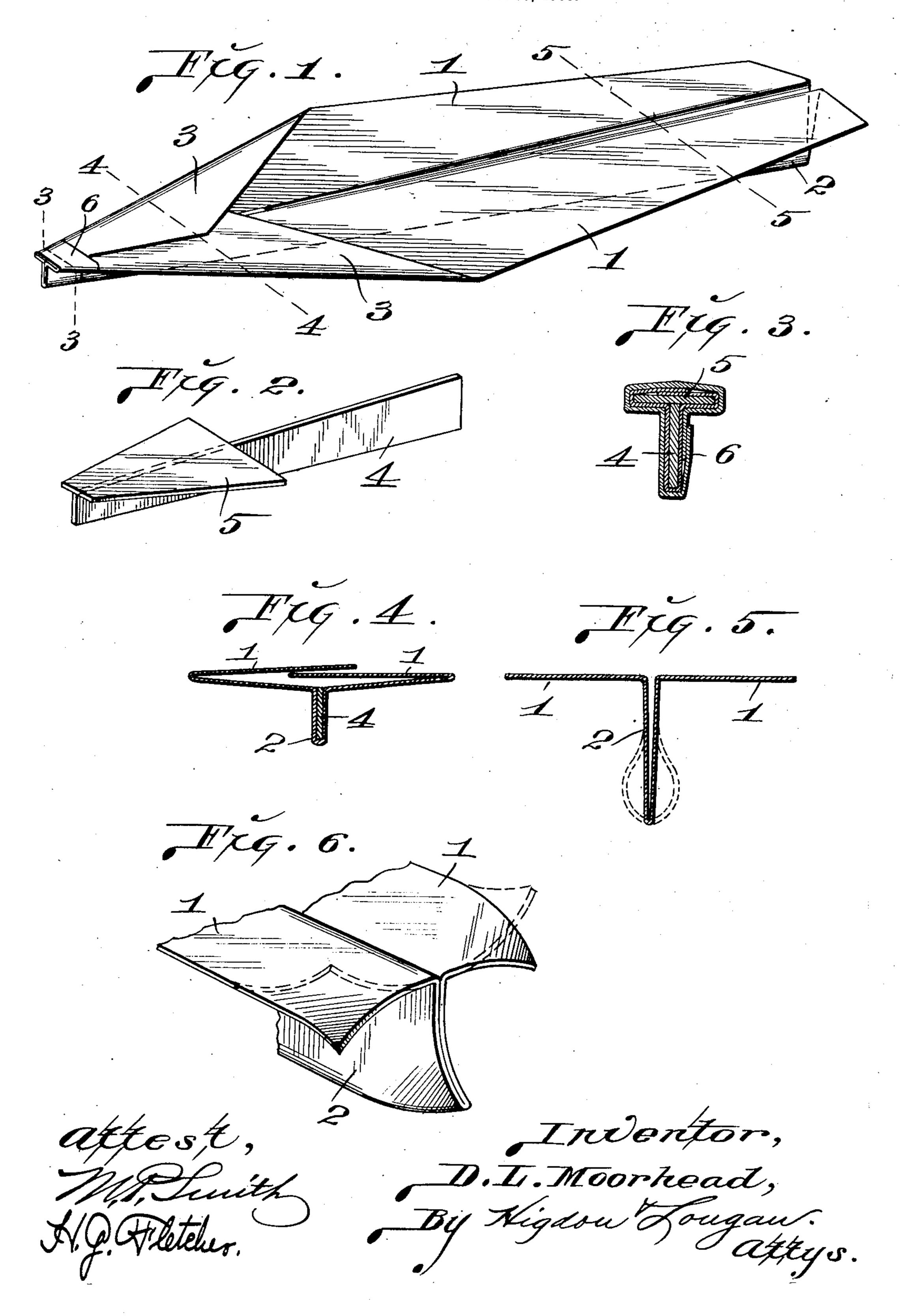
No. 865,419.

PATENTED SEPT. 10, 1907.

## D. L. MOORHEAD. AEROPLANE.

APPLICATION FILED NOV. 30, 1906.



## UNITED STATES PATENT OFFICE.

DENNIS L. MOORHEAD, OF ST. LOUIS, MISSOURI.

## AEROPLANE.

No. 865,419.

Specification of Letters Patent.

Patented Sept. 10, 1907.

Application filed November 30, 1906. Serial No. 345,646.

To all whom it may concern:

Be it known that I, Dennis L. Moorhead, a citizen of the United States, and a resident of St. Louis, Missouri, have invented certain new and useful Improve-5 ments in Aeroplanes, of which the following is a specification containing a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to an aeroplane, and consists of 10 certain novel features of construction and arrangement of parts, which will be hereinafter more fully set forth, pointed out in the claims, and illustrated in the accompanying drawings, in which:--

Figure 1 is a perspective view of my invention; Fig. 15 2 is a detail perspective of a portion of the same detached; Fig. 3 is an enlarged section taken on the line 3—3 of Fig. 1; Fig. 4 is a section taken on the line 4—4 of Fig. 1; Fig. 5 is a section taken on the line 5-5 of Fig. 1; Fig. 6 is a perspective view, with parts broken 20 away, of a modified form.

