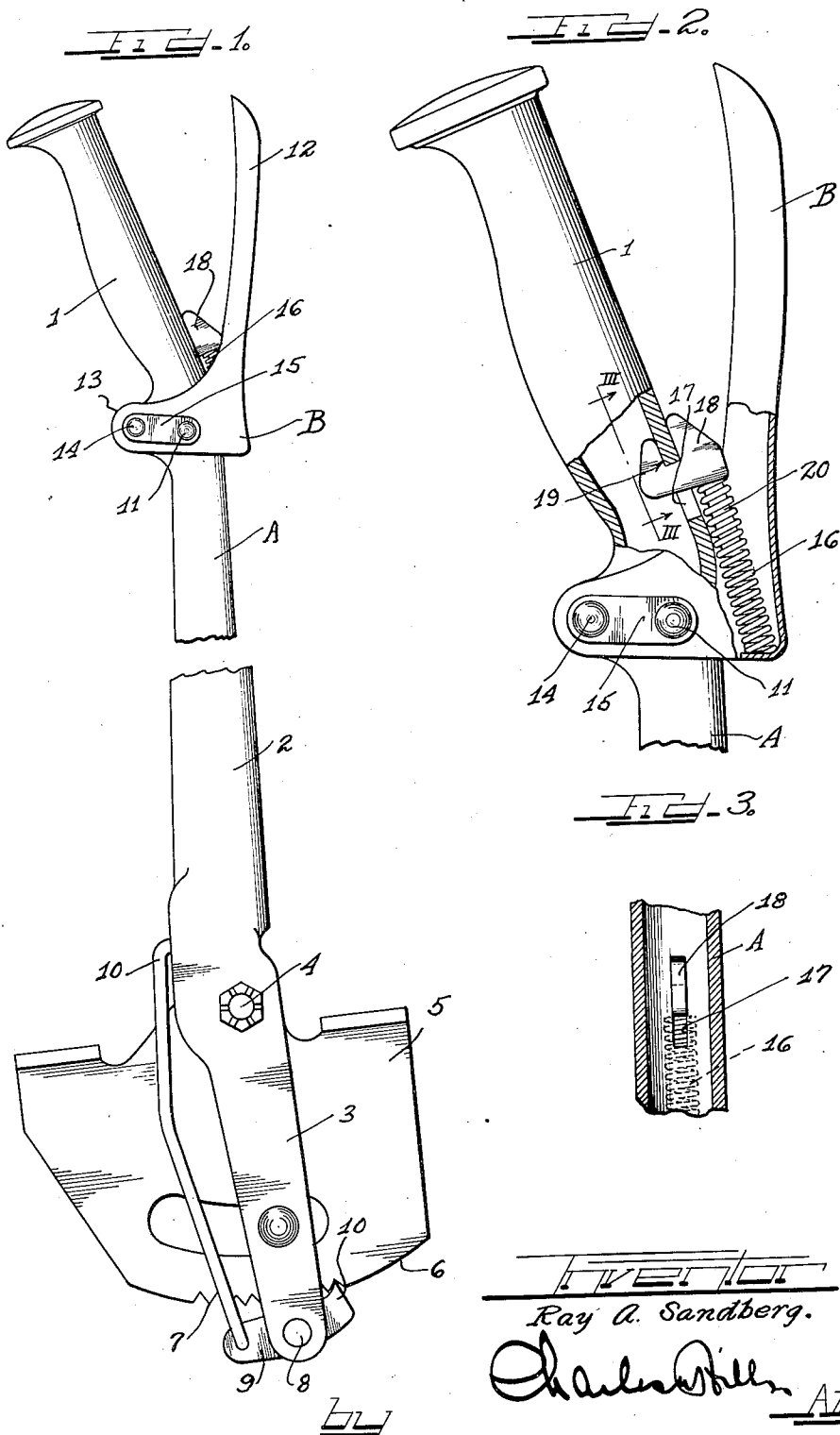


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HANDLE GRIP FOR LEVERS
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HANDLE GRIP FOR LEVERS

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The present invention relates to handle grip for lever and will be herein described and illustrated as applied to a brake lever for an automotive vehicle.

5 It has been observed from experience that handle grips for levers, many times become impaired by reason of use, to points where rattle occurs. This is especially true where latch handles are utilized in connection with the levers for actuating the latches carried by the levers for engaging ratchet plates and the like. Another disadvantage that has arisen is due to the construction of the parts where it is customary to rivet the latch handles to the levers thus requiring
10 cutting away of the rivets and removing the latch handles for replacement of springs and requiring re-riveting. This, of course, is expensive and inconvenient.

The present invention is directed to a novel latch grip for levers of such construction that the springs for maintaining the latch handles normally in position, may be readily replaced without removing the latch handles from the levers.

