No. 724,419. PATENTED APR. 7, 1903.

E. ANDREWS.

LEVER HANDLE LOCK.

APPLICATION FILED MAR. 6, 1902.

NO MODEL. 2 SHEETS—SHEET 1.

FIG. 6.

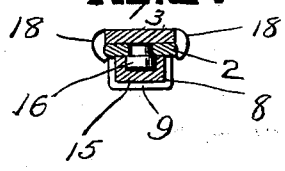


FIG. 1.

FIG. 2.

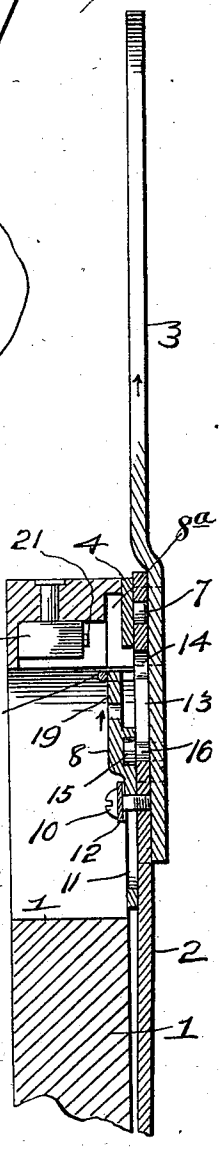


FIG. 3.

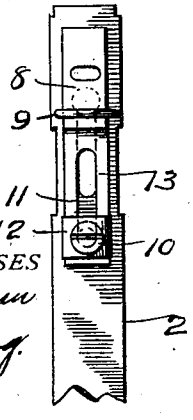


FIG. 5.

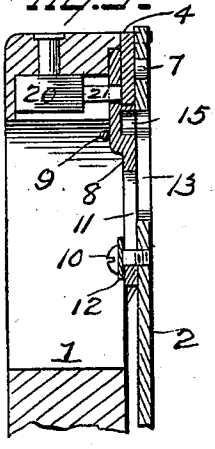
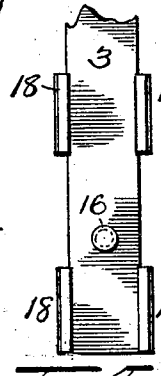


FIG. 4.



WITNESSES

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No MODEL. 2 SHEETS—SHEET 2.

Fig. 7.

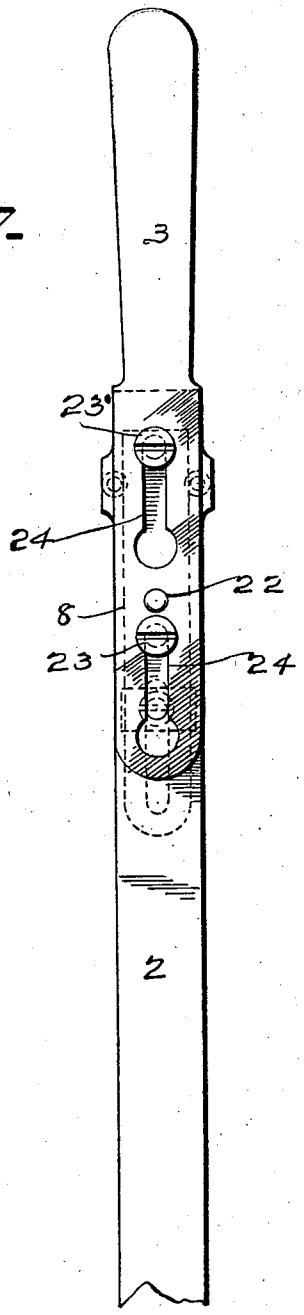
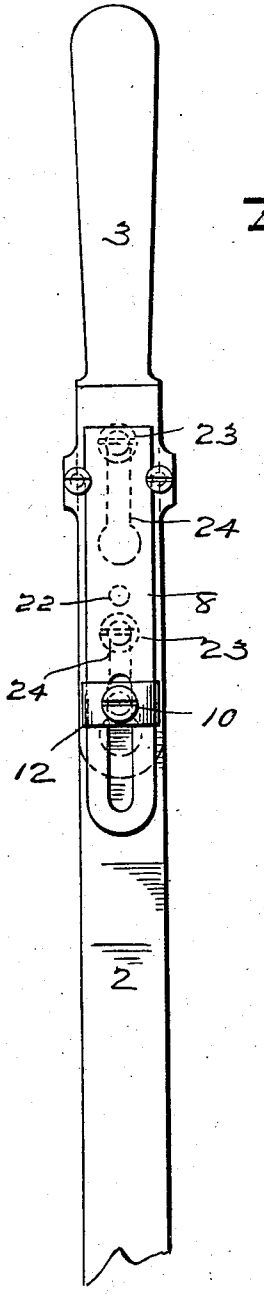


