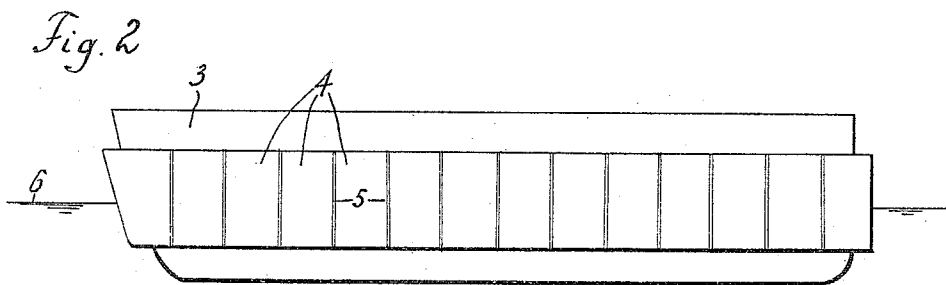
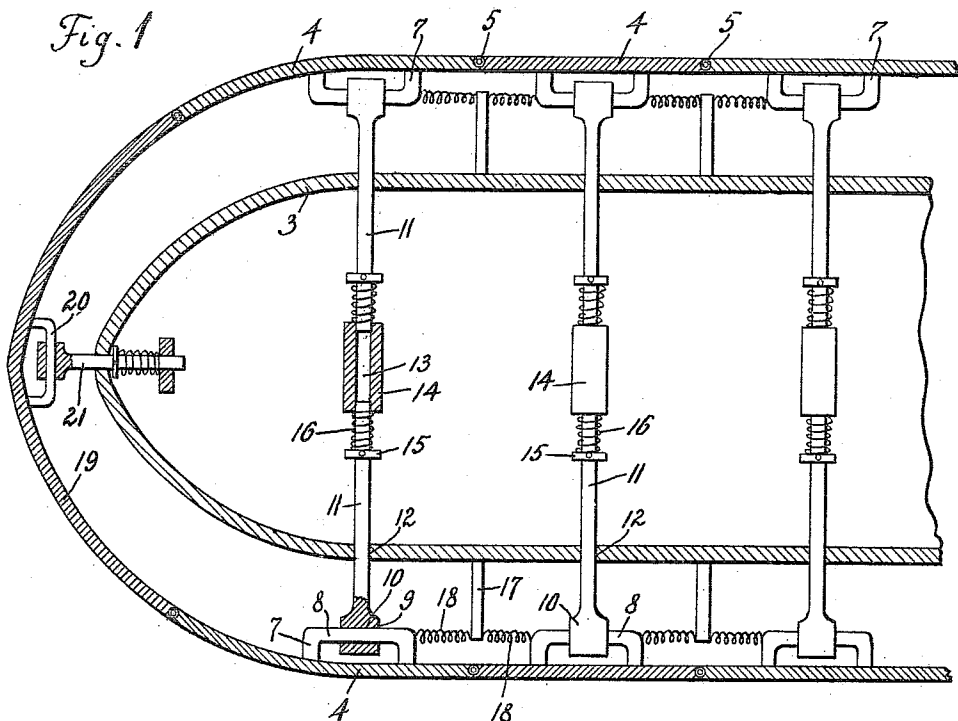


M. MORÁUSZKY.
FENDER FOR VESSELS.
APPLICATION FILED AUG. 31, 1910.

979,539.

Patented Dec. 27, 1910.



WITNESSES
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MÁTYÁS MORÁÚSZKY, OF NEW YORK, N. Y.

FENDER FOR VESSELS.

979,539.

Specification of Letters Patent.

Patented Dec. 27, 1910.

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To all whom it may concern:

Be it known that I, MÁTYÁS MORÁÚSZKY, a subject of the King of Hungary, and a resident of the city of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Fenders for Vessels, of which the following is a specification.

The present invention relates to fenders for vessels, and has for its object to prevent injury to ships' hulls, their bows and sides from collision, grounding or waves.

With these and other objects in view, which will appear as the nature of the invention is better understood, the same consists in the construction, arrangement and combination of the several parts hereinafter fully described, pointed out in the appended claims and illustrated in the accompanying drawings, it being understood that various changes may be made in the size and proportion of the several parts and minor details of construction without departing from the spirit or sacrificing any of the advantages of the invention.

