Nov. 27, 1934.　　J. P. FOLEY　　1,982,247

BANKER'S PROTECTIVE APPLIANCE

Filed Sept. 17, 1930　　2 Sheets-Sheet 1

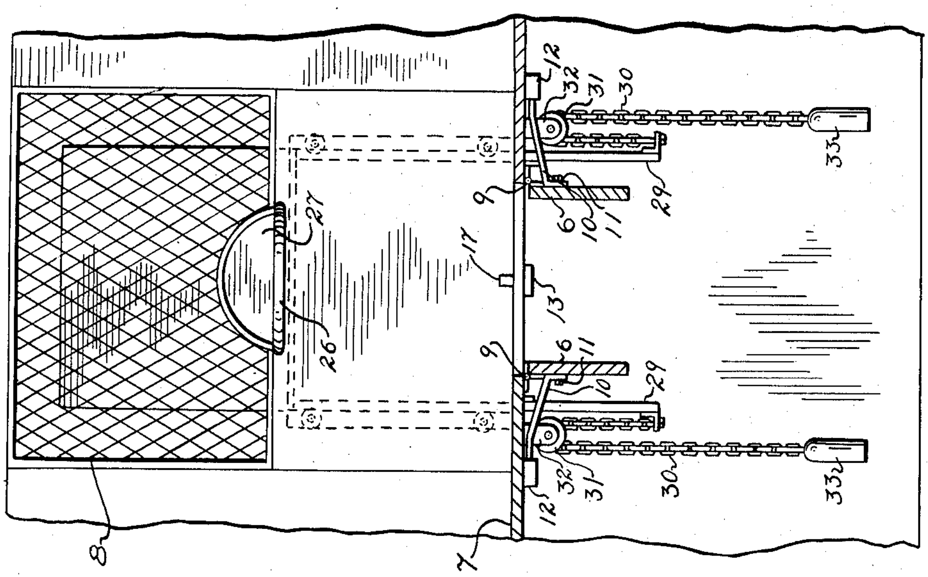

FIG. 4.

