

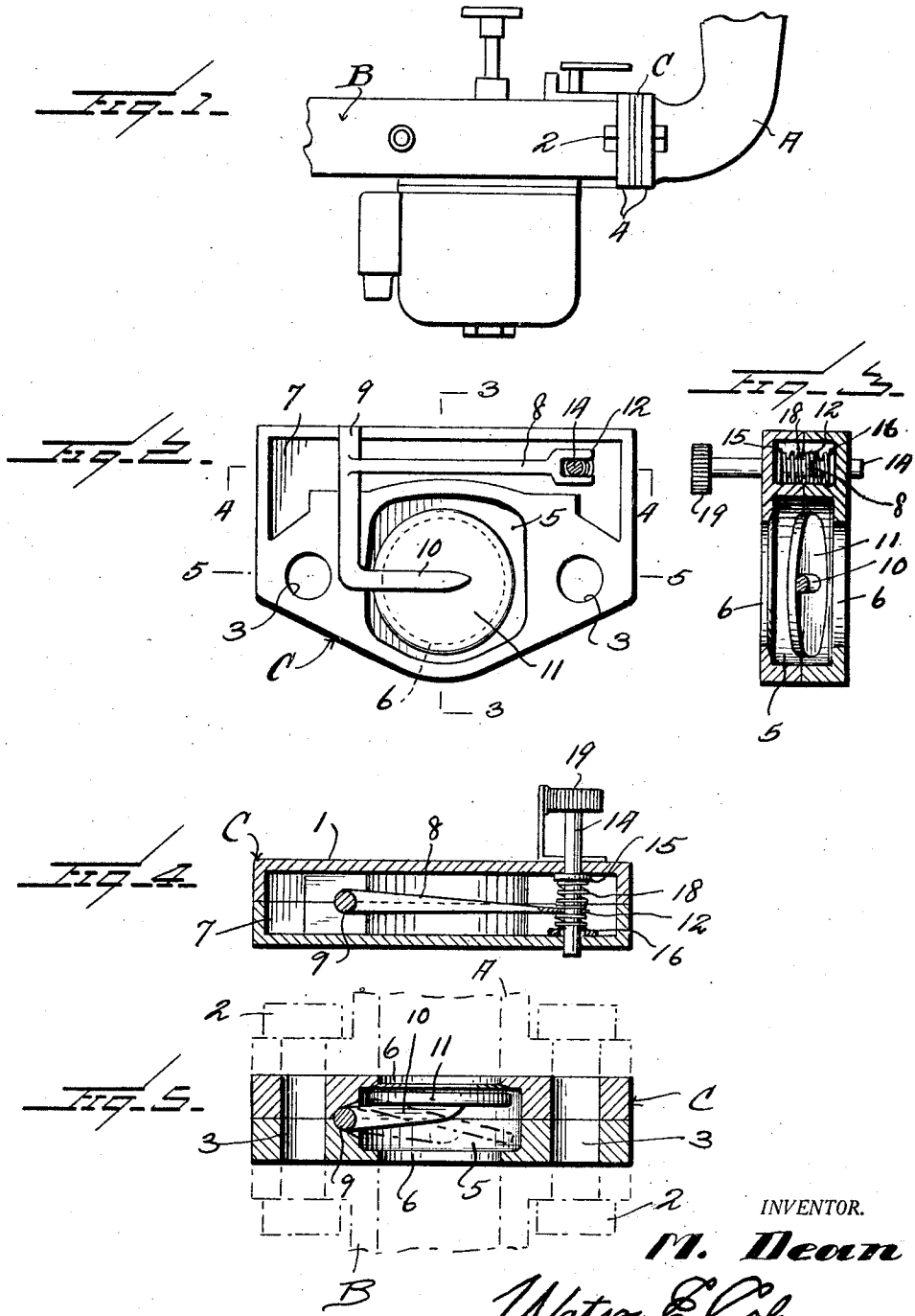
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GOVERNOR THROTTLE

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GOVERNOR THROTTLE.

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This invention relates to a governor throttle for use in connection with internal combustion engines and it is an object of the invention to provide a device of this kind adapted to be interposed in the intake for the motor and which operates to maintain uniform the motor speed with the motor under or free of load.

Another object of the invention is to provide a device of this kind which may be quickly installed and which embodies a valve member mounted in a manner whereby such member automatically moves to regulate the amount of explosive mixture drawn from the carburetor into the manifold and thereby effectively governing the motor speed.

The invention consists in the details of construction and in the combination and arrangement of the several parts of my improved governor throttle whereby certain important advantages are attained and the device rendered simpler, less expensive and otherwise more convenient and advantageous for use, as will be hereinafter more fully set forth.

The novel features of my invention will hereinafter be definitely claimed.

In order that my invention may be better understood, I will now proceed to describe the same with reference to the accompanying drawing, wherein:—

Figure 1 is a view in elevation illustrating a controlling throttle constructed in accordance with an embodiment of my invention and in applied position;

Figure 2 is a view in elevation of my improved throttle as herein disclosed, one of the casing plates being removed;

Figure 3 is a sectional view through my improved throttle on line 3—3 of Figure 2;

Figure 4 is a sectional view taken substantially on the line 4—4 of Figure 2;

Figure 5 is a sectional view taken substantially on the line 5—5 of Figure 2.

My improved throttle, as herein disclosed, comprises a casing C consisting of two superimposed plates 1 readily separable to facilitate the desired assembly of all the parts. These plates 1 are maintained in assembled relation when the device is in applied or working position through the medium of the bolts 2 which pass through the end openings 3 in the plates 1 and through the opposed flanges 4 of the intake A and the carburetor B, it being understood that my improved throttle when in applied or working

position, as indicated in Figure 1, is interposed between these two devices.

