

W. H. CLAY.  
TRUNK LOCK.

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917,250.

Patented Apr. 6, 1909.

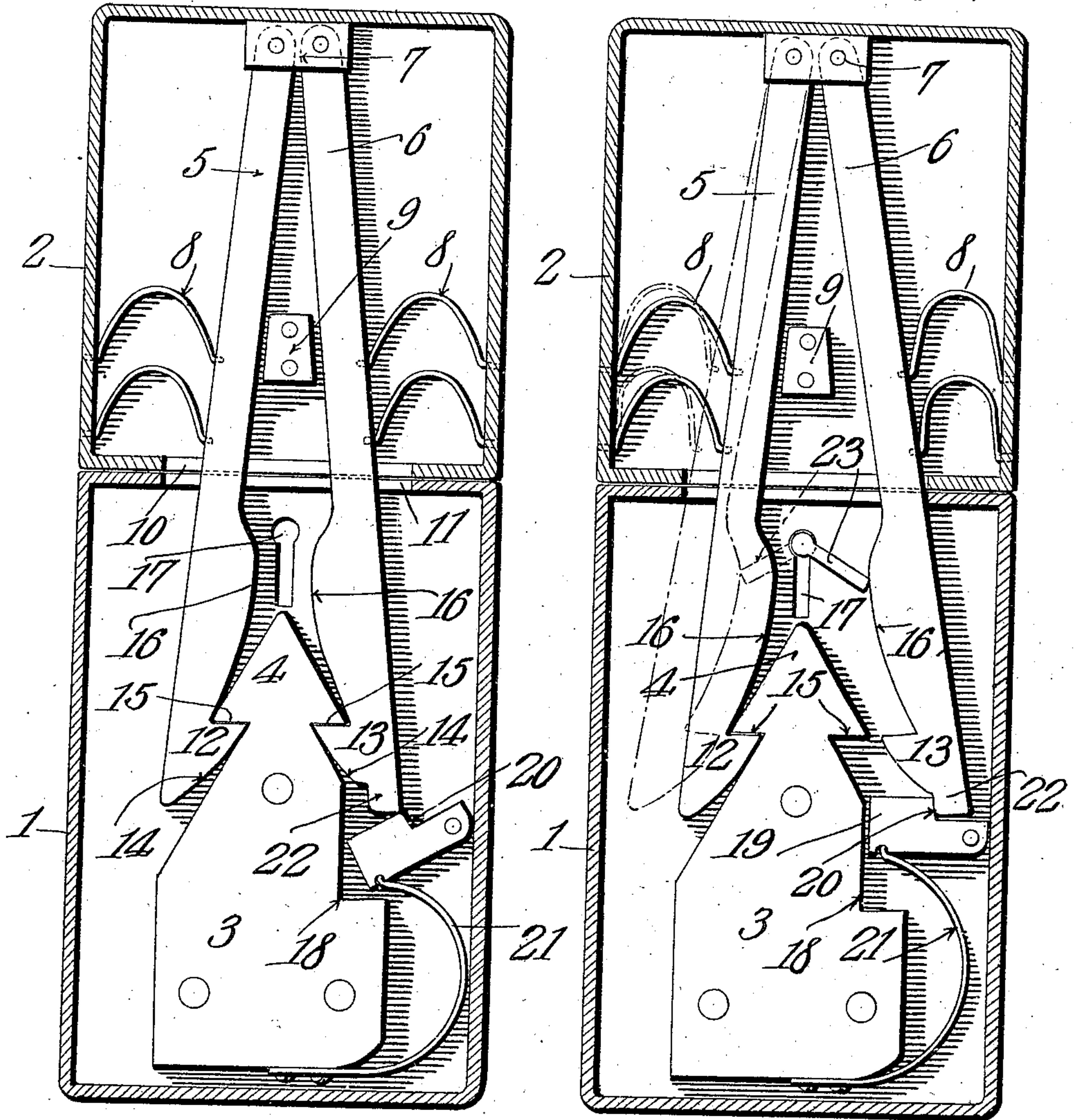


Fig. 1.

