

No. 791,916.

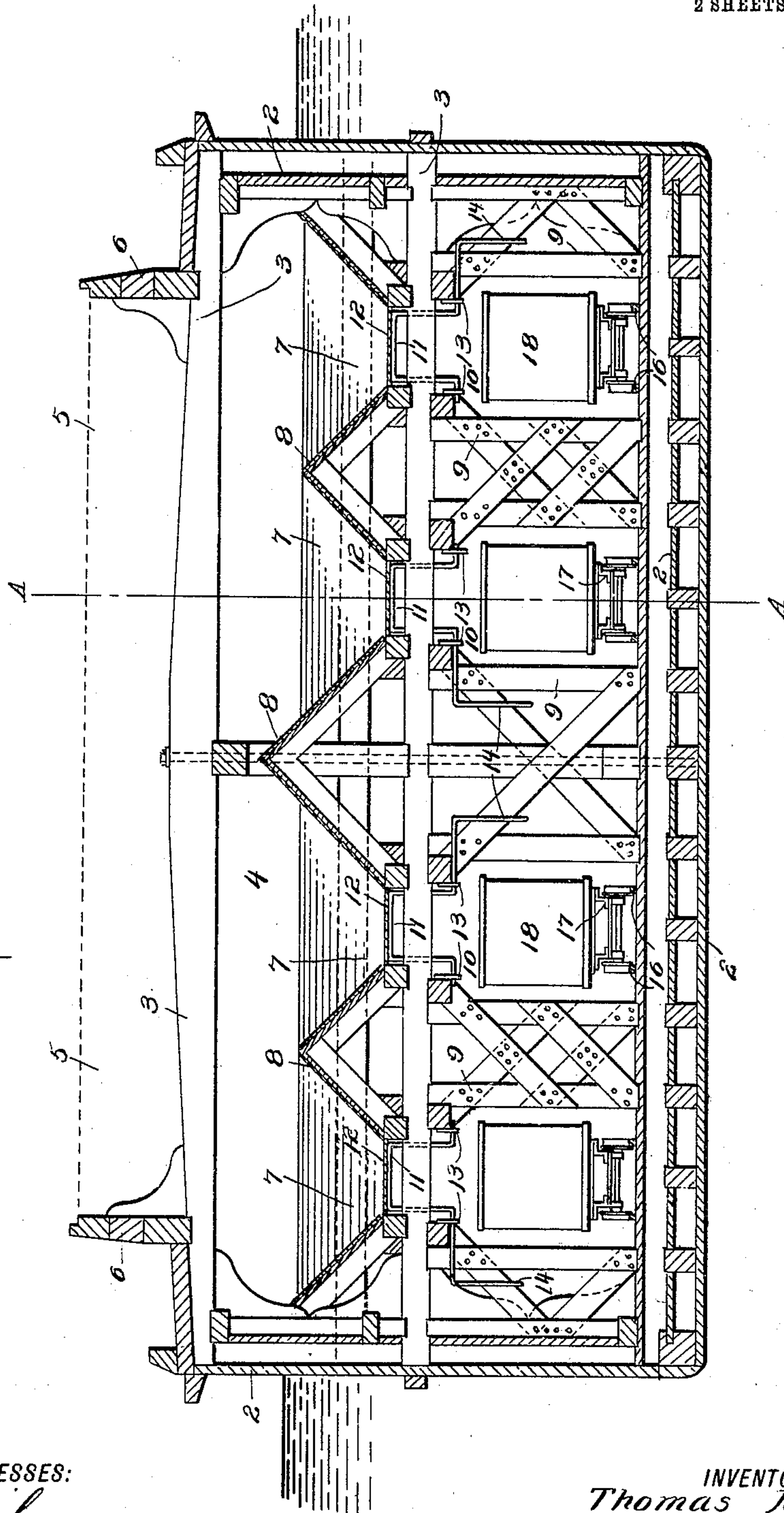
PATENTED JUNE 6, 1905.

T. KIDDIE.
ORE OR COAL CARRYING BARGE.

APPLICATION FILED APR. 11, 1904.

2 SHEETS—SHEET 1.

Fig. 1.



WITNESSES:

F. L. Gibson,
A. Dietrich

INVENTOR,

Thomas Kiddie.

BY

Fred G. Dietrich
ATTORNEY

No. 791,916.

