

F. McMAHON.
AUTOMATIC CONTACTING DEVICE.
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1,075,987.

Patented Oct. 14, 1913.

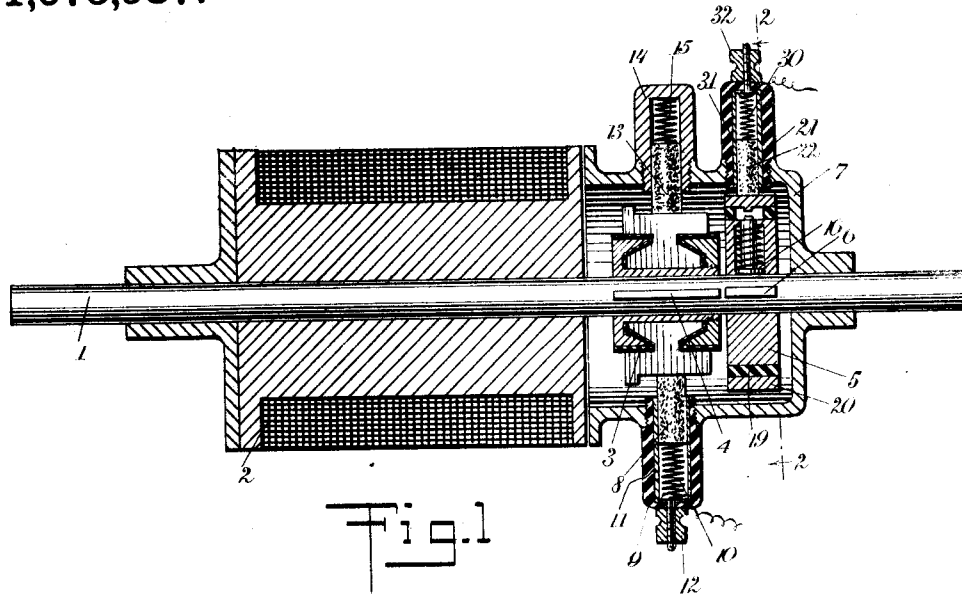


Fig. 1

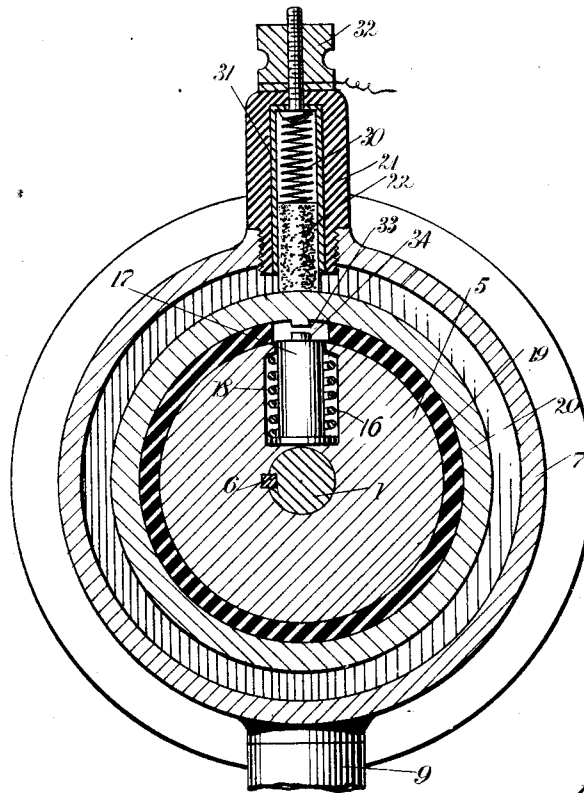


Fig. 2

WITNESSES
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AUTOMATIC CONTACTING DEVICE.

1,075,987.

Specification of Letters Patent.

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Application filed May 22, 1911. Serial No. 628,636.

To all whom it may concern:

Be it known that I, FRANK McMAHON, a citizen of the United States, and a resident of Union City, in the county of Randolph and State of Indiana, have invented a new and Improved Automatic Contacting Device, of which the following is a full, clear, and exact description.

My invention relates generally to electrical apparatus and more particularly it involves an automatic contacting device especially adapted for use on magnetos used on automobiles and other structures whereby a storage battery may be conveniently charged therefrom when the magneto has reached a predetermined speed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which like characters of reference denote corresponding parts in all the views, and in which—

Figure 1 is a vertical sectional view of the armature of the magneto having the contacting device at one end thereof; Fig. 2 is a vertical sectional view thereof, on the line 2—2 of Fig. 1.

