(Model.)

C. H. SMITH.

PADLOCK.

No. 272,593. Patented Feb. 20, 1883.

Fig. 1.

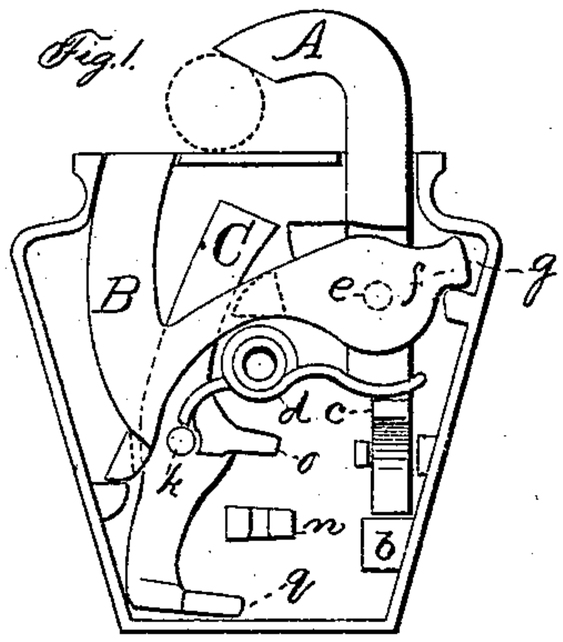


Fig. 2.

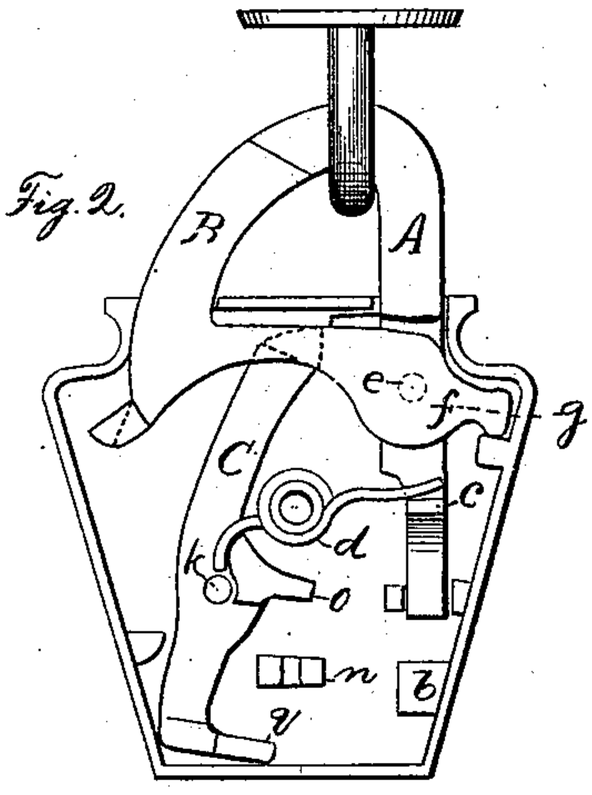


Fig. 3.

