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H. S. LOOMIS

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GOVERNOR

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2 Sheets-Sheet 2

Fig. 2.

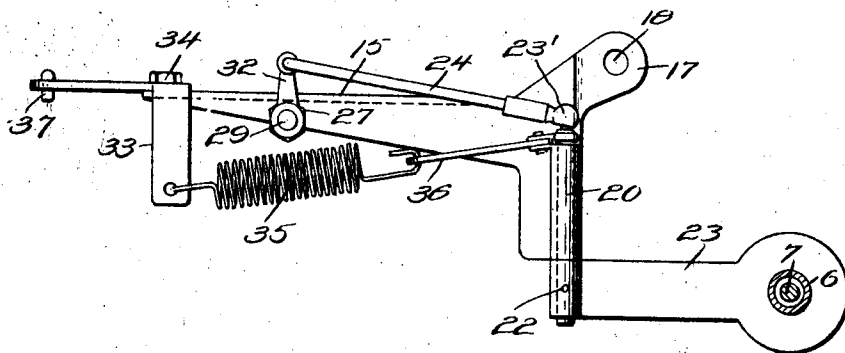
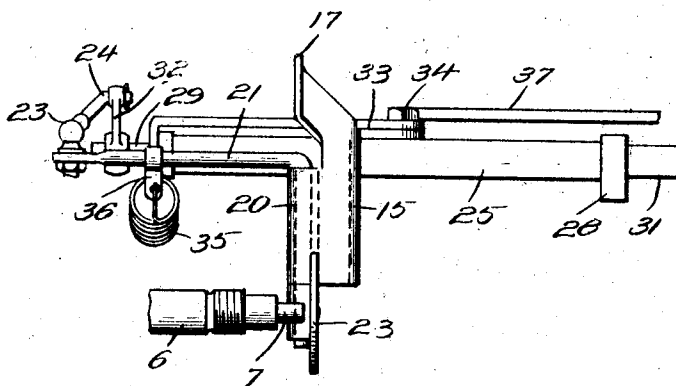


Fig. 4.



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GOVERNOR.

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The present invention relates to a governor designed particularly for use on Fordson tractors but adapted to automobile engines generally.

5 The principal object of the invention is to provide a governor control for the throttle valve of the engine which is exceedingly simple in its construction, strong and durable in use, reliable and efficient in operation, not too likely to easily become out of order, one which requires very little attention, and which is otherwise well adapted to the purpose for which it is designed.

15 Another very important object of the invention is the production of a governor controlling mechanism of this nature which is capable of being quickly and easily installed on the tractor and one which is capable of being manually adjusted in a convenient manner.

20 Another very important object of the invention is the production of a compact and simple governor mechanism incorporated in the fan structure of the engine.

25 With the above and numerous other objects in view as will appear as a description proceeds, the invention resides in certain novel features of construction, and in the combination and arrangement of parts as will be hereinafter more fully described and claimed.

In the drawings:—

35 Figure 1 is a top plan view of the mechanism embodying the features of my invention.

Figure 2 is a sectional view taken substantially on the line 2—2 of Figure 1.

Figure 3 is a sectional elevation of the throttle valve operating means.

40 Figure 4 is an end elevation of the parts shown in Figure 2.

Figure 5 is an end elevation of the means shown in Figure 3.

45 Referring to the drawings in detail it will be seen that 5 designates the fan of a Fordson tractor which is broken away for clearness sake and is rotatable in the usual manner on shaft 6 which is made hollow to slidably receive a rod 7 having a plate 9 on its front end. Brackets 10 are mounted on the bolts 11 of the fan and have the intermediate portions of L-shaped levers 12 pivoted thereto as at 13. The outer ends of these levers 12 are provided with weights 14.

55 It will thus be seen that upon rotation of the

fan the weights will swing out radially because of centrifugal force thereby engaging the inner ends of the levers with the plate 9 pushing the rod 7 rearwardly for actuating the operating mechanism which I am about 60 to describe.

A bracket 15 is twisted at one end at 16 to provide a raised angular extension 17 which has an opening 18. An opening 19 is provided in the bracket 15 adjacent the 65 twisted end 16. These openings 18 and 19 are adapted to receive bolts or the like which are already parts of the engine thereby mounting the bracket on the forward portion of the engine block so as to extend laterally to one side thereof in front of the carburetor. A sleeve 20 is formed on the bracket 15 and has its axis disposed vertically. An L-shaped rod 21 has one portion rotatable in the sleeve 20 and on the lower 75 end of said portion there is fixed as at 22 a plate 23 terminating in the path of movement of the rod 7 to be actuated thereby. On the other extremity of the rod 21 there is a ball and socket adjustable connection 23' 80 with a link 24. A tubular casing 25 is attached to the intermediate portion of the bracket 15 by a U-bolt 26 and has bearings 27 and 28 at its ends for rotatably receiving a shaft 29. The bearing 28 is in the form of 85 a plate having openings so it may be bolted to the valve casing of the engine. The rear end of the shaft 29 has a slotted member 31 thereon for engaging the shaft of the throttle valve. A crank 32 is fixed to the other 90 end of the shaft 29 and the free end of this crank is engaged with the link 24. A bell crank 33 is pivoted as at 34 to the other end of the bracket 15. A spring 35 is engaged on one end of this bell crank 33 and has a strap 95 or link 36 engaged therewith and attached to an intermediate portion of the rod 21. A manually controlled rod 37 is engaged with the other end of the bell crank 33 so that the desired tension may be placed on the 100 spring 35.

When the spring 35 is tensioned as desired and the engine started, the plate 23 is forced to engagement with the rear end of the rod 7. As the engine speeds up the weighted 105 ends of the levers 12 move out so that their inner ends engage the plate 9 and force the rod 7 rearwardly which swings the plate 23, turns the rod 21 thereby pulling on the link 24 to swing the crank 32 and rotate the shaft 110

29 to close the throttle valve. The speed of the engine may thus be controlled very efficiently to prevent racing.

5 It is thought that the construction, operation, and advantages of this invention will now be clearly understood by those skilled in this art without a more detailed description thereof. The present embodiment of the invention has been disclosed in detail
10 merely by way of example since in actual practice it attains the features of advantages enumerated as desirable in the statement of the invention and in the above description. Numerous changes in the details of construction,
15 in the combination and arrangement of parts may be resorted to without departing from the spirit and scope of the invention as hereinafter claimed.

Having thus described my invention, what
20 I claim as new is:—

A governor actuated throttle valve controlling mechanism of the class described including, in combination, a governor actu-

ated push rod, a bracket adapted to be attached to an engine block, a sleeve formed
25 on the bracket, a crank rod having a portion rotatable in the sleeve, a plate fixed on said portion of the rod to be disposed in the path of movement of the push rod so that when the push rod moves in one direction, it will
30 abut the plate for swinging the crank rod, a link engaged with the end of the other portion of the crank rod, a tubular housing supported on the bracket, a throttle valve operating shaft journaled through said tubular housing, a crank on said shaft engaged
35 with said link, a bell crank on said bracket, manual means for operating said bell crank, a spring engaged with said bell crank and with said other portion of the crank rod
40 whereby the spring may be tensioned to swing the crank rod and the plate attached thereto so as to resist movement of said plate and said crank rod by the push rod.

In testimony whereof I affix my signature.

HOWARD S. LOOMIS.