip the sides of the ship's hull.

Extending downwardly in converging planes from the outer ends of the arms 17 of each pair and pivotally secured thereto, are rods 22 which are pivotally connected at their lower ends to the adjacent ends of a stout spring bow 23 upon which the keel of the ship to be transported rests. The arch of the bow is directed upwardly and it will be seen that the weight of the ship will tend to straighten the same and in doing so will pull downwardly upon the rods 22, causing the inner ends of the arms 17 to swing upwardly to engage the hull of the ship and firmly support the same in an upright position. Furthermore, it will be seen that the weight of the ship will only tend to increase the gripping action of the arms.

Mounted upon the rearmost axle 11′ is a cog wheel 24 which is in mesh with a rack rail 25 extending in parallel relation to the rails 13. The cog wheel is provided with bevel gear teeth 26, and meshing with the same is a bevel gear 27 upon one end of a shaft 28 which is mounted in a suitable bracket 29 to the rear of the bed frame of the structure and which is provided at its extreme rear end with a bevel gear 30. A shaft 31 is journaled in a bracket 32 carried by the rear end beam 11 of the bed frame, and to the lower end of the shaft is secured a bevel gear 33 which meshes with the bevel gear 30. The last-named shaft is driven from the propeller shaft 34 of the ship by means of meshing bevel gears 35 and 36, the gear 35 being secured to the upper end of the shaft 31 and the gear 36 to the said propeller shaft.

It will be seen from the above that the structure may be readily propelled by power derived from the ship which is being trans-

ported thereby but, in view of the fact that other than screw-propelled ships will at times be transported and that the power derived from the propeller shaft may be insufficient for an up-grade, I have provided an electric motor 37 which is supported upon a platform 38 intermediate the side beams of the bed frame and which has its power shaft 39 geared to the axle 11′ by means of a sprocket chain 40.

What is claimed as the invention, is:—

1. A structure of the class described comprising a wheeled truck, a ship supported thereby, and means operated from said ship for propelling the truck.

2. A structure of the class described including means for automatically gripping a ship to be transported thereby.

3. A structure of the class described comprising a wheeled truck, gripping arms mounted upon the truck and arranged to grip a ship to be transported thereby, and means connecting the arms and arranged to rock the same to engage a ship, the ship being designed to rest upon the connecting means.

4. A structure of the class described comprising a wheeled truck, gripping arms mounted upon the truck and arranged to grip a ship to be transported thereby, rods connected with the arms, and a spring plate connecting the rods and arranged for engagement by the ship to cause the rods to rock the gripping arms.

In testimony whereof, I affix my signature, in presence of two witnesses.

EARL C. WEST.
ALBERT F. WOLTHER.

Witnesses:
JAMES BOHN,
JOHN S. WEST.