

No. 749,860.

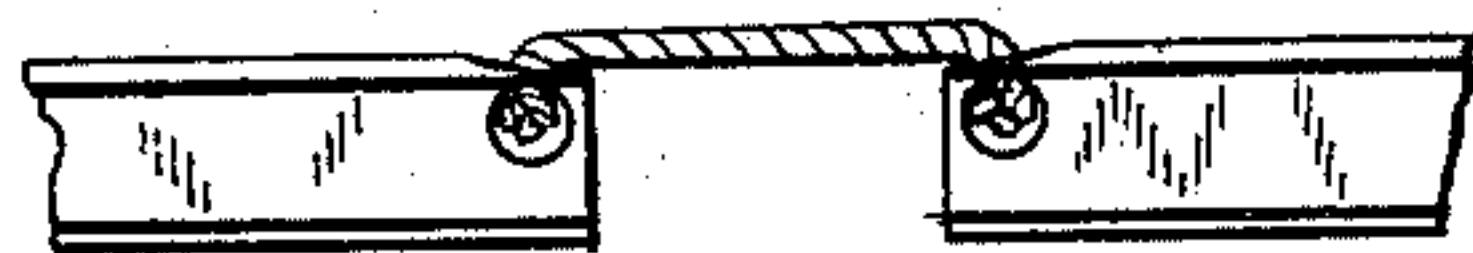
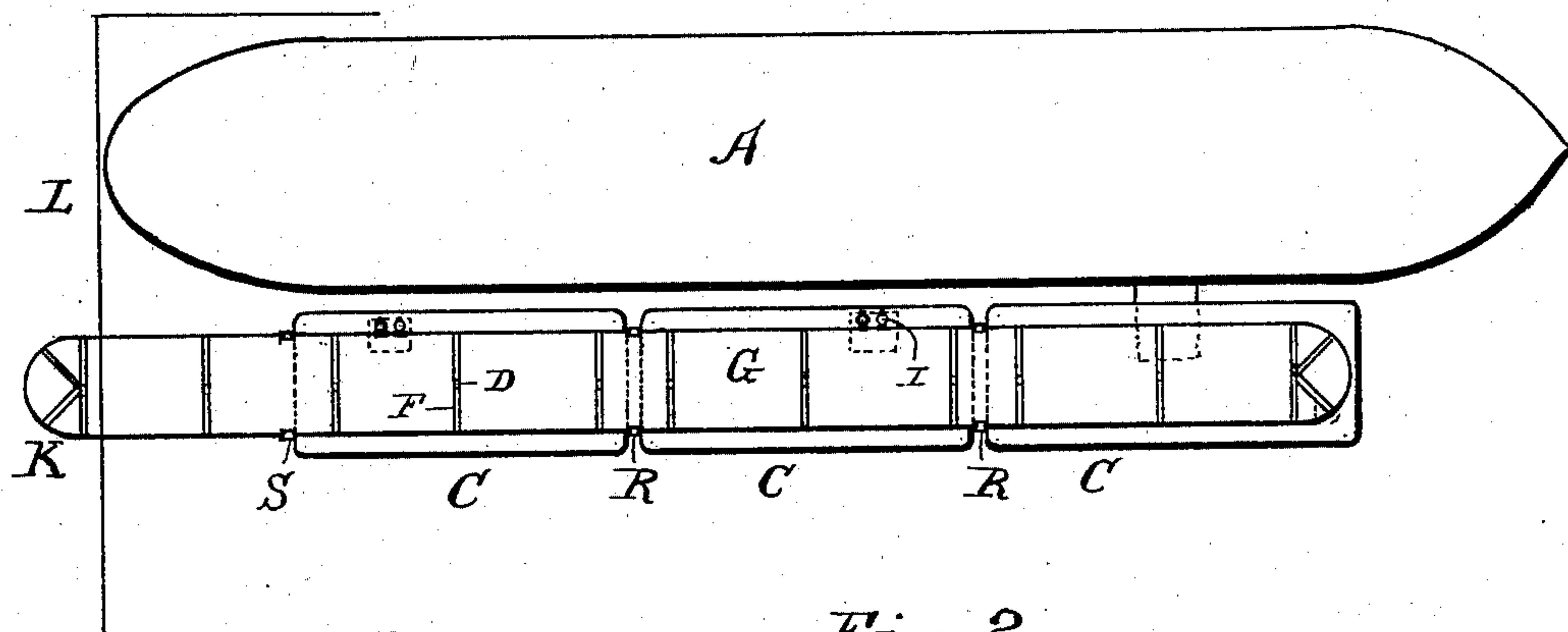
