Oct. 27, 1925. 1,558,731

F. G. WITHROW

RETAINING DEVICE

Filed Sept. 2, 1925

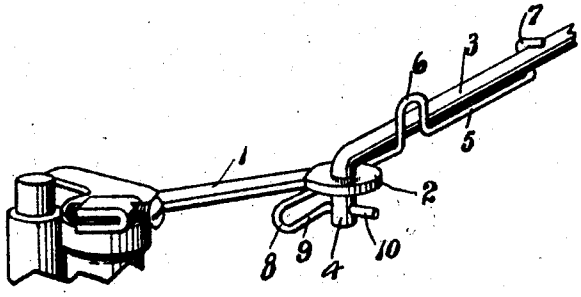


Fig. 1.

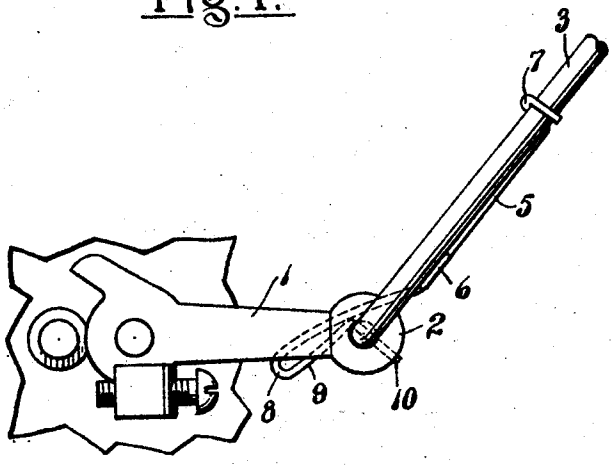


Fig. 2.

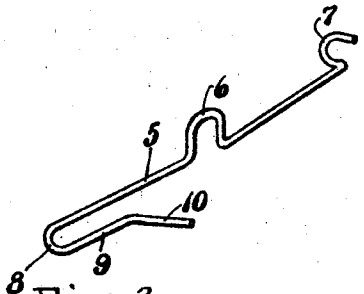


Fig. 3.

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UNITED STATES PATENT OFFICE.

FLOYD G. WITHROW, OF GRAND RAPIDS, MICHIGAN.

RETAINING DEVICE.

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To all whom it may concern:

Be it known that I, FLOYD G. WITHROW, a citizen of the United States of America, residing at Grand Rapids, in the county of Kent and State of Michigan, have invented certain new and useful Improvements in Retaining Devices; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to a retaining device which may be used where two rods or bars are pivotally joined and connected together so as to retain them against separation. One place where this device is of value is in connection with the attachment of throttle rods to the levers of carburetors in Ford cars and the illustration of the invention in the drawing shows the retaining device as thus used. It is to be understood, however, that the invention is in no sense limited to the one place of use but may be used in many other places or where a rod having an end portion turned at right angles to the main body thereof is connected with a second member, the down-turned end of the rod passing through an opening in the end of said second member.

It is a primary object and purpose of the present invention to make a retainer of this character which can be applied almost instantly and which, when applied, is held securely against disconnection. A further object of the invention is to provide a retaining device of this character made from a single length of wire which is very quickly and easily bent into the desired shape to serve the purposes for which it is designed. Various other objects and purposes than those stated will appear as understanding of the invention is had from the following description taken in connection with the accompanying drawing, in which,

Fig. 1 is a perspective view showing a throttle lever of a carburetor and the operating rod therefor joined together, the retaining device being applied thereto.

Fig. 2 is a plan view of the construction shown in Fig. 1, and

Fig. 3 is a perspective view of the retaining device.

Like reference characters refer to like parts in the different figures of the drawing.

The throttle lever 1 is of the usual type used with Ford carburetors and is pivotally mounted at one end to turn about a vertical axis. Its opposite free end is somewhat enlarged to provide a head 2 through which a central vertical opening is made. The throttle rod 3 is formed at one end with a short section 4 turned downwardly at right angles to the main body of the rod, said section 4 passing through the opening in the head 2 of the lever 1. This section 4 near its end has an opening through it which ordinarily is to receive a cotter pin and hold the parts against disconnection. The retaining device which I have made is formed from a single piece of wire and includes a relatively long section 5 which, between its ends, is formed into a vertically extending inverted U-shaped loop 6. At one end of the section 5 a wire is bent laterally and then back upon itself to form an open hook 7 of a size that it may freely receive the rod 3. The opposite end of the wire is bent back upon itself as indicated at 8 and extended to make a section 9 lying parallel to the main section 5 of the device. Said section 9 extends a distance toward the loop 6 and is then bent laterally at right angles making the terminal end section 10, as shown.

In applying the device to the throttle lever and rod, the terminal section 10 is inserted through the opening made through the down-turned end portion 4 of the rod 3 and the device then sprung so that the loop 6 is brought to lie against a side of the rod 3, the open hook 7 engaging against the rod with spring tension at its opposite side. The material from which the device is made is spring wire which is capable of being sprung and bent to a considerable extent, whereby its application, as described, to the throttle lever and the rod is easily accomplished and when once applied the section 10 cannot accidentally move backward to disengage from the part 4 of the throttle rod. To disengage the device it is necessary to spring the hook 7 to one side sufficiently to disengage it from the rod 3. This can be easily accomplished when desired but does not occur accidentally, owing to the tension to which the device is subjected when it is applied and in use.

The device while of very simple construction is very useful for the purpose for which it is designed and has so proved in practice.

The claim defines the invention which is to be considered as comprehensive of all forms of structure coming within its scope.

I claim:

In combination with a carburetor throttle lever and a throttle rod having an end portion turned to pass downwardly through an opening in the end of said lever, said end portion of the rod being provided with a transverse opening through it, of a retaining device formed from a single piece of wire located alongside of the throttle rod and formed at one end with a hook to engage said throttle rod, the opposite end of the device being bent back upon itself and formed with an out-turned terminal section passing through said opening in the down-turned end of the throttle rod.

In testimony whereof I affix my signature.

FLOYD G. WITHROW.