The ordinary shaft 1 has the armature 2 suitably positioned thereon, together with a commutator 3 held in position by means of keys 4, the contacting device 5 being preferably placed on the shaft adjacent the commutator and being held thereon by any suitable means, such as a key 6, the commutator and contacting device being preferably inclosed in a suitable casing 7.

Referring particularly to Fig. 1 it will be noted that the brush 8 is positioned within the holder 9, tension of the brush on the commutator being secured by means of a helical spring 10. The holder 9 is preferably made of insulating material, the interior portion thereof, however, being provided with a metallic lining 11, with which the thumb screw 12, forming one terminal, contacts. The other brush 13 is suitably positioned in a holder 14 having a helical spring 15 therein whereby pressure is maintained, this holder 14 being of metal and forming part of the casing 7. Thus it will be noted that one brush 13 is grounded on the frame of the machine and the other brush 8 is insulated therefrom. The contacting device comprises a suitable circular

element 5 held in position on the shaft 1 by means of a key 6, this element being provided with a transversely extending recess 16 in which a member 17, preferably cylindrical, is positioned, this member being maintained in the position shown in Fig. 2 by means of a helical spring 18 contained within the transversely extending recess 16. The device further consists of an insulating ring 19 between the element 5 and an outer metallic ring 20, the parts 5, 19, and 20, turning with the shaft 1. Suitably spaced adjacent the end of the casing 7 is another brush holder 21 of insulating material having the brush 22 therein adapted to bear against the metal ring 20 as the shaft turns. The pressure of the brush against this ring is maintained by means of a spring 30 within the holder, there being also a metallic lining 31 in contact with the brush, this lining terminating in a binding screw 32 whereby connection may be made therewith.

The tension of the spring 18 is sufficient to hold the member 17 within the recess 16 when the machine is at rest or until it has reached a certain predetermined speed; this predetermined speed is that at which a certain voltage will be generated so that when this speed is reached centrifugal force will bring the member 17 into contact with the metal ring 20, each of these parts being provided with contacting points 33, 34, of any desired material or construction.

My device is intended primarily for charging storage batteries; hence, it will take care of the battery and provide for the charging without constantly watching the switches as the magneto is started and stopped. This contacting device always insures that the battery will not be in circuit with the armature of the magneto until a certain voltage is reached, this voltage being greater than the counter-voltage of the battery so that the magneto will charge the battery and not vice versa.

Of course the size and shape of my device may be varied in order to adapt it to magnetos of different sizes, and it is also clear that it may be used on any electric machine having a rotating element, and to other uses than charging storage batteries, without departing from the spirit and scope of the invention as set forth in the following claims.

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

1. An armature for a dynamo electric machine embodying a shaft, a commutator and a collector ring on the shaft, a plurality of brushes bearing on the commutator and the ring, one of the commutator brushes being in electrical circuit with the shaft, and means whereby the shaft may be placed in electrical circuit with the brush bearing on the collector ring when a predetermined speed has been reached.

2. An armature for a dynamo electric machine embodying a shaft, a commutator and a collector ring mounted on and turning with the shaft, brushes bearing on the commutator, a brush bearing on the collector ring, one of the commutator brushes being in electrical circuit with the shaft, and a centrifugal device for bringing the said collector ring into electrical communication with the shaft after a certain speed has been reached.

3. An armature for a dynamo electric machine embodying a shaft, a commutator and a collector ring turning with the shaft, one of the commutator brushes being in elec-

trical circuit with the shaft, and a centrifugal device in electrical contact with the shaft and adapted to be brought into electrical contact with the said collector ring after a certain speed has been reached, whereby the brush bearing on the collector ring is placed in circuit with the before-mentioned commutator brush.

4. An armature for a dynamo electric machine comprising a shaft, a commutator and a collector ring carried by and turning with the shaft, brushes bearing on the commutator, a brush bearing on the ring, one of the commutator brushes being in electrical circuit with the shaft, and movable means adapted to bring the shaft into electrical circuit with the said ring after a certain speed has been attained, whereby the brush bearing on the ring will be in electrical circuit with the beforementioned commutator brush.

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

FRANK McMAHON.

Witnesses:

JOHN A. SHOCKNEY,
GEORGE P. KENNEDY.