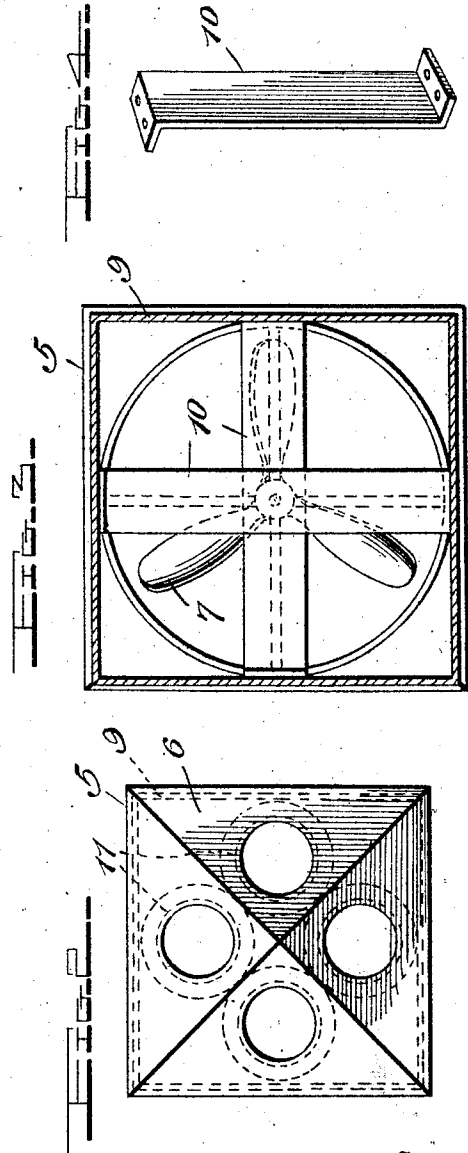
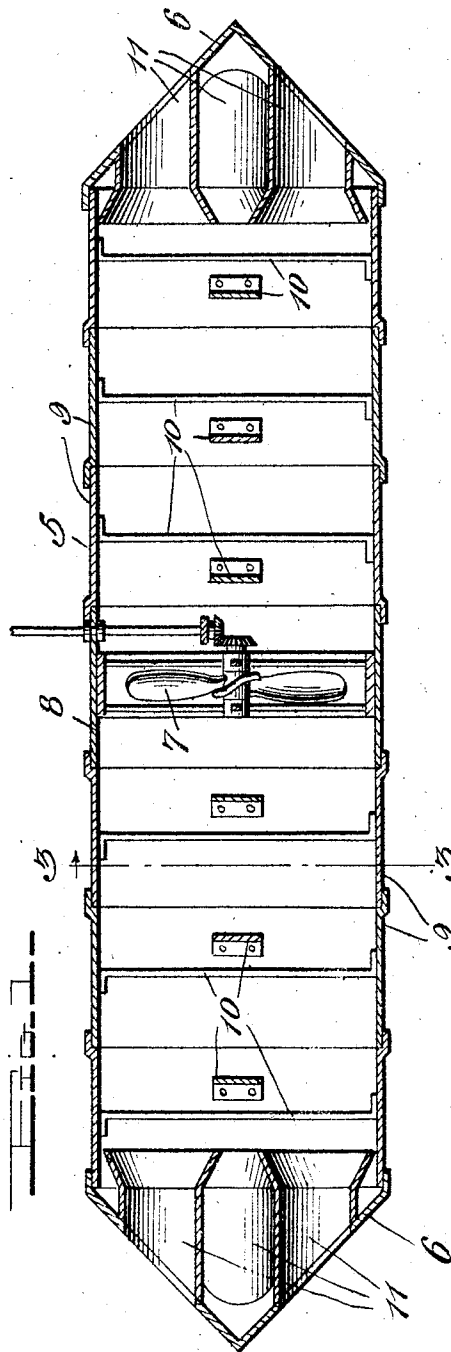


W. McCAIRNS.
AIRSHIP PROPELLER.
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1,061,961.

Patented May 13, 1913.



Inventor

W. McCairns,

Witnesses

Chas. R. Griestauer
A. J. Hind.

By

Watson E. Coleman.
Attorney

UNITED STATES PATENT OFFICE.

WILLIAM McCAIRNS, OF ELDORADO, ILLINOIS.

