

# RESERVE COPY PATENT SPECIFICATION



Application Date: Aug. 12, 1942. No. 11312/42.

556,537

Complete Specification Left: July 26, 1943.

Complete Specification Accepted: Oct. 8, 1943.

## PROVISIONAL SPECIFICATION

### Improvements in Padlocks and other Key-actuated Locks

We, (Mrs.) GEORGINA LAMB, a British Subject, (Trading as GEO. H. LAMB), and (Miss) KATHLEEN NORAH LAMB, a British Subject, both of 45, Kings Avenue, Woodford Green, Essex, do hereby declare the nature of this invention to be as follows:—

This invention relates to padlocks of the type (hereinafter referred to as the type described) wherein a shackle, having a gap, is movable angularly within the padlock casing, and the locking mechanism comprises a key-retracted spring-pressed bolt for entering the gap in the shackle for preventing it from being turned to release it from a staple or other member with which the padlock is used.

When unlocking a padlock of the type described heretofore, after withdrawing the bolt by the key from the gap it was necessary to continue to use the key to hold the bolt in its withdrawn position while turning the shackle, so that two hands had to be used for unfastening the padlock.

It is an object of the present invention to obviate this drawback, and to provide an improved construction of padlock of the type described which can be unfastened more conveniently than heretofore.

According to the invention, there is provided a padlock of the type described, wherein the bolt is formed or provided with a lug having a recess to be engaged by the key when unlocking the lock, which padlock is characterised in that the recess in said lock is so shaped that when the bolt is moved by the key into its end unlocking position, the key automatically holds the bolt retracted. This arrangement obviates the necessity for using a hand for holding the padlock unlocked.

When the stem of the key is rotatable about a pivot pin, the arrangement is preferably such that the key bears laterally against a stop in the end unlocking position of the bolt, and the said recess in the lug has a slanting face which, in the end unlocking position of the bolt, is pressed against an end face of the ward of the key in a direction tending to hold the key against rotation about its pivot pin.

According to one method of carrying the invention into practice, a padlock of the type described comprises a casing having a guide-way for a key-retracted, spring-shot sliding bolt whereof one end bears against an abutment that limits the endwise unlocking movement of the bolt. A lateral lug on one end of the bolt has a recess which is engaged by the key when it is turned about its pivot pin for unlocking the lock. The head of the bolt may be provided with wingbolts arranged to enter into slots in the shackle, one at each side of its gap which receives the central portion of the head. A slotted tumbler that is pivoted in the casing and is operable by the key is arranged to cooperate with a stop on the bolt and lock it in its end locking position.

In the end unlocking position of the bolt, the ward of the key bears against a stop pin that lies at the side of the pivot pin remote from the head of the bolt. In this position of the key, its ward bears against a slanting face of the lug which, in the end unlocking position of the bolt, is pressed by its spring against an end face of the ward in a direction tending to hold the key against rotation about its pivot pin. This direction of pressure is preferably along the ward of the key, so that there is no tendency for the key to turn about its pivot pin and release the bolt. When the lock is unlocked, the key remains imprisoned in it until the lock is again in its locked position. Consequently, no hand need be used to hold the lock unlocked, and only one hand is needed to unfasten and remove the lock after it has been unlocked.

The gapped shackle may be rotatable in the general plane of the casing of the padlock, or in a plane lying at an angle, e.g. 90°, thereto.

The invention is also applicable in an analogous manner to other key-actuated locks.

Dated this 12th day of August, 1942.

BOULT, WADE & TENNANT,  
111 & 112, Hatton Garden,  
London, E.C.1,  
Chartered Patent Agents.

