W. C. SANSOM.

CONNECTOR FOR BARGES.

APPLICATION FILED FEB. 28, 1916.

1,231,067. Patented June 26, 1917.

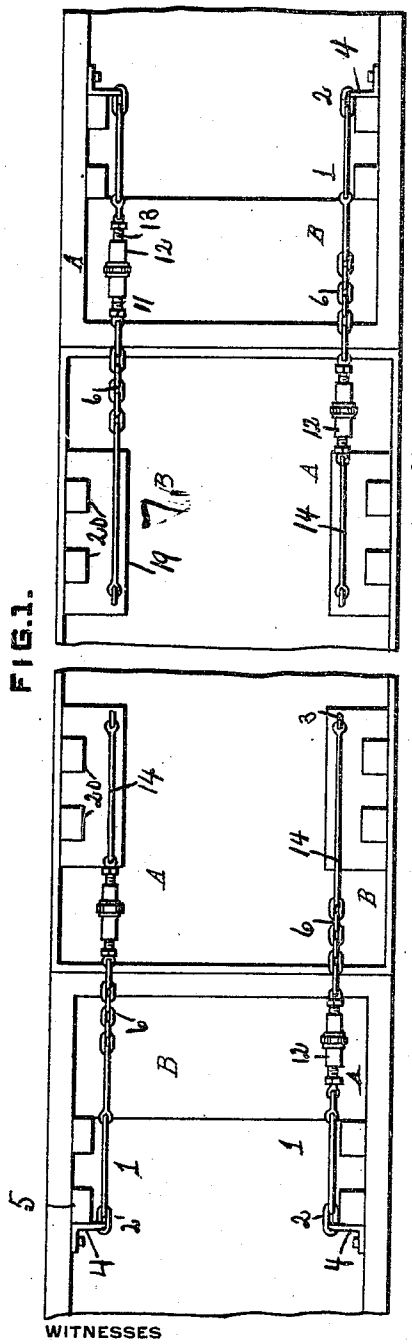


FIG. 1.

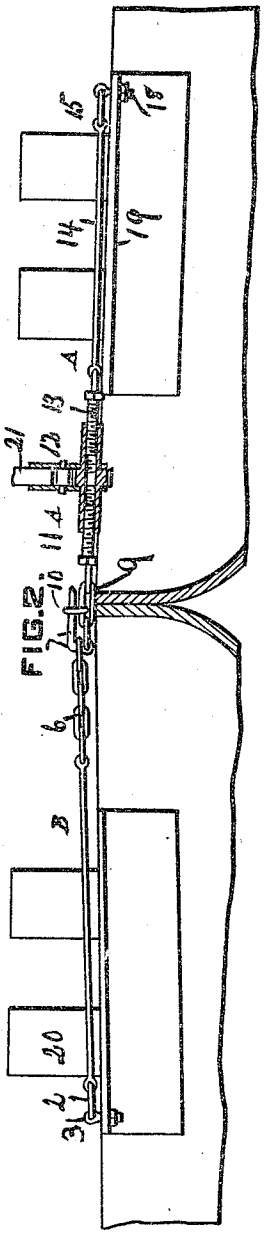


FIG. 2.

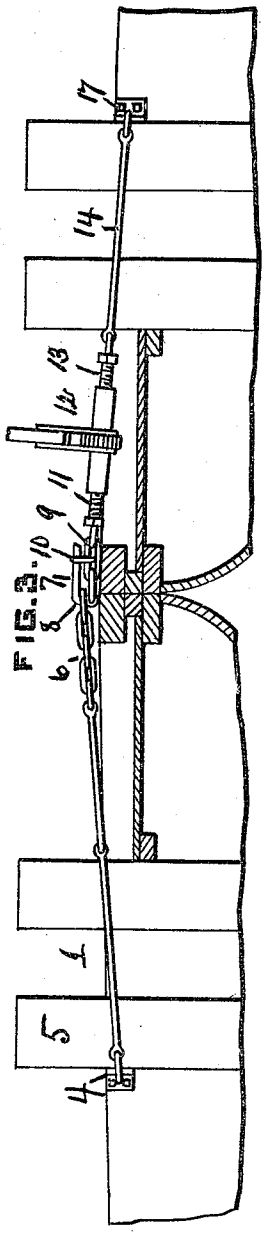


FIG. 3.

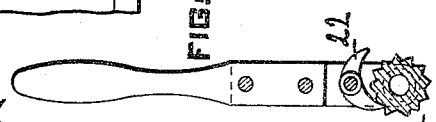


FIG. 4.

WITNESSES

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UNITED STATES PATENT OFFICE.

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CONNECTOR FOR BARGES.

1,231,067. Specification of Letters Patent. **Patented June 26, 1917.**

Application filed February 28, 1916. Serial No. 80,918.

To all whom it may concern:

Be it known that I, WALTER C. SANSOM, residing at Pittsburgh, in the county of Allegheny and State of Pennsylvania, a citizen of the United States, have invented or discovered certain new and useful Improvements in Connectors for Barges, of which improvements the following is a specification.

