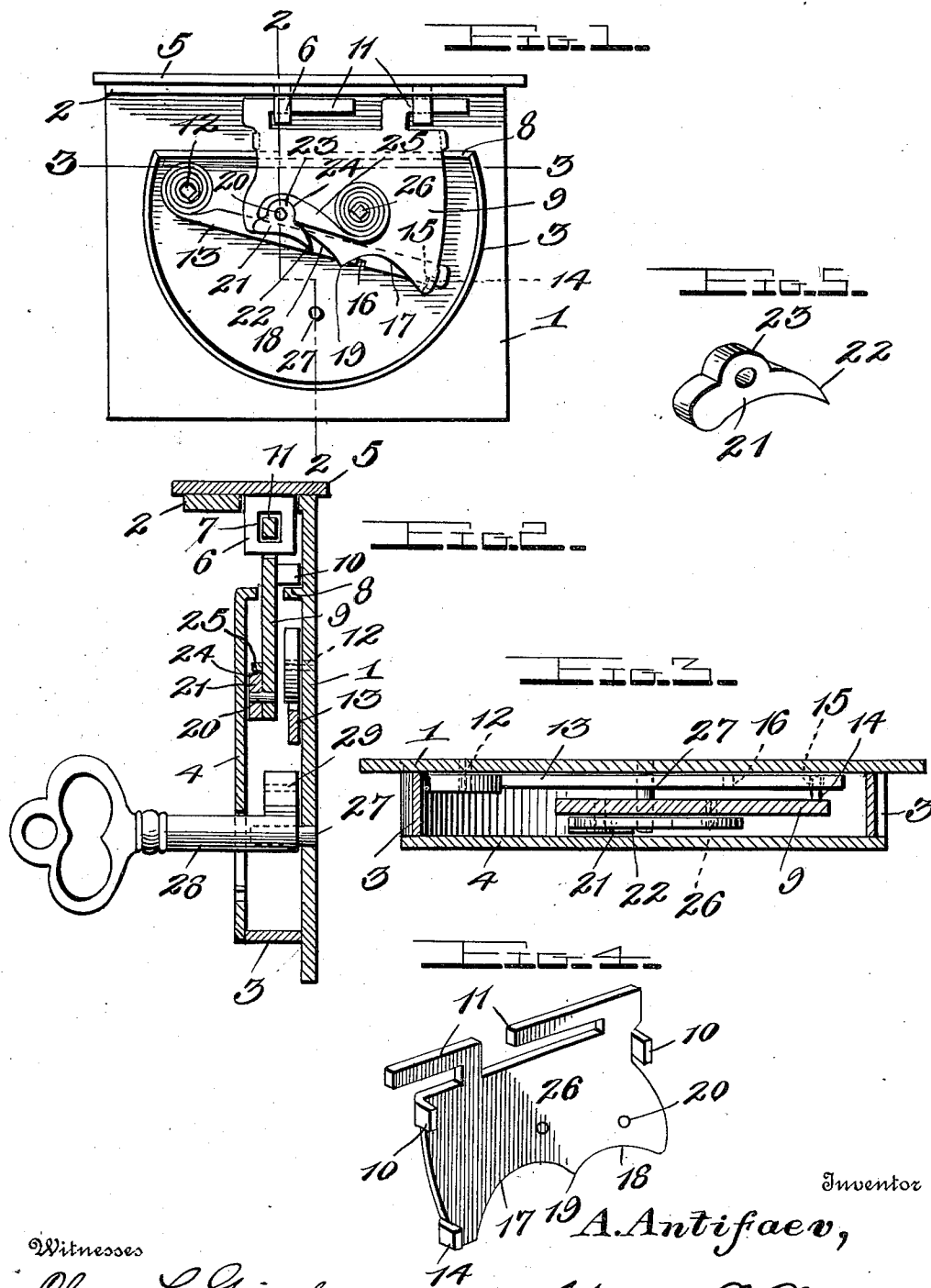


A. ANTIFAEV.
TRUNK LOCK.

APPLICATION FILED MAY 4, 1912.

1,043,188.

Patented Nov. 5, 1912.



Inventor

A. Antifaev,

Witnesses

Chas. L. Giestauer.

A. B. Norton.

By

Watson E. Coleman,

Attorney

UNITED STATES PATENT OFFICE.

ALEXIS ANTIFAEV, OF PELLY, SASKATCHEWAN, CANADA.

TRUNK-LOCK.

1,043,188.

Specification of Letters Patent.

Patented Nov. 5, 1912.

Application filed May 4, 1912. Serial No. 695,248.

To all whom it may concern:

Be it known that I, ALEXIS ANTIFAEV, a subject of the King of England, residing at Pelly, in the Province of Saskatchewan and Dominion of Canada, have invented certain new and useful Improvements in Trunk-Locks, of which the following is a specification, reference being had to the accompanying drawings.

