

(No Model.)

W. POPE.
REEFING DEVICE.

No. 585,226.

Patented June 29, 1897.

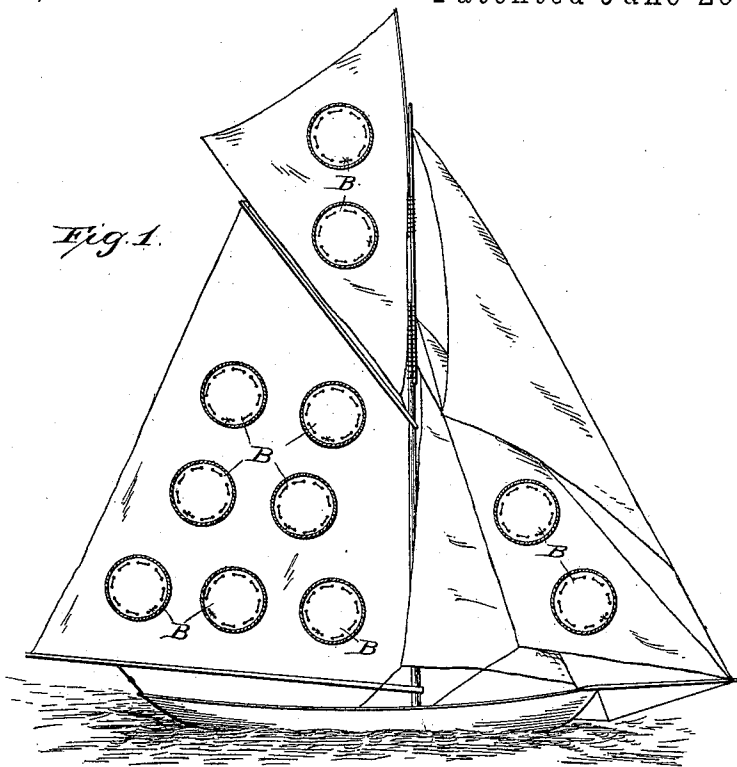


Fig. 1.

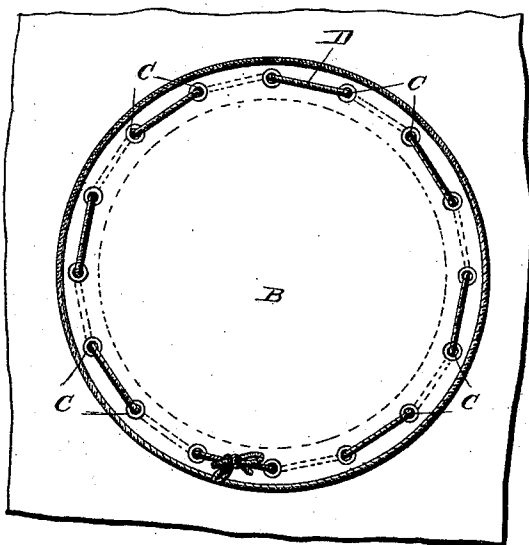


Fig. 2.

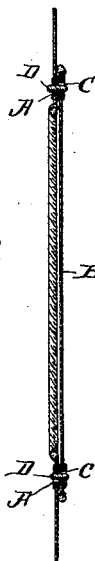


Fig. 3.

Witnesses
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UNITED STATES PATENT OFFICE.

WILLIAM POPE, OF PHILADELPHIA, PENNSYLVANIA.

REEFING DEVICE.

SPECIFICATION forming part of Letters Patent No. 585,226, dated June 29, 1897.

Application filed September 16, 1896. Serial No. 605,939. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM POPE, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a certain new and useful Improvement in Funnel-Reefers, of which the following is a specification.

My invention relates to a new and useful improvement in funnel-reefers, and has for its object to so construct a sail for sailing vessels of all descriptions as to facilitate the reduction of the surface against which the wind may act, thereby obviating the necessity under ordinary circumstances of reefing a sail in the usual manner, and when it becomes necessary to so reef a sail to still further reduce the action of the wind thereon, thereby enabling the heaving to of the vessel in the face of a strong wind, and also to give better control over the vessel when running close in the wind during a storm.

