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HYDRAULIC ACTUATED GOVERNOR CONTROL

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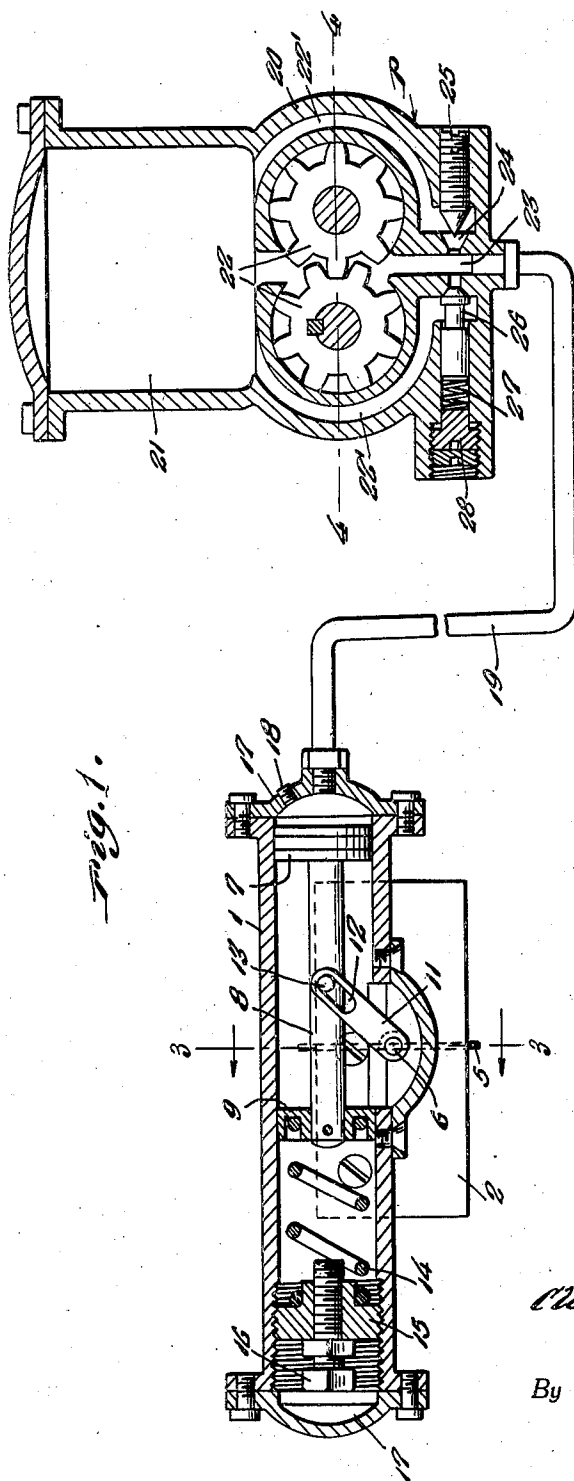


Fig. 1.

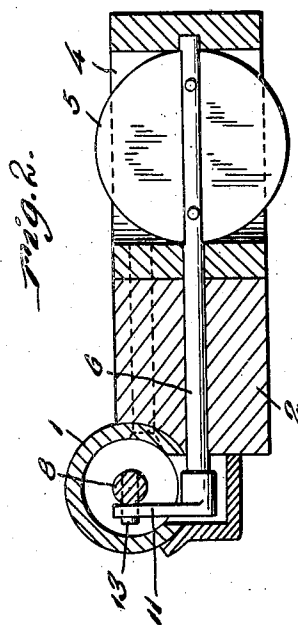


Fig. 2.

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HYDRAULIC ACTUATED GOVERNOR
CONTROL

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1 Claim. (Cl. 137—139)

This invention relates to a hydraulic actuated governor control for motor vehicles, the general object of the invention being to provide a fluid pump actuated by the momentum of the vehicle for causing fluid in a closed circuit to actuate a piston which, in turn, operates an auxiliary valve which controls the flow of an explosive mixture to the cylinders of the engine of the vehicle.

This invention also consists in certain other features of construction and in the combination and arrangement of the several parts to be hereinafter fully described, illustrated in the accompanying drawing and specifically pointed out in the appended claim.

In describing the invention in detail, reference will be had to the accompanying drawing wherein like characters denote like or corresponding parts throughout the several views, and in which:

Figure 1 is a diagrammatic elevational view of the invention with parts in section.

Figure 2 is a section on the line 3—3 of Figure 1.