Another object of the present invention is to provide a handle grip for levers so constructed that the latch handle springs as well as the members which connect the springs to the levers may be replaced in event of breakage or impairment of function, without having to remove the latch
20 handles from the levers.

A further object of the invention is to provide a novel means for securing a latch handle spring to a lever, which means include a separate clip in hooking engagement with the lever, which
30 may be readily removed for replacement or repair simply by compression of the spring, whereupon the spring and the clip may be removed and replaced, without disconnecting the latch handle from the lever.

Generally speaking the present invention contemplates the provision of a latch handle pivoted to a lever, and provision of a clip which is adapted for hooking engagement with the lever, and a spring interposed between the clip and the latch handle, which spring is compressed when applied, thereby retaining the clip in operative engagement with the lever. The clip and spring may be removed by compressing the spring and unhooking the clip from the lever.

The above, other and further objects of this invention will be apparent from the following description, accompanying drawing and appended claims.

55 The accompanying drawing illustrates an em-

bodiment of the present invention, and the views thereof are as follows—

Figure 1 is a fragmental side elevational view of a lever constructed in accordance with the principles of the present invention.

Figure 2 is a side elevational view of a fragmental portion of a lever, with parts broken away to show details of construction, constructed in accordance with principles of the present invention.

Figure 3 is a fragmental sectional view taken substantially in the plane indicated by the line III—III of Figure 2.

The drawing will now be explained.

The present invention has been illustrated herein in connection with a hand brake lever for automotive vehicles, the invention, however, not being limited to such lever as, of course, it is susceptible of universal application.

The illustrated lever A is fashioned from flat stock, blanked and subjected to tool action to provide a substantially hollow finished brake lever with the handle portion 1, body portion 2, and the bifurcated extensions or ends 3 at the lower end of the lever.

The illustrated form of lever is pivoted at 4 to a ratchet plate 5, which plate is illustrated as provided on its lower arcuate margin 6 with teeth 7. Pivoted at 8 to the extremity of the lower portion 3 of the lever, is a latch 9 having a tooth or detent
10 adapted to engage any of the teeth 7 on the ratchet plate 5. The latch 9 is operated by a pull rod 10 which in turn is connected to the latch at one end and at the upper end is connected to a pivot pin 11 carried by a latch handle, designated
generally at B.

The latch handle B is made from flat metal stock and suitably fashioned by tool action to the ultimate form and shape desired. As illustrated, the latch handle B comprises a hand-engaging
portion 12 with parallel ears 13 adapted to receive a pivot pin 14 for pivoting the latch handle B to the lever A.

The lugs 13 are adapted to straddle the lever A adjacent the pivotal connection 14 thereto so that the spoon portion 12 of the latch handle may conform to the contour of the portion 1 of the lever.

The pull rod 10, in the hollow type of lever, extends preferably through the hollow portion of the lever and, as before explained, is pivoted at 11 to the latch handle B. The lever is provided with suitable cut-out portions to receive the pivot pin 11, which has its ends secured in the lugs 13 of the latch handle. If desired, reinforcing straps
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15 may be applied to the sides of the lugs 13 for strengthening purposes.

The latch handle B being dished from flat stock is of substantially spoon shape so as to conform to the handle portion 1 of the lever A and in this connection a seat is provided for one end of the tension spring 16, the seat constituting a part of the latch handle B.

In the exemplification illustrated, the handle portion 1 of the lever is provided with a slot 17 into which projects a clip 18 which clip is notched at 19 to engage the inner and outer surfaces of the portion of the handle adjacent one margin of the slot. The clip 18 is made of flat metal and has a projection 20 adapted to enter the adjacent end of the spring 16, thus serving as a guide for the spring and maintaining the clip and spring in co-operative relationship. The clip and spring are applied after the rivets constituting the pivots 14 and 11 are headed, that is, permanently fixed in position, with the spring applied first and then the projection 20 of the clip inserted in the adjacent end of the spring, the spring compressed so that the clip may enter the slot 17 until its notch 19 engages the lever whereupon the spring serves to maintain the clip 18 in hooking engagement with the lever. The parts are so constructed that the spring 16 is under slight compression at all times, when the latch handle B is in normal position, that is, as shown in full lines in Figures 1 and 2.

When it becomes necessary to repair or replace the spring 16, or the clip 18, all that is necessary to be done is to slide the clip downwardly, compressing the spring 16, until the clip is freed from the slot 17, whereupon the clip and spring are free to be removed and replaced as required.

It will be observed that the present invention provides a handle grip for levers which is simple in construction, efficient in use, and which may be readily repaired or replaced as to the spring and clip, without having to remove the latch handle B from the lever. This is an important feature.

