

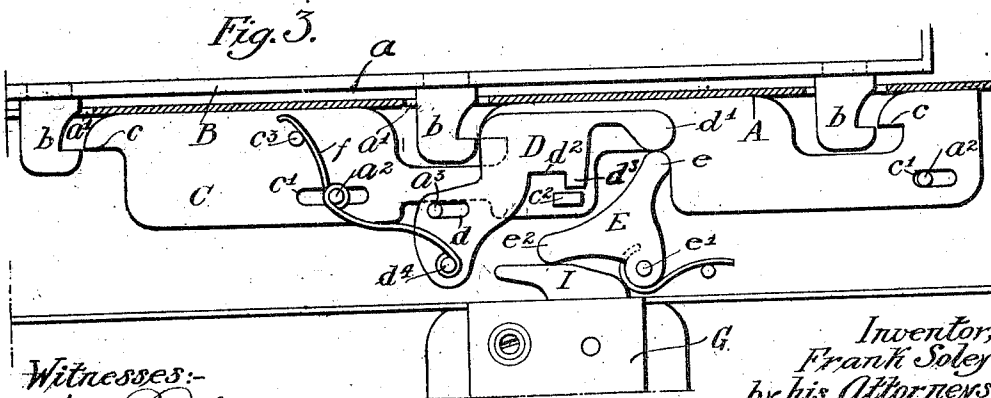
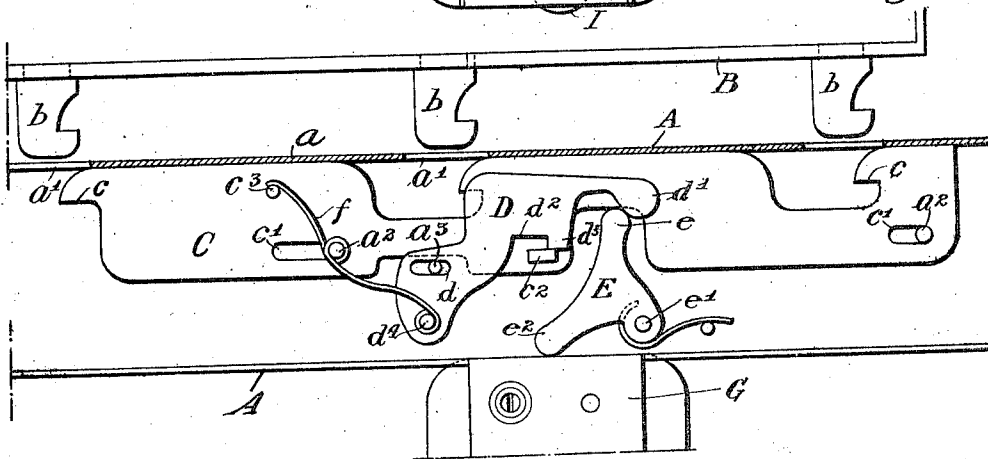
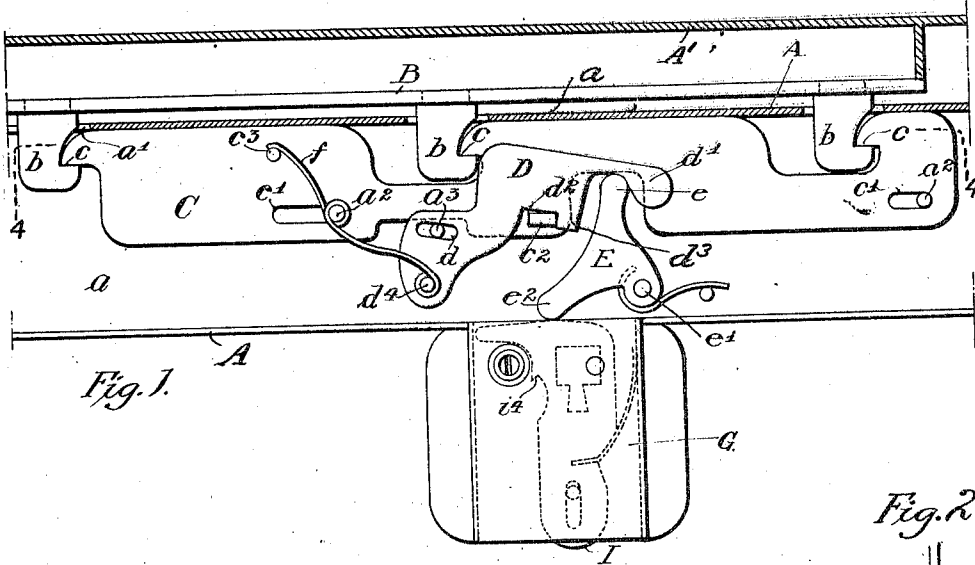
F. SOLEY.
TRUNK LOCK.

