(No Model.)

J. E. C. HILL.

LOCK BOX FOR SAFES.

No. 516,650. Patented Mar. 20, 1894.

Fig. 1.

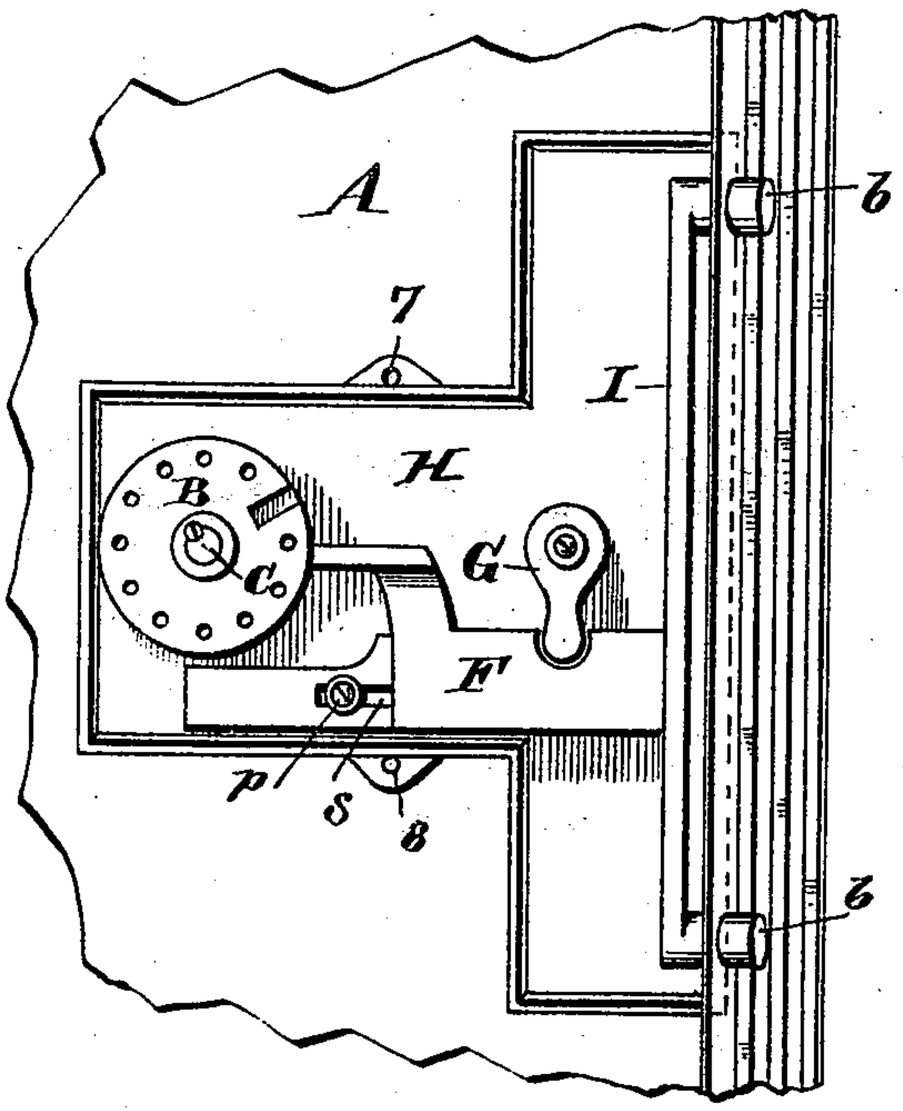


Fig. 2.