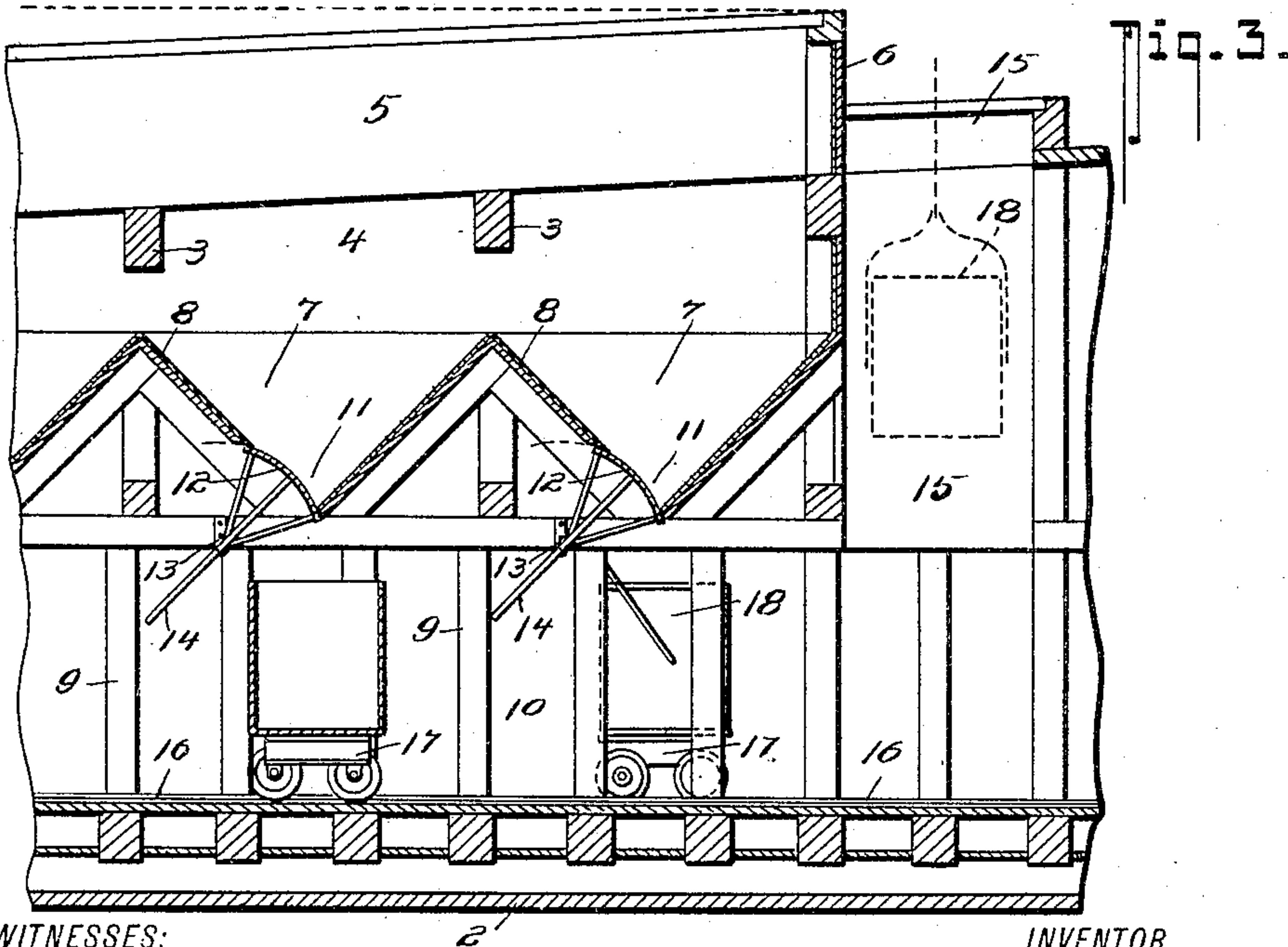
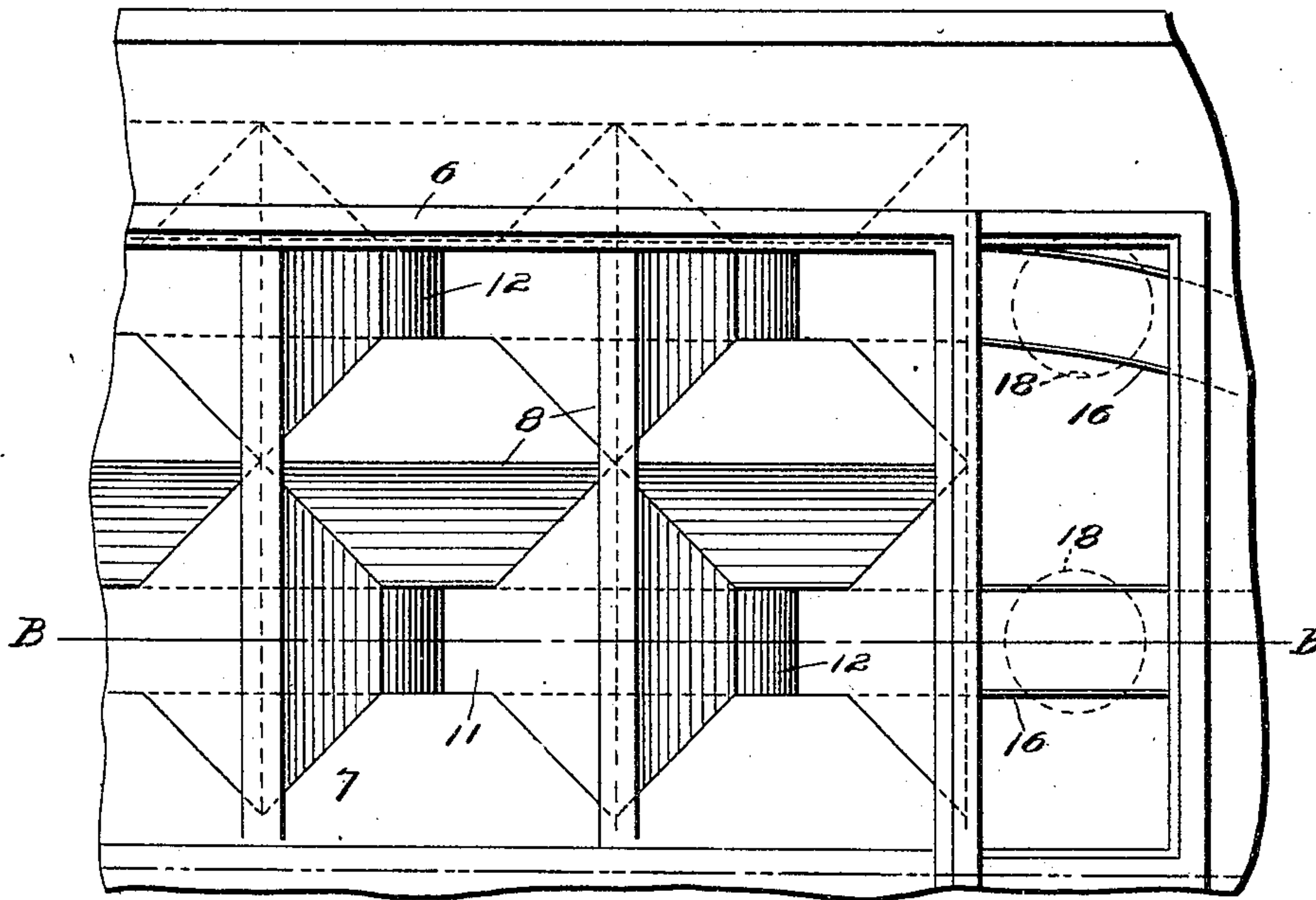
PATENTED JUNE 6, 1905.