## COMPLETE SPECIFICATION

## Improvements in Padlocks and other Key-actuated Locks

We, (Mrs.) GEORGINA LAMB, a British Subject, (Trading as GEO. H. LAMB), and (Miss) KATHLEEN NORAH LAMB, a British Subject, both of 45, Kings Avenue, Woodford Green, Essex, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

10 This invention relates to key-actuated locks of the type (hereinafter referred to as the type described) wherein the locking mechanism comprises a key-retracted spring-pressed guided bolt having a lateral 15 recess arranged to be entered by the key for withdrawing the bolt from its locking position and thereby unlocking the lock. The invention is particularly applicable to padlocks of the type described wherein a 20 shackle, having a gap, is movable angularly within the padlock casing, and the bolt is arranged to engage the shackle for preventing it from being turned to release it from a staple or other member with 25 which the padlock is used.

When unlocking a padlock of the type described heretofore, after withdrawing the bolt by the key from the gap it was necessary to continue to use the key to 30 hold the bolt in its withdrawn position while turning the shackle, so that two hands had to be used for unfastening the padlock.

It is an object of the present invention 35 to obviate this drawback, and to provide an improved construction of padlock of the type described which can be unfastened more conveniently than heretofore.

According to the invention, there is 40 provided a lock of the type described, characterised in that the recess in said bolt is so shaped that when the bolt is moved by the key into its end unlocking position, the key automatically holds the 45 bolt retracted. This arrangement obviates the necessity for using a hand for holding the lock unlocked.

When the stem of the key is rotatable about a pivot pin, the arrangement is 50 preferably such that the key bears laterally against a stop in the end unlocking position of the bolt, and the said recess in the bolt has a slanting face which, in the end unlocking position of the bolt, is 55 pressed against an end face of the ward of the key in a direction tending to hold the key against rotation about its pivot pin.

One embodiment of the invention is diagrammatically illustrated by way of 60 example in the accompanying drawing,

wherein:—

Figure 1 is a front elevation showing one form of padlock according to the invention in its locking position and with the front plate removed, and 65

Figure 2 is a like view, on a scale larger than that of Figure 1, showing the locking mechanism in its unlocked position.

Like reference characters designate like parts in both views. 70

Referring to the drawings, a padlock of the type described comprises a casing 10 having a guide-way for a key-retracted, spring-shot sliding bolt 12, 14 having a head 12 and a shank 14. One end of the 75 shank bears against a limiting abutment 16 in the endwise unlocking movement of the bolt. The end portion of the shank remote from the head of the bolt has a recess 18 which is entered by the key 20 80 when it is turned about its pivot pin 22 for unlocking the lock. The head 12 of the bolt is provided with wingbolts 24 arranged to enter into slots 26 in the shackle 28, one at each side of its gap 30 85 which receives the central portion 32 of the head that is pressed by a spring 34. A slotted tumbler 36 that is pivoted in the casing and is operable by the key is arranged to co-operate with a stop 38 on 90 the shank 14 of the bolt and lock it in its end locking position. As described so far the lock is of known construction.

In the end unlocking position of the bolt, the ward of the key bears against a stop pin 40 that lies at the side of the pivot pin 22 remote from the head 12 of the bolt. In this position of the key shown in broken lines in Figure 2, its ward bears against a slanting face 42 of the recess 18 100 which, in the end unlocking position of the bolt, is pressed by its spring 34 against an end face of the ward in a direction, indicated by the line 44, tending to hold the key against rotation about its pivot 105 pin 22. This direction of pressure is slantwise along the ward of the key, so that there is no tendency for the key to turn about its pivot pin and release the bolt. When the lock is unlocked, the key 110 thus remains imprisoned in it until the lock is again in its locked position. Consequently, no hand need be used to hold the lock unlocked, and only one hand is needed to unfasten and remove the lock 115 after it has been unlocked.

The gapped shackle may be rotatable in the general plane of the casing of the padlock, or in a plane lying at an angle, e.g. 90°, thereto. 120

Although the invention has been described with reference to a padlock, it is to be understood that it is also applicable in an analogous manner to other key-actuated locks of the type described.

Having now particularly described and ascertained the nature of our said invention and in what manner the same is to be performed, we declare that what we claim is:—

1. A padlock or other key-actuated lock of the type described, characterised in that the recess in the bolt of the locking mechanism is so shaped that when the bolt is moved by the key into its end unlocking position, the key automatically holds the bolt retracted.

