

No. 710,266.

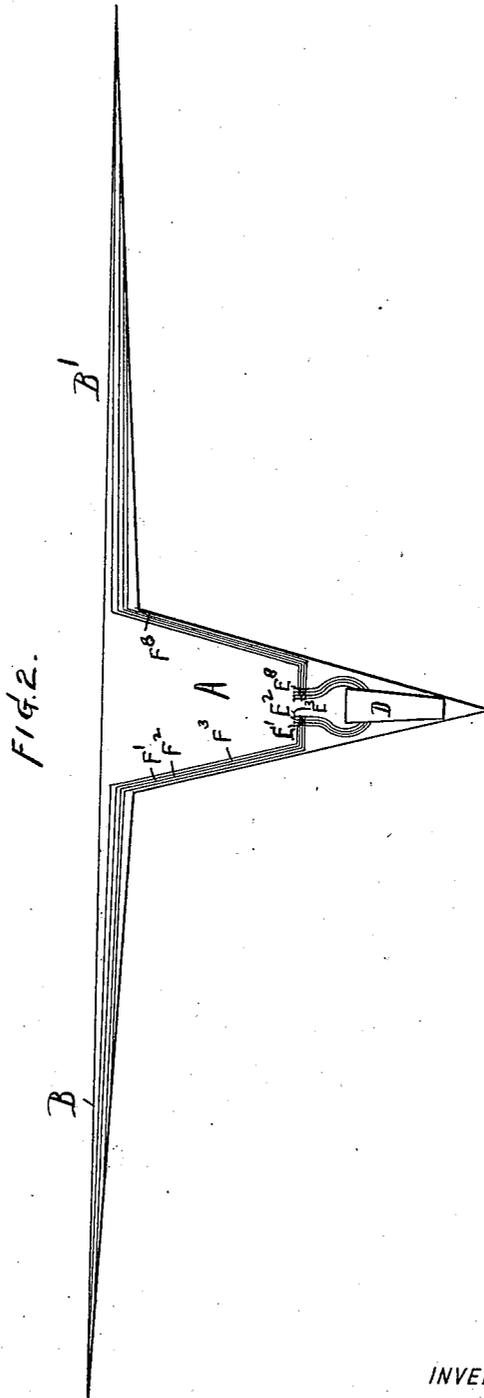
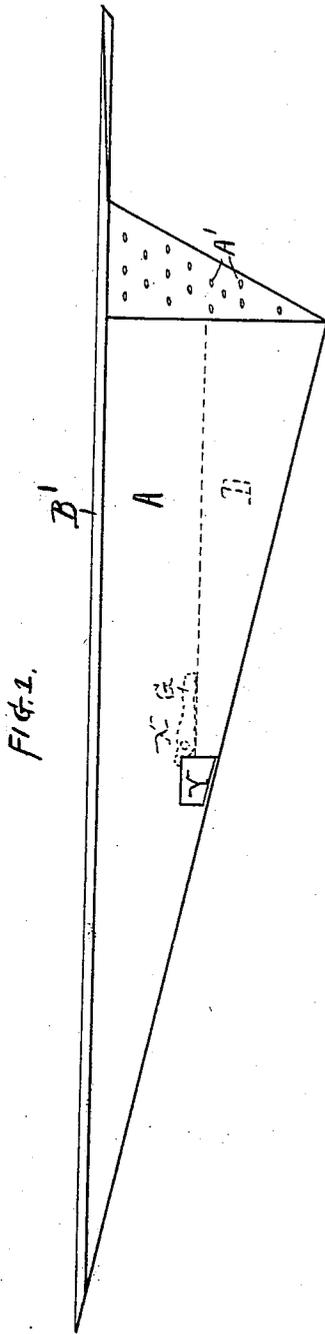
Patented Sept. 30, 1902.

T. GIBON.  
AEROPLANE.

(Application filed Apr. 24, 1901.)

(No Model.)

