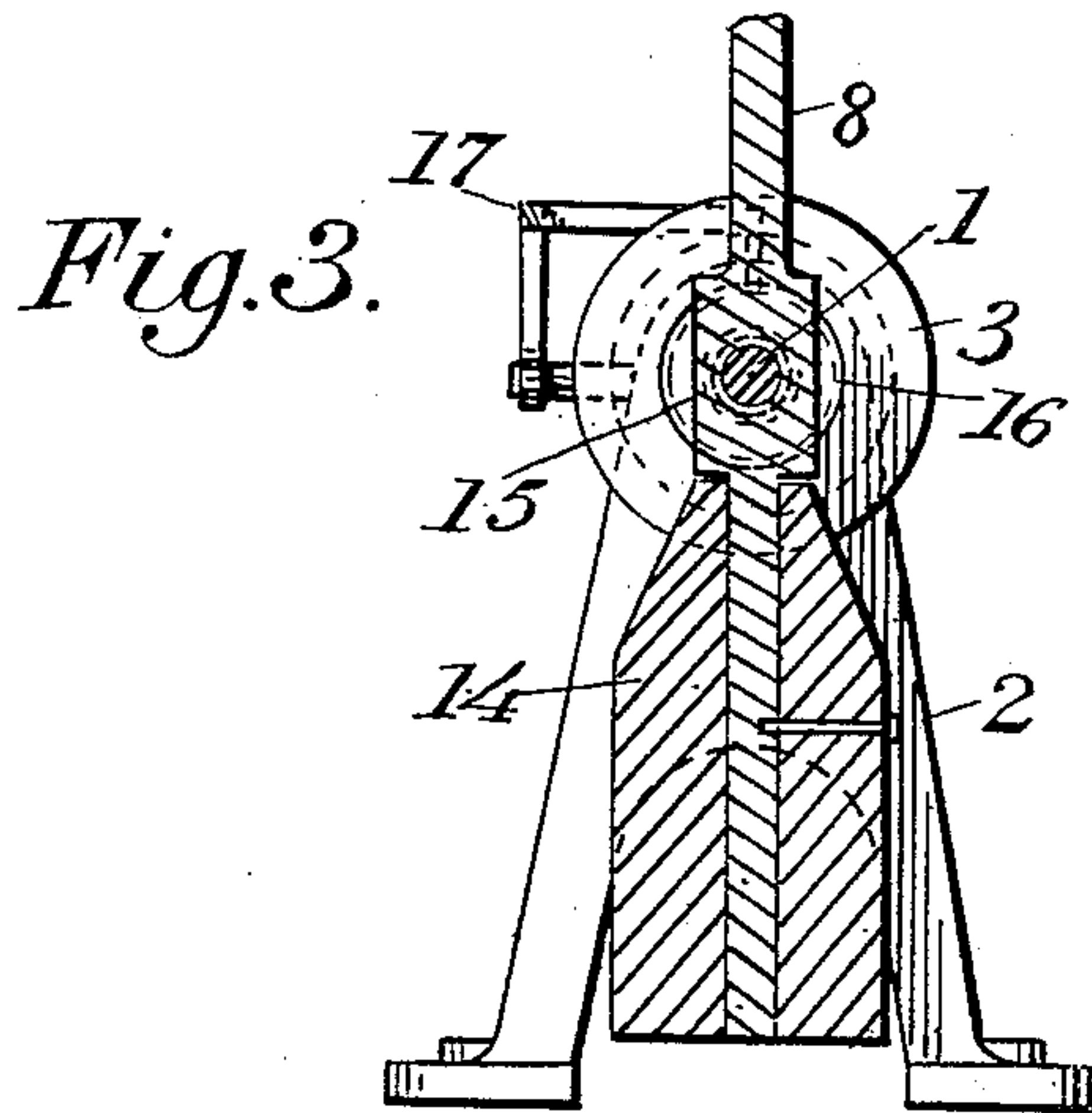
