E. J. BLOOM.

EXTENSIBLE PEDAL.

APPLICATION FILED JUNE 23, 1916.

1,213,825. Patented Jan. 30, 1917.

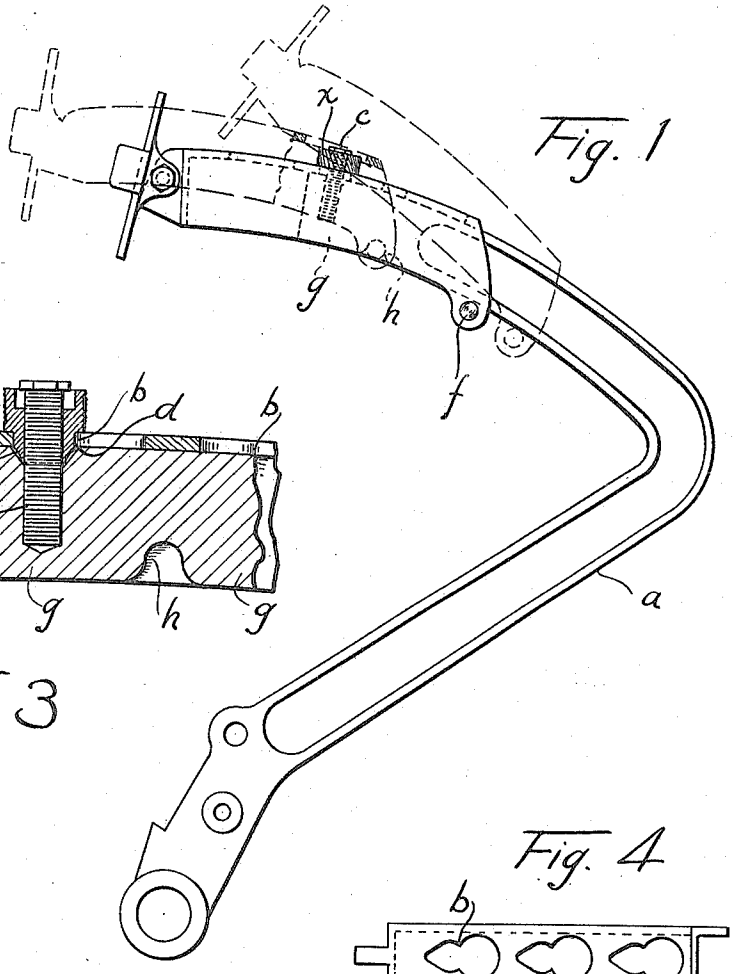


Fig. 1

Fig. 3

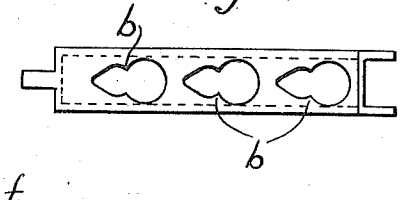


Fig. 4

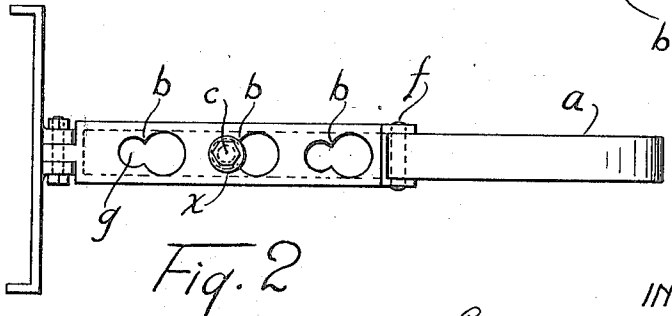


Fig. 2

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EXTENSIBLE PEDAL.

1,213,825. Specification of Letters Patent. Patented Jan. 30, 1917.

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To all whom it may concern:

Be it known that I, EDGAR J. BLOOM, a citizen of the United States, residing at Tiffin, county of Seneca, State of Ohio, have invented a certain new and useful Improvement in Extensible Pedals, and declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to extensible pedals especially designed for automobiles.

The object of the invention is to afford a pedal extension which may be easily and positively adjusted into several selected positions and which will be cheap to manufacture.

In the drawings,—Figure 1 is a side elevation showing in dotted lines two positions that the extension may assume. Fig. 2 is a top plan view. Fig. 3 is a fragmentary longitudinal section of the pedal lever and the extension. Fig. 4 is a plan view of a modified form of extension.

a indicates the pedal lever. The extension which fits over the top of the pedal lever is of inverted U shape in cross section (see Fig. 2), and in its top is a plurality of slots, each slot comprising a circular perforation and an offset perforation. The offset perforation where it joins the larger perforation has a reduction in width indicated at *b*. This is quite important for there is screwed into the terminal of the pedal lever a locking bolt *c* upon which runs a nut *x* which has an annular shoulder *d* just adapted to fit into the offset perforation, and consequently when this nut is run in as far as it will go, it brings the shoulder *d* into this perforation, and the shoulder being larger than the bolt and being larger in diameter than the reduced passage-way *b* between the offset perforation and the large perforation, the locking nut securely locks the extension to the pedal lever. In turning the locking nut down, the tapered portion *e* performs a useful service in bringing the extension so that the offset perforation will precisely register with the enlarged circular portion or locking shoulder *d*.