3 Sheets—Sheet 1.



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FIG. 3

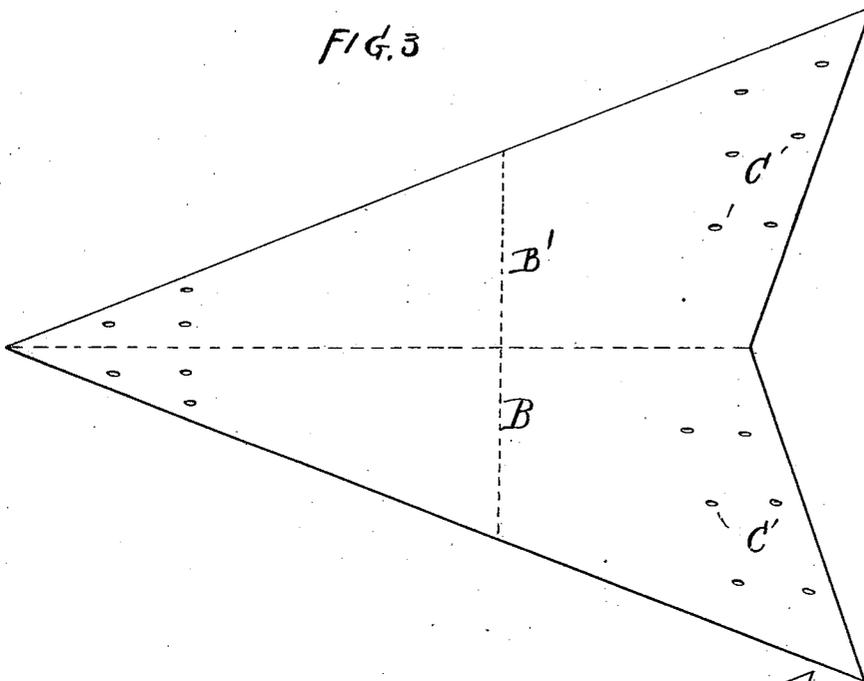


FIG. 4.

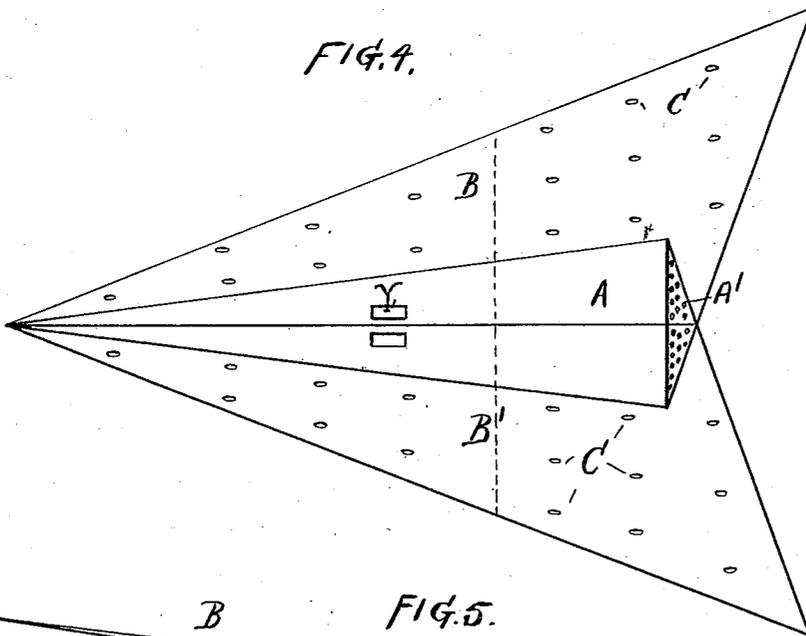
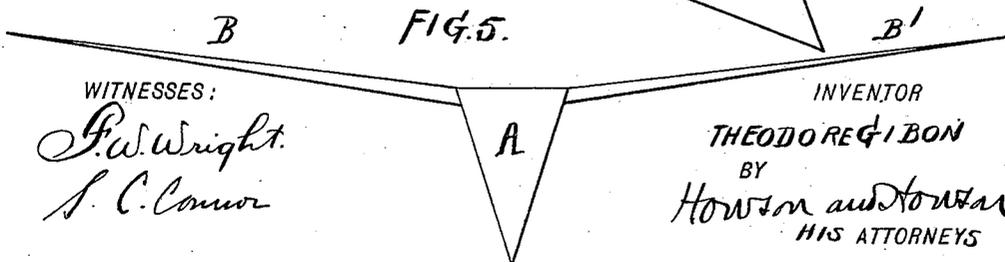


FIG. 5.



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FIG. 6.

