

E. L. HORTON.

FAIR LEAD.

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906,802.

Patented Dec. 15, 1908.

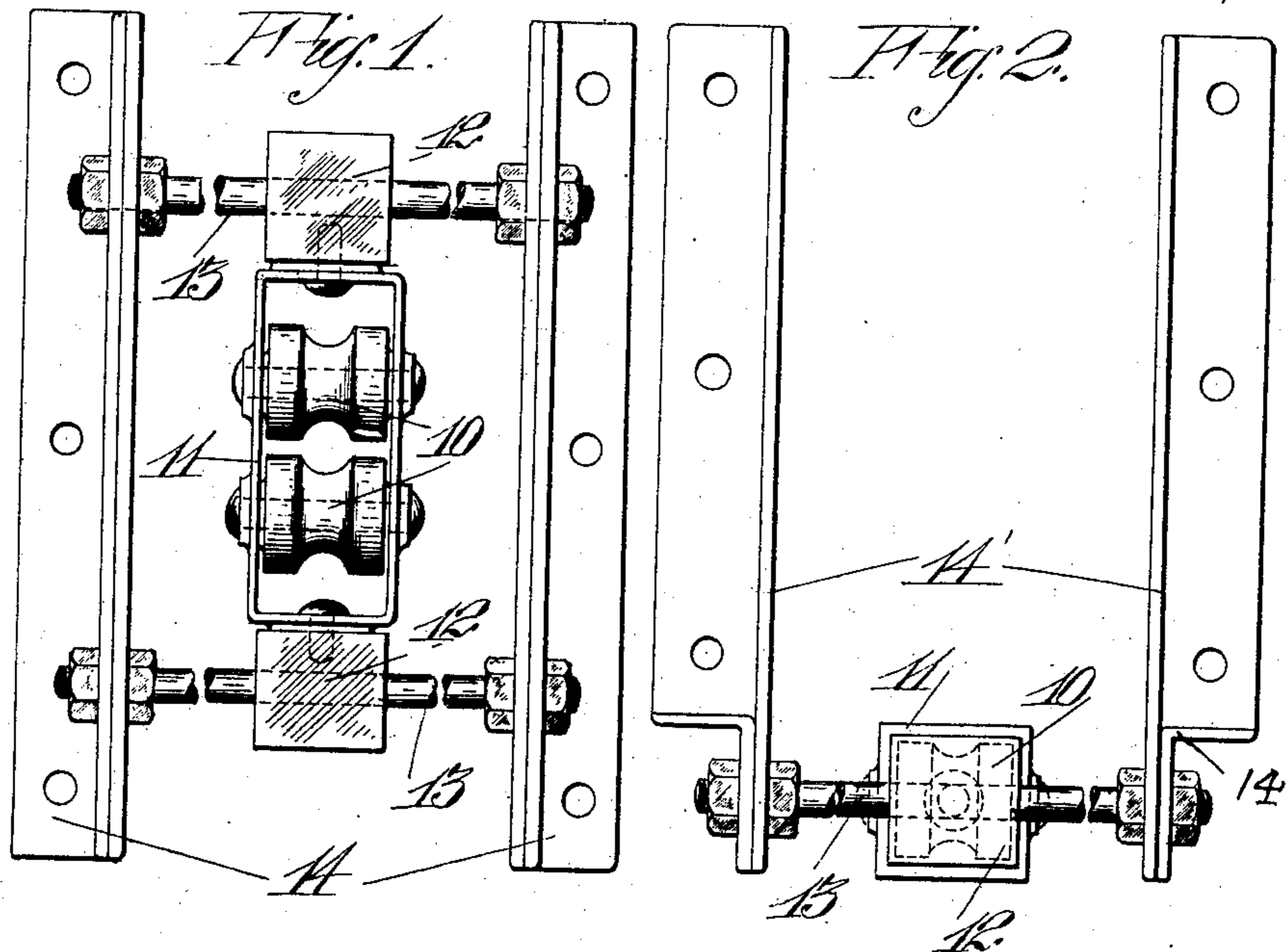
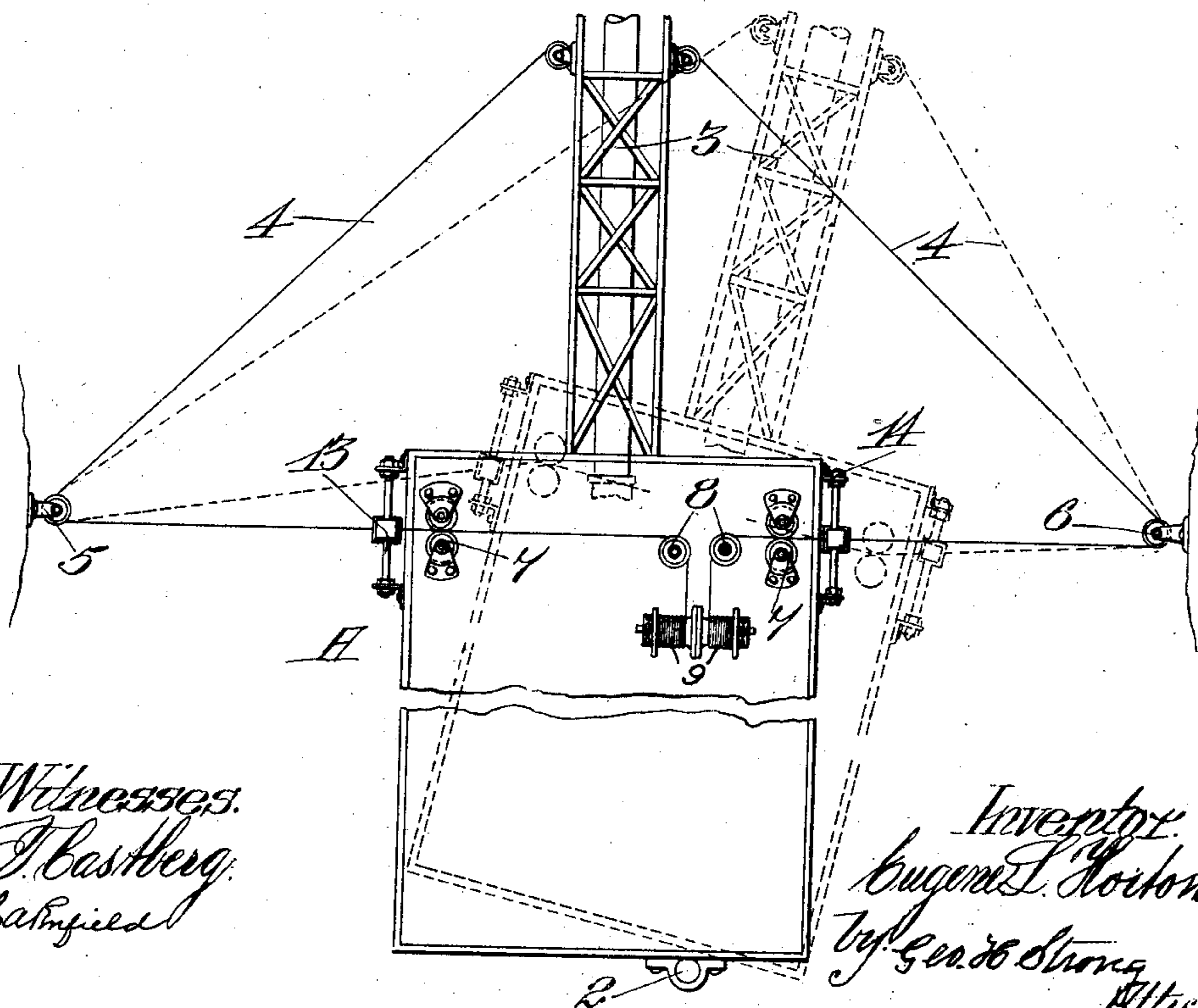


