

No. 738,190.

PATENTED SEPT. 8, 1903.

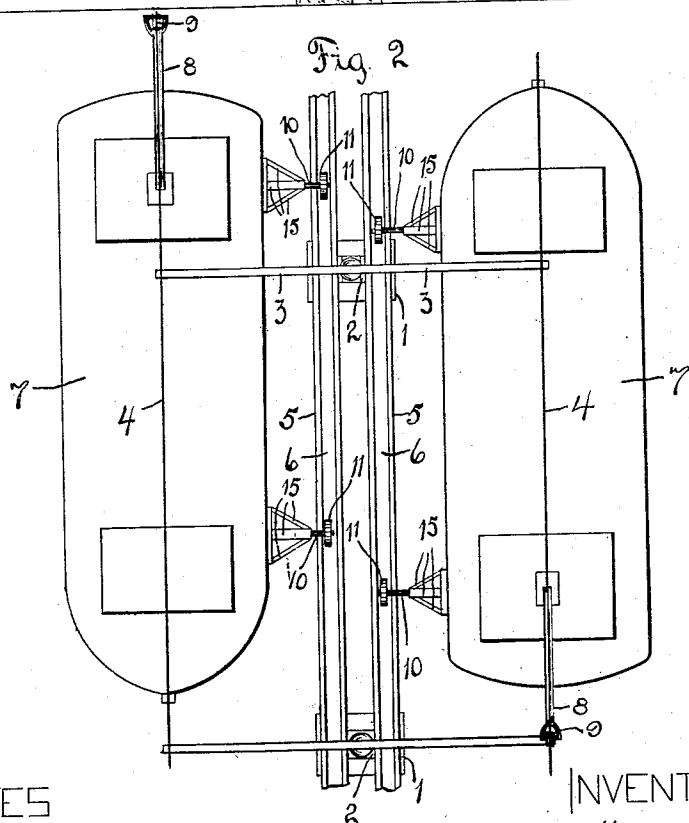
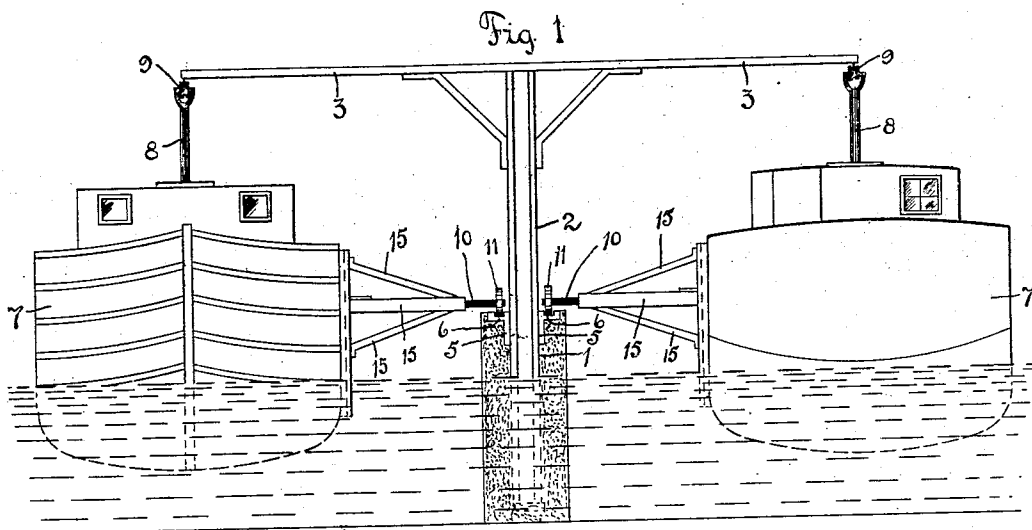
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MEANS FOR GUIDING BOATS PROPELLED BY ELECTRIC OR OTHER POWER.

APPLICATION FILED FEB. 2, 1903.

NO MODEL.

