E. C. FREESE.

MAGNETO.

APPLICATION FILED FEB. 12, 1917.

1,292,296. Patented Jan. 21, 1919.

Fig. 1.

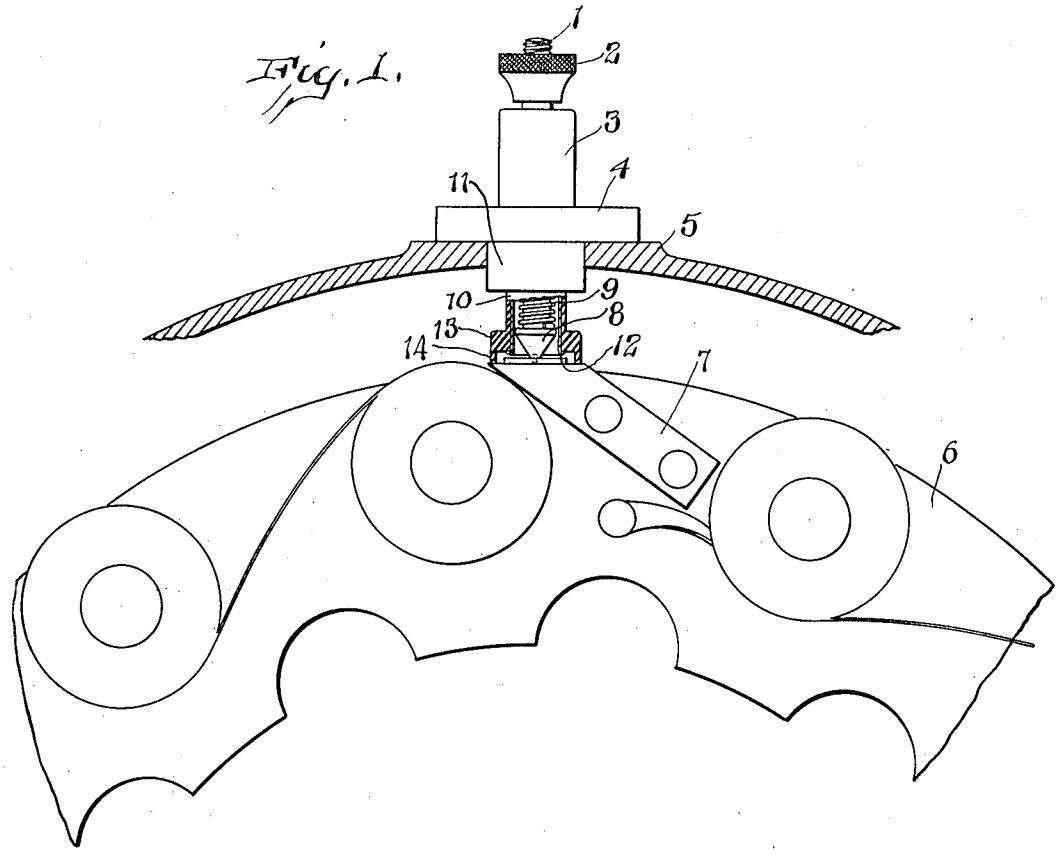
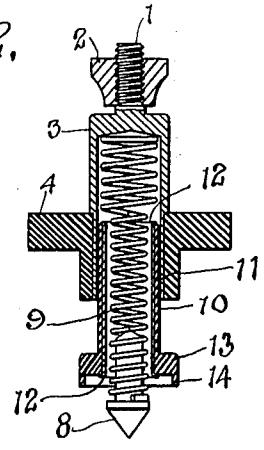


Fig. 2.



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MAGNETO.

1,292,296. Specification of Letters Patent. Patented Jan. 21, 1919.

Application filed February 12, 1917. Serial No. 148,206.

To all whom it may concern:

Be it known that I, EARL C. FREESE, a citizen of the United States, residing at Marietta, in the county of Washington and State of Ohio, have invented certain new and useful Improvements in Magnetos, of which the following is a specification, reference being had therein to the accompanying drawing.

My invention relates to magnetos, in particular to the contact assembly.

While my invention is adaptable to various forms of magnetos and to kindred applications, yet it is particularly efficient when applied to the fly wheel magneto of a Ford car. This fly wheel magneto gives a great deal of trouble when a small piece of fiber lodges between the contact point and contact body on the magneto. This is an event of frequent occurrence because particles of fiber from the brake band in the transmission case are continually wearing away and becoming lodged between these contact surfaces. This results in breaking of the contact between the magneto and the spark coil and completely cripples the car until the foreign matter can be removed from the contact points.

