Dec. 4, 1923. 1,476,578

J. F. BALLAK

CLUTCH CONTROL

Filed Feb. 21, 1923

Fig. 1

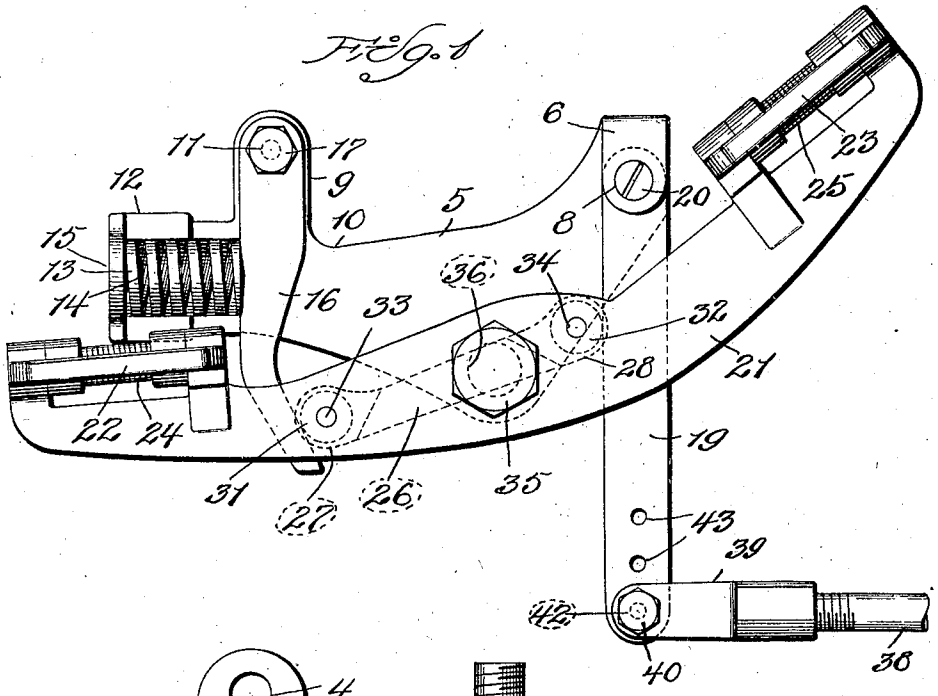
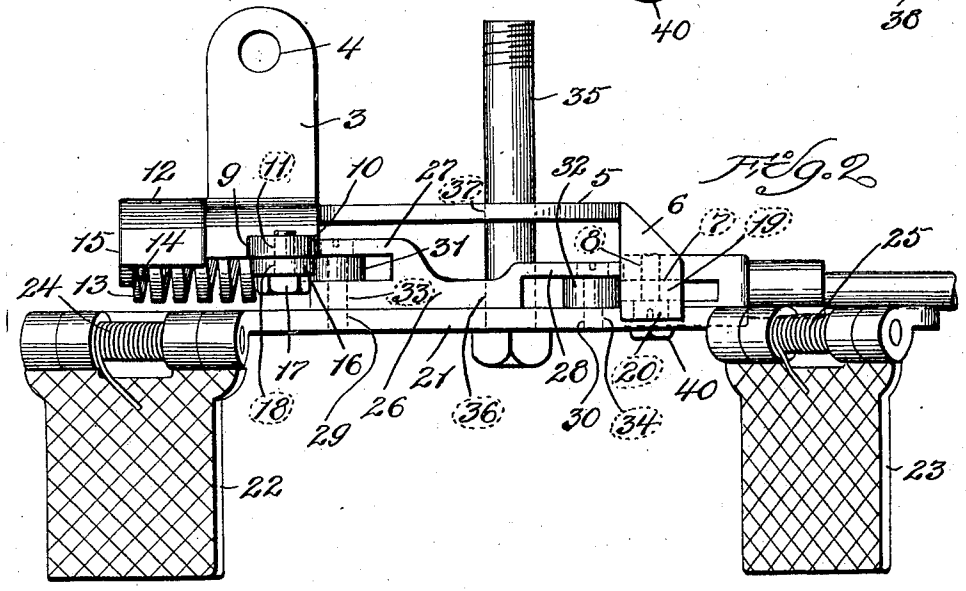


Fig. 2



INVENTOR

JOHN F. BALLAK,

by Arthur C Eckert ATTORNEY.

Patented Dec. 4, 1923. 1,476,578

UNITED STATES PATENT OFFICE.

JOHN F. BALLAK, OF ST. LOUIS, MISSOURI.

CLUTCH CONTROL.

Application filed February 21, 1923. Serial No. 620,319.

To all whom it may concern:

Be it known that I, JOHN F. BALLAK, a citizen of the United States of America, residing at 100 North Twelfth Street, in the city of St. Louis and State of Missouri, have invented certain new and useful Improvements in Clutch Controls, of which the following is a specification.

