

No. 704,729.

Patented July 15, 1902.

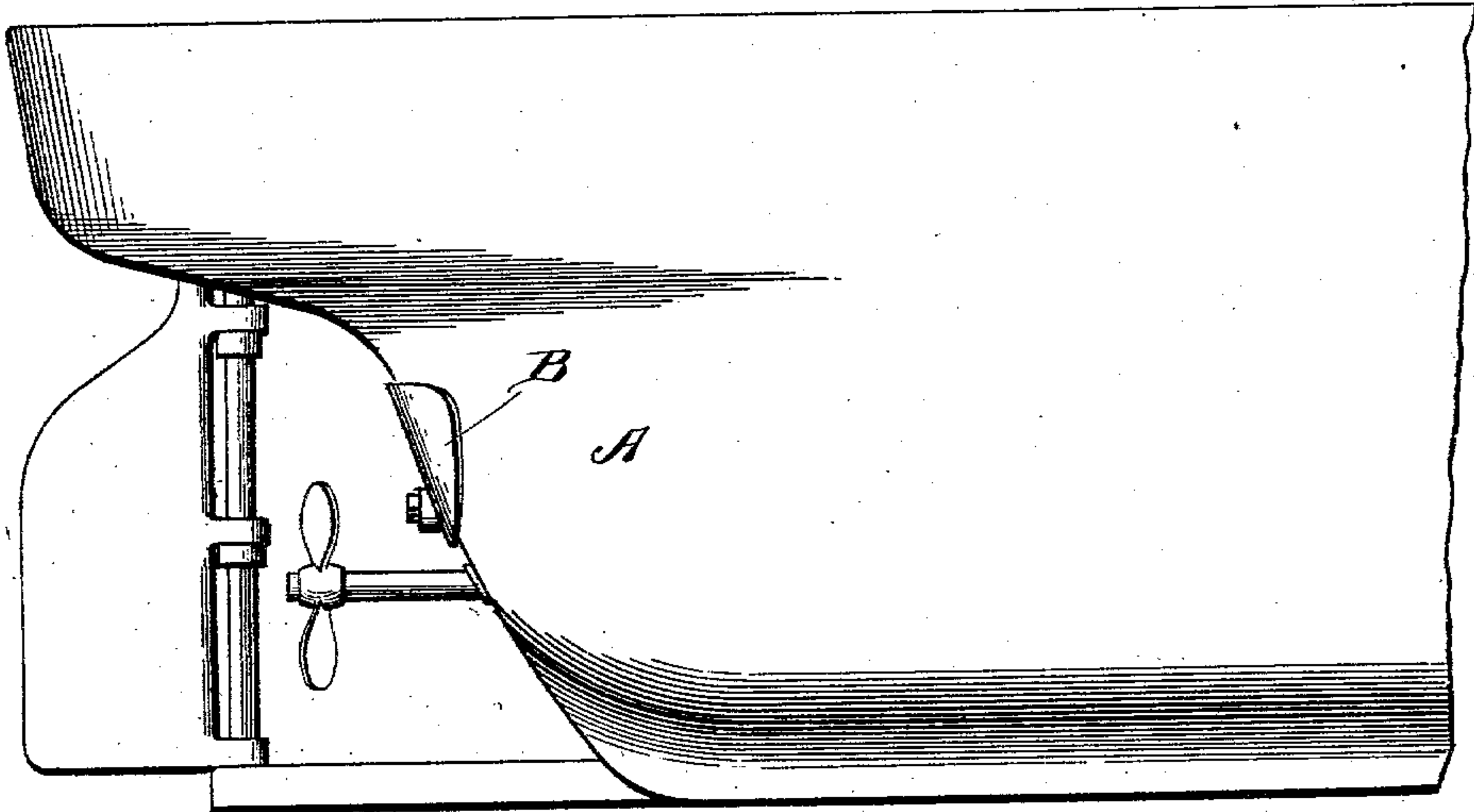
A. ZERBE.