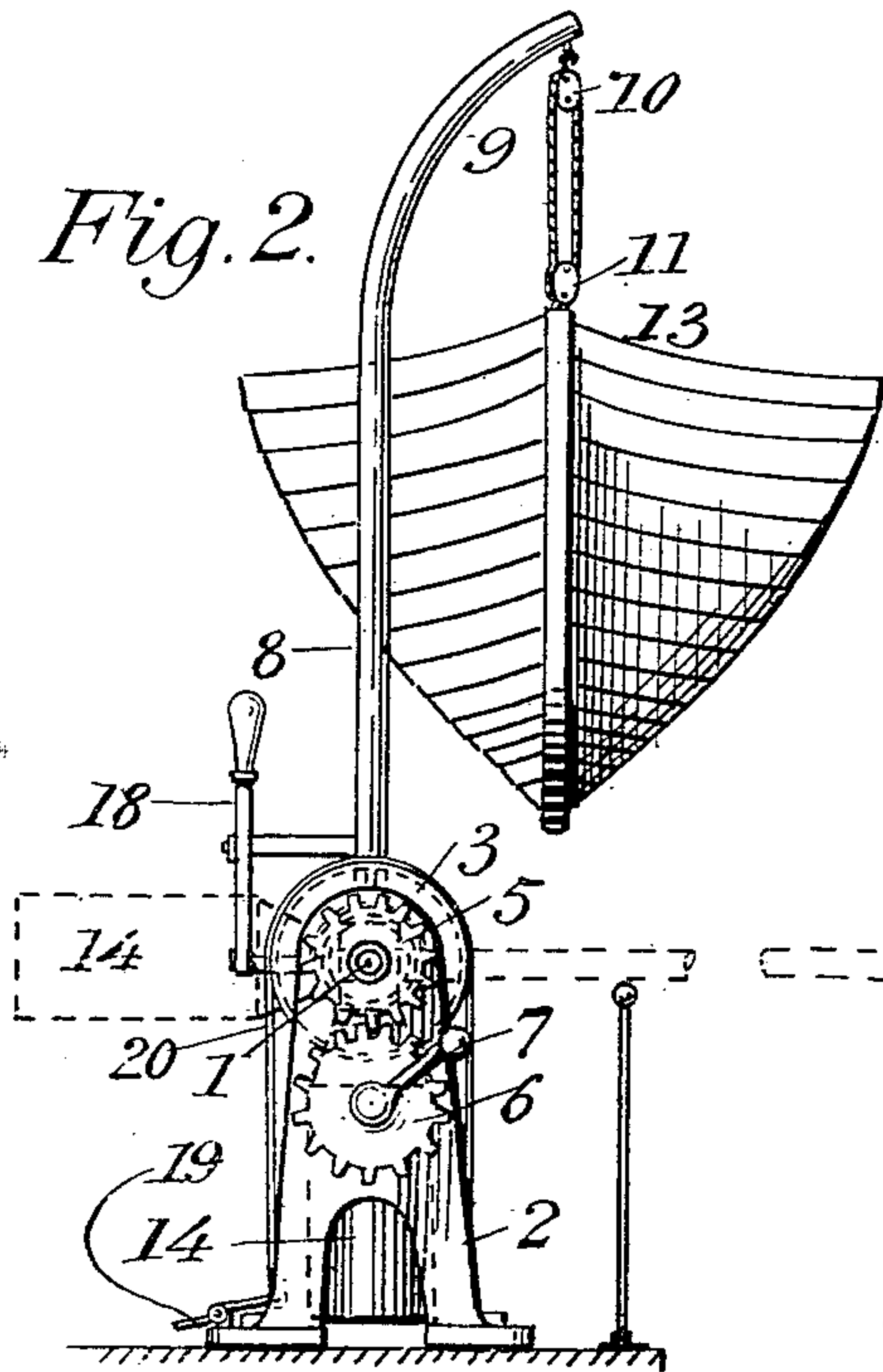
