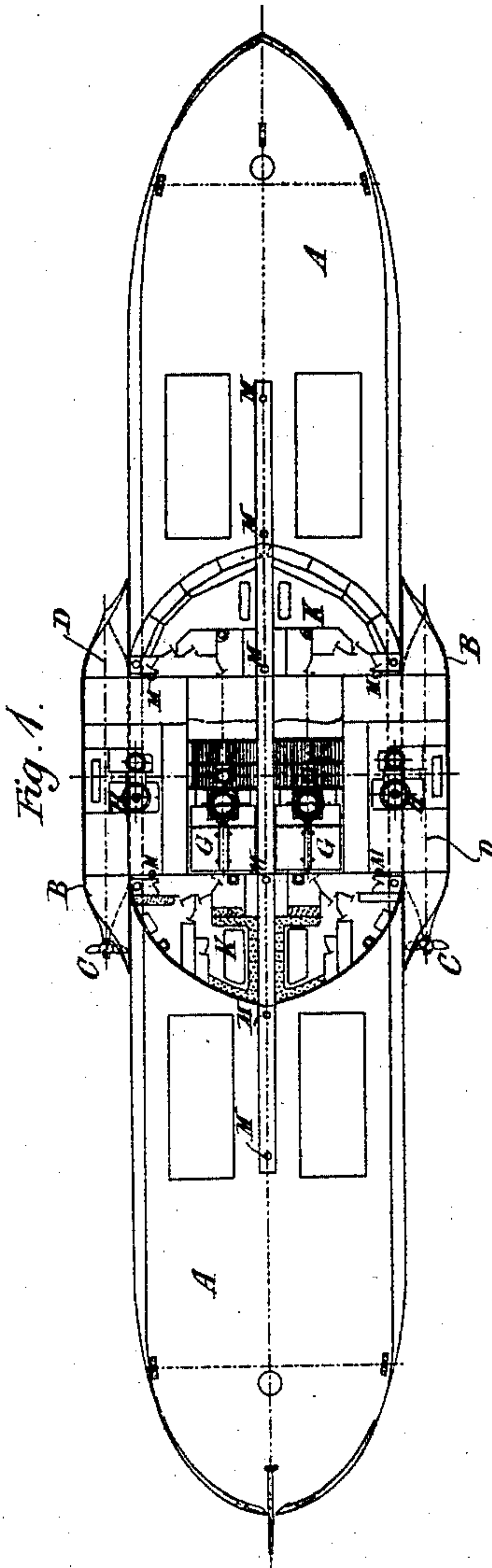
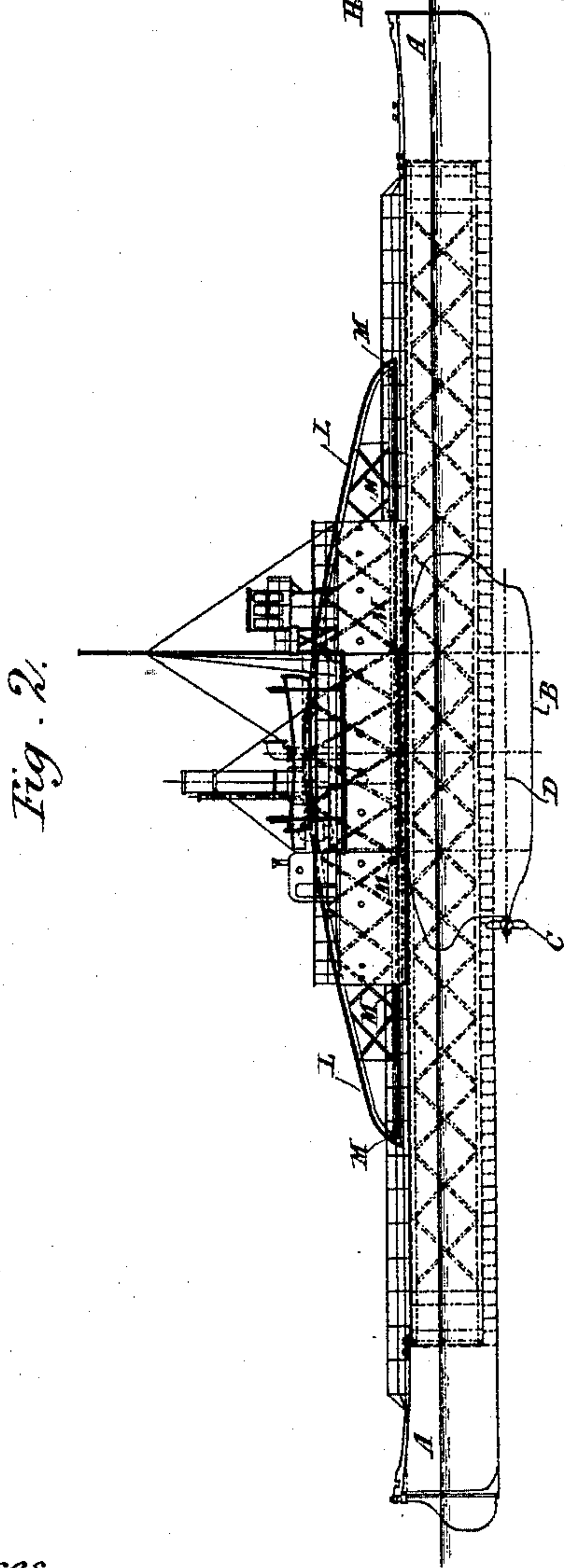
