No. 624,077. Patented May 2, 1899.

H. R. PATRIARCHE.

HOISTING OR LOWERING DEVICE.

(Application filed Jan. 16, 1899.)

(No Model.)

Fig. 1.

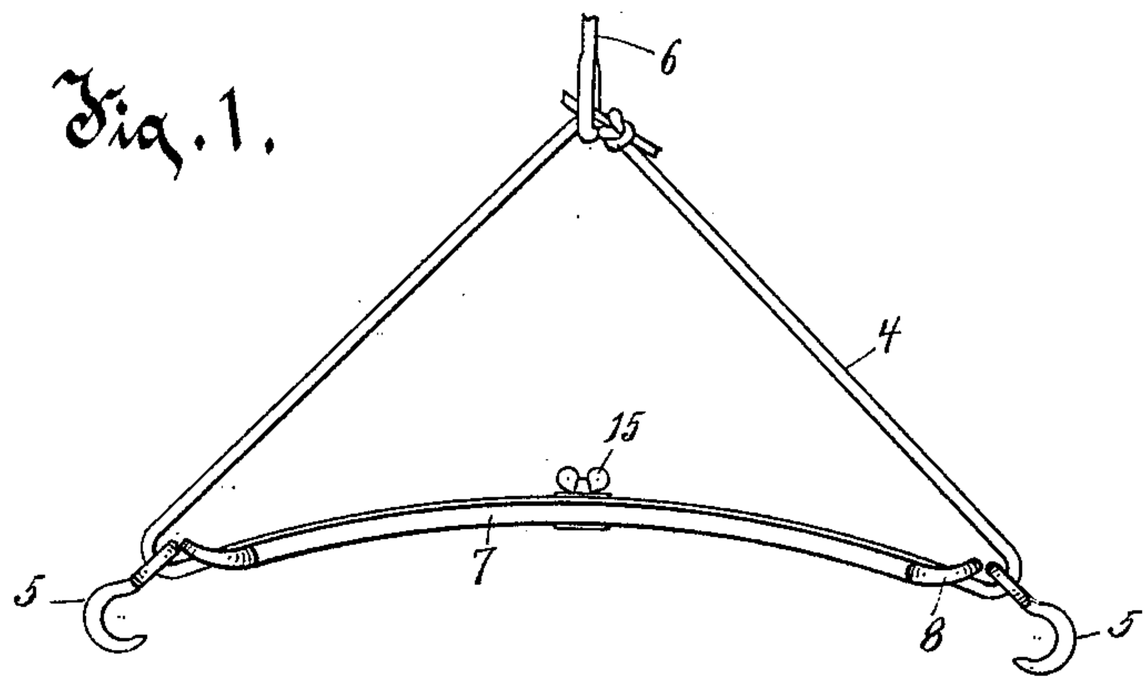


Fig. 2.

