

UNITED STATES PATENT OFFICE.

SAMUEL CRANSTON, OF PHILADELPHIA, PENNSYLVANIA.

MAN-TRAP FOR VAULTS.

SPECIFICATION forming part of Letters Patent No. 304,180, dated August 26, 1884.

Application filed November 9, 1883. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL CRANSTON, of West Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and Improved Man-Trap for Vaults, of which the following is a full, clear, and exact description.

The object of my invention is to provide a new and improved trap-door, which is to be connected with a vault in such a manner that when the vault-door is opened the trap-door drops and prevents the person that opened the vault-door from escaping through the door at which he entered.

The invention consists in the construction and arrangement of parts, as will be hereinafter fully described and claimed.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in both the figures.

Figure 1 is a longitudinal sectional elevation of a vault-entrance provided with my improved trap-door. Fig. 2 is a sectional plan view of the same on the line *x x*, Fig. 1.

In front of the vault A a tunnel or covered passage-way, B, is arranged, at the inner end of which the vault-door C is arranged, which door is hinged in the usual manner. At the opposite end of the tunnel or passage-way a transverse slot, D, is formed in the roof or top of the passage-way or tunnel, through which slot a vertically-sliding door, E, can pass, which is suitably guided, which door, when raised, is contained within a casing, F, formed above the top of the passage-way. To the top of the door E a rope or chain, G, is fastened, which passes through an opening in the top of the casing F, and is used for raising the door. The chain can be fastened to a windlass, drum, or other device, for winding it up to raise the door. The door E must be made so heavy that it cannot be raised by a man without the employment of a windlass, &c. If desired, catches can be provided in the jamb or in the sill, which catches automatically lock the sliding door in place when it is lowered. On the upper surface of the top of the passage-way or tunnel a sliding latch-bar, H, is held in such a manner that it can slide in the direction of its length, the said bar being guided by clips J. The inner

end of the sliding bar H is connected by a rope, band, or chain, L, with the vault-door C, the said chain or rope passing through a transverse slot, K, in the top of the passage-way at the inner end of the same, the edge of the slot being rounded.

The operation is as follows: The door E is raised and the sliding bar H is drawn toward the outer end of the tunnel, so that its end will be under the door E, the vault-door C being closed. If the vault-door C is opened, that end of the rope or chain L fastened to the upper edge of the door will be drawn in the direction of the arrow *a'*, and as the rope or chain rests against the rounded edge of the slot K, the upper end of the rope or chain will be drawn in the inverse direction of the arrow *a'*, as will also the bar H, whereby its outer end will be drawn from under the door E, permitting the same to drop. The burglar or person opening the vault-door cannot escape, as the door E closes the entrance to the tunnel, and the said door is so heavy that he cannot raise it. My improved safety trap-door can also be arranged in combination with other apartments besides vaults. An alarm is connected with the sliding door, which alarm is sounded when the door drops.

I am aware that an animal-trap has been constructed, in which the vertical sliding door is held suspended by a spring-bolt connected by a rod to a pivoted trigger extending within the box or trap; and I do not claim such construction as broadly of my invention.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

A man-trap for vaults, consisting of the passage B, transverse slotted casing F, and a chamber above the passage B, the vertical sliding door E in the casing F, the bolt H in the chamber above the passage B, and the vault-door C at the inner end of the passage, said door being connected with the bolt by a cord, L, passing through the slot K, whereby when the door E rests on the bolt D the opening of the vault-door will cause the withdrawal of the bolt, thereby releasing the door E, substantially as set forth.

SAMUEL CRANSTON.

Witnesses:

F. H. FITLER,
GEO. W. HANCOCK.