

No. 765,513.

PATENTED JULY 19, 1904.

J. A. ROCK.  
SHACKLE FOR MARINE PURPOSES.

APPLICATION FILED NOV. 11, 1903.

NO MODEL.

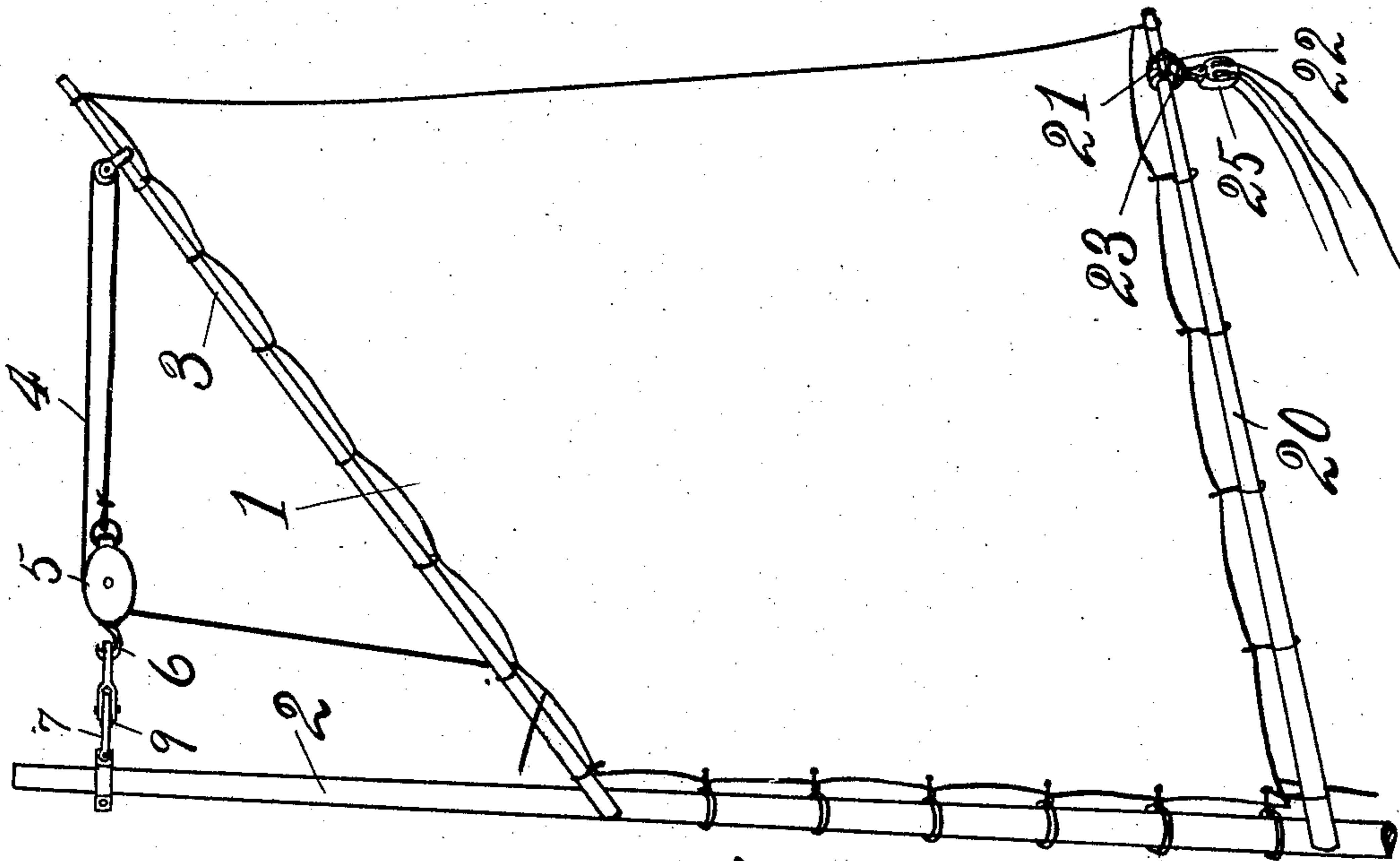


Fig. 1.