DEVICE FOR RETARDING THE SPEED OF VESSELS.

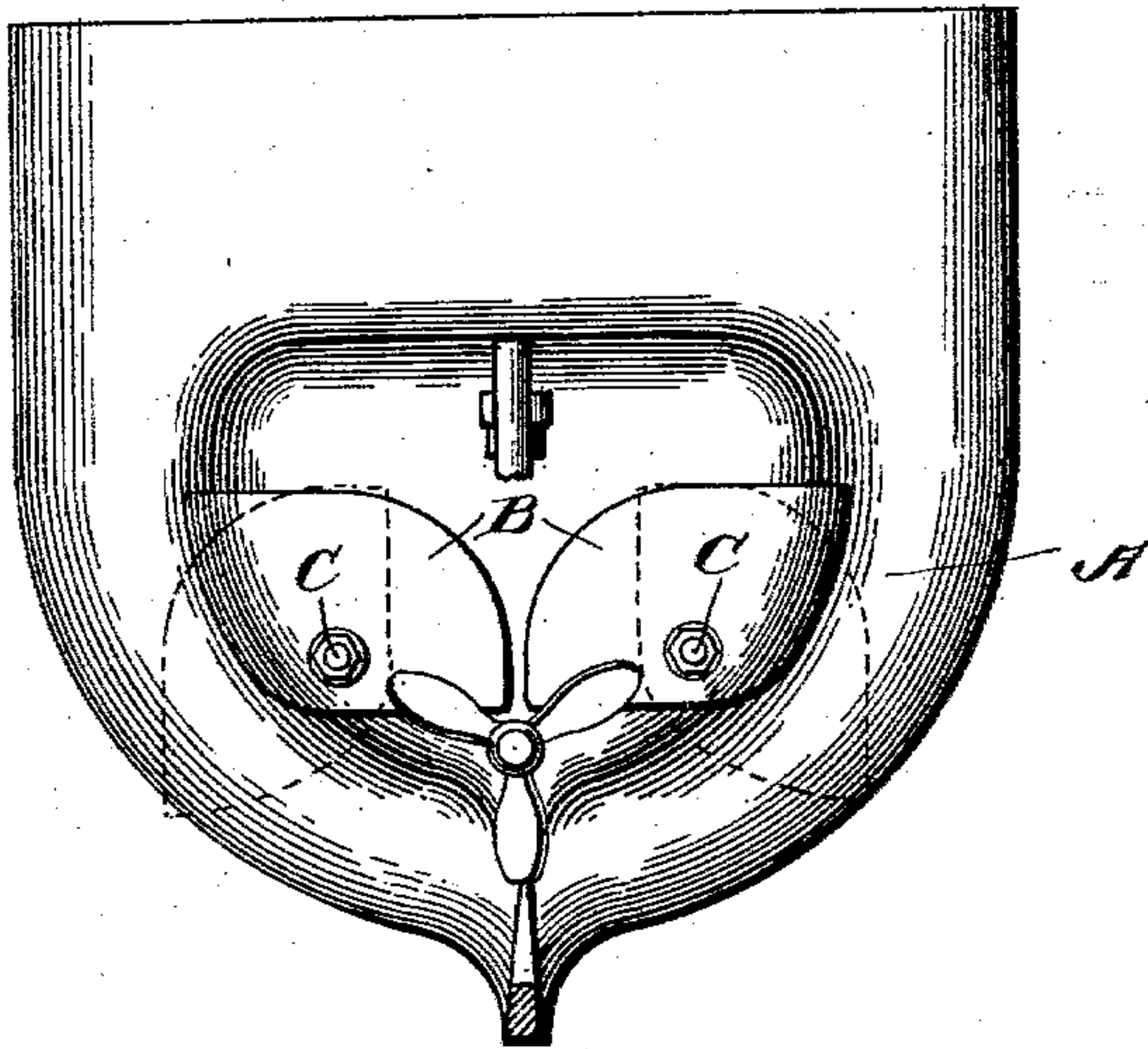
(Application filed Nov. 21, 1901.)

