

No. 607,267.

Patented July 12, 1898.

J. S. C. NICHOLS.

VESSEL BRAKE.

(Application filed Dec. 10, 1897.)

(No Model.)

Fig. 1.

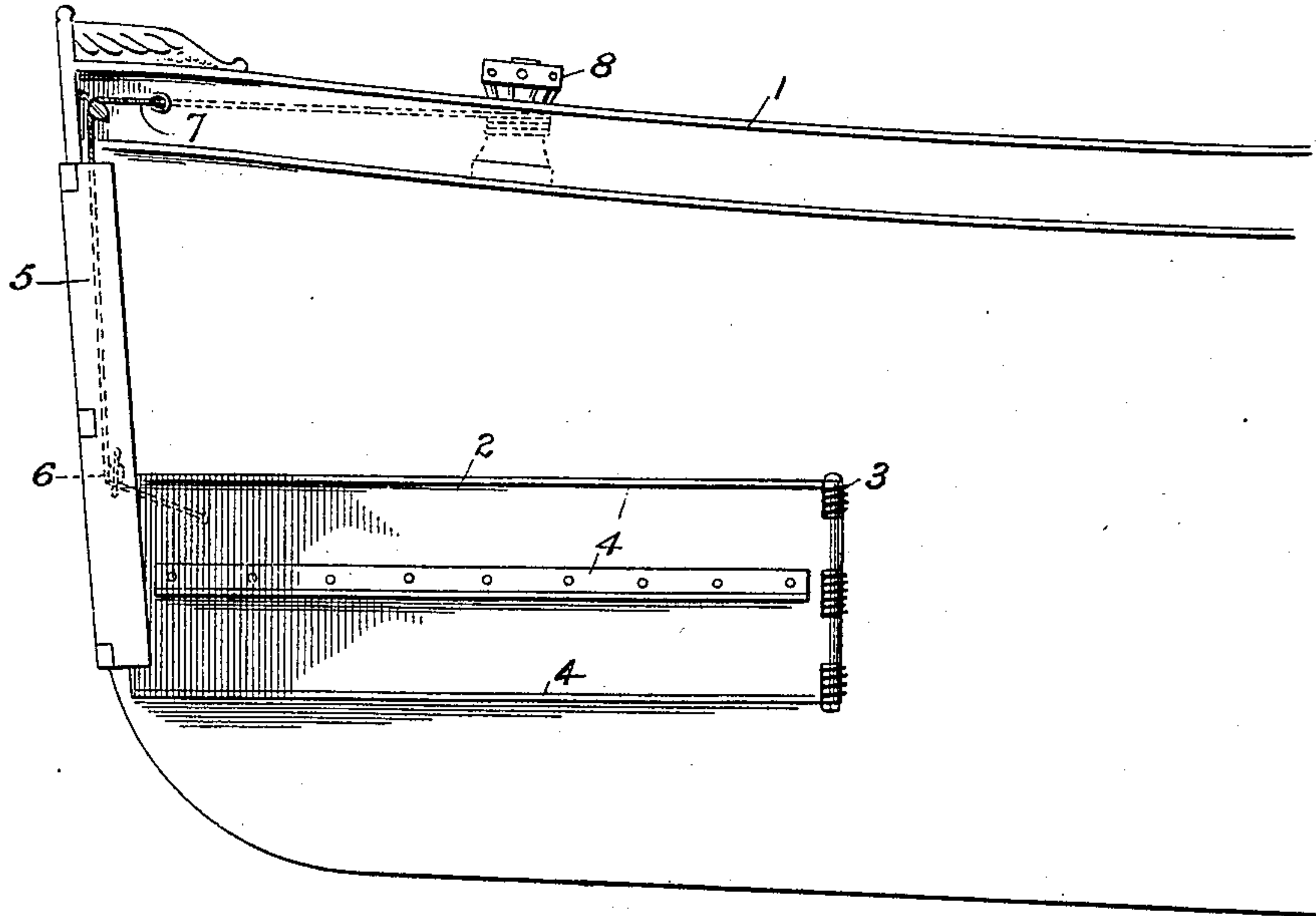


Fig. 2.

