B. B. SWANSON.

SAFETY BARRIER FOR WINDOWS.

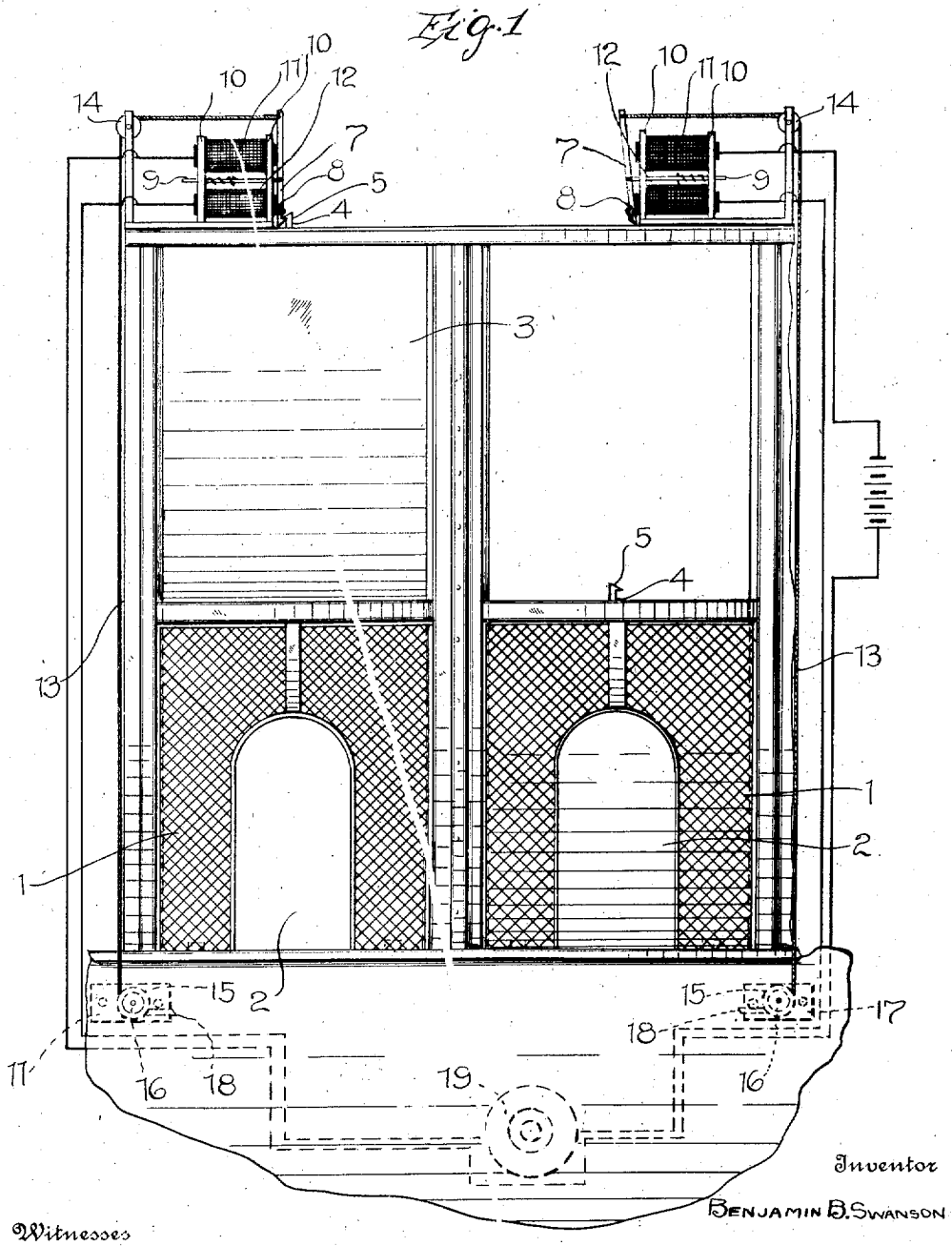
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1,082,368.

Patented Dec. 23, 1913.