T. KIDDIE.
ORE OR COAL CARRYING BARGE.

APPLICATION FILED APR. 11, 1904.

2 SHEETS—SHEET 2.

Fig. 2.



WITNESSES:

F. C. Gibson.
A. Dieterich

INVENTOR

Thomas Kiddie.

BY

Fred G. Dieterich
ATTORNEY

UNITED STATES PATENT OFFICE.

THOMAS KIDDIE, OF LADYSMITH, VANCOUVER ISLAND, CANADA.

ORE OR COAL CARRYING BARGE.

SPECIFICATION forming part of Letters Patent No. 791,916, dated June 6, 1905.

Application filed April 11, 1904. Serial No. 202,644.

To all whom it may concern:

Be it known that I, THOMAS KIDDIE, a citizen of the Dominion of Canada, residing at Ladysmith, Vancouver Island, in the Province of British Columbia, Canada, have invented new and useful Improvements in Barges Designed for Carrying Ore or Coal, &c., in Bulk, of which the following is a specification.

My invention relates to an improved barge designed to carry ore or coal, &c., in bulk and to permit of the rapid discharge of the cargo with a minimum of labor and a saving of time. I accomplish this by providing a barge or scow of any suitable construction with an ore-carrying space having a floor or deck strongly supported at a sufficient distance above the bottom of the boat to afford room beneath the deck for a means for discharging the cargo and conveying it to either one end or the other, where it may be removed through a hatchway and discharged outboard. To facilitate the discharge, the floor of the cargo-space is formed into a regular series of hoppers the discharge-doors of which are in alignment to suit the conveying means beneath, which conveying means may be of any suitable character; but the system which I have preferred to adopt is that illustrated in the drawings which accompany this application, wherein a system of track-rails is laid on the bottom of the boat, on which rails low-set wheeled trucks may run endwise to under the hoist-hatchways. On these trucks tubs or buckets may be mounted, which when under the hatch may be detached from the cars and lifted through the hatch by a derrick or hoist. The manner in which I prefer to carry this idea into practice is fully described in the following specification, reference being made to the drawings which accompany it.