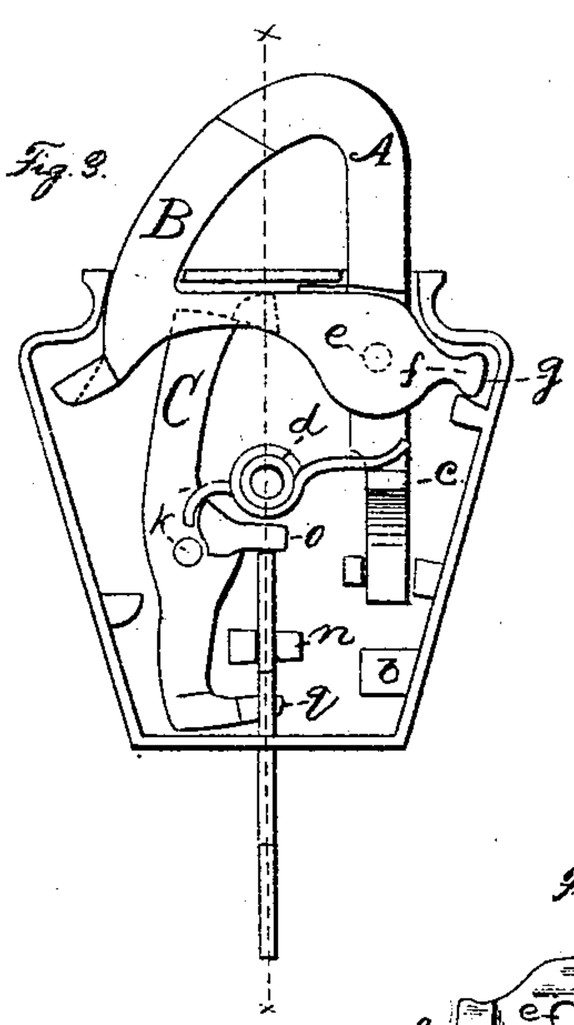


Fig. 4.

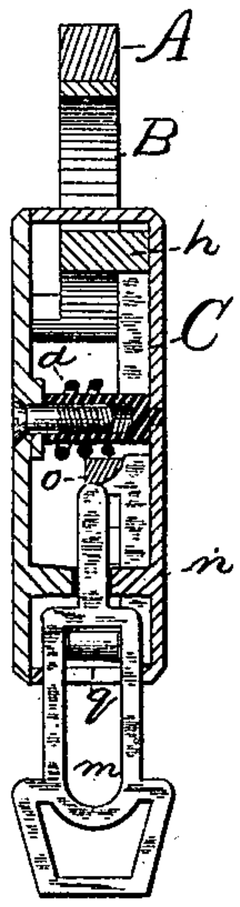
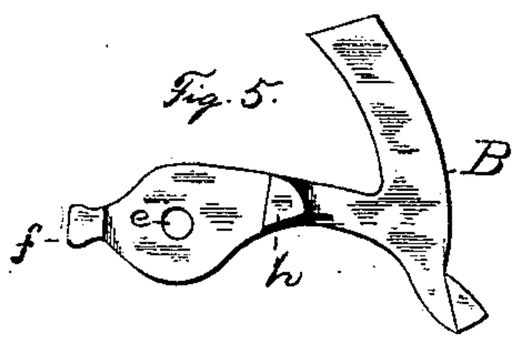


Fig. 5.



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UNITED STATES PATENT OFFICE.

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PADLOCK.

SPECIFICATION forming part of Letters Patent No. 272,593, dated February 20, 1883.

Application filed June 30, 1882. (Model.)

To all whom it may concern:

Be it known that I, CHARLES H. SMITH, of New Britain, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Padlocks, of which the following is a specification.

My invention relates to improvements in padlocks. In my improved lock the shackle proper is composed of a sliding shackle and a swinging shackle, which are carried into their position for locking by pulling the sliding shackle outward, are held in said position by a swinging dog, and when the dog is released by the action of the key a spring throws the shackles into the position for unlocking.

The object of my invention is to provide a lock which is of simple and cheap construction, and which is convenient to operate. I attain this object by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a front elevation with one side of the case removed and with the shackles unlocked. Fig. 2 is a like view with the shackles locked. Fig. 3 is a like view with the key and dog thrown almost into position for unlocking the shackles. Fig. 4 is a vertical section of the same on line *x x* of Fig. 3, partly in elevation, and as viewing that side which is mainly on the left of the line *x x* of said Fig. 3, and Fig. 5 is a rear elevation of the swinging shackle.