10 This invention relates to new and useful improvements in the art of locks and latches and more particularly to a trunk or suit case lock, and my object is to provide a simple and efficient device of this character which
15 will be positive in operation and is not adapted to be unlocked except by one familiar with the operation thereof.

A further object of the invention resides in providing a device wherein a double turn
20 of the key is required in order to entirely release the engagement of the latch plate of the lock proper from the keepers of the plate on the trunk top.

A further object of the invention resides
25 in providing a spring member having engagement with the latch plate to retain the latter in various adjusted positions, and still another object resides in providing a pivoted dog member on the latch plate, which dog
30 member is directly operated upon by an additional member.

With these and other objects in view, the invention consists in the novel features of construction, combination and arrangement
35 of parts as will be hereinafter referred to and more particularly pointed out in the specification and claims.

In the accompanying drawing forming a part of this application, Figure 1 is a front
40 elevation of the lock with the cover of the casing thereof removed. Fig. 2 is a vertical transverse section through the device, as seen on line 2—2 Fig. 1. Fig. 3 is a horizontal section as seen on line 3—3, Fig. 1. Fig. 4
45 is a perspective view of the latch plate removed; and Fig. 5 is a similar view of the pivoted dog removed.

In describing my invention, I shall refer to the drawing in which similar reference
50 characters designate corresponding parts throughout the several views and in which 1 indicates a plate, the upper portion of which is bent at right angles to form a lateral extension 2 thereon, while the one face
55 of said plate is provided with an arcuate flange 3 to which may be secured a top or

key-hole plate 4. These parts form a substantial casing or the like for my improved lock, which casing is adapted to be mounted in the body of a trunk or the like and an additional plate 5 provided with depending
60 keepers 6 thereon is adapted to be secured in the usual manner to the cover of a trunk so that when said cover is disposed to its lowered and closed position, said keepers
65 may be disposed through the openings 7 in the extension 2 of the plate 1.

Extending horizontally in the upper portion of the face of the plate 1 having the flange 3 thereon is an additional flange or
70 guide strip 8 and a latch plate 9 is provided on the upper side edges thereof with angularly bent guide and spacing lugs 10, said lugs resting on the flange or guide strip 8
75 and spacing the latch plate proper from the plate 1. This latch plate has the upper edge thereof provided with integral hook or hasp portions 11 adapted for engagement with the depending keepers 6 of the additional
80 plate 5, when said keepers are disposed through the openings in the extension of the plate 1 and said latch plate 9 is slidable on the plate 1.

Coiled about a stud or pin 12 is one end of a leaf spring 13, said spring being disposed
85 across the face of the plate 1 to permit the lower edge thereof to rest in engagement with an additional spacing lug 14 on the lower edge of the latch plate 9 and the extended portion of said spring 13
90 is provided with a pair of notches 15 and 16 which are arranged at predetermined points thereon and are adapted to receive therein the lug 14 as the latch plate 9 is moved
95 on the plate 1. These notches or the like 15 and 16 are so arranged that when the latch plate 9 is moved to its extreme effective position, the spacing lug 14 will engage in the outer notch 15, while when
100 in its total ineffective position, said lug will engage with the inner notch 16. From this construction, it will be seen that the extended portion of the spring 13 bearing
105 downwardly upon the spacing lug 14 will normally retain the lugs on said latch plate in engagement with the horizontal strip 8 to retain said latch plate in sliding position on the plate 1.

The lower edge of the latch plate 9 is provided with a pair of concave recesses or the
110 like 17 and 18, the walls of which are arcuately designed and meet in a central point

19 and pivotally carried on a stud 20 on the latch plate 9, is an arcuate or substantially crescent-shaped dog 21. This dog is pivoted about centrally of its outer surface, the inner surface of the same alining for a portion of its length with the wall of the cavity 18, while the one end of said dog is normally adapted to project below the wall of said cavity as shown at 22. Formed on the outer surface of the dog 21 at the pivotal point thereof is a convexed projection 23 which is received in a concave cavity 24 formed in the lower edge of the extended portion of a leaf spring 25, which leaf spring has the opposite end thereof coiled about a stud 26 on the outer face of the latch plate 9. This spring 25 normally retains said dog 21 in a position, as described above, that is, so that the greater portion of the inner surface of said dog aligns with the wall of the cavity 18 and the one end 22 thereof projects slightly below said wall. This projected end of the dog in one position of the latch plate is adapted to be engaged by a key, to be hereinafter described, whereby said latch plate may be moved within the casing and the fact that this dog is held in position by means of a spring, will permit the same to yield slightly under pressure and thereby prevent undue wear and at the same time provide a more easily operating device than heretofore known.

Formed on the plate 1 below the spring 13, is a key post 27 which is adapted to receive the free end of a key 28, said key having a bit 29 thereon which is adapted to engage the lower edge of the spring 13, as said key is turned to force said spring upwardly out of contact with the lower lug 14 on said spacing plate and also adapted for engagement with the projected end of the dog 21 and the walls of said cavities 17 and 18 to slide said latch plate on the plate 1.