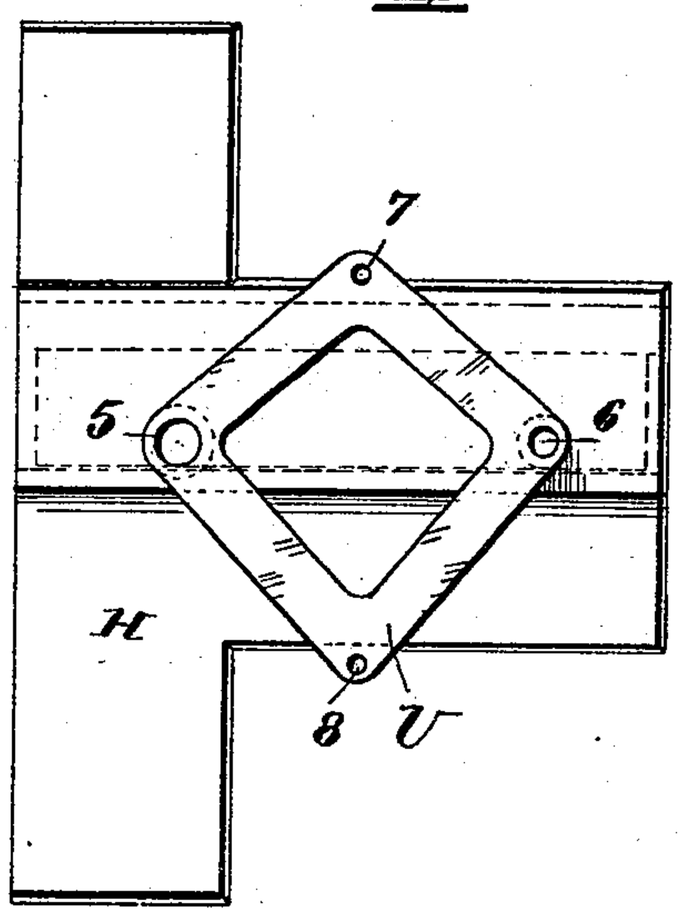


Fig. 3.

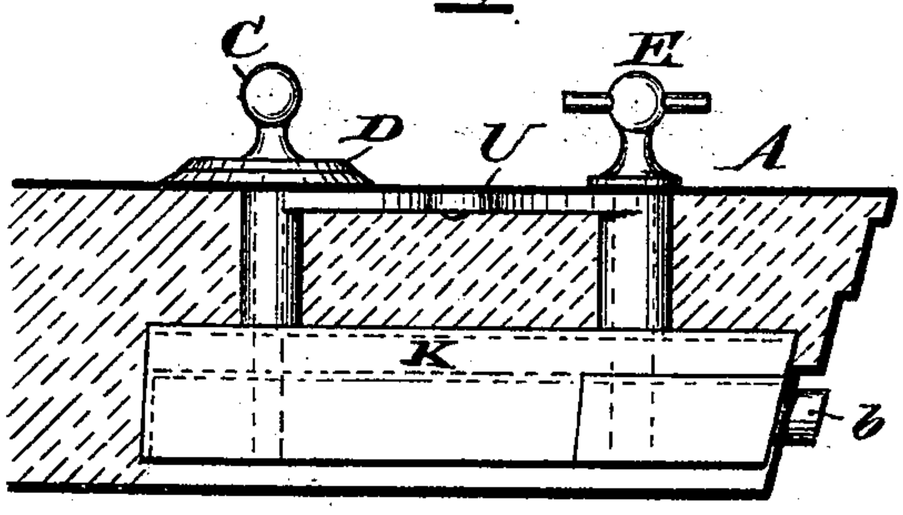


Fig. 4.