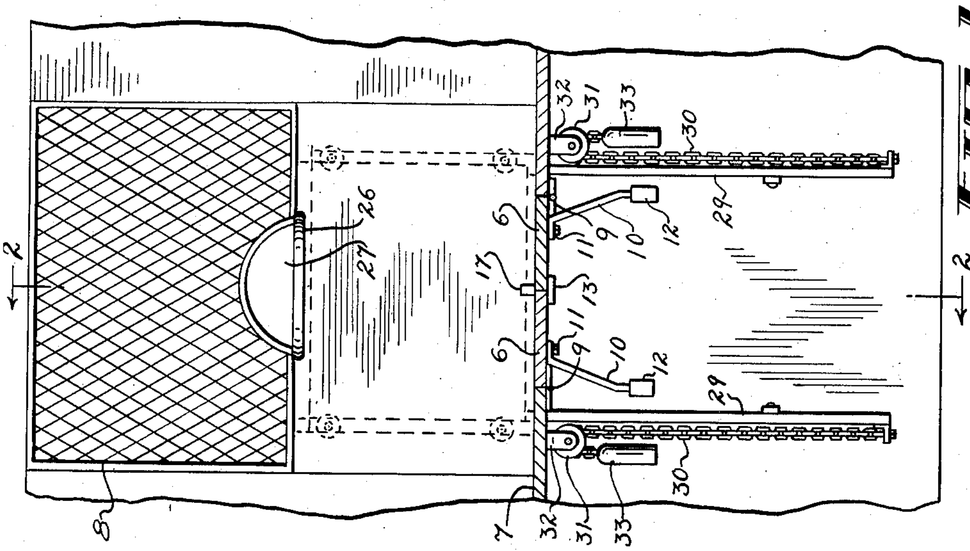

FIG. 1

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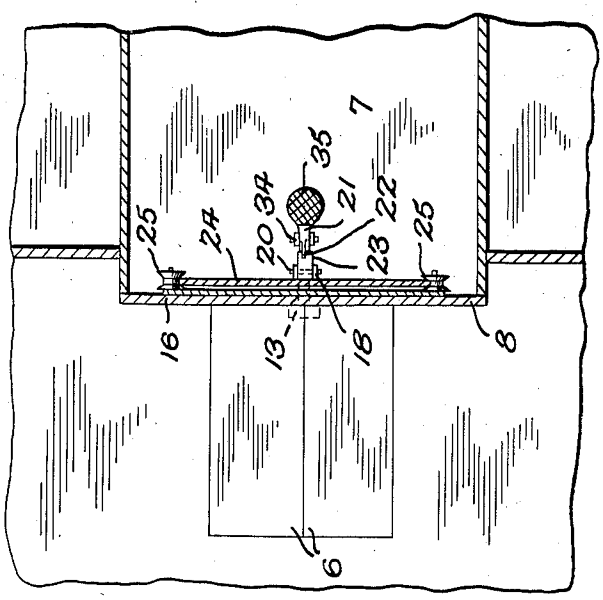

Fig. 3

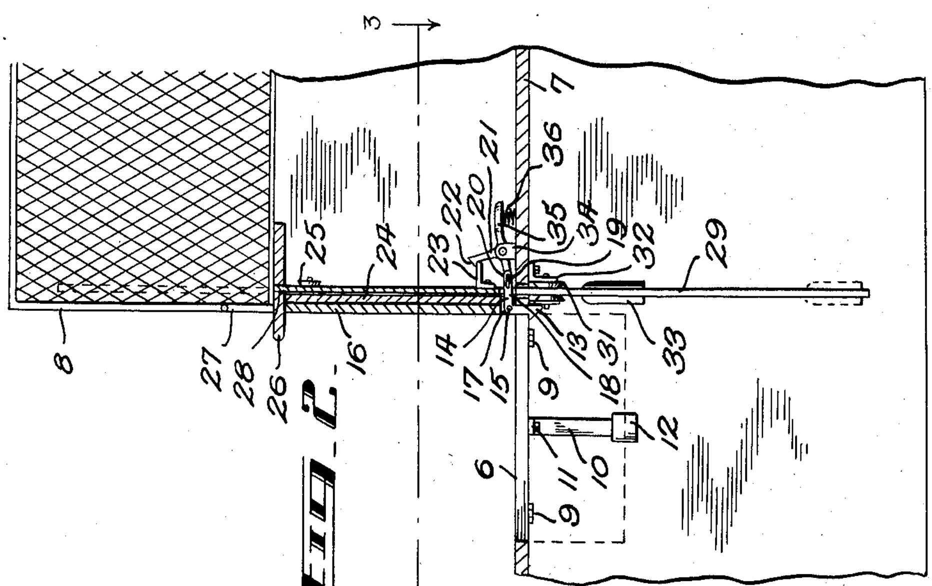

Fig. 2

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UNITED STATES PATENT OFFICE

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BANKER'S PROTECTIVE APPLIANCE

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2 Claims. (Cl. 20—1.01)

This present invention relates to certain new and useful improvements in a banker's protective appliance and has for its primary object the provision of a trap by means of which the robber is automatically caught and at the same time the bank official is protected.

Another object of the invention resides in the provision of a banker's protective appliance of the character stated which is constructed in such a manner that the burglar will be dropped through the floor from in front of the cage while at the same instant a protecting plate is raised automatically in front of the bank official in the cage.

A further object of the invention resides in the provision of a banker's protective appliance of the character stated which is operated by a small pedal within the cage which serves to automatically release all of the operative parts of the structure with one operation.

A still further object of the invention resides in the provision of a banker's protective appliance of the character stated which is composed of the minimum number of parts of simple and inexpensive construction and operation and which will serve to effectively protect and defend the bank official attacked, from a person in front of the cage.

