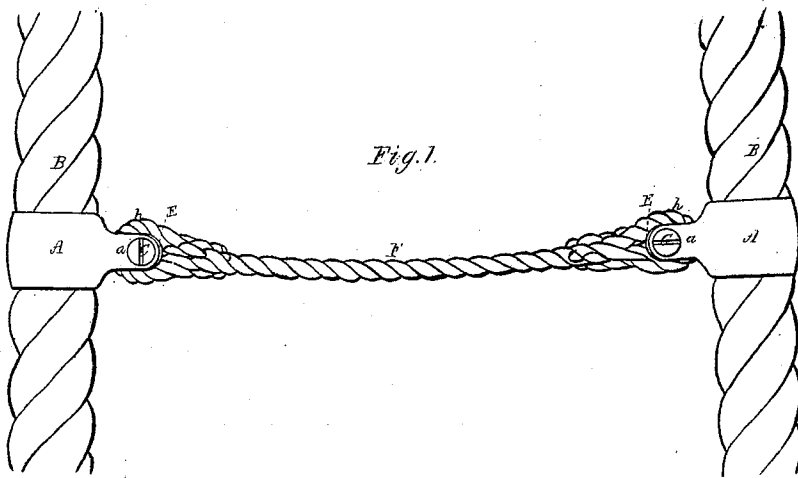


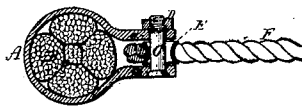
*J. C. Knowlton,*  
*Sails & Rigging.*

*No. 110,476.*

*Patented Dec. 27, 1870.*



*Fig. 2.*



Witnesses  
*S. N. Piper*  
*L. N. Miller*

John C. Knowlton.  
by his attorney  
*R. W. Eady*

# United States Patent Office.

JOHN CALEF KNOWLTON, OF ROCKPORT, MASSACHUSETTS.

Letters Patent No. 110,476, dated December 27, 1870.

## IMPROVEMENT IN ATTACHMENTS FOR RATLINS.

The Schedule referred to in these Letters Patent and making part of the same.

*To all persons to whom these presents may come :*

Be it known that I, JOHN CALEF KNOWLTON, of Rockport, of the county of Essex and State of Massachusetts, have invented a new and useful Improvement in Rigging for Navigable Vessels; and do hereby declare the same to be fully described in the following specification and represented in the accompanying drawing, of which—

Figure 1 denotes a front view of a shroud and ratlin provided with my invention.

Figure 2 is a transverse section of such.

The devices hereinafter described for connecting a ratlin and shroud of a ship or vessel may be termed a "ratlin attachment."

The common mode of fastening a ratlin to a shroud is by what is termed a "seizing," which goes around the shroud and through an eye or loop in the ratlin. The seizing is constantly liable to become worn or chafed, or to rot and break away, much to the annoyance and danger to seamen.

In case of separation of the ratlin from the shroud when a seaman may be standing on the ratlin, he is in danger of falling from the rigging to the deck, or, perhaps, overboard, many a mariner having either lost his life or been seriously injured by reason of breakage of a ratlin from a shroud.

It has therefore been my purpose to obtain a certain and safe fastening or ratlin attachment, which may be thus described:

It consists, first, of a metallic, flexible, or elastic yoke or clasp, A, to extend around the shroud B, and to be formed and to project therefrom in manner as represented.

Through the jaws *a a* of this clasp a screw-bolt, C, is passed, and receives on its screw a nut, D.

The said bolt goes through a metallic thimble, E, arranged between the jaws *a a* and within the eye or loop *h* of the ratlin F.

The clamp, screw-bolt, and nut serve to fasten the yoke to the shroud, and, with the thimble, answer to hold the ratlin in connection with the yoke, and to prevent wear of the ratlin by either the screw or yoke.

The yoke also is advantageous in preventing the shroud from being chafed by spars or ropes.

Another advantage of my ratlin-attachment over the common mode of securing a ratlin is that it admits of a more ready adjustment and fixation of the ratlin with respect to the shroud.

I make no claim to the ratlin attachment made as represented and described in A. S. Davidson's application for a patent, filed in the Patent Office on April 14th, 1866, in which a cam and two yokes or clasps and a screw-bolt and nut are employed to compose such attachment.

My invention is much simpler and involves the employment of a thimble, and the making of the ratlin with an eye to receive such thimble.

In the Davidson attachment the ratlin has no eye, but is simply bent around the cam and held to it by the smaller clasp or yoke.

The ratlin-eye is formed by bending the ratlin near its end in the form of a loop and around the thimble, and fastening the end by a seizing, or interweaving the strands so as to complete the eye, as shown in the drawing; therefore,

What I claim as my invention is—

My improved ratlin attachment as composed of the yoke or clasp A, the screw-bolt C, the nut D, the thimble E, and the eye made in the ratlin in manner as described or represented.

JOHN CALEF KNOWLTON.

Witnesses:

R. H. EDDY,  
J. R. SNOW.