

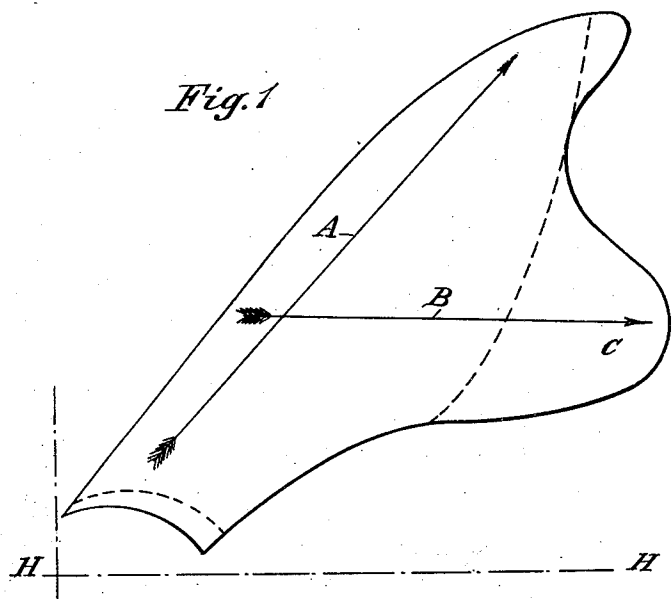
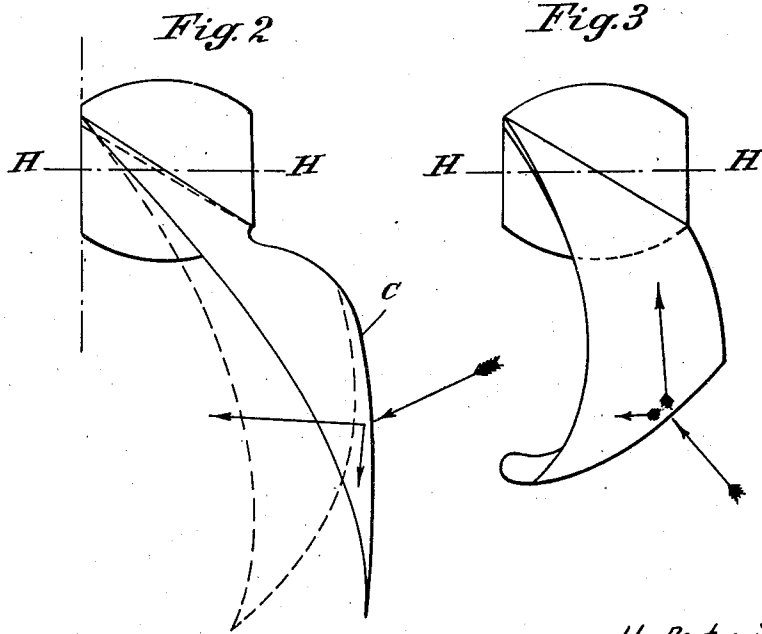
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U. ANTONI

1,798,299

ROTARY FLEXIBLE PROPELLER

Filed Dec. 30, 1927



U. Antoni
INVENTOR

By: Marks & Clark
ATTYS.

UNITED STATES PATENT OFFICE

UGO ANTONI, OF VIAREGGIO, ITALY

ROTARY FLEXIBLE PROPELLER

Application filed December 30, 1927, Serial No. 243,732, and in Italy December 31, 1926.

It is well known that according to practice and experience, rotary flexible propellers cannot reach a degree of perfection required for their use if the plane of the wings perpendicular to the driving axle cannot be deformed.

In preceding inventions of applicant the method was tried to have a gradual diminution of the wings' thickness but it was not possible to obtain a distribution of the elasticity inversely proportional to the resistance met by the wings on the axis of rotation.

To prevent said inconvenience and obtain a greater efficiency applicant has found that wings should be constructed with a fore edge whose resistance decreases in the direction of arrow A, and also in the plane in direction of arrow B to provide the flexible surface C, thus producing a larger and more flexible surface (Fig. 1) which even when rotating with a smaller radius than the peripheral zone as regards the axis R possesses a greater flexibility with more parts normal to axis H (Fig. 2) which may be deflected, the efficiency consequently becoming very high.

Fig. 3 shows a wing without the surface C inscribed in Fig. 1, and consequently of a very scarce efficiency during flexures.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed I declare that what I claim is:

A flexible rotating propeller blade having its fore edge proportioned in thickness to the resistance made in movement, the rear edge of the blade terminating in a prolonged section having greater flexibility than the blade, said section having its medial line in the central zone of the blade.

In testimony whereof I have hereunto signed my name.

UGO ANTONI.