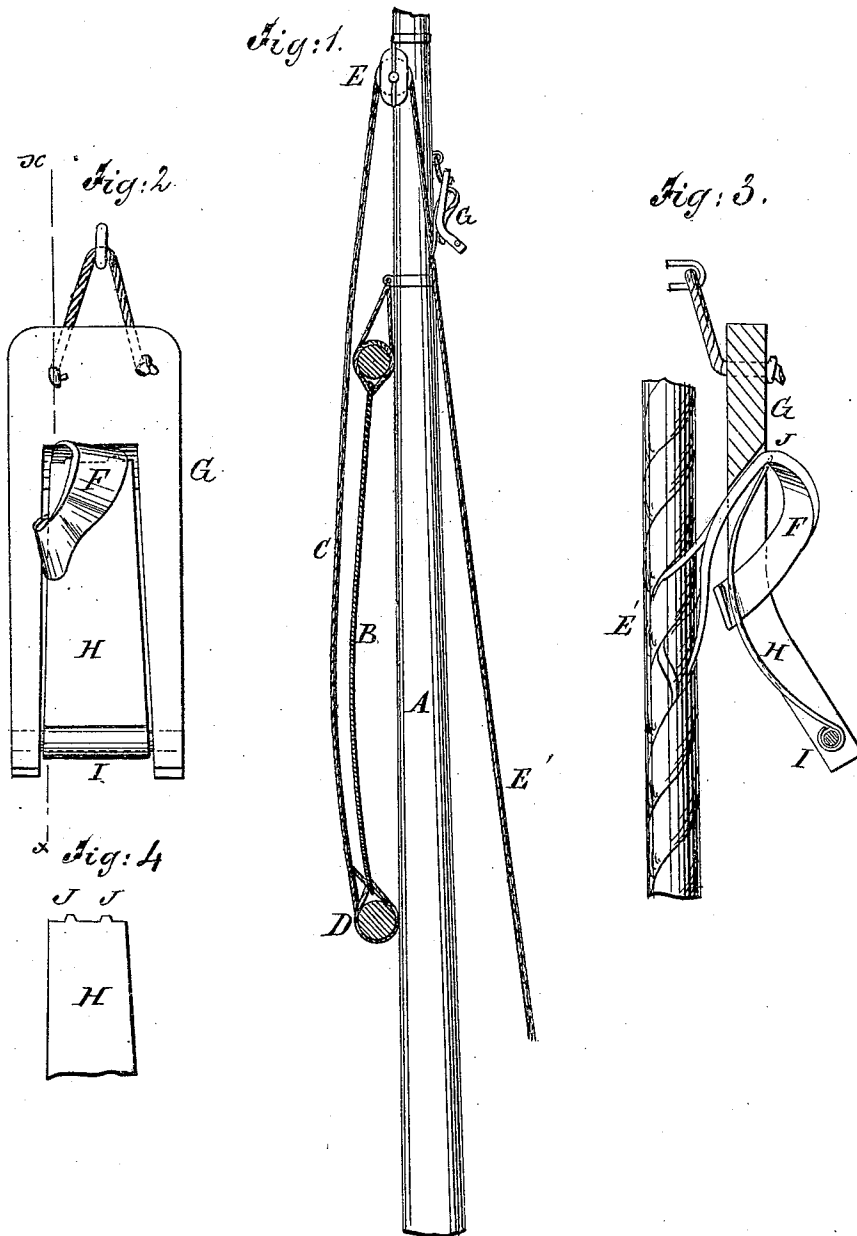


J. W. KNIGHT.

STOPPERS FOR SHIPS' RUNNING GEAR.

No. 178,373.

Patented June 6, 1876.



WITNESSES:

Chas. Nida
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INVENTOR:

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BY *mm*
ATTORNEYS.

UNITED STATES PATENT OFFICE.

JOHN W. KNIGHT, OF NEW YORK, N. Y.

IMPROVEMENT IN STOPPERS FOR SHIPS' RUNNING GEAR.

Specification forming part of Letters Patent No. **178,373**, dated June 6, 1876; application filed November 30, 1874.

To all whom it may concern:

Be it known that I, JOHN W. KNIGHT, of the city, county, and State of New York, have invented a new and useful Improvement in Stoppers for Ships' Running Gear, of which the following is a specification:

The object of this invention is to prevent the chafing and wear of the sails of a vessel from the rope or buntline by which it is drawn up; and it consists of a "stopper" attached to the mast or any part of the rigging by which the rope is held, so that it will hang loosely over the sail, and so that when the "fall" of the rope is hauled in, it will let the rope go free.

Figure 1 is a view of the mast, showing the sail and the buntline or other rope which is used, and the stopper as in actual use. Fig. 2 is a view of the stopper detached. Fig. 3 is a view of the stopper and the rope enlarged, showing the strap attached to the rope and held by the stopper, the view being a section of Fig. 2, taken on the line *xx*, and Fig. 4 is a view of the end of the spring-holder.

Similar letters of reference indicate corresponding parts.

A is the mast. B represents the sail. C is the rope which is attached to the foot of the sail B. This rope extends upward and passes through the pulley-block E. The fall end of the rope E' extends to the deck of the vessel. To prevent this rope from chafing and wearing the sail it is usual for sailors to lash it up with twine to some other part of the rigging. The rope is hitched up or stopped, so that it will hang loose and not chafe the sail. This can be done with twine or cord, but it takes time to put the twine on, and it not infrequently bursts, from the swelling of the rope. Altogether, this mode of stopping the rope or line has been a source of much trouble to sailors.

In carrying out my improvement, a strap of leather or other suitable material, F, is attached to the rope, in a firm and substantial manner, and a metallic stopper, G, which is slotted, as seen in the drawing, is fastened up to the mast or rigging. In the slot is a spring, H, which turns on the rod I, having at its other end one or more small bits or teeth, J, which, as the strap F is drawn through the slot and over the end of the spring H, as seen in Fig. 3, enter the leather and prevent it from slipping, while it holds and stops the rope. When the fall end E' is hauled, the stop lets go instantly, and the sail is raised with trouble or detention. The strap F marks the place where the rope should be stopped.

For stopping, the strap is simply passed through the slot and over the end of the spring and tucked around the edge of the spring, as seen in Fig. 3; but the end may be fastened in any other effective manner.

I do not confine myself to the particular form of this stop, as it may be varied somewhat without departing from my invention.

This stopper may be applied for the lower sails, and for all the purposes for which it is applicable on a vessel.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

The combination, with rope E', of the strap F, loosely-hung slotted stopper G, toothed spring H, and rod I, all arranged as shown and described, so that when the sails are to be unfurled the rope is released by the depression and swinging out of the spring.

JOHN W. KNIGHT.

Witnesses:

T. B. MOSHER,
ALEX. F. ROBERTS.