March 30, 1926. 1,579,161

S. W. STACEY

AUTOMOBILE HYDRAULIC GOVERNOR

Filed March 28, 1925 2 Sheets-Sheet 1

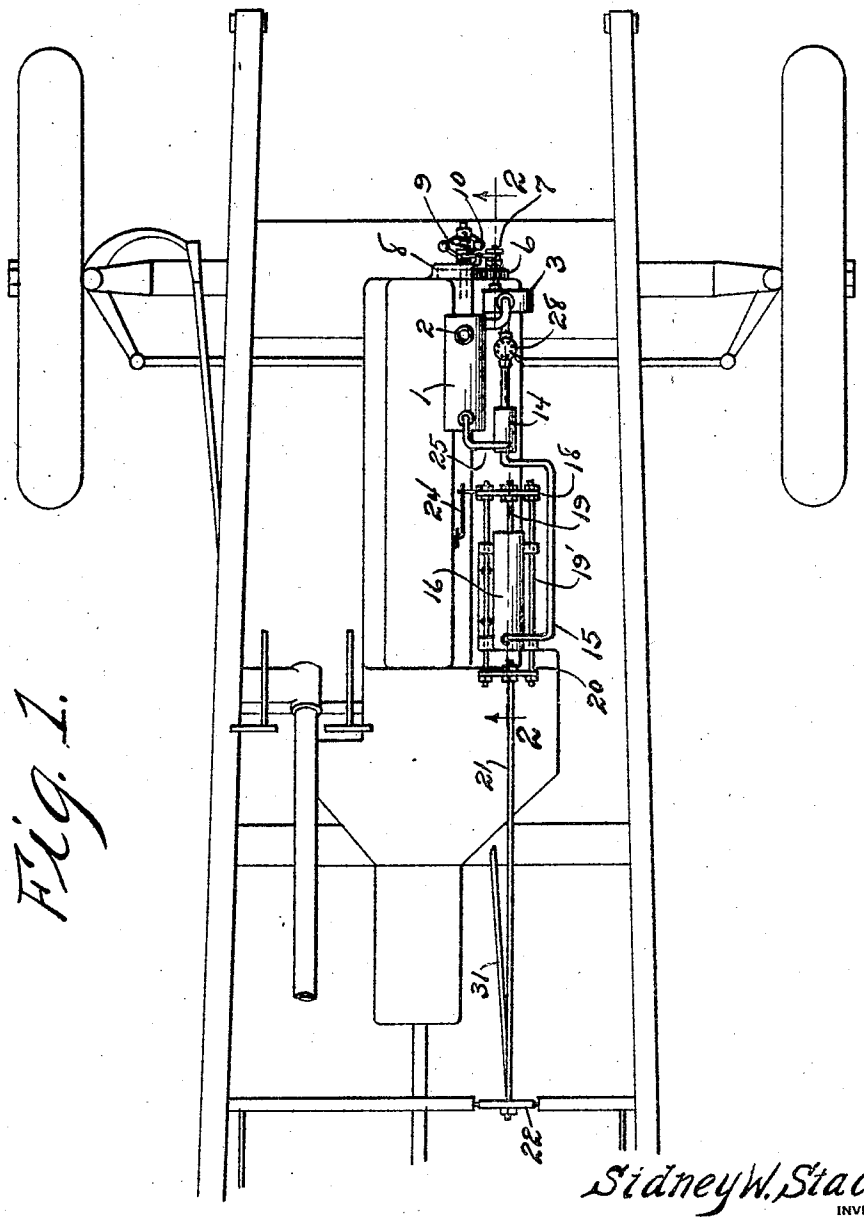


Fig. 1.

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WITNESS

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Fig. 4.

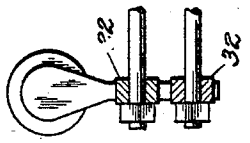


Fig. 2.

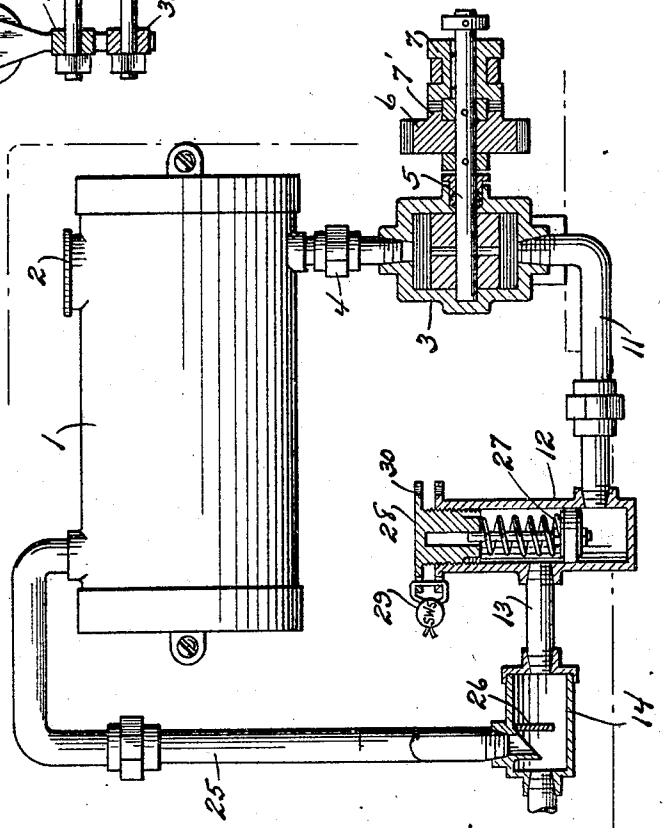
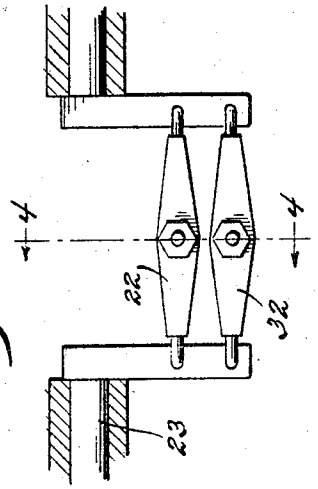
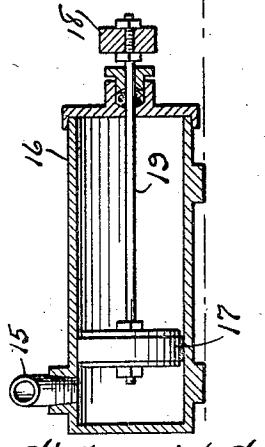


