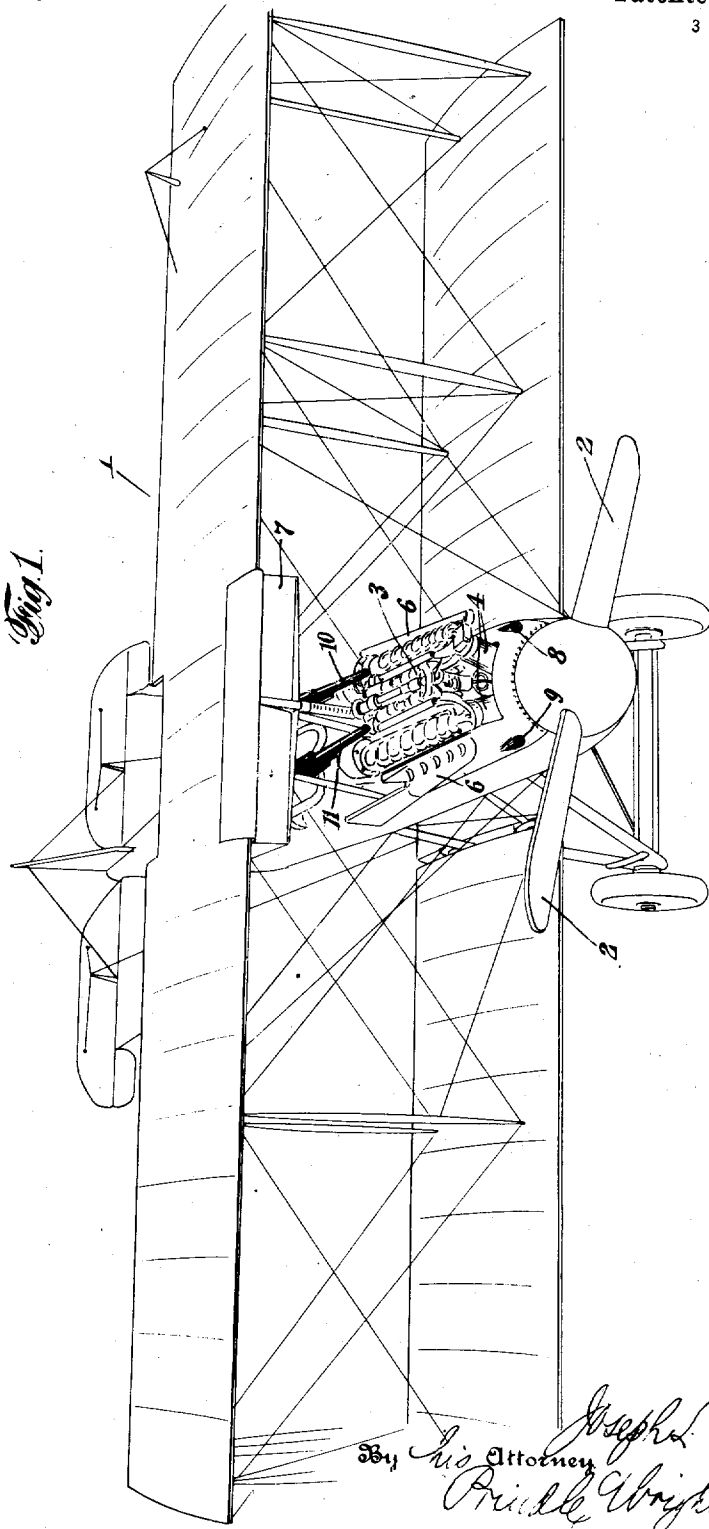


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APPLICATION FILED SEPT. 20, 1918.

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Patented Nov. 7, 1922.
3 SHEETS—SHEET 1.



