

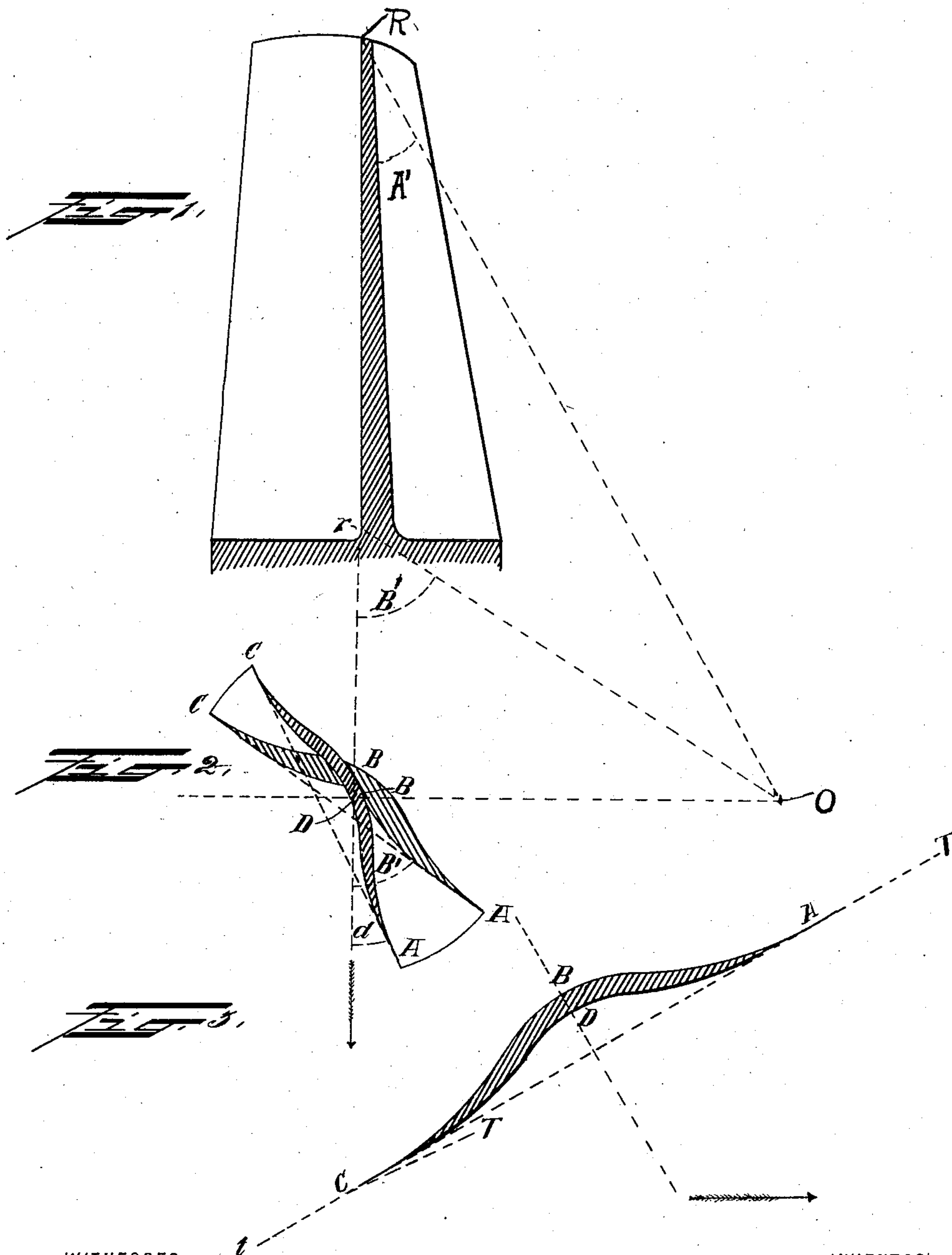
No. 738,985.

PATENTED SEPT. 15, 1903.

E. CLAUDIO.  
PROPELLER.

APPLICATION FILED MAY 19, 1902.

NO MODEL.



**WITNESSES**

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# UNITED STATES PATENT OFFICE.

EDUARDO CLAUDIO, OF RIO JANEIRO, BRAZIL.

## PROPELLER.

SPECIFICATION forming part of Letters Patent No. 738,985, dated September 15, 1903.

Application filed May 19, 1902. Serial No. 107,887. (No model.)

*To all whom it may concern:*

Be it known that I, EDUARDO CLAUDIO, a citizen of Brazil, residing at Rio Janeiro, Brazil, have invented certain new and useful Improvements in Propellers, of which the following is a full and complete specification, such as will enable those skilled in the art to which it appertains to make and use the same.

The object of this invention is to provide a propeller the blades of which are given at both the forward and after faces an outline in cross-section similar or approximately similar to ordinary wave-lines, the concavities of the curves at the middle of the blades in cross-section being in the direction of the rotation of the said blades; and with these and other objects in view the invention consists in a propeller constructed as hereinafter described and claimed.

The invention is fully disclosed in the following specification, of which the accompanying drawings form a part, in which the separate parts of my improvement are designated by suitable reference characters in each of the views, and in which—

Figure 1 is a side view of one blade of my propeller, partly in section, showing the manner of obtaining the inclination of the cross-sections to the plane of rotation of the blades. Fig. 2 is a section of said blade, giving cross-sections at the root and at the extremity thereof; and Fig. 3 represents a cross-section of one blade of my propeller, showing different methods of forming the outlines of the faces of said blade by curves approximately similar to wave-lines, the concavities of the middle of the section being in the direction of the rotation of the blades.

In the practice of my invention, as shown in the drawings, I provide a propeller having blades the forward and after faces of which are given in cross-section wave-shaped outlines A B C, A D C, Fig. 2, with the concavities at B D in the direction of the rotation of the blades. The inclinations A' and B' of said sections to the plane of rotation of the plates

are obtained by making O D represent the advance of a ship per revolution of propeller at any convenient scale, O R and O r representing in the same scale the circumference of the plates at the respective sections. The inclinations of other sections are obtained in the same manner.

Fig. 3 represents a section of one of my propeller-blades at a given radius, formed of curves B and D at the middle of the section with the concavities in the direction of the rotation of the blades united to reverse curves, these reverse curves finishing in tangents, as shown by A T, C T, and C t. The outlines of the faces of the blades can be formed of one or more combinations of the above forms, so as to give finer or closer sectional outlines, the finer the sectional profile of the blades the more efficient will the propeller be.

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

1. A propeller provided with blades, the faces of which are, in cross-section, represented by outlines approximating wave-lines in shape with the concavities at the middle of said section in the direction of the rotation, the curves at the middle of the section being united to reverse curves which reverse curves finish in tangents at one or both edges of one or of both faces of the blades, substantially as shown and described.

2. A propeller, the blades of which are provided in cross-section with forward and after faces representing wave-line curves the concavities of the middle of the sections being in the direction of the rotation of the blades, substantially as shown and described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of the subscribing witnesses, this 10th day of April, 1902.

EDUARDO CLAUDIO.

Witnesses:

JNO. KATHLEY,  
JE CLAUDIO DA SR.