2 SHEETS—SHEET 1.



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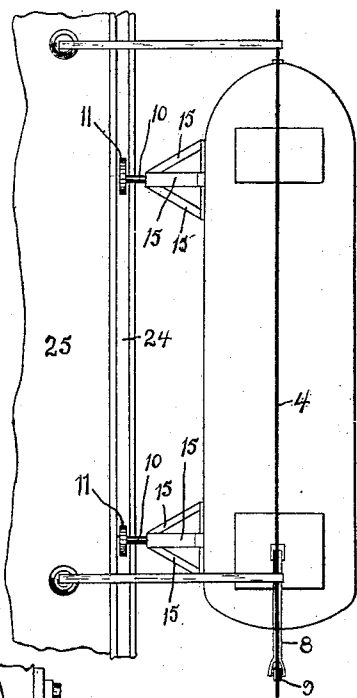


Fig. 3

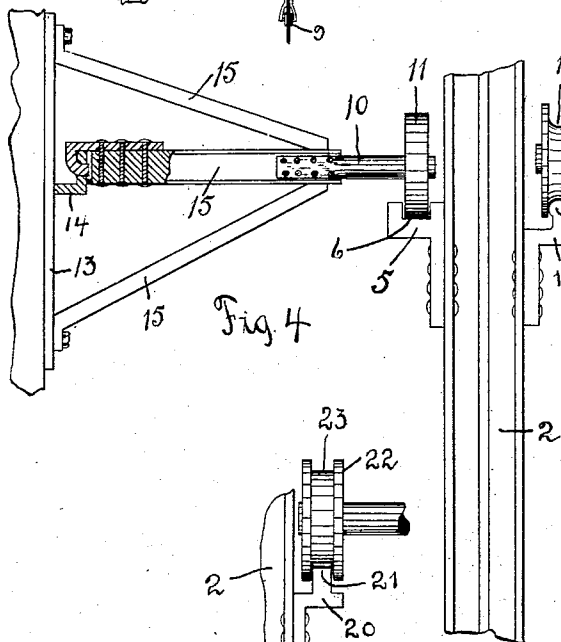
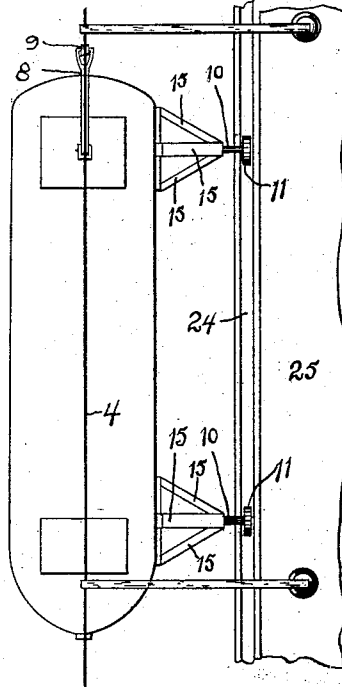


Fig. 4

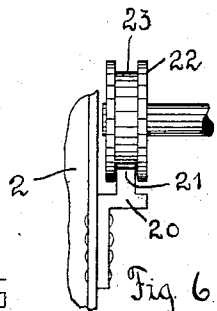


Fig. 6

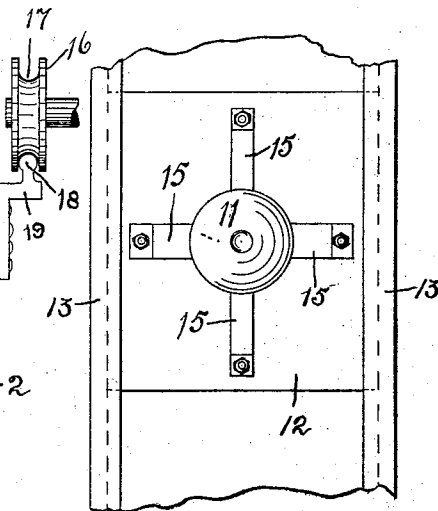


Fig. 5

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# UNITED STATES PATENT OFFICE.

HENRY HEALY, OF BUFFALO, NEW YORK.

MEANS FOR GUIDING BOATS PROPELLED BY ELECTRIC OR OTHER POWER.

SPECIFICATION forming part of Letters Patent No. 738,190, dated September 8, 1903.

Application filed February 2, 1903. Serial No. 141,622. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY HEALY, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements in Means for Guiding Boats Propelled by Electric or other Power; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in means for guiding boats propelled by electric or other power, and more particularly for the guidance of canal-boats propelled by the trolley system. Under such system it is necessary for the boat to travel as nearly as possible in the line of the trolley-wire in order to insure a constant operative contact of the trolley with the wire.