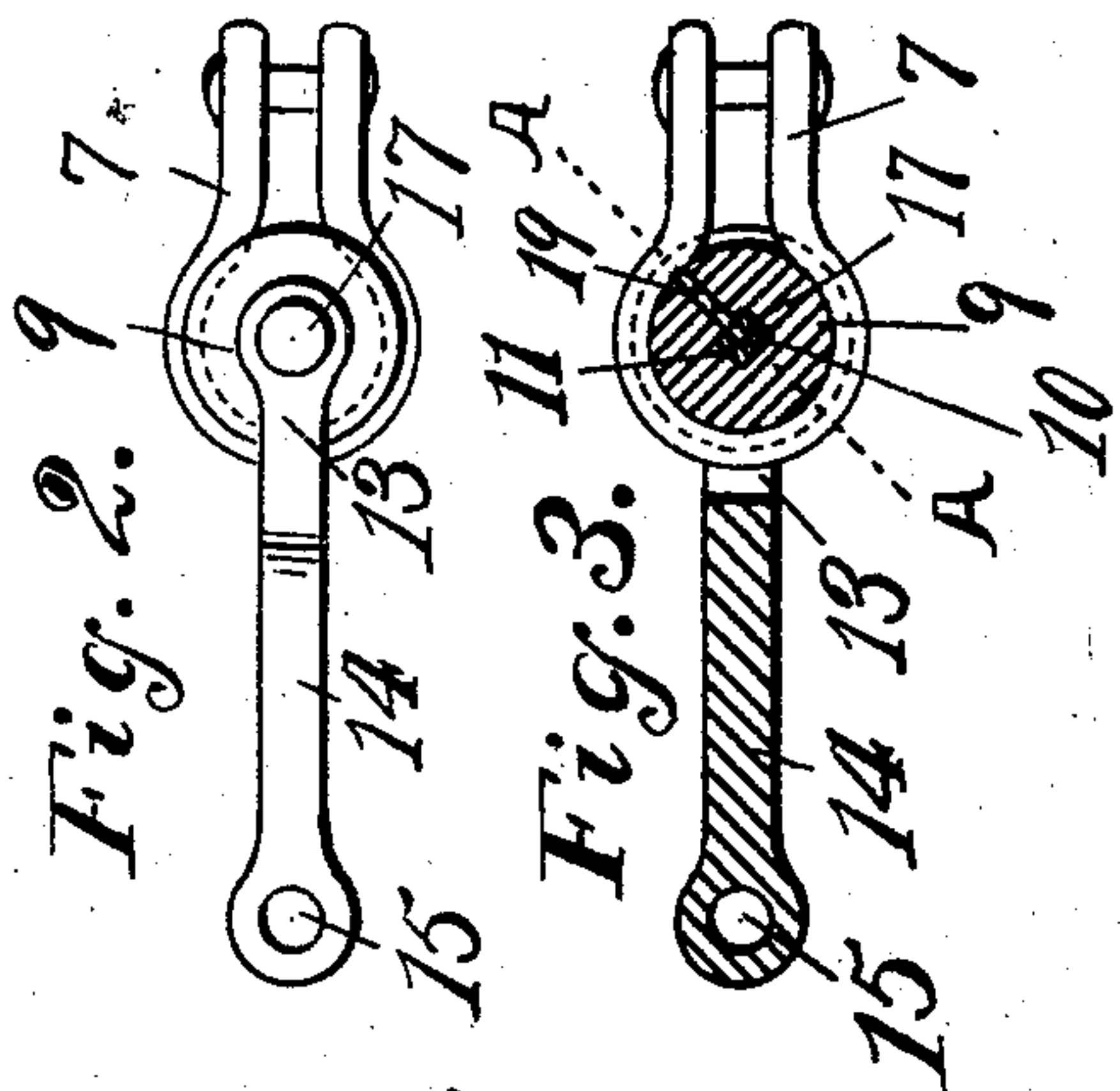


Fig. 2.

