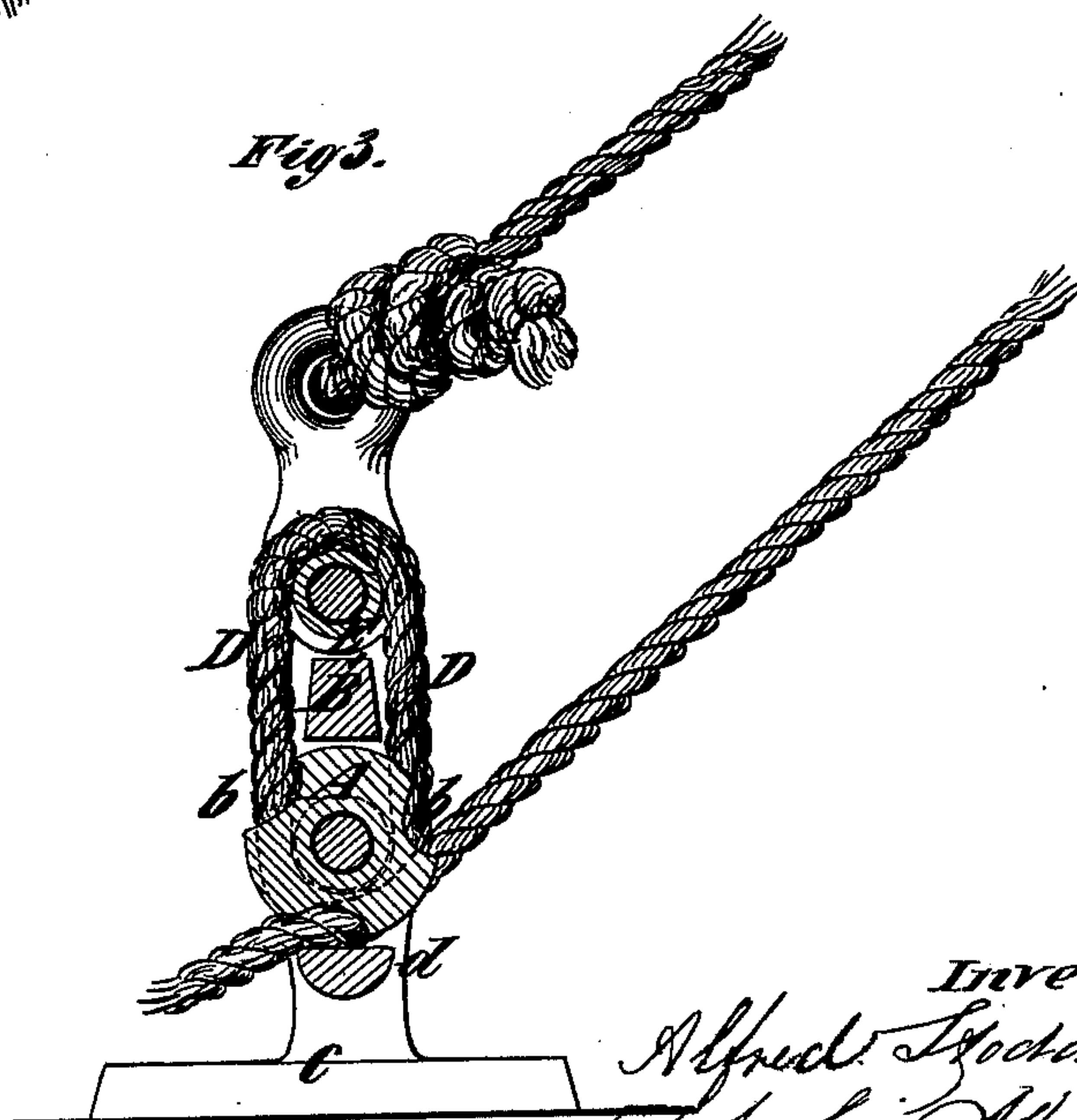
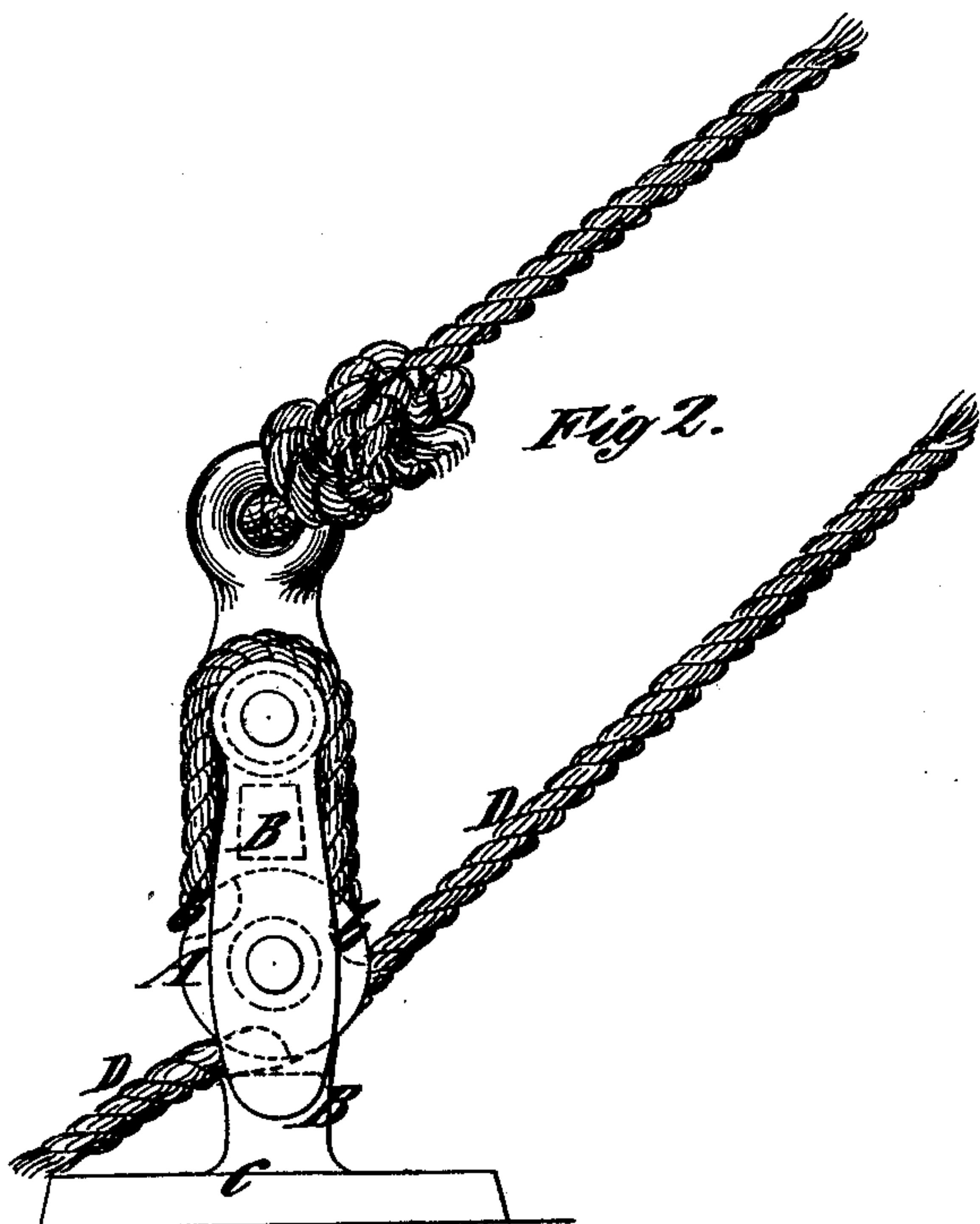