It is the object of my invention to prevent any foreign matter from coming in between the contact members and breaking the connection. It is a further object to provide means for keeping out foreign matter of such a character that it will not interfere with the operation of the magneto, that it will be readily adapted to the restricted area in which the parts must operate and that it will be durable, cheap and easy to apply without modification of the existing parts in such a car as a Ford.

It is an object of my invention to be able to apply this improvement to a car after it leaves the factory as well as before.

In the accompanying drawings, Figure 1 is a front elevation of the magneto and contact points partially in section; and Fig. 2 is a detail of the contact mechanism in section.

1 refers to the terminal of the contact body; 2 knurled nut working on the terminal head to clamp the wire leading from the terminal; 3 is the metallic body of the terminal; 4 is the non-conducting seat for the terminal; 5 is the shell of the fly wheel case in which is located the magneto coils 6 on the stationary armature; 7 is a contact body of the magneto; 8 is the head of the contact point which is pressed into engagement with the contact body by the spring 9. This spring at its lower end is restricted in its diameter as compared with the diameter at the upper end. This restriction is necessary in order to permit the entrance of the guard 10 into the terminal 3. The guard 10 is of non-conducting material and forms a sliding fit with the metallic extension 11 for the terminal body 3. Within the non-conducting body 10 of the guard is a metallic shell or lining 12. The non-conducting body 10 has an annular extension 13 at its lower end and from the annular extension at its outer periphery is a depending flange 14 which forms an effective wall for the prevention of the entrance of any foreign matter between the contact surfaces. It will be observed that this wall 14 rests on its lower edge upon the outer periphery of the magneto armature so that any material resting upon the periphery of this magneto will be prevented from lodging between the contact surfaces.

While I have shown and described one embodiment of my invention it will be understood that the same has been chosen for the purposes of illustration only, and that I do not desire to be limited to the details of construction shown and described, for obvious modifications will occur to a person skilled in the art.

Having thus fully described my invention, what I claim as new and desire to secure by Letters Patent, is:—

1. In a magneto, a contact body, a contact member spring pressed into contact with said body, a movable guard of non-conducting material surrounding said contact member, one end of said guard being provided with an annular depending flange movable into engagement with said contact body, and means for supporting said guard.

2. In a magneto, a terminal body of conducting material, a non-conducting support therefor, a non-conducting shield adapted to move therein, a movable terminal point within said shield and connected with said terminal body, means to keep said point in spring-pressed engagement with a contact body, whereby foreign material is prevented from interfering with the union of the contact point and contact body.

3. In a magneto, a contact member with a conducting terminal body, a non-conducting support therefor, an extension of said

conducting body through said non-conducting support, a non-conducting guard traveling within said extension, a lining of conducting material within said guard, a contact point traveling in said guard, a contact body, and means to keep said contact point of the contact member in spring-pressed engagement with the contact body.

4. In a magneto, a contact member composed of a hollow terminal body of conducting material, said body being extended through a support of non-conducting material, a guard of non-conducting material with an annular extension at one end provided with a depending flange at right angles to said extension and with its other end traveling in the interior of the terminal body, a helical spring within said terminal body at its upper end and extending into the restricted interior of the non-conducting guard at its other end, a contact point carried at the lower end of said spring, and a contact body, whereby foreign material is prevented from interfering with the union of the movable and stationary contacts.

5. In a magneto, a contact member composed of a hollow terminal body of conducting material, said body being extended through a support of non-conducting material, a guard of non-conducting material with an annular extension at one end provided with a depending flange at right angles to said extension and with its other end traveling in the interior of the terminal body, a helical spring within said terminal body at its upper end and extending into the restricted interior of the non-conducting guard at its other end, a contact point carried at the lower end of said spring, a contact body, and a lining for said guard of conducting material, whereby foreign material is prevented from interfering with the union of the contact point and contact body.

6. In magneto-electric machines, a contact fitting, said contact fitting carrying an insulating tube, said tube at its outer end having an outwardly extending flange or shield, a contact pin mounted within the said insulating tube at its outer end in position to be protected by the said flange or shield, substantially as described.

In testimony whereof, I affix my signature.

EARL C. FREESE.