

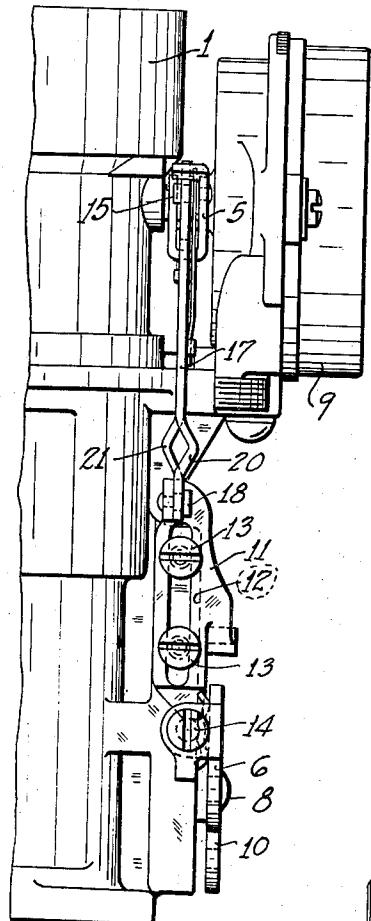
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2,149,023

## ADJUSTABLE LINK

Filed May 20, 1936



*Fig. 2.*

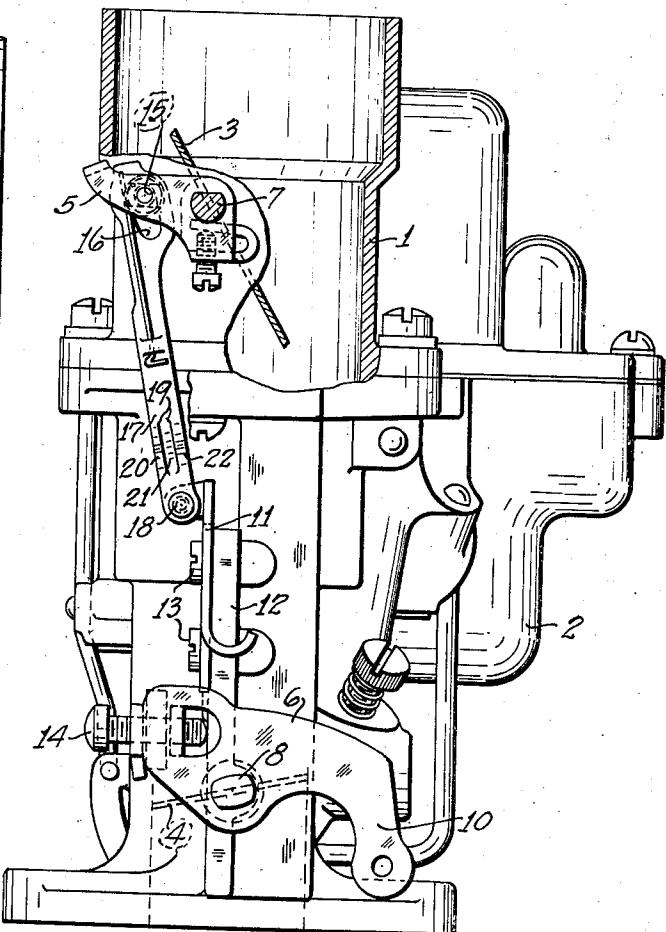


Fig. 1.

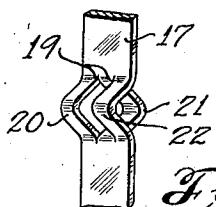


Fig. 3.

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## UNITED STATES PATENT OFFICE

2,149,023

## ADJUSTABLE LINK

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Application May 20, 1936, Serial No. 80,736

3 Claims. (Cl. 74—586)

This invention relates to linkage means for mechanisms and consists particularly in novel means for varying or adjusting a linear dimension thereof.

6 Certain force-transmitting elements of mechanism, such, for instance, as the choke and throttle interconnection arrangements frequently used in automotive carburetors, require adjustment after or prior to assembly so as to insure proper 10 operation of the associated parts. Carburetor "fast idle" devices, preventing full closing of the throttle valve when the choke valve is substantially closed, are generally controlled from the choke valve, and it is necessary that the mechanism be rendered inoperative at the proper time 15 during opening of the choke to permit the throttle to fully close to its normal idling position. Due to manufacturing tolerances and for other reasons, these interconnection mechanisms can- 20 not be accurately formed by production methods, but must be individually adjusted before the carburetors are ready for use.

An object of the present invention is to provide novel means for facilitating the adjustment 25 of a linear dimension of a link or similar element of mechanism.

A more detailed object is to provide simple means for accurately adjusting a link, such as may be used in a carburetor choke and throttle 30 interconnection mechanism.