(No Model.)

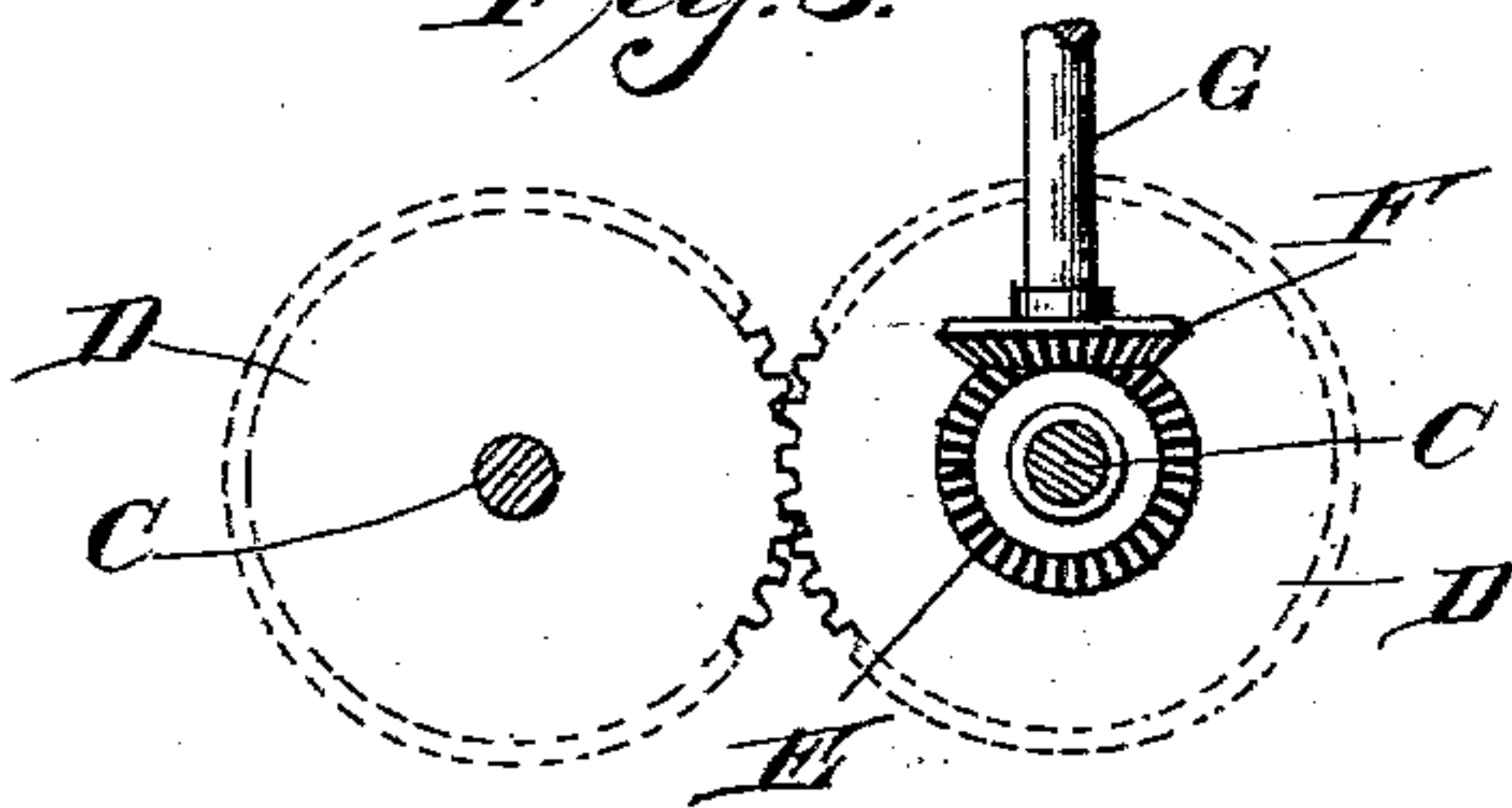
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



Witnesses:

*Louis D. Heinrichs*  
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*Aaron Zerbe*  
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*Atty*



# UNITED STATES PATENT OFFICE.

AARON ZERBE, OF PHILADELPHIA, PENNSYLVANIA.

