

July 1, 1924.

W. NORTHRUP

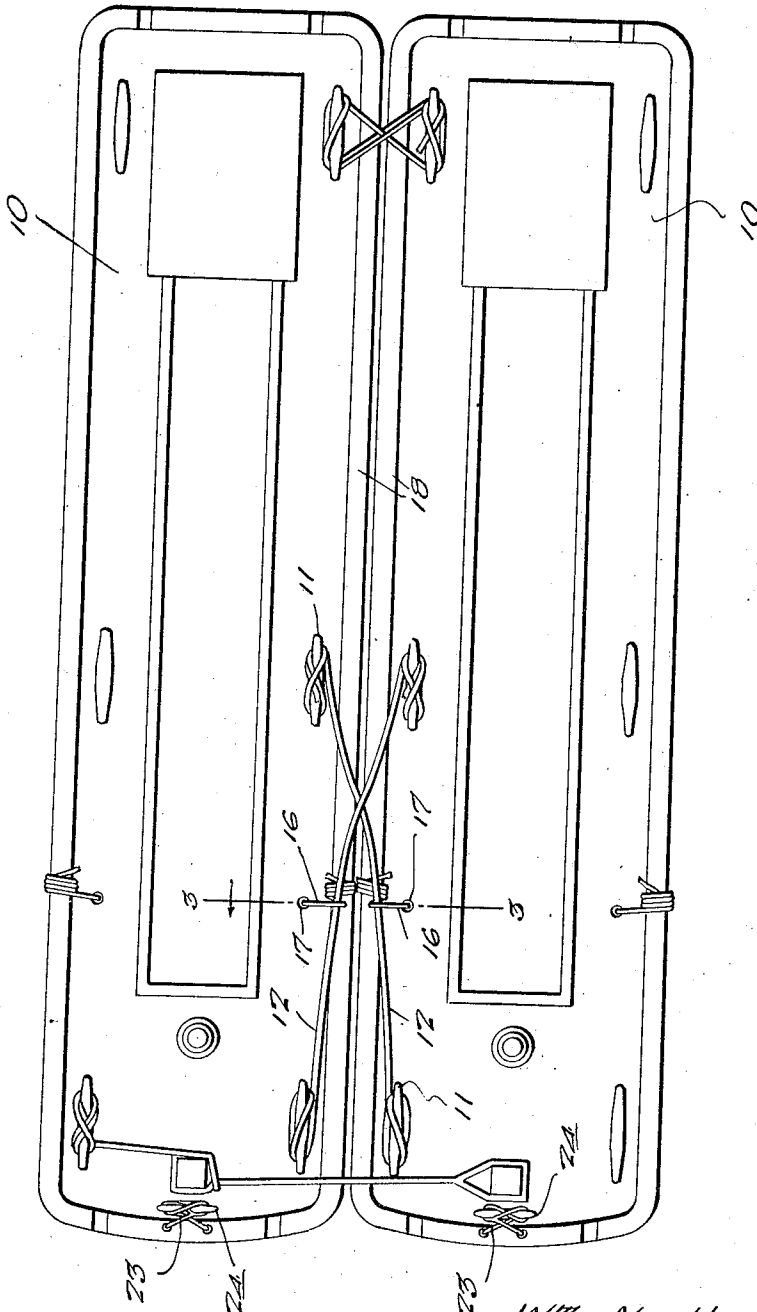
1,499,686

TOWLINE TAKE-UP

Filed Aug. 15, 1923

3 Sheets-Sheet 1

Fig. 1.



Paul W. Hunt.

WITNESS:

