June 2, 1925. 1,540,728

W. G. G. WEIDINGER

PROPELLER

Filed Sept. 6, 1924

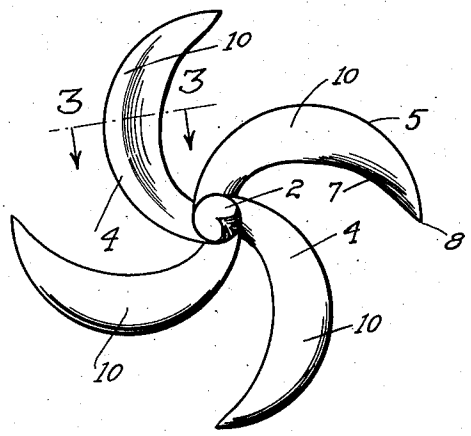


FIG. 1

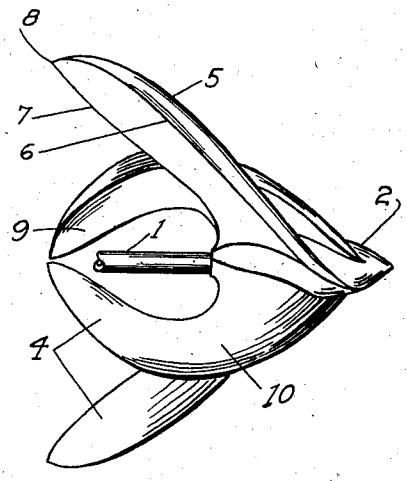


FIG. 2

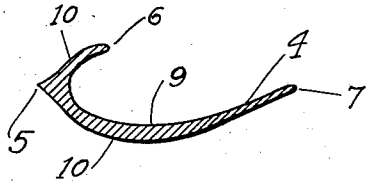


FIG. 3

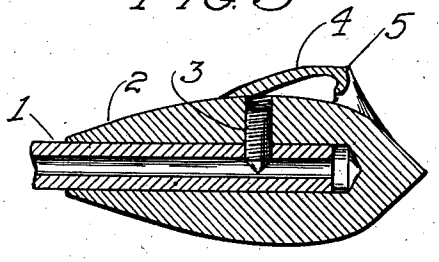


FIG. 5

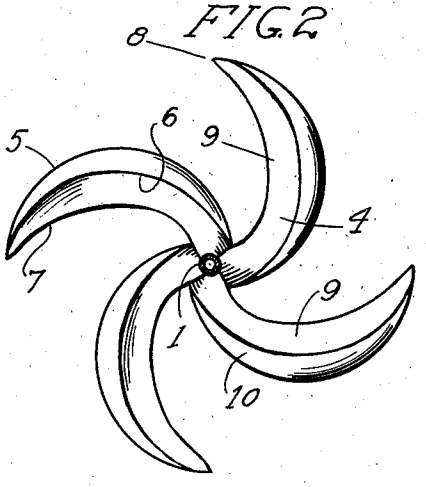


FIG. 4

WITNESS:
Geo. Hjelm

BY

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Patented June 2, 1925. 1,540,728

UNITED STATES PATENT OFFICE.

WILLIAM G. G. WEIDINGER, OF CHICAGO, ILLINOIS.

PROPELLER.

Application filed September 6, 1924. Serial No. 736,279.

To all whom it may concern:

Be it known that I, WILLIAM G. G. WEIDINGER, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Propellers, of which the following is a specification.

This invention relates to improvements in propellers for aerial use although it is capable of other adaptations if desired. One object is to provide a more economical application of power and to increase the efficiency of the propeller by giving it an increased grip on the medium in which it operates. A further object is to provide a high speed propeller that operates without loss of power, that is simple in construction, of few parts, and that consequently is cheap to manufacture.

With the foregoing and other objects in view the invention consists in the combination and arrangement of parts to be hereinafter fully described, pointed out in the appended claims and illustrated in the accompanying drawing which forms a part of this application and in which—

Fig. 1 is a view of the propeller in front elevation.

Fig. 2 is a view of the propeller in side elevation.

Fig. 3 is a sectional view on line 3—3 of Fig. 1.

Fig. 4 is a view of the propeller in rear elevation.

Fig. 5 is an enlarged fragmentary sectional view of the propeller.

Like reference characters denote corresponding parts throughout the several views.

The reference numeral 1 denotes the tubular shaft which fits into a recess in the hub 2 and is positively retained in operative position by means of the headless screw 3. Secured to or formed integral with the hub 2 are the blades 4, of counterpart formation, four in number in this instance although this is not strictly essential, said blades curving outwardly and rearwardly from said hub and being spaced equidistant one from the other thereabout.

Each blade curves uniformly out from the hub, as it extends rearwardly therefrom, and then inwardly and terminates in the plane of said member. The propeller rotates to the right and each blade is formed with three cutting edges 5, 6, 7 which come together in a point 8 at the blade termination. Each blade comprises a concave portion 9 that grips the air as it rotates and a convex portion 10 that embraces the cutting edge 5 and that extends in a stream line from the hub to the free or pointed end of the blade and affords the minimum air resistance. The propeller in operation penetrates the air screw-fashion, the concave portion of the blades accentuating the forward thrust of the propeller and the convex portions affording but a trifling resistance to the air.

What is claimed is:—

1. In a propeller, a shaft, a hub arranged thereupon, and blades spaced equidistant one from the other about said hub and extending outwardly and then inwardly and terminating in the plane of said hub, each of said blades being formed with three cutting edges and with a concave portion.

2. In a propeller, a shaft, a hub screwed thereupon to rotate therewith, and blades of counterpart formation spaced equidistant one from the other about said hub and curving uniformly outward and then inward and terminating in the plane of said hub, each of said blades being formed with three cutting edges terminating in a point, and with a concave portion.

3. In a propeller, a tubular shaft, a hub fast thereupon and rotating therewith, and blades of counterpart formation spaced equidistant one from the other about said hub and extending rearwardly therefrom, said blades curving uniformly outward and then inward and terminating in the plane of said hub, each of said blades being formed with three longitudinally extending cutting edges terminating in a point at the blade end, with a concave portion and with a convex portion embracing one of said cutting edges and producing a streamline effect.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two subscribing witnesses.

WILLIAM G. G. WEIDINGER.

Witnesses:
F. S. MANN,
ARTHUR W. RUAL.