Fig. 2.

Witnesses

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# UNITED STATES PATENT OFFICE.

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## TRUNK-LOCK.

No. 917,250.

Specification of Letters Patent.

Patented April 6, 1909.

Application filed October 21, 1908. Serial No. 458,827.

*To all whom it may concern:*

Be it known that I, WILLIAM HENRY CLAY, a citizen of the United States, residing at Williamsburg, in the county of Fremont and State of Colorado, have invented a new and useful Trunk-Lock, of which the following is a specification.

This invention has reference to improvements in trunk locks and its object is to produce a lock which will positively hold the trunk lid in the closed position without danger of the lock being jarred to the unlocked position and which can only be unlocked by the movement of the key to at least two positions which would not suggest themselves to a person not aware of the character of the lock so that the lock becomes in a manner a safety lock. Furthermore the trunk cannot be left in the unlocked position when the cover is closed down even though the key be left in the lock.

The invention will be best understood from a consideration of the following detail description taken in connection with the accompanying drawings forming a part of this specification, it being understood however that the drawings are not designed to show the only form that the invention may assume since it is within the scope of the invention to modify the structure in minor details and in size and form and location of the parts so long as the salient features of the invention are retained.

In the drawings, Figure 1 is an elevation of the working parts of the lock with the casing in section, showing the lock in the closed position. Fig. 2 is a similar view showing the lock in the partially unlocked position and indicating the fully unlocked position.

Referring to the drawings, there is shown a casing 1 which is designed to be secured to the body of the trunk and a casing 2 which is designed to be secured to the cover of the trunk, the parts being so located on the respective parts of the trunk that the two casings are brought into juxtaposition as indicated in the drawings when the trunk cover is closed down upon the body of the trunk. Within the casing 1 which may be termed the keeper of the lock, is a block 3 having at its upper end a spear head 4 or this spear head may be replaced by any other like structure acting in a like manner. The casing 2 carries two arms 5—6 pivotally connected at their upper ends as indicated

at 7 to the casing 2 so that these two arms 5 and 6 are pendent. The two arms which may be termed latch members or latches, are maintained in the proper position by springs 8 shown in the drawings as bowed springs one end of which is fastened in the respective side of the casing and the other end of which is secured to the respective one of the arms 5 and 6. An intermediate stop block 9 fast in the casing 2 prevents a too close approach of the arms one to the other under the action of the springs 8. The end of the casing 2 where it approaches the casing 1 is provided with a slot 10 and the casing 1 is provided with a like slot 11. The arms 5 and 6 are of such length as to project through the slot 10 and beyond the like end of the casing and when the casings 1 and 2 are brought together the arms 5 and 6 enter the casing 1 through the slot 11. The free ends of the arms 5 and 6 are formed into hook extensions or lateral teeth 12 and 13 respectively and these teeth project one toward the other and their outer faces are rounded or beveled as shown at 14 so that when the arms 5 and 6 are introduced into the casing 1 the beveled faces 14 will engage the sides of the spear head 4 and the arms be thereby caused to spread against action of the springs 8. As soon as the two ends 12 and 13 of the arms 5 and 6 after having engaged the spear head 4 have passed along the same until the widest portion of the spear head has been reached, then the springs 8 react on the arms 5 and 6 to cause them to approach each other and catch under the shoulders 15 on the spear head 4, thus locking the casing 2 to the casing 1 and in this position the casing 2 has reached the said casing 1. Immediately adjacent to the teeth 12 and 13 the arms 5 and 6 are swelled or thickened as shown at 16 on the adjacent edges and immediately above the spear head 4 the casing 1 is pierced by a keyhole 17. One side of the block 3 is cut away as at 18 to provide space for a pivoted block 19 carried by the casing 1 in the interior thereof and provided with a shoulder 20. The block 19 is under the control of a spring 21 tending at all times to force it in the direction of the slotted end of the casing 1. The extreme end of the arm 6 beyond the tooth 13 is formed with an extension or lug 22 with which the block 19 coacts in a manner to be described.