Fig. 8.



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UNITED STATES PATENT OFFICE.

EMANUEL ANDREWS, OF WILLIAMSPORT, PENNSYLVANIA.

LEVER-HANDLE LOCK.

SPECIFICATION forming part of Letters Patent No. 724,419, dated April 7, 1903.

Application filed March 6, 1902. Serial No. 96,999. (No model.)

To all whom it may concern:

Be it known that I, EMANUEL ANDREWS, a resident of Williamsport, in the county of Lycoming and State of Pennsylvania, have invented certain new and useful Improvements in Lever-Handle Locks; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improved lever-handle lock, and more particularly to improved means for locking a lever against movement when the handle or handhold is removed, the object of the invention being to provide improved handle-locking mechanism which will permit of the ready removal of the handle, but at the same time lock the lever against unauthorized operation.

A further object is to provide operating-levers for motor-vehicles and for other use with removable handles to operate them and permit the easy removal of the handle and simultaneous locking of the lever against operation until the handle is replaced.

With these objects in view the invention consists in certain novel features of construction and combinations and arrangements of parts, as will be more fully hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view illustrating my improvements. Fig. 2 is a view in section of the same. Fig. 3 is a view of the lever with handle removed. Fig. 4 is a view of the handle. Figs. 5 and 6 are sectional views of details of construction, and Figs. 7 and 8 are views illustrating a modified form of my invention.

1 represents a section of frame of a motor-vehicle, and 2 an operating-lever therefor, and while I shall describe my improvements as applied to a motor-vehicle it is to be understood that I do not limit myself to this use, but consider that any use to which it may be put is within the scope of my invention.

The lever 2 is preferably for throwing on or off power, either electrical or other power, or it may be the brake-lever or for any other purpose, and it is advisable when the occupants leave the vehicle to take away the handle 3 of the lever and lock the latter against movement until the handle is again placed in position; and with this end in view my invention was devised, as will hereinafter appear.

On the frame 1 a curved metal strip 4 is secured and against which the upper end of the lever moves, said strip being provided on each side of its center with inclined flanges 5, notched, as shown at 6, at the center of strip 4, the flanges serving to press the lever slightly outward and permit the same to spring into notch 6 and be temporarily locked against swinging in either direction until the lever is forced out of the notch. A lug 7 is preferably provided at the notched portion of strip 4 to enter a hole in lever 2, and thus further secure the lever against swinging to either side. A sliding bolt 8 is mounted to slide against the inner face of lever 2, near its upper end, and the frame 1 is recessed, as shown, to provide space in which the bolt moves when the lever is swung from side to side. This bolt 8 is held against lever 2 by a U-bolt 9, riveted to the lever and surrounding the bolt, and by a screw or rivet 10, secured to the lever, located in an elongated slot 11 in the bolt and carrying a bow-spring 12, bearing against the bolt to exert a firm frictional engagement therewith to hold the bolt in any position to which it may be moved.