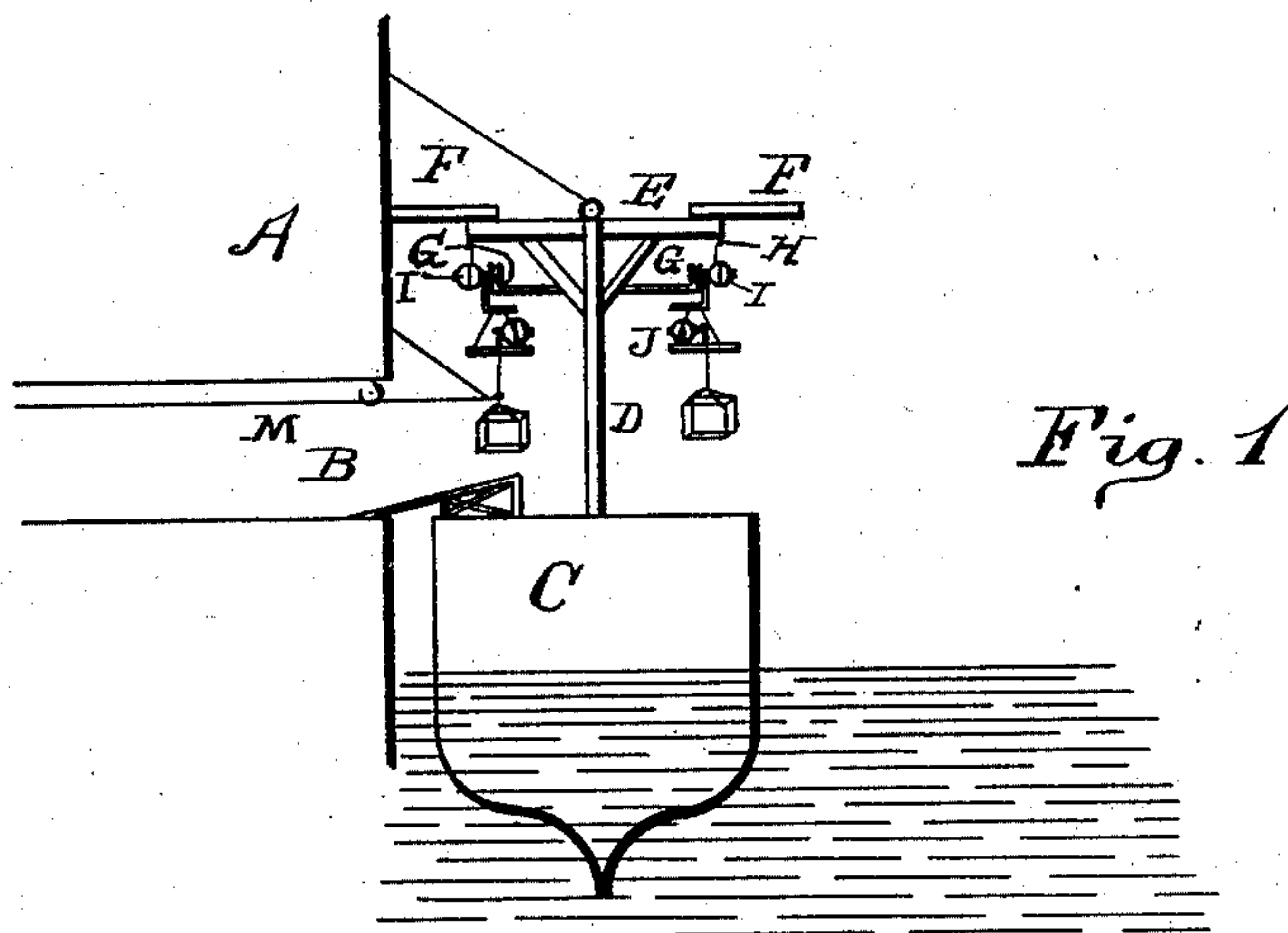
PATENTED JAN. 19, 1904.