APPLICATION FILED FEB. 21, 1911.

Patented Sept. 17, 1912.

2 SHEETS—SHEET 1.

1,038,981.



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1,038,981.

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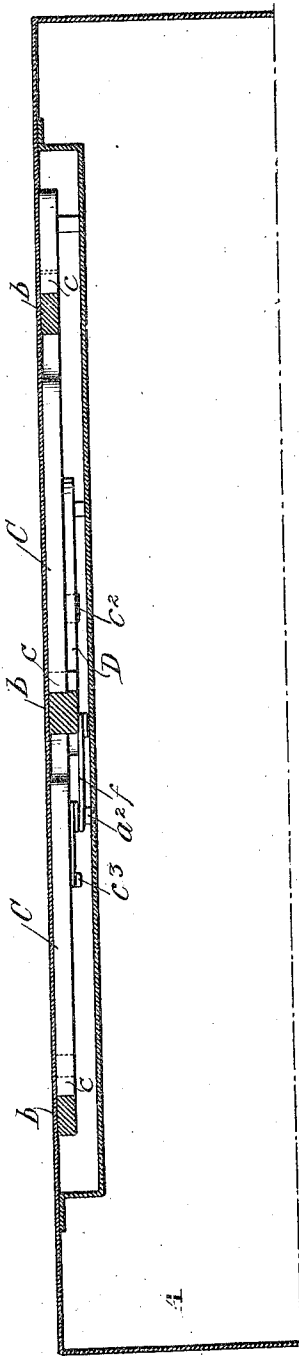


Fig. 4.

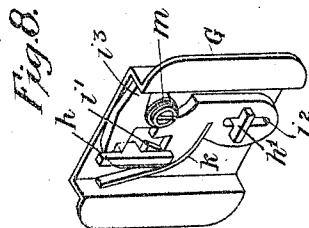


Fig. 8.

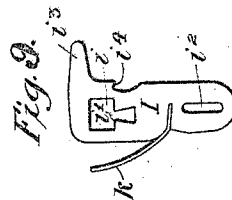


Fig. 9.

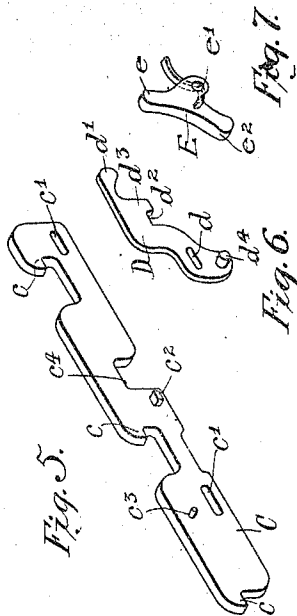


Fig. 5.

Fig. 6.

Fig. 7.

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UNITED STATES PATENT OFFICE.

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TRUNK-LOCK.

1,038,931.

Specification of Letters Patent.

Patented Sept. 17, 1912.

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To all whom it may concern:

Be it known that I, FRANK SOLEY, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented certain
5 Improvements in Trunk-Locks, of which the following is a specification.

My invention relates to certain improvements in locking mechanism used particularly on boxes, chests, document cases and
10 like articles.

One object of the invention is to provide a simple and effective lock in which the lock proper is independent of the bolt.

Another object of the invention is to so
15 construct the lock that the bolt mechanism will return the tumbler to its original position as soon as released from the control of the key, and a still further object is to so construct the lock mechanism that it will
20 be impossible to jar the bolt loose after it is thrown to the locked position.

In the accompanying drawing:—Figure 1, is a sectional view of a metallic box illustrating my improved locking mechanism; Fig.
25 2, is a view of the lock mechanism showing the keeper retracted; Fig. 3, is a view showing the keeper in line with the bolt; the bolt being held by the raised tumbler of the lock; Fig. 4, is a sectional plan view on the line
30 4—4, Fig. 1; Fig. 5, is a perspective view of the bolt; Fig. 6 is a perspective view of the locking dog; Fig. 7, is a perspective view of the lever; Fig. 8, is a perspective view of the casing and tumbler, and Fig. 9,
35 is a side view of the tumbler.

A is the body of an ordinary metallic document case and A' is the lid hinged to the box in the usual manner. Secured to the flange of the lid A' is the keeper B having
40 hooked projections b which extend through openings a' in the bolt casing a in the present instance.

C is a bolt having three hooks c engaging the hooked projection b of the keeper and this bolt is slotted at c' and through the slots pass pins a^2 secured to the casing. These pins hold the bolt in proper position and allow it to freely slide into either the open or closed position.