Fig. 3.





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Patented Mar. 30, 1926. 1,579,161

UNITED STATES PATENT OFFICE.

SIDNEY W. STACEY, OF UNIONTOWN, PENNSYLVANIA.

AUTOMOBILE HYDRAULIC GOVERNOR.

Application filed March 28, 1925. Serial No. 19,097.

To all whom it may concern:

Be it known that I, SIDNEY W. STACEY, a citizen of the United States, residing at Uniontown, in the county of Fayette and State of Pennsylvania, have invented new and useful Improvements in Automobile Hydraulic Governors, of which the following is a specification.

This invention relates to a governor for a motor vehicle, the general object of the invention being to provide a hydraulic governor for keeping the speed of the vehicle below a certain point.

Another object of the invention is to provide means for adjusting the device so that the vehicle can be driven at different speeds.

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 drawings and pointed out in the appended claim.

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

Figure 1 is a plan view of a portion of a motor vehicle showing the invention in use.

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

Figure 3 is a detailed view showing the manner of connecting the governor with a portion of the brake mechanism.

Figure 4 is a section on line 4—4 of Figure 3.

In these views 1 indicates a tank which is suitably supported on the vehicle and which is adapted to be filled with oil or the like through a filling opening 2. A gear pump 3 is connected with the tank through the connection 4 and the shaft 5 of said pump has a gear 6 loosely mounted thereon and a clutch part 7 keyed thereon, this clutch part being designed to engage a clutch part 7′ on the gear. The gear meshes with a gear 8 on the cam shaft of the motor of the vehicle and said cam shaft has a governor 9 thereon which operates a lever 10, the fork of which engages the clutch 7, so that when the speed of the motor reaches a certain point the governor will operate the lever 10 and close the same to move the clutch part 7 into engagement with the part 7′ on the gear and thus fasten the gear to the shaft 5 so that the pump will be operated from the motor. The oil leaving the pump will pass through the connection 11 to the valve casing 12 and from this casing it will pass through the connection 13 into the casing 14 and from this casing 14 it will pass through the connection 15 to the cylinder 16, which contains the piston 17. The oil will act on this piston and cause it to move the cross head 18 through means of the piston rod 19. The cross head is connected by the rods 19 with a cross piece 20 and this cross piece 20 is connected by a rod 21 with a cross piece 22 on the equalizer shaft 23 of the brake mechanism, so that the brakes of the vehicle will be applied when the piston 17 is moved by the oil entering the cylinder 16. The cross head 18 will also act on a lever 24 which is connected with the throttle device of the motor to reduce the speed of the same. When the speed of the vehicle is checked the clutch 7 will be disconnected from the gear 6 by the governor so that the pump will cease to operate and the springs of the brake mechanism will return the parts to normal position and cause the piston 17 to force the oil from the cylinder 16 back into the casing 14 and from this casing the oil will return to tank 1 through the connection 35. A check valve 26 in casing 14 closes the connection 25 when the oil is flowing to the cylinder 16, but will open said connection when the oil is flowing in an opposite direction.

In order to set the parts so that the device will operate at any desired speed, I provide a spring pressed valve piston 27 in the valve casing 12, which must be lifted against the action of its spring by the oil but the oil can pass into the casing 14 through the connection 13. This valve piston is carried by a cover member 28 threaded in the casing 12 so that by turning said cover member the piston valve 27 can be adjusted towards or away from the bottom of the casing. This cover member may be locked in adjusted position by means of a seal 29 passing through any one of a plurality of pairs of holes 30 formed in the cover member on the top of the casing. The brake rod leading from the emergency lever of the vehicle to the cross piece 32 is shown at 31.

From the foregoing it will be seen that when the motor reaches a speed to which the device is set, the motor driven gear 6 will be locked to the shaft 5 of the pump so that the pump will come into operation and thus force oil from the tank 1 to the cylinder 16 so as to move the piston 17 to cause the same to apply the brakes and reduce the speed of the motor. Thus the speed of the vehicle will be checked and then the parts will be returned to normal position and remain there until the speed of the vehicle again exceeds the speed for which the device is set. This speed can be changed by adjusting the control valve.

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

I desire it to be understood that I may make changes 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 thus described the invention, what is claimed as new, is:—

A governor for a motor vehicle comprising a supply tank, a gear pump, a pipe connecting the pump with the tank, a gear loosely mounted on the pump shaft, clutch means for connecting the gear with the shaft, a governor operated by the motor of the vehicle for actuating the clutch means, means for connecting the gear with the movable part of the motor, a casing, means for connecting the same with the outlet of the pump, an adjustable control valve in the connection, a cylinder, a piston therein, means for connecting the piston with the brake mechanism and throttle mechanism of the vehicle, means for connecting the casing with the cylinder, means for connecting the casing with the tank and a check valve for controlling such connection.

In testimony whereof I affix my signature.

SIDNEY W. STACEY.