3 SHEETS—SHEET 1.

Fig. 1



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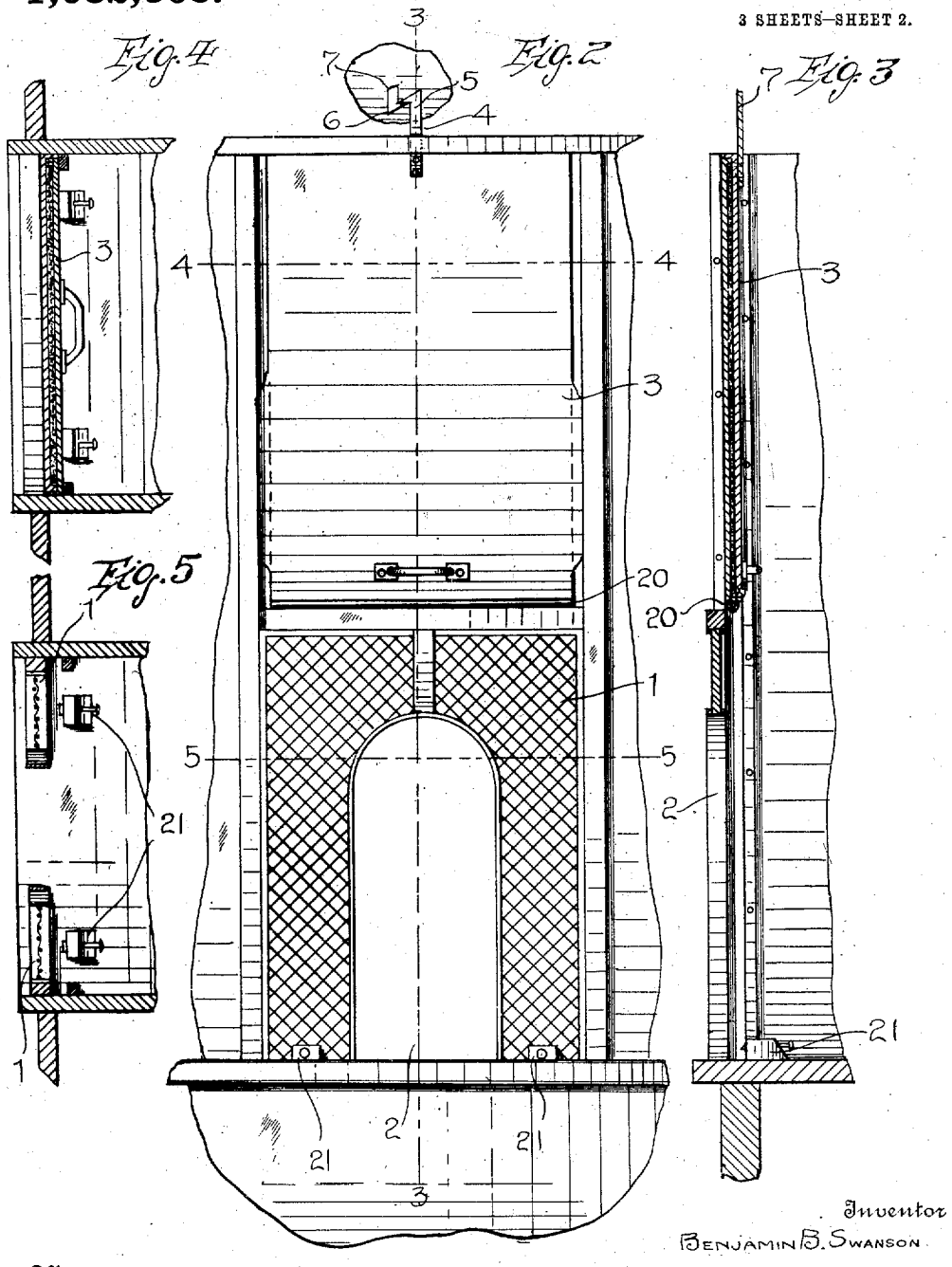
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3 SHEETS—SHEET 2.



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3 SHEETS—SHEET 3.