The above describes how one position of adjustment is secured. If it is desired to lock the two members into a different position the nut is unscrewed, exposing the reduced diameter of the bolt at the plane of the top of the extension. This allows the extension to be slipped along the pedal lever, causing the bolt to pass through the restricted portion *b* of the slot, bringing the nut into registery with the large perforation of the slot. The large perforation of the slot is large enough to allow the knurled head of the nut to pass therethrough. Consequently when the nut and the large perforation register, the extension may be lifted over the nut as indicated by the dotted line showing at the left in Fig. 1. The extension may then be slid along the pedal lever as indicated by the dotted line showing at the right in Fig. 1. It will be noticed that in lifting the extension over the nut head that the extension always pivots on the pin *f* which serves to hold the extension to the pedal lever by connecting the depending lugs of the extension on the under side of the pedal lever.

The device which I have described may be used with pedal levers which have been manufactured with no view to attachment of an extension, or the pedal lever may be made with the design of attaching the extension. In the drawings I have chosen to show the extension in connection with a pedal lever especially designed to take the extension. For this purpose the usual pedal lever of I cross section is at its extreme upper end made solid as indicated at *g* in Fig. 3. Into this solid terminal of the pedal lever is tapped a threaded hole for the bolt *c* and in the bottom is cast or routed out a recess *h*. The purpose of this recess is clearly indicated by the left hand dotted line showing of Fig. 1. It is necessary for the pin *f* to drop into this recess in lifting the extension over the head of the locking nut when the innermost slot is in registry therewith. The reason for this is that if the pin *f* rested merely at the under side of the pedal lever, the arc of swing of the walls of this slot is on such a small radius that the wall of the slot would be bound to encounter the head of the nut. In any of the other slots the radius of the arc is long enough so that it is not necessary to provide recesses.

In Fig. 4 I have shown a modified form of slot in which the offset portion is tapered. The reason for the taper is that the harder one pushes on the pedal the firmer one shoves the extension into engagement with the locking nut for with the tapered slots

the action of the walls of the offset portions about the locking shoulder is a wedging action.

Where the pedal is not made with a view to the attachment of the extension, a member formed precisely like the upper end of the pedal already described may be simply bolted to the conventional form of pedal. Therefore, in the claims I shall refer to the pedal terminal and it will be understood that I mean either a pedal terminal which is an integral part of the pedal lever or else a separable pedal terminal which is bolted to the conventional form of pedal lever.

Of course the nut and bolt could be supplanted by simply a bolt but the separate nut and bolt are preferable as the bolt is screwed into the threaded hole very tightly and the nut is restrained from dropping off by the head of the bolt. Consequently there is no danger of the nut dropping off and becoming lost as would be the case if the bolt was used to be turned in and out by hand to do the locking.

What I claim is:

1. The combination of a pedal lever terminal, an extension adapted to slidingly engage the pedal lever terminal and provided with two or more slots, each slot provided with two portions of different width and connected by a reduced passage-way, and a locking member which can be adjusted toward or away from the pedal lever terminal and which has three diameters, a diameter which can pass through the reduced passage-way of the slot, a head portion which can only pass through the large portion of the slot, and an intermediate locking shoulder portion which is adapted to fit into the offset or smaller portion of the slot.

2. The combination of a pedal lever terminal, an extension slidingly fitting over the same and having a plurality of slots, each slot having two portions of different widths connected by a reduced passage-way, and a locking bolt and nut adapted to screw into the pedal lever terminal and having three diameters, one to pass through the reduced portion, a second to fit into the smaller portion of the slot, and a third to pass through only the large portion of the slot.

3. The combination of a pedal lever terminal, an extension slidingly engaging thereon and provided with a plurality of slots, each slot comprising two portions of different widths connected by a reduced passage-way, and a locking member screwing toward or away from the pedal lever terminal and comprising three diameters, one arranged to pass through the reduced passage-way, a second portion of larger diameter and toward the outside of the locking bolt arranged to fit into the smaller portion of the slot, the said portions of two diameters being connected by a tapered portion so as to cause the extension to so arrange itself as to bring the smaller portion of the slot into registry with the locking member, and a portion or head having a diameter larger than the two portions previously mentioned and which will pass through only the large portion of the slot.

4. The combination of a pedal lever terminal having a recess on its under side, an extension of inverted U shape cross section and having at its inner end a pin, the said extension adapted to straddle the pedal lever extension and the said pin adapted to fit on the under side of the pedal lever terminal, a locking member adjustable into or away from the pedal lever terminal, the said extension being provided with a plurality of slots in its top which coöperate with the locking bolt and which in certain positions may be lifted over the locking member head, the said pin upon which the extension swings being arranged to drop into the recess in the bottom of the pedal lever terminal to allow the walls of a slot to clear the head of the locking member.

5. The combination of a pedal lever terminal, an extension arranged to slide along the pedal lever terminal and provided with a plurality of slots, and locking means having a screw adjustment with respect to the pedal lever terminal and adapted to pass through the said slots and to positively as well as frictionally lock the extension at selected points along the pedal lever terminal.

In testimony whereof, I sign this specification.

EDGAR J. BLOOM.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."