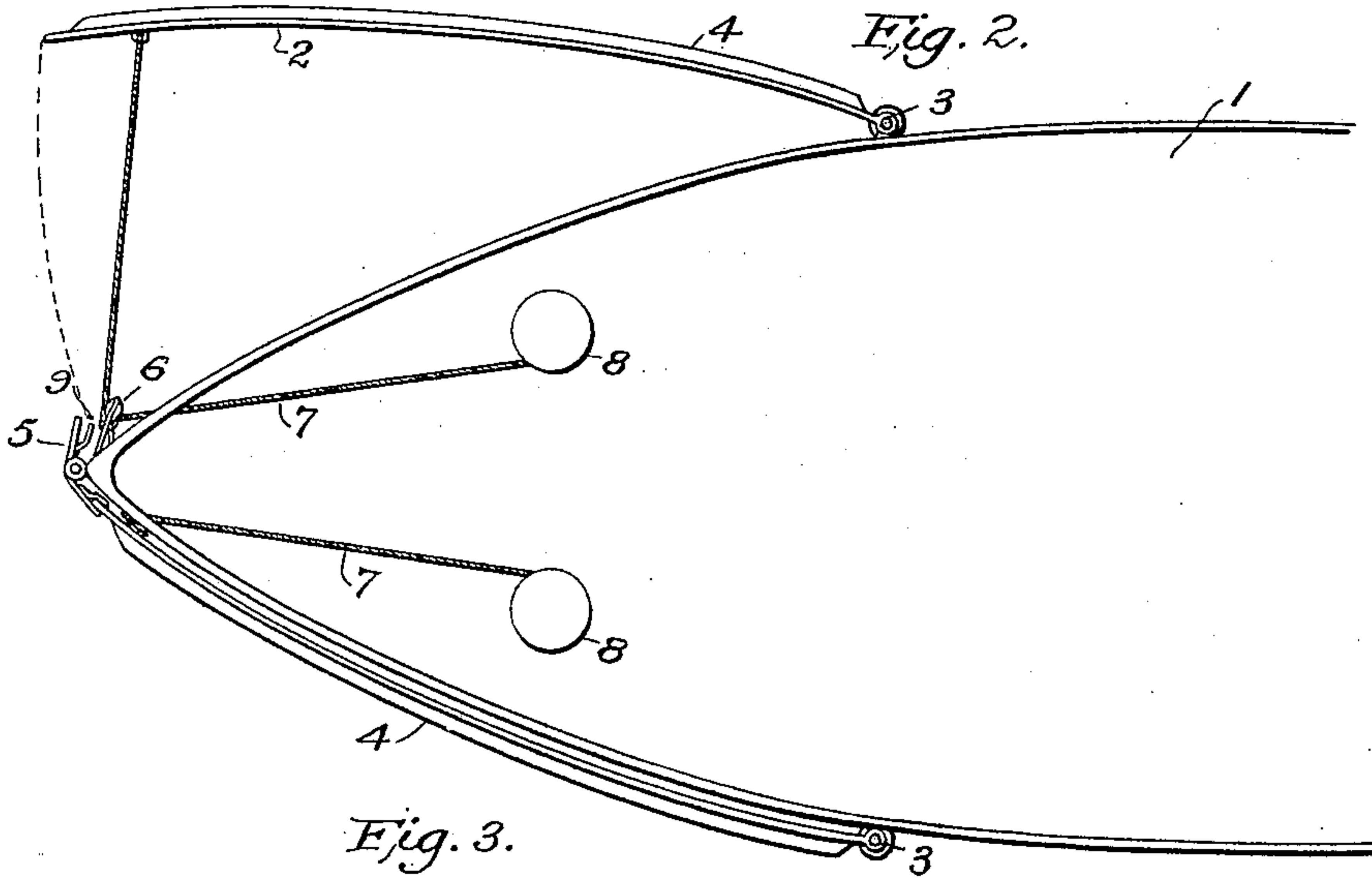
