Sept. 29, 1931. G. PEMSL 1,825,473

PROPELLER

Filed Sept. 17, 1930

Fig. 1

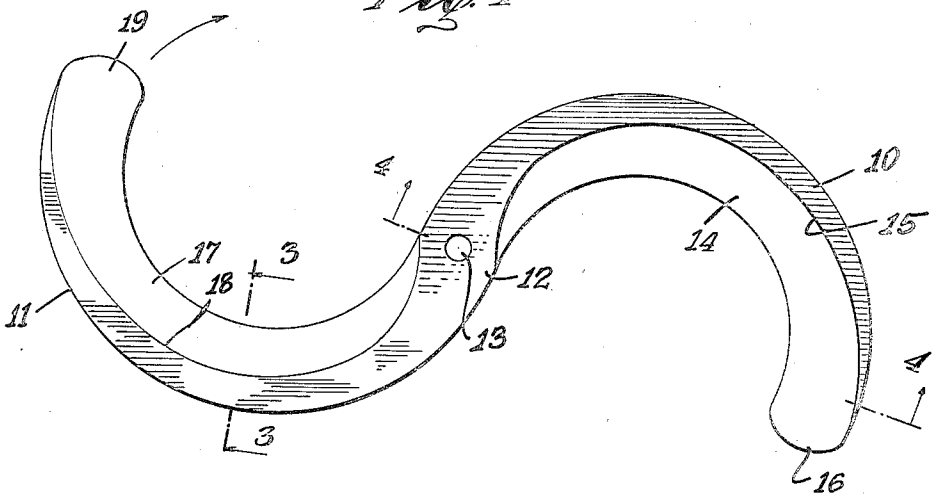


Fig. 2

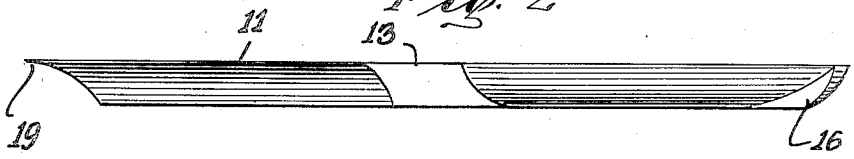


Fig. 3

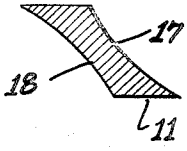
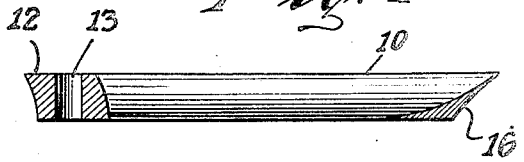


Fig. 4



Inventor
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Patented Sept. 29, 1931

1,825,473

UNITED STATES PATENT OFFICE

GEORGE PEMSL, OF DUBUQUE, IOWA

PROPELLER

Application filed September 17, 1930. Serial No. 482,408.

This invention relates to improvements in propellers, principally in aerial propellers and it is the principal object of my invention to provide a propeller the thrust-exerting surface of which is provided with radial oblique blades having fluted or chamfered and oppositely directed faces and of a pitch apt to produce the best results.

Another object of my invention is the provision of an aerial propeller of comparatively simple and inexpensive construction, yet durable and efficient in operation.

These and other objects and advantages of my invention will become more fully known as the description proceeds and will then be specifically defined in the appended claim.

In the accompanying drawings forming a material part of this disclosure:

Fig. 1 shows an aerial propeller in elevation constructed according to my invention.

Fig. 2 is an edge view of the same.

Fig. 3 is a cross-section on line 3—3 of Figure 1.

Fig. 4 is a fragmentary inner edge view of the propeller partly in section on line 4—4 of Figure 1.

As illustrated the obliquely curved propeller blades 10 and 11 of substantially elliptical outlines are made integrally and have a median boss 12 provided with an opening 13 for the shaft from which the blades are torsionally extending to both sides.

The inner face of the blade 10 is fluted as indicated at 14 to present an air engaging face and shoulder 15 and a thrust end surface 16 while shoulder 15 is decreasing in width from the center towards thrust member 16. In a similar manner the outer face of blade 11 is fluted or chamfered, as at 17 to present an air engaging shoulder 18 and a thrust end surface 19.

In operation the air will be engaged by the shoulders, 15, 18, during the rapid rotation of the propeller and thus the propeller blades will develop a driving force superior to all the known propellers, the greater number of which allows the air to flow smoothly over the propeller blades, thus losing a great amount of their driving power. The thrust surfaces engaging the air and forcing it gradually against the shoulders towards the center of the propeller.

It will be understood that I have described and shown one form of my new and improved aerial propeller as an example only, and that I may make such changes in the construction of the minor details thereof as come within the scope of the appended claim without departure from the spirit of my invention.

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

An aerial propeller comprising a substantially S-shaped body of equal width throughout, a perforated median boss, a pair of blades extending torsionally to both sides of said boss, the inner face of one of the blades fluted to present an air engaging face and shoulder decreasing in width from the boss towards the end of the blade, the outer face of the other blade fluted to present an air engaging shoulder facing in a direction opposite to the inner face of the first-named blade, and comparatively wide thrust-surfaces formed at the ends of the blades for gradually forcing the air against the shoulders towards the center of the propeller.

In witness whereof I have signed my name to this specification.

GEORGE PEMSL.