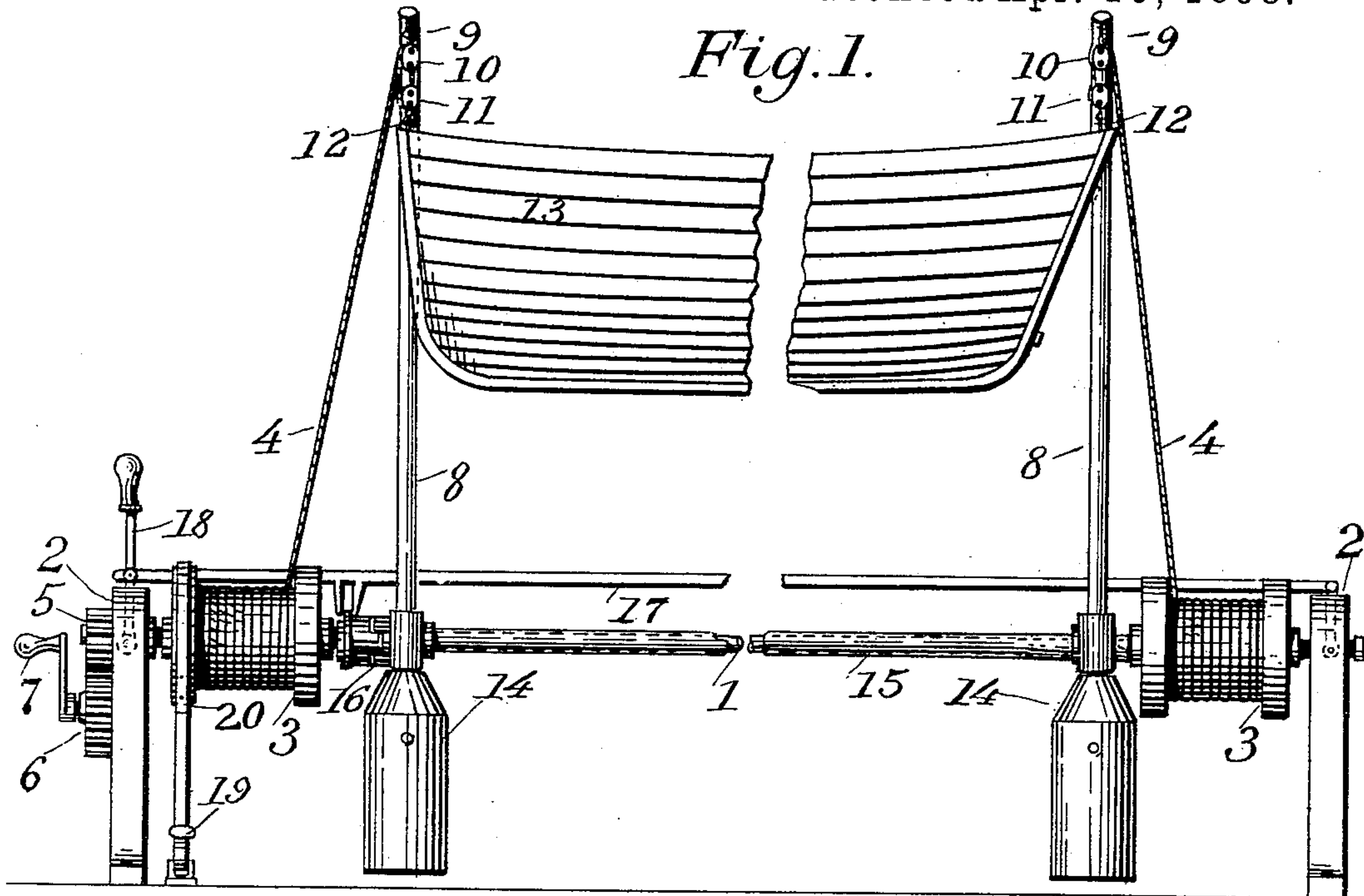