Fig. 6

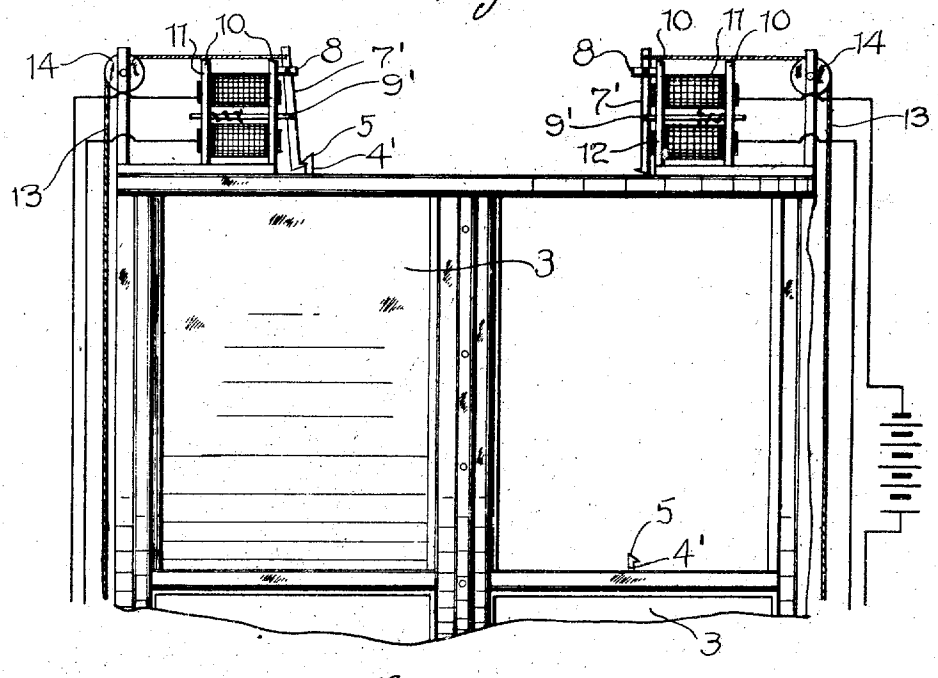
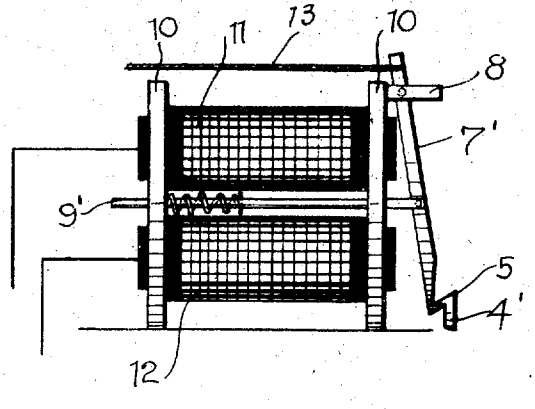


Fig. 7



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UNITED STATES PATENT OFFICE.

BENJAMIN B. SWANSON, OF PORTAGE, PENNSYLVANIA.

SAFETY-BARRIER FOR WINDOWS.

1,082,368. Specification of Letters Patent. Patented Dec. 23, 1913.

Application filed March 12, 1913. Serial No. 753,876.

To all whom it may concern:

Be it known that I, BENJAMIN B. SWANSON, a citizen of the United States, residing at Portage, in the county of Cambria and State of Pennsylvania, have invented certain new and useful Improvements in Safety-Barriers for Windows, of which the following is a specification, reference being had to the accompanying drawings.

It is well known, and particularly to those who are engaged or interested in banking or any similar vocation where it is necessary to keep near at hand at a window of a booth or similar inclosure large sums of money to be passed out to patrons, employees, or others, that the teller or other window attendant is constantly exposed to danger or violence at the hands of some evilly disposed person endeavoring to rob, due to the very fact that under ordinary circumstances, such attendant is practically helpless and in full view of the would be thief, whereby if a revolver be drawn, he would have practically no chance of defending himself or of protecting himself except by dodging underneath the counter, in which event, however, the coin, currency, or the like, would be left unguarded within the convenient reach of the thief who could, as has heretofore often happened, in such emergencies, quickly made off with the booty.

