

(No Model.)

2 Sheets—Sheet 1.

F. P. COBHAM.
BAG LOCK.

No. 475,037.

Patented May 17, 1892.

Fig. 1.

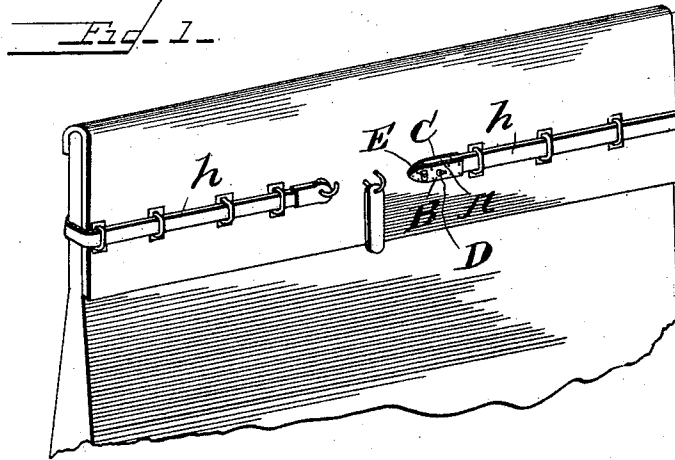


Fig. 2.

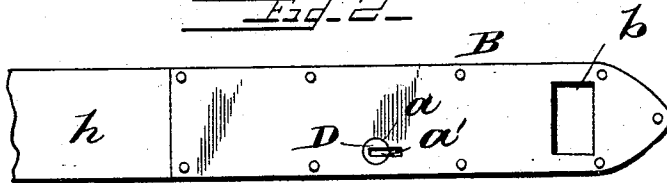


Fig. 3.

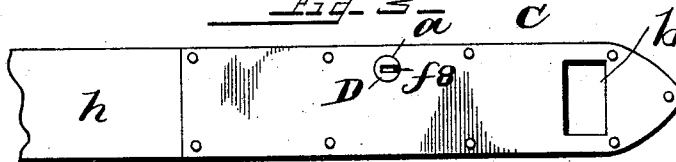


Fig. 4.

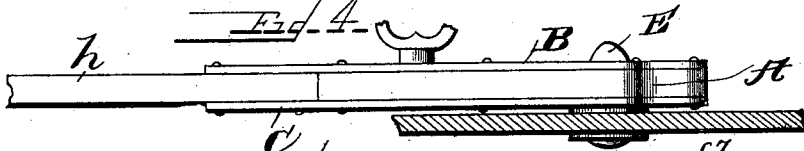
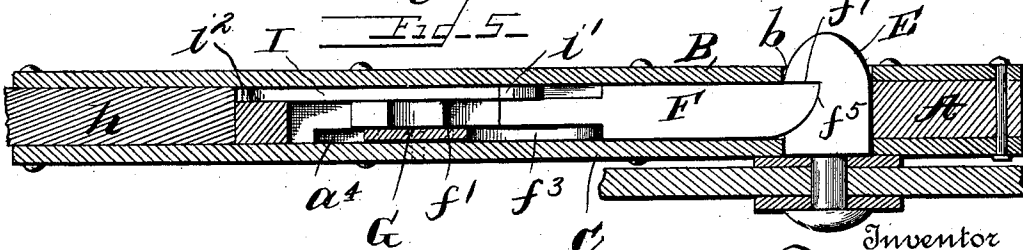


Fig. 5.



