A. TOELLNER.

Marine Transshipment and Overland Transportation.

No. 223,685. Patented Jan. 20, 1880.

Fig. 1.

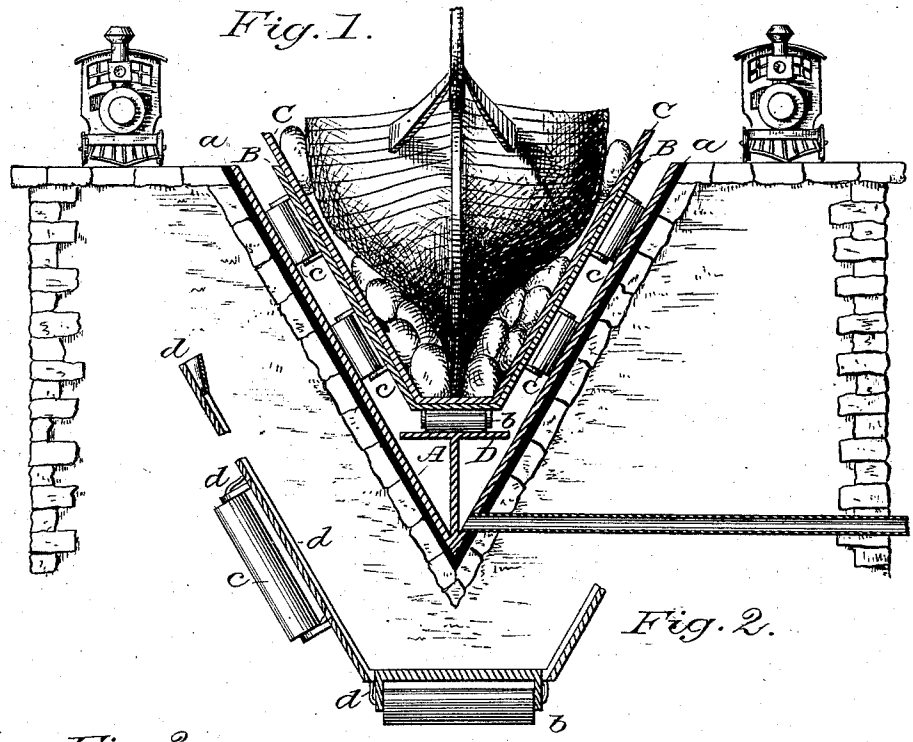
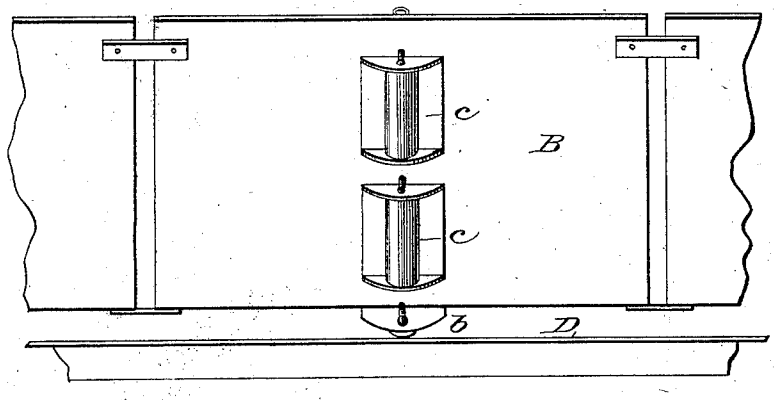


Fig. 2.

Fig. 3.



Witnesses:
D. W. Fiskell
Henry Hoffeen

Inventor:
Adolph Toellner
by his attorney
E. F. Gleason

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

ADOLPH TOELLNER, OF MOLINE, ILLINOIS.

MARINE TRANSSHIPMENT AND OVERLAND TRANSPORTATION.

SPECIFICATION forming part of Letters Patent No. 223,685, dated January 20, 1880.

Application filed October 24, 1879.

To all whom it may concern:

Be it known that I, ADOLPH TOELLNER, of Moline, county of Rock Island, and State of Illinois, have invented a new and useful Improvement in Marine Transshipment and Overland Transportation, of which the following is a specification.

My invention relates more particularly to the manner of moving vessels and steamers from one body of water to another overland by means of a metal canal or way and movable docks. This is done partly by the employment of stationary and partly by movable power, all as hereinafter more fully described.

