Nov. 11, 1924. 1,515,230

C. W. STRINGER

CARBURETOR CHOKE VALVE CONTROL

Filed Oct. 3, 1923 2 Sheets-Sheet 1

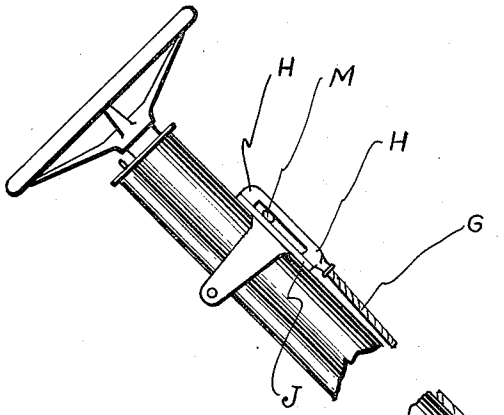



Fig. 1

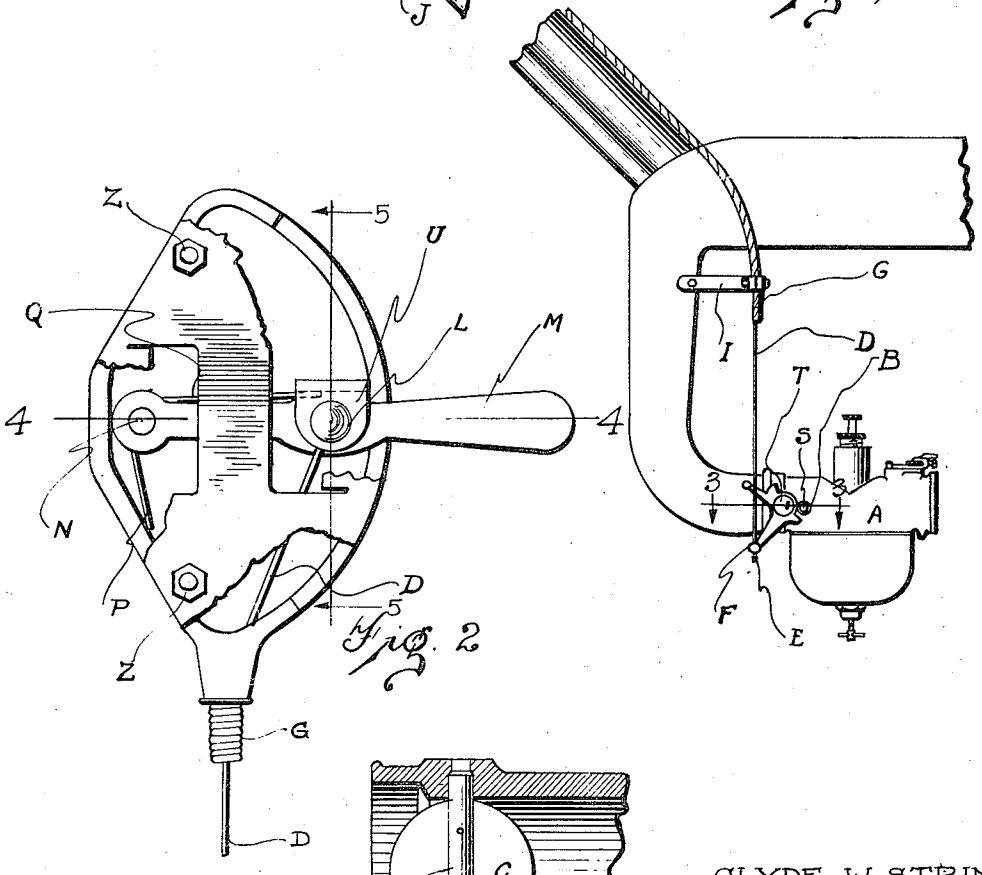



Fig. 2

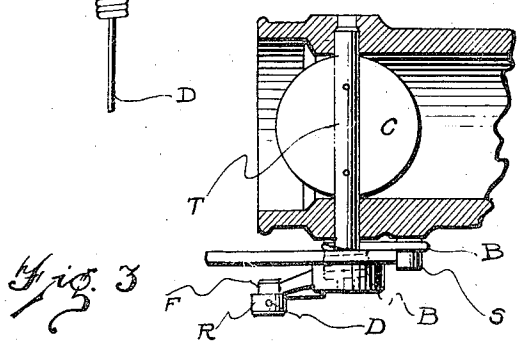



Fig. 3

CLYDE W. STRINGER
*INVENTOR.*

BY Stanley M. Udale

*ATTORNEY.*

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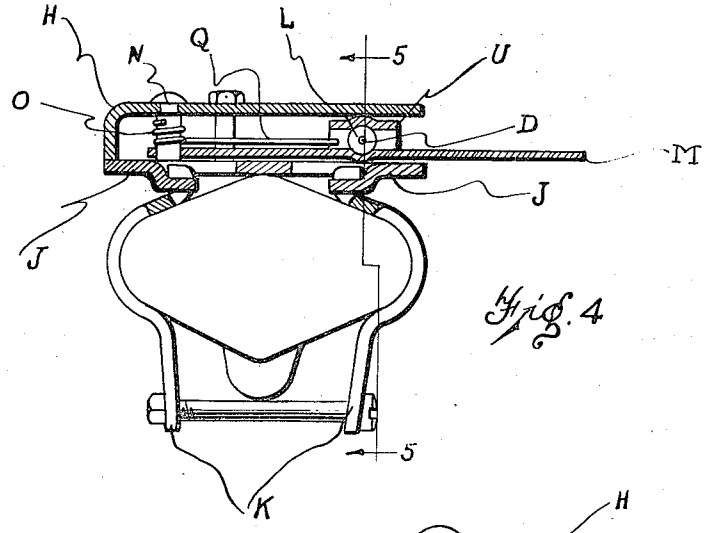



Fig. 4

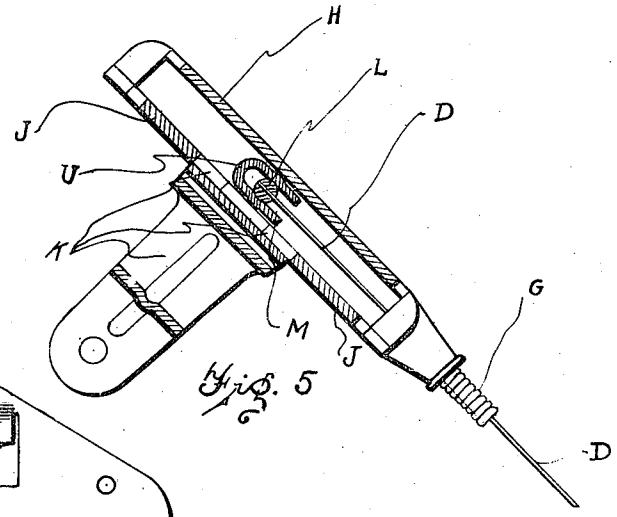



Fig. 5

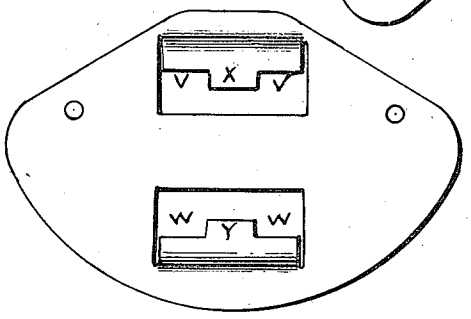



Fig. 7

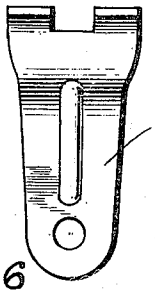



Fig. 6

CLYDE W. STRINGER
*INVENTOR.*

BY Stanley M Udale

*ATTORNEY.*

Patented Nov. 11, 1924. 1,515,230

# UNITED STATES PATENT OFFICE.

CLYDE W. STRINGER, OF HIGHLAND PARK, MICHIGAN, ASSIGNOR TO GEORGE M. HOLLEY, OF DETROIT, MICHIGAN.

## CARBURETOR-CHOKE-VALVE CONTROL.

Application filed October 3, 1923. Serial No. 666,312.

*To all whom it may concern:*

Be it known that I, CLYDE W. STRINGER, a citizen of the United States, residing at 12819 Second Street, Highland Park, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Carburetor-Choke-Valve Controls, of which the following is a specification.

This invention relates to the manufacture of a control device of the priming means of a carburetor. The specific type of controlling device consists of that known as Bowden wire and its flexible tubular guide. It is highly desirable in this connection that the wire should not be subjected to torsion and to as little bending as possible. It is further desirable that the device be firmly mounted upon the car. This particular device is adapted to be bolted to the steering post of a Ford car, where it is subjected to considerable vibration.

Figure 1 shows the device mounted on the steering post of a Ford car and applied to a Holley carburetor.

Figure 2 shows a plan view of the control itself viewed from beneath, with bottom plate partially removed.

