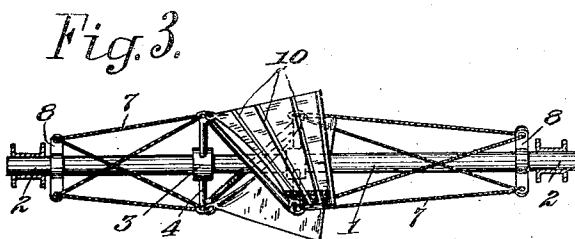
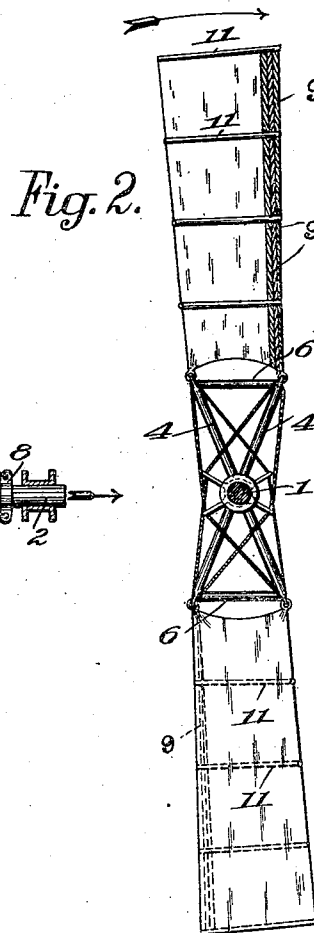
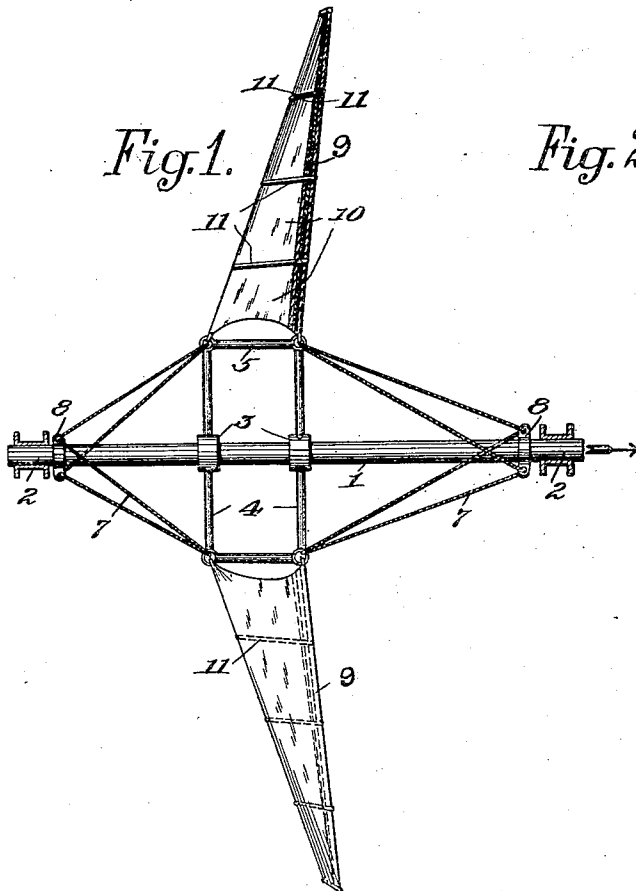


A. VON PARSEVAL.
PROPELLER.
APPLICATION FILED APR. 6, 1908.

954,992.

Patented Apr. 12, 1910.



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AUGUST VON PARSEVAL, OF CHARLOTTENBURG, GERMANY.

PROPELLER.

954,992.

Specification of Letters Patent. Patented Apr. 12, 1910.

Application filed April 6, 1908. Serial No. 425,427.