The object of my invention is to construct an aeroplane which may be used as an amusement toy, or for advertising purposes. By making the same on a large scale, and equipping it with the proper steering mech-25 anism, the same may be used for the body of an airship.

Referring by numerals to the accompanying drawings:— 1—1 indicate the wings of the body of my invention, and formed in the center of said wings is a longitudinally disposed rib 2, said wings and rib being 30 formed integral and constructed of paper, or any other suitable material. The forward portions of the wings I are folded so as to produce a tapered end, the folded portions being indicated by the figures 3-3, and said folded portions being of such length as that the base of 35 the triangle formed by the tapered forward end is on a line in advance of the longitudinal center of the entire device, which arrangement is essential to secure the proper lifting action at the forward end of said device. The portions 3 are folded over onto the top of the wings 40 1, in order that the lower surfaces of said wings are left perfectly plain so as to offer the least possible resistance to the air while the aeroplane is in flight.

.4 indicates the bar of the reinforcing device illustrated in Fig. 2, and secured to said bar 4 is a tapered 45 plate 5, the plate 5 and bar 4 forming a reinforcing device for the aeroplane.

When the device is assembled, the plate 5 lies between the folded portions 3 and the wings 1, and the bar 4 is inserted between the sides of the rib 2.

Passing over the forward end of the aeroplane is a 50 metal nose piece 6, which strengthens the forward end of the aeroplane and serves as a weight for the same. It will be seen that the aeroplane is constructed so that its forward end offers the least resistance to the air.

In Fig. 5 I have shown in dotted lines a modified 55 form of the longitudinal rib 2. When the device is made on a large scale, suitable propelling mechanism may be inserted in this rib, such as a spring motor, etc.

As I have shown, the aeroplane is constructed to be operated by hand, and, in order to operate the same. 60 it is only necessary for the operator to take hold of the rib 2, or any other portion of the aeroplane, and give the same a thrust, when it will sail through the air.

The wings 1 support the device while sailing through the air, and the rib 2 guides or holds the same in a 65. straight line, and also prevents it from tilting laterally.

In Fig. 6 I have shown the terminal portions of the wings 1 bent. If it is desired for the aeroplane to go in an ascending direction when it is thrown; the corners of the wings 1 are bent upwardly, as shown in dotted 70 lines in Fig. 6; or, if it is desired for the aeroplane to go in a descending direction when the same is thrown, the corners of the wings 1 may be bent down, as illustrated in Fig. 6. Furthermore, if it is desired for the aeroplane to go in a lateral direction when thrown, the end 75 of the rib 2 may be bent, or turned, as illustrated in Fig. 6.

By the proper bending of the terminal portions of the wings 1, or the rib 2, the aeroplane may be constructed to go in most any direction, when thrown; 80 that is to say, in a lateral direction, either right or left, or in an ascending or descending direction.

As I have shown the aeroplane, it is adapted for use only as a toy, or for advertising purposes; but it is manifest that I can use this same principle for con- 85 structing the body of an air ship, in which case of course it would be necessary to build the same on a large scale, and out of suitable material, and properly equip it with proper steering and propelling mechanism.

## I claim:—

1. The herein described aeroplane, consisting of wings, having their front portions folded so as to produce a tapered end, which tapered end lies wholly forward of the longitudinal center of the aeroplane; and a centrally lo- 95 cated rib; substantially as specified.

2. The herein described aeroplane, consisting of wings, having their front portions folded so as to produce a tapered end, a centrally located rib, and a reinforcing device located in said rib; substantially as specified.

3. The herein described aeroplane, consisting of wings, having their front portions folded so as to produce a tapered end, a centrally located rib, a reinforcing device located in said rib, and a nose piece; substantially as specified.

4. The herein described aeroplane, consisting of wings, having their front ends folded so as to produce a tapered end, and the corners of the rear ends bent, a centrally located rib, a reinforcing device located in said rib, and a nose piece; substantially as specified.

5. The herein described aeroplane, consisting of wings,

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end, and the corners of the rear ends bent, a centrally located rib having its rear end bent, a reinforcing device located in said rib, and a nose piece; substantially as specified.

ontally disposed wings which gradually taper in width toward their rear ends, the forward ends of which wings are folded so as to produce a triangular front portion which lies wholly in advance of the longitudinal center

of the aeroplane, and a vertically disposed rib extending longitudinally the entire length of the aeroplane on the under side thereof.

In testimony whereof, I have signed my name to this specification, in presence of two subscribing witnesses.

DENNIS L. MOORHEAD.

Witnesses:

E. E. LONGAN,

E. L. WALLACE.