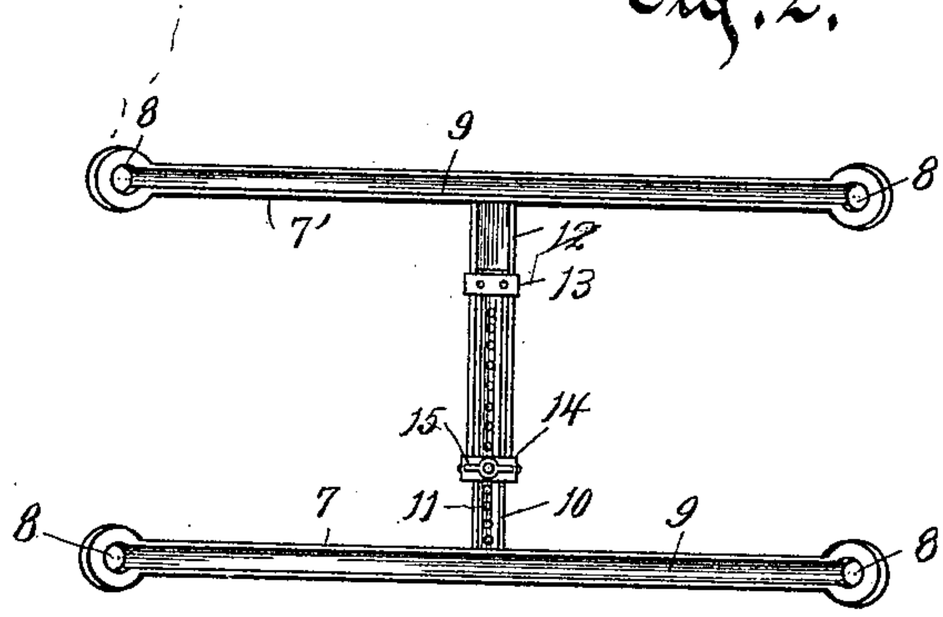
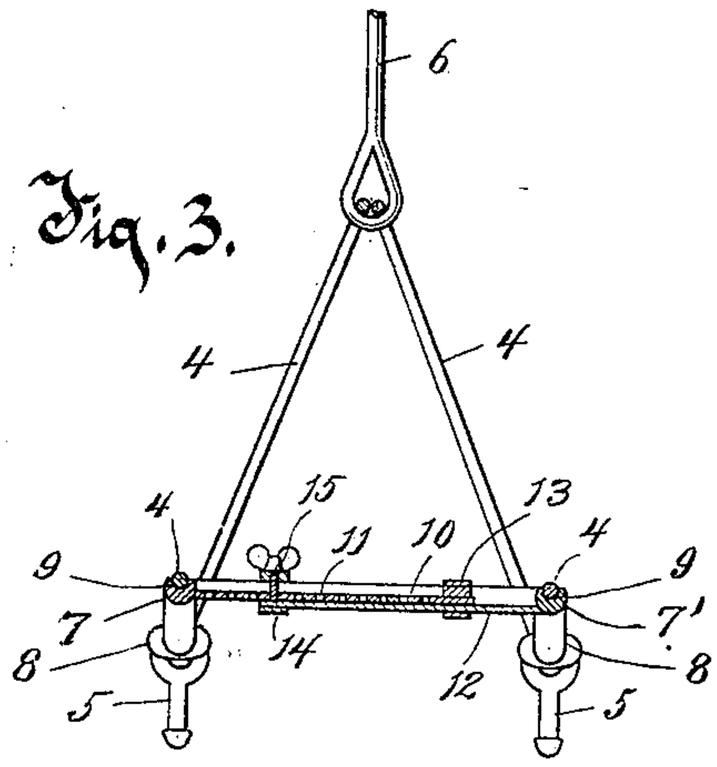


Fig. 3.



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UNITED STATES PATENT OFFICE.

HUGH R. PATRIARCHE, OF MILWAUKEE, WISCONSIN.

HOISTING OR LOWERING DEVICE.

SPECIFICATION forming part of Letters Patent No. 624,077, dated May 2, 1899.

Application filed January 16, 1899. Serial No. 702,263. (No model.)

To all whom it may concern:

Be it known that I, HUGH R. PATRIARCHE, of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented a new and useful Improvement in Hoisting or Lowering Devices, of which the following is a description, reference being had to the accompanying drawings, which are a part of this specification.

My invention has relation to improvements in hoisting and lowering devices more especially intended for use on freight vessels for elevating and lowering barrels and the like.

The most commonly-employed means for elevating barrels from and lowering into the hold of a vessel is the provision of two slings suspended from a hoisting-rope, each of said slings carrying loosely two hooks, which hooks are adapted for adjustment to the chimes of a barrel. This arrangement in practice has been found to be open to serious objections—as, for instance, in hauling up the slings after the barrels have been detached there is nothing to prevent said slings from becoming tangled, which when this occurs, and practice demonstrates that it almost invariably does occur, entails considerable trouble, annoyance, and some loss of time in untangling. A further objection to the form of hoisting mechanism referred to resides in the fact that three men are usually required to operate the mechanism—viz., one man to operate the hoisting and lowering rope and two men to handle the hooks in order to engage the same with the chimes of the barrels.

It is the primary object of my invention to overcome the above-named disadvantages in a simple manner.