With these ends in view this invention consists in the details of construction and combination of elements hereinafter set forth and then specifically designated by the claims.

In order that those skilled in the art to which this invention appertains may understand how to make and use the same, its construction and operation will now be described in detail, referring to the accompanying drawings, forming a part of this specification, in which—

Figure 1 represents a yacht having my improvement applied to the sails thereof; Fig. 2, an enlarged view of one of the improved reefers, and Fig. 3 a section thereof.

In carrying out my invention I form a number of circular openings in either or all of the sails of a vessel of a diameter in proportion to the size of the sail, preferably about six feet, and place around the edge of each of these openings a number of eyelets A, and when the sail is to be used in winds of ordinary speed the circular openings are closed by the reefer-caps B, which are of a diameter somewhat greater than said openings and have a number of eyelets C placed around their edges, so arranged as to correspond in number and location to the eyelets around the edges of the openings, by which arrangement the caps may be secured in

place by the cords D by passing the ends of the latter through the eyelets, both in the cap and sail, as clearly shown in Figs. 2 and 3, or if found desirable these caps may be secured in place by a concatenation of the cords, which will permit the ready withdrawal of said cords by a single pull upon one end thereof—as, for instance, after the manner of a chain stitch—or these caps may be secured in place by clips or clamps of any desired construction, so as to facilitate their removal when occasion may require, and as it is often necessary to remove the same with great haste this last method may be found preferable under most circumstances.

By the use of my improvement the sails of a vessel may be so reduced in surface as to obviate the necessity of reefing the same in the ordinary manner, and will also give better control over the vessel than when the sails are so reefed, and will also obviate the necessity of lowering the peak of a mainsail to further reduce the wind-surface, and, as is well known, the lowering of the peak often causes serious injury to the sail by the flapping thereof against the surface of said sail.

When a snail provided with my improvement has the caps removed therefrom, the accelerated pressure of the wind passing through the reefer-openings will bulge the sail at these points, forming a number of funnels, through which the wind may pass after the manner of water issuing from a nozzle.

In practice it has been found that the formation of openings in a sail facilitates the sailing of a vessel close in the wind in that when the wind comes in contact with the surface at an angle it is not compelled to travel over the entire surface, but may escape through the first opening in its path of travel, thereby giving place to the succeeding wind-currents; and since the force exerted by the wind upon the sail is represented by the first contact therewith it will be seen that the escape of said wind after this contact will greatly facilitate the action of the succeeding currents thereon.

Another advantage of my improvement is that when sailing from the wind it is not necessary to reef a sail in the ordinary manner, since the caps may be removed and the

sail left in its normal and natural position, but its surface sufficiently reduced to prevent undue strain upon the rigging.

Still another advantage of my improvement is that the reefing-caps may be removed in less time than a sail could be reefed in the ordinary manner, and in the case of a sudden storm this is of great importance, since the safety of the vessel may depend upon the proper trimming of the sails within a very limited time.

Having thus fully described my invention, what I claim as new and useful is—

1. In a device of the character described, a sail having an opening formed therein, and a series of holes formed around said opening a cap having holes formed therein registering with the first-named holes and a cord passed through said holes, as and for the purpose described.

2. In a device of the character described,

a sail having one or more openings formed therein, a series of eyelets secured around said opening, a cap, eyelets secured therein registering with the first-named eyelets and a cord passed through the eyelets, substantially as described.

3. In combination, a sail having one or more openings formed therein and a series of holes formed around said openings, caps for covering said openings, said caps having holes formed therein adapted to register with the first-named holes, and means for securing said caps in place, substantially as and for the purpose set forth.

In testimony whereof I have hereunto affixed my signature in the presence of two subscribing witnesses.

WILLIAM POPE.

Witnesses:

S. S. WILLIAMSON,
MARK BUFORD.