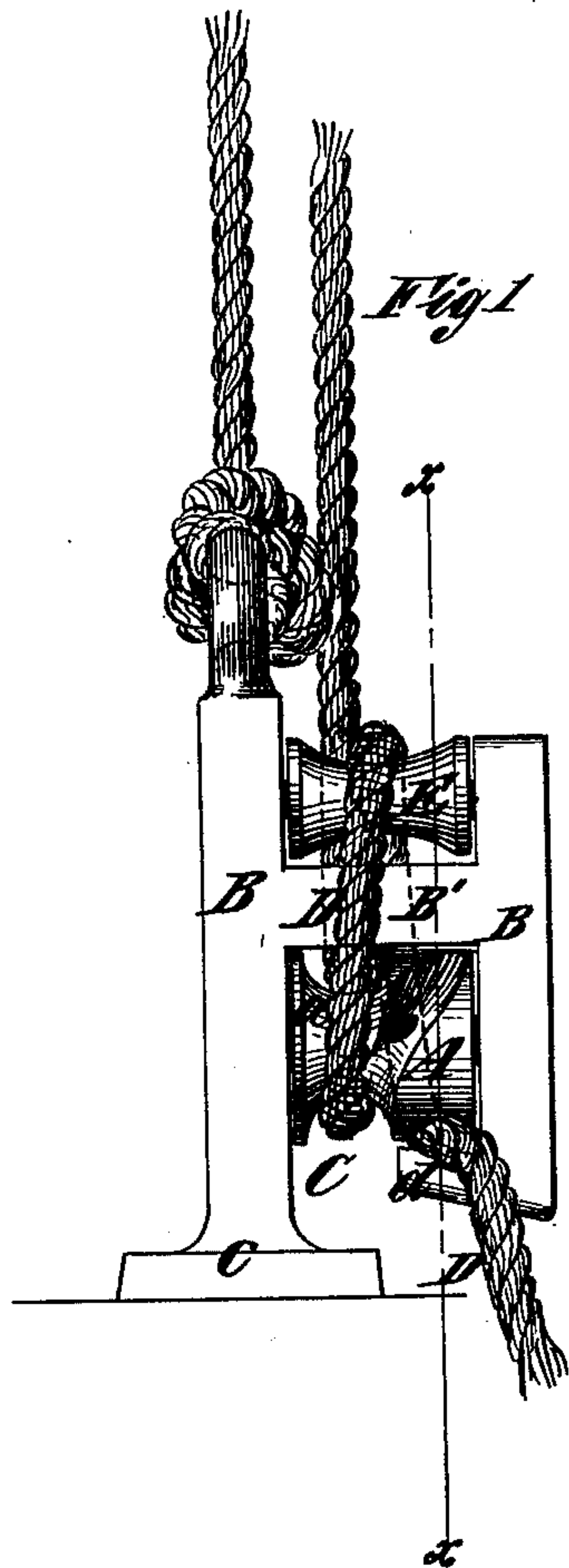