The lever 2 is made with an elongated slot 13, which widens at its upper end into a large opening 14, with which a pocket 15 in bolt 8 alines when the latter is in its highest position, and the handle 3 is provided on one face with a headed pin 16 to enter the opening 14 and pocket 15, and when the handle is forced downward (the pin 16 moving in the slot 13) the bolt 8 will be drawn downward to move pocket 15 out of alinement with opening 14 and the pin 16 will be securely locked, as its head is too large to pass through slot 13. This securing of pin 16 will firmly clamp the handle to the lever, and the handle is made at its side edges with inwardly-projecting lips or flanges 18 to overlap the edges of lever 2 and prevent possibility of pivotal movement of the handle. The upper end of bolt 8 is made with a finger 19 to project behind strip 4 and into a keeper formed by recess 8^a in frame 1 when the bolt is drawn up to release the handle,

and hence making it absolutely necessary to lock the lever before the handle can be removed. To further secure the lever, a lock 20 may be mortised in frame 1 and finger 19 provided with an opening to receive the lock-bolt 21 when the lock is operated by a suitable key, the bolt 8 being in its highest position when locked. This necessitates the use of a key to release finger 19 before the lever can be released by the handle being connected therewith, and while such a lock may be found in some cases advisable it is not at all necessary and may be dispensed with.

In Figs. 7 and 8 I have shown a slightly-modified form of my invention, in which the bolt 8 is provided with a pin 22, moving in an elongated slot in lever 2 and the latter provided near both ends of the slot with headed pins 23. The handle 3 is made with two elongated slots 24, in alinement and enlarged at their lower ends to receive the headed pins 23, and an opening is made between the slots to receive pin 22. Hence it will be seen that when the handle 3 is raised to aline the enlarged ends of slots 24 with headed pins 23 the bolt 8 must be drawn up to locking position by means of pin 22, and when the handle is again placed in position on the lever the bolt 8 will be moved to its unlocking position by the downward movement of the handle to dispose the headed pins 23 in the elongated slots 24 to lock the handle and lever together.

It will be seen that with my improvements when it is desired to leave the vehicle or other machinery on which my improvements are employed it is simply necessary to raise the handle to release it from the lever, and this movement will simultaneously lock the lever, and the replacing of the handle will release the lever from its locked position.

A great many other changes might be made in the shape of the pins and other parts of the device and a great many changes might be made in the connecting mechanism between the handle and lever and between the latter and the bolt without departing from my invention. As, for instance, I might make the heads of the different pins square and shape the openings to receive them, and other forms of frictional contact between the bolt and lever might be made, and hence I do not wish to be limited to the precise details set forth, but consider myself at liberty to make such slight changes and alterations as fairly fall within the spirit and scope of my invention.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination with a notched strip and a pivoted lever, of a sliding bolt on the lever, a keeper for the bolt and a removable handle attached to the lever and connected with the bolt, whereby when the handle is in position to be removed from the lever the bolt will be slid on the latter and made to engage the keeper.

2. The combination with a lever, of a curved strip against which the lever moves, a flange on the strip to force the lever outward, said flange having a notch into which the lever will spring, a sliding bolt on said lever, a keeper for the bolt and a removable handle for the lever adapted to move the bolt behind the strip to engage the keeper when the handle is moved to a position for removal and thereby lock the lever in the keeper.

3. The combination with a lever having an elongated slot therein at one end, of a locking-bolt mounted to slide on said lever and having a pocket to aline with the enlarged end of the slot, a handle and a headed pin thereon to enter the enlarged end of the slot and pocket and when the handle is moved to lock the pin in the slot, the bolt will be moved out of its locking position.

4. The combination with a lever and a sliding bolt thereon, of a handle removably connected to the lever and adapted to move the bolt to locking position when the handle is removed and a lock adapted to lock the bolt against movement when the latter is in its locking position.

5. The combination with a lever having an elongated slot therein enlarged at one end, of a locking-bolt mounted to slide on said lever and having a pocket to aline with the enlarged end of the slot, a spring to exert frictional contact with the bolt, a handle, a headed pin thereon to enter the enlarged end of the slot and pocket and when the handle is moved to lock the headed pin in the slot the bolt will be moved thereby out of its locking position and into its unlocking position and flanges to prevent pivotal movement of the handle.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

EMANUEL ANDREWS.

Witnesses:
E. C. EDWARDS,
W. M. EDWARDS.