The object of my invention is to devise a rocker clutch control to be used on vehicles particularly motorcycles. A more specific object is to devise a clutch control that is actuated by the operator's foot and that will remain in any position in which it is placed by the foot of the operator automatically. It is well known that the clutch is used in different states of engagement and that it is desirous of having a control by a pedal that will maintain the clutch in any degree of engagement. A further object is to make a rocker clutch control that can be operated by one foot, the toe rotating it in an anti-clockwise direction and the heel in a clockwise direction. A further object is to make a rocker clutch control that is positive in its action, made of few and simple parts, that can be readily assembled and disassembled; one that lends itself readily to multiple production, is positive in its action and easily applied to a standard vehicle or motorcycle.

With these and other objects in view my invention has relation to certain novel features of construction and arrangement of parts as will be hereinafter more fully described, pointed out in the claims and illustrated in the drawings in which

Fig. 1 is a side elevation of my device and

Fig. 2 is a plan view of my device.

Numeral 3 designates a bracket secured to the frame or other portion of the vehicle or motorcycle by a bolt passing through the hole 4. Numeral 5 designates an arm extending longitudinally parallel to the frame and having the finger 6 formed thereon at its end and at right angles to it. A slot 7 is formed in the finger 6 and a hole 8 passes through the finger 6 as clearly shown in the drawing. A second finger 9 is formed on the bracket 3 at 10 and has a hole 11 passing therethrough. A mutilated cylinder 12 is formed integral with the end of the bracket 3 opposite the finger 6 with the external portion of its lateral surface removed. A coil spring 13 is secured in the mutilated cylinder 12 in a longitudinal position by means of the pin 14 which passes through the head of the mutilated cylinder 12 at 15. Numeral 16 designates a cam which is rotatively secured at the side of the finger 9 by means of the bolt 17 which passes through the hole 18 in the cam 16 and through the hole 11 in the finger 9. Normally the left side of the cam 16 in Fig. 1 rests or is supported against the coil spring 13. Numeral 19 designates a lever rotatively secured in the finger 6 by means of the bolt 20 which passes through the hole 8 in the finger 6 and through a hole in the cam 19 itself permitting the lever 19 to oscillate in the slot 7 of the finger 6. Numeral 21 designates a rocker arm of the shape best shown in Fig. 1 and having secured to it at its ends the heel and toe rests 22 and 23 which are conventionally in the position shown in Fig. 2, but which may be rotated against the coil springs 24 and 25. I claim no novelty in the heel and toe rests 22 and 23 nor in their methods of attachment. They are simply made to rotate through a portion of a circle in the event that the rider on a motorcycle should tip to one side to such an extent that they would come in contact with an external object or the ground, that they would not be broken.

Formed integral with the rocker arm 21 is the lateral projection 26 which has formed the two clevises 27 and 28 thereon. Holes 29 and 30 are formed in the rocker arm 21 and corresponding holes are formed in the opposite arms of the clevises 27 and 28. Numerals 31 and 32 designate rollers which are rotatively secured in the clevises 27 and 28 by means of the bolts 33 and 34 which pass through the holes 29 and 30 in the rocker arm 21 and the holes in the clevises 27 and 28. Numeral 35 designates a bolt which passes through a hole 36 in the rocker arm 21 and through the hole 37 in the bracket 3. By means of this bolt the rocker arm 21 and the bracket 3 are assembled into operative positions. The free end of the bolt 35 is secured conveniently to the frame. The lateral projection 26 is of such length and proportion that when the rocker arm 21 and the bracket 3 are assembled that the cams 16 and 19 will ride on the rollers 31 and 32. Numeral 38 designates a reach rod which is broken off at its right end in Fig. 1 and has a clevis 39 formed at its inner end. Numeral 40 designates a bolt which passes through holes 42 in the clevis 39 and through holes 43 in the external end of the cam 19. Several such holes as 43 are pro-

vided in order to enable the reach rod 38 to be adjusted vertically. The reach rod connects to the clutch which I have not shown and which is no part of my invention. The tension in the reach rod 38 which is very great in the average clutch on a motorcycle must be counterbalanced or counteracted and I have provided the coil spring 13 for that purpose. It will be seen that when the toe rest 22 of the rocker arm 21 is rotated in an anticlockwise direction by pressing on the toe rest 22 with the toe that the lever 19 will be rotated in an anti clockwise direction and that thereby the reach rod 38 will be pushed to the right in Fig. 1. It is also likewise obvious that when the heel portion is pushed down that the reverse will be true and that the rod 38 will be pulled to the left in Fig. 1. It is also obvious that wherever the rocker arm is placed it will remain, i. e. to say, either in the completely engaged or in the completely disengaged positions of the clutch or in any intermediate position.

What I claim and mean to secure by Letters Patent is

1. In combination with a bracket having a cam and a lever revolubly secured thereto, a reach rod revolubly secured to said lever, a rocker arm, rollers revolubly secured to said rocker arm in such position that they are in contact with the inner faces of said cam and lever, a coiled spring secured to said bracket in contact with said cam.

2. In combination with a bracket having cams revolubly secured thereto, a reach rod revolubly secured to the free end of one of said cams, a coiled spring secured to said bracket in contact with one of said cams, a rocker arm revolubly secured to said bracket by means of a bolt, rollers revolubly secured to said rocker arm in such position that they are in contact with the inner faces of said cams, heel and toe rests secured to said rocker arm at its extremites.

In testimony whereof I affix my signature.

JOHN F. BALLAK.