

Feb. 9, 1932.

C. N. FAIRCHILD

1,844,569

PADLOCK

Filed Sept. 12, 1927

Fig. 1.

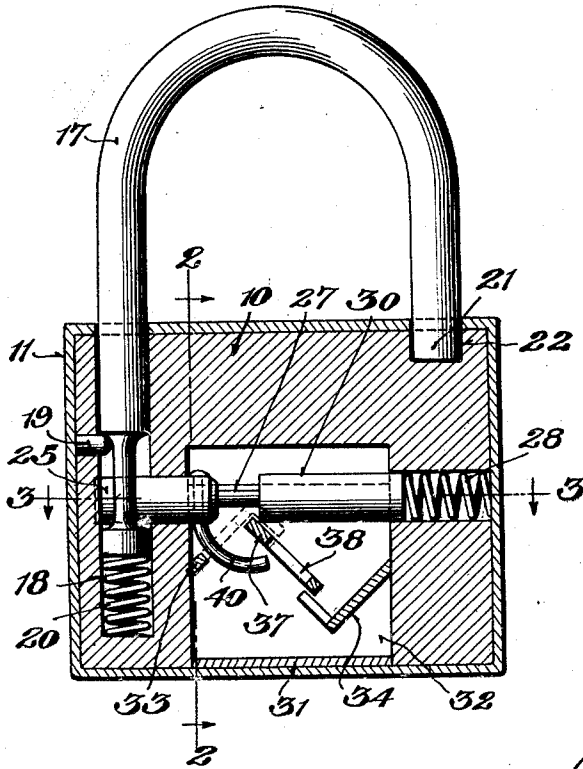


Fig. 2.

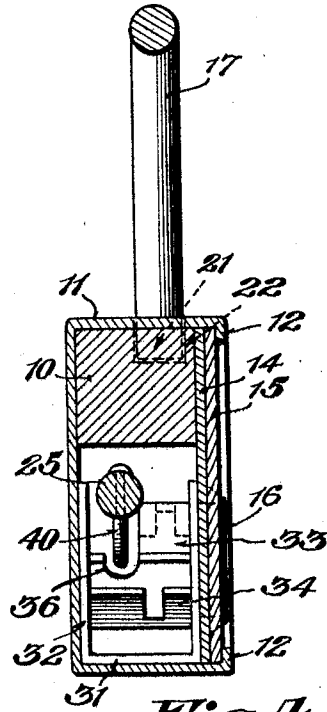


Fig. 3.

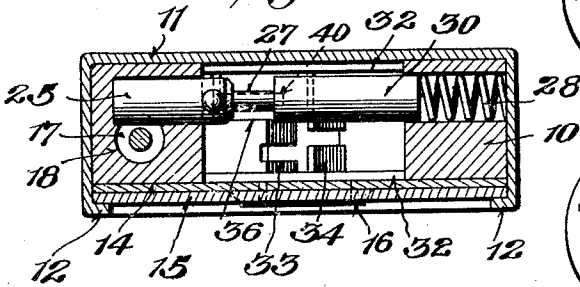


Fig. 4.

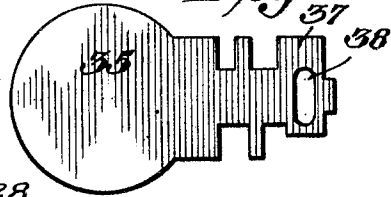
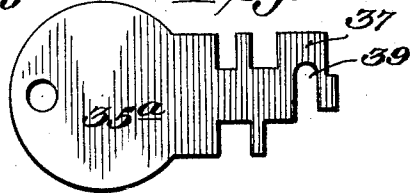


Fig. 5.



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PADLOCK

Application filed September 12, 1927. Serial No. 219,043.

This invention relates to padlocks and has for its principal object the provision of a padlock in which an element moves so as to cut the axis of the key in order that it shall be impossible to provide a master-key for series of the locks.

A further object of the invention is the provision of a padlock that, while sold at a standard price, will be superior to the other articles sold at the same price.

In the drawings:—

Figure 1 is a horizontal section taken through the axis of the bolt showing the shackle in full lines.

Figure 2 is a transverse cross section.

Figure 3 is a top plan view of the cage.

Figure 4 is a view of preferred form of key and

Figure 5 is a modified form of key.

The housing 10 is received in a sheet metal case 11, the front end of which is downturned as at 12 to imprison the cover plate 14 and also the face plate 15, the latter having pivoted therein a swivel plate or disk 16. The shackle 17 is rotatably and slidably mounted in a bore 18 but is imprisoned in the bore by a pin 19 engaging an annular groove to prevent the shackle being ejected from the lock by the spring 20.

In normal locked position the shorter end 21 of the shackle is moved in the pit 22 and the shackle is held down by engagement between the annular groove of the shackle and the forward portion 25 of the locking bolt. In the preferred form, that shown in the drawings, I bore a hole practically the entire way through the housing and form the bolt of round rod grooved as at 27 and urged into locking position by a spring 28 which is held in its bore by the outer box or casing 11 which I find preferable by reason of cheapness to the more common method of plugging the bore to imprison the spring. The key engages the shoulder between the rear portion 30 and the relatively small neck and withdraws the bolt against its spring 28, allowing the shackle spring 18 to raise the shackle out of the pit 22 and as far as permitted by the pin 19.

The cage 31 is generally of the usual form

consisting of a sheet of metal 32 bent into U-form, and upper and lower brackets 33 and 34 provided with teeth to engage corresponding notches in the key 35. The upper bracket 33 is cut away as is 36 to receive a lug 40 which moves with said bolt and preferably is directly secured to it as shown in Figures 1 and 2.

In operation the key 35 is inserted through the slot in the circular beveled swivel 16, the corresponding slot in the cover plate 14, and a third aligned slot in the cage 31. Upon turning the key clockwise, as seen in Figure 1, the notches in the key will clear the teeth in the cage brackets and the operative point 37 will engage the shoulder between the thin stem and the larger portion 31 of the locking bolt to compress the spring 28. During such motion, however, the lug 40 will move rearward and since its path lies directly through the axis of the key it is necessary that the key shall have either a hole such as 38 or a notch such as 39 in the modified form of key shown in Figure 5 and numbered 35a. There is no appreciable advantage, however, in the preferred form save that it will sell better as it looks stronger and that by having the hole 38 it is unnecessary to provide the usual hole in the head of the key. Since the hole 38 is directly in the axis of the key and the similar holes of keys for the same series of locks will be to the right or left of the position shown it is quite impossible to provide a master-key as the lug 40 on some one or more of a number of the series of locks would engage the axis of the pass or master-key and prevent the bolt from being withdrawn.

What I claim is:—

In a device of the character described, a housing, a shackle slidably and rotatably mounted in the housing, a bolt for locking the shackle to the housing, a spring for urging the bolt to locking position, and a lug carried by the bolt and adapted to pass through the axis about which the bolt operating means turns.

In testimony whereof I affix my signature.

CHARLES N. FAIRCHILD.