Figure 3 shows a sectional plan view on the plane 3—3 of Figure 1, and illustrates the priming device itself.

Figure 4 is a cross sectional elevation on a plane 4—4 of Figure 2, with the control lever shown moved over to its middle position.

Figure 5 is a cross sectional elevation on a plane 5—5 of Figure 2 and Figure 4.

Figures 6 and 7 show details of the clamping device for securely locating the control onto the steering post of a Ford car.

In Figures 1, 2, and 3, A is the carburetor to which the device is applied, B is the spring maintaining the choke valve C in the wide open position, this being the priming device used on this carburetor. D is the wire controlling this choke valve. E is an enlargement or stop on the end of the wire. F is the choke valve lever. R is a cylindrical piece free to rotate in F and through which the wire D is drawn. The choke valve rod T is locked to the lever F which is stamped out so as to enclose the spiral spring B. The spring B engages with the lever F and is anchored onto the pin S on the carburetor A.

The tube G, through which the wire D passes, consists of a closely wound spiral spring of a well known type. This tube G at its upper end is shown connected to the casing H. The lower end of the tube G is connected by a bracket I to the engine (Figure 1). The housing H is fastened to a slotted plate J by means of the bolts Z which is clamped tightly and thus supported by the hooked pieces K, details of which are shown in Figures 6 and 7.

The wire D terminates in the ball L, the ball L being freely connected to the lever M which is so made that the ball L may be rotatably held by an ear U stamped integral with the lever M and turned over at 180° so as to form a universal joint between the wire D and the lever M. The ear U is provided with a depression in which the ball L is free to revolve. A second depression is shown but obviously is not essential.

The fulcrum of the lever M is the pin N riveted to the housing H, and a spring O is interposed between the lever M and the casing H and is wound around the pin N. The two ends of this coil spring, P and Q, are respectively anchored to the casing H and inside the ear U on the lever M, as shown in Figure 2. The torsion in the spring O is arranged to oppose the torsion of the spring B of the carburetor choke valve C, which tends to maintain the valve C in the wide open position and to put at all times the wire D in tension. The piece J is slotted at V and W and two ears X and Y project into these slots. These ears engage with corresponding recesses in the end of the two hooked pieces K.

*Assembly.*—A wire D is first made integral with a ball L. The ball L is then sprung into the U-shaped piece in the lever D. The lever D is then mounted on the pin N of the cover H and the spring Q interposed between the lever M and the casing H. The cover H is then bolted to the base J by means of the bolts Z Z, the cover H is then connected to the flexible tube G and a pin not shown driven in whereby the flexible tube J is securely locked to the casing H. The control is then a unit and is ready for installation. The two clamps K are placed on the steering post and engage with the ears X Y stampel out of the plate J. The pieces K are then clamped together. The wire D is threaded through the roller E

on the end of the lever F. Finally the stop E is affixed to the end of the wire D so that a slight clearance is left between the roller R and the stop E.

*Operation.*—When the carburetor is started the lever arm M is drawn up thereby pulling the wire D up through G. This causes the stop E on the arm D to contact with the arm F and so close the choke valve C against the action of the spring B. On releasing the manual pressure applied to the lever arm M the friction of the wire D in the tube G, together with the torsion of the spring O, maintains the choke valve C in its adjusted position against the action of the spring B which tends to open the valve C. When the car is driven away, and as the need for the priming means gradually diminishes, the lever arm M is pushed down in a counter-clockwise direction releasing the choke valve C, which, under the influence of the torsion spring B, returns finally to its wide open position.

By connecting the wire D to the ball L and mounting the ball L in the U-shaped piece U integral with the lever M the danger of the wire D ever being subjected to torsion is eliminated. By the provision of the ears X Y and the corresponding clamps K K, the clamps not only hook into the base plate but also dovetail therein and the control is very securely mounted on the steering post and positively resists any tendency to vibrate loose.

What I claim is:

1. In a device of the character described, a slotted base plate having ears projecting into said slots, hooked pieces engaging with said slots, recesses in said hooked pieces corresponding to said ears, means for clamping the said hooked pieces together for the purpose described.

2. In a device of the character described, a slotted base plate, two hooked pieces engaging with said slotted base plate, projecting tongues on said hooked pieces engaging with said slot, whereby said hooked piece dovetails into said slotted base plate.

3. In a device of the character described, a control lever, a U-shaped piece integral therewith, a depression in one arm of said U, a ball embraced by said U and retained by said depression, a wire passing through and secured to said ball whereby the wire and lever are universally connected.

In testimony whereof I affix my signature.

CLYDE W. STRINGER.