Feb. 10, 1948. A. K. WIHANTO 2,435,914

ADJUSTABLE LEVER-EFFECTING SELF-CLEANING IGNITION POINT

Filed Dec. 11, 1946

Fig. 1

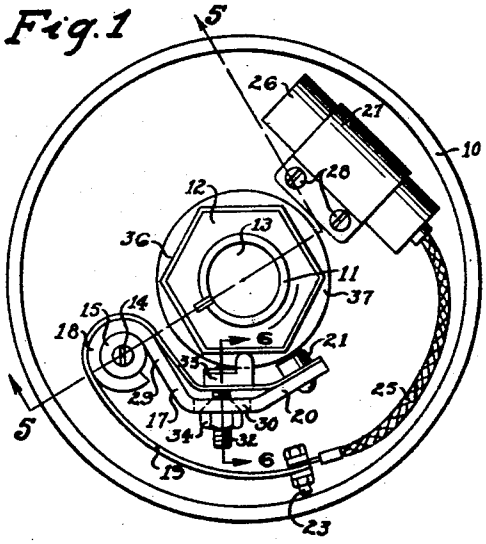


Fig. 2

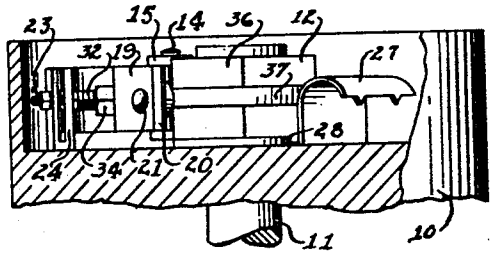


Fig. 4

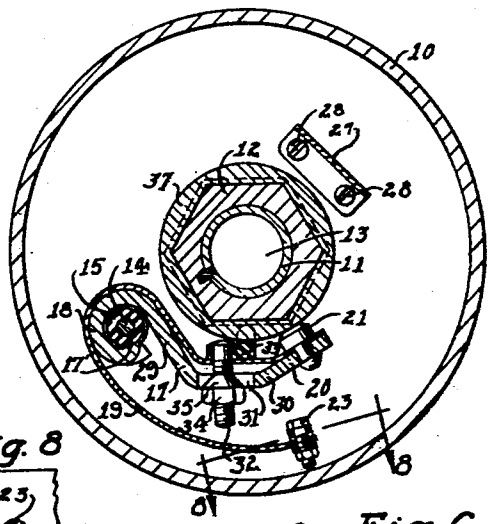


Fig. 3

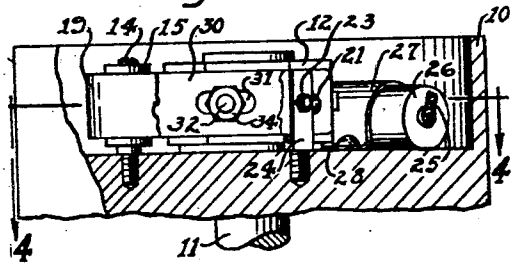


Fig. 5

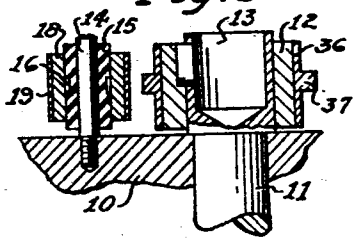


Fig. 8

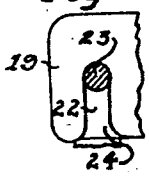


Fig. 6

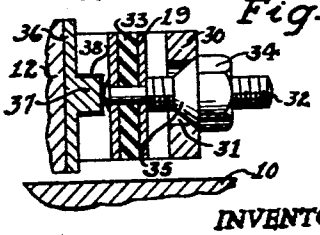
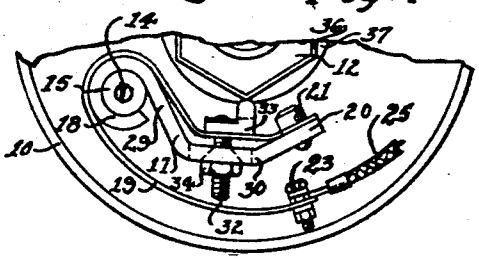


Fig. 7



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ADJUSTABLE LEVER-EFFECTING SELF-CLEANING IGNITION POINT

Adolph K. Wihanto, Malden, Mass.

Application December 11, 1946, Serial No. 715,582

2 Claims. (Cl. 200—30)

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This invention relates to an adjustable contact lever which is adapted to be installed in the distributor of an internal combustion engine to effect and maintain the cleaning of the breaker points of the distributor.

An object of the invention is to provide a device which, installed in the distributor of an internal combustion engine, will provide self-cleaning breaker points.

Another object of the invention is to provide a device that can be easily installed, and will replace the breaker points in use at the present time.