With a knowledge of these conditions, my invention has for its primary object, simple and efficient means whereby the teller or other window attendant may instantly, should the contingency before referred to arise, release a door or slide which will automatically close over the window and form a barrier between the thief and the counter behind the window, while at the same time, such barrier being preferably bullet proof, would protect the person of the attendant until assistance could be summoned.

A further object of the invention is a device of this character wherein the door or slide which in operation constitutes a barrier, may be easily maintained in an elevated inoperative position so long as not required for use, and easily released from its holding means when necessary, whereby it will drop by gravity across the window or similar opening with the advantageous results above mentioned.

A further object of this invention is the provision of an improved device of this type in which the door is slidably maintained in its upper inoperative position by an energized magnet which is included in an electric circuit, and the switch of which is within convenient reach of the operator so that when an emergency is at hand, the actuation of said switch may instantly open the circuit and deënergize the magnet, and thereby permitting the releasing means to act so as to allow the door to drop.

With these and other objects in view as will more fully appear as the description proceeds, the invention consists in certain constructions, arrangements, and combinations of the parts that I shall hereinafter more fully describe and claim.

For a full understanding of the invention, reference is to be had to the following description and accompanying drawings, in which—

Figure 1 is an elevation of two windows equipped with my improved safety device, looking inwardly or from the outside. Fig. 2 is a similar view of one window looking at the inner face thereof. Fig. 3 is a longitudinal section on the line 3—3 of Fig. 2, and Figs. 4 and 5 are sectional views on the lines 4—4 and 5—5 of Fig. 2. Fig. 6 illustrates a modified form of my invention. Fig. 7 is a detail elevation showing the magnet and latch bar which is used in connection with the modified form of my invention.

Corresponding and like parts are referred to in the following description and designated in all of the views of the accompanying drawings by like reference characters.

Referring to figures from 1 to 5 inclusive of the drawings, the numeral 1 designates a portion of the front of a booth or similar inclosure designed, as is customary, to separate the patrons or customers of an institution such as a bank, from the teller or other employees or officials, and the money which they handle, said front being provided, as is usual in such cases, with a window, as it is called, the same being normally open or unobstructed, at least to an extent sufficient to permit the hand of any one desiring to do so, to reach in through the window, and grasp the currency or the like stacked upon the counter at the rear thereof.

In carrying out my invention, I provide a door or slide 3 which is preferably formed

of sheet steel plates with pressed cork interposed between the steel plates whereby the structure is made light in weight but at the same time bullet proof. This slide 3 is mounted for a vertical movement, in suitable guides forming part of the front of the booth or inclosure, and in its lowermost position is designed to constitute a barrier extending across the window 2 and its surrounding margin, so as to practically shut off a relatively large area, when required and thereby protect the window attendant as well as guard the money which he handles.

The door or slide 3 is provided at its upper edge with an upwardly projecting keeper 4 which is formed at its extremity with a beveled hook 5, designed for engagement with a shoulder 6 formed on the lower end of a latch 7. This trigger or latch is pivotally mounted intermediate of its ends as at 8, on any suitable support, and is pivotally connected above its pivotal point 8 with a rod 9 which is mounted for a lateral movement in and through brackets 10. An expansion spring 11 is coiled around the rod 9 and exerts a tension thereon to move the rod in a direction to rock or swing the latch 7 out of engagement with the hook 5 of the keeper 4.

The brackets 10 support an electromagnet 12 which is composed of two coils in the present instance although it is to be understood that my invention is not limited in this regard. This magnet is designed to hold to it, the upper arm of the latch 7 which constitutes an armature for the magnet, so long as the circuit in which said magnet is included is closed, but when the circuit is open as will be more fully described, and the magnet deënergized, the springs 11 will be permitted to act to swing the latch 7 in a direction to free it from the keeper 4 and thereupon the door or slide 3 will drop by gravity across the window 2 and form an effective barrier, as hereinbefore set forth.