Witnesses

G. A. Taubenschmitt,
J. D. Kengaberg

Inventor
By Frederick P. Cobham
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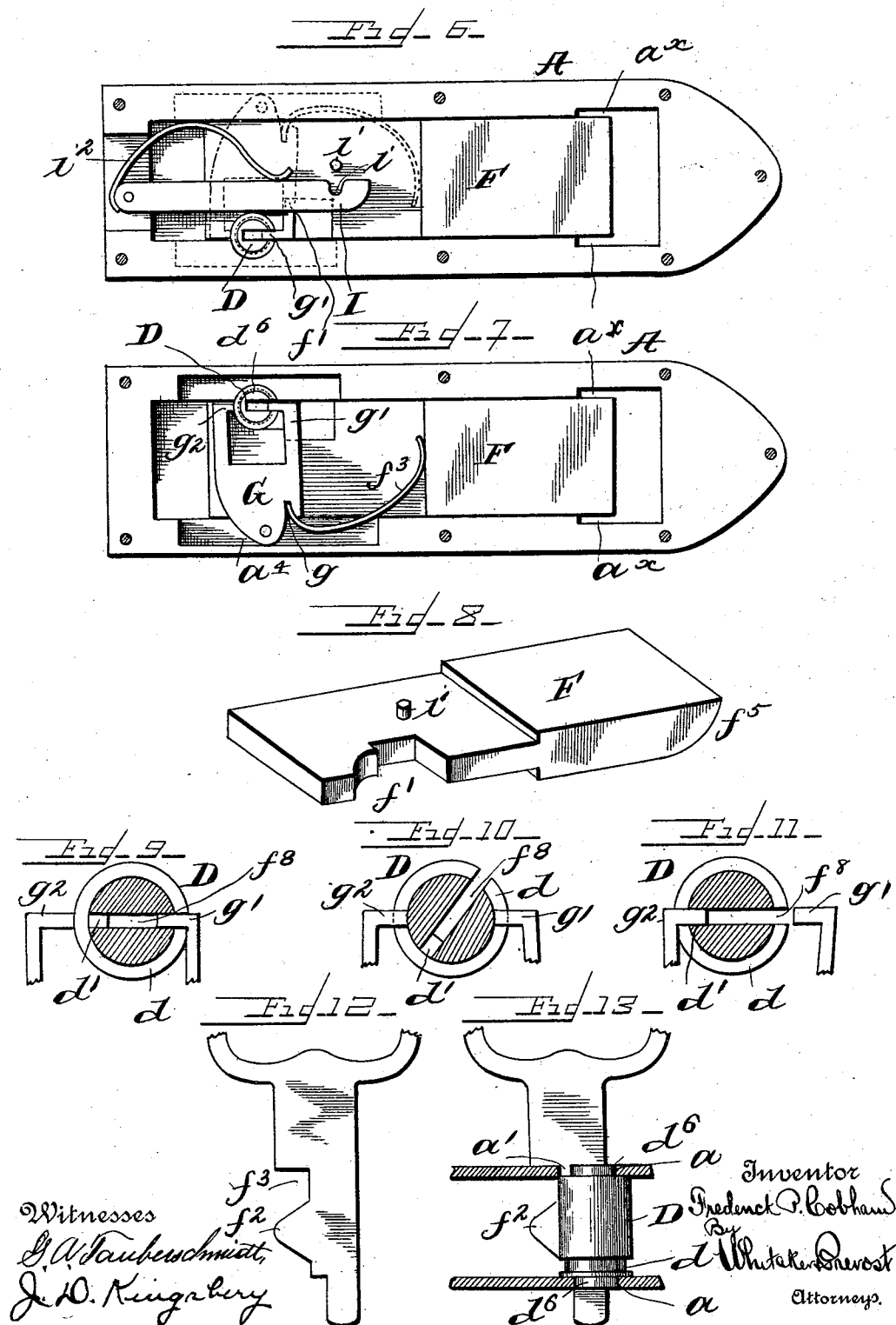
(No Model.)

2 Sheets—Sheet 2.

F. P. COBHAM.
BAG LOCK.

No. 475,037.

Patented May 17, 1892.



UNITED STATES PATENT OFFICE.

FREDERICK P. COBHAM, OF WARREN, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO FRED E. WINDSOR, OF SAME PLACE.

BAG-LOCK.