A still further object of the invention resides in the provision of a bank robbers' trap of the character stated which is entirely practical and highly efficient in operation and may be released for operation by the bank official even at the same time he is forced to raise his hands or obey other orders of the would-be robber.

To the accomplishment of these and related objects as shall become apparent as the description proceeds my invention resides in the construction, combination and arrangement of parts as shall be hereinafter more fully described, illustrated in the accompanying drawings and pointed out in the claims hereunto appended.

The invention will be best understood and can be more clearly described when reference is had to the drawings, forming a part of this disclosure, wherein like characters indicate like parts throughout the several views.

In the drawings:—

Figure 1 is a front elevation of a bank official's cage and the mechanism of the present invention beneath the same under normal conditions;

Figure 2 is a vertical section, taken substantially on the plane of line 2—2 of Figure 1, looking in the direction indicated by the arrows;

Figure 3 is a horizontal transverse section, taken substantially on the plane of line 3—3 of Figure 2, looking in the direction indicated by the arrows; and

Figure 4 is a view similar to Figure 1, showing all of the operative parts of the bank robbers' trap, and operation thereof.

Referring more in detail to the drawings, it is to be noted that a pair of trap doors or drop doors 6 are provided in the floor 7, immediately in front of the bank official's cage 8. The trap doors or drop doors 6 are hingedly mounted to the underface of the floor 7, at the outer longitudinal edges of the doors 6 by appropriate hinges 9. Each door 6, has an angularly extended bar 10 mounted by a turned end 11 on its underface and carrying a weight 12 at its free end which is adapted to engage the underside of the floor 7 when the doors 6 swing downwardly to open position. The weights 12, however, tend to normally swing the doors 6 on their hinges 9 towards closed position. A latch 13 is normally engaged with the underface of the doors 6, at the inner ends thereof to firmly hold the doors 6 in their normal horizontal or closed position. The latch 13 constitutes the depending arm of a bell crank 14 which is fulcrumed at its central portion on the fulcrum pin 15 supported in the lower solid portion 16 of the front of the teller's cage 8, a pocket 17 being provided in said lower portion 16 of the front wall for the accommodation of the latch 13. The horizontal arm 18 of this bell crank extends into the front of the cage 8 for the teller or other bank official and has an elongated longitudinal slot 19 in which operates the pin 20 carried on one end of the forked member 21. The other end or arm of the forked member 21 is in the form of a latch finger 22 which is normally engaged over the plate 23 projecting laterally from the vertically movable protecting plate 24 which works vertically between pairs of guide rollers 25 engaging the vertical edges of said protecting plate 24, beneath the shelf 26 for the cage window 27 and through a slot 28 of which shelf 26 the protecting plate 24 operates. A pair of legs 29 depend from the lower edge of the protecting plate 24, at the corners thereof and through the floor 7, within the cage 8. A chain or cable 30 is secured by its lower end to the lower end of a leg 29 and passes over a guide pulley 31 carried in a bracket 32 depending from the underside of the floor 7 to connect with a heavy weight 33 on the remaining end of the chain or cable 30 to counter-balance or over-balance the weight of the protecting plate 24 and cause a quick and positive raising of the same through the shelf 26 and between the upper or greatest portion of the front wall of the cage and the official within the cage, when the plate 24 is released. The forked member 21 is fulcrumed in a suitable bracket support 34 on the floor of the cage and has a pedal extension 35 which is resiliently retained in spaced relation with the floor of the cage by a spring 36 beneath the pedal extension 35. Thus, the forked member 21 is normally held in functioning position so as to retain the trap doors or drop doors 6 in closed position by means of the latch 13 while the latch finger 22 remains in engagement with the plate 23 and thus holds the protecting plate 24 in its lowermost and ineffective position. As soon as the bank official within the cage presses down on the pedal extension 35, however, the forked member 21 is operated to swing the latch 13 from engagement with the trap doors or drop doors 6 and permit the latter to function by opening and dropping below the floor any person or persons standing thereon. At the same instant, the latch finger 22 moves from engagement with the plate 23 and permits the weight 33 to drop and thus raise the plate 24 through the shelf 26 to its functioning position for protecting and shielding the bank official in the cage. It is to be understood that a chain or cable 30, guide pulley 31 and weights 33 are provided on each side of the protecting plate 24 and below the same, so that both of the legs 29 are raised simultaneously. When the doors 6 are closed and the protecting plate 24 is returned to its lowermost position, the spring 36 will serve to again automatically move the forked member 21 to its operative position with the latch finger 22 engaged with the plate 23 of the protecting plate 24 and at the same time bring the latch 13 into operative engagement with the underface of the doors 6, thus again securely retaining all of the operative members in their normal set position.