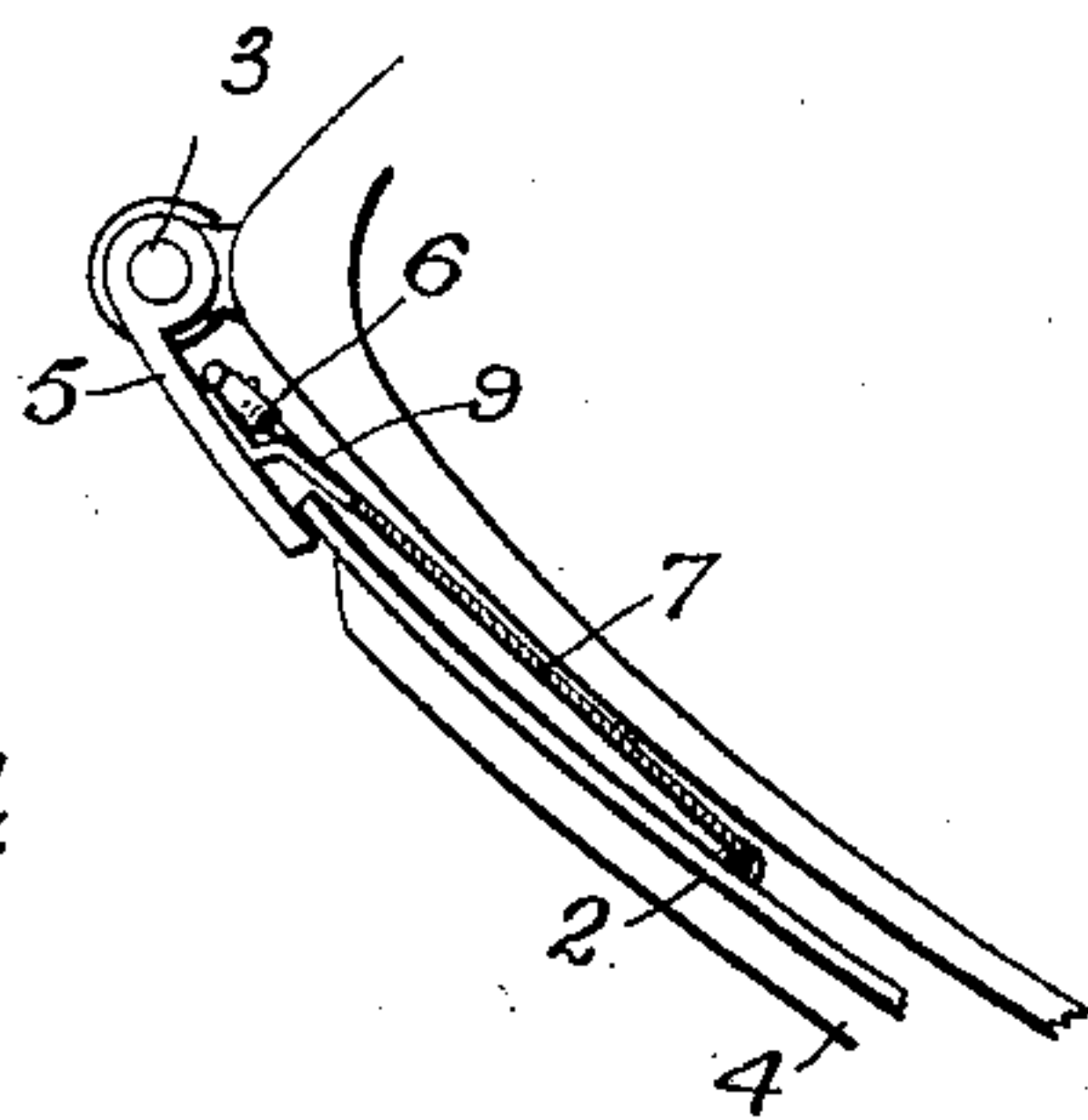