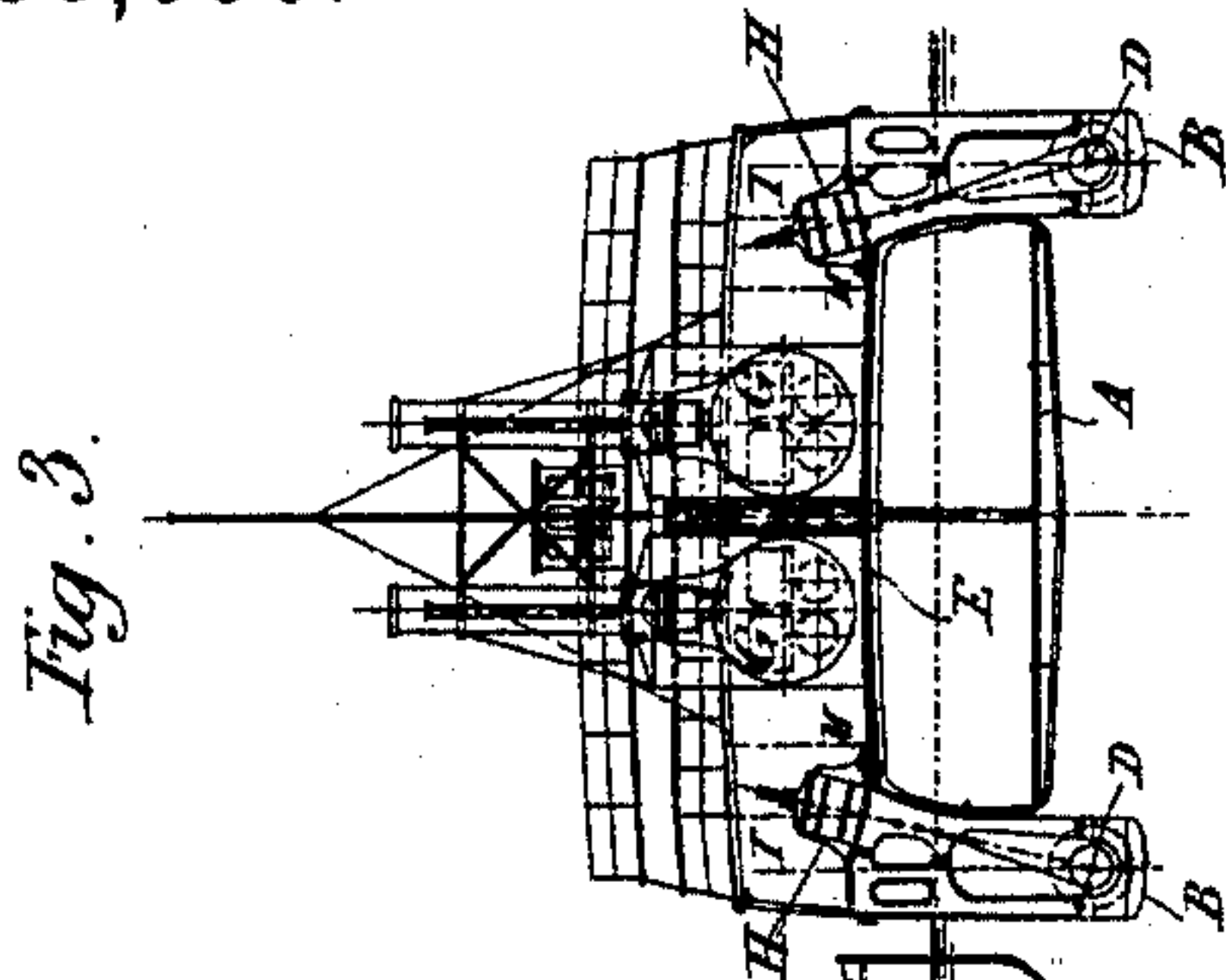