H. M<sup>o</sup>L. HARDING.  
MEANS FOR LOADING OR UNLOADING VESSELS.

APPLICATION FILED JAN. 16, 1902.

NO MODEL.

3 SHEETS—SHEET 1.



Witnesses  
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Frederick B. Maerke

Inventor  
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By his Attorneys  
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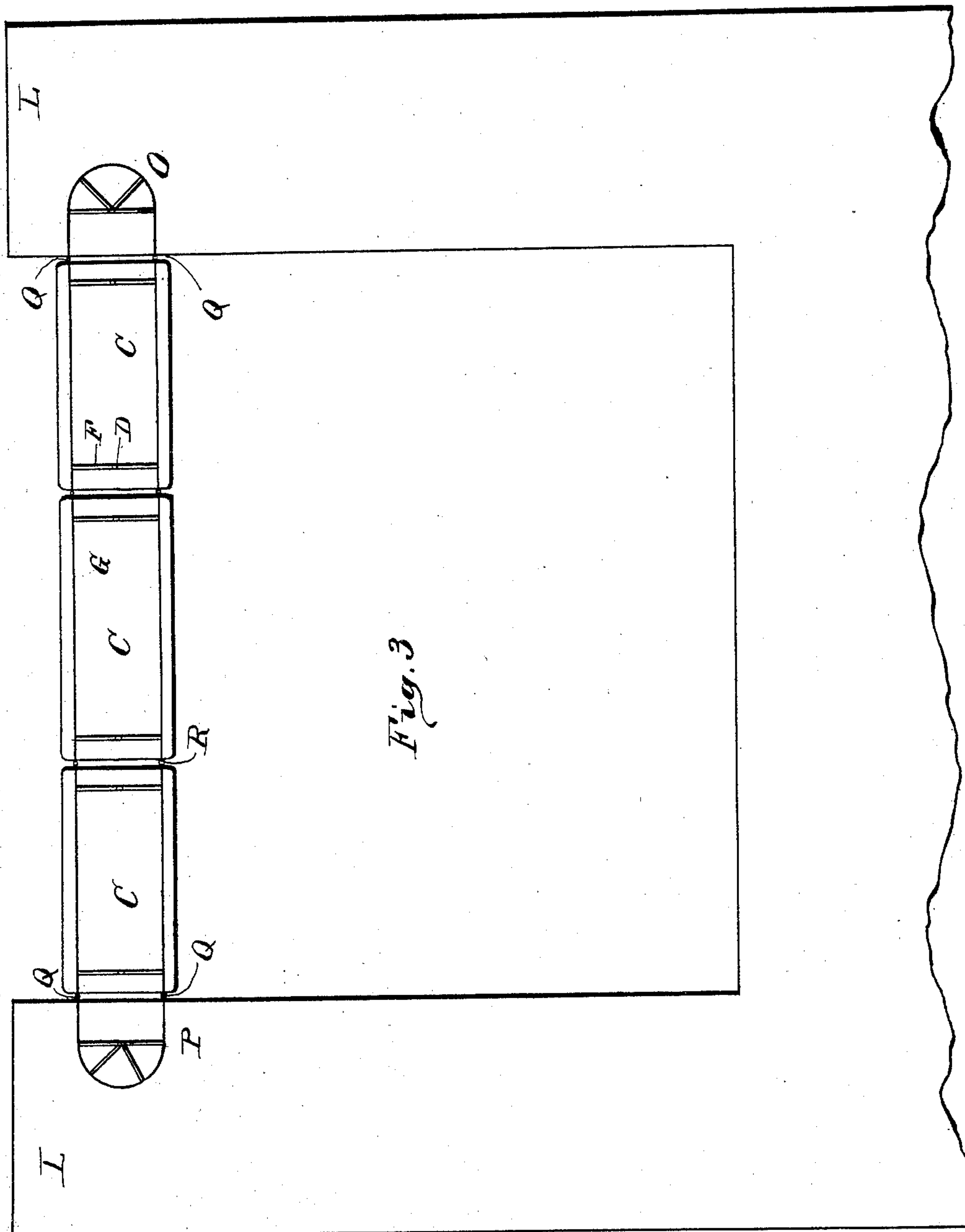
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