The provision of the projection 20 of the clip 18, being in the same direction as the axis of the spring, affords no means for preventing proper functioning of the spring as the latch handle B is actuated in service. The direction of compression and expansion of the spring 16 is a straight line direction and in the same direction as the engagement of the clip 18 with the handle. Thus it will be observed that there are no angular portions to prevent proper functioning of the spring nor to become liable to damage in use.

The latch handle B pivots or rocks about the pivot pin 14 as may be readily observed.

The invention has been described herein more or less precisely as to details, yet it is to be understood that the invention is not to be limited thereby, as changes may be made in the arrangement and proportions of parts, and equivalents may be substituted, without departing from the spirit and scope of the invention.

The invention is claimed as follows:

1. A handle grip for levers including in combination with a lever, a latch handle pivoted thereto for rocking movement, a spring for maintaining said handle in normal position, said lever having a slot in it, a notched clip for hooking engagement with the slot of said lever and having a part for engaging said spring to prevent accidental displacement of said spring and clip.

2. Means for retaining the latch handle spring of a lever in position in such manner that the

spring may be replaced without removing the handle from the lever, said lever provided with a slot, said means comprising a clip adapted for hooking engagement with the slot of said lever and for cooperation with said spring, said spring being removable by compressing the same and unhooking the clip from the lever.

3. A handle grip for levers, including in combination with a lever having a slot in it, a latch and a latch handle, said latch handle being pivoted to said lever for rocking movement, a spring for maintaining said latch handle in normal position to retain the latch in engagement with its ratchet, and a removable clip in hooking engagement through said slot and contacted by said spring for maintaining the spring in position.

4. In combination with a slotted lever having a latch handle pivoted to it and a spring engaging said handle, of means for retaining said spring in position, said means comprising a clip removably engaging the slot of said lever and having a part for cooperating with said spring, said clip being removable by compressing said spring and disengaging the clip from the slot.

5. In combination with a slotted lever having a latch handle pivoted to it and a spring engaging said handle, of means for retaining said spring in position, said means comprising a clip having a projection for entering the coiled spring for guiding that end of the spring, and said clip having spaced jaws providing a notch to engage said slot in the lever.

6. In combination with a lever and a latch handle, said lever having a slot adjacent said handle end, said latch handle being pivoted to said lever near its handle end, a notched clip in said slot and having a projection outwardly of the lever, a spring about said projection and being compressed between said clip and said handle for maintaining said handle in normal position.

7. A handle grip for levers including a slotted lever and a latch actuating member movably supported on said lever, a coiled spring against said member and effective to maintain it in normal position, means for maintaining said spring in position, said means including a bifurcated member having a projection entering said coiled spring and having a part adapted for entering said slot for hooking engagement with the lever, the said member being maintained in hooking engagement with said lever by the inherent expansive characteristics of the spring.

8. A handle grip for levers including a slotted lever and a handle latch pivoted to it for rocking movement, a coiled spring against said latch handle and effective to maintain said latch handle in normal position, and spring retaining means comprising a clip having a projection for entering said coiled spring and centering said spring and also having a part for entering said slot in hooking engagement with the lever, the arrangement of the clip and spring being such that the spring is compressed when the clip is applied to the lever so that the inherent tendency of the spring to expand maintains said clip in engagement with said lever.

9. In combination, a lever provided with an opening, a latch handle pivoted to said lever, a spring for maintaining said latch handle in normal position, and means entered in said opening in hooking engagement with said lever and contacted by said spring for maintaining said spring in operative relationship with said latch handle, said last mentioned means being retained

in hooking engagement with said lever solely by the inherent expansive characteristics of said spring.

10. In combination, a lever provided with a slot therein, a latch handle provided with a yoke straddling said lever and pivoted to said lever, a clip having bifurcated jaws engaging said slot, and a spring between said clip and said handle.

11. In combination, a lever provided with an opening therein, a latch handle pivoted to said lever, a bifurcated member entered in said opening, and resilient means between said member and said handle to hold said member in place and maintain normally the free end of said handle spaced from said lever.

12. In combination, a lever provided with an opening therein, a latch handle pivoted to said lever, a bifurcated member entered in said opening, and a spring between said member and said handle to hold said member in place and main-

tain normally the free end of said handle spaced from said lever, said member and spring being removable by compression of said spring and disengagement of said member from said opening.

13. In combination, a lever provided with an opening therein, a latch handle pivoted to said lever, a bifurcated member entered in said opening, a projection on said member, and a coiled spring about said projection between said member and handle for maintaining normally the free end of said handle spaced from said lever.

14. In combination, a lever provided with an opening therein, a latch handle pivoted to said lever, a bifurcated member entered in said opening, and a coiled spring under tension between said member and said handle, said spring maintaining said member in engagement in said opening by the inherent characteristics of said spring to expand.

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