Inventor
Joseph L. Cato
By *his Attorney*
Prindle Wright & Small

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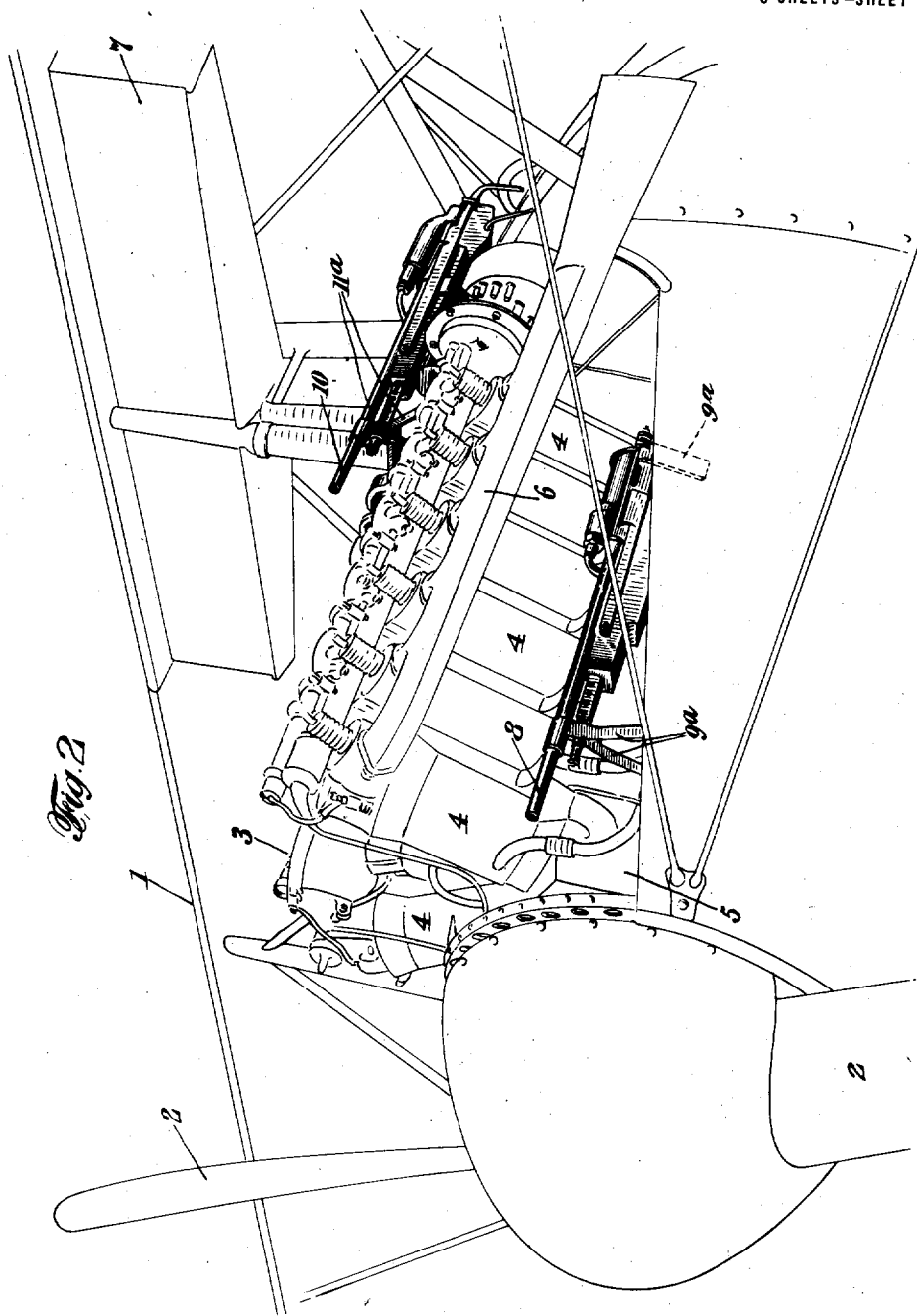


