

W. D. HEATH.
 TIMER DEVICE.
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1,361,256.

Patented Dec. 7, 1920.

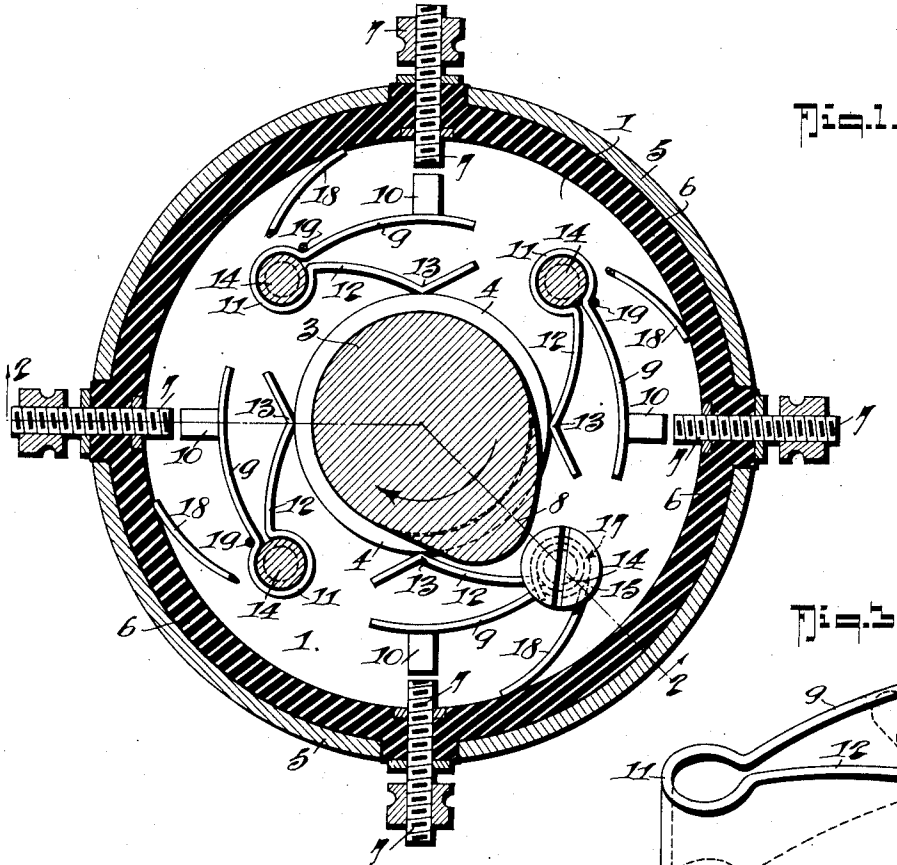


Fig. 1.

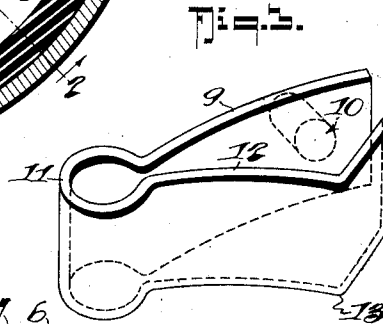


Fig. 2.

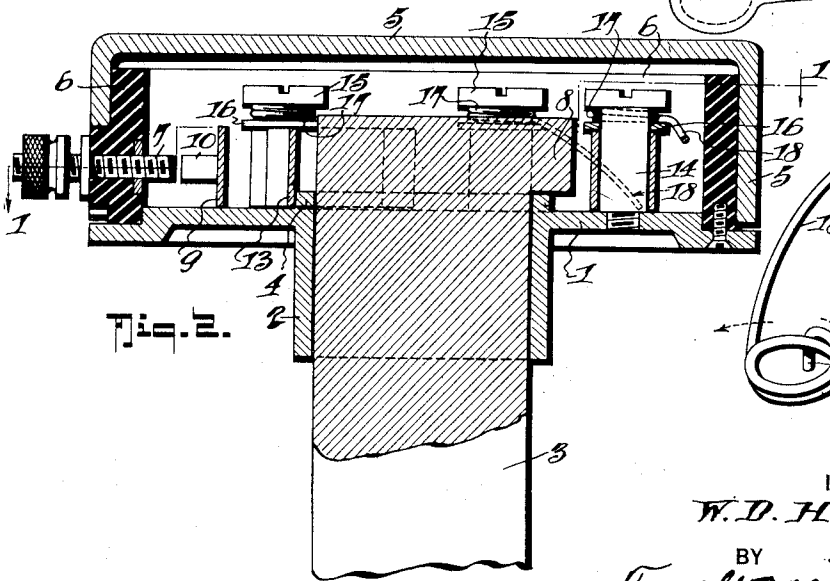


Fig. 3.