50 D is a locking dog made as shown in Fig. 6, having an elongated pivot pin opening d for the pin a^2 so that it can rock and slide upon said pin. The dog has a head d' provided with an inclined surface against

which rests the arm c of the lever E. This
arm also enters a notch in the bolt and engages the bolt after it lifts the dog. The
central projection b of the keeper B is of a
width equal to the combined width of the
bolt C and the dog D and the end of this
projection rests against the rear end of the
dog when in certain positions. The dog is
notched at d^2 to form a projection d^3 which
either rests upon or engages the lug c^2 on
the bolt.

f is a spring mounted on one of the pins
 a^2 . One arm of the spring rests against a
pin c^3 on the bolt C and tends to move it
forward while the other arm rests against
a pin d^4 on the dog D and tends to press the
dog down.

When the parts are in the locked position,
as shown in Fig. 1, the notched ends of the
projections b of the keeper are in engagement
with the bolt and one of the projec-
tions also rests against the rear portion of
the dog D, holding the dog in engagement
with the projection d^3 . Consequently, the
bolt cannot be jarred out of engagement, but
as soon as the dog is raised, on the move-
ment of the lever E, it will be lifted clear
of the lug c^2 as it will slide on its pin d ;
the ends of the projection b becoming the
fulcrum and the bolt will thus be released.
On the continued movement of the lever E,
it will move the bolt C longitudinally clear
of the keeper B.

The lock proper G is preferably made independent of the bolt, as shown, so that any
type of lock may be used in combination
with the bolt. The casing of the lock G is
made from sheet metal as shown in Fig. 8.
On the casing is the T-headed projection h
which passes through an opening i in the
tumbler I; the tumbler having a shoulder
 i' engaged by the projection h . The lower
end of the tumbler is guided by a projection
 h' which is adapted to a slot i^2 in the
tumbler. A spring k is secured to the tumbler,
as shown in Fig. 9, and presses against the
casing tending to force the tumbler toward
the key hub. This key hub m is mounted in
the casing and on the tumbler is the projection
 i^3 which passes over the hub and a
shoulder i^4 which is engaged by the key
when it is inserted in the key head and
turned. The tumbler rises from the position
illustrated in Fig. 1 to that illustrated

in Fig. 3, by turning the key. The tumbler is located directly in line with the arm e^2 on the lever E so that when the tumbler is raised it will actuate the lever, which will in turn first raise the dog clear of the lug c^2 and then actuate the bolt and move it out of line with the projections on the keeper, as shown in Fig. 3, so that the box can be opened. As soon as the tumbler is released from the control of the key, the bolt C is forced back to its normal position by the spring f and the dog will ride upon the lug, but when the keeper is inserted on closing the box, the bolt and the dog will be pushed back by the projection b on the keeper and the projection d^3 of the dog will drop back of the lug c^2 and hold the bolt in position as shown in Fig. 1. On the movement of the bolt by the spring f it will act upon the lever E, which in turn will force the tumbler into the position shown in Fig. 1.

It will be understood that the lock may be modified without departing from the essential features of the invention.

By the use of my invention I can make a very simple lock which can have one or more hooked projections which may engage the hooked projections on the keeper. The lock is preferably made as a snap lock; the bolt being entirely independent of the main lock mechanism which can be of any type. The type shown in the drawings is very easily and economically made.

The slot in the dog must be so proportioned that the distance between the pin and the rear end of the slot must be less than the width of the keeper projection so that even if the bolt should move longitudinally when the box is jarred the dog will prevent the full movement of the bolt owing to the end of the slot in the dog coming in contact with

the pin, thus preventing the opening of the box.

I claim:

1. The combination of a keeper, a sliding bolt adapted to engage the keeper, a pivoted locking dog engaging the bolt and arranged to be acted upon by the keeper, a spring actuated lever for throwing the bolt and lifting the dog, and a tumbler engaging the lever.

2. The combination in a lock, of a keeper, having a wide hooked projection, a sliding bolt for the hook arranged to be engaged by the projection on the keeper, a pivoted locking dog arranged to be actuated by the hooked projection and having a projection engaging the lug on the bolt and the locking dog, and a separate locking mechanism for actuating the lever.

3. The combination in a lock, of a keeper having a series of hooked projections, a casing, a sliding bolt mounted in the casing and having a series of hooks to engage the projections of the keeper; a pivoted locking dog engaging the bolt when in the forward position and arranged to be acted upon by one of the projections of the keeper, said bolt and dog being notched, a two-armed lever pivotally mounted in the casing and having one arm extending into the notches of the lever and dog, with a separate lock casing, a tumbler therein bearing against the other arm of the lever, and means for actuating the tumbler.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

FRANK SOLEY.

Witnesses:

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WM. A. BARR.