With the above and other objects and advantages in view, the invention consists of the novel details of construction, arrangement and combination of parts more fully hereinafter described, claimed and illustrated in the acompanying drawing which:

Figure 1 is an elevational view of an embodiment of the invention installed in a distributor of an internal combustion engine;

Figure 2 is a peripheral view thereof;

Figure 3 is the same as Figure 2 looking at the opposite periphery thereof;

Figure 4 is a sectional view on the line 4—4 of Figure 3;

Figure 5 is a sectional view on the line 5—5 of Figure 1;

Figure 6 is a sectional view of the adjuster nut the figure having been revolved 90° to more clearly illustrate the construction;

Figure 7 is a fragmentary view similar to Figure 1, with the contact on one of the hexagonal edges and

Figure 8 is a sectional view on the line 8—8 of Figure 4.

Referring more in detail to the drawing, the reference numeral 10 designates the distributor housing of an internal combustion engine, and 11 the timing shaft thereof.

Mounted on the shaft 11 in the conventional manner is the cam 12 which, as shown, may be hexagonal or will comprise as many faces as there are cylinders for the proper timing thereof. The shaft 11 is provided with the oil reserve 13 for the lubrication thereof.

The housing 10 is provided with the spindle 14 for the conventional breaker arm which is replaced by the construction later to be described, and embodying the invention.

Mounted on the spindle 14 is a sleeve 15 which is made of insulating material, and is provided with an annular groove 16 for the retention of the notched end 17' of the breaker lever 17 therein.

The breaker lever 17, being mounted on the sleeve 15 by having a loop portion 18 thereof bent to conform to the shape of the sleeve 15 and the notched end 17' of the lever 17 firmly grips the

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sleeve 15. A strip of spring metal 19 is secured to the inclined portion 20 of the lever 17 by the contact point 21 and looped around the curved portion 18 of the lever 17 is connected at its opposite end by means of the vertical slot 22 to the terminal post screw 23 in the terminal post 24 secured to the housing 10, and the lead 25 from the condenser 26 is also connected to the post 24, the condenser being retained in the housing 10 by a spring clip 27 secured to the housing 10 by screws 28.

The lever 17 contains a second inclined portion 29, and a straight portion 30 intermediate the portions 20 and 29 which is provided with a central aperture 31.

Mounted on the spring 19 by means of the screw bolt 32 is the L-shaped contact member 33 which is made of insulating material, and is provided with a square opening to conform to the square portion of the bolt 32 to prevent rotation of the member with relation to the bolt. A washer is inserted between the head of the bolt and the member 33, and the bolt passes through the member 33, spring 19 and the aperture 31 to receiver the nut 34, the conical portion 35 of which engages the edges of the aperture 31. With the assembly described thus connected as a unit, and the tension of the spring 19 acting on the lever 17 by the adjustment of the nut 34, this part of the invention is complete.

A sleeve 36 of high carbon steel shaped to conform to the cam 12, is mounted thereon, and the sleeve is provided with an annular track 37 at the center thereof, which engages with the groove 38 in the member 33.

This sleeve forms the moving contact or point which is engaged by the point 21, but such a construction will be used only if the cam itself is not of the proper material to form the moving contact.

During operation of the engine on which the distributor is mounted, the space between the sleeve 36 and contact 21 is adjusted by means of the nut 34. The constant sliding contact of the cam or sleeve 36 with the point 21 will keep both of the engaging surfaces clean and serviceable for a long time.

It is to be noted that a suitable felt mat may be placed in the distributor housing in contact with the track 37 on the sleeve 36 and saturated with lubricant, will lessen the wear on the track and contact point 21, thus adding to the service and life of the device. Due to the rapidity with which the lubricant may be used, lubricant should be used generously on the felt to replace the loss of lubricant therefrom.

It is believed that with the above description, the operation and construction of the invention will be apparent to those skilled in the art, and it is to be understood that changes in the minor

details of construction may be resorted to, provided they fall within the spirit of the invention and the scope of the appended claims.

Having thus described the invention, what is claimed as new and desired to be secured by Letters Patent is:

1. A device of the character described, in combination with the distributor of an internal combustion engine of a swinging lever, a stud for mounting said lever, an insulating sleeve on said stud to which said lever is connected, a notched end on said lever, a groove in said sleeve to receive said notched end to hold the lever on said sleeve, a spring secured to said lever for the tensioning thereof, a timing stud secured to said

spring, and said lever, a nut on said stud for adjusting the timing and tension of said spring, a contact point receiving the end of said spring and said lever in fixed relation to each other, a slot at the other end of said spring for connecting said spring to the terminal post of said distributor, and a contact sleeve on the cam of said distributor forcing the movable contact adapted for contact with said first mentioned contact.

2. The invention as in claim 1 wherein said lever is provided with an aperture through which said stud extends, and the nut is of the self-centering type having the centering conical shaped portion thereon.

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