These objects and others hereafter appearing are attained substantially by the structure illustrated in the accompanying drawing in which:

Figure 1 is a side view of an automotive carburetor with the invention applied thereto, portions 35 of the carburetor being broken away.

Figure 2 is a partial view of the structure in Figure 1 and taken at 90 degrees thereto.

Figure 3 is a detailed view of the link adjusting means.

The carburetor illustrated in the drawing is of a well known, automotive type including a barrel 1, forming a downdraft mixture passage, and a fuel bowl 2. Pivoted mounted in the barrel 45 are a choke valve 3 and throttle valve 4 having control levers 5 and 6 rigid with the pivots 7 and 8. A thermostatic control (not shown) is provided within housing 9 for operating the choke valve. The throttle valve is manually controlled 50 by means of an arm 10 on the throttle control lever connected by means of a suitable rod or wire (not shown) to a pedal or lever adjacent the driver's seat. A spring (not shown) may be provided for closing the throttle.

55 A slotted fast idle block 11 is slidably mounted

on rib 12 projecting from the barrel 1 by means of screws 13. Rib 12 serves as a stop for the adjusting screw 14 in the throttle lever 6 when block 11 is lifted to its inoperative position, as shown in Figure 1.

A pin 15 projects laterally from choke lever 5 and is received within a slot 16 in the upper extremity of a link 17 pivoted, as at 18, to the fast idle block 11 for controlling the latter. Slot 16 provides for limited movement of the choke valve 10 independent of linkage elements 17 and 11, but when the choke is opened a predetermined extent, pin 15 engages the upper edge of slot 16 to lift link 17 and the fast idle block. When the choke is closed, linkage elements 17 and 11 drop 15 by gravity, and if throttle screw 14 is sufficiently spaced from rib 12, block 11 drops between the screw and rib. Thereafter, the movement of throttle lever in a clockwise direction so as to close the throttle valve will be limited to the 20 fast idle position by engagement of screw 13 with the fast idle block. The interconnection mechanism shown is more fully disclosed and claimed in a copending application, Serial No. 83,066, filed June 2, 1936, in the name of August H. Blattner.

The point in the opening movement of the choke valve at which the fast idle block should be rendered inoperative as a limiting abutment for screw 14 may be fairly accurately determined. 30 In order to insure the withdrawing of the fast idle block at the proper time, link 17 is provided with novel means for adjusting the length thereof. This means constitutes a pair of short longitudinal slits 19 which divide a restricted portion 35 of a wider face of the link into a plurality of relatively narrow sections 20, 21 and 22; each of these sections is then crimped in a direction normal to this face, as more clearly shown in Figure 3, so as to draw together the adjacent portions of the link. Preferably, the outer sections 20 and 22 are crimped oppositely from center section 21. The crimping of the member is effected by bending across its thickness in the direction of least resistance to bending and does 45 not damage the metal. Obviously, the facility of crimping depends upon the character and thickness of the material.

In order to increase the dimension of the link in the direction in which the slits extend, it is 50 merely necessary to partially straighten the crimped sections, as by squeezing the bends together with a pair of pliers. To shorten the link, it is merely necessary to further crimp the sections as by inserting a suitable punch or wedge 55

transversely through the crimps, that is, along the axis of the crimped sections. These operations may be easily performed by a mechanic who is installing or repairing the carburetor.

5 The novel adjustable link may be advantageously used in connection with carburetor choke and throttle interconnection mechanism, but the use of the invention is not so limited. Obviously, a linear dimension of substantially any force-  
10 transmitting member constructed of relatively thin, bendable material may be varied by the means described. The multiple, parallel slits serve to divide the width of the member into relatively narrow sections which may be bent or  
15 crimped substantially easier than the member itself where not so divided. The divided sections also permit crimping of parts in opposite directions, so that adjustment may be easily made by applying lateral pressure to the crimped sec-  
20 tions. If desired, the member to be adjusted may be provided with a single slit forming two sections for crimping or with three or more slits.  
25 These modifications, and others as will occur to those skilled in the art, may be made without departing from the spirit of the invention and

the exclusive use of all such modifications as come within the scope of the appended claims is contemplated.

I claim:

1. An adjustable element of mechanism for transmitting linear force comprising a body strip having sides broader than the edges thereof, a portion of said body being divided into a plurality of sections by longitudinal slits shorter than said strip, said sections being oppositely crimped in directions normal to said broader sides whereby the length of the element may be varied by application of bending pressures to said sections in said directions. 10

2. An element as described in claim 1 in which said crimped sections form a transverse opening through said body strip paralleling the broader faces thereof. 15

3. An element as described in claim 1 in which said crimped sections are wider than the thicknesses thereof whereby said sections may be bent in directions normal to said wider sides substantially without distortion in other directions. 20

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