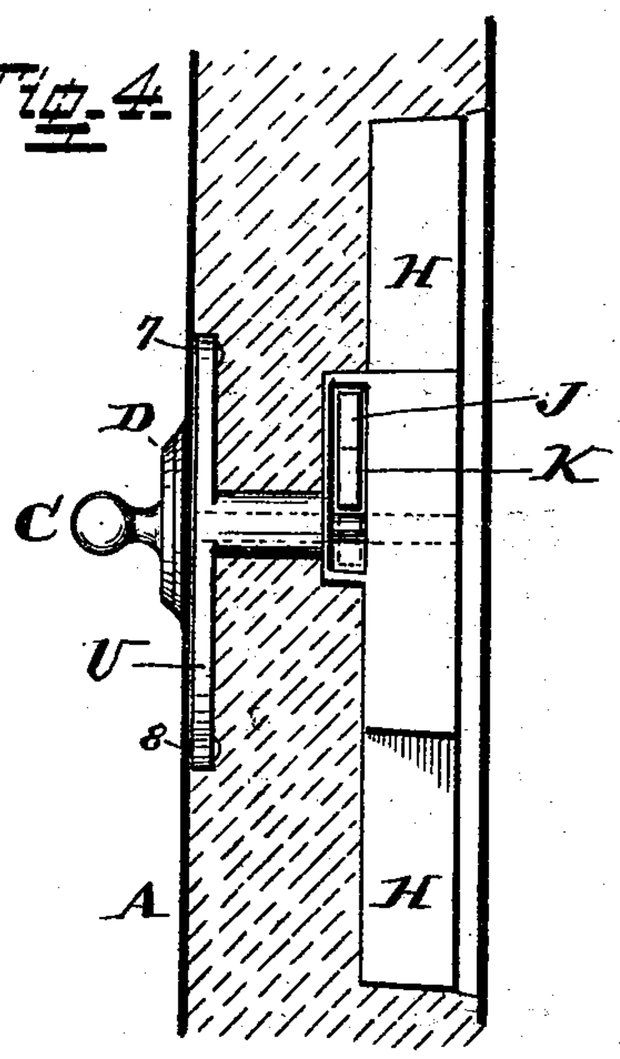
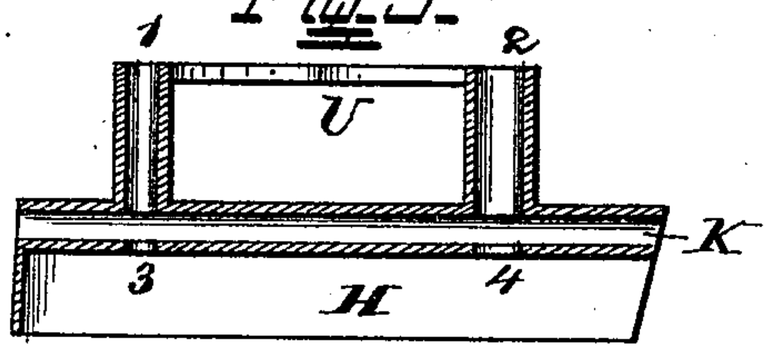


Fig. 5.



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LOCK-BOX FOR SAFES.

SPECIFICATION forming part of Letters Patent No. 516,650, dated March 20, 1894.

Application filed December 7, 1892. Serial No. 454,324. (No model.)

To all whom it may concern:

Be it known that I, JONATHAN E. C. HILL, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Lock-Boxes for Safes, of which the following is a specification.

My invention relates to improvements in the construction of boxes or casings which contain the lock- and bolt-mechanism of such locks as are used in connection with fire- and burglar-proof safes and similar receptacles employed for security-and safe- deposit purposes. One mode of gaining access to the interior of such locks for the purpose of manipulating them or the bolts, or for introducing explosives, has been had through an opening obtained by pulling out forcibly the tumbler-spindle which carries also the dial-plate, or the handle-spindle where such is used.

The primary object of my invention is to prevent access in this manner by closing automatically such opening, the closing being made dependent on the removal of either one or the two spindles and occurring simultaneously with such removal.

Another part of my invention relates to the construction of the lock-box itself and to the means whereby it is secured to the door which means also incidentally serve to stiffen and brace such door at a point where it is the weakest and most severely used.

In the following specification and particularly pointed out in the claims, is found a full description of my invention, its operation, parts and construction, the latter being also illustrated in the accompanying drawings, in which—

Figure 1 is an interior front view of a safe-door containing my improved lock-box or casing with the ordinary lock-tumblers, throw-bar, bolts, &c., in their customary positions, the inside door-plate being removed for purposes of the view. Fig. 2, is a front view of the lock-box itself as it appears when detached, or when the front plate of the door is removed, the bolts and other adjuncts of the lock proper being also dispensed with. Fig. 3, is a horizontal section taken through the safe-door, while, Fig. 4, is a vertical section thereof. Fig. 5, is a horizontal section taken through the lock-box alone, thus showing more clearly its construction, in connection with the attaching-plate, tubular bearing for the handle and bolt spindles, the whole being integral and cast in one piece, the advantages of which will hereinafter be set forth.