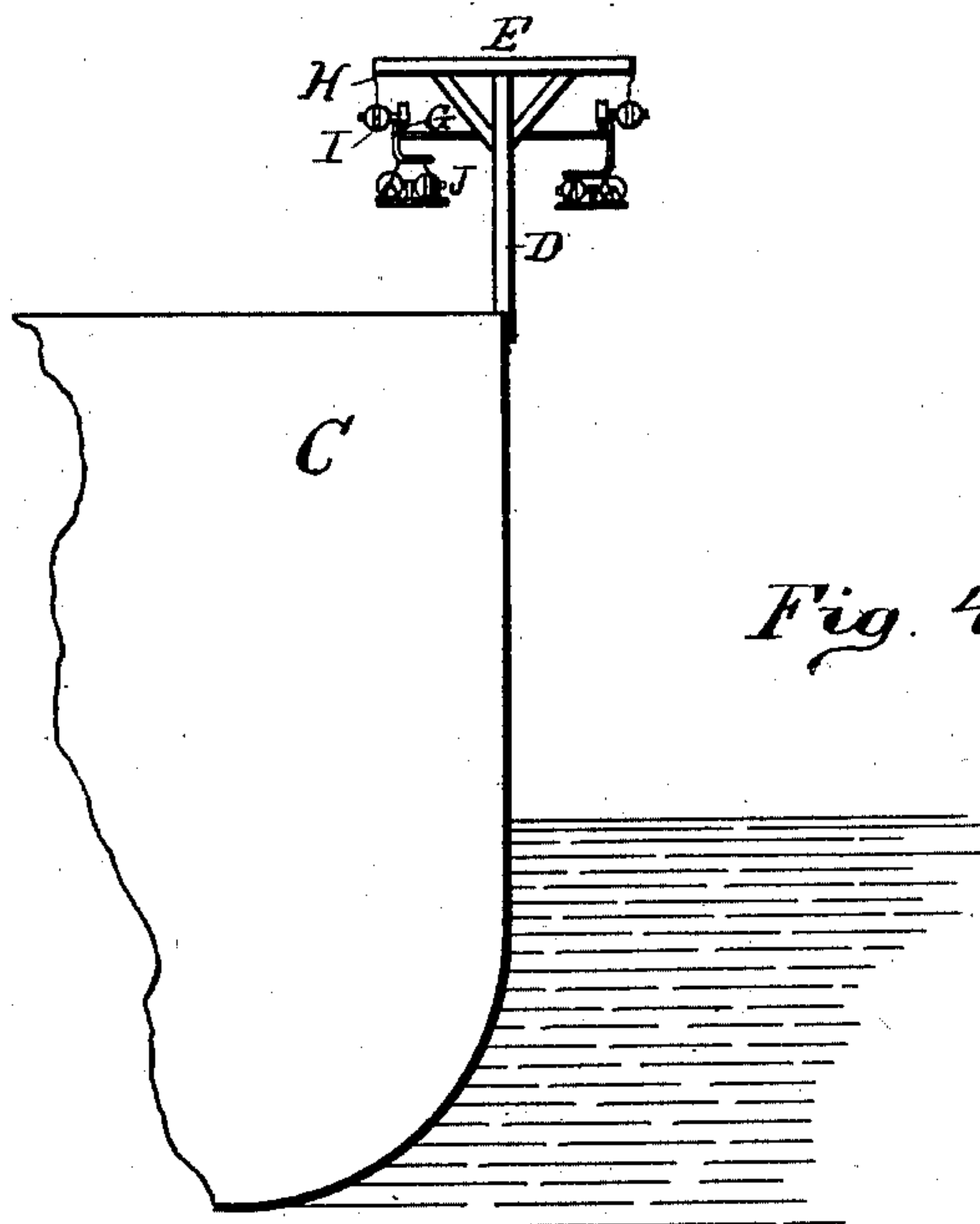
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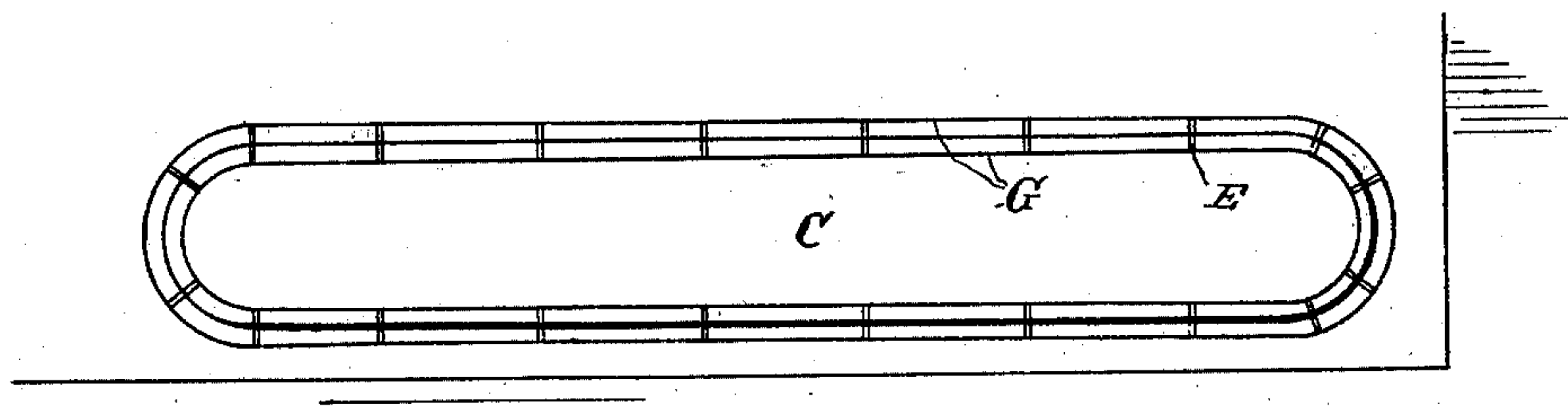
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3 SHEETS—SHEET 3.