In these views the numeral 1 indicates a cylinder which is suitably attached to a supporting member 2 adapted to be placed between the inlet manifold of a motor and the carburetor of the motor and said support has a part of the conduit wherein which passes from the carburetor to the inlet manifold, said portion of the conduit being shown at 4 and said support also carries an auxiliary butterfly valve 5 which controls the conduit, the valve being carried by a shaft 6 rotatably arranged in the support 2. A piston 7 is arranged in the cylinder 1 and a rod 8 connects the piston with a slide 9 made in the form of a piston and an arm 11 fastened to the shaft 6 has a slot 12 therein for receiving a pin 13 projecting from the rod 8. Thus the movement of the piston 7 will rock the shaft 6 to move the valve 5. A spring 14 engages the slide 9 and acts to hold the piston 7 in the position shown in Figure 1 and said spring engages a nut member 15 threaded in the cylinder and adapted for adjustment to regulate the tension of the spring. A bolt 16 is threaded through the nut 15 to provide an adjustable stop for limiting movement of the piston rod 8 to control the extent of closing movement of the butterfly valve 5. Caps 17 close the ends of the cylinder and one cap has an opening therein closed by a plug 18 which permits bleeding of the cylinder when oil or other liquid is placed in the pump. This end of the cylinder is connected by a pipe line 19 with a pump P which includes a body part 20 and a tank or reservoir 21 above

the body part and the pumping disks 22 of the usual toothed type which operate in substantially circular parts of the body. Also, arcuate-shaped passages 22' are formed in the body and each has one end in communication with the tank or reservoir and its other end is connected with the discharge passage 23 of the pump by the port 24. One port 24 is controlled by a needle valve 25 having a kerf in its outer end so that it can be adjusted by a screw-driver or the like and the other port is controlled by a spring-pressed valve 26, the spring 27 of which can be adjusted by the screw 28. Any suitable means may be provided for driving the pump by the forward momentum of the vehicle so that the pump will not be affected by the direct movement of the motor of the vehicle.

As will be seen when the vehicle is traveling along the pump means will force liquid such as oil or the like from the tank 21 through the discharge passage 23 into the pipe 19 and into one end of the cylinder 1. However, the needle valve 25 is adjusted so that while the vehicle is moving at a speed below that for which the governor is set most of the liquid will pass through the port 24 and through the right hand passage 22' back into the reservoir and only a sufficient amount of the liquid will enter the cylinder to close the valve 5 a certain amount. However, if the travel of the vehicle should exceed that for which the governor is set then the additional speed of the pump will force more of the liquid into the cylinder so that the piston 7 will be caused to close the valve to a sufficient extent to slow down the engine which will then act as a brake to the vehicle and, of course, slow down the vehicle. If the pump should work too fast which would tend to cause damage to the parts the increased pressure would open the valve 26 so that more of the liquid could by-pass to prevent such damage.

Thus it will be seen that I have provided simple means for preventing excessive speed of a vehicle and this independently of the motor so that the travel of the vehicle itself is controlled so that the vehicle cannot exceed the speed for which the governor is set. Of course, the parts would be sealed so that they cannot be adjusted or tampered with by unauthorized persons and the invention will be useful on all vehicles where it is desired to stop the drivers or operators thereof from exceeding a certain speed limit.

It is thought from the foregoing description that the advantages and novel features of the invention will be readily apparent.

It is to be understood that changes may be made in the construction and in the combination and arrangement of the several parts provided that such changes fall within the scope of the appended claim.

Having described the invention, what is claimed as new is:

In a hydraulic governor for motor vehicles, a supporting member having a passage there-through, a shaft journaled in the supporting member, a valve connected with the shaft located in the passage, a cylinder attached to the supporting member and having a slot therein, an arm connected with the shaft and passing through the slot into the cylinder, a piston in the cylinder, a rod connected with the piston, a pro-

5 jecton carried by the rod, said arm having a slot therein for receiving the projection, a slide member in the cylinder connected with the rod, said slide member and the piston having the slot in the cylinder and the slotted arm of the shaft located between them and spring means in the cylinder engaging with the slide member and tending to hold the piston against movement by pressure fluid in the cylinder, the arm carrying 10 end of the valve shaft being enclosed by a part of the cylinder, a nut threaded in the cylinder and forming a seat for the outer end of the spring and a bolt threaded in a hole in the nut and acting as an adjustable stop for limiting 15 movement of the piston rod by the pressure fluid.

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