(No Model.)

R. H. AGNEW.
BOAT HOISTING OR LOWERING APPARATUS.

No. 602,611.

Patented Apr. 19, 1898.



WITNESSES
J. S. Bowen.
Henry H. Byrne.

INVENTOR:
Robert H. Agnew.
by John W. Adair.
Attorney

UNITED STATES PATENT OFFICE.

ROBERT H. AGNEW, OF NEW YORK, N. Y.

BOAT HOISTING OR LOWERING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 602,611, dated April 19, 1898.

Application filed December 10, 1896. Serial No. 615,126. (No model.)

To all whom it may concern:

Be it known that I, ROBERT H. AGNEW, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Life-Boat Apparatus; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to apparatus for raising and lowering life-boats from the decks of vessels or from docks and life-saving stations.

The object of the present invention is to provide, in connection with horizontally-fulcrumed and vertically-swinging davits, means whereby said davits may be rocked from a vertical to a horizontal position, and vice versa, and the boat, which is suspended from the free ends of said davits, raised or lowered by means of the same mechanism employed for moving the davits.

Other objects and advantages of the invention will appear in the course of the subjoined description.

In the accompanying drawings, Figure 1 is a side elevation showing a pair of davits and the mechanism for adjusting the same and lowering the boat. Fig. 2 is an end elevation of the same. Fig. 3 is an enlarged detail cross-section.

Similar numerals designate corresponding parts in the several figures of the drawings.

Referring to the drawings, 1 designates a revoluble shaft of any suitable length journaled at or near its ends in bearing-standards 2, secured to the deck of a vessel or other support in such manner that the shaft 1 extends substantially parallel to the rail of the boat or to the edge of the dock, as the case may be. Upon the shaft 1, near each end, is mounted a drum or windlass 3, around which is wound one of the hoisting and lowering ropes 4. At one end the shaft 1 is extended through one of the bearing-standards 2 and provided with a spur gear-wheel 5, which meshes with and is actuated by a spur-pinion 6, fast on the shaft of a crank-handle 7, by means of which the shaft 1, together with its drums, may be revolved.

8 designates a pair of davits provided at

their upper or free ends with curved portions 9, having pulley-blocks 10 at their extremities, around which pass the ropes 4, said ropes also passing over pulley-blocks 11, adapted to be detachably connected to eyes 12 at each end of the life-boat, (indicated at 13.) The davits are provided at their opposite ends with counterbalancing-weights 14, and intermediate their ends the davits 8 are secured at spaced points to a sleeve 15, surrounding the shaft 1 above referred to.

16 designates a clutch having a feather-and-spline engagement with the shaft 1 and adapted to be moved longitudinally on said shaft into and out of engagement with the sleeve or hollow shaft carrying the davits. This clutch is shifted by a rod 17, which at one end is pivotally connected with a lever 18, fulcrumed on one of the bearing-standards 2, by vibrating which the operator may shift the clutch for the purpose described.

19 designates a brake-lever having connected thereto a flexible strap 20, which passes around one of the flanges of one of the drums 13, so as to retard the too-rapid rotation thereof while a boat is being lowered.

In operation when it is desired to lower the boat the clutch is moved into engagement with the sleeve on which the davits are mounted, and the crank-handle 7 is then revolved, thus swinging the davits on their fulcrums and moving the same from a vertical into a horizontal position. This carries the life-boat outward from the side of the vessel or dock and suspends the same over the water. If desired, suitable rests may be provided for limiting the downward movement of the davits and maintaining the same in a horizontal position. The clutch 16 is now thrown out by operating the lever 18, and thereupon by continuing the rotation of the crank 7 the ropes 4 are unwound therefrom and the life-boat is thereby lowered. By providing a brake 20 the crank 7 may be entirely released and the boat allowed to descend rapidly, the speed being governed by the application of said brake. The life-boat is hoisted by simply reversing the operation above described.

The apparatus above described greatly facilitates the hoisting and lowering of life-boats and enables a life-boat to be placed upon the deck of a vessel or upon the dock, so as to

rest thereon, thus removing the strain from the hoisting-ropes.

Having thus described the invention, what is claimed as new is—

- 5 1. In a boat-hoisting apparatus, a davit fulcrumed intermediate its ends and provided with a counterbalancing-weight, and means for operating said davit, substantially as described.
- 10 2. In a boat-hoisting apparatus, a davit fulcrumed on a horizontal axis intermediate its ends and provided, at one end, with means for suspending the boat and at its opposite end with a counterbalancing-weight, and
15 means for operating said davit, substantially as described.
3. In a life-boat apparatus, the combination with a shaft having drums fast thereon and provided with operating means, of a hollow
20 shaft surrounding the aforesaid shaft, a pair of davits fast on said hollow shaft and adapted to be operated in vertical planes, hoisting-cords running around said drums and passing through guides at the free ends of the davits,

and connections between said davits and drums whereby the same means is employed for operating the davits, substantially as described. 25

4. In a boat-hoisting apparatus, a horizontal shaft, drums fast thereon, operating means
30 for said shaft, a sleeve surrounding said shaft, spaced davits attached to said sleeve, means for causing said davits to swing simultaneously, hoisting-ropes wound on said drums and passing through guides at the free ends
35 of the davits, a clutch cooperating with one of said davits for connecting the same to or disconnecting the same from said shaft, a shifting-rod connected to said clutch, and a lever for reciprocating said rod, substantially
40 as described.

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

ROBERT H. AGNEW.

Witnesses:

WM. C. BAKER,

ADOLPH BULSCHUN, Jr.