A. A. D. LANG.

AERIAL PROPELLER.

APPLICATION FILED MAR. 27, 1914.

1,150,436. Patented Aug. 17, 1915.

FIG. 1.

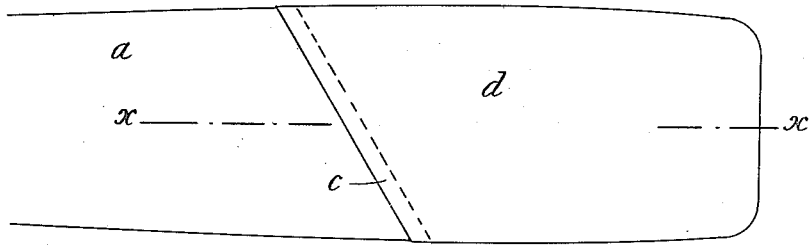


FIG. 2.

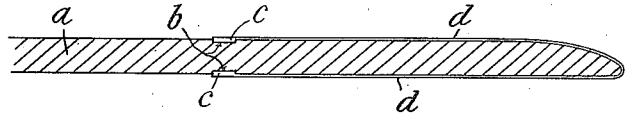


FIG. 3.

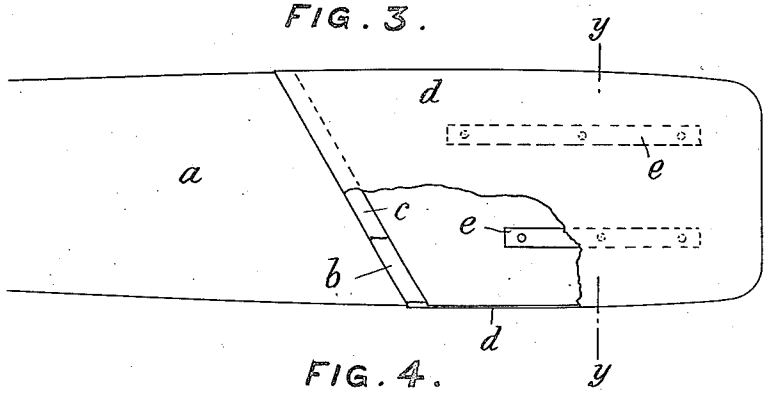
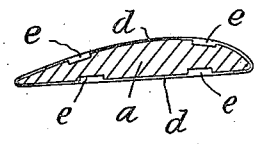


FIG. 4.



WITNESSES;

John C. Sanders

Albert D. Heuman

INVENTOR;

Arthur Alexander Dashwood Lang

BY Wallace White

ATT'Y.

UNITED STATES PATENT OFFICE.

ARTHUR ALEXANDER DASHWOOD LANG, OF LONDON, ENGLAND.

AERIAL PROPELLER.

1,150,436. Specification of Letters Patent. Patented Aug. 17, 1915.

Application filed March 27, 1914. Serial No. 827,775.

To all whom it may concern:

Be it known that I, ARTHUR ALEXANDER DASHWOOD LANG, a subject of the King of Great Britain, 166 Piccadilly, London, W., England, have invented new and useful Improvements in Aerial Propellers, of which the following is a specification.

This invention relates to propellers, which are usually constructed of wood, for use on aeroplanes, hydroplanes, and hydro-aeroplanes and the like. In some cases such propellers have the outer end portions or tips of the blades sheathed in metal in order to resist the distorting action of water or moisture, the metal sheathing being wrapped around the blade lap-jointed and riveted in position. It is found however that water finds its way between the sheathing and the wooden blade and in many instances outlets have had to be formed in the tip of the sheathing in order to allow the water to escape.

This invention has for its object a method of sheathing the ends of wooden propellers in a neat and watertight manner and without the employment of rivets which have the tendency to weaken the blade.

The invention is illustrated by the accompanying drawings in which—

Figure 1 is a plan of a portion of one blade of a propeller, Fig. 2 is a section of Fig. 1 on the line *x*—*x*, Fig. 3 is a similar view to Fig. 1 and Fig. 4 is a cross section of Fig. 3 on the line *y*—*y*.

According to this invention the blade *a* is formed with a shallow endless groove *b* encircling the blade at the part thereof which will form the inner extremity of the sheathing and a strip *c* of wire (preferably of brass or copper) is laid in the groove and the ends joined or connected so that the strip or wire band binds tightly in the groove. Preferably the band *c* when fitted in place should be flush with the surfaces of the blade and if found desirable the strip may be further secured by means of screws. The part of the blade between the said strip and the tip is then prepared to receive and subsequently receives an electric deposit of copper thereupon so as to form a homogeneous sheathing *d* united to said strip or wire band. As a further precaution against the admission of water the joint between the strip or wire band and the groove may be packed or sealed with red lead, rubber, or other suitable material.

In some cases it may be desirable to provide other flush sunk strips in the surface of the blade in order to afford a holding for the electrically deposited copper sheathing. An example of this is shown in Figs. 3 and 4 in which the auxiliary strips are indicated at *e*.

I claim:—

1. Aerial propellers made of wood, a metal sheathing for the end portions of the blades comprising a metal covering electrically deposited upon the end portion of each blade and uniting with an endless metal band laid in a groove and tightly encircling the blade, as set forth.

2. Aerial propellers made of wood, a flush sunk band of metal encircling each blade, and a sheathing of metal electrically deposited on the end portion of each blade and uniting with the flush sunk metal band, as set forth.

3. Aerial propellers made of wood, a flush sunk band of metal tightly encircling each blade, flush sunk metal strips secured in the end portion of each blade, and a sheathing of metal electrically deposited on the end portion of each blade and uniting with the flush sunk metal band and flush sunk strips, as set forth.

4. Aerial propellers made of wood, a flush sunk band of metal laid in a groove and encircling each blade, a packing between said metal band and the groove, and a sheathing of metal electrically deposited on the end portion of each blade and uniting with the flush sunk metal band, as set forth.

5. Aerial propellers made of wood, a flush sunk band of metal laid in a groove and encircling each blade, a packing between said metal band and the groove, flush sunk strips of metal secured in the end portion of each blade, and a sheathing of metal electrically deposited on the end portion of each blade and uniting with the flush sunk metal band and the flush sunk metal strips, as set forth.

In testimony whereof I have set my hand this 12th day of December 1913.

ARTHUR ALEXANDER DASHWOOD LANG.

Witnesses:

ARTHUR C. DOWNING,

TRACY LAY.