Figure 1 is a cross-section of a barge, showing a series of hoppers and ore-tub tracks across its width; Fig. 2, an enlarged plan showing a portion of the ore-carrying deck adjacent to a hatchway; and Fig. 3, a longitudinal section on the line B B in Fig. 2, showing ore-buckets under the hopper-discharge and in dot-and-dash lines a tub being hoisted through the hatchway.

In the drawings the sides and bottom of

the barge are indicated by 2, the sides being framed and tied together in any approved manner by cross-beams 3. The cargo-space 4 of the barge is provided with an open hatch 5, surrounded with a combing 6. The floor of the cargo-space is formed into a regular series of metal-sheathed hoppers 7, the dividing-ridges 8 of which run fore and aft and athwartship, and this structure is supported from the bottom of the boat on strongly-braced frames 9, running fore and aft in such a manner as to leave passage-ways 10 from end to end of the boat under the discharge-apertures 11 of the hoppers. The discharge-apertures 11 of the hoppers are each provided with a door or valve 12, which is a segment of a cylinder, and this segment is provided with a frame, so that it may be pivotally mounted at the center of its arc in bearings 13, the axis of movement being athwartship and located fore and aft of the aperture, so as to leave a clear way. At one side the mounting-frame of the door is provided with a handle 14, extending beyond the pivotal axis, by which handle the segmental door 12 may be opened or closed.

Along each passage-way 10 track-rails 16 are laid, on which may run ore-cars of a standard type or low-set carriages 17, designed to receive ordinary hoisting-tubs 18, and at one or each end of the barge a hatchway 15 gives communication from above with the under-deck passage-ways 10, through which hatchway the cars or tubs 18 may be hoisted and discharged outboard.

I have illustrated the adaptation of the system to a barge framed of timber; but I do not desire to be confined to the particular manner of constructing and framing the vessel, nor exclusively to the use of cars and tubs, as shown in the drawings, but claim the application of a cargo-deck divided into a series of rectangular hoppers the outlets of which are closable with doors and discharge into sub-deck galleries in which a conveying means may be provided communicating with hatchways for outboard discharge.

I am aware that prior to my invention barges have been used having beneath the cargo-deck a space wherein cars could be run to facilitate the work of unloading; but in all

cases that I am aware of no effort has been made to control the discharge, as I have done. The boards of the deck have been merely removable and the cargo has required to be
5 shoveled down into the cars, a method both laborious and incomplete.

The formation of the ore-carrying deck claimed in this application not only serves the purpose for which it was introduced, but forming as it does an integral part of the hull construction introduces a particularly strong element into the design.
10

Having now particularly described my invention, what I claim as new, and desire to be
15 protected in by Letters Patent, is—

1. An ore-carrying barge having a cargo-space 4, hoppers 7 in the deck thereof, fore-and-aft braced frames 9 for supporting the hoppers, said frames 9 being so arranged as
20 to leave passage-ways 10 running the length of the barge, said hoppers 7 having discharge-apertures 11 discharging into said passage-ways, cylindrical segmental doors 12 closing the hopper discharge-apertures, each of said
25 doors being pivotally mounted at the center of its arc, bearings 13 wherein said doors are mounted, a handle 14 connected with said doors by means of which said doors may be operated in the direction of their arc, a hatchway 15,
30 rails 16 located in the passage-ways and running the full length of the barge, cars or tubs 18 running upon said rails said hoppers being

V-shaped in cross-section and having their discharge-apertures 11 in the side wall, the cylindrical segmental doors lying approximately
35 in the plane of said side to close said discharge-apertures, all being arranged substantially as shown and described.

2. An ore-carrying barge having a cargo-space 4 and a deck, hoppers 7 located within
40 said barge, fore-and-aft braced frames 9 for supporting said hoppers, said braced frames 9 being so arranged as to leave longitudinal passage-ways 10 beneath said hoppers, said hoppers having discharge-apertures 11, a cy-
45 lindrical segmental door for closing said apertures, a spider-frame for supporting each of said doors including a U-shaped rod member having its ends bent at right angles to form shaft portions, bearings 13 for said shaft portions, one of said shaft portions being extended and terminating in an angle projection forming a handle 14 for operating said doors
50 12, a hatchway 15, rails 16 located in said passage-ways, cars or tubs 18 for running on said
55 rails, all being arranged substantially as shown and for the purposes described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

THOMAS KIDDIE.

Witnesses:

W. J. WATSON,
ROBT. ALLAN.