Dec. 6, 1932. R. KLINGER 1,890,120

PROPELLER

Filed May 3, 1932

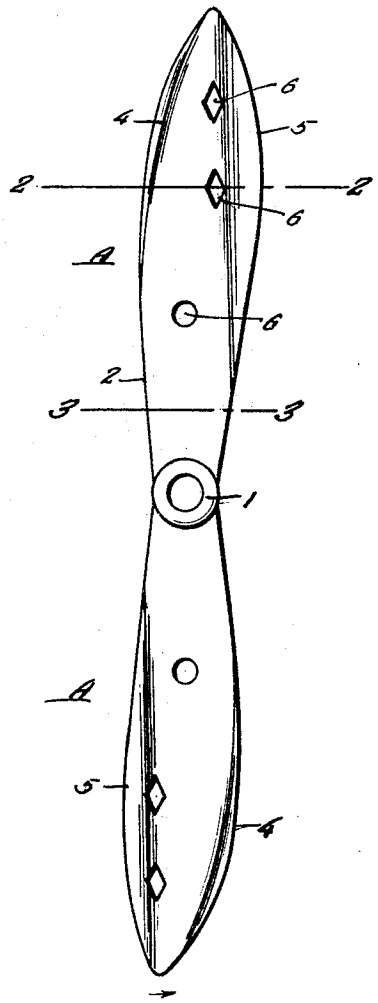



Fig. 1.

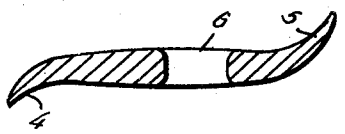



Fig. 2.

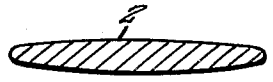



Fig. 3.

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# UNITED STATES PATENT OFFICE

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## PROPELLER

Application filed May 3, 1932. Serial No. 608,982.

This invention relates to a propeller for aeroplanes and the like, the general object of the invention being to form the blades of the propeller in such a manner that the propeller will have greater lifting power and more pull, therefore enabling the plane to take off faster than planes provided with the ordinary propellers.

This invention also consists in certain other features of construction and in the combination and arrangement of the several parts to be hereinafter fully described, illustrated in the accompanying drawing and specifically pointed out in the appended claim.

In describing the invention in detail, reference will be had to the accompanying drawing wherein like characters denote like or corresponding parts throughout the several views, and in which:—

Figure 1 is a face view of the propeller.

Fig. 2 is a section on line 2—2 of Fig. 1.

Fig. 3 is a section on line 3—3 of Fig. 1.

In this drawing, the numeral 1 indicates the hub of the propeller and the letter A indicates the blades thereof. The inner part of each blade is of substantially elongated oval shape in cross section as shown at 2 and the major portion of the blade, or the outer part thereof, is formed with a slightly curved front edge 4 and a curved rear edge 5, which is curved to a greater extent in an opposite direction from the curved part 4, and the curved part 5 is of greater length than the curved part 4 as shown in Fig. 1.

Each blade is also formed with the openings 6. The curved blade of my propeller will give more power and a greater pull per revolution for size than will the straight-bladed propeller because the air currents do not slide off without being fully used. The curve 5 deflects the currents and causes them to go outward and upward thereby causing superior pulling and lifting power. The air will be inclined to be thrown upward and away from the fuselage causing less resistance and enabling higher speeds. The currents will slide off more easily on the forward part of the blade curve to the resultant outer curve 5, and also the holes 6 will lessen the resistance, by allowing the air to pass through and this air helps toward more power, because it is caught up by the curved edge 5 and utilized.

The slight curve on the cutting edge 4 pulls more air in, causing the maximum amount of air to be used. It will turn at approximately the revolutions the straight blades will, and has the added pull due to the deflection of the air.

This curve 5 is better than the sharply inclined propeller, it has approximately the deflection on the air, but turns it off without slowing down the propeller and so operates at much higher speed.

It is thought from the foregoing description that the advantages and novel features of the invention will be readily apparent.

It is to be understood that changes may be made in the construction and in the combination and arrangement of the several parts, provided that such changes fall within the scope of the appended claim.

Having thus described my invention, what I claim as new is:—

A propeller of the class described comprising a hub and elongated blades having their inner ends attached to the hub, each blade having its forward and rear edges forming elongated arcs merging at the tip of the blade, the forward or cutting edge of the blade having a slightly forwardly curved portion, extending from a point adjacent the tip to a point slightly beyond the transverse center of the blade, the rear edge of the blade being rearwardly curved to a greater extent than the forward edge, the ends of this rear curved portion extending beyond the ends of the forwardly curved portion and each blade having openings therein permitting air to pass through the blade and being acted on by the curve at the rear edge thereof.

In testimony whereof I affix my signature.

RALPH KLINGER.