Fig. 2

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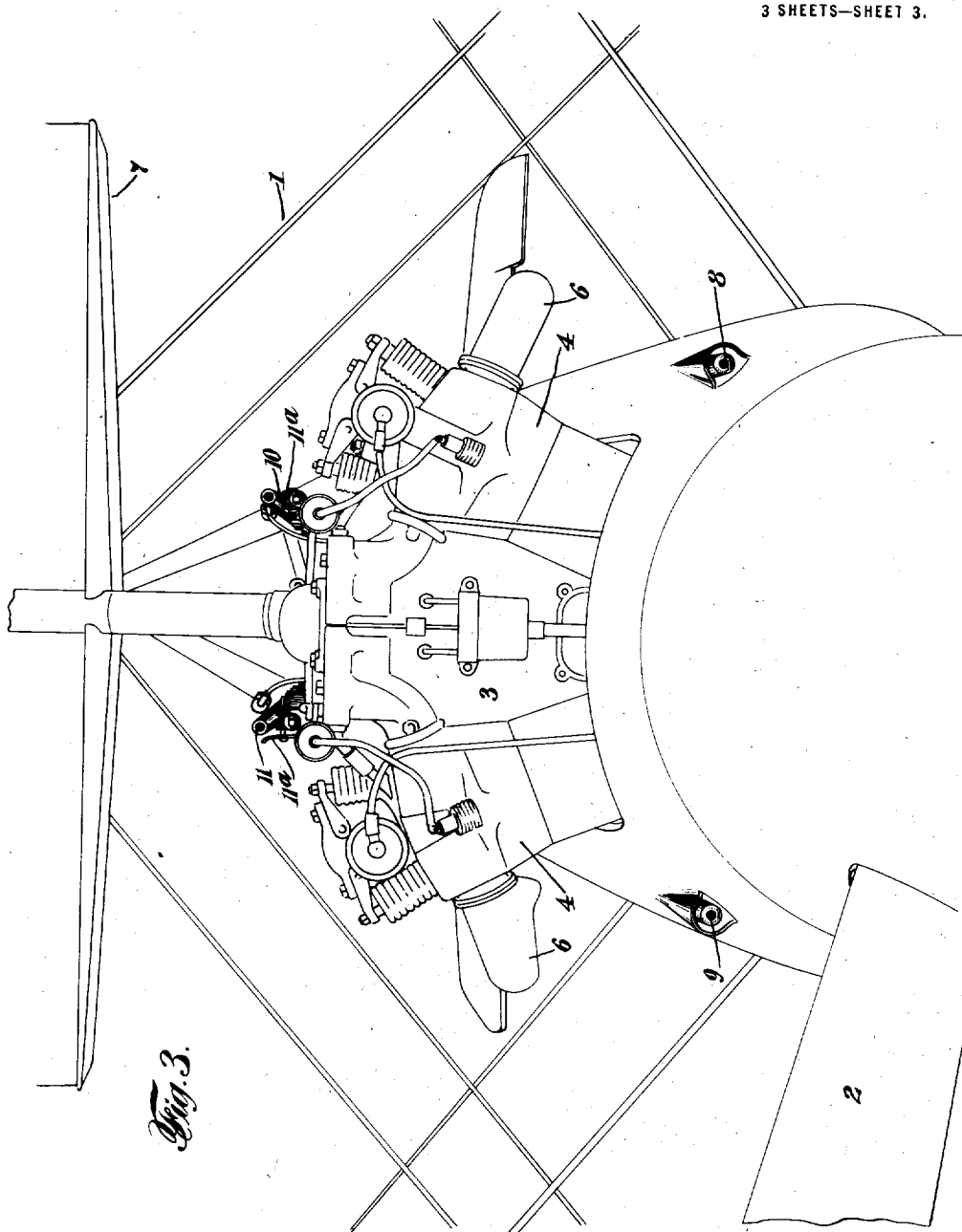


Fig. 3.

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UNITED STATES PATENT OFFICE.

JOSEPH L. CATO, OF ELMHURST, NEW YORK, ASSIGNOR TO L-W-F ENGINEERING COMPANY INC., OF COLLEGE POINT, LONG ISLAND, NEW YORK, A CORPORATION OF MICHIGAN.

ARMED AEROPLANE.

Application filed September 20, 1918. Serial No. 254,889.

