

G. A. LANE, Jr.

WITHE-BAND FOR SHIPS' MASTS.

No. 184,531.

Patented Nov. 21, 1876.

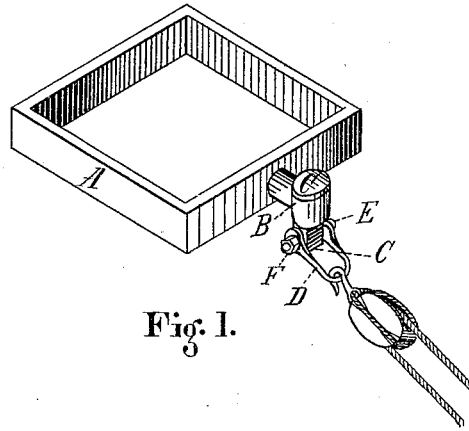


Fig. 1.

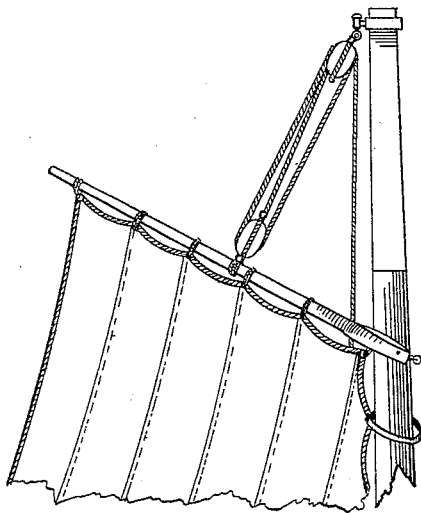


Fig. 2.

Witnesses:  
O. A. Phelps.  
C. G. Reyes

Inventor:  
Gustavus A. Lane, Jr.  
by his attorney A. H. Jewett

# UNITED STATES PATENT OFFICE.

GUSTAVUS A. LANE, JR., OF PIGEON COVE, MASSACHUSETTS.

## IMPROVEMENT IN WITHE-BANDS FOR SHIPS' MASTS.

Specification forming part of Letters Patent No. **184,531**, dated November 21, 1876; application filed October 20, 1876.

*To all whom it may concern:*

Be it known that I, GUSTAVUS A. LANE, JR., of Pigeon Cove, Essex county, Massachusetts, have invented an Improvement in Devices for Suspending Ships' Rigging, &c., of which the following specification is a full and clear description:

My invention relates particularly to means of supporting the running rigging of sailing-vessels, &c., whereby the great friction and rapid wear incident to the common method is avoided.

My invention consists in the combination, with the ordinary withe or band for the mast-head, of a swivel-bolt and shackle, to which the boom-supporting tackle-blocks may be attached.

Heretofore it has been customary to support the sails, booms, &c., by hooking the tackle-block into a ring or into the eye of the withe-band. By this arrangement, the parts wearing continually upon each other are subjected to great friction, and consequently wear very rapidly at a given point, and are liable, on long voyages, to give out in localities where it is most difficult to repair them. To obviate this, by reducing and distributing the friction, is the object of my invention.

Figure 1 is a perspective view of my improvements, and Fig. 2 illustrates the practical application of the same.

In the drawings, A is the withe-band for the mast, and B the eye thereof. C is a withe-bolt, passing through and playing freely in

the eye B. D is a shackle, secured to the bolt C by means of the shackle-pin E, which passes loosely through a hole in the bolt C, and through the eyes of the shackle D. The pin E is kept in position by means of a screw-nut, F, or by a forelock, and the tackle-block is hooked directly into the shackle D. It will thus be seen that I interpose, substantially, a universal joint between the rigid withe-band upon the mast and the boom or other article to be suspended therefrom, since the bolt C has free play upon its vertical axis in the withe-eye, and the shackle plays freely upon the horizontal pin E, working in the bolt C. By means of this arrangement friction is materially reduced, and is divided among the several parts in such way as to add greatly to the durability of the device. If desired, the eyes of the shackle and of the withe-band may be babbitted to lessen friction still further. The neck of the eye B may, if preferred, be permitted to turn freely in the withe-band, and the eye may, with the bolt C, be arranged at any desired angle thereto.

I claim as my improvement in devices for suspending ships' rigging, &c.—

The combination of the withe-band A, eye B, bolt C, shackle D, and pin E, arranged and operating substantially as set forth.

GUSTAVUS A. LANE, JR.

Witnesses:

A. H. SPENCER,  
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