The object of my invention is to provide improved means for effecting such purpose; and to that end it consists in providing the canal or waterway with continuous guide-rails arranged either centrally or upon its opposite banks and the boat with arms secured to its side and provided at their outer ends with wheels which engage with and travel upon the guide-rails.

My invention further consists of certain details of construction, all of which will be fully hereinafter described and claimed.

In the drawings, Figure 1 is an end elevation showing a waterway, a trolley system, and two boats pointing in opposite directions and equipped with my improved device for guiding their travel. Fig. 2 is a top plan view of Fig. 1 on a smaller scale. Fig. 3 is a top plan view of a modified arrangement. Fig. 4 is a detail view, in side elevation, of one of the arms, partly in section, and its wheel riding in the guide-rail. Fig. 5 is an end elevation of Fig. 4, and Fig. 6 is a modified form of wheel and guide-rail.

Referring to the drawings, it will be seen that Figs. 1 and 2 illustrate my preferred arrangement of parts.

Along the center of the bed of the canal or waterway I construct a series of concrete abutments 1, in which are embedded the trolley-posts 2, having at their upper ends the cross-arms 3, carrying the trolley-wires 4 4. Attached to the posts 2, upon each side thereof, and resting upon and embedded in the abutments 1 are the two guide-rails 5 5, having in their treads the channels 6 6.

7 7 are the two boats, with their bows pointing in opposite directions. Each boat is provided with a trolley-pole 8, with its wheel or trolley 9 in engagement with the wires 4 4. At two or more points, preferably near each end of the left-hand side of the boat, are secured the arms 10 10, carrying the wheels 11 11, adapted to engage with and travel within the channels 6 6 of the guide-rails 5 5. In order that the wheels 11 may have operative engagement with the channels in the guide-rails, it will be necessary to have them adjustably secured to the boat, so that they may be raised or lowered as occasion demands. This I accomplish as follows: 12 (see Fig. 5) is a metal plate adjustable vertically between the cleats 13 13, secured to the side of the boat. Centrally secured to this plate 12 is the angle-plate 14, (see Fig. 4,) to which is hinged the inner end of the arm 10, so that it may be swung up out of the way when not in use. It is removably secured in its horizontal operative position by the four braces 15, which are removably bolted to the plate 12 and arm 10.

A modified form of wheel 16 is shown in Fig. 4, which has a rounded groove 17, adapted to engage with and travel upon the rounded tread 18 of the guide-rail 19. Still another modification is shown in Fig. 6, in which the rail 20 has a square tread 21. Operating with this form of rail is the wheel 22, with the square groove 23.

Fig. 3 illustrates a modified application of my invention, in which the guide-rails 24 24 are laid along the opposite banks 25 25 of the canal or waterway instead of along the center of the waterway, as shown in Figs. 1 and 2.

In operation the arms 10 10 are first adjusted as to height, so that the wheels 11 11 have holding engagement with the guide-rails 5 6. As the boats progress under power in either direction the arms 10 10 thus hold and

constantly maintain them in the proper line of travel, so that the trolleys are thus enabled to preserve their operative contact with the wires.

5 It is well understood that any mechanical equivalent to the wheel may be substituted therefor as an antifriction element without departing from the spirit of my invention.

I claim—

- 10 1. In an electric system of canal propulsion, the combination with a waterway and a boat, of a series of trolley-poles located along the line of the waterway for supporting a feed-wire, guide-rails arranged upon opposite sides  
15 of the trolley-poles beneath the feed-wire, an arm secured to the side of the boat, means carried by said arm for engagement and travel upon the guide-rail, and electrical communication between the boat and the feed-wire.
- 20 2. In a system of canal propulsion, the combination with a waterway and a boat, a guide-rail, a plate slidably and adjustably mounted upon one side of the boat, said plate having an offset projection, an arm hingedly con-  
25 nected to said projection, and means carried

by the free end of the arm for engagement and travel upon the guide-rail.

3. In an electric system of canal propulsion, the combination with a waterway and a boat, a series of abutments arranged along the path  
30 of the waterway, of a trolley-pole mounted upon each abutment, a guide-rail arranged upon each side of the trolley-poles and connecting the abutments in series, an arm secured to each trolley-pole and extending upon  
35 either side of the said abutments, said arms supporting feed-wires, an arm adjustably connected to one side of the boat, and means at the free end of said latter arm for engagement  
40 with and travel upon the guide-rails, and electrical communication between the boat and the feed-wires.

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

HENRY HEALY.

Witnesses:

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