Wm. Northrup
INVENTOR.
BY Victor J. Evans
ATTORNEY

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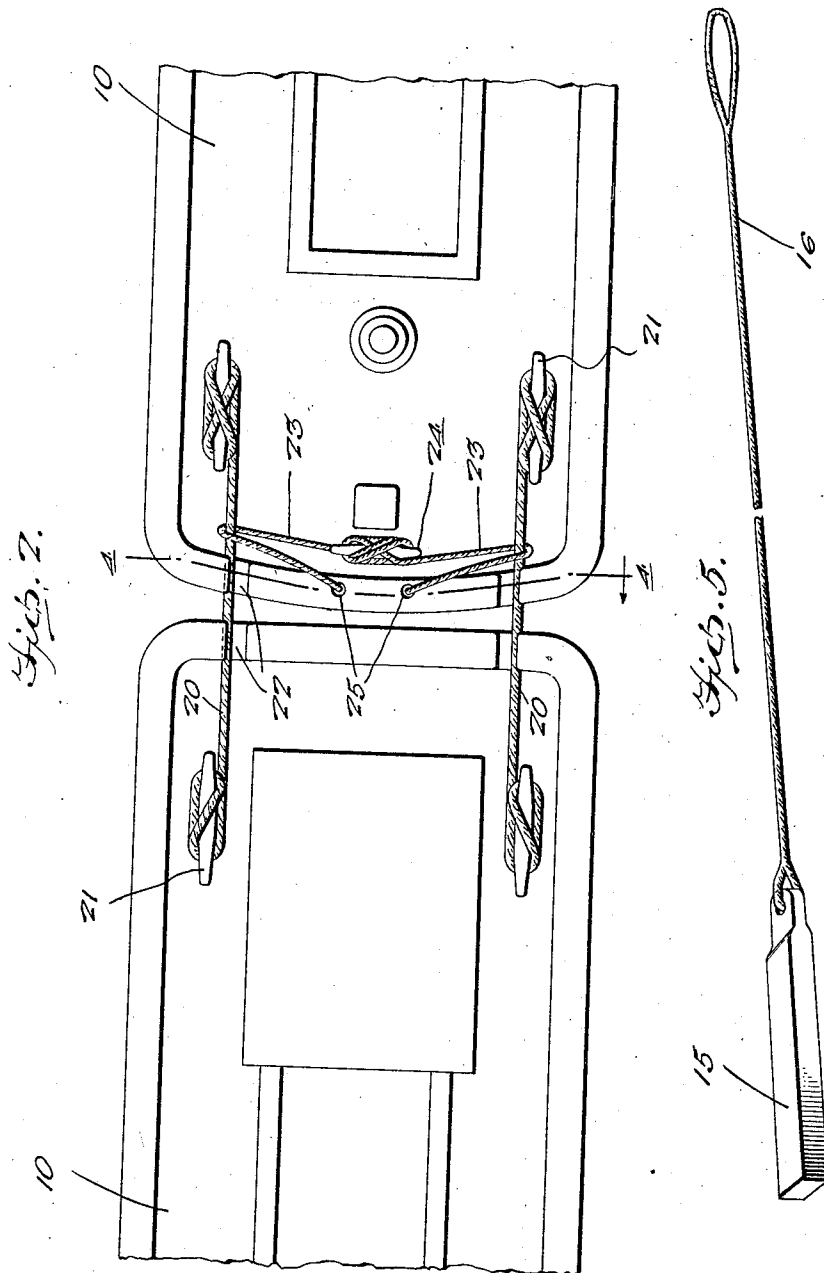
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3 Sheets-Sheet 2



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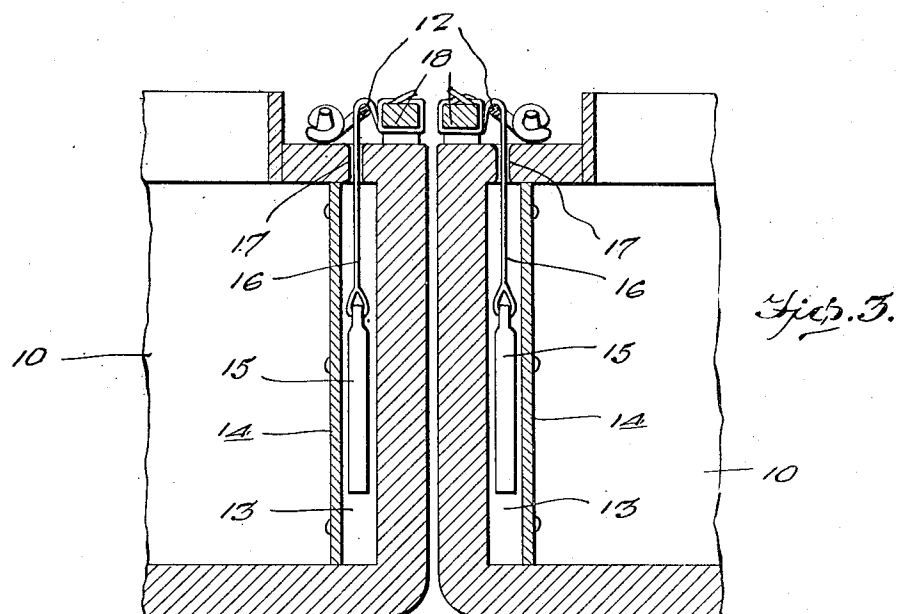
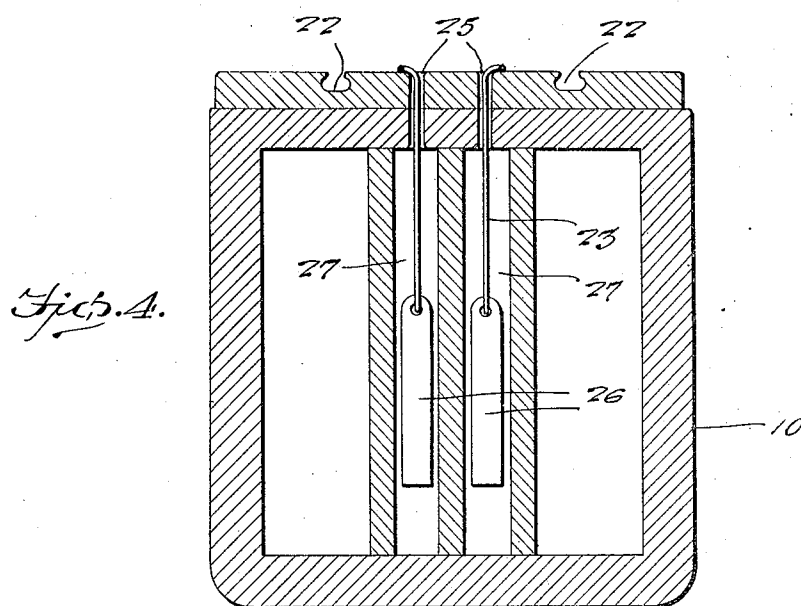
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TOWLINE TAKE-UP

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3 Sheets-Sheet 3



Paul M. Hunt

WITNESS:

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Patented July 1, 1924.