One of the many possible embodiments of the invention is illustrated in the accompanying drawings, in which:—

Figure 1 is a horizontal section taken through a ship's hull provided with the invention, forming the subject matter of the present application, and Fig. 2 is a diagrammatic view of a ship's hull or body with the fender, constructed in accordance with the present invention.

In the drawings, the numeral 3 indicates the hull or body of the vessel, constructed in any suitable manner and being of any desired dimensions. The fender of the vessel comprises a plurality of planks or plates 4 made of any suitable material, and being joined at 5 by means of hinges or other flexible connections, allowing of a relative movement of the said plates. These plates are located at a suitable distance from the outer surface of the hull and parallel to the sides and bows of the vessel. The height and width of the plates 4 varies, of course, according to the requirements, for instance, in the case shown in Fig. 2 of the drawings the same cover a substantial part of the vessel below the water line 6 and above the same, and it will be easily seen that more than one row of planks or plates 4 may be arranged above each other without departing from the invention.

To each plate 4 is attached a U-shaped member 7, the base portion 8 of which is slidably arranged in the bore 9 of the head 10 of a supporting bar 11, which projects out through a hole 12 in the side of the vessel body, its inner end being slidably arranged in the bore 13 of a block 14, which is fixedly attached to the hull. At a suitable distance from the edge of the block is arranged a disk 15 upon the bar 11, against which disk and the block 14 bears a spring 16, whereby the corresponding plate member 4 is kept in its outermost position. As will be seen from an inspection of Fig. 1, each block is engaged by two supporting bars 11, which project through the opposite sides of the hull. In order to keep the U-shaped members 7 and thus the plate members 4 in their center positions relative to the axes of the supporting bars 11, lugs 17 project from the sides of the vessel against which bear springs 18 in engagement with the U-shaped members. The plate member 19 at the bow part of the vessel is also provided with a U-shaped member 20, in engagement with a supporting bar 21, similar to the supporting bars 11.

The operation of the device is as follows: In case of a collision, and if the blow is directed in a direction parallel to the axes of the supporting bars 11, the plate members will be forced inward toward the side of the ship, and it will be easily seen that the shock will be taken up by the springs 16, 16. Should a blow be received at an angle to the axes of the supporting rods 11, the supporting bars will be forced inward and at the same time the fender plates 4 forced in the direction of the longitudinal axis of the vessel, the sliding arrangement between the plates and the supporting rods 11 allowing of such movement, or in other words, the plates 4 will move in the direction of the blow. It is obvious that the springs 16 and 18 will tend to bring the fender back to its normal, operative position.

What I claim is:

1. The combination with the hull of a vessel, of a plurality of fender plates surrounding the same, supporting bars slidably arranged in said hull and projecting through the sides and bows thereof toward said fender plates, means engaging said fender plates and said supporting bars and allowing of a relative movement of the same in the direction of the longitudinal axis of the

vessel and of a movement in the direction of the longitudinal axes of said bars, and springs engaging said supporting rods and some stationary part of said hull.

5 2. The combination with the hull of a vessel, of a plurality of fender plates surrounding the same, supporting rods slidably arranged in said hull and projecting through the sides and bows thereof toward said fender plates, means engaging said fender
10 plates and said supporting bars and allowing of a relative movement of the same in the direction of the longitudinal axis of the vessel and of a movement in the direction of
15 the longitudinal axes of said bars, springs engaging said supporting rods and some stationary part of said hull, and springs for keeping said plates in their central positions relative to said supporting bars.

20 3. The combination with the hull of a ves-

sel, of a plurality of fender plates surrounding the same, supporting bars slidably arranged in said hull and projecting through the sides and bows thereof toward said fender plates, U-shaped members fastened to
25 said fender plates and engaging slidably said supporting bars and allowing a movement of said plates in the direction of the longitudinal axis of the vessel, springs engaging said supporting rods and some sta-
30 tionary part of said hull, and springs for keeping said plates in their central positions relative to said supporting bars.

Signed at New York, in the county of New York and State of New York, this 18th
35 day of August, A. D. 1910.

MÁTYÁS MORÁÚSZKY.

Witnesses:

EDUARD THOMKA,
SZTAJAN KURT.