As the construction of the device has thus been described in detail, brief reference is now had to its use and modus operandi: All of the operative parts are concealed and a mat or the like may be placed over the door 6 in front of the bank official's cage 8 or other provision made for concealing or practically concealing the doors 6 in the floor 7. When the official within the cage 8 is threatened by a party standing on the doors 6 in front of the cage window 27, it is simply necessary for the official to press upon the pedal extension 35 and thus operate the forked member 21 to release the trap door or drop door 6 and at the same time also release the protecting plate 24 so as to permit the weight 33 to raise the protecting plate 24 in front of the bank official and thus protect him from his antagonizer. The doors 6 and protecting plate 24 will operate instantly when released and the protecting plate 24 will remain in its uppermost position until returned against the action of the weights 33. The weights 12, will however, tend to return the doors 6 toward their normal horizontal or closed position, ready to be again caught by the latch 13. This trap may be operated very readily by the bank official within the cage 8 without requiring movement of the hand or the body and thus attracting attention of or disobeying the orders of any would-be robber.

Though only a simple form of the invention has been illustrated and described and that form operating on but one side,—that is to say the front,—of the cage; it is perfectly obvious and within the intended boundaries of the invention that the elements of protection set forth as applying to only one side of the cage may be duplicated on two or more sides as found desirable and that such changes or rearranging of elements as necessitate the exercise of mere mechanical skill may be made.

From the foregoing description taken in connection with the accompanying drawings, it will be manifest that a banker's protective appliance is provided that will fulfill all the necessary requirements of such a device but as many changes could be made in the above description and many apparently widely different embodiments of my invention may be constructed within the scope of the appended claims without departing from the spirit or scope thereof, it is intended that all matters contained in the said accompanying specification and drawings shall be interpreted as illustrative and not in a limited sense.

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

1. A banker's protective appliance including a bell crank member having a depending and a horizontal arm fulcrumed in the lower portion of the front wall of a bank official's cage; a latch member formed on the depending arm of said bell crank member and engaging beneath drop doors in the floor in front of the cage; the horizontal arm of said bell crank member being longitudinally slotted and extended into the bottom of the cage; a releasing pedal fulcrumed on the floor within said cage loosely connected to the slotted arm of said bell crank member; and means to resiliently maintain said releasing pedal in unoperated position.

2. A banker's protective appliance including a bell crank member having a depending arm and a horizontal arm and fulcrumed in the lower portion of the front wall of a bank official's cage; a latch member formed on the depending arm of said bell crank member and engaging beneath drop doors in the floor in front of the cage; the horizontal arm of said bell crank member being longitudinally slotted and extended into the bottom of the cage; a releasing pedal fulcrumed on the floor within said cage; and having a pair of diverging arms; one of said arms extending horizontally and being loosely connected at its free end to the slotted arm of said bell crank member; the other arm of said releasing pedal extending vertically and engaging a means to limit the upward movement of said pedal; and a coil spring compressed between the underside of said releasing pedal and the floor to resiliently maintain said releasing pedal in elevated position with its vertically extending arm in engagement with said means.

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