(No Model.)

H. DE M. SNELL.
SHIP LOCOMOTIVE.

No. 498,036.

Patented May 23, 1893.



Witnesses
B. M. Miller.
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Inventor.
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UNITED STATES PATENT OFFICE.

HENRY DE MORGAN SNELL, OF LONDON, ENGLAND.

SHIP-LOCOMOTIVE.

SPECIFICATION forming part of Letters Patent No. 498,036, dated May 23, 1893.

Application filed October 22, 1892. Serial No. 449,689. (No model.)

To all whom it may concern:

Be it known that I, HENRY DE MORGAN SNELL, civil engineer, a subject of the Queen of Great Britain, residing at 53 New Broad Street, in the city of London, England, have invented certain new and useful Ship-Locomotives, of which the following is a specification.

The object of this invention is to enable the steam engines and propelling mechanism used for propelling vessels to be detachable from the ship, boat or barge to be propelled, in such a way that after a ship has been navigated from one port to another by means of what I call the ship locomotive, the said ship locomotive may be detached from the ship, boat or barge, which may then be left at the port to discharge its cargo and reload, while the ship locomotive may be attached to another ship, boat or barge and take it to its destination. For these purposes I construct my ship locomotive of a platform which carries steam boilers and propelling engines and which is to be placed across and to extend beyond the sides of the ship or vessel that is to be propelled so as to give facility for readily lifting or lowering the platform and for shifting it from one ship or vessel to another. Preferably also I construct the platform with two caissons descending from it one to come on either side of the ship and each caisson I arrange to be propelled by a screw propeller at its stern. The caissons I also preferably make deeper than the ships or vessels to be propelled so as to give greater facility for lifting the platform as hereinafter described and also to better provide for a free run of water to the propeller. When propellers of other kinds are used it is not necessary to make the caissons deeper than the ship or vessel or even in some cases except for the sake of giving stability to the ship it would not be necessary to use them at all.

In the annexed drawings Figure 1 shows a plan of a ship, boat or barge with a ship locomotive attached to it. Fig. 2 shows an elevation and Fig. 3 a transverse section of the same.

In Fig. 1, the ship, boat or barge, which I call the hull is marked with the letter A.

BB are the caissons each fitted with a screw propeller C on a propeller shaft D.

E is the platform carrying the boilers G and engines H which drive the propeller shafts and also carrying coal bunkers I and cabins for the crew. The accommodations for officers and crew are conveniently arranged on the spaces K.

L is a girder for strengthening the ship locomotive and the ship, boat or barge when necessary. This girder may be either of the lattice type shown in Fig. 2 or may be an ordinary plate girder.

