

J. KNUPPEL.

STEVEDORE RIG.

APPLICATION FILED FEB. 15, 1906. RENEWED AUG. 13, 1908.

900,685.

Patented Oct. 6, 1908.

Fig. 1.

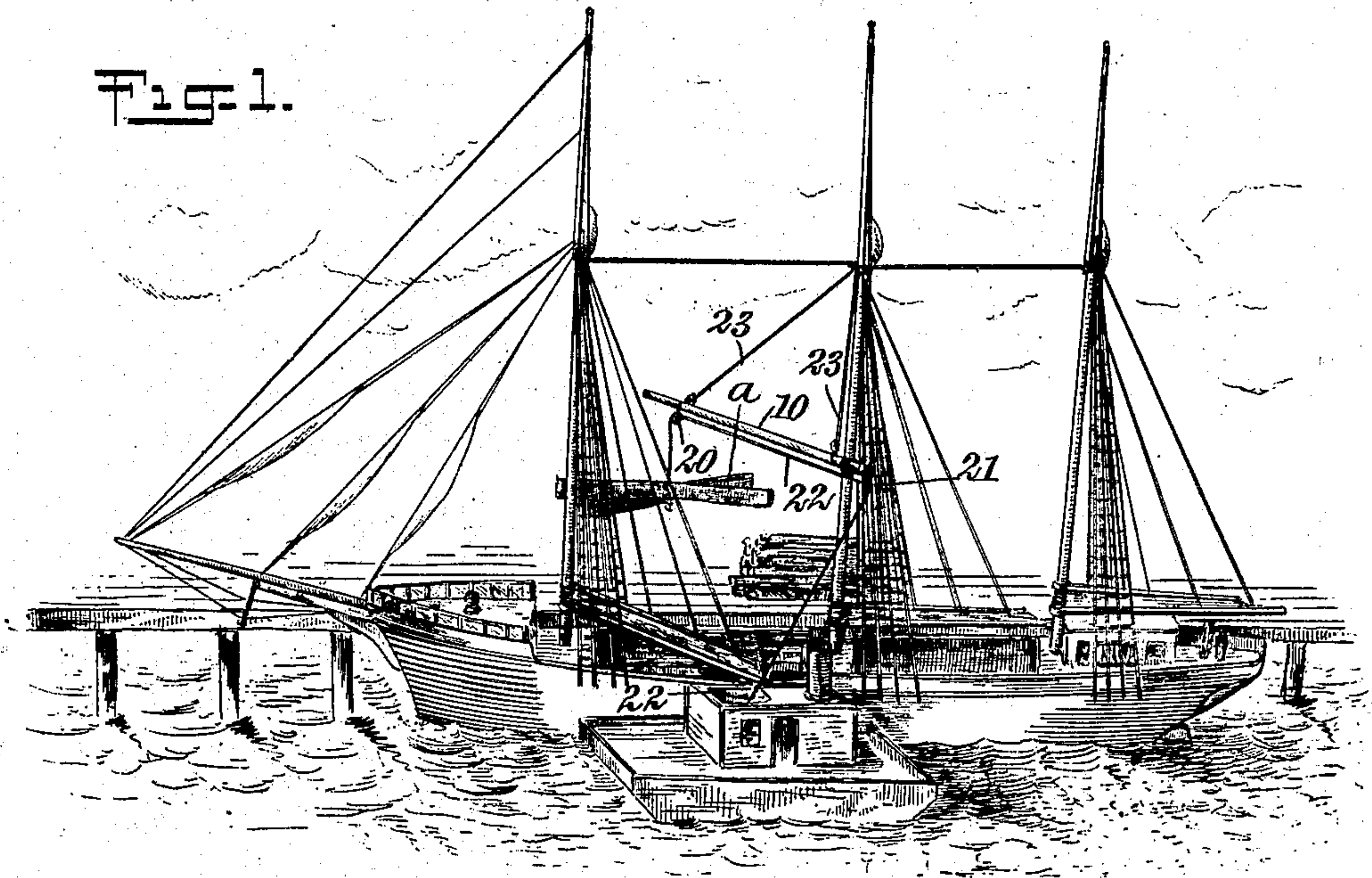


Fig. 2.