In making up tows for the transportation of coal down rivers, the loaded barges are collected from different mines along the river and brought two, three or more at a time to a harbor where the large tow is made up. Where there is considerable current, the barges are arranged ahead of the tow boat, so that it may control the movements of the tow. The barges, whether being collected to move them to the harbor, or being arranged in large tows for movement to final destination, are arranged end to end in two or more rows extending forward from the tow boat. It is necessary that so far as possible, the barges and the tow boat should be rigidly connected together in order that the tow boat may control the movements, and especially to hold the tow against the current and hence the connections between the barges forming a tow must be especially secure. Heretofore it has been the practice to connect the rear end of one barge to the front or bow of the next by chains wrapped around the snubbing posts in the stern and bow of the respective barges, and to tighten such chains by what is known as screw ratchets. The tow boats which collect the barges and move them to a harbor, are provided with chains and ratchets for forming the small tows, and when the latter are brought to a harbor, these chains and ratchets are removed and returned to the tow boat, so that when the large tows are made up, the barges are secured together by the chains and ratchets of the steamboat, which is to move the large tow. This practice entails very hard work and considerable time in moving the chains and ratchets from the tow boat out to different points along the tow and back again to the tow boat. And further, very hard work and considerable time are required in connecting barges after the chains and ratchets have been brought to the points of use.

The object of the invention described herein is to provide means consisting of complementary parts for connecting two barges end to end, one of the complementary parts being permanently attached to one end of the barge and the other part similarly secured at the opposite end. Suitable means are provided whereby the parts on one barge may be easily connected to its complementary part on an adjoining barge, and one of the parts is provided with means whereby the connection when formed may be placed under proper tension. The invention is hereinafter more fully described and claimed.

In the accompanying drawing forming a part of this specification, Figure 1 shows in plan portions of three barges connected end to end by my improved means; Fig. 2 is a sectional view on an enlarged scale of the adjoining ends of two steel barges having my improved connecting means applied thereto, and Fig. 3 is a similar view of two wooden barges showing the manner of attaching the connecting means thereto. Fig. 4 is a detail of the actuating handle.

My improved connector consists of two parts, one of said parts being formed of a steel bar or wire rope 1 having one end connected by a link 2, to an anchor, which may be secured to the barge adjacent to the snubbing posts in any suitable manner. As for example, if the barge is made of wood, the anchor is formed of an angle 4, having a hole in one arm, the other arm being bolted to the side of the barge in such manner that the arm having the eye will bear against the snubbing post 5, so that the latter will receive the strains transmitted to the connector. The free end of the bar or rope 1 is provided with a plurality of links 6, for engagement by a hook forming a member of the other part of the connector. While any suitable form of hook may be employed, it is preferred to use the construction shown, consisting of an arm 7 having an elbow 8 connected by a short link to a longer link 9. When forming a connection the arm 7 is passed through one of the links 6 and shifted against one of the sides of the link 9, where it is held by sliding a ring 10 mounted on the side of the link over the end of the arm. The link 9 passes through an eye on the end of a threaded stem 11 adapted to screw into one end of an internally threaded sleeve 12. The threads at the respective ends of the sleeve have opposite pitches, so that the stems 11 and 13 will be moved in opposite directions when the sleeve

is rotated. The outer end of the stem 13 is flexibly connected to one end of a steel bar or section of wire rope 14, which has its opposite end connected by a link 15 to an eye formed on the end of an arm of an angle 17 similar to the angle 4. In lieu of employing angle pieces to secure the connectors to the barges, it is preferred when the barges are constructed of steel, to employ screw eyes 3 having threaded stems 18, which are passed through the cast steel plate 19 carrying the snubbing posts 20, and held in position by nuts.

By reference to Fig. 1 it will be seen that the parts A of the connector are arranged at diagonally opposite corners of the barge and the parts B at the other corners, so that when the ends of two barges are brought together, the parts of the connector on one barge are in line with their complementary parts on the other barge, and it is only necessary to connect these two parts in the manner described, and then rotate the sleeve 12 in proper direction to draw the two barges firmly together.

The sleeve 12 may be rotated by any suitable means, but preferably by a lever 21 rotatably mounted on the sleeve and provided with a pawl 22 adapted to engage a ratchet wheel secured to the sleeve. It is preferred that a double pawl should be employed and the ratchet wheel so constructed that the sleeve can be rotated in either direction by the lever.

I claim herein as my invention:

1. A barge having in combination therewith a pair of complementary connecting elements located at each end of the barge, one element of each pair being provided with means for varying its length, like connecting elements being located at diagonally opposite corners of the barge.

2. A barge having in combination therewith a pair of complementary flexible connecting elements, located at each end of the barge, one element of each pair being provided with means for varying its length movably but permanently connected to each end of the barge, like connecting elements being located at diagonally opposite corners of the barge and means for detachably connecting the elements of one barge with complementary elements on an adjoining barge.

In testimony whereof, I have hereunto set my hand.

WALTER C. SANSOM.

Witness:

ALICE A. TRILL.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."