The sliding shackle A is arranged to slide longitudinally in the case, and is limited in its outward movement by the ends of the swinging and sliding shackles coming in contact with each other, and in its inward movement by its inner end coming in contact with the stop *b*. One side is cut away to make room for the swinging shackle B, and to form the shoulder *c* for one arm of the spring *d*, which spring has a tendency to force the shackle A inward. The outer portion of the shackle A is made hooked and is beveled on the end, as shown. The swinging shackle B is pivoted to the shackle A at *e*, and is provided with an extension or lug, *f*, which lies loosely in the notch or recess *g* of the case. The inner portion of the shackle B lies transversely to the case and to the shackle A, while the outer portion is curved substantially on the arc of a circle, and has its ends beveled to match that of the shackle A when both are thrown outward, as shown in Figs. 2 and 3. The rear side of the shackle B is provided with a stud or projection, *h*, Fig. 5, which is also indicated by broken lines in Figs. 1, 2, and 3.

A swinging dog, C, is pivoted within the case at *k*, and is held in the position represented in Figs. 1 and 2 by one arm of the spring *d*. Its upper end lies behind the inner portion of the shackle B, and when the shackles are in the position represented in Fig. 2 and the dog is left to the influence of the spring *d* its end comes under the stud *h* of the part B and holds both shackles firmly locked, as shown in Fig. 2.

The form of the key is clearly shown in Fig. 4, in which it will be seen that there is a slot or opening, *m*, in its widest part. This key is fitted to slide through slots in the bottom of the case and in the post *n*. The dog is provided with a transverse arm, *o*, located in the path of the key, and provided with only a small bearing-surface (see Fig. 4) at the point of contact with the key. The tail or lower end of the dog is provided with an arm, *q*, the end of which arm, when the dog is in the position shown in Figs. 1 and 2, lies just by the side of the keyway. When the key is forced into the lock its point or inner end of the bit strikes the arm *o* of the dog and swings the upper end of said dog out from under the stud *h*. In Figs. 3 and 4 this dog is represented as almost out from under the stud *h*. This movement brings the arm *q* into the keyway and into the opening *m* of the key, so that the key is free to operate, notwithstanding the fact that the arm *q* crosses its path. As soon as the end of the dog is wholly withdrawn from under the stud of the part B the spring *d* draws the shackle A inward, and as the part B is pivoted to A, with the extension *f* in the slot *g* of the case, the inward movement of the shackle A also necessitates the inward movement of the shackle B. The other arm of the spring also returns the dog to its normal position, as shown in Fig. 1, after which the key may be removed. The inner end of the key is only a narrow bit, and the keyway at the post *n* is so formed that only a flat and thin narrow

bit or instrument can be inserted beyond that point.

To lock the shackles it is only necessary to pull the shackle A outward, which can be done very conveniently by hooking the part A upon the staple or object that is to be locked into the shackle and give a slight pull to bring the ends of the shackles together, when the dog will snap into place and lock them.

One peculiarity of this lock is that it has both a sliding and a swinging shackle; also, that the sliding shackle moves outward instead of inward to effect a locking. By reason of this latter peculiarity a much larger rod or staple may be locked within the eye of the shackle than one would suppose by the appearance of the lock when the shackles are in the position shown in Fig. 1. The broken circle between the ends of the shackles A and B in Fig. 1 represents a size of rod that the said shackles will receive. By forcing the rod under the beveled end of the shackle A both shackles will move outward, and as the shackle A is forced outward the rod can be slipped farther under the beveled end fast enough to keep it out of the way of the swinging shackle B.

I claim as my invention—

1. The combination of a lock-case with the sliding shackle and the swinging shackle, whose respective ends, when closed together, form the shackle proper in its position for locking, and when separated form the opening in the shackle proper, substantially as described, and for the purpose specified.

2. The combination of the sliding shackle, the swinging shackle pivoted thereto, with its extension *f* resting in a slot or recess in the case, substantially as described, and for the purpose specified.

3. The combination of the sliding and swinging shackles, the stud *h* on the swinging shackle, and the dog for engagement with said stud, substantially as described, and for the purpose specified.

4. The combination of the sliding and swinging shackles, pivoted together, the dog for engaging the swinging shackle, and the spring *d*, substantially as described, and for the purpose specified.

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