Fig. 3.



Witnesses.  
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# UNITED STATES PATENT OFFICE.

EUGENE L. HORTON, OF OROVILLE, CALIFORNIA.

## FAIR-LEAD.

No. 906,802.

Specification of Letters Patent.

Patented Dec. 15, 1908.

Application filed April 16, 1908. Serial No. 427,536.

*To all whom it may concern:*

Be it known that I, EUGENE L. HORTON, a citizen of the United States, residing at Oroville, in the county of Butte and State of California, have invented new and useful Improvements in Fair-Leads, of which the following is a specification.

My invention relates to dredger attachments, and particularly to a fair lead for the bowline of dredging machines.

The particular object of the present invention is to provide a guide or guard for the double deck sheaves, through which the bowline passes from either side to the winch or engine drum by which the oscillatory movements of the dredge barge are effected.

The invention consists of the parts and the construction and combination of parts as hereinafter more fully described and claimed, having reference to the accompanying drawings, in which—

Figure 1 is a front elevation of my device. Fig. 2 is a plan view of same. Fig. 3 shows its attachment to a dredger.

A represents a dredger which is suitably moored for oscillation about the spud 2 located at the stern of the barge.

The dredging is accomplished by suitable buckets or other dredging means carried on the extension or ladder 3 at the bow of the dredger; an oscillatory movement being given continually in one direction or other to the dredger by the bowlines 4, which are shown as connected to the ladder 3, with one bowline leading to one bank and around a bank sheave 5 shown as located at the left, and the other bowline passing around another bank sheave 6 located at the right; the two bowlines then being brought into the barge and passed between their respective double deck pulleys 7 and around suitable direction pulleys 8 to their respective drums 9. As one bowline is wound up, the other is unwound, and in so doing the barge is moved back and forth about the spud 2 as a pivot. In this oscillatory movement of the dredge the bowlines are continually assuming different angles with respect to the double deck sheaves 7; and while these double deck sheaves will ordinarily lead the line properly, so long as the bank sheaves are in substantially the same horizontal plane with the deck of the barge, yet difficulty often occurs when the bank sheaves

are elevated considerably above the horizontal plane of the deck sheaves, as is frequently the case.

It is in connection with the double deck sheaves that my invention is particularly employed. My improved fair lead sits out on the bow deck just in front of each double deck sheaves, and consists of a pair of grooved rollers or sheaves 10 turning on horizontal pivot shafts, which latter are journaled in a frame 11; the frame 11 being in turn pivotally connected at the ends to the blocks 12 which slide fore and aft on the rods or guides 13, these rods 13 being suitably supported at the ends in the bracket or frame 14, which is adapted to be fixedly secured to the barge proximate to the double deck sheaves. The frame 14 may be in the form of brackets angular in cross section secured to the side of the barge, as in Fig. 3; or the brackets may be associated with other angle-iron pieces 14', as in Figs. 1 and 2 to permit the frame to be secured to the deck of the barge. The frame 11 carrying the sheaves is pivoted in the manner described, so that it will allow the pulleys to turn at any angle and accommodate the bowline which passes through them, irrespective of the position of the barge; the rods 13 which carry the blocks 12 being long enough to allow the carriage to slide back and forth, and without interfering with the passing of the bowline between the pulleys 10. It is understood that one of these fair leads consisting of the pulleys 10 and frame 11, etc., is arranged in conjunction with each pair of double deck sheaves 7.

The double deck pulleys will ordinarily lead the lines properly, so long as the length of cable running to the bank is not inclined very much from the horizontal plane.

By means of my sliding carriage 11 and sheaves 10, the latter turning on horizontal pivots and maintained always in a fixed horizontal plane, it is immaterial at what angle the bowline may lead from the vessel to the bank. The pulleys 10 will always lead it fair between the deck sheaves 7.

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

1. In a dredge, the combination with double deck sheaves, of a fair lead therefor, comprising a suitably mounted sliding car-

riage, said carriage having opposed grooved rollers turning on pivots at right angles to the pivots of the double deck sheaves.

2. The combination with a sheave, of a line passing therearound and adapted to be at different angles relative thereto, a pair of opposed grooved pulleys between which the line passes, said pulleys mounted on axes at right angles to the axis of said sheave, and a pivoted sliding frame for said pulleys.

3. The combination with a dredger mounted for oscillatory movement, of double deck sheaves thereon, bowlines passing between said double deck sheaves and to suitable bank sheaves, with means for operating said bowlines to oscillate the dredger, and a slideable fair lead on the dredger in front of the double deck sheaves, through which a bowline leads.

4. The combination with a dredger mount-

ed for oscillatory movement, of double deck sheaves thereon, bowlines passing between said double deck sheaves and to suitable bank sheaves, with means for operating said bowlines to oscillate the dredger, and a slideable fair lead on the dredger in front of the double deck sheaves, through which a bowline leads, said fair leads each comprising a carriage mounted on vertical pivots and sliding on horizontal trackways, and carrying grooved rollers between which a bowline passes.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

EUGENE L. HORTON.

Witnesses:

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L. T. SENNOTT.