Let it be assumed that the casing 2 is



brought toward the casing 1 then the arms 5 and 6 enter the casing 1 through the slot 11 and are spread apart by engagement with the spear head 4 and ultimately snap behind the same. At the same time the lug 22 engages the block 19 and moves the same against the action of its spring 21 to the position shown in Fig. 1. The trunk is now locked. Suppose under these conditions it is desirable to unlock the trunk, then a key 23 is inserted through the keyhole 17 and is turned in the proper direction until it engages the enlargement 16 of the arm 6, the enlargement 16 of the two arms being adjacent to the keyhole when the lock is in the locked position. On further turning the key in the same direction the arm 6 is moved away from the spear head 4 and ultimately the tooth or lug 22 passes beyond the shoulder 20 and the block 9 snaps up alongside of the tooth or lug 22 under the action of the spring 21. This will lock the arm 6 against return movement under the action of the springs 8. The trunk however is still locked by the arm 5 so it is necessary to turn the key 23 in the opposite direction until it engages the enlargement 16 of the arm 5 and causes the latter to be forced to one side against the action of its springs 8 until the tooth 12 is free from the spear head 4. Now the top of the trunk may be lifted up and the tooth 22 is ultimately caused to be moved free of the block 19 but in the meantime the tooth 13 has been elevated to such an extent that it will no longer engage behind the shoulder 15 of the spear head 4 with which it was first engaged. When the trunk is again closed the parts will assume the position shown in Fig. 1. It will be observed that it is necessary that the key be moved to two different operative positions in order to unlock the trunk and unless the key be held in engagement with the arm 5 after having locked the arm 6 out of its active position the trunk cover cannot be lifted since as soon as the key is moved away from engagement with the enlargement 16 the arm 5 will immediately return into active engagement with the spear head 4 and will again lock the trunk. The danger of success from the unauthorized attempt to open the trunk is to this extent reduced.

There is practically no danger of the lock becoming jarred loose on account of the springs 8 and even though one side should become disengaged say the lock arm 6, then the lock arm 5 will still maintain the trunk in the locked position. It is also to be observed that while in the foregoing description the term trunk lock has been used the lock may be employed for other purposes

than the locking of a trunk and the term trunk lock is to be taken with sufficient latitude of meaning to cover the use of the lock in connection wherein it may be successfully employed.

What is claimed is:—

1. A lock having two oppositely operating coacting latch members, a keeper with which the latch members are adapted to engage, and means carried by the keeper for retaining one latch member in inoperative position while the other latch member is in operative position.

2. A lock having two oppositely operating pivoted coacting latch members constantly constrained to approach each other, a keeper with which the latch members are adapted to engage, and means carried by the keeper for retaining one latch member in inoperative position while the other latch member is in operative position.

3. In a lock, a lock member having two pivoted arms projecting beyond said member and each there provided with a locking end and an intermediate enlarged portion, springs urging said arms toward each other, and another lock member adapted to be entered by the projecting arms and provided with means coacting with the locking ends of said arms and means for holding one of said arms in the unlocked position while the other arm is in the locked position.

4. In a lock, two pivoted spring actuated arms each terminating in a hook or laterally projecting tooth and a side enlargement adjacent to the tooth, and one of said arms having an end lug or extension beyond the tooth, a coacting member having shoulders under which the projecting teeth on the arms engage, and a spring actuated shouldered pivoted block in the path of the lug on the respective one of the arms and adapted to hold the said arms in the unlocked position.

5. In a lock, two pivoted arms each terminating in a laterally projecting part and one of said arms having an end lug or extension beyond the laterally projecting part, a coacting member having shoulders under which the projecting parts of the arms engage, and a latch member in the path of the lug on the respective one of the arms and adapted to hold the said arms in the unlocked position.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

WILLIAM HENRY CLAY.

Witnesses:

JESSE TURNER,  
JAMES MEAD.