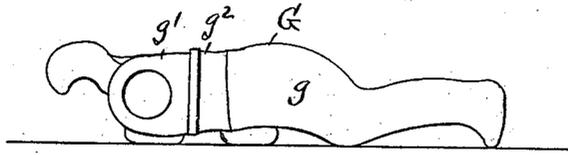


FIG. 7.

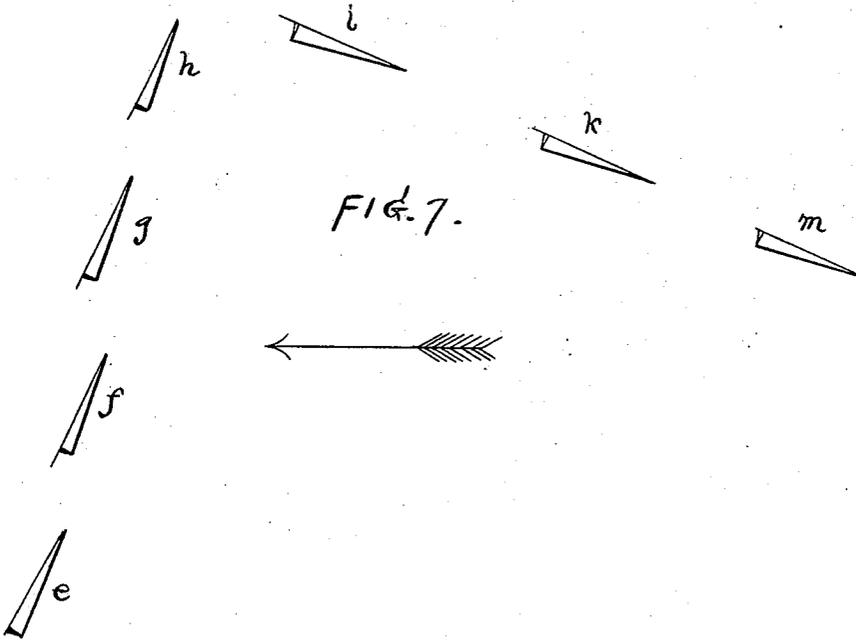


FIG. 8.



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# UNITED STATES PATENT OFFICE.

THEODORE GIBON, OF CLARKSVILLE, TENNESSEE.

## AEROPLANE.

SPECIFICATION forming part of Letters Patent No. 710,266, dated September 30, 1902.

Application filed April 24, 1901. Serial No. 57,229. (No model.)

*To all whom it may concern:*

Be it known that I, THEODORE GIBON, a subject of the Emperor of Germany, and a resident of Clarksville, in the county of Montgomery, State of Tennessee, have invented an Improved Aeroplane, of which the following is a specification.

My invention consists of an improved aeroplane or flying-machine the movements of which are controlled by reaction.

In the accompanying drawings, Figure 1 is a side elevation of the preferred form of my aeroplane. Fig. 2 is a transverse section drawn to a larger scale. Fig. 3 is a plan view drawn to a smaller scale. Fig. 4 is an inverted plan view. Fig. 5 is a diagrammatic view of a modification. Fig. 6 is a view, drawn to a larger scale, of a casing to receive the engineer. Fig. 7 is a diagram illustrating a manner of flying. Fig. 8 is an enlarged sectional view of a discharge-outlet on the upper side of one of the wings.

The frame of my aeroplane comprises a hollow body A of approximately pyramidal shape, with laterally projecting wings B and B', which may be in the same plane as illustrated in Fig. 2, or may be slightly tilted upward, as indicated in the modification, Fig. 5.

As I have said, I control the movements of my aeroplane by means of the force of reaction due to the discharge from openings in the machine of expansive fluids stored or generated in suitable appliances in the machine. I do not wish to restrict myself to any particular motive force or any particular motive apparatus; but, for illustration, I may store liquid air in a tank D and from this or other source of supply of expansive fluid I carry systems of pipes to different parts of the apparatus, not only for the purpose of propelling, but also for the purpose of guiding and steering the aeroplane and bringing and keeping it in the desired position in the wind.

The wings B and B' are made hollow, and the distributing-pipes from the power-supply are carried in branched sets to different sections of the wings and also of the body, if desired, and have discharge-openings C projecting backward. The discharge-openings on the upper sides of the wings project slightly upward as well as backward, and those on the

lower sides of the wings project slightly downward as well as backward, while those at A' at the back of the main body A preferably project backward directly. In Fig. 8 I have indicated in enlarged sectional view at C one of the discharge-outlets on the upper side of one of the wings, the section being taken longitudinally in a direction from stem to stern.