The central portions of the plates 1 have their opposed faces cut out to provide a valve chamber 5 through which a fuel mixture is adapted to be drawn from the carburetor B into the intake A, opposed walls of the chamber 5 being provided with the openings 6 in suitable register with the intake and the carburetor.

Opposed faces of the plates 1 are also recessed to provide to one side of the valve chamber 5 an elongated chamber 7 in which is arranged for swinging movement a rock arm 8 carried by a shaft 9. This shaft 9 is suitably supported for rocking movement between the assembled plates 1 and at its inner end is provided with an inwardly disposed rock arm 10 extending within the valve chamber 5 and carrying a disk-like valve member 11.

Movement of the valve member 11 toward or from the discharge opening 6 will readily regulate the flow of the explosive mixture from the carburetor B into the intake A and thereby providing means for governing the motor speed when under or free of load.

The outer or free end portion of the arm 8 is provided with a fork 12 which straddles a rod 14 freely disposed through the casing C. The rod 14 at the discharge side of the casing C has fixed thereto an outstanding annular flange or washer 15 and freely mounted on the rod 14 within the casing C, or more particularly the chamber 7, is a washer 16.

Surrounding the portion of the rod 14 within the casing C is an expansible coil spring 18, one end portion of which being fixed to the washer 14 and the opposite end portion to the washer 16. This spring is also disposed through the fork 12 and serves as a screw whereby the valve member 11 may be set for different speeds. This spring, when fully compressed by the arm 8 serves to stop the valve member 11 from entirely closing. It will also be understood that the spring 8 serves to normally maintain the valve member 11 in its fully open position in accordance with the adjustment of the arm 8 as accomplished by rotation of the rod 14 through the spring 18.

In other words, upon turning the rod 14 as through the button 17, the arm 8 will be moved to set the valve member 11 closer to or further from the discharge opening 6 of

the casing. When it is adjusted close to the discharge opening, the valve member will more easily move under the pulsations of the motor and, of course, the further away the valve member is adjusted, the harder it will be to effect such operation.

The rod 14 extends exteriorly of the casing C and carries a button 19 and by exerting pressure on the button 19, the valve member 11 may be maintained fully open should it be desired to permit excessive motor speed for a comparatively short period of time.

From the foregoing description it is thought to be obvious that a governor throttle constructed in accordance with my invention is particularly well adapted for use by reason of the convenience and facility with which it may be assembled and operated, and it will also be obvious that my invention is susceptible of some change and modification without departing from the principles and spirit thereof and for this reason I do not wish to be understood as limiting myself to the precise arrangement and formation of the several parts herein shown in carrying out my invention in practice except as hereinafter claimed.

I claim:—

1. In combination with the intake of an internal combustion motor, a casing interposed therein and provided with a valve chamber, opposed walls of such chamber having openings through which the explosive mixture is adapted to pass, a valve within the chamber and supported for movement toward and from the eduction opening of the casing, said casing having a second chamber, a shaft rotatably supported by the casing and extending through said second chamber, a rock arm carried by the shaft and extending within the first chamber, a valve carried by said rock arm for coaction with the eduction opening of said first chamber, a second rock arm carried by the shaft and arranged within the second chamber, and a tensioned member within the second chamber coacting with the second rock arm for normally maintaining the valve at its limit of movement away from the eduction opening of the first chamber, said tensioned member also serving as a stop to prevent the valve moving to a full closed position with respect to the eduction opening of the first chamber.

2. In combination with the intake of an internal combustion motor, a casing interposed therein and provided with a valve chamber, opposed walls of such chamber having openings through which the explosive mixture is adapted to pass, a valve within the chamber and supported for movement toward and from the eduction opening of the casing, said casing having a second chamber, a shaft rotatably supported by the cas-

ing and extending through said second chamber, a rock arm carried by the shaft and extending within the first chamber, a valve carried by said rock arm for coaction with the eduction opening of said first chamber, a second rock arm carried by the shaft and arranged within the second chamber, a rod disposed through the casing and the second chamber therein, said second rock arm having a fork straddling the rod, and a coil spring encircling the rod and engaging within the fork to normally maintain the valve at its limit of movement away from the eduction opening of the first chamber.

3. In combination with the intake of an internal combustion motor, a casing interposed therein and provided with a valve chamber, opposed walls of such chamber having openings through which the explosive mixture is adapted to pass, a valve within the chamber and supported for movement toward and from the eduction opening of the casing, said casing having a second chamber, a shaft rotatably supported by the casing and extending through said second chamber, a rock arm carried by the shaft and extending within the first chamber, a valve carried by said rock arm for coaction with the eduction opening of said first chamber, a second rock arm carried by the shaft and arranged within the second chamber, a rod disposed through the casing and the second chamber therein, said second rock arm having a fork straddling the rod, and a coil spring encircling the rod and engaging within the fork to normally maintain the valve at its limit of movement away from the eduction opening of the first chamber, said rod having endwise movement through the casing and having an outstanding flange within the second chamber with which the spring engages.

4. A casing adapted to be interposed within the intake of an internal combustion engine, said casing being provided with a valve chamber having an induction opening and an eduction opening, a valve within the casing and supported for movement toward and from the eduction opening of the casing, a rock arm associated with the valve member and provided with a fork, a rod slidably disposed through the casing and through the fork of the arm, a coil spring surrounding the rod within the chamber of the casing and engaging the fork of the arm, said spring serving to constantly urge the valve member away from the eduction opening, said spring upon rotation of the rod adjusting the normal position of the valve member with respect to the eduction opening.

In testimony whereof I hereunto affix my signature.

MARCUS DEAN.