To all whom it may concern:

Be it known that I, AUGUST VON PARSEVAL, a subject of the King of Bavaria, residing at Charlottenburg, Germany, have invented certain new and useful Improvements in Propellers, of which the following is a specification.

My invention relates to air-ships of the so called non-rigid type and has for its object to provide a non-rigid air propeller in which the fly weights which are adapted to tension the propeller blades during operation, are arranged in such a manner that the most favorable division of power is obtained with the greatest efficiency in operation.

In the hitherto known propellers with non-rigid blades of which the shape and tension are maintained by the centrifugal force of fly weights the provision of large weights at the ends of the blades gives the disadvantage that an unsteady movement is obtained owing to the fact that the weights do not act upon the same parts as the air resistance. Further large weights when starting and stopping the propeller are a source of danger to the parts of the air ship and especially to the occupants of the car.

For the purpose of obviating these disadvantages I provide as fly-weights heavy ropes or chains which are embedded in the front edge of the propeller. Besides this I also form the transverse stays for stiffening the blades as fly-weights. By these means the mass of the fly-weights is divided over the whole surface of the blades.

The invention will be more clearly understood by reference to the accompanying drawings in which similar references refer to the same parts.

Figure 1 is a side elevation of a non-rigid air propeller according to the invention. Fig. 2 is a front elevation of the propeller illustrated in Fig. 1 and Fig. 3 is a plan.

To hubs 3 mounted on the shaft 1, which is mounted in suitable bearings 2, there are fixed one behind the other two sets of radial supports 4 in the form of the letter X which are stiffened and connected together by longitudinal stays 5 and transverse stays 6 and which form the hub of the air propeller. For further stiffening the hub I provide cords 7 which have one end attached to the supports 4 and the other end to sleeves 8 mounted upon the shaft 1.

To both the outer ends of one of the members of one of the supports 4 are attached heavy ropes or chains 9 and to these is attached one side of the material 10 forming the propeller blades. The free inner end of the other edge of the material is attached to the end of the support 4 lying diagonally opposite the point of attachment of the ropes 9 while the fourth corner of the blade is entirely free. For the purpose of preventing the formation of folds in the blades transverse bars 11 are provided which also serve as fly-weights. The screw shape of the propeller blade is formed by the resistance of the air during operation.

Although I have limited the drawing to one construction I do not wish to be limited to this as the details of course can be varied without altering the feature of the invention namely the hub may be formed in any suitable manner. The essential feature is that the fly-weights which serve to stiffen the propeller are divided over the whole length of the propeller blades and consist of pliant material such as ropes or chains and that the transverse rods simultaneously serve as fly-weights.

What I claim as my invention and desire to secure by Letters Patent is:—

1. In an air propeller of the type described a shaft, a hub fixed upon the shaft, non-rigid propeller blades fixed to the hub, said blades being tensioned by fly-weights divided over their whole surfaces, and means for preventing the formation of folds in the said blades.

2. In an air propeller of the type described a shaft, a hub mounted upon the shaft, non-rigid propeller blades attached to the hub, heavy ropes or chains also attached to the hub and to one of the longitudinal edges of the blades and means for preventing the formation of folds in the said blades.

3. In an air propeller of the type described a shaft, a hub mounted upon the shaft, non-rigid propeller blades fixed to the hub, heavy ropes or chains also attached to the hub and to one of the longitudinal edges of the blades and transverse rods attached to the blades for preventing the formation of folds.

4. In an air propeller of the type described a shaft, a hub mounted upon the

shaft, non-rigid propeller blades fixed to the
hub, heavy ropes or chains also connected
to the hub and to one of the longitudinal
edges of the blades, and transverse rods at-
5 tached to the blades for preventing the for-
mation of folds, the transverse rods being of
such a weight that they act as fly-weights.

In witness whereof I have hereunto set
my hand this 21st day of March, 1908.

AUGUST VON PARSEVAL.

Witnesses:

MORITZ WETZEL,
OTTO SCHROEDER.