Fig. 3.

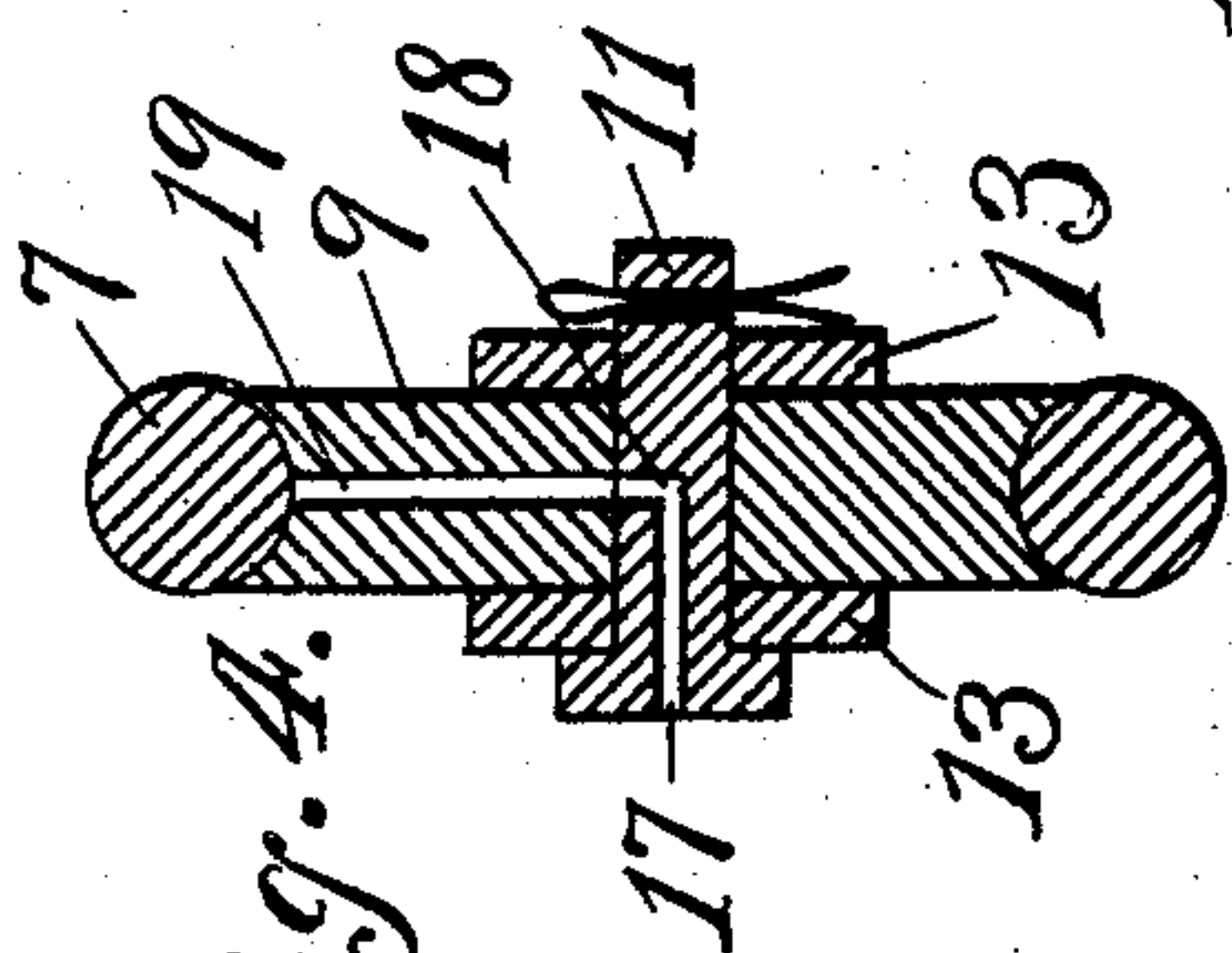


Fig. 4.