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UNITED STATES PATENT OFFICE.

WILLIAM NORTHRUP, OF MIDDLEPORT, NEW YORK.

TOWLINE TAKE-UP.

Application filed August 15, 1923. Serial No. 657,637.

To all whom it may concern:

Be it known that I, WILLIAM NORTHRUP, a citizen of the United States, residing at Middleport, in the county of Niagara and State of New York, have invented new and useful Improvements in Towline Take-Ups, of which the following is a specification.

This invention contemplates the provision of means for taking up the slack which might occur in tow lines utilized to lash barges together, either side by side or in end to end relation, thus preventing the tow lines from hanging between the barges which would of course result in surging.

The nature and advantages of the invention will be better understood when the following detailed description is read in connection with the accompanying drawings, the invention residing in the construction, combination and arrangement of parts as claimed.

In the drawings forming part of this application, like numerals of reference indicate similar parts in the several views, and wherein:

Figure 1 is a plan view showing the barges lashed side by side, and the manner in which the tow lines are held from sagging between said barges.

Figure 2 is a fragmentary plan view showing how the barges are lashed end to end, and the manner of using the invention in this connection.

Figure 3 is a sectional view taken on the line 3—3 of Figure 1.

Figure 4 is a sectional view taken on the line 4—4 of Figure 2.

Figure 5 is a detail view of the take up cable and weight.

Referring to the drawings in detail, and particularly to Figures 1 and 3, 10 represents the barges which are lashed side by side, for this purpose the barges are provided with the usual cleats 11 around which tow lines are passed, the tow lines being indicated at 12. The tow lines extend from one barge to the other as shown. Adjacent one end of the pair of barges the tow line is arranged transversely thereof, while adjacent the opposite end the tow lines extend diagonally being crossed as shown. In accordance with the present invention, each barge is provided with a compartment 13 defined by the use of a partition 14, and this compartment receives a weight 15 suspended from a cable 16, the cable being passed

through a restricted opening 17 in the top of the barge as clearly illustrated in Figures 1 and 3. There is one of these cables for each barge, the free end of the cable being wrapped around the side rail 18 and suitably secured thereto, the cable being passed over the adjacent tow line which connects the barges. The arrangement of these cables with respect to the tow lines is such that any slack which might occur in the tow line is taken up by the cables incident to the falling of the weight, the cables moving the tow line laterally under such circumstances, and thus preventing the tow lines from sagging between the barges which of course would result in surging of the barges. The manner in which the cables are passed over the tow lines for this purpose is clearly illustrated in the cross sectional view illustrated in Figure 3. The cable 16 with its weight is shown in detail in Figure 5.

In Figures 2 and 4 I have shown this application of the invention, that is to say, the manner in which the take up cable and weight is used when the barges are lashed end to end. The tow lines 20 are arranged in spaced parallel relation, being wrapped about cleats 21 secured to the barges, the tow lines being received by grooves 22 formed in the adjacent ends of the barges. The take up cable is indicated at 23, and has its intermediate portion wrapped around a cleat 24 secured to one of the barges as shown in Figures 2, the sides or the strands of this cable being subsequently passed under and over the tow line, after which the strands converge toward the longitudinal center of the particular barge and pass downwardly through the restricted openings 25 in the end thereof. Weights 26 are suspended from the ends of this take up cable and are received by compartments 27 as shown in Figure 4. The invention is used in this connection for the same purpose as described in connection with Figure 1, that is it prevents slack in the tow lines and subsequent surging of the barges.

While it is believed that from the foregoing description, the nature and advantages of the invention will be readily apparent, I desire to have it understood that I do not limit myself to what is herein shown and described and that such changes may be resorted to when desired as fall within the scope of what is claimed.

Having thus described the invention, I line terminally connected to the respective 15
claim:

1. The combination with a plurality of barges lashed together by tow lines, of a cables being terminally connected with their respective barges and having a portion of
5 take up cable secured to each of said barges the cable passed over the adjacent tow line, and subsequently passed downwardly 20
and having a portion passed downwardly through an opening therein, said cable being passed over the adjacent tow line, and having a compartment to receive the cable,
and a weight suspended from said cable, where- and a weight arranged in the compartment
10 by the latter is used to take up slack in the and suspended in the cable to take up the
tow line for the purpose specified. slack in said lines for the purpose specified. 25

2. In combination with a plurality of barges lashed side by side by tow lines, the lines being arranged diagonally with each

In testimony whereof I affix my signature.

WILLIAM NORTHRUP.