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W. J. RUDOLPH

ADJUSTING LEVER

Filed Jan. 23, 1922

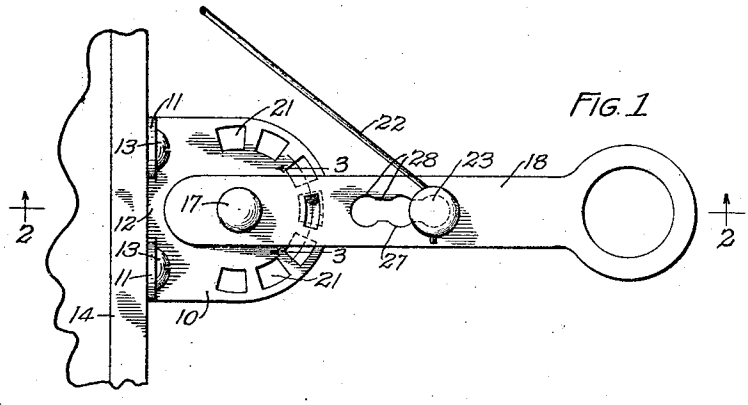


FIG. 1

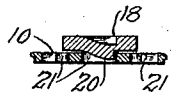


FIG. 3

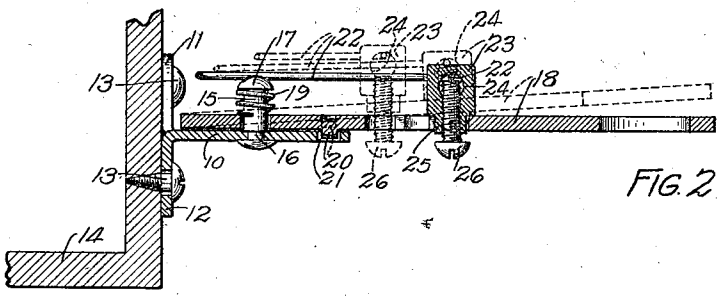


FIG. 2

INVENTOR:

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HIS ATTY.

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UNITED STATES PATENT OFFICE.

WALTER J. RUDOLPH, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE IMPERIAL BRASS MANUFACTURING COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

ADJUSTING LEVER.

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My invention is concerned with adjusting levers, sometimes called "sprag" levers, and is designed to produce a lever of the class described in which (1) it can be left adjusted in any of several chosen positions, instead of either of two extreme positions, as in the case of the ordinary sprag lever; (2) the connecting abutment for the wire can be rotatably mounted in any selected one of a plurality of positions so that the length of the movement of the wire can be varied for each of the positions of adjustment of the lever; (3) the wire connection to the abutment is such that it will readily grip a plurality of sizes of wire; (4) the parts are designed so that they are all stampings or automatic screw machine work, so that it can be manufactured quickly and cheaply; (5) it will be held yieldingly but firmly in any adjustment; and (6) it can be mounted and be operative in any position in which it may be supported.

To these ends, I have devised the novel combination of elements which will be described at length in the specification and particularly pointed out in the claims.

To illustrate my invention, I annex hereto a sheet of drawings, in which the same reference characters are used to designate identical parts in all the figures, of which,—

Fig. 1 is a top plan view of a lever embodying my invention;

Fig. 2 is a central longitudinal section on the line 2—2 of Fig. 1; and

Fig. 3 is a detail in section on the line 3—3 of Fig. 1.

In carrying out my invention in its preferred form, I employ a fulcrum base 10, which is preferably a stamping made from heavy sheet-metal, and has the body portion shown in a horizontal position, although it may be mounted at any angle and extend in any plane desired. At the preferably square end of the body I turn up a pair of ears 11, and between them I turn down an ear 12, these ears being perforated to receive screws 13, by which the base is secured to any desired portion 14 of the vehicle or other device upon which it is mounted. Preferably riveted in the small aperture formed in the center of the body portion is the fulcrum pin 15 having the reduced lower portion 16 extending through said aperture. Surrounding the pin 15 and interposed between the head 17 of said pin and the top of the lever 18 is the helically-coiled expanding spring 19, which serves to hold the lever normally parallel with the base 10 and with the ratchet tooth 20 struck from its under side, extending into the desired one of the plurality of detent apertures 21, which are stamped out of the body of the base 10 and extend in the arc of a circle concentrically with the pin 15.