The letter A, represents the front plate of the safe-door; B, the ordinary lock-tumblers, operated by the usual spindle C, which also carries dial D.

E, is the ordinary handle and spindle which operates the throw-bar F, through the instrumentality of dog G, which is, in connection with said spindle and bar, as usual, and as shown in the drawings.

S, is the slot working on pin *p*, by means of which the movement back and forth of the bar is limited.

I, is the vertical rod which supports the bolts *b b*.

The sectional dotted lines in Figs. 3 and 4 represent the usual cement which surrounds the parts and occupies other vacant spaces in the safe door to give it strength and fire-proof qualities.

H, composes the lock-box proper—in which as before stated, is the bolt mechanism, and the lock-tumblers with their respective adjuncts. Upon the vertical front-wall of the lock-box and outside of the latter is formed a supplementary box, or housing J, from which extend in the direction of the front, or outer side of the door tubes 1 and 2 through which pass the lock-spindle and handle-spindle respectively, extending inwardly through the interior of housing J, and continuing through openings 3 and 4 into the interior of the lock-box. Upon that part of said spindles which passes through the interior of housing J, rests normally a drop-guard K, consisting preferably of a steel-plate. As to thickness it should fill the interior width of the housing and as to height it must be so high as to close the opening left by the spindles should either one of them, or the two have been withdrawn and thereby permitted the drop-guard to be precipitated to the bottom of its housing. The object of this drop-guard is to close the opening which the spindles would otherwise leave should they be withdrawn for the purpose of gaining access

to the interior with a view to manipulate the lock or bolts, or introduce explosives. It will thus be seen that access to the interior through the spindle-passages is most effectively barred in a very simple manner and by an inexpensive construction. To the ends of said tubes is integrally connected a plate U, by which the lock-box, and its adjuncts going to make up the whole is attached by rivets to the rear side of front plate A. The intervening space between the plate U, and the front of the lock box is filled with cement, the tubes being also necessarily surrounded. The advantage of having the lock-casing, the said plate housing J, the said spindle tubes and attaching-plate cast integrally and secured as they are, and having the lock-casing extend well toward the rear of the door instead of being in proximity to the front, as in most cases, and having the intervening spaces and said parts packed with cement, will be apparent, for it protects the said parts more efficaciously from fire, and also from nefarious designs, for strength and durability is thereby added. This plate U also stiffens the front plate A at a point where it is the weakest and most severely used.

In Fig. 2, I designate spindle apertures in the attaching plate by Figs. 5, and 6. The rivet holes in same for attachment to plate A, I denominate as 7, 8. The drop-guard is also applicable where only one spindle is used as is the case in many safes where the tumbler-spindle also serves as a handle-spindle.

What I claim, therefore, as my invention, and desire to secure by Letters Patent, is—

1. In combination with the tumbler- or handle-spindle of a lock as here described, and with the box or housing for the latter, containing the spindle-ways a drop-guard resting normally on such spindles and supported thereby and adapted to drop to a position to close the otherwise open spindle-ways, when one or the two of such spindles are withdrawn therefrom.

2. In combination with the tumbler- or handle-spindle and the box, or housing of a lock as here described, a supplementary housing J so located as to be penetrated by such spindles, a drop-guard normally supported by them and occupying that part of housing J which is above the spindles and adapted to drop to a position to close the opening left when one or the two of such spindles are withdrawn.

3. In combination with a case or box for locks as here described, a housing formed by an extension of parts of said box, such housing so located as to be penetrated by the tumbler- or handle-spindle, or both, and a drop-guard occupying the interior of this housing above the spindles and normally supported thereby and adapted to drop to a position to close the opening when one or the two of such spindles are withdrawn.

4. A case or box for locks of the kind as here described, having forwardly extending spindle-tubes and a plate U integrally connected to them, such plate adapted to receive rivets or screws and furnishing a broad and stiff base of connection whereby the whole lock-box is secured to the front plate.

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Witnesses:
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JERE. F. TWOHIG.