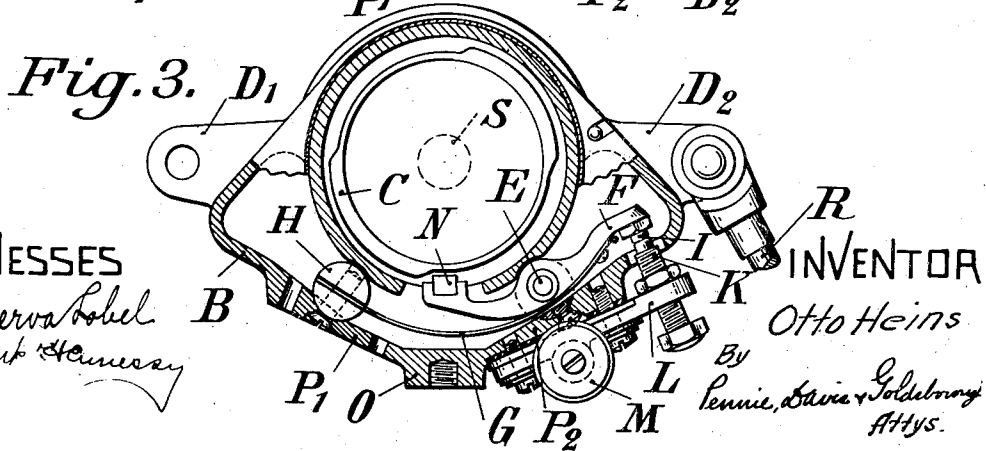
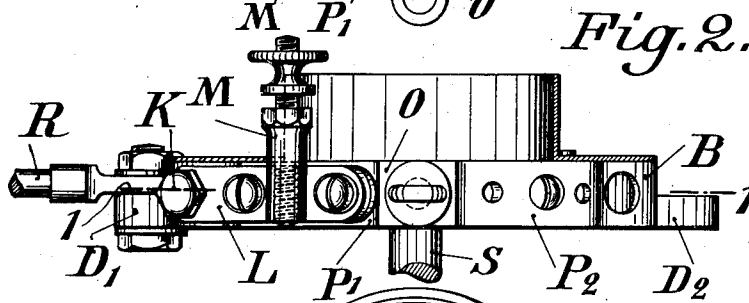
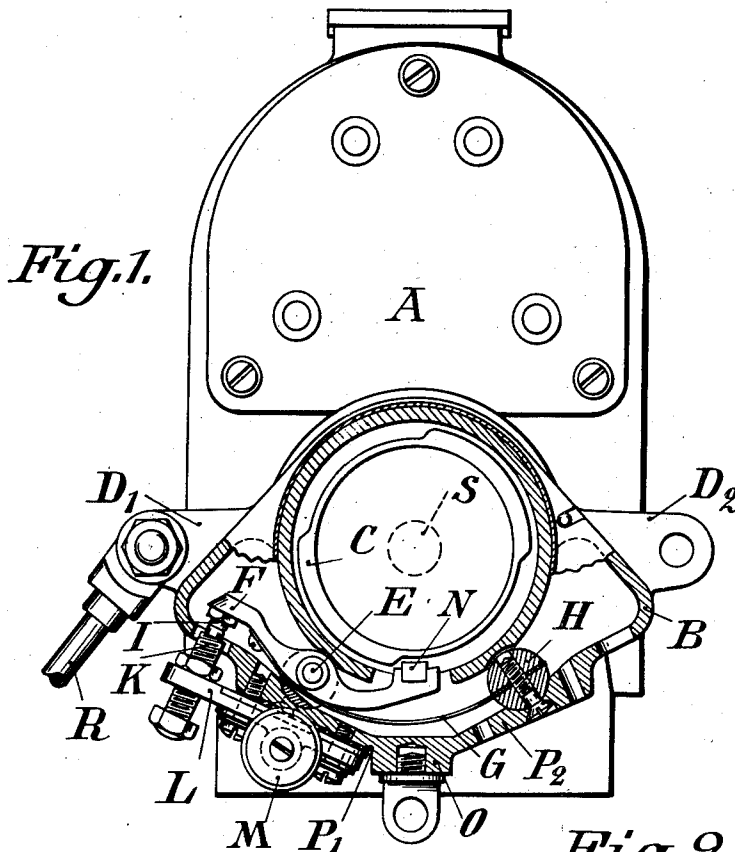