SPECIFICATION forming part of Letters Patent No. 475,037, dated May 17, 1892.

Application filed January 30, 1892. Serial No: 419,731. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK P. COBHAM, a citizen of the United States, residing at Warren, in the county of Warren and State of Pennsylvania, have invented certain new and useful Improvements in Locks; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to locks; and it consists of certain useful and novel improvements in the same, fully disclosed in the specification following and in the drawings filed herewith, and more particularly pointed out in the claims.

In the drawings, Figure 1 is a partial perspective view of a mail-bag provided with my improved lock. Figs. 2 and 3 represent the side plates. Fig. 4 is a view showing the plates and frame combined and the catch inserted. Fig. 5 is a sectional view of Fig. 4. Figs. 6 and 7 are views of the interior mechanism with the side plates removed. Fig. 8 is a perspective view of the bolt. Figs. 9, 10, and 11 are end views of the barrel. Fig. 12 is a side view of the key; and Fig. 13 is a partial side view with the frame removed, showing the barrel secured between the plates with the key inserted.

Similar letters of reference indicate identical parts throughout.

My improved lock consists of a main frame A, preferably rectangular in shape and provided with suitable recesses, as hereinafter described, to permit the insertion and operation of the locking devices, which constitute parts of my invention. Side plates B C, adapted to be rigidly secured to the frame A, are provided, having annular openings *a* to receive the barrel D of the lock, which is adapted to turn with the key in said openings in the operation of locking and unlocking. The plate B is provided with a slot *a'* to permit the passage through it of the key. The plates are also provided with openings *b* to admit the catch E.

Within the frame A and between the plates B C is placed the sliding bolt F, adapted to engage the catch E when the latter is inserted through the openings *b*. The bolt is made

substantially as shown in Fig. 5 of the drawings, and is preferably reduced at a portion of its length to admit of its free passage past the mechanism upon either side of it and to facilitate the adjustment of the parts, and has a rounded or inclined portion *f*⁵, adapted to engage the catch E. The rear portion of the bolt F is provided with a suitable shoulder to be engaged by the ward of the key in the operation of withdrawing or retracting the bolt and with a lug or pin *i'*. The bolt is adapted to be held in the position shown in the drawings by means of a spring, as *f*³.

The barrel D is made substantially as shown in Fig. 13, and consists of a cylindrical part provided with reduced portions *d*², fitting in the openings *a* of the plates B C, and which are adapted to rotate in said openings. The barrel is also provided with a longitudinal slot *f*⁸, through which the key passes, and with an annular groove *d*, in which the arms *g' g*² of the tumbler G are adapted to travel, as hereinafter described.

In order to prevent the successful use of false keys, a tumbler G is pivoted in a recess *a*⁴ in the frame A, and is provided with two arms having inward projections *g' g*², adapted to travel in the groove *d* of the barrel when the proper key is inserted and the barrel turned. The projection *g'* normally engages the key-slot in the barrel D and prevents the barrel from turning. The other projection *g*² is adapted to enter a recess *d'* in the groove *d*, and is also for the purpose of holding the barrel stationary.

It is obvious that in order to insure the adjustment of the tumbler G, so that the projections *g' g*² will travel in the groove *d* and permit the barrel D to turn, only a key which fits the lock can be used. The tumbler G is maintained in its normal position by means of a spring *f*³, which is preferably made to engage the tumbler in the recess *g*. The other end of this spring abuts against a projecting portion of the bolt F, the said spring serving the double purpose of forcing the bolt forward and holding the tumbler in its normal position. Separate springs may, however, be used, if desired. The end of the key is inclined in order to force the arm *g'* out of the slot. The lock is also provided with the tum-

bler I, pivoted in a recess in the end of the frame A upon the opposite side of the bolt F and provided with a recess i , adapted when moved laterally a sufficient distance to engage the pin i' of the bolt F.