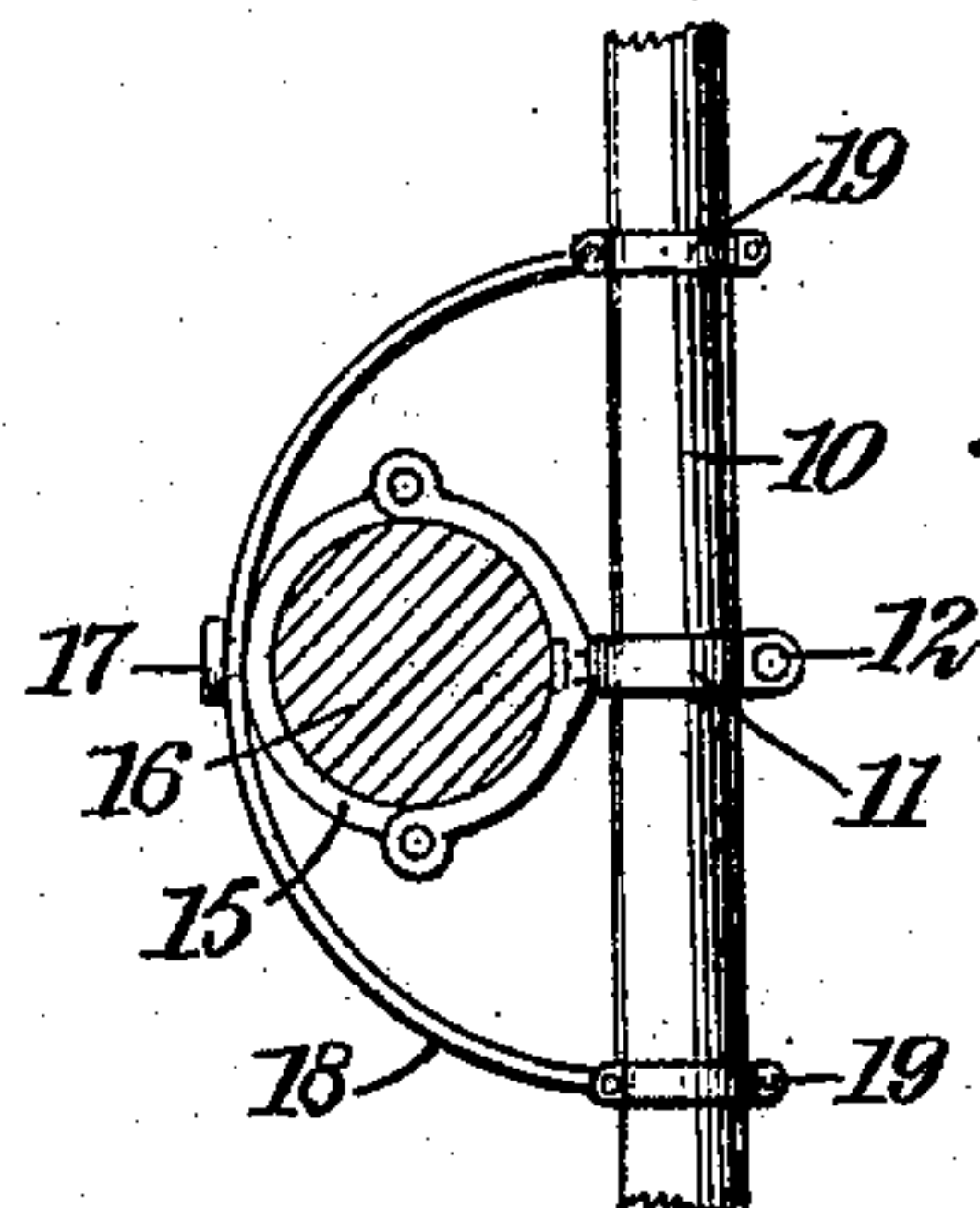
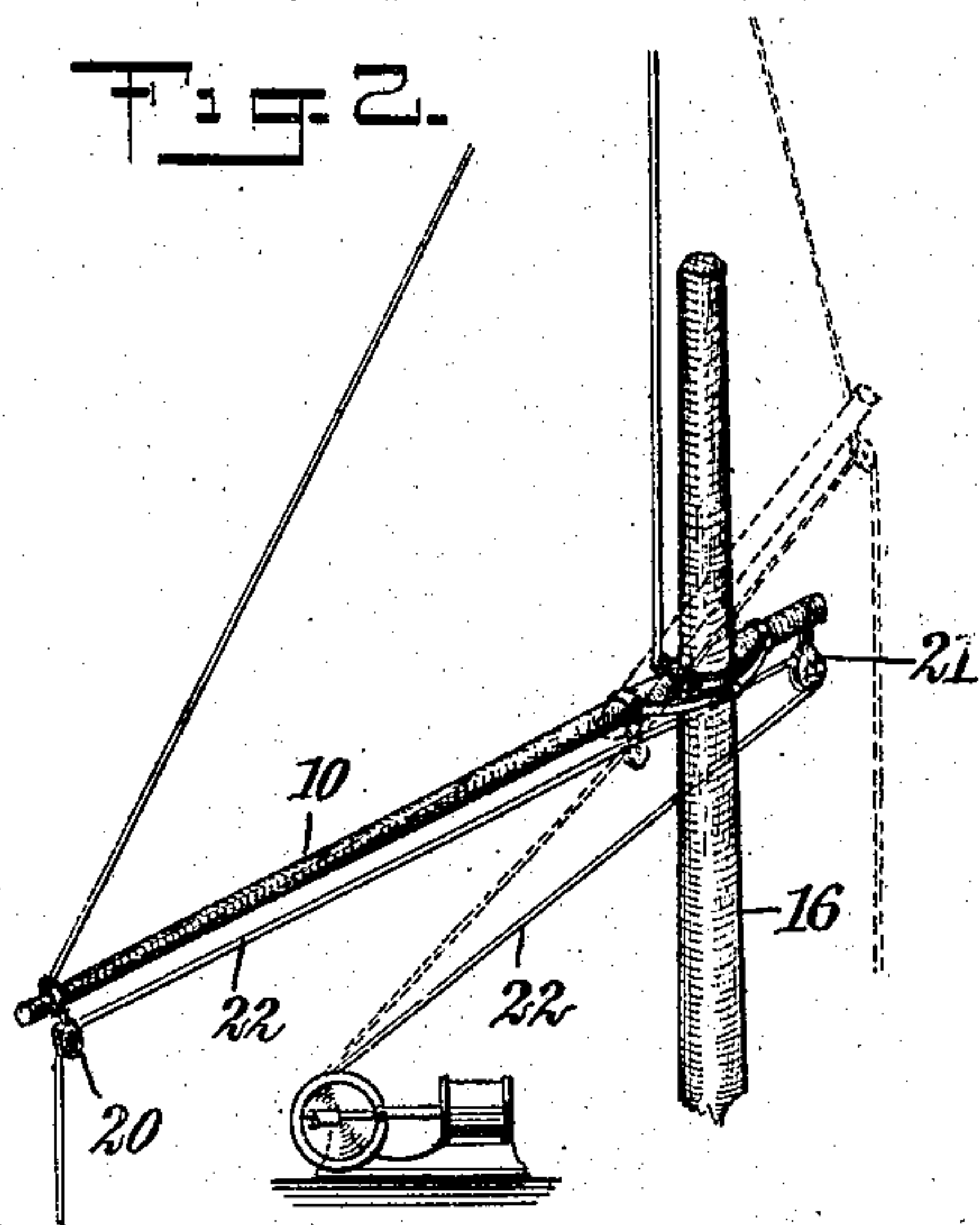
