March 29, 1932. A. N. MERLE 1,851,718

SPEED GOVERNOR

Filed Nov. 28, 1930

Fig.1

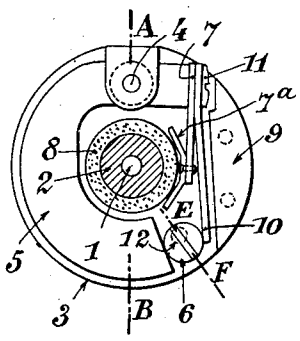


Fig.2

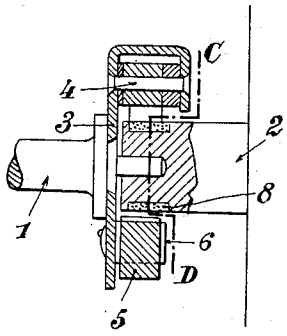
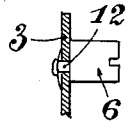


Fig.3



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UNITED STATES PATENT OFFICE

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SPEED-GOVERNOR

Application filed November 28, 1930, Serial No. 498,528, and in France January 11, 1930.

The present invention relates to speed-governors of the type in which an eccentric weight is adapted to apply a brake shoe against a braking surface by the action of centrifugal force.

According to the invention, a spring is adapted to constantly urge said eccentric member into its idle position, thus having a tendency to reduce the frictional resistance of said shoe against the braking surface.

The tension of said spring increases when the said eccentric weight recedes from the axis of rotation, that is, when the speed of rotation increases. The tension of said spring, in its different positions, may be adjusted by means of an eccentric stop mounted upon a rotary shank.

The accompanying drawings show by way of example an embodiment of the invention.

Fig. 1 is a section of the apparatus on line C—D of Fig. 2.

Fig. 2 is a section on line A—B of Fig. 1.

Fig. 3 is a section of the eccentric stop on the axis E—F of Fig. 1.

The shaft 1 whose speed is to be regulated is journalled in a fixed support 2 and has rigidly mounted thereon a plate 3, located adjacent said support. To said plate is secured a pivot pin 4 on which is rotatable an eccentric weight 5, one end of which is adapted to engage a stop member 6, whilst the other end is provided with a blade 7, engaging an annular friction facing 8, for instance of leather, mounted on a support 2. In order to increase the friction of the blade upon the facing, said blade is provided with a polygonal shoe 7*a*, thus increasing the number of points of contact between the brake and the facing 8. To plate 3 is riveted a counterweight 9, which balances the eccentric member 5.

It will be seen that the movements of eccentric member 5 are limited on the one hand by stop 6 and on the other hand by the engagement of member 7*a* with the friction facing 8, and that the greater the speed of the shaft 1, the greater will be the distance of said eccentric member from the centre of shaft 9 under the action of centrifugal force, and hence shoe 7*a* will press with increasing force upon friction facing 8.

According to the invention, a spring 10 bears at one end against a fixed stop, which may be the stop member 6 above-described, and at the other end against the eccentric member 5, to which it may be secured, for instance by the same screw 11 serving to attach blade 7 to member 5; said spring urges member 5 into its idle position, in which it engages stop member 6. As the speed of shaft 1 increases, spring 10 will be flexed, and counteract centrifugal force, so that the spring will dampen any abrupt movement of eccentric member 5, whereby said member, for any given speed of shaft 1, will assume a determined corresponding position with reference to plate 3.

The contact surface between the spring 10 and stop member 6 may be made adjustable in order to alter the tension of the spring as desired and to thus control the speed of the motor. Stop member 6 preferably consists of a roller eccentrically mounted on a stud 12 secured to plate 3.

Obviously, the construction above illustrated is susceptible of various modifications without departing from the principle of the invention.

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

1. In a speed-governor, a centrifugally responsive member, a friction member, a brake member connected with said centrifugally responsive member, a stop member, a spring adapted to press on said two last-named members, means for attaching said spring to one of said two last-named members, and means for adjusting the position of the contact sur-

face between said spring and the other of said two last-named members.

2. In a speed-governor, centrifugally responsive means, a friction member, a brake member connected with said means, a spring adapted to urge by one of its ends said brake member against the action of centrifugal force, and an eccentrically rotatable stop member on which the other end of said spring is adapted to bear.

In testimony whereof I have signed by name to this specification.

ANDRÉ NOËL MERLE.