AIRSHIP-PROPELLER.

1,061,961.

Specification of Letters Patent.

Patented May 13, 1913.

Application filed August 10, 1912. Serial No. 714,402.

To all whom it may concern:

Be it known that I, WILLIAM McCAIRNS, a citizen of the United States, residing at Eldorado, in the county of Saline and State of Illinois, have invented certain new and useful Improvements in Airship-Propellers, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to improvements in air ship propellers and has for its primary object to provide a device of this character whereby a maximum of propulsive effort may be obtained with the use of a single propeller, so that the weight to be sustained in the movement of the ship may be greatly reduced.

Another object of the invention resides in the provision of an air ship propeller embodying improved stabilizing for equilibrizing means whereby the vessel will be maintained in its elevated position in contrary air currents.

A still further object of the invention resides in the provision of an airship propeller of simple and novel construction which may be produced at small cost and is highly efficient, durable and reliable in operation.

With the above and other objects in view, this invention consists of the novel details of construction, combination, formation and arrangement of parts as will be hereinafter more fully described, claimed and particularly pointed out in the accompanying drawings, in which—

Figure 1 is a longitudinal section of a propeller constructed in accordance with the present invention. Fig. 2 is an end elevation thereof. Fig. 3 is a transverse section taken on the line 3—3 of Fig. 1. Fig. 4 is a detail perspective view of one of the webs.

Referring in detail to the drawing, the numeral 5 indicates generally an elongated chamber, which in the present instance, is shown of rectangular form, and is provided with tapering pyramidal shaped ends 6. The propeller, designated at 7, is mounted to rotate in a central enlarged chamber 8 arranged intermediate of the ends of the main elongated chamber 5 and constituting a portion thereof. This central chamber will preferably be constructed as an individual element and the sections of the main chamber 5 on either side thereof may be

soldered, riveted, or otherwise secured or connected to this central propeller chamber.

The device is primarily adapted for the propulsion of dirigible airships and the propeller 7 is driven by a motor situated exteriorly of the chamber 5 and suitably mounted in the frame-work of the machine.

The elongated chamber 5 on either side of the propeller chamber 8 includes a plurality of sections 9, each of which is provided with a web 10 connecting the opposed walls thereof. When the sections of the chamber are assembled and secured together, these webs are alternately disposed in planes at right angles to each other and provide means whereby the air currents are broken up and resistance to the movement of the machine reduced to a minimum.

In each end of the elongated chamber the air inlet tubes 11 are arranged. Four such tubes are preferably employed at each end of the chamber and provided with slightly bell shaped ends, as clearly shown in Fig. 2, which are fixed to the walls of the pyramidal ends 6 of the air receiving chamber. In the forward movement of the vessel, the air currents enter through these tubes 11 at one end of the chamber 5, and are broken up by the webs 10 and are then driven or directed by the propeller 7 against the webs 10 in the rear portion of the chamber 5, said currents finally escaping through the other tube 11 at the other end of the air chamber.

From the foregoing, it is thought that the construction and manner of use, together with the many advantages which accrue to my improved propeller construction will be readily understood.

The entire device may be inexpensively manufactured, and as the same is extremely light in weight, it will not add to any material extent to the weight of the vessel. The chamber sections are preferably constructed of aluminum. While I have stated that the same are of rectangular form, it will be obvious that they may be cylindrical or of any other preferred configuration.

The device is efficient and reliable in use and is capable of application to any of the various well known forms of ships used in aerial navigation.

While I have shown and described the preferred construction and arrangement of the various elements, it will be obvious that the invention is susceptible of a great many

modifications without departing from the essential features or sacrificing any of the advantages thereof.

What I claim is:—

- 5 In a propeller for aerial vessels, a central chamber having a propeller arranged therein, longitudinally extending chambers connected to the central chamber, each of said longitudinally extending chambers consisting of a plurality of sections, a web connecting the opposed walls of each of the chamber sections, the webs of adjacent chamber

sections extending at right angles to each other, a plurality of air directing tubes arranged in one end of each of the longitudinally extending chambers, said tubes at one of their ends being open to the atmosphere. 15

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

WILLIAM MCCAIRNS.

Witnesses:

H. B. HEMPHILL,
W. B. MARTIN.