A. STODDARD.
Belaying Device.

No. 222,328.

Patented Dec. 2, 1879.



Witnesses

John Becker
Thomas E. Birch.

Inventor

Alfred Stoddard
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UNITED STATES PATENT OFFICE.

ALFRED STODDARD, OF NEW YORK, N. Y.

IMPROVEMENT IN BELAYING DEVICES.

Specification forming part of Letters Patent No. **222,328**, dated December 2, 1879; application filed September 19, 1879.

To all whom it may concern:

Be it known that I, ALFRED STODDARD, of the city of New York, in the county and State of New York, have invented a certain new and useful Improvement in Belaying Devices, of which the following is a specification.

The object of my invention is to provide, as a substitute for the belaying-pins and cleats heretofore in use on shipboard for securing the ends of ropes, a device which is more handy, because it requires less rope to be belayed to make a secure hitch, and which saves much of the time ordinarily consumed in belaying.

In my device I employ a sheave provided with a circumferential groove and oblique grooves extending therefrom, in which the rope is guided by the operator as the sheave revolves, and which act in conjunction with an adjacent portion of the frame-work to clamp the rope. These sheaves are similar to the sheave for which Letters Patent No. 25,978 were granted Isaac E. Palmer, November 1, 1859.

My invention consists in the combination, with such a pulley or sheave, of a frame-work for supporting the same, provided with an opening opposite the said circumferential groove, to permit the rope to be applied to the pulley without passing it around the same, and with a lug or projection extending in proximity to said oblique grooves upon the same side of the pulley as said opening, and effecting, in conjunction with the sheave, the clamping of the rope.

It also consists in the combination, with such a sheave, of a frame-work therefor composed of two side pieces receiving the ends of the axis of said sheave, provided with such an opening and lug or projection, and comprising a cross-piece uniting the two side pieces, and a sheave arranged parallel with the first said sheave and upon the opposite side of the said cross-piece, whereby, when the rope is passed over both said sheaves, the strain of the rope is brought upon both sides of said cross-piece.

In the accompanying drawings, Figure 1 represents a side view of my belaying device; Fig. 2, a face view at right angles to Fig. 1; and Fig. 3, a vertical section on the dotted line *x x*, Fig. 1.

Similar letters of reference designate corresponding parts in all the figures.

A designates a sheave, provided with a circumferential groove, *a*, extending entirely around it, and several oblique grooves, *b*, (here shown as three in number,) extending from said circumferential groove. This sheave rotates freely upon its axis, which is supported at each end in a frame-work composed of two side pieces, B, and a cross-piece, B', connecting the two side pieces, and represented as cast in one piece therewith. One of the said side pieces is here represented as provided with a foot, *c*, by which it may be fastened to the yard or rail of a vessel; but it might, in place of said foot, be provided with a flange to secure it to the side of a mast, or so constructed as to be lashed to a stay. One of the side pieces is here shown as provided with an eye, in which is secured the end of a rope; but this forms no part of my invention.

One of the side pieces is provided with a lug or projection, *d*, in proximity with the oblique grooves *b*, and effecting therewith the clamping of the rope.

C designates an opening arranged upon the same side of the pulley or sheave as the lug or projection *d*, and permitting the rope D to be applied directly to the sheave without the necessity of passing it around the same.

In order to bring the strain of the rope upon both sides of the cross-piece B', I have represented a second sheave, E, as arranged parallel with the sheave A, and on the opposite side of the cross-piece B'.

In belaying, the rope is first passed under the sheave A, thence up over the sheave E, and back to the sheave A, where it is turned into one of the oblique grooves and clamped in place.

If desirable, the rope might be passed two or three times around the two sheaves instead of once, as represented.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination, with a sheave provided with a circumferential groove and one or more oblique grooves extending therefrom, of a frame-work for supporting the same, provided with an opening opposite the circumferential groove, to permit the rope to be applied to the

sheave without passing it around the same, and also provided with a lug or projection extending in proximity to said oblique grooves upon the same side of the sheave as said opening, and effecting, in conjunction with the sheave, the clamping of the rope, substantially as specified.

2. The combination, with the sheave A, having circumferential and oblique grooves, of the frame-work composed of the side pieces,

B B, provided with the opening C and lug or projection *d*, and comprising the cross-piece B', and the sheave E, arranged parallel with the sheave A and on the opposite side of the cross-piece B', substantially as specified.

ALFRED STODDARD.

Witnesses:

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