No. 871,007. PATENTED NOV. 12, 1907.

W. C. TODD.

MEANS FOR OPERATING OYSTER DREDGES.

APPLICATION FILED DEC. 8, 1906.

Fig. 1.

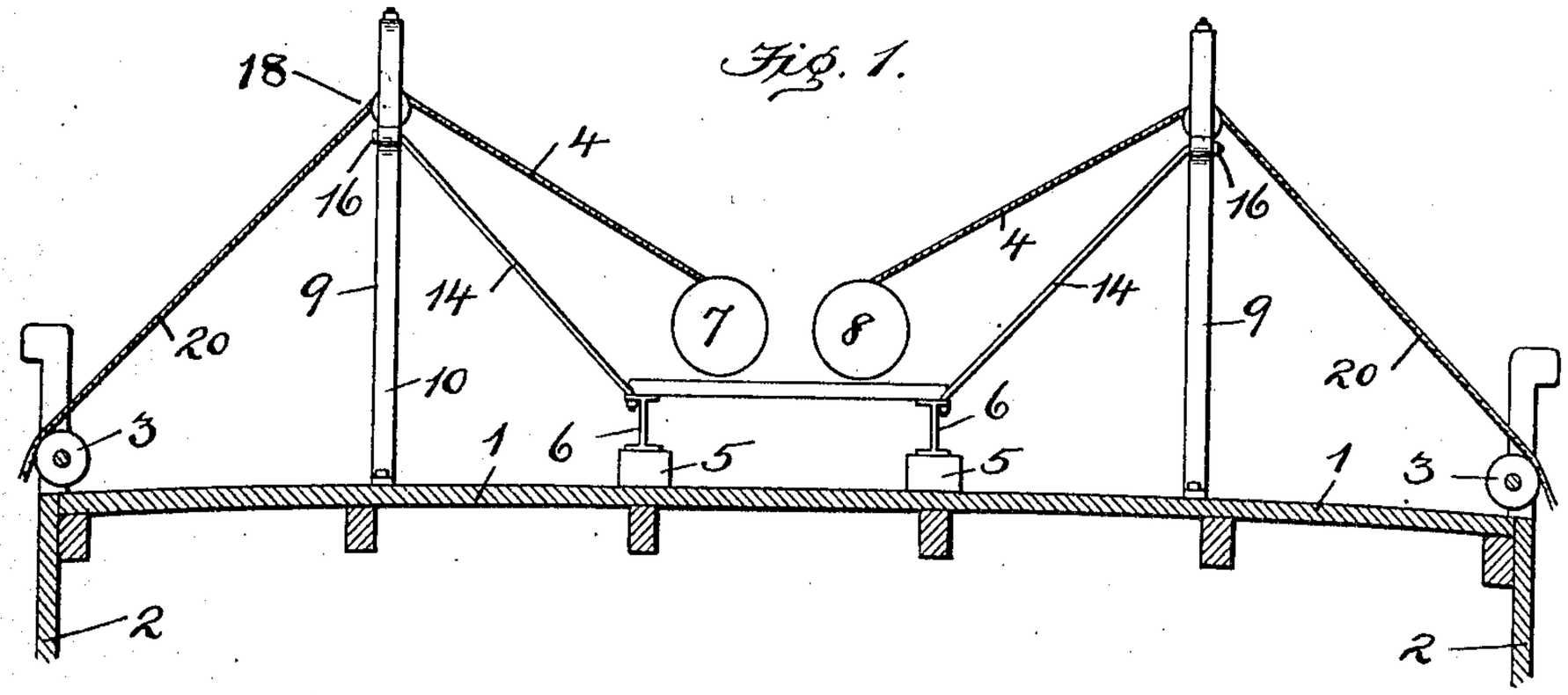

Fig. 2.

