J. B. JOHNSON.

TRUNK LOCK.

APPLICATION FILED NOV. 21, 1907.

898,744. Patented Sept. 15, 1908.

Fig. 1.

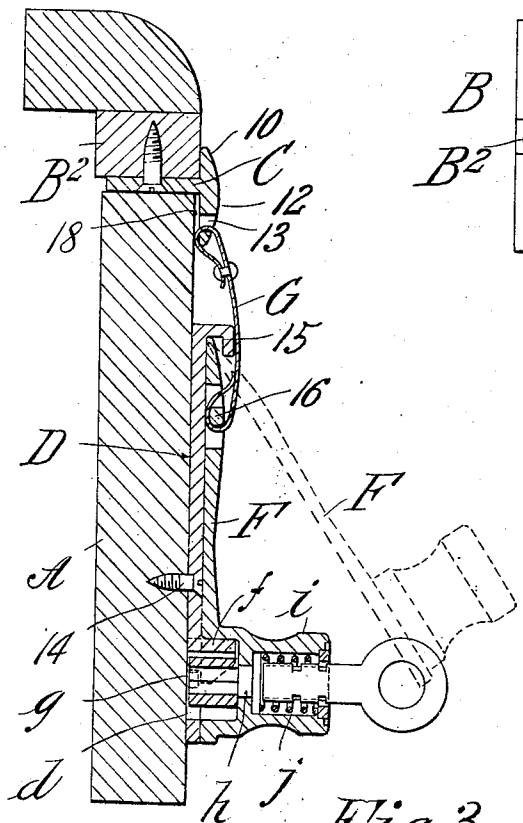


Fig. 2.

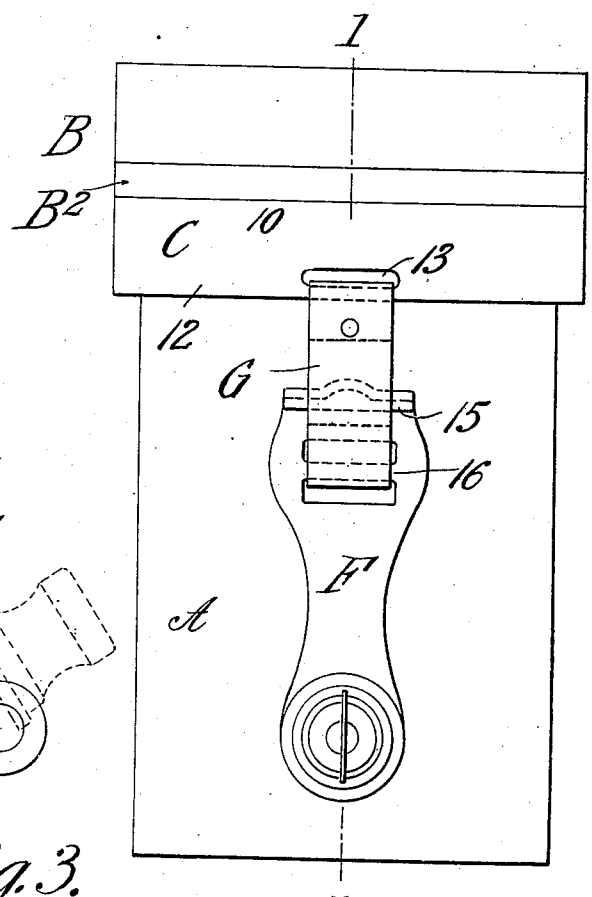
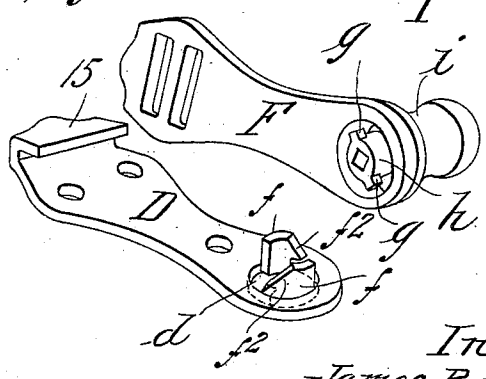


Fig. 3.



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UNITED STATES PATENT OFFICE

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TRUNK-LOCK.

No. 898,744. Specification of Letters Patent. Patented Sept. 15, 1908.

Application filed November 21, 1907. Serial No. 403,175.

To all whom it may concern:

Be it known that I, JAMES B. JOHNSON, a citizen of the United States of America, and resident of Springfield, in the county of Hampden and State of Massachusetts, have invented certain new and useful Improvements in Trunk-Locks, of which the following is a full, clear, and exact description.

This invention relates to locking devices which are especially available for use on automobile boxes or chests, on trunks, or otherwise, for locking the front portion of a hinged cover or lid to the front wall of the receptacle.

An object of the invention is to provide a locking device which is simple, cheap of construction, convenient and efficient in operation, and which has the capability in the locking action of drawing the cover of the box, etc. closely and firmly to bearing against the edge portion of the receptacle with which the cover or top coacts.

Another object is to provide a spring snap lock of improved construction and of extreme simplicity.

The invention consists in the combination or arrangement of the parts and the construction of the parts all substantially as hereinafter fully described and set forth in the claims.

In the drawings the locking device is shown as in its operative position as applied relatively to a front portion and a hinged top portion of a box,—Figure 1 being a central vertical section and Fig. 2 a front view. The line 1—1, on Fig. 2 indicates the plane on which the section is taken. Fig. 3 is a perspective view of parts of the locking device.

Similar characters of reference indicate corresponding parts in all of the views.

