July 25, 1933. E. B. STONE 1,920,116

PADLOCK

Filed Aug. 6, 1931

Fig. 1.

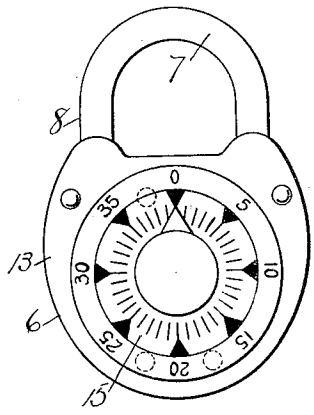


Fig. 2.

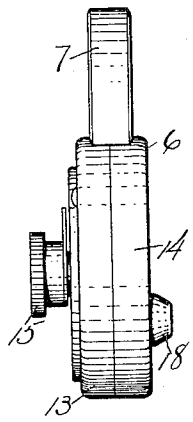


Fig. 3.

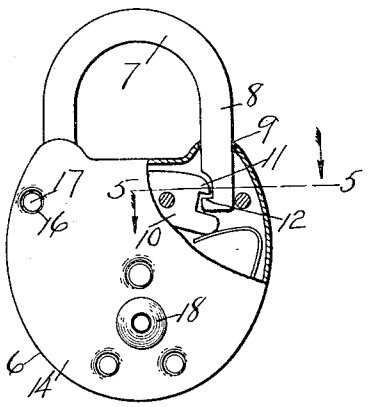


Fig. 4.

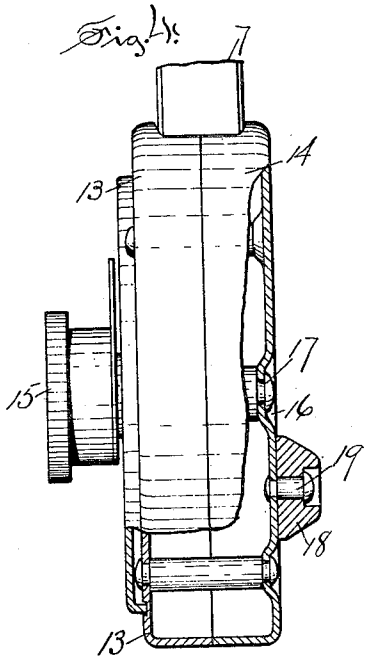
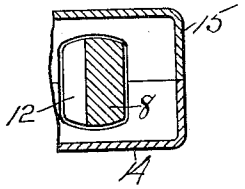


Fig. 5.



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UNITED STATES PATENT OFFICE

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PADLOCK

Application filed August 6, 1931. Serial No. 555,545.

My invention relates to the class of locks embodying a shackle comprising two legs one of which is movably secured within the lock case and the other of which engages a bolt in the opposite edge of the case, and an object of my invention, among others, is to produce a lock of this type that shall be extremely strong without increasing its size; and a further object of the invention is to provide a lock of this type having means to prevent marring of articles or surfaces in connection with which the lock is used.

One form of a lock embodying my invention and in the construction and use of which the objects herein set out, as well as others, may be attained is illustrated in the accompanying drawing, in which—

Figure 1 is a front view of a padlock embodying my invention.

Figure 2 is an edge view of the same.

Figure 3 is a rear view with parts broken away to show construction.

Figure 4 is an edge view on enlarged scale with parts broken away to show construction.

Figure 5 is a detail view illustrating the form of the shackle at the point of engagement with the locking bolt and illustrating the strengthening feature.

In the accompanying drawing the numeral 6 indicates the case of my improved padlock that may be composed of any suitable material and of any desired form peculiar to locks of this type. A shackle 7 of the usual form has one leg movably secured within the case in a manner common to locks of this type, the other free leg 8 being removably engaged within an opening 9 within the case. A locking bolt 10 pivotally mounted within the case has a recess forming a lip 11 that engages a shoulder 12 on the end of the shackle, as shown in Figure 3 of the drawing, this engagement being for the purpose of locking the shackle in its closed position.

It has heretofore been common practice in the manufacture of locks of this type to form the shackle from metal round in cross section, and such a structure possesses inherent weakness at the point of engagement of the lip 11 and shoulder 12 for the reason that the latter has a minimum amount of surface engaging with the lip, owing to this round form. It is undesirable to increase the size of the lock in order to provide strength, but I have effected this result by making the shackle of substantially rectangular shape in cross section, and as shown in Figure 5, so that the shoulder 12 is of a width substantially the same as that of the lip 11, and this affords engaging surfaces between the lip and the shoulder sufficient to provide extreme strength.

Locks of this type are commonly used in suspended positions upon moving objects, as automobiles and the like, and the movement of such objects causes the locks to be repeatedly swung into contact with finished surfaces, thereby marring such surfaces. In order to lessen this defect I have so constructed the rivets uniting the halves 13—14 of the lock case that there will be no projections on the back of the case which is the part usually facing the finished surfaces just hereinabove referred to, it being noted that I have embodied my invention in a padlock of the permutation type and that includes in its structure a dial 15 that is constructed in any ordinary manner to release and secure the locking mechanism within the lock, which mechanism will also be of any ordinary construction to release and secure the locking bolt 10. In order that the dial 15 may be operated the lock is supported so that the back faces said polished surfaces.

In developing this idea the rear half 14 of the lock has recesses 16 formed therein in which the ends of the rivets are located, said ends being riveted over and headed as at 17 within said recesses, and as clearly shown in Figure 4 of the drawing, so that said heads will not project beyond the plane of the back surfaces of the lock case.

In order to further guard against the marring of a finished surface by contact of the lock case I provide a cushion in the form of a button 18 that is secured to the back face of the lock as by means of a rivet 19 the head of which is located in a recess

in the button, said rivet being secured to the lock case as by heading in the usual manner. This button may be composed of any comparatively soft, non-marring material as rubber or the like.

While I have shown and described herein a single button attached to the rear face of the lock case, I contemplate that any number of buttons positioned as may be desired to accomplish the non-marring feature may be employed, and such button or buttons may or may not be used in connection with a structure in which the heads of the rivets are located in depressions to provide for a non-marring feature of the lock.

I claim:

A padlock comprising a case having a shackle projecting from one end thereof and a button of non-marring material projecting outwardly of a side of the case with the button adapted to space the case from an article with which the shackle is engaged and said button including a cushion element carried by the case at a point below the transverse median line of the case providing a two-point shackle and button engagement with the article.

ELMER B. STONE.