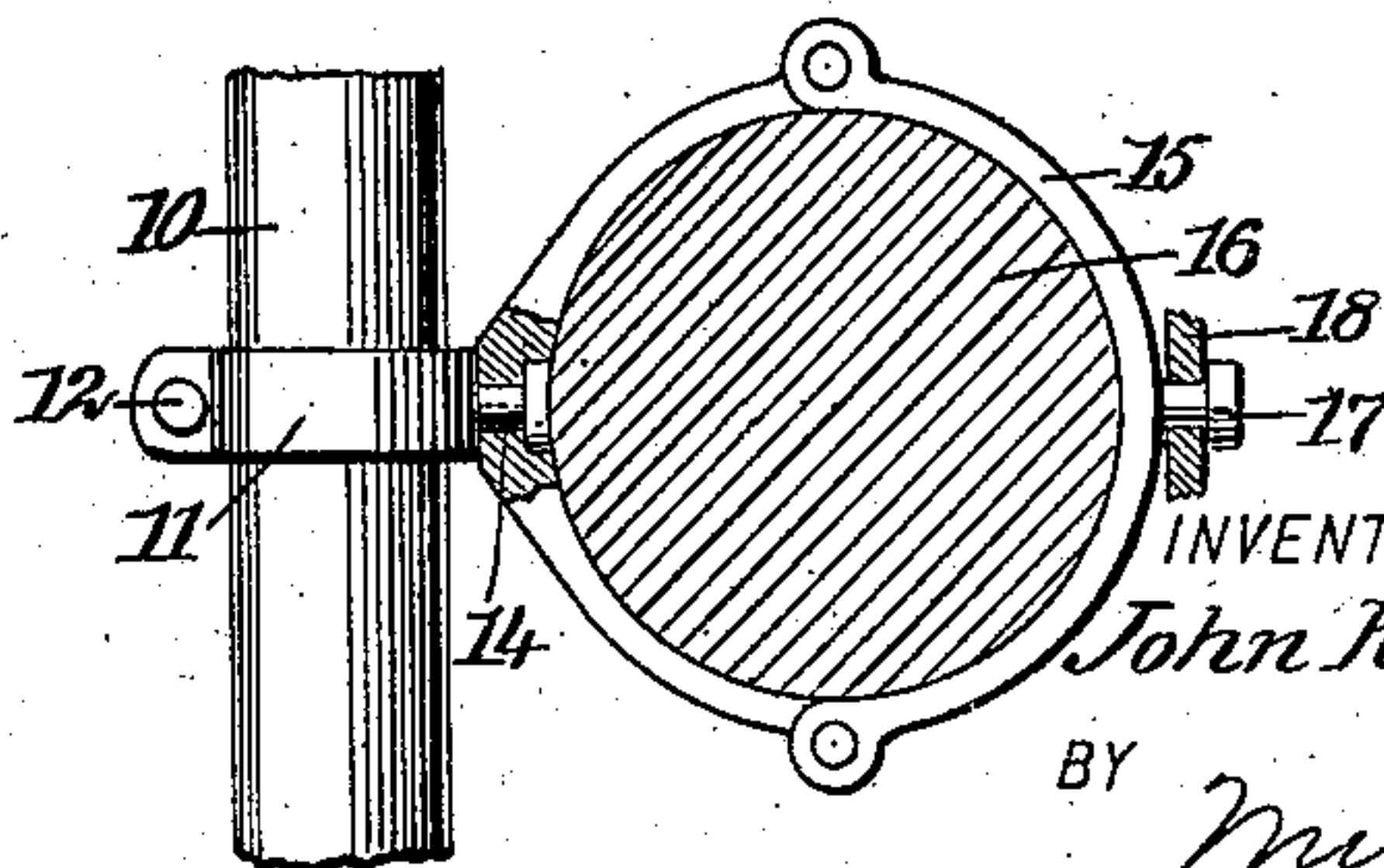