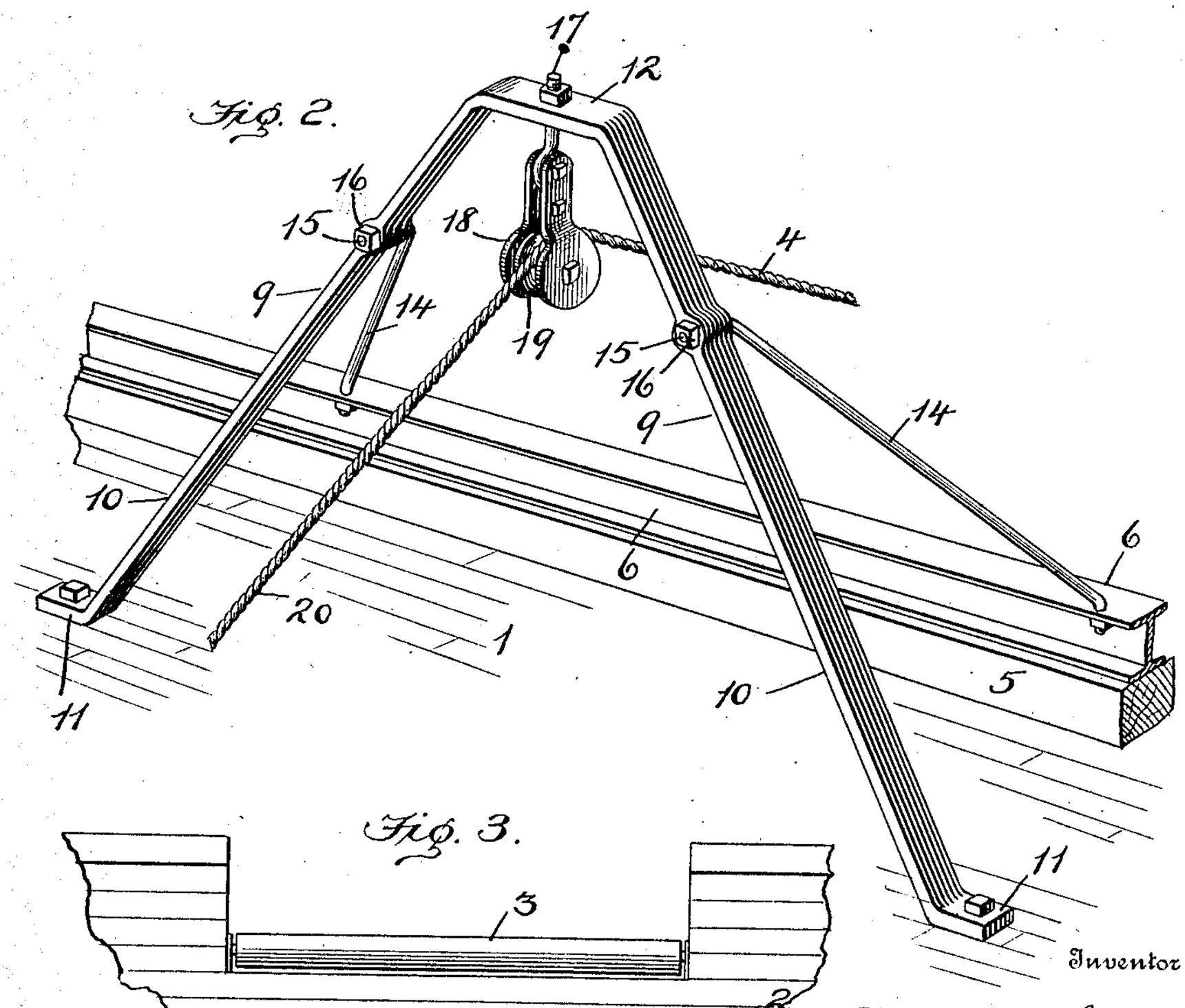

Fig. 3.

Witnesses

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WILLIAM C. TODD, OF CHANCE, MARYLAND.

MEANS FOR OPERATING OYSTER-DREDGES.

No. 871,007. Specification of Letters Patent. Patented Nov. 12, 1907.

Application filed December 8, 1906. Serial No. 346,850.

To all whom it may concern:

Be it known that I, WILLIAM C. TODD, a citizen of the United States, residing at Chance, in the county of Somerset and State of Maryland, have invented certain new and useful Improvements in Means for Operating Oyster-Dredges, of which the following is a specification.

This invention relates to rope guide devices for oyster dredges.

The object of the invention is to provide an improved device for guiding or leading the hoisting ropes that connect the oyster dredges with the hoisting machine, whether the latter be a hand-operated machine or an engine.

In the operation of oyster dredging in deep water considerable trouble is often experienced in guiding the rope attached to the dredge both in winding upon and unwinding from the drum of the hoisting machine. The rope leading from the hoisting drum extends to the side of the vessel and the oyster dredge is attached to the end of the rope and is lowered over the side of the vessel and beneath the surface of the water. In the operation of the dredges the rope becomes alternately slack and tight, and this variation in the condition of said rope together with the rolling motion of the ship when there is wind, and the undercurrent in the water, are conditions that prevent the proper guiding and winding of the rope on the drum, and thus cause delay and inconvenience in the raising and lowering of the dredges, and also often cause the loss of dredges by breaking of the ropes.

By my improvement herein described these objections are all overcome, and the rope is led fairly to and from the drum irrespective of the movement of the vessel and also irrespective of the slack or tight condition of the rope in passing to and from the drum over the side of the ship.