2. A lock according to Claim 1 having a

key that is rotatable about a pivot pin and bears laterally against a stop in the end unlocking position of the bolt, characterised in that the said recess in the bolt has a slanting face, which in the end unlocking position of the bolt, is pressed against an end face of the ward of the key in a direction tending to hold the key against rotation about its pivot pin.

3. A lock according to Claim 1 having locking mechanism as shown in the accompanying drawing.

Dated this 26th day of July, 1943.  
BOULT, WADE & TENNANT,  
111 & 112, Hatton Garden,  
London, E.C.1,  
Chartered Patent Agents.

Fig. 1.

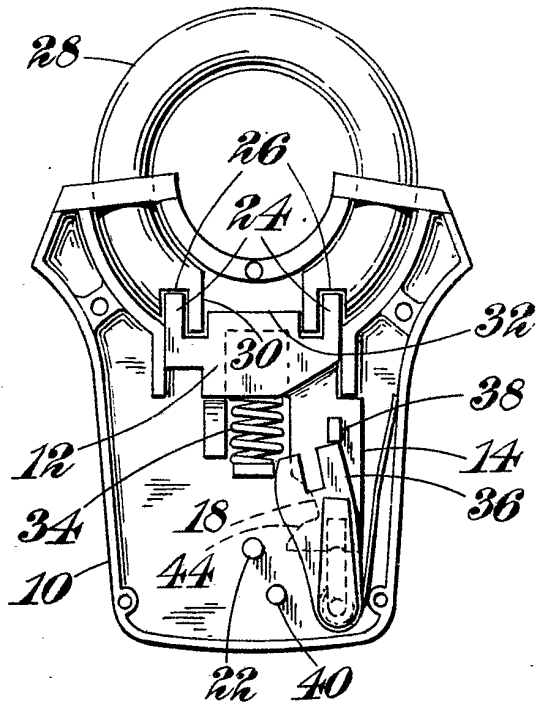
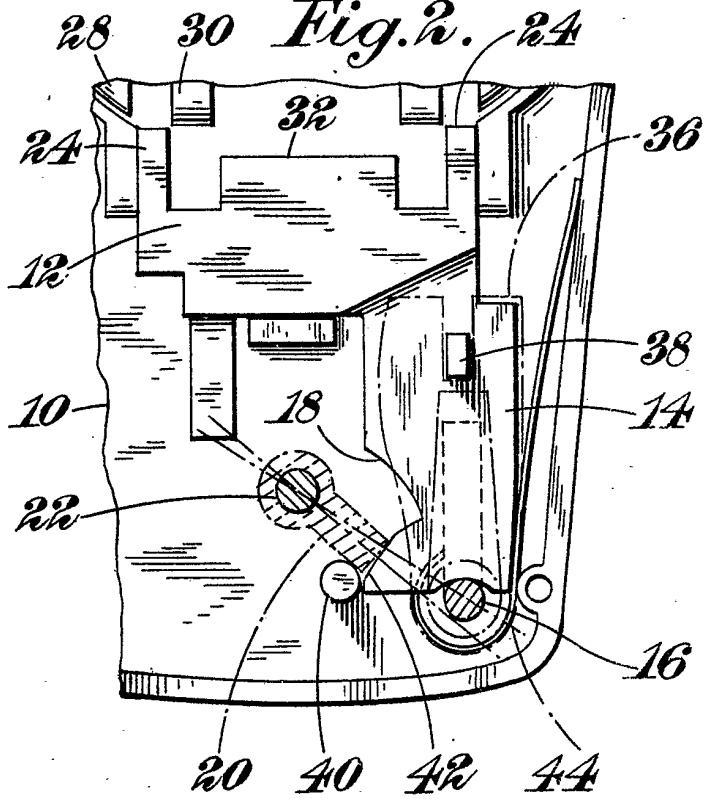


Fig. 2.



[This Drawing is a reproduction of the Original on a reduced scale.]