O. HEINS.
 INTERRUPTER FOR IGNITION MACHINES.
 APPLICATION FILED MAY 26, 1911.

1,048,832.

Patented Dec. 31, 1912.



WITNESSES
 Minerva Label
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INTERRUPTER FOR IGNITION-MACHINES.

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To all whom it may concern:

Be it known that I, OTTO HEINS, a subject of the Emperor of Germany, and residing at Edgewater, county of Bergen, and State of New Jersey, have invented certain new and useful Improvements in Interrupters for Ignition-Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to an interrupter for ignition machines, and particularly to one whose housing is mounted on a sleeve on the journal box concentric with the shaft of the machine and is adapted to be turned thereon to adjust the period of ignition.

The principal object is to provide means for supporting the interrupter in either one of two positions on the housing, whereby the rod for adjusting the period of ignition may extend to that position which is most convenient for the driver of an automobile, notwithstanding the various arrangements of other parts of the operating mechanism in the diverse types of cars.

Wherever possible the period of ignition is adjusted by hand from the driver's seat, and for that purpose there is usually provided a rod connecting the adjusting lever of the interrupter to a handle at the driver's seat. However, the arrangement of the rod is generally different in the various types of cars, so that the mounting of the ignition machine often involves considerable difficulty in cases where the position of other parts have already been advantageously determined. These difficulties are materially diminished and often entirely eliminated by providing alternative points for connecting the driver's handle with the adjusting lever of the ignition machine.

In accordance with this invention, the interrupter housing is provided with two seats for mounting the interrupter, while the interrupter elements are so constructed that they permit either position. These seats are symmetrically disposed with respect to a median plane passing through the axis of the shaft and the point of contact between the cam-disk and the interrupter lever, whereby, with the interrupter mounted on one of the seats, the period of ignition is ad-

justed by connecting the rod from the driver's handle to one side of the adjusting lever, and whereas, with the interrupter mounted on the other seat the same adjustment is attained by connecting the rod to the other side of the adjusting lever.

In the accompanying drawings illustrating the preferred embodiment of my invention, Figure 1 is an elevation partly in section of the interrupter end of the ignition machine on section line 1—1 of Fig. 2, showing the interrupter mounted on the left hand seat of the housing; Fig. 2 is a bottom view of the interrupter housing; and Fig. 3 is a sectional elevation of the housing with the interrupter mounted on the right hand seat.

In the drawings, A is an ignition machine of any well known type having suitable windings to generate an ignition spark for an internal combustion engine. The interrupter housing B surrounds one of the journal boxes of the machine, while the cam ring C is mounted on the shaft S so as to rotate with it. The two adjusting levers D₁ and D₂ are fastened to the interrupter housing B, and are provided with eyes as shown. The rod R extending to a handle near the driver's seat is connected in any suitable way to one of the levers D₁ or D₂, depending upon the position of the interrupter. By means of the adjusting rod, the driver can turn the housing through a small angle about the axis of the shaft S and thereby adjust the period of ignition. The housing is designed to have sufficient friction against turning to hold it in any position to which it may be adjusted.