To all whom it may concern:

Be it known that I, JOSEPH L. CATO, of Elmhurst, in the county of Queens and in the State of New York, have invented a certain new and useful Improvement in Armed Aeroplanes; and do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates particularly to aeroplanes equipped with rifles for use in military operations etc.

The object of my invention is to provide an aeroplane with a plurality of rifles so arranged as to be protected as far as possible from damage by attacks from other aeroplanes, and in such a way that their presence cannot be readily discerned by observation, thus increasing their effective use. Another object is to locate one or more automatic rifles in the angles at the sides of a V-shaped motor.

Further objects of my invention will appear from the detailed description thereof contained hereinafter.

While my invention is capable of embodiment in many different forms, for the purpose of illustration I have shown only one form of my invention in the accompanying drawings, in which;

Fig. 1 is a perspective view of an aeroplane equipped with my invention.

Fig. 2 is a perspective view of the forward part of the same, showing the engine casing partly removed, and

Fig. 3 is a perspective view of the same taken directly from the front thereof.

In the drawings, I have shown an aeroplane 1 which may be of any desired construction, but which as shown in the drawings is of the biplane type having a single propeller 2 driven by an internal combustion engine 3 having twelve cylinders 4 arranged in pairs in such a manner that the cylinders of each pair are at an angle to each other, that is to say, in the form of a V. The cylinders 4 form at either side of the engine a recess between the same and a crank casing 5 provided for the engine. At either side of the engine there is an exhaust pipe 6, and above the engine there is a radiator 7 for the water cooling system. At the two sides of the engine in the recesses referred to, there are located a pair of rapid firing automatic rifles 8 and 9 which may, if desired, be of the Browning type, and which

are supported upon brackets 9^a from the crank casing 5. Above the engine 1 there may be a further pair of rifles 10 and 11 of the same character which are supported upon brackets 11^a carried by the cylinders 4. All of these rifles 8, 9, 10 and 11 may be fired merely by hand, or they may be synchronized with the propeller 2 by being controlled from the shaft of the engine 3 in the usual manner, so as to fire only at the times when the propeller blades are not in front of the muzzles of the rifles.

In the operation of my invention the rifles 8, 9, 10 and 11 will be caused to commence firing by the operator whenever desired, and whenever the triggers of the rifles are pressed by the operators, they will continue to fire until the ammunition has been entirely used up, and where the rifles are synchronized with the propeller 2 they will only fire when the propeller blades are not opposite to the muzzle of the particular rifle firing. By locating the rifles 8 and 9 at the positions given, they will be protected by the portions of the engine which are located adjacent thereto, and which form angles in which the rifles are located. Furthermore, the location of the rifles in this manner will prevent them from being observed by another aeroplane, except when extremely close, and this will increase their effectiveness as the enemy will be taken unawares thereby.

While I have described my invention above in detail, I wish it to be understood that many changes may be made therein without departing from the spirit thereof.

I claim:

1. In combination, an internal combustion engine whose cross section would disclose an angle formed by the cylinder and crank casing of the engine, and a rifle located adjacent to the side thereof within the angle.

2. An aeroplane comprising an internal combustion engine having an angle formed by the cylinder and crank casing of the engine, and a rifle located partially within said angle adjacent to the side of said engine.

3. In combination, an internal combustion V-shaped engine and a rifle secured thereto and located adjacent to the side thereof in an angle formed by the cylinder and crank casing of the engine.

4. An aeroplane comprising an internal combustion V-shaped engine and a rifle located adjacent to the side thereof in an angle

formed by the cylinder and crank casing of the engine.

5 An aeroplane comprising an internal combustion V-shaped engine, a rifle located adjacent to the side thereof in an angle formed by the cylinder and crank casing of the engine, and a casing substantially covering and concealing said rifle, but without marked departure from the form of casings

customarily employed upon such aeroplanes as lack armament.

In testimony that I claim the foregoing I have hereunto set my hand.

JOSEPH L. CATO.

Witnesses:

ALLAN S. ADAMS,
H. L. GARBER.