The caissons and platforms are formed of frame-work and sides of iron or steel connected together so as to give the necessary rigidity to the whole structure both when in position on the hull and also when resting upon the lifting ponton by which it is removed from one hull to another. The ship locomotive and hull when connected are securely fastened together by substantial bolts M or by keys, wedges or other attachments instead of or in addition to such bolts.

The relative dimensions of the different parts such as would be suitable for one application of the invention, are shown in the drawings, for a light draft barge, but these dimensions will vary according to the amount and kind of cargo intended to be carried in the ship, boat or barge.

There may be one, two or more boilers, and the engines may be simple, compound, triple or quadruple expansion. The screw propeller instead of being driven direct from the engines as shown in Fig. 3 may be driven by means of gearing, the engines being placed in any suitable position for this purpose.

The caissons may if desired be constructed with compartments and pumps for filling the compartments with water or air—in this case they can be raised or lowered in the water by pumping water into or out of them.

In order to move a ship locomotive from one hull to another I generally employ a ponton of construction somewhat similar to those employed for floating docks. I bring the ship, boat or barge with the ship locomotive attached to it into position over the ponton. I then cause the ponton to rise in the water by pumping water out of it and when the locomotive rests upon the caissons I unfasten the bolts, screws, wedges or other attachments by which the locomotive is fastened to the ship,

boat or barge. I then continue to pump water out of the ponton which will consequently rise to a higher level, lifting the ship locomotive off the hull. I then draw the hull clear
 5 of the ship locomotive by any of the ordinary methods of moving ships, boats or barges in docks and harbors. I then in a similar manner bring another hull into position under the platform of the ship locomotive and lower
 10 the ponton till the locomotive rests upon the hull. I then fasten the bolts, screws or wedges. I then lower the ponton a little more and remove the combined hull and locomotive either by working the propellers or by
 15 any of the means usually employed for moving ships in docks and harbors.

In place of employing a floating ponton as above described for lifting and lowering a ship's locomotive to allow of its being de-
 20 tached from one hull and placed on to another I may employ platforms that are lifted and lowered in other ways or where there is a rise and fall of tide the hull with a locomotive upon it may at high tide be brought between
 25 two fixed platforms so that when the tide goes down the ship's locomotive may rest upon and be supported by the platforms while the hull descends with the tide and can be drawn away and another brought into its place.

30 When the caissons are constructed in compartments and fitted with pumps so that by pumping water into or out of them they can be raised or lowered in the water they can be detached from one hull and attached to an-
 35 other without the aid of any further lifting or supporting appliance.

Parallel guide rails may be placed upon the hull and double flanged wheels upon the locomotives. These wheels may be so fixed that
 40 they may be raised or lowered by means of screws or hydraulic rams. When the hull is being brought up to or removed from the ship

locomotive the two may be guided into their proper relative positions by means of the flanged wheels of the locomotive resting upon
 45 the guide rails on the barge.

What I claim is—

1. The combination with a barge or vessel, of boilers and propelling engines carried by a platform which passes across the vessel, and
 50 extends beyond both sides thereof, and which is provided with readily detachable fastenings for connecting it to the vessel, the arrangement being such that the engines with their platform may be readily transferred from one
 55 vessel to another, substantially as described.

2. The combination with a barge or vessel, of two caissons, one on either side, a platform connecting the two caissons passing across the vessel, and carrying boilers and propelling
 60 engines, and readily detachable fastenings for connecting the platform and vessel together.

3. The combination with a barge or vessel of two caissons, one on either side of said vessel, each fitted with a screw propeller, a plat-
 65 form connecting the two caissons passing across the vessel, and carrying boilers and engines for driving the screw propellers, and readily detachable fastenings for connecting the platform and vessel together.
 70

4. The combination with a barge or vessel, of two caissons, one on either side of said vessel and each of greater depth than the vessel, a platform connecting the two caissons pass-
 75 ing across the vessel and carrying boilers and propelling engines and readily detachable fastenings for connecting the platform and vessel together.

HENRY DE MORGAN SNELL.

Witnesses:

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