The invention is illustrated in the accompanying drawing, in which,—

Figure 1 shows a vertical cross-sectional view of a ship's deck on which two hoisting drums are indicated and my improved rope guide device is mounted. Fig. 2 is a perspective view of part of the rope guide. Fig. 3 shows a detail of the side roller.

Referring to the drawing by numerals, 1, designates the deck of the ship, 2, the side of the latter and, 3, a long roller one of which is mounted at each side edge of the deck and over which the dredge rope travels when lowering or raising the dredge. At the center of the deck and longitudinal with respect thereto are parallel beams, 5, on which metallic I-beams, 6, rest, and on top of which latter is a hoisting machine or engine (not shown) having two drums indicated by the numerals, 7, and, 8. Of course the hoisting machine may be of any preferred form and as its particular construction forms no part of the present invention it is deemed sufficient to merely indicate the location of the drums.

Between the hoisting drums and the long roller, 3, at the side of the ship, I mount a fixed or stationary upright straddling frame, 9. This frame comprises two oppositely inclined legs, 10, which spread apart, each having a foot, 11, at its lower end by which it may be bolted down to the deck, and at the upper ends the said inclined legs are closer together and are connected by a strut or horizontal portion, 12. The inclined legs have each a horizontally-extending perforation, and a brace rod, 14, has one end, 15, which projects through said perforation and is secured to the legs by nuts, 16. The brace rods extend from these legs downwardly and their lower ends are bolted to a rigid stationary object which, in the present instance, is the metal eye-beam, 6. It will thus be seen that the upright straddling frame is rigidly mounted and is stationary between the drum of the hoisting machine and the long roller at the side of the ship, and that the legs of the stationary frame are widely spread apart where they are fixed on the deck of the vessel, so as to leave on the deck a space for dumping the oysters from the dredge.

An eye bolt, 17, is pivotally sustained from the top strut, 12, of the frame and supports a pulley block, 18, which hangs pendent and is free to swing between said two inclined legs. This pulley block being hung from the pivoted eye bolt is capable of swinging and also swiveling or partly rotating beneath the strut, while the pulley wheel, 19, revolves between the side jaws of the block, 18.

It will be noted that the pulley blocks, 18, have position in a horizontal plane elevated above the drums, 7, and, 8, and above the long rollers, 3, and also that the said higher pulley block, 18, has a position in a vertical plane between the drum and long roller.

It will be seen there are duplicate apparatus, one at each side of the vessel; and it is only necessary to describe one apparatus.

The dredge rope from the winding drum, 8, passes in an upwardly-inclined direction, as at 4, over the pulley-block, 18, which is the highest point, and then said rope passes in a downwardly-inclined direction as at 20, and over the long roller, 3, at the side of the vessel to the dredge. The relative positions here described of the winding drum, 8, the elevated pulley-block, 18, the long roller, 3, and the rope, must be always maintained in order to secure the several results that are desired.

One result obtained is that when the dredge is on the bottom filling with oysters, the downward-inclined dredge-rope 20, will have free play over and may move lengthwise of the long roller, 3, to accommodate any rolling or plunging movement of the vessel; at the same time the rope will be kept, by the elevated pulley-block, 18, within such limits with respect to the

winding drum, 8, as will enable the winding operation to continue without trouble and delays.

Another result obtained is that the dredge rope is always sufficiently elevated above the deck of the vessel to be out of the way of the operators who unload the dredges onto the deck and transfer the oysters from the deck to the hold of the vessel.

Having thus described my invention what I claim as new and desire to secure by Letters Patent is,—

1. The combination with the deck of a vessel, of a stationary horizontal beam secured thereto; a stationary upright frame having inclined spreading legs whose feet are secured to the deck; a brace rod one end of which is secured to one leg of said frame and the other end to said stationary beam and holding the frame always in fixed position; a hoisting drum on the deck at one side of the said frame; a long roller at the other side of the frame; a pulley-block suspended from the top of said frame and free to have swinging movement between said legs and permanently supported in an elevated position higher than both the drum and said roller; and a dredge rope extending from the hoisting drum upward to the swinging pulley-block and thence downward to the said long roller.

2. The combination with the deck of a vessel of a long roller secured at the side of the vessel; a hoisting drum on the deck; a stationary upright frame having inclined spreading legs and positioned in a vertical plane between the said roller and hoisting drum; a pendent pulley-block free to swing between said spreading legs and permanently supported in an elevated position higher than both the roller and drum, and a dredge-rope passing from the said drum upward to the swinging pulley-block and thence downward to the said long roller.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM C. TODD.

Witnesses:
G. FERDINAND VOGT,
CHAS. B. MANN.