

(No Model.)

W. D. F. H. TROST.

DEVICE FOR PREVENTING INJURY TO COLLIDING VESSELS.

No. 565,614.

Patented Aug. 11, 1896.

Fig. 1.

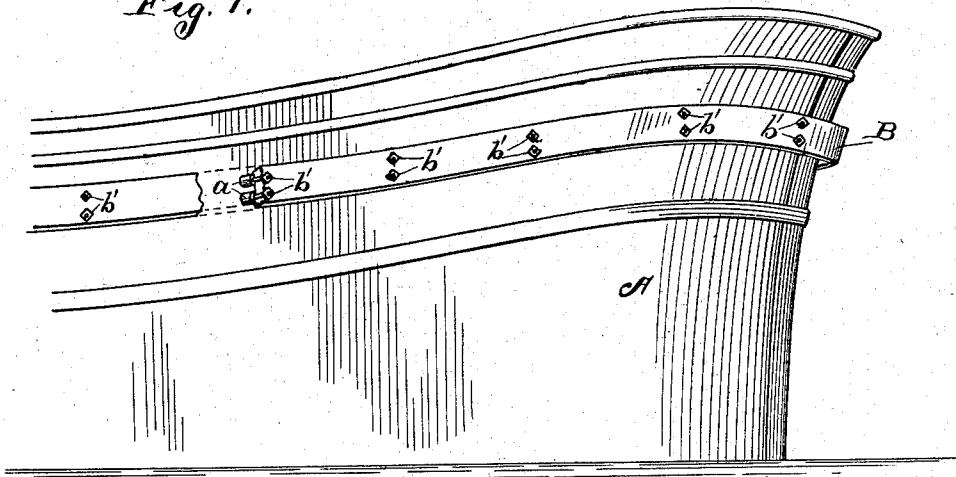


Fig. 2.

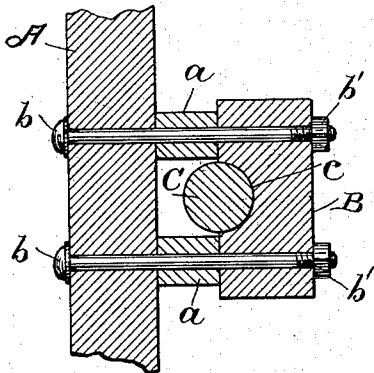


Fig. 3.

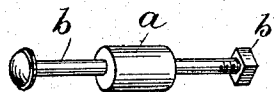
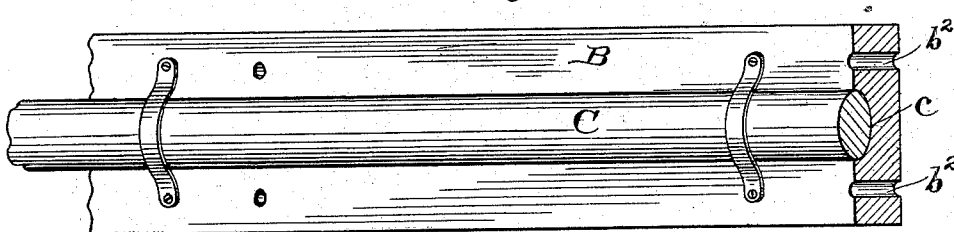


Fig. 4.



Witnesses:

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UNITED STATES PATENT OFFICE.

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DEVICE FOR PREVENTING INJURY TO COLLIDING VESSELS.

SPECIFICATION forming part of Letters Patent No. 565,614, dated August 11, 1896.

Application filed November 27, 1895. Serial No. 570,274. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM D. F. H. TROST, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Devices for Preventing Injury to Colliding Vessels, of which the following is a specification.

This invention relates to an apparatus or device to be applied to the body of vessels, such as steamboats, ships, and sailing boats and vessels of various kinds, as well as to small launches and row-boats, to act as a fender and to prevent them being damaged when in collision with one another, or when colliding with other obstacles; and it consists in certain peculiarities of the construction, novel arrangement and operation of the various parts thereof, as will be hereinafter more fully set forth and specifically claimed.

The objects of my invention are, first, to provide a fender or protecting device for vessels which shall be simple and inexpensive in construction, strong and durable, and effective in operation; and, second, such a device which may be readily applied to vessels of almost any construction and in such a manner as to prevent any serious damage to the body of the vessel when the same is in collision with another vessel or other obstacle.

In order to enable others skilled in the art to which my invention pertains to make and use the same, I will now proceed to describe it, referring to the accompanying drawings, in which—

Figure 1 is a view in side elevation of a portion of the body of a vessel, showing my fender or protecting device applied thereto. Fig. 2 is a cross-sectional view, showing a portion of the body of a vessel and the manner of securing the fender or protecting device thereto. Fig. 3 is a perspective view of one of the securing-bolts detached, showing the elastic cushion thereon; and Fig. 4 is a rear perspective view, partly in section, of a portion of the protecting device detached from the vessel.

Similar letters refer to like parts throughout the different views of the drawings.

A represents the body of a vessel, which may be of any of the various kinds employed in navigating the waters, either as pleasure-

boats, passenger-steamers, or freight vessels. To the outside of the body and near its upper portion and extending longitudinally therewith is placed and secured a protecting-beam B, which may be made of any suitable size, form, and material, but preferably of wood and rectangular in cross-section, as is clearly shown in Fig. 2 of the drawings. This beam or piece B is provided with a longitudinal groove or recess *c*, which is usually circular, to receive a cylindrical piece of rubber or other elastic substance C, which extends with the beam B entirely around the vessel.

As shown in Figs. 1 and 2 of the drawings, the beam or piece B is held at a slight distance from the outer surface of the wall or body of the vessel by means of the elastic cushions *a*, which are placed around the bolts *b* between the body and said beam, thus affording a yielding cushion for the beam should it be struck by a passing vessel. By reference to Fig. 2 of the drawings it will also be seen that the cylindrical piece C of rubber or other suitable elastic material is located between the cushions *a* and the beam and the body of the vessel, and as it extends longitudinally with the vessel it will afford a cushion for the beam at any point at which the same might be struck. In order that the beam B may yield when in contact with a vessel or other obstacle, it is loosely secured on the bolts *b*, and for this reason the openings *b*² in the beam are somewhat larger than the bolts which they are designed to receive.

While I have shown one protecting-beam only applied to the body of the vessel, yet it is obvious that I may apply as many as is desired, and at the proper place on the body to protect it against injury when colliding. Vessels are frequently injured by collision with the piers or wharfs when entering their docks, and it is apparent that my invention will be found very useful in protecting them in such cases, as well as against other passing vessels.

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

1. The combination with the body of a vessel, of a beam loosely secured longitudinally thereon and at a slight distance therefrom, and having on its adjacent surface a longi-

tudinal groove or recess, with an elastic piece located within said recess and coextensive with the beam, substantially as described.

2. The combination with the body of a vessel, of the beam B, provided with a longitudinal groove *c*, on its inner surface and loosely secured longitudinally to the body of the vessel by means of bolts, and at a slight distance therefrom, with a series of elastic cushions *a*,

located between the beam and body on the securing-bolts, and an elastic piece located in the groove *c*, and extending longitudinally with the beam and between the cushions *a*, on the bolts, substantially as described.

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Witnesses:

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