July 5, 1927. 1,635,121

A. GOODMAN

ANTIHOLDUP DEVICE

Filed March 3, 1926 2 Sheets-Sheet 1

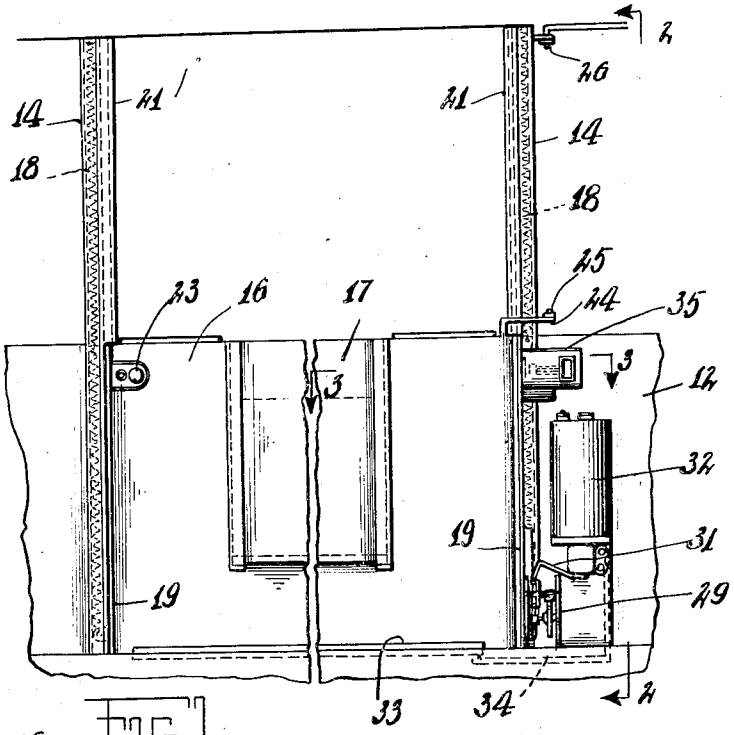


FIG. 1

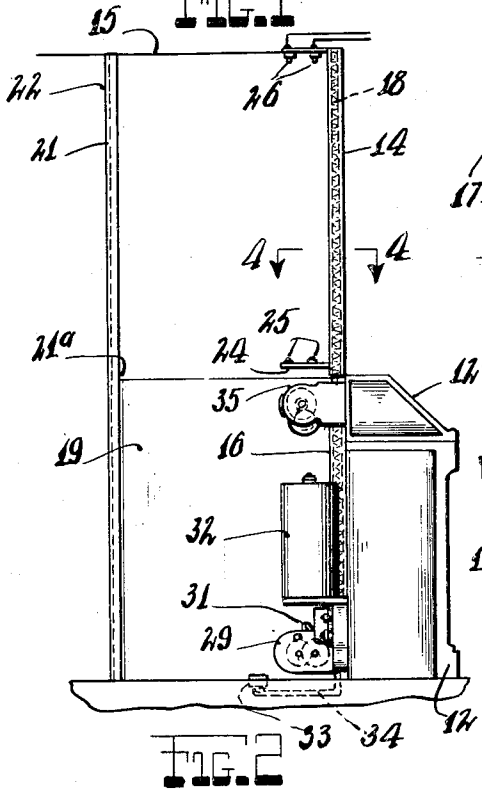


FIG. 2

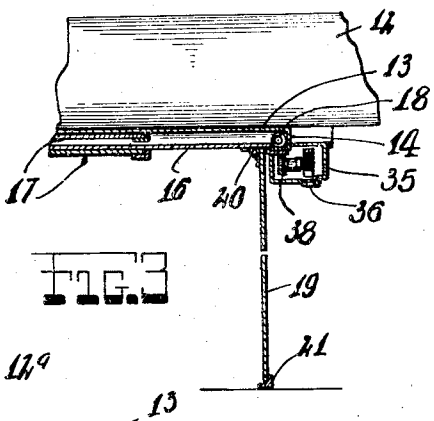


FIG. 3

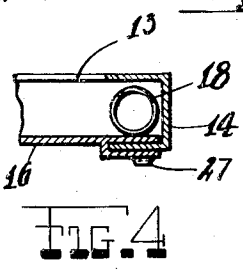


FIG. 4

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A. GOODMAN

ANTIHOLDUP DEVICE

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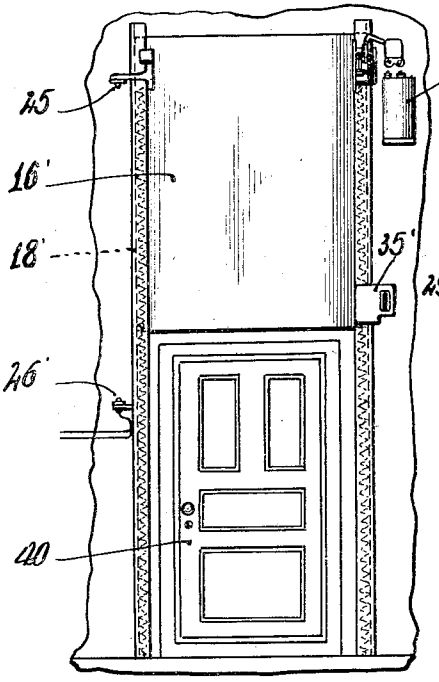


FIG. 5.