This tumbler is normally retained in the position shown in Fig. 6 and out of engagement with the pin i' by means of a spring i^2 . When a false key is inserted in the lock, the wards coming in contact with the tumbler move it into engagement with the pin i' and prevent further retraction of the bolt.

While my improved lock may be used upon a variety of articles, and I do not wish to limit myself to its use upon any one of them, I have shown the lock in the drawings as employed upon a mail-bag, the lock being riveted to one end of the strap h , which passes around the flap and bag, as shown in Fig. 1. The lock is fastened to the strap, preferably, by extending the plates B C beyond the frame, inserting the strap between the plates, and riveting them together, the other end of the strap being rigidly secured to the flap, as shown. The catch E is also attached to the flap of the bag, and when the bag is locked passes entirely through the openings b in the plates B C, the bolt F being forced back by the catch. As soon as the catch has been inserted a sufficient distance the bolt springs into engagement with the shoulder f' and locks the bag, as shown in Figs. 1 and 5.

The bag may be unlocked by inserting the key shown in Fig. 13, the ward of which extends through the slot f^3 in the barrel D. Upon the insertion of the key the projections g' g^2 of the arms of the tumbler G are forced into such a position as to enable them to travel freely in the groove d of the barrel and permit the latter to rotate with the key, while the reduced portion f^3 of the key permits said key to be turned without disturbing the tumbler I until the ward f^2 , coming in contact with the shoulder f' of the bolt F, retracts said bolt from engagement with the catch and permits the latter to be withdrawn. As before stated, the insertion of a false key would be apt to displace the arms g' g^2 of the tumbler G and so prevent the turning of the barrel, the projection g^2 entering the recess d' in the groove d , Fig. 11. Such a key would also be liable to move the tumbler I into engagement with the pin i' , when the bolt F would be held from retraction. The shoulder f' of the bolt is made very slight, as shown, so that the key-ward must be nicely adjusted in order to operate the bolt. The frame A is preferably provided with shoulders a^x to insure ready action of the catch and prevent its engaging the plate C when being withdrawn.

Instead of having the bolt reduced at a portion of its length, I may, if I prefer, increase the depth of the recesses in the frame A, so as to permit the bolt to be made of uniform thickness throughout. The tumbler I may be provided with a groove, if desired, adapted to be engaged by a suitable ward of the key instead of having the key recessed, as shown.

What I claim, and desire to secure by Letters Patent, is—

1. In a lock, the combination, with a spring-bolt, of a revolving barrel having a slot at one side for the reception of a key, a key provided with a projection adapted to engage the bolt, and a tumbler engaging said barrel and adapted to be engaged and released by said key, substantially as described.

2. In a lock, the combination, with a spring-bolt, of the slotted barrel, and the tumbler adapted to engage the slot of the barrel, substantially as described.

3. In a lock, the combination, with the bolt, of the slotted barrel, the tumbler adapted to engage the barrel and to be disengaged by the direct contact of the key, and the tumbler adapted to engage the bolt, substantially as described.

4. In a lock, the combination, with a spring-bolt, of the slotted barrel, the tumbler having arms extending on opposite sides of the barrel, said arms having projections, one adapted to engage the slot of the barrel and the other adapted to engage a recess therein, substantially as described.

5. In a lock, the combination, with the main frame and side plates, of a bolt, a slotted barrel provided with an annular groove and having a recess in said groove, as set forth, and a tumbler provided with arms having inward projections adapted to travel in said groove when the barrel is rotated, substantially as described.

6. In a lock, the combination, with a main frame and side plates, of a bolt, a barrel provided with an annular groove and with a recess therein, a tumbler provided with arms having inward projections adapted to travel in said groove when the barrel is rotated, and a spring adapted to force one of said arms into the key-slot of the barrel and the other arm adapted to engage the recess of the said groove, substantially as described.

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

FREDERICK P. COBHAM.

Witnesses:

W. W. DUNN,
R. L. JOHNSON.