To enable others skilled in the art to make and use my invention, I will proceed to describe the same with reference to the accompanying drawings, in which—

Figure 1 is an end view of a metal canal or way, showing the movable docks with vessel in order of transit. Fig. 2 is a cross-sectional end view of the bottom of movable skating-dock with the rollers attached. Fig. 3 is a side view of skating-dock, showing the rollers or manner of attaching and the connections of sectional parts forming the dock.

Similar letters of reference indicate corresponding parts in all the figures.

In the drawings, A represents the sides and bottom of the metal canal or way, which is constructed of iron or steel plates with sides at an angle of about forty-five degrees from the horizon, laid and bedded on layers of rubber *a a*, or other similar substance, inserted and resting on solid masonry, concrete, or similar substance, as shown at Fig. 1. This canal A is made of plate metal bolted or riveted firmly together, so as to make and present inside one continuous smooth and solid surface.

I do not confine myself to this particular form of construction, but mean to specify any form of bed or way on this principle.

At intervals openings are made at the sides from or near the top to the bottom sufficient to admit a person from the outside, and also serve for drainage. These openings are protected by steel bars of such strength that the firmness of the surface may not be impaired, and fastened by bolts or rivets, so as to present no obstacle to the evenness of side surface.

D is an elevated bench or keel, in form similar to the T-rail of railroads, which forms the bottom, and to which the lower parts of the sides are fastened, the upper part having a broad surface corresponding to the length or bearing of the rollers *b b*, which are attached to the bottom of dock B, as shown in Fig. 2.

B is a sectional skating or rolling dock having sides at the same angle as the way A, and made and shaped to conform to the inside of canal A. It is made of plate steel in section of three or more, and connected together in a hinge-like manner by means of loose rings or slotted steel bars, or in any like manner, so that it will conform to curvatures that may be in the course of the canal or way A. Along the entire bottom of dock B are placed steel rollers *b b b*, spaced as may be desired, shouldered, and fitted into metal frames which are firmly attached to the bottom of B, so as to have even and equal bearing throughout on keel D.

c c c are steel rollers like *b b b*, not necessarily as large, but fitted in metal frames, and firmly attached to the sides in a vertical or upright position, and made to have equal bearing on the entire inner surface of A. These rollers serve the same purpose as wheels. Wheels and rails might be used, if thought desirable, in place of the rollers and the even surface of the canal.

d d are stationary oil-cups having metal or rubber tubes or pipes running to each journal of the rollers, thereby keeping up a constant supply of fresh oil. C is the inner dock or shoe, being the part for receiving the vessel. It is constructed to conform to B, in shape made of one unbroken surface at sides and bottom, but open, like dock B, fore and aft. It is made to work inside of dock B, and is connected by pivot, or in such manner that it will retain its even position when B may be on a curve.

In constructing in this manner and form, the hull of a vessel, when entered into the dock or shoe, finds an even and secure rest on the sides if it happens to be too broad to set on its keel; and in case a vessel is narrower than the dock it would rest on an even keel, and could in either case be more easily and effectively kept in and secured in an upright position than

could be done under any other form of receiving-dock.

The manner of lifting a vessel from the water and getting it into position for a trip overland is to build an inclined way whatever distance may be necessary down into the harbor to whatever depth required. At the head of the incline is placed stationary power with the necessary machinery to operate with. The docks B and C being let down on the incline A into the water far enough to allow the vessel to be floated into the dock or shoe C to the desired position, it is made fast and held in its upright position by means of rubber air bags or balls, or in any manner desired. After being brought to the top of the incline the whole is moved forward on the railway to the desired point.

In constructing the canal-bed sufficient space is to be left on either side of the way to lay two or more lines of railroad-track to be used for propelling-power.

What I claim, and desire to secure by Letters Patent, is—

1. An iron or steel canal or way, A, keel D, and rubber sheets *a a*, constructed in the manner described, and for the purpose specified.

2. Sectional dock B, steel rollers *b b c c*, oil cups and pipes *d d*, and inner dock or shoe, C, all constructed and combined with each other, substantially as described, and for the purpose specified and set forth.

ADOLPH TOELLNER.

Witnesses:

V. VITZTHUM,

HERMAN SCHROEDER.