The interrupter lever F is pivotally mounted on the stud E and is in electrical connection with the frame of the apparatus. The plate spring G is fastened at one end to this lever, while its other end extends freely within the slitted block H, so that the spring constantly tends to hold the contact terminals I and K in electrical contact with each other. The member L is mechanically fastened to the housing but electrically insulated therefrom in any well known way. It carries the contact terminal K which may be adjusted to various positions with respect to the contact terminal I. The member L also carries the binding post M to which one terminal of an electric circuit may be connected. The lever F carries the contact

terminal I at one end and a block N of fiber or other suitable material at the other end in coöperation with the cam ring C, whereby upon rotation of the shaft S the lever F is

turned about its pivot E as the different cam surfaces come into engagement with the block N. In this way the contact terminals I and K are periodically brought together and separated to produce the ignition spark.

In Fig. 1 the interrupter is arranged at the left of the median plane passing through the axis of the shaft and the block N while in Fig. 3 the interrupter is arranged on the right of that plane. The housing is constructed so as to provide for either of these arrangements by having the two seats P_1 and P_2 symmetrically disposed with respect to the median plane, whereby the member L may be fastened either at the left or the right hand side. Preferably the block H and the stud E are symmetrically disposed with respect to the median plane, while the two seats are provided with symmetrically disposed threaded holes for the reception of the screws for holding the member L to the seat P_1 or the seat P_2 as the case may be. Also the binding post M may be fastened in the member L so as to project therefrom in either direction so that it does not interfere with other parts of the ignition machine when the interrupter is mounted on either seat. It will be apparent from the above that the same movement of the rod R produces the same adjustment of the period of ignition whether the rod is connected to the adjusting lever D_1 (as in Fig. 1) or D_2 (as in Fig. 3).

The boss O between the seats P_1 and P_2 is provided with a threaded hole as shown, for the reception of the adjusting rod R should it be desirable to adjust the period of ignition by turning the housing by means of a connection at the bottom of the ignition machine, in which case the interrupter would be mounted on the left or the right hand seat depending upon the relative positions of the other parts. Any other suitable method of fastening the adjusting rod to the boss O could be used.

It is obvious that the construction herein shown may be variously modified within the scope of my invention, the only essential condition being that the housing and the parts of the interrupter be so constructed that the interrupter may be positioned on either side of the median plane to correspond with the position of the rod for adjusting the period of ignition. It is to be understood that by "median plane", I mean that plane which passes through the axis of the

shaft S and the actuated end N of the pivoted lever F.

Having thus described my invention, what I claim is:

1. In combination with an ignition machine, a support having two seats, an interrupter adapted to be mounted on either one of said seats and to be turned through an angle to adjust the period of ignition and means for turning said interrupter.

2. In combination with an ignition machine, a housing adapted to be turned through an angle to adjust the period of ignition and having two seats, an interrupter adapted to be mounted on either one of the said seats and having a pair of terminal contacts, a rotatable cam ring within said housing adapted to periodically separate said contacts, and an adjusting lever operatively connected to turn said housing, whereby the period of ignition may be adjusted with the interrupter mounted on either of said seats.

3. An interrupter for ignition machines having a rotatable cam-ring, a contact lever actuated thereby, and a housing carrying two levers extending in opposite directions and by which the housing may be turned through an angle to adjust the period of ignition, said housing having within it two reception spaces for the contact lever symmetrically disposed with respect to a median plane passing through the axis of rotation of the cam-ring and the point of contact between the cam-ring and the contact lever, whereby the contact lever may be operatively mounted in either side of the housing.

4. An interrupter for ignition machines having a rotatable cam-ring, a contact lever actuated thereby, a housing adapted to be turned through an angle to adjust the period of ignition and having seats symmetrically disposed with respect to a median plane passing through the axis of rotation of the cam-ring and the point of contact between the cam-ring and the contact lever, an interrupter adapted to be mounted on either one of said seats, and having coöperative contact terminals and an adjusting rod for turning said housing, said housing being adapted to be operatively connected at any one of a plurality of points with the adjusting rod.

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

OTTO HEINS.

Witnesses:

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G. BARENBOG.