Witnesses

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# UNITED STATES PATENT OFFICE.

JASPER A. ROCK, OF SAN FRANCISCO, CALIFORNIA.

## SHACKLE FOR MARINE PURPOSES.

SPECIFICATION forming part of Letters Patent No. 765,513, dated July 19, 1904.

Application filed November 11, 1903. Serial No. 180,667. (No model.)

*To all whom it may concern:*

Be it known that I, JASPER ANDREW ROCK, a citizen of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented certain new and useful Improvements in Shackles for Marine and other Purposes, of which the following is a specification.

My invention relates to improvements in shackles such as are used on ships, on derricks, and on other like apparatus.

Shackles as at present constructed are a constant source of expense by reason of their quickly wearing out. The shackles on board of a vessel are subjected to continuous wear without interruption from the time when the vessel leaves port until its return thereto. Each movement of the vessel causes the hook which engages the shackle to move backward and forward thereon, and as the vessel is never still during the voyage it will readily be seen that the wear on the shackle on this account is very great. Thus the expense of renewing these shackles is considerable, averaging about fifty dollars on a four months' voyage of an ordinary schooner. Besides, the great wear upon the shackles requires constant vigilance on the part of the officers of the ship to assure themselves that the shackles are not worn through, the result of which latter event would be almost certain disaster, involving, perhaps, loss of life.

The object of my invention is to provide a shackle which will last much longer than those heretofore used without the expense being much greater. I have herein shown the improvement as applied to a ship's gear; but the invention is also valuable in hoisting apparatus or wherever shackles are used.

My invention therefore resides in the novel construction, combination, and arrangement of parts for the above ends hereinafter fully specified, and particularly pointed out in the claim.

In the accompanying drawings, Figure 1 is a view of a ship's sail, showing two forms of my invention applied thereto. Fig. 2 is an enlarged top plan view of one form of my invention. Fig. 3 is a view, partly in section, of the same. Fig. 4 is an enlarged section of the same, showing the means for oiling.

Referring to the drawings, 1 represents a ship's sail, and 2 the mast. To the gaff 3 of said sail is secured the rope 4, attached by a block 5 and a hook 6 to the shackle 7, secured to the mast by an iron band around the mast. This shackle is circular in form, and within said shackle is a grooved sheave or roller 9. Said sheave has a square central hole 10, through which is passed a square bolt 11, upon the ends of said bolt being secured the arms 13 of a forked hanger 14, the lower end of said hanger having an eye 15, into which may be passed the hook 6.

By the above construction the wear of the block instead of being upon a single point of the shackle at one time is distributed throughout half the circumference of the grooved roller. Thus the wear at each point is greatly reduced. The central aperture and bolt are made square in order to insure that the bolt does not turn within the roller, which would cause a rapid wear upon the bolt.

In order to reduce the friction and wear, the bolt is made with an axial oil-channel 17, which terminates in a lateral channel 18, communicating with a radial channel 19, leading to the periphery of the roller. By this means after filling up said channel with oil the oil will gradually find its way to the surface of the roller and will reduce friction between said roller and shackle.

I claim—

A shackle comprising a square bolt, a grooved sheave or roller having a square central aperture through which said bolt is passed, a forked hanger through which the arms of said bolt passes, said hanger having at its other end an eye for a hook and a shackle proper consisting of a bar extending around the roller for the greater part of its circumference and in said groove, the ends of said bar being then extended parallel to but spaced from each other, and a tie-bar passing through said ends, substantially as described.

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

J. A. ROCK.

Witnesses:

FRANCIS M. WRIGHT,  
BESSIE GORFINKEL.