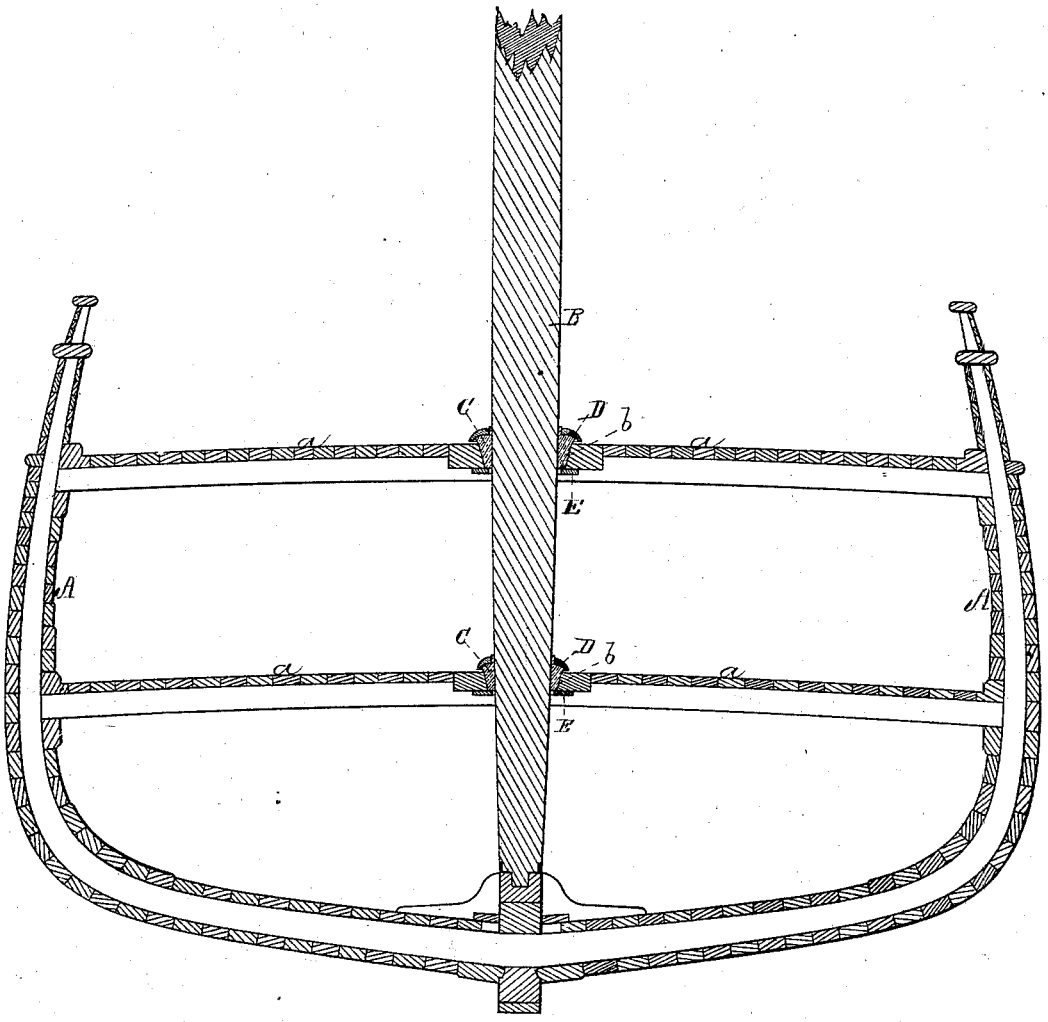
E. ROBBINS.

Deck-Supports for Ships' Masts.

No. 197,980. Patented Dec. 11, 1877.



Witnesses.

S. N. Pipe

L. M. Miller

Inventor

Elisha Robbins.

by his attorney

R. H. Eddy

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

ELISHA ROBBINS, OF COTUIT, ASSIGNOR TO ELISHA F. ROBBINS, OF READING, AND NATHANIEL T. GORHAM, OF BOSTON, MASS.

IMPROVEMENT IN DECK-SUPPORTS FOR SHIPS' MASTS.

Specification forming part of Letters Patent No. **197,980**, dated December 11, 1877; application filed August 14, 1877.

To all whom it may concern:

Be it known that I, ELISHA ROBBINS, of Cotuit, of the county of Barnstable, of the State of Massachusetts, have made a new and useful invention for supporting a mast in the deck of a navigable vessel; and do hereby declare the same to be described in the following specification and represented in the accompanying drawing, which is a transverse section of a hull and mast with my invention applied thereto, it being to afford to the mast an elastic bearing on the deck, in order to overcome or prevent certain difficulties incident to wedging the mast or fixing it immovably in the deck, as heretofore practiced.

In carrying out my improvement I insert in the deck around the mast an elastic collar, to encompass the mast when within such deck, the mast at its foot being stepped in the ordinary way. This elastic collar may be in one piece, or it may be composed of a series of pieces of vulcanized india-rubber, or other suitable elastic material. I construct it wedge-shaped in transverse section, and make the hole in the deck for its reception correspondingly tapering or conical, in order that when the collar is pressed down within the socket for its reception it may be caused to expand laterally, so as to fit with a water-tight joint to the socket and the mast. Above the collar and around the mast I arrange an inelastic annulus or cap, to rest upon and cover the upper part of the elastic collar, and to aid in forcing it downward and keeping it in place. Furthermore, another such annulus I generally place around the mast, just below or at the base elastic bearing or collar. The lower annulus is fastened to the deck. Its inner diameter should be greater than the diameter of the part of the mast encompassed by it.

In the drawings, A denotes the hull; B, the mast; C, the elastic bearing or collar, and D E the two annuli. The socket in the deck *a* for the collar is shown at *b*.

Very material advantages result from the elastic collar thus applied to a mast. It relieves the deck from the heavy jerking strains to which it is subjected when the mast is firmly keyed to the deck and the vessel is at sea. It lessens the danger of springing the mast. It insures a tight joint around it, and it operates to equalize the strains on the stays and the shrouds.

I do not claim "supporting the masts of vessels in flexible and elastic partners and steps."

I do not use an elastic step, as I employ the common inelastic step to the foot of the mast, whereby I am enabled to keep the mast duly centered with the hull, as well as properly supported at its foot.

What I claim as my invention is as follows:

1. The combination of the mast and hull of a vessel with an inelastic step for the foot of the mast, and with an elastic collar encompassing the mast and supporting it where in each deck over such step.

2. The combination of the cap-ring D with the wedge-shaped elastic collar C and the deck and mast, all as set forth.

3. The combination of the lower annulus with the deck and mast, the elastic collar, and the cap-ring, all being arranged and applied substantially as explained.

ELISHA ROBBINS.

Witnesses:
R. H. EDDY,
JOHN R. SNOW.