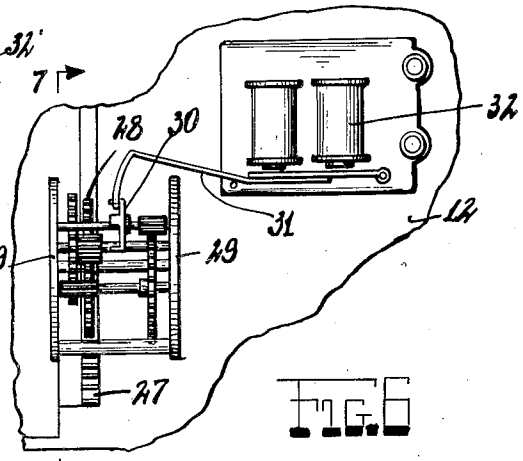


FIG. 6

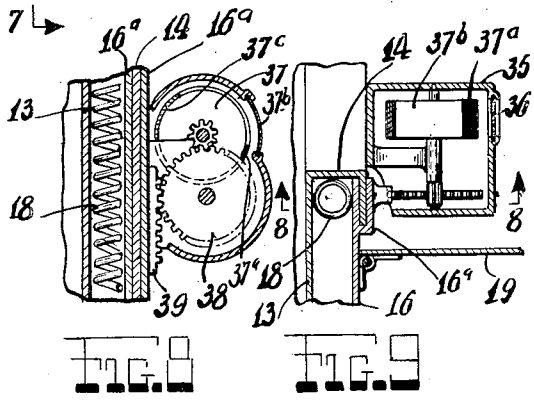


FIG. 8 FIG. 9

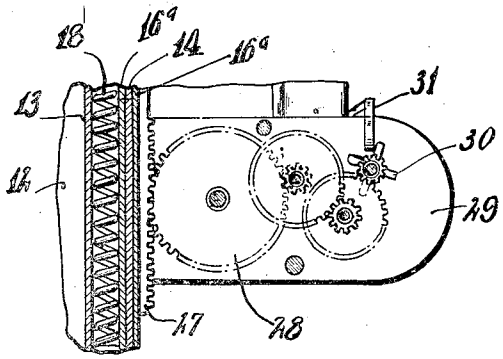


FIG. 7

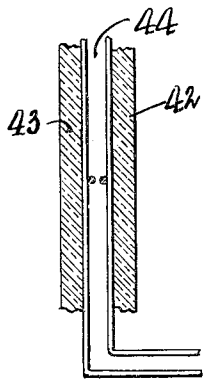


FIG. 10

INVENTOR.
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Patented July 5, 1927. 1,635,121

UNITED STATES PATENT OFFICE.

AARON GOODMAN, OF NEW YORK, N. Y.

ANTIHOLDUP DEVICE.

Application filed March 3, 1926. Serial No. 92,095.

This invention relates to a device affording protection from burglars, and has for its object the provision of an armor plate which may be automatically inserted between the burglar, and the protected, upon the closing of an electric switch by the latter.

Customarily, burglars, and hold-up men upon entering a store, such as a jewelry store, are in front of the counter, while the clerk is stationed behind the counter. The hold-up man may draw a gun, and command the clerk to put his hands up, and threaten to shoot. The clerk raises his hands, and at the same time steps on a switch, whereupon an armor plate swiftly moves up from the counter, and shields the clerk from the bandit's gun.

For further comprehension of the invention, and of the objects and advantages thereof, reference will be had to the following description, and accompanying drawings, and to the appended claims in which the various novel features of the invention are more particularly set forth.

Fig. 1 of the drawing shows a fragmentary rear elevational view of a counter with the invention embodied thereto.

Fig. 2 shows a side elevational view taken on the line 2—2 of Fig. 1.

Fig. 3 shows a fragmentary horizontal sectional view taken on the line 3—3 of Fig. 1.

Fig. 4 shows a fragmentary horizontal sectional view taken on the line 4—4 of Fig. 2.

Fig. 5 shows a fragmentary rear elevational view of a wall with a door, and the invention embodied thereto.

Fig. 6 shows a fragmentary portion of the device, illustrating to an enlarged scale the armor releasing mechanism.

Fig. 7 shows a fragmentary vertical sectional view taken on the line 7—7 of Fig. 6.

Fig. 8 shows a fragmentary sectional view taken on the line 8—8 of Fig. 9.

Fig. 9 shows on an enlarged scale, a fragmentary portion of the indicating device, as seen on a small scale in Fig. 3.

Fig. 10, shows a fragmentary sectional view of a glass window to which the invention may be applied.

