

L. COATALEN.
 MEANS FOR PROTECTING THE IGNITION APPARATUS OF INTERNAL COMBUSTION ENGINES.
 APPLICATION FILED NOV. 21, 1916.

1,256,876.

Patented Feb. 19, 1918.

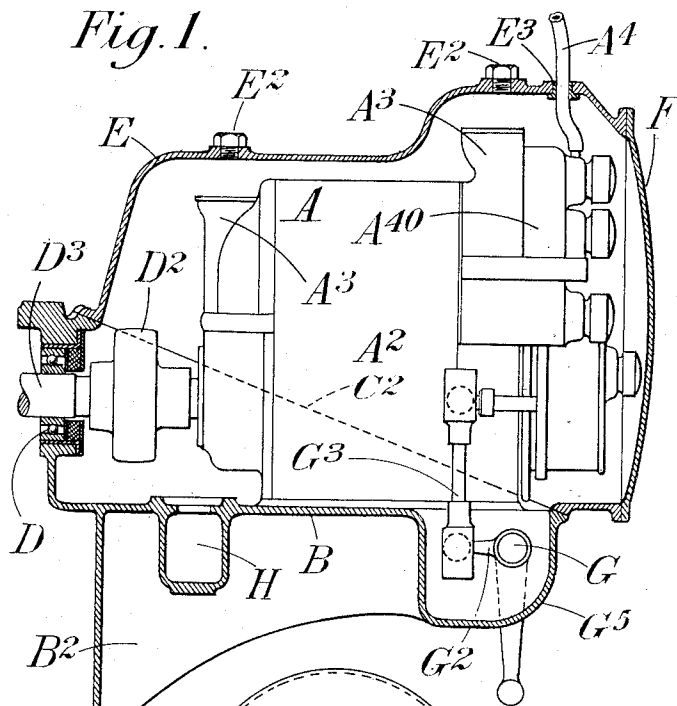
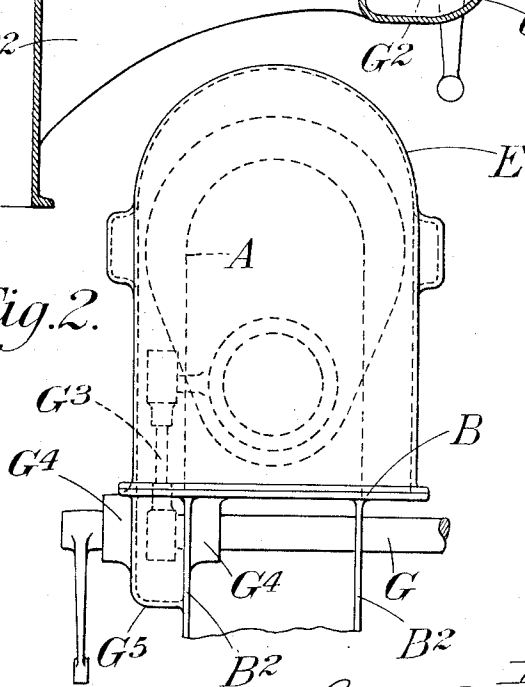


Fig. 2.



Inventor
 Louis Coatalen
 by Spear, Middleton, & Danvers Spear
 Attys.

UNITED STATES PATENT OFFICE.

LOUIS COATALEN, OF WOLVERHAMPTON, ENGLAND.

MEANS FOR PROTECTING THE IGNITION APPARATUS OF INTERNAL-COMBUSTION ENGINES.

1,256,876.

Specification of Letters Patent.

Patented Feb. 19, 1918.

Application filed November 21, 1916. Serial No. 132,642.

To all whom it may concern:

Be it known that I, LOUIS COATALEN, a subject of the King of Great Britain, and resident of Wolverhampton, Staffordshire, England, have invented certain new and useful Means for Protecting the Ignition Apparatus of Internal-Combustion Engines, of which the following is a specification.

This invention has for its object to provide an improved means for protecting from moisture the ignition apparatus of internal combustion engines, which usually consist of a magneto driven by a shaft and carried by a bracket. Usually where the magneto is inclosed there is a complete cover through which the driving shaft passes, which prevents the cover being removed without detaching the magneto. Further, it is not a simple matter to make a water-tight joint around the shaft.

According to this invention, the bracket is formed with walls which constitute a permanent inclosure or protection for the lower parts, such as the bearing for the driving shaft, and there is fitted to the bracket so as to join up with these walls one or more detachable covers, which in turn may have easily detachable portions.

The accompanying drawings show one method of carrying out this invention. In these,

Figure 1 is a central vertical section showing the magneto in elevation, and

Fig. 2 is an end view of the same.

Like letters indicate like parts in both views.

In this case the magneto A is mounted upon a platform B which with the supporting webs B¹ forms a bracket which is attached to the engine in any suitable manner. The platform B is provided with sloping walls C at the sides, which at their higher ends extend above and protect the bearing D and coupling D² of the magneto driving shaft D³. The other ends of the walls C are low to provide easy accessibility to the contact breaker at A². Fitted over the magneto is the main cover E which makes a water-tight joint along the edges C² or sides of the walls C and is provided with one or more oiling orifices at E³ if neces-

sary connected by tubes with the oil wells A³ on the magneto. Through this main cover E pass the wires A⁴. Apertures are provided for these, which contain insulating bushes E³ which firmly grip the wires and form a water-tight joint.

There may be an end cover plate F which is separately detachable to provide easy accessibility to the contact breaker at A² and distributor at A⁴⁰ without removing the main cover E.

For the adjustment of the position of the contact breaker A² there may be provided in the bracket at G⁴ bearings for a short spindle G which carries a crank G² coupled to the contact breaker by the link G³. These bearings are water-tight, and if desired the crank G² may operate in a small well G⁵ formed in the bracket.

In order that any moisture, which may enter or which may be formed by sweating, may be absorbed, there may be located in the casing a quantity of some hygroscopic material, such as calcium chlorid. This may be arranged in a small pocket H in the bracket.

It is not essential that the side walls C be formed integral with the bracket B as they may be separate therefrom and more or less permanently attached to the bracket. Their chief function is to provide easy means of adjustment, with a water-tight joint for the main cover E.

If desired a single inclosure may contain two or more magnetos, there being any number of detachable covers for access thereto.

Thus the entry of moisture to the casing is prevented, and any moisture formed therein is absorbed, while the parts are easily accessible and controllable. All the joints between the various parts of the casing may be machined joints, so that complete protection is obtained, which is particularly desirable in the case of magnetos used on seaplane engines.

What I claim as my invention, and desire to secure by Letters Patent, is:—

In an internal combustion engine, the combination of a bracket, an ignition device thereon, a driving shaft for said ignition device, a bearing for said shaft, walls to

said bracket which project above said bearing, a cover over said ignition device and joining up said walls, a spindle upon said bracket, and projecting to one side thereof,
5 and a connection between said spindle and said ignition device, substantially as set forth.

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

LOUIS COATALEN.

Witnesses:

SAMUEL BAYLISS,
T. CURETON.