As indicated in Fig. 2, there are a number of valves E' E<sup>2</sup> E<sup>3</sup>, &c., in the distributing pipes F' F<sup>2</sup> F<sup>3</sup>, &c., leading from the power-supply D to the different sections of the apparatus. Thus I may divide the discharge-outlets on the upper sides of the two wings into four sections, as indicated by dotted lines in Fig. 3, two sections forward at the pointed prow and two toward the stern on opposite sides, while in like manner the discharge-openings on the under face of each wing may be divided into forward and rear sections, as indicated by dotted lines in Fig. 4. So, also, the discharge-openings at the rear of the body may be in separate sections, and every section will be controlled from a main pipe F' F<sup>2</sup>, &c., with its valve E' E<sup>2</sup>, &c. These several valves are to be grouped together under the control of the engineer, for whom I prefer to provide a close-fitting shell or case G, such as shown in Fig. 6. This case may be located at X, Fig. 1, and of course windows will have to be provided in the body of the aeroplane, particularly at the point Y, Figs. 1 and 4, near where the engineer is to be stationed.

The case G for the engineer will vary in shape with the position preferred to be occupied. In the drawings I have shown this casing as constructed to receive the engineer in a lying posture, face downward; but it may, if preferred, be constructed so that the engineer may occupy a sitting or other suitable posture. In the form shown the casing is in two parts, one, g, permanently secured to the framework and adapted to receive the lower part of the man's body, while the other, g', is attachable and is adapted to fit over the man's head and shoulders. The engineer puts this part g' on before getting backward into the fixed piece g, and then the two parts may fit together by means of the sleeves g<sup>2</sup>, and then the part g' may be secured to the part g or to the framework by any easily-manipulated

lated fastening. The purpose of this casing G is not only to securely hold the engineer in place under all movements of the aeroplane, but also that the pressure of his body against one or other part of this casing will enable him to feel which way the machine is being tilted, so that he can quickly manipulate the proper valves  $E' E^2$ , &c., to cause discharge of the motive fluid at such points as will correct any undesired tilting in any direction and bring the machine to the angle desired.

In starting, the machine will be mounted upon a light wheeled frame upon a level ground, and the motive fluid will be discharged from the stern and from under the wings, thereby starting the aeroplane and frame forward horizontally by the reaction, and then the aeroplane will rise from the frame into flight. A reference to the diagram Fig. 7 will illustrate a mode of flying against the wind, the direction of the wind being indicated by the arrow. The engineer will first cause the motive fluid to be discharged from the under side of the wings on the forward sections and from the upper side of the wings at the rear sections, but only for a sufficient length of time to bring the aeroplane to an upwardly-tilted position. (Shown exaggerated at  $e$  in Fig. 7.) Motive fluid being at the same time discharged from the rear of the body of the machine, the joint effect of the reaction of the motive fluid and the wind will be to carry the aeroplane upward to the position  $f g h$  successively, and when the engineer thinks he has risen high enough he manipulates his valves so as to cause discharge from the forward sections on the upper side of the wings and from the rear sec-

tions on the under side of the wings, these discharges being continued only long enough to bring the machine to the position shown at  $i$ . Then under the impulse of the reaction from the stern discharges and from any or all parts of the wing-sections, too, if desired, the machine will fly rapidly forward to the positions  $k m$ , &c., and continue on that tack as long as the engineer may deem expedient. In like manner the aeroplane may be steered to the left or to the right by causing discharges of motive fluid from the right or the left side of the wings or body, as will be readily understood.

I claim as my invention—

1. An aeroplane having a body with lateral wings, said wings having openings for the discharge of motive fluid to operate by reaction.

2. An aeroplane, having a body with lateral wings, a motive-fluid supply, and pipes leading therefrom to discharge-outlets in different sections of the aeroplane, and valves in the pipes to control the discharge of motive fluid from the different sections, as and for the purpose described.

3. An aeroplane, having a body with lateral wings, discharge-outlets in sections, in the wings, a motive-fluid supply and valved pipes leading from the latter to the different sections of discharge, as and for the purpose described.

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

THEOD. GIBON.

Witnesses:

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C. L. BOONE.