Assuming that the latch plate is in its effective position and engaged with the depending keepers 6 of the additional plate 5 so that the top of a trunk, for which said lock is particularly adapted for use, is in locked engagement with the body thereof, should it be desired to open the trunk, the key is first inserted in the lock and turned counter clock-wise. The bit 29 on said key will first contact with the lower edge of the spring 13 which projects below the wall of the latch plate 9 at the cavities 17 and 18 and by a continued turning of the key, the spring 13 will be forced upwardly out of engagement with the lower spacing lug 14, it being understood that said lug had been in engagement with the notch 15 and said bit will then contact with the projected end 22 of the dog 21. The engagement of the projection of the key with the dog 21 may cause the latter to swing slightly on its pivot and yield under the tension of the spring 25,

but on the continued turning of the key will also cause the latch plate 9 to be moved horizontally on the plate 1. The one turn of the key, while moving the latch plate 9 toward its ineffective position will not be sufficient to completely disengage the hook or hasp portions 11 from their engagement with the keepers 6 and upon a second turn of the key, the bit 29 of said key will contact with the wall of the cavity 17 to further withdraw the latch plate and entirely disengage said hasp or hook portion from the keepers, whereupon the cover of the trunk carrying the additional plate 5 with the keepers thereon may be raised. When the latch plate has been retracted to its extreme ineffective position, the lower spacing lug 14 will engage in the notch 16 of the spring 13 whereby said latch plate will be retained in its ineffective position until such time when the key is again inserted in the lock to raise the spring 13 from its engagement with said lug. In sliding the latch plate to its locked position, the key is turned in the opposite direction and the bit thereof, after engaging and raising the spring 13, contacts with the wall of the cavity 17 to cause said latch plate to slide a short distance within the casing. This first turn of the key, will position the longer locking member 11 into engagement with one of the keepers 6 and will also dispose the central point 19 of the latch plate slightly to the left of the key post 27 so that upon the second turning of the key, the bit of the latter will contact with the wall of the cavity 18, immediately adjacent said point 19. Upon the continued turning of the key clockwise, the latch plate will be caused to travel toward the right hand side of the casing and the free end of the bit of said key will contact lightly with the projected end 22 of the dog 21, the latter yielding in view of the spring 25, so as not to interfere with the movement of the key and latch plate. Upon the completion of the second turning of the key in this direction, the latch plate will assume its complete locked position, as shown in Fig. 1 of the drawing.

From the construction and operation of the device as described, the operation of the lock to its effective position will be obvious, but it must be here stated that in its latter operation, the key effectively coöperates with the walls of the cavities 17 and 18 of the latch plate 9.

From the foregoing it will be seen that I have provided a simple, inexpensive and efficient trunk lock, but while I have particularly described this lock as being used in connection with a trunk, it will be understood that the same is equally well adapted for use in any other connection desired. It will also be understood that various changes in form, proportion and in

the minor details of construction may be resorted to without departing from the spirit or sacrificing any of the features of the invention.

5 Having thus described this invention, what is claimed is:—

1. A lock of the class described comprising a casing, a latch plate slidably mounted therein and provided with concave recesses 10 in the lower edge thereof, locking members carried on the upper edge of said latch plate, a leaf spring member mounted in the casing and coöperating with said latch plate to retain the same in various adjusted 15 positions, an arcuate dog pivotally mounted on said latch plate immediately adjacent one of the recesses therein, an additional spring member carried on the latch plate and normally engaged with said dog thereon 20 to position a portion of the latter in alinement with the wall of said last mentioned recess and to permit one end of said dog to extend within said recess, and means adapted for introduction into the casing to coöperate 25 with the first mentioned spring member, dog and latch plate to move the latter to its locked and unlocked positions.

2. A lock of the class described comprising a casing, one wall of which is provided 30 with a horizontal guide strip thereon, a latch plate provided with a pair of upper

spacing lugs resting on said guide strip and adapted to slide thereon, the lower edge of said latch plate being provided with a pair of recesses, an additional spacing lug formed 35 at the lower edge of said plate adjacent said recesses, a spring member secured to the referred to wall of the casing and having a portion thereof extended into engagement with the last referred to lug on said latch 40 plate, said spring member having the engaging edge thereof provided with a pair of notches arranged at predetermined points thereon and adapted to receive the lug therewithin, a dog pivotally mounted on 45 the latch plate adjacent the lower edge thereof, a spring member carried on said latch plate and engaged with said dog to normally dispose a portion thereof in one of the recesses of the latch plate, locking mem- 50 bers carried on said latch plate, and means adapted for introduction into the casing to coöperate with said first referred to spring member, dog and latch plate to move the latter to its locked and unlocked positions. 55

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

ALEXIS ANTIFAEV.

Witnesses:

WASSIL SOWINKOFF,
FRED KONKIN.