Fig. 3.



Witnesses

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# UNITED STATES PATENT OFFICE.

JOHN S. C. NICHOLS, OF NOBLE, ILLINOIS.

## VESSEL-BRAKE.

SPECIFICATION forming part of Letters Patent No. 607,267, dated July 12, 1898.

Application filed December 10, 1897. Serial No. 661,422. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN S. C. NICHOLS, a citizen of the United States, residing at Noble, in the county of Richland and State of Illinois, have invented certain new and useful Improvements in Vessel-Brakes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to vessel-brakes, the object in view being to provide a simple and efficient braking device for checking the progress of vessels, of different descriptions to the end that serious collisions and accidents may be prevented, and for facilitating the general handling of the vessel while under way. The detailed objects and advantages of the invention will be clearly pointed out in the course of the subjoined description.

The invention consists in a vessel-brake embodying certain novel features and details of construction and arrangement of parts, as hereinafter fully described, illustrated in the drawings, and incorporated in the claims hereto appended.

In the accompanying drawings, Figure 1 is a side elevation of a sufficient portion of a vessel to illustrate the application of the improved brake thereto. Fig. 2 is a diagrammatic plan view of the same, showing one of the brakes thrown out of its operative position. Fig. 3 is a detail section showing the engagement between the bow-plate and check-plate or brake proper.

Similar numerals of reference designate corresponding parts in the several figures of the drawings.

Referring to the drawings, 1 designates the bow portion of a vessel, preferably a steam-vessel, having applied thereto on each side a check-plate or brake 2 of a size and shape corresponding to the size and displacement of the vessel. This plate is preferably of oblong form and is hingedly connected at its rear end to the vessel, as indicated at 3, so that its forward end may swing toward and away from the bow of the vessel. This plate is also provided upon its outer surface with a series of ribs 4, which, in addition to their function of bracing the plate 2, also serve as

bilge-keels, whereby the tendency of the vessel to rock is to a certain extent overcome.

Secured pivotally to the bow of the vessel and upon each side thereof is a bow-plate 5, the front edge thereof being pivotally connected to the vessel and the rear or free edge thereof being adapted to fold over and outside of the front edge of the brake-plate 2. Arranged beneath each bow-plate 5 are one or more pulleys or sheaves 6, around which run one or more cables 7, the said cables connecting at one end to the free end of the brake-plate 2 and at their opposite end wound upon a suitable drum or capstan 8, by the rotation of which the brake-plates may be drawn inward against the vessel or released. The bow-plate is provided near its free edge with one or more lugs 9, designed for engagement with the free end of the plate 2, so that as the plate 2 is moved inward by the cables said plate acts upon the lugs 9, so as to take up the bow-plate and rock the same inward until the bow-plate covers the edge of the brake-plate.

From the foregoing description it will be seen that by unwinding the drum and releasing the cables the free edges of the plates 2 are released, thus allowing said edges to move outward away from the vessel, this operation being assisted by the pressure of the water against the inner side of said plates. When the plates are thrown outward, a broad resistance-surface is presented to the water, and the forward progress of the vessel is correspondingly resisted and checked, thus causing a stoppage of the vessel in a much shorter space of time than is possible under the present construction. At the same time when the parts are in their folded positions they afford no additional resistance to the progress of the vessel through the water to that which is encountered in their absence. The brake-plates are preferably located below the water-line of the vessel and thus do not detract in any way from the normal appearance thereof. The outward movement of brake-plates is greatly facilitated by employing stiff spring-hinges at the points where the plates are connected pivotally to the vessel's hull.

It will of course be understood that the brake hereinabove described is susceptible of various changes in the form, proportion,



and minor details of construction which may accordingly be resorted to without departing from the principle or sacrificing any of the advantages of the invention.

5 Having thus described the invention, what is claimed as new, and desired to be secured by Letters Patent, is—

10 1. The combination with a vessel, of a brake-plate hingedly connected thereto, operating means therefor, and a hinged bow-plate for covering in the free edge of the brake-plate, substantially as described.

15 2. The combination with a vessel, of a brake-plate hingedly connected thereto, means for holding said plate against the side of the vessel, and a hinged bow-plate constructed to in-

terlock with the brake-plate and to be held inward by the brake-plate, substantially as described.

3. The combination with a vessel, of a brake- 20 plate hingedly connected thereto at one end, a bow-plate also hingedly connected to the vessel, operating means for the brake-plate, and lugs on the bow-plate for engagement with the free end of the brake-plate, substan- 25 tially as described.

In testimony whereof I affix my signature in presence of two witnesses.

JNO. S. C. NICHOLS.

Witnesses:

IRA F. JONES,

FRED STATTARD.