In order to move the latch 7 to its operative position for engagement with the keeper 4, while the circuit of the electromagnet 12 is closed, I provide a preferably steel cord or cable 13 which is connected at one end to the upper end of the latch and which passes around and down over a pulley 14 located at the required point and thence downward to a preferably grooved disk 15 to which it is secured, and around which it extends. The disk 15 is mounted to turn on a centrally disposed axis 16 at the rear side of a plate 17 and is provided with any desired form of handle 18, whereby it may be easily manipulated. It will thus be understood that when the circuit is closed, the operator may by grasping the handle 18, turn the disk 15 in a direction to pull upon the cable 13 and thereby swing the latch 17 into a substantially vertical position, whereupon the door or slide 3 may be raised and the hook 5 of the keeper 4 will be engaged by the shoulder 6 with the latch so as to hold the door in its raised inoperative position so long as the circuit remains closed, but it is to be understood that my invention is not limited to any particular arrangement of the electric circuits or manner of closing and opening the same and that furthermore, these circuits may be so arranged that any desired number of doors may be operated simultaneously as well as any door operated independently of all of the others.

Preferably the lower edge of the door is provided with a buffer strip 20 so as to reduce the shock when the door drops and the door may be held in lowered position after it is dropped, by means of latches 21 of any desired construction, so that after the door has once dropped, it can not again be raised from the outside.

From the foregoing description, in connection with the accompanying drawings, the operation of my improved safety device will be apparent. In the practical use of the device, the circuit for the electromagnet 12 is closed by the switch 19 and the magnet thereby energized, the handle 18 is then manipulated so as to draw the latch 7 over against the magnet which will hold it in such position and the door or slide 3 is raised so as to cause the keeper 4 to be engaged with the shoulder 6 of the latch. The parts will remain in this position so long as the circuit of the electromagnet is closed, and whenever the exigency arises it is only necessary for the window attendant to actuate the switch and open the circuit whereupon the electromagnet will be deënergized and the spring 11 will be permitted to act so as to disengage the latch 7 from the keeper 4, the door immediately dropping and shielding the attendant, and frustrating any attempt to steal his cash.

Referring more particularly to Figs. 6 and 7 of the drawings, the latch 7′ is shown held in engagement with the catch 4′, by the rod 9′, which is equipped with an expansive spring, as in the other figures. The circuit in this instance is normally open and obviously when the same is closed by the switch such as hereinbefore referred to, the latch will be drawn to the magnet and away from the catch 4′, thus releasing the door or slide 1′ and permitting it to fall as previously described.

While the accompanying drawings illustrate what I believe to be the preferred embodiment of my invention, it is to be understood that the invention is not limited thereto, but that various changes in the construction, arrangements and proportions of the parts may be made without departing from the scope of the invention as defined in the appended claims.

What I claim is:—

1. The combination with a window of the character described, of a vertically movable gravity actuated door adapted to close the window opening, said door being provided with a keeper, a latch movable into engagement with the keeper and adapted to hold the door in a raised position, an electromagnet tending to move the latch relative to said keeper, an electric circuit in which the electromagnet is included, a pull cord connected to said latch, and a handle connected to one end of said pull cord, whereby the same may be drawn in a direction to move the latch into engagement with the keeper.

2. The combination with a window of the character described, of a vertically movable gravity actuated door adapted to close the window opening, said door being provided with a keeper, a latch movable into engagement with the keeper and adapted to hold the door in a raised position, supporting brackets, an electromagnet mounted in said brackets and adapted to move the latch relative to said keeper, a spring actuated rod movable through said brackets and pivotally connected at one end to said latch, and tending to move the latch away from said keeper, and an electric circuit in which said electromagnet is included.

3. The combination with a window of the character described, of a vertically movable gravity actuated door adapted to close the window opening, said door being provided with a keeper, a latch movable into engagement with the keeper and adapted to hold the door in a raised position, an electromagnet tending to move the latch relative to said keeper, the latch tending to move in a direction to release the keeper upon the deënergization of the electromagnet, an electric circuit in which the electromagnet is included, a pull cord connected to said latch, and a handle connected to one end of the pull cord, whereby the same may be drawn in a direction to move the latch toward the electromagnet and into position for engagement with the keeper.

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

BENJAMIN B. SWANSON.

Witnesses:

ALEXANDER WRIGHT,

GEORGE BERKHIMER.