In the drawings,—A represents a front portion of a box, chest or trunk, and B a portion of the cover or top therefor, these portions which in a fragmentary manner are shown, having dimension and proportions as may be readily understood as comprised in receptacles of various kinds and styles. The top or cover B has at its forward edge a depending flange like extension B^2 secured on the lower edge of which is a metallic strip C having an overlapping front portion 10 upwardly extending and a depending portion 12 downwardly extending and provided with a slot or elongated eye 13.

D represents a flat plate having an attachment by screws, (one of several thereof being indicated at 14 in Fig. 1) to the box front A, and said attachment plate at its upper end is provided with an angular or L-shaped lug 15.

F represents a movable member or plate of the locking device, the same being, in substance link connected to the forward edge portion of the cover B,—this connection and practice being through means of a flat metal strap G, the looped lower end of which has an engagement with a bar like portion 16 of the plate F below the upper end of such plate, while the upper loop formed end of the strap engages through the slot or elongated eye 13 of the metallic strip which is secured to the cover.

When the cover is to be closed and locked it is swung on its hinge to its approximately closed position, the plate F being carried for a free swinging movement on the strap or link G; the upper end of the plate is engaged in the manner represented by the dotted lines in Fig. 1 while in an oblique position under the angular lug 15, acquiring a fulcrum thereat so that in its downward swinging movement towards the box front a leverage is exerted for downwardly drawing the cover or top positively and closely against, or in the required proximity to the upper edge of the box proper.

A fastening device is provided between the attachment plate D and the hasp-like swinging plate F; and in the present instance a form of spring snap lock is shown consisting of parts in combination as follows: The attachment plate D at its lower portion is made with a generally circular aperture or socket *d* forwardly standing from the margins of such and in opposition are lugs *f f* in the form of segments of a mutilated cylindrical shell, the edges f^2, f^2, of these lugs being inclined as shown, the segmental lugs being widened towards the plate D, the base edges of such widened parts of the segmental lugs forming shoulders to be engaged by radial wings *g g* oppositely extended from the lower ends of a spindle *h* fitted for rotation in the barrel or casing *i* therefor made in the form of a forwardly protruding boss at the lower extremity of the plate F. Said spindle is properly shouldered and incased within the lock barrel *i*, with capability of a rotative movement but restrained against any endwise movement, and is surrounded by a spiral spring *j* for a torsional effect,—said spring being at-

tached by one end to the spindle and by its other to the barrel *i*. The spindle and its casing are slotted in a manner usual in Yale locks for the reception of a key, specially constructed therefor by the use of which only the spindle may be turned for unlocking the lock.

The locking action will be explained thus: When the plate F is swung from its position shown in the dotted lines to that of the full lines Fig. 1, the wings *g g* of the spindle *h* ride down on the inclined edges f^2, f^2 of the segmental lugs *f f* standing forwardly from the locking plate, until such wings are well into the aperture *d* and below the plane of the overhanging bases of the inclines f^2, f^2, whereupon the reaction of the spring will so partially rotate the spindle *h* in the proper direction as to bring the wings *g g* to their interlocking engagements under the shoulders at the bases of the inclined portion of the segmental lugs *f f;* and the device must, of course, remain fastened until by the employment of the key the lock spindle may be rotatively moved to free the wings *g* from engagement under the shoulders which are features of the parts *f*.

This invention is not necessarily to be limited to the particular form of spring snap lock herein particularly described, as I may employ other forms of key operated locks or other means of fastening or engaging between the plate D and the swinging plate F; and while this fastening device is primarily designed for use on boxes and the like, it is applicable in other situations, such for instance as on car and other doors; and various changes may be made to the details of construction of this locking device without departing from my invention or sacrificing any of the advantages thereof.

The metallic strip or rim C secured on the lower edge of the flange like extension B^2, and which is understood as continuous entirely around the cover, as shown in Figs. 4 and 5, has the depending flange like portion 12 thereof constructed with a recess 18 at the portion through which the slot or elongated eye 13 is formed. This gives slight, though sufficient, space for occupancy of the thickness of the metal comprised in the strap G, and adds materially to the excellence of the connections.

I claim:—

1. In a locking device, the combination of a stationary part and a hinged part designed to rest thereupon, a plate secured to the stationary part and having at one end thereof an opening, said plate having oppositely located and curved lugs, outstanding from one side thereof on each side of the opening, said lugs affording an interrupted cylindrical barrel and having relatively opposite side edges thereof inclined as cams and terminating in relatively opposite shoulders, a second plate hung for pivotal movement from the hinged part and provided at its free end with a forwardly projecting barrel, a key operated spindle fitted within the barrel and formed at its inner end with laterally and oppositely projecting wings which ride upon said inclined edges and engage under said shoulders, and a torsional spring fitted within the barrel and connected thereto and to the spindle, said spring acting to hold the spindle in position to engage its wings under the shoulders.

2. In a locking device, the combination of a stationary part and a hinged part designed to rest thereupon, a plate secured to the stationary part and having at one end thereof an opening, said plate having oppositely located and curved lugs projecting forwardly therefrom at each side of the opening, said lugs affording an interrupted cylindrical barrel and having relatively opposite side edges thereof inclined as cams, said lugs having widened base portions formed with relatively opposite undercut shoulders, a second plate hung for pivotal movement from the hinged part and provided at its free end with a forwardly projecting barrel, a key operated spindle fitted within the barrel and formed at its inner end with laterally and oppositely projecting wings which ride upon said inclined edges and engage under said shoulders, said second plate having a recess formed in its inner face and inclosing the inner end of said spindle, said lugs projecting into said recess in the locked relation of the parts and a torsional spring fitted within the barrel and connected thereto and to the spindle, said spring acting to hold the spindle in position to engage its wings under the shoulders.

Signed by me at Springfield, Mass., in presence of two subscribing witnesses.

JAMES B. JOHNSON.

Witnesses:
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