An incidental object resides in the provision of means for increasing or diminishing the width of the frame for the purpose hereinafter specified.

With the above and other incidental objects in view the invention consists of the devices and parts or their equivalents, as hereinafter more fully pointed out.

In the accompanying drawings, Figure 1 is a side elevation of my invention. Fig. 2 is a plan view of Fig. 1 with the slings omitted, and Fig. 3 is a central cross-sectional view of Fig. 1.

Referring to the drawings, the numerals 4 4 indicate slings, each consisting of a rope arranged in ordinary loop form. Each of these slings carries two hooks 5 5, which are of the ordinary form of hooks used in this class of devices, the shank of each hook being advisably provided with an eye through which the rope forming the sling loosely passes. The ends of the rope of each sling may be tied together, as shown in Fig. 1, so that in case it is desired to remove one form of hooks and substitute others of different forms or other hooks better adapted for engaging different kinds of barrels or receptacles this can be readily accomplished. To the upper portions of the slings is connected the lower end of a hoisting and lowering rope 6, the opposite end of said rope being advisably connected to a windlass or other suitable winding mechanism. (Not shown.)

My improvements consist of a frame to which the slings are connected, said frame consisting of two arms and a connecting cross member. The arms are indicated by the numerals 7 7′ and are preferably of an upwardly-curved form throughout, excepting at their extreme ends, which extremities are enlarged somewhat and bent upwardly and provided with openings or eyes 8. The arms are each shown as of a concavo-convex form in cross-section with the cavity uppermost, thereby forming grooves 9 9. The transverse connecting member for the arms consists of two parts—viz., an upper portion 10, extending from the arm 7 and provided throughout its length with a series of perforations 11 and an under portion 12, extending from the arm 7′ and preferably being of the form of a channel in cross-section, said channel receiving the member 10. Said member 10 is provided at its extremity with a rigid collar 13, which loosely surrounds the member 12, and said member 12 in turn is provided at its extremity with a rigid collar 14, which loosely surrounds the member 10. Through a threaded opening in the collar 14 passes a set-screw 15, said screw being also adapted to pass through any of the series of perforations 11 of the member 10 and to impinge against the lower member 12.

Figs. 1 and 2 show the relation of the slings with reference to the frame. From these figures it will be seen that the lower portions of

the slings pass through the eyes 8 of the arms and are seated in the grooves 9 9.

In applying my improved device a man grasps either of the arms 7 or 7′ or the transverse connecting member and arranges said arms over two adjacent barrels, the upward curvature of the arms conforming to the longitudinal form or curvature of the barrels. Two of the hooks are then made to engage the chimes of the barrels at corresponding ends of said barrels, and then the other two hooks are made to engage the chimes of the opposite ends of the barrels. The device is now properly connected, so that the barrels may be lowered into the hold of a vessel or elevated from the hold, as the case may be. This is accomplished by unwinding or winding up the rope 6, in accordance with whether it is desired to lower or elevate the barrels. In case the distance between the two arms 7 7′ is not such as to permit said arms to extend properly along the lengths of the barrels this space may be readily adjusted, so as to be increased or decreased, by merely loosening screw 15 and adjusting the arms 7 7′ closer together or farther apart, as required, the screw 15 being again tightened, when the proper adjustment is obtained. By this means it will be obvious that the distance between the arms may be readily regulated in order to adapt said arms to fit adjacent barrels, no matter what the diameter of said barrels may be. The groove or channel of the member 12 prevents lateral displacement of the member 10, and the two collars 13 and 14 prevent separation of the two members in the opposite direction. Collar 14 also provides a surface through which the screw 15 may pass.

The grooves 9 9 in the arms 7 7′ hold the two slings entirely separate, and thereby effectually prevent said slings from tangling and twisting. The provision of the framework consisting of the two arms 7 7′ and the transverse connecting member also provides a single frame, whereby one man is enabled to handle and properly adjust all the hooks in the manner hereinbefore fully pointed out.

