

G. A. F. Des Corats,

Loading and Unloading Vessels,

N^o 67,031,

Patented July 23, 1867.

Fig. 1.

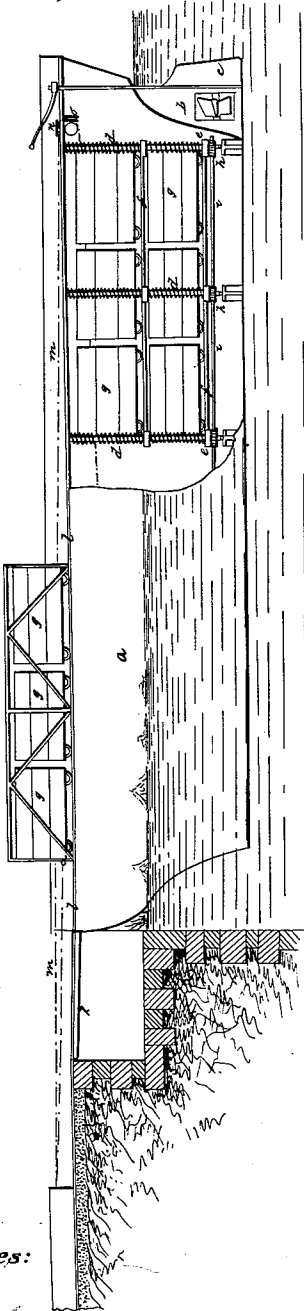


Fig. 2.

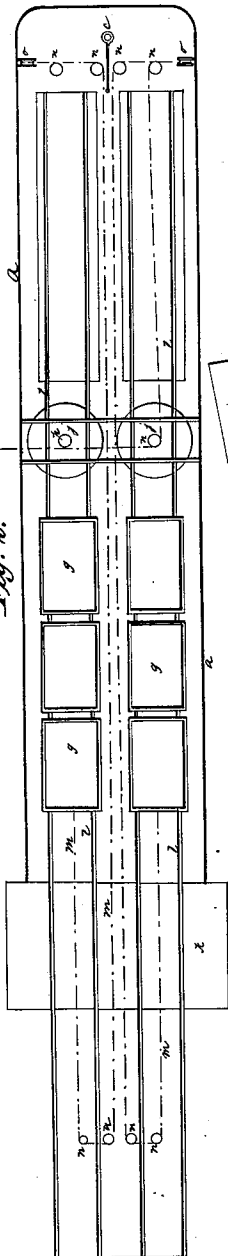
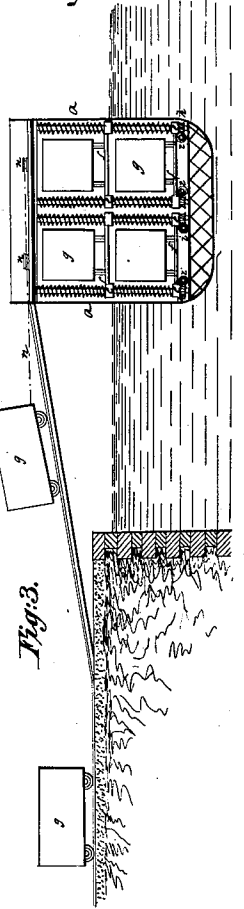


Fig. 3.



Witnesses:

J. J. Smith
W. C. Smith

Inventor:

G. A. F. Des Corats

United States Patent Office

GILBERT AUGUSTE FOURNIER DES CORATS, OF PARIS, FRANCE.

Letters Patent No. 67,081, dated July 23, 1867.

IMPROVED METHOD OF LOADING AND UNLOADING VESSELS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, GILBERT AUGUSTE FOURNIER DES CORATS, Gentleman, of Paris, France, have invented a new Mode of Conveyance on Sea or River, avoiding Transshipment, Lading and Unlading by Manual Labor; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed sheet of drawing, making a part of the same.

My invention refers to a new arrangement of steamboats and vessels, avoiding all transshipment, lading and unlading by manual labor on board the same.

I separate the interior of a vessel or steamboat in several compartments, say three, the one at the bow and another astern for containing boxes or carriages mounted on small wheels, and in which boxes goods have been previously shipped. In the third compartment, between, are the steam engines for the propulsion of the vessel, and others intended for the lading and unlading of said boxes or carriages. Regular platforms like railway platforms, provided with rails, will receive the said carriages on their being conveyed out of the steamboat or other vessel. The lading and unlading of said carriages is effected in the same way as done in a railway terminus. As regards the introduction on board a ship or steamboat of such carriages, a steam engine is provided inside the vessel whereby this operation is effected by means of any suitable lifting-apparatus situated likewise inside the vessel.