*Fig. 4.*



*Fig. 5*

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# UNITED STATES PATENT OFFICE.

HENRY McL. HARDING, OF NEW YORK, N. Y.

## MEANS FOR LOADING OR UNLOADING VESSELS.

SPECIFICATION forming part of Letters Patent No. 749,860, dated January 19, 1904.

Application filed January 16, 1902. Serial No. 89,933. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY McL. HARDING, a citizen of the United States, and a resident of the city, county, and State of New York, have invented certain new and useful Improvements in Means for Loading or Unloading Vessels, of which the following is a specification.

The object of my invention is to provide means for handling freight from wharves and vessels.

In the drawings forming part of this specification, Figure 1 is a diagrammatic view of one form of my invention. Figs. 2 and 3 are plans showing uses of my invention. Fig. 4 is a view of my invention applied to floats such as are used to carry railway-cars. Fig. 5 is a plan view of the same. Fig. 6 is a view showing one form of flexible connection between the sections of track.

The methods of handling freight now in vogue where it is transferred from barges to steamers or docks or from steamers to barges or docks necessitate handling it several times and are slow, expensive, and difficult to operate.

My invention consists in having a barge or series of barges on which is supported an overhead electric railway with electric carriers running thereon. These barges may be brought alongside the steamer or the dock or placed between two docks, and from them the material may be transferred with a single handling to any point.

Figure 1 is a view showing in section the barges alongside of the steamer (indicated at A) and the loading-hatch, (shown at B.) C is the barge. On the barge are uprights D, having a cross-arm E, from which cross-arm extend suitable shores F, whose object is to prevent the barge getting too close to the side of the steamer. Supported on the uprights is an overhead railway G. On the cross-piece E is a conductor H. Running on the overhead railway is an electric motor I. As shown in this figure, the electric motor carries an electric hoist J. As shown in Fig. 2, this overhead electric railway makes a complete circuit, one branch being on each side of the barge, and, as indicated in that figure,

a section of overhead railway K is placed on the dock, the dock being represented by L. The system receives its current from a source of supply not indicated. These overhead electric-railway motors may be controlled in any suitable manner and may be of any suitable kind or description.

The hoisting device may or may not be used, the ordinary whip being substituted therefor, as will be readily observed.

The operation of this system is as follows: Barges loaded with merchandise or with cars of freight being placed alongside of the steamer, the bales, boxes, or the like are hoisted by the carrier. The electric carrier being set in operation will carry the load to the proper hatch, where it is transferred to the steamer. The carrier having deposited its load proceeds on around to the other side of the track and in its turn takes another load. As many of these carriers may be used as may be desirable.

It will thus be seen that in handling freight from barges into steamers or from steamers into barges but one handling of the material is necessary.

In Fig. 1 I have shown a small branch gravity-line M, which is supported on the vessel in any suitable manner, and the package-sling provided with a pulley may be transferred to this gravity-line and run into place and lowered into the hold.

In Fig. 3 I have shown my device in use for transferring freight from one pier to another. In this case I prefer to have two sections of the overhead railway on the piers at the points O and P, as indicated, the apparatus being placed between the piers and connections made between the section of road on the pier and that on the barges at the points indicated at Q. The operation of the device in this case is the same as that in the other. The connections between the sections of the overhead railway carried by the barges is any suitable flexible connection, (indicated at R.) This flexible connection may be of any desired form. I have shown one form in Fig. 6 of the drawings, which consists of a short piece of wire rope secured to the ends of adjoining sections of the track. The connections between the



sections of railway on the dock and that on the barges is also flexible, as indicated at S.

Figs. 4 and 5 show my invention applied to such barges as are usually used to carry railway-cars, and the support in this instance is placed on the gunwales of the barge, running completely around the same. It will be observed that with this construction the freight can be loaded from the cars into the steamer direct or from the steamer into the cars.

The advantages of the system above described are with this explanation sufficiently obvious not to necessitate further elaborate description. I do not limit my invention in any way to any particular type or style of railway or carrier or hoisting device, as many of these devices are in use in other connections which may be advantageously used here.

This system of transporting freight may be and it is my intention to use it in connection with telpherage systems placed on the docks themselves.

In this system the operator travels with the motor or controls it in the same manner as any electric motor is controlled. It will be understood, however, that it may be controlled by automatic means or from the floor of the dock or from any suitable or desirable point.

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

1. Means for loading, unloading or transferring freight and the like consisting of a float or barge, an overhead electric railway mounted thereon and inclosing substantially the area of the barge, and electrically-operated carriers moving on said railway, substantially as described.

2. Means for loading, unloading or transferring freight and the like consisting of a series of barges or floats, a section of overhead electric railway on each barge or float, flexible connections between said sections, and electrically-operated carriers traveling on said railway, substantially as described.

3. Means for loading, unloading or transferring freight and the like consisting of a float or barge carrying a section of overhead electric railway, a section of overhead electric railway on the dock, flexible connections between the sections of the barges and between the section on the barges and the dock, substantially as described.

In testimony whereof I have hereunto set my hand in the city, county, and State of New York this 2d day of January, 1902.

HENRY McL. HARDING

Witnesses:

LOUIS N. WHEALTON,  
HENRY BOSSONG.