While I prefer to employ the two arms 7 7′ with the transverse connecting member, yet I do not wish to be understood as limiting myself thereto, inasmuch as two arms of the construction or substantially the construction shown and adapted to be used in connection with the slings as described or substantially as described and without the provision of the transverse connecting member I consider within the spirit and scope of my invention. I also desire to be understood as claiming merely a single arm of the construction or substantially the construction described as comprehended by my invention.

What I claim as my invention is—

1. In a hoisting and lowering device, the combination, of an arm adapted to be placed over the barrel, receptacle, or article to be elevated or lowered, a sling secured to and having a portion thereof extending longitudinally of said arm, and hooks freely carried by the sling, and unconnected with the arm.

2. In a hoisting and lowering device, the combination, of arms adapted to be placed over the barrels, receptacles, or articles to be elevated or lowered, slings, each secured to and having a portion thereof extending longitudinally of each arm, and hooks freely carried by the slings, and unconnected with the arms.

3. In a hoisting and lowering device, the combination, of an arm adapted to be placed over the barrel, receptacle, or article to be elevated or lowered, said arm provided at opposite ends with eyes, a sling passing through the eyes and extending longitudinally of the arm, and hooks freely carried by the sling, and unconnected with the arm.

4. In a hoisting and lowering device, the combination, of an arm adapted to be placed over the barrel, receptacle, or article to be elevated or lowered, said arm being upwardly curved longitudinally, and having its opposite ends bent upwardly and provided with eyes, a sling passing through the eyes, and fitted to and extending longitudinally of the arm, and hooks freely carried by the sling and unconnected with the arm.

5. A frame for a hoisting and lowering device comprising arms and a transverse connecting member, said arms adapted to be placed over the barrels, receptacles, or articles to be elevated or lowered, and to have portions of the ropes of the hoisting and lowering mechanism secured and fitted thereto and extending longitudinally thereof.

6. A frame for a hoisting and lowering device comprising arms and a transverse adjustable connecting member, said arms adapted to be placed over the barrels, receptacles, or articles to be elevated or lowered, and to have portions of the ropes of the hoisting and lowering mechanism fitted to and extending longitudinally thereof.

7. A frame for a hoisting and lowering device comprising arms and a transverse connecting member, said arms adapted to be placed over the barrels, receptacles, or articles to be elevated or lowered, said arms provided with longitudinal recesses adapted to receive portions of the ropes of the hoisting and lowering mechanism, said portions of the ropes secured to the arms and extending longitudinally in said recesses.

8. A frame for a hoisting and lowering device comprising arms and a transverse connecting member, said arms being curved upwardly in the direction of their lengths to adapt them to be adjusted to the contour of the curved surfaces of the barrels, receptacles, or articles to be elevated or lowered, and said arms adapted to have portions of the ropes of the hoisting and lowering mechanism fitted and secured thereto and extending longitudinally thereof.

9. A frame for a hoisting and lowering device comprising arms and a transverse con-

necting member, said arms provided at their ends with eyes through which the ropes of the hoisting and lowering mechanism are adapted to pass.

10. In a hoisting and lowering device, the combination, of an arm adapted to be placed over the barrel, receptacle, or article to be elevated or lowered, said arm being upwardly curved in the direction of its length, a sling secured to and having a portion thereof extending longitudinally of said arm, and hooks freely carried by the sling, and unconnected with the arm.

11. A frame for a hoisting and lowering device comprising arms and a transverse connecting member, said arms adapted to be placed over the barrels, receptacles, or articles to be elevated or lowered, and said transverse connecting member consisting of two overlapping parts extending from the respective arms, and means for retaining said overlapping parts in adjusted position.

12. A frame for a hoisting and lowering device, comprising arms and a transverse connecting member, said arms adapted to be placed over the barrels, receptacles, or articles to be elevated or lowered, and said transverse connecting member consisting of two overlapping parts extending from the respective arms, collars carried by each part of the connecting member and surrounding the other part of said connecting member, and a set-screw passing through an opening in one of the collars, through any of the series of perforations in one of the parts of the connecting member, and engaging the other part of said connecting member.

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

HUGH R. PATRIARCHE.

Witnesses:
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ANNA V. FAUST.