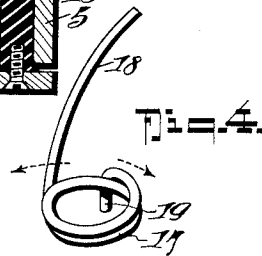


Fig. 4.

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TIMER DEVICE.

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To all whom it may concern:

Be it known that I, WALTER D. HEATH, a citizen of the United States, residing at Lakeport, in the county of Belknap and State of New Hampshire, have invented a new and Improved Timer Device, of which the following is a specification.

My invention relates to certain new and useful improvements in circuit making and breaking devices commonly known as "timers" and especially adapted for use in connection with the circuit distributing systems of internal combustion engines. In its generic nature, the invention has for its object to provide a timer device of a simple and effective construction in which the spring-contact member is so designed as to provide a delayed break in the circuit, thus adding to the intensity of the discharge at the spark point terminals. Another object of the invention is to provide a timer device in which the spring or movable contact is protected against wear by being held out of engagement with the cam shaft during the time the circuit has to remain open at that particular contact.

Another object of the invention is to provide a timer using silver or platinum contact points and having no roller or drag movement.

In its generic nature, the present invention resides in the provision of a leaf spring member bent back to form a cylindrical bearing and continued back upon itself and angled to provide a member adapted to be engaged by the cam on the cam shaft, the "leg" of the spring farthest from the cam shaft being provided with the contact point and a light wire spring is provided for holding the spring-contact member against a shoulder or boss and against the cam at such times as the cam is in engagement with the spring-contact member.

In its more detailed nature, the invention also resides in those novel details of construction, combination and arrangement of parts, all of which will be first fully described, then be specifically pointed out in the appended claims and illustrated in the accompanying drawings, in which:—

Figure 1 is a horizontal section on the line 1—1 of Fig. 2.

Fig. 2 is a vertical section on the line 2—2 of Fig. 1.

Fig. 3 is a detail perspective view of one of the spring-contact members,

Fig. 4 is a detail perspective view of one of the wire springs used for holding the spring-contact member in its retracted position.

In the drawing, in which like numerals of reference indicate like parts in all of the figures, 1 designates the timer case which is provided with a bearing 2 for the cam shaft 3 and is also provided with a boss 4 for a purpose presently understood. The case 1 also includes a cover 5 which may be slipped over the insulating ring 6 which carries the fixed contact points 7, the latter being of any approved construction. The cam shaft 3 is provided with the usual cam 8 that is adapted to engage the spring-contact members and cause the closing of the circuit. The spring-contact members are each composed of a piece of leaf spring steel and having a portion 9 which carries the contact-point 10, the portion 9 uniting with a cylindrical bearing loop 11 which in turn unites with a wing 12 that is bent to form a V, the edge 13 of which is adapted to be engaged by the cam 8 as it comes into position with respect thereto. The bearing loop 11 is fitted loosely onto a stud 14 secured to the case 1 and having a head 15 to hold the parts in position, a washer 16 being provided between which washer and the head 15 the coil 17 of the wire spring 18 is held, the spring 18 lying against the insulated ring 6 and also having an end 19 bent to engage the spring-contact member, as shown, to hold the V edge 13 constantly against the shoulder or boss 4 of the case, thus holding it out of contact with the cam shaft 3.

From the foregoing description, taken in connection with the accompanying drawings, it is thought the construction, operation and advantages of the invention will be clear to those skilled in the art to which the invention relates. I desire to say, however, that any number of contact units may be employed, four being shown in the drawing. The number employed, of course, depends upon the number of cylinders of the engine it is desired to operate.

While the drawings illustrate one embodiment of the invention I do not wish to be understood as being limited thereto as changes in the details of construction and arrangement of parts may be made to suit the timer to fit any desired location and power plant.