Fig. 3.

Fig. 4.



WITNESSES:

Geo. W. Maylor.

Isaac B. Owens.

INVENTOR

BY

John Knuppel

ATTORNEYS

UNITED STATES PATENT OFFICE.

JOHN KNUPPEL, OF NEW YORK, N. Y., ASSIGNOR OF ONE-THIRD TO JULIUS H. REITER, OF NEW YORK, N. Y.

STEVEDORE-RIG.

No. 900,685.

Specification of Letters Patent.

Patented Oct. 6, 1908.

Application filed February 15, 1906, Serial No. 301,187. Renewed August 13, 1908. Serial No. 448,379.

To all whom it may concern:

Be it known that I, JOHN KNUPPEL, a citizen of the United States, and a resident of the city of New York, borough of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Stevedore-Rig, of which the following is a full, clear, and exact description.

The invention relates to an improved rigging especially designed for use in unloading cargoes from vessels. Ordinarily heavy cargoes are unloaded by landing the vessel alongside of the dock or pier and mooring a hoister on the off-shore side, the line from the drum of the hoister running up into the rigging of the vessel to enable the cargo to be lifted out of the hold and on to the dock.

The object of my invention is to enable the cargo to be not only lifted out of the hold but swung sidewise onto the dock by the mere action of hauling on the hoister line, and I attain this end by a peculiarly rigged gaff or boom along which the hoister line runs, and by means of which the hoister acts first to lift the cargo out of the hold of the vessel and then to swing the gaff and its load sidewise over the dock, so that the load may then be dropped on the dock. I attain these ends by certain peculiar devices which will be fully set forth hereinafter and particularly pointed out in the claims.