## DEVICE FOR RETARDING THE SPEED OF VESSELS.

SPECIFICATION forming part of Letters Patent No. 704,729, dated July 15, 1902.

Application filed November 21, 1901. Serial No. 83,122. (No model.)

*To all whom it may concern:*

Be it known that I, AARON ZERBE, a citizen of the United States, residing at Philadelphia, county of Philadelphia, and State of Pennsylvania, have invented a certain new and useful Improvement in Devices for Retarding the Speed of Vessels, of which the following is a specification.

My invention relates to a new and useful improvement in devices for retarding the speed of vessels, and has for its object to provide mechanism which will be secured at the rear of the vessel and which may be easily manipulated from the interior of the same so as to cause the speed of the vessel to be retarded to a greater or less degree, as occasion requires.

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, the construction and operation will now be described in detail, referring to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a side elevation of the rear portion of a vessel having my invention applied thereto; Fig. 2, a rear view of a vessel having my improvement applied thereto; Fig. 3, a view of the gearing in the interior of the vessel for operating the mechanism.

In the drawings, A represents the rear portion of the vessel, and B represents plates secured to the shafts C, extending to the interior of the vessel, and these shafts have secured upon their inner ends the gear-wheels D, which are in mesh with one another. One of the gear-wheels has secured to it the beveled gear-wheel E, which is in mesh with the second beveled gear-wheel F, secured upon a vertical shaft G, which extends upward to the deck of the vessel and is there provided with means for rotating the same. The plates B normally lie flat against the rear portion of the vessel and are curved so as to follow the general outline of this portion, so as not to present when in their normal position any projecting portion to cause a retarding action

upon the vessel; but these plates are so formed and the shafts C are so placed that when the upright shaft G is rotated and the gears D and shafts C are also thereby rotated the plates B will then be turned outward beyond the sides of the vessel, as shown in dotted lines in Fig. 2, and thus will present a resisting-surface upon each side of the vessel to the water, which will act as a drag, and consequently reduce the speed of the boat. Of course these plates may be turned so as to present a great amount of resisting-surface or may be just slightly displaced from their normal position, so as to only slightly reduce the speed.

This device will be of great service to sailing vessels, but may be used upon steam vessels, as the plates are placed above the propeller and do not interfere with the same in any way and will be of great advantage at times when a collision is imminent, as the plates are operated in conjunction with the reversing of the propeller, and thereby much more quickly stop or reverse the boat than could be done with the propeller alone, and another advantage in steam vessels is that the boat can be temporarily slowed down to allow for the passing of another vessel without slowing the engine.

Of course I do not wish to be limited to the exact construction here shown, as slight modifications could be made without departing from the spirit of the invention.

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

1. In a device of the character described, two shafts upon each side of the boat extending longitudinally of the boat and protruding from the rear thereof, two plates secured to the outer end of the shafts, said plates normally lying against the rear portion of the boat so as to present no resistance to the water, means located in the interior of the vessel for rotating the shafts so as to turn the plates outward beyond the sides of the vessel, substantially as and for the purpose specified.

2. In a device of the character described, two shafts extending from the interior of the vessel through the rear portion thereof, plates secured to the outer end of said shafts, said

plates so formed as to normally lie against the rear portion of the vessel so as to present no resistance to the water, a gear-wheel secured upon the inner end of each of the shafts  
5 in the interior of the vessel, said gear-wheels being in mesh with one another, a beveled wheel secured to one of the gear-wheels, a second beveled wheel in mesh with the other, the upright shaft to which the latter beveled

wheel is secured, substantially as and for the purpose set forth.

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

AARON ZERBE.

Witnesses:

JOHN J. MINNICK,  
WASH HOTZ.