With the construction shown, it will be obvious that the lever 18 can be swung clockwise without substantial effort, and that it will be held in any advance position to which it may be moved by reason of the engagement of the ratchet tooth 20 with the aperture 21 in which it is left. When it is desired to release the lever, it is lifted to the dotted-line position shown in Fig. 2, when it can be swung back anti-clockwise to its initial position.

These sprag levers are provided with means for securing thereto a wire 22, leading to the carburetor valve or other device they are intended to control, and as this wire is taut, it is desirable to permit the plug 23 to which it is attached to swing upon the lever. It is also desirable to be able to adjust the position of the plug 23 to and from the fulcrum pin 15, so that the throw of the wire due to each amount of angular movement of the lever 18 can be varied, and it is also desirable to provide the plug 23 with means for gripping any sized wire and for connecting the wire or adjusting the position of the plug without detaching it entirely from the lever 18. I secure all this desiderata by the following simple construction:

The plug 23 has the cylindrical body portion with the transverse aperture 24 passing therethrough, which is of sufficient size to permit the passage of the largest size wire 22 which it may ever be desired to use. I reduce the diameter of the lower portion 25 of the plug 23 and pass a threaded aperture through said reduced portion into the transverse aperture 24 so that the machine screw 26 may be screwed upward with its end extending into the transverse aperture 24 as far as may be necessary to grip the wire 22 between the top of the transverse aperture and the end of the screw. The aperture 27 in the lever 18 consists of a plurality of large portions 28, which are of sufficient diameter to receive the reduced end 25 of the

plug 23 and are connected by narrower necks or passages which will permit the passage of the body of the screw 26 but not the reduced end 25. With this construction, it will be obvious that the position of the plug 23 may be quickly adjusted simply by screwing out the screw 26 far enough so that the reduced portion 25 may be lifted out of the large portion 28, so that the plug 23 can be moved longitudinally of the lever to bring the reduced portion 25 into the desired large portion 28, when the screw 26 will be screwed up to catch the wire 22. It will be noted that the length of the screw 26 is great enough so that when it is tightened up on any size wire 22, the reduced portion 25 will be drawn down into the chosen large portion 28 so as to hold it in place, while permitting the plug 23 to turn as much as may be necessary in the swinging of the lever 18.

While I have shown and described my invention as embodied in the form which I at present consider best adapted to carry out its purposes, it will be understood that it is capable of modifications, and that I do not desire to be limited in the interpretation of the following claims except as may be necessitated by the state of the prior art.

What I claim as new, and desire to secure by Letters Patent of the United States, is:

1. In a device of the class described, the combination with a fulcrum base, of a lever pivoted thereon, means for holding said lever in a plurality of positions, a wire-holding plug pivotally mounted on the lever, and means for adjusting the distance of the plug from the fulcrum without detaching the plug from the lever.

2. In a device of the class described, the combination with a fulcrum base, of a lever pivoted thereon, means for holding said lever in a plurality of positions, a wire-holding plug pivotally mounted on the lever, and means for securing the plug rotatably on the lever and at the same time the wire in the plug.

3. In a device of the class described, the combination with a fulcrum base, of a lever pivoted thereon, means for holding said lever in a plurality of positions, a wire-holding plug pivotally mounted on the lever, said plug having an internally-threaded reduced portion extending through an aperture in the lever and a transverse aperture, and a screw threaded through the reduced portion of the plug into the transverse aperture.

4. In a device of the class described, the combination with a fulcrum base, of a lever pivoted thereon, means for holding said lever in a plurality of positions, a wire-holding plug pivotally mounted on the lever, said plug having an internally-threaded reduced portion extending through an aperture in the lever and a transverse aperture, and a screw threaded through the reduced portion of the plug into the transverse aperture, said aperture in the lever consisting of a plurality of large portions into which the reduced portion of the plug may extend and connected by narrower portions through which only the screw can pass.

5. In a device of the class described, the combination with a sheet-metal fulcrum base having a plurality of supporting ears turned at an angle to the body thereof together with a central pivot and a series of detent apertures through the flat base arranged in the arc of a circle concentric with the pivot, of a lever fulcrumed on the pivot and having a tongue extending downward therefrom into the plane of the detent apertures, and a helically-coiled expanding spring interposed between the lever and the head of the pivot.

In witness whereof, I have hereunto set my hand this 16th day of January, 1922.

WALTER J. RUDOLPH.