Reference is to be had to the accompanying drawings which illustrate as an example the preferred form of my invention, in which drawings

Figure 1 is a view of a vessel lined to the dock with a hoister moored to the off-shore side thereof, and illustrating my improved rigging; Fig. 2 is a detail perspective view showing the action of the invention; Fig. 3 is a plan view of part of the gaff showing the devices for connecting it with the mast of the vessel, and Fig. 4 is an enlarged partly sectional plan view showing the connecting devices between the mast and gaff.

The invention may be applied to any one of the various masts of the vessel according to the position of the hatches and to the other circumstances surrounding the work to be performed. As here shown the improved gaff 10 is mounted on the main mast of the vessel and is in position to unload from the fore-hatch thereof. The gaff 10 has a clamp 11 applied thereto intermediate its ends, adjacent to its butt or heel. Said clamp 11 is

provided with a bolt 12 or other means for tightening it around the gaff, so that the clamp may be securely fastened at any desired position along the length thereof. Said clamp 11 is provided with a stud 14 which is loosely received in a jointed hoop 15 arranged loosely to encircle the mast of the vessel which is indicated at 16 in the sectional views. Said hoop 15 is made of two sections hinged together, and provided with means for removably locking them. It will thus be seen that the gaff is by means of these devices mounted on the mast so that it may be adjusted vertically along the length thereof, and also to allow the gaff to be swung in a vertical plane around a horizontal axis, to wit, the pin or stud 14, and to be turned in a horizontal plane around a vertical axis, which is the mast to which the gaff is applied. The hoop 15 carries at the side opposite the clamp 11 a headed stud or pin 17, and this is engaged with braces 18 which project toward the gaff at opposite sides of the mast, and are secured to the gaff by means of clamps 19. This construction increases the strength of the parts and prevents twisting strains on the stud 14.

As shown best in Figs. 1 and 2, the gaff 10 is provided at its peak with a block 20, and at the throat with a similar block 21. Over these blocks the hoisting line 22 is rove, said line having at one end a sling for the connection of the load, which is indicated at *a* in Fig. 1, and the other end of the line being lead to the hoister. The blocks 20 and 21 may, if desired, be replaced by double or triple blocks so as to increase the purchase of the hoisting gear, which, however, is not essential to my invention. It will be seen that the end of the hoisting line 22 with which the load is connected passes down from the peak block 20, and that the part of the line which runs to the hoister passes from the throat block 21. The gaff is suspended so that it may swing in its characteristic operation by means of peak and throat halyards 23, which are attached to the gaff and suspended suitably from the mast head, as will be understood by persons skilled in the art.

In the use of the invention, the fall of the hoister is dropped into the hold and connected with that part of the cargo which is to be unloaded. When this is done the hoister is operated, drawing in the line and lifting the load out through the hatch. Owing to the

arrangement of the block 21 at the side of the mast opposite that on which the block 20 is located, as soon as the hoisting operation begins the gaff will be swung sidewise, and since the hoister is on the side of the vessel opposite the dock the peak of the gaff will be swung out over the dock enabling the load to be dropped down. If desired guy lines may be attached to the gaff so as to hold the same over the dock until the load is dropped thereon, and also to prevent the outboard swinging of the gaff until the load has cleared the hatch coaming. It will, therefore, be seen that by a single operation of hauling on the hoister line not only is the load lifted clear of the vessel, but it is swung sidewise over the dock so that it may be dumped thereon.

While the invention is particularly useful for unloading cargoes, it may be with equal facility applied to the operation of loading vessels by such changes in the adjustment as will adapt it to the peculiar particular circumstances at hand.

Having thus described the preferred form of my invention, what I actually claim and desire to secure by Letters Patent is:

1. The combination of a support, a jointed

hoop adapted loosely to encircle the same, a gaff, a clamp encircling the gaff and pivoted to the hoop, additional clamps fastened to the gaff at opposite sides of the first named clamp, braces attached to said additional clamps and pivoted to the hoop, means to sustain the gaff at a point removed from the said clamps, and a hoisting line guided along the gaff.

2. The combination of a vessel having a mast, a gaff, means adjacent to one end of the gaff for mounting the same to swing around the mast, dividing the gaff into arms of unequal lengths, means for sustaining the free or longer arm of the gaff, a hoisting line, means for guiding the same along the gaff at points respectively at opposite sides of the means for mounting the gaff to swing, and a hoisting means located at the side of the vessel and adapted to engage the hoisting line.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN KNUPPEL.

Witnesses:

ISAAC B. OWENS,
JNO. M. RITTER.