Supposing a steamer, for instance, in the two compartments of which it is desired to lodge wheeled boxes or carriages for the above purpose, I place vertically, and at proper distance from one another, screws supporting nuts upon which rails are secured, and on which rails the carriages are placed. Longitudinal shafts provided with endless screws set the vertical screws in motion, and the nuts screw forth or back, according as said carriages are to be got in or out.

Now it will be readily understood that the deck being provided with rails corresponding to those of a springing-board, themselves corresponding to those in the terminus, and the rails and the nuts being come on a level with those on the deck, it will be easy to have either the lading or unlading effected.

The working is proceeded with in the following manner: The steam engine for this purpose sets in motion a cylinder placed astern, on which a cable or chain is either wound or unwound, according to the work it is desired to accomplish, and the boxes or carriages being suspended thereto, will in this manner get in or out of the vessel. The steamboat or other vessel is to be introduced, for lading or unlading purpose, into a sort of recess dug out of the wharf, the depth of the water therein being the same of course as that in the haven. The springing-board is hinged up to the end of said recess so as to assume always the level of the vessel, to the bow or fore-part of which it is likewise secured in such manner that the railways on the platform of the board and of the vessel will correspond with each other. When this operation is over then is to commence the working of the lifting-apparatus, whereby the boxes or carriages are raised to the height of the rails both on the springing-board and deck. When arrived at this height they are hooked on to the cable which is wound on the cylinder placed astern, and a motion is imparted thereto by the steam engine, above mentioned, and by means of a return pulley placed in the terminus; the boxes or carriages are quickly and at once got in. For unlading I proceed inversely: the cable is attached ahead one or more rows of carriages, and is directly wound up on the cylinder or drum astern, by which way of proceeding the lading is so speedily effected that the stability of the vessel is but for a few moments disturbed. It is evident that the supply of coal for the engines, and other conveniences, are conveyed in the same manner by means of special carriages.

The advantages of this system may be summed up as follows: Notable saving of time; suppression of expenses for transshipment; preservation of the goods; possibility, in case of fire, of quickly throwing the burning carriages or boxes into the sea, making up readily or repairing the leakages.

In the annexed drawing, illustrative of this new mode of conveyance—

Figure 1 shows a longitudinal view of a steamboat arranged according to my invention, so as to admit wheeled boxes or carriages. In this figure the boat is seen partly in elevation and partly in section.

Figure 2 is the plan of the same.

Figure 3 is a transverse section of the boat, and in these three figures the same letters of reference stand for the like parts where they recur.

a, boat or vessel; *b*, screw; *c*, rudder; *d*, nuts supporting the rails *f*, upon which the boxes or carriages are placed; *g*, gear-wheels keyed on the screws *d*; to these wheels is imparted a rotary motion by the endless screws *i*; *j*, turn-plates placed on the deck of a vessel so as to facilitate the working thereof; *k*, boards setting in communication the platform and the boat; *l*, rails placed on the deck and corresponding to those on the board and platform; *m*, traction-chain or cable for conveying the carriages from the platform to the deck, or *vice versa*; *n*, return pulleys; *o*, other pulleys leading the cables towards the machine intended to effect the traction.

Fig 3 shows the lading and unlading operated along one side of the vessel.

Figs. 1 and 2 show the same operation performed at the bow; both these arrangements being indicated in order to show that the lading and unlading may take place both ways indiscriminately, as the carriages are easily worked upon on the deck by means of the turn-plates.

Claims.

Having so far described my invention, what I claim is—

1. The vertical screws *d* in the vessel *a*, having gear-wheels *h*, provided with nuts *e*, operated by means of the endless screws and longitudinal rods arranged in such a manner that two or more tiers of cars may be supported in said vessel and raised or lowered, substantially as described for the purpose specified.
2. The combination of the turn-tables *j*, rails *l*, traction-chains and pulleys *h* *o*, spring-boards *k*, arranged in relation to the vessel *a*, and operated as herein described for the purpose specified.

A. FOURNIER DES CORATS.

Witnesses:

A. GUION,
DEMOS.