Referring to the drawing, the numeral 12 indicates, generally a counter which may have a display case 12^a on the top thereof, and behind which a clerk stands when attending a customer. The rear of the counter is provided with a stationary armor plate 13, formed with side channels 14 which project to the ceiling 15 of the store, or showroom, and a movable armor plate 16, formed with end forked portions 16^a engaging one leg of the channels 14, to guide the armor plate 16 in an upward movement. To facilitate entrance to the rear of the counter, the armor plates 13, and 16 are constructed with slidable doors 17. Springs 18 extend within the channels 14, and have their upper ends fastened to the ceiling 15, and the lower ends to the bottom of the movable armor plate 16, normally tending to snap the said armor plate upwards to the ceiling, and thus separate the clerk in back of the counter from a bandit in front. To shield the clerk from the sides, door armor plates 19 are hingedly connected, as at 20, to the front armor plate 16, and while the plate 16 is in a lower position the said doors are closable to allow passage behind the counter, but the outer edges of the doors are engageable in guides 21, having a lower open side 21^a, and fastened to the store wall 22, extending from the floor to the ceiling, so that in the raised position the door plates are rigidly held. The lock 23 automatically locks the armor in the upward position, to prevent manual pushing down of the armor from the front of the counter. Support 24 from the plate 16, carries a pair of contacts 25, aligned with ceiling contacts 26, so that an electric circuit to an exterior alarm will be complete when the armor plate 16 is in the raised position.

The device is provided with means to normally retain the armor plate 16 in lowered position, and manually controlled means to release the holding means, and allow the springs 18 to raise the plate. The plate 16, on the exterior of the forked portion 16^a, being provided with rack teeth 27 meshable with gear 28, of a train of gears supported by shafts journaled in the body plates 29, supported from a stationary part of the rear of counter 12. The last of the train of gears has an escapement wheel 30 fixed to its shaft, and engaged by an escapement arm 31, operated by an electromagnet 32, controlled by a switch operated by the clerk behind the counter by stepping on the switch board 33, which has the necessary wires 34 leading to the electromagnet. Stepping on

the switch board 33 will not result in an immediate release of the armor plate 16, but a certain time must elapse from the freeing of the escapement wheel 30, the turning of the train of gears, till the rack 27 is released from gear 28. The store clerk may readily know the position of release, by observing the indicator 35 having an observation window 36, an indicating wheel 37 aligned with said window, and having portions of different colors, such as a black portion 37^a, white 37^b, and red 37^c. The indicating wheel being connected by a train of gears 38 to a rack 39 integral with the forked portion of armor plate 16. The clerk suspecting a customer as being a hold-up man, may with his foot tap the switch bar 33 until the indicator shows that the armor plate will be released upon the next tap.

The modification shown in Fig. 5 illustrates the device mounted above a door 40, to entrap the burglar. The slidable armor plate 16′, has the necessary co-acting spring 18′, the alarm connections 25′, and 26′, the electromagnet release 32′, and the indicator 35′. In Fig. 10, a window of glass, may be formed of two plates 42, and 43 allowing a central passage 44 for the armor plate, so as to cut off the window as an escaping medium for a burglar.

While I have illustrated and described my invention with some degree of particularity, I realize that in practice various alterations therein may be made, I therefore reserve the right and privilege of changing the form of the details of construction or otherwise altering the arrangement of the correlated parts without departing from the spirit or the scope of the appended claims.

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

1. A device of the class described, comprising an armor plate in a hidden position, springs to project the said plate to a shielding position, means for normally retaining said armor plate in the hidden position, escapement mechanism for permitting a partial projection of said armor plate to position the same in readiness for a later complete projection, manually controlled means for controlling said escapement mechanism and for releasing the said retaining means, and indicating means for disclosing the position of the partial projection of said armor plate.

2. A device of the class described, comprising an armor plate in a hidden position, guides extending from the said hidden position, springs to project the said plate to a shielding position determined by said guides, means for normally retaining said armor plate in the hidden position, escapement mechanism for positioning the plate in readiness for projection, manually controlled means to release the said retaining means, and indicating means for disclosing the position of the said releasing means.

3. A device of the class described, comprising an armor plate in a hidden position, guides extending from the said hidden position, springs to project the said plate to a shielding position determined by said guides, means for normally retaining said armor plate in the hidden position, manually controlled means to release the said retaining means, an alarm connection, closed when said armor plate is in the shielding position, and indicating means informing the position of the said releasing means.

4. The combination, in a device of the class described, of an armor plate having rack teeth on a face thereof, engageable with a gear from a train of gears, the last gear of said train of gears being fixed to a shaft provided with an escapement wheel, engaged by an escapement arm, controlled by an electromagnet, operated by a manual switch, whereby said armor plate may be retained in position, or manually released by the operation of said switch.

5. The combination, in a device of the class described, of an armor plate having rack teeth on a face thereof, engageable with a gear from a train of gears, the last of said train of gears being fixed to a shaft provided with an indicating wheel, whose indications may be observed through a window, in a casing housing said wheel, whereby the relative positions of the said armor plate in respect to a holding, and releasing device, may be known.

In testimony whereof I have affixed my signature.

AARON GOODMAN.