

March 8, 1927.

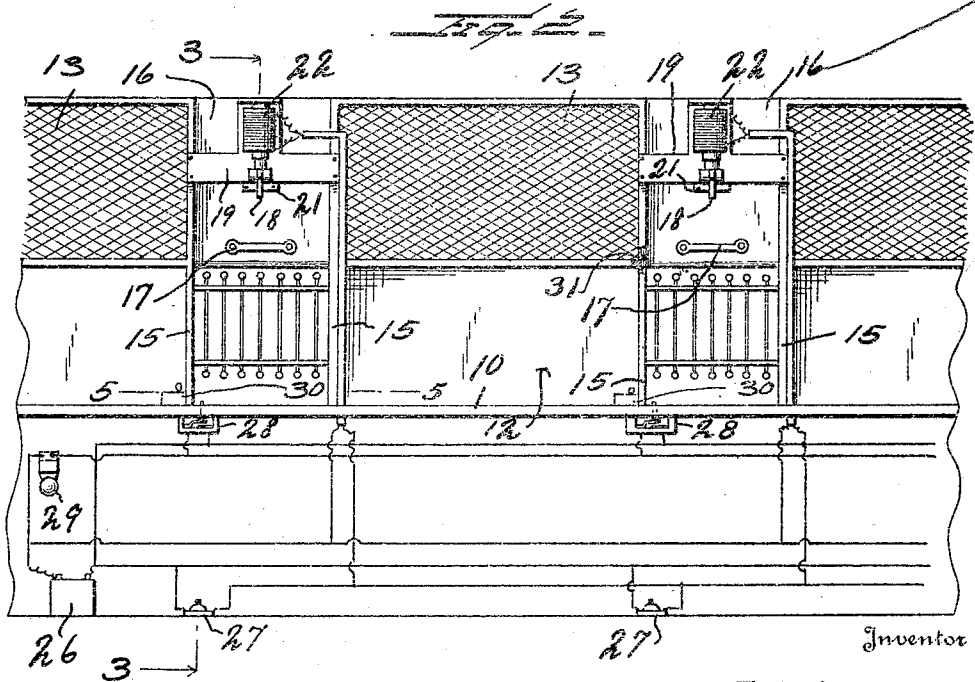
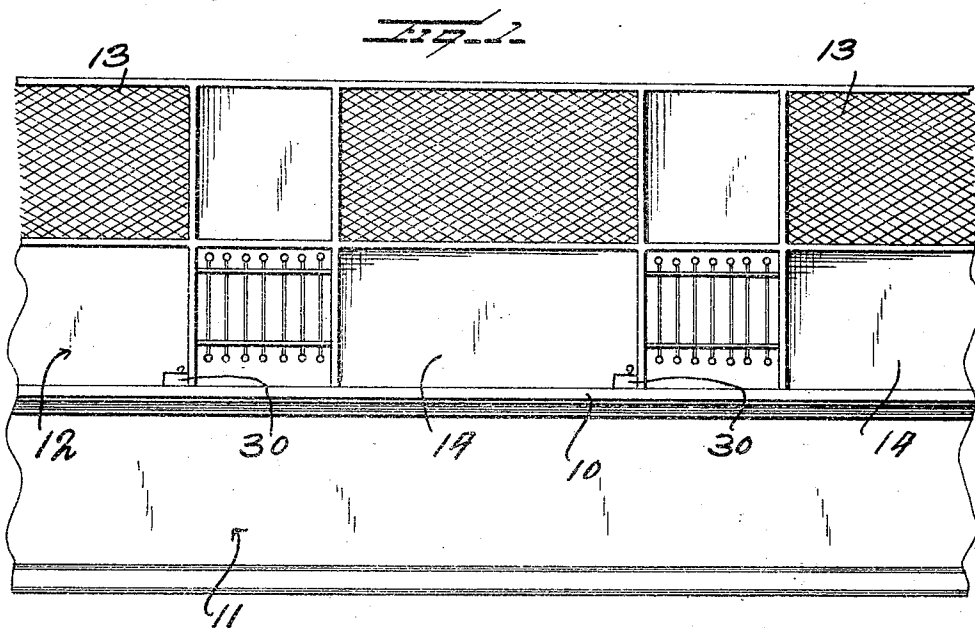
J. C. LUCAS

1,619,982

BANK PROTECTOR

Filed Nov. 26, 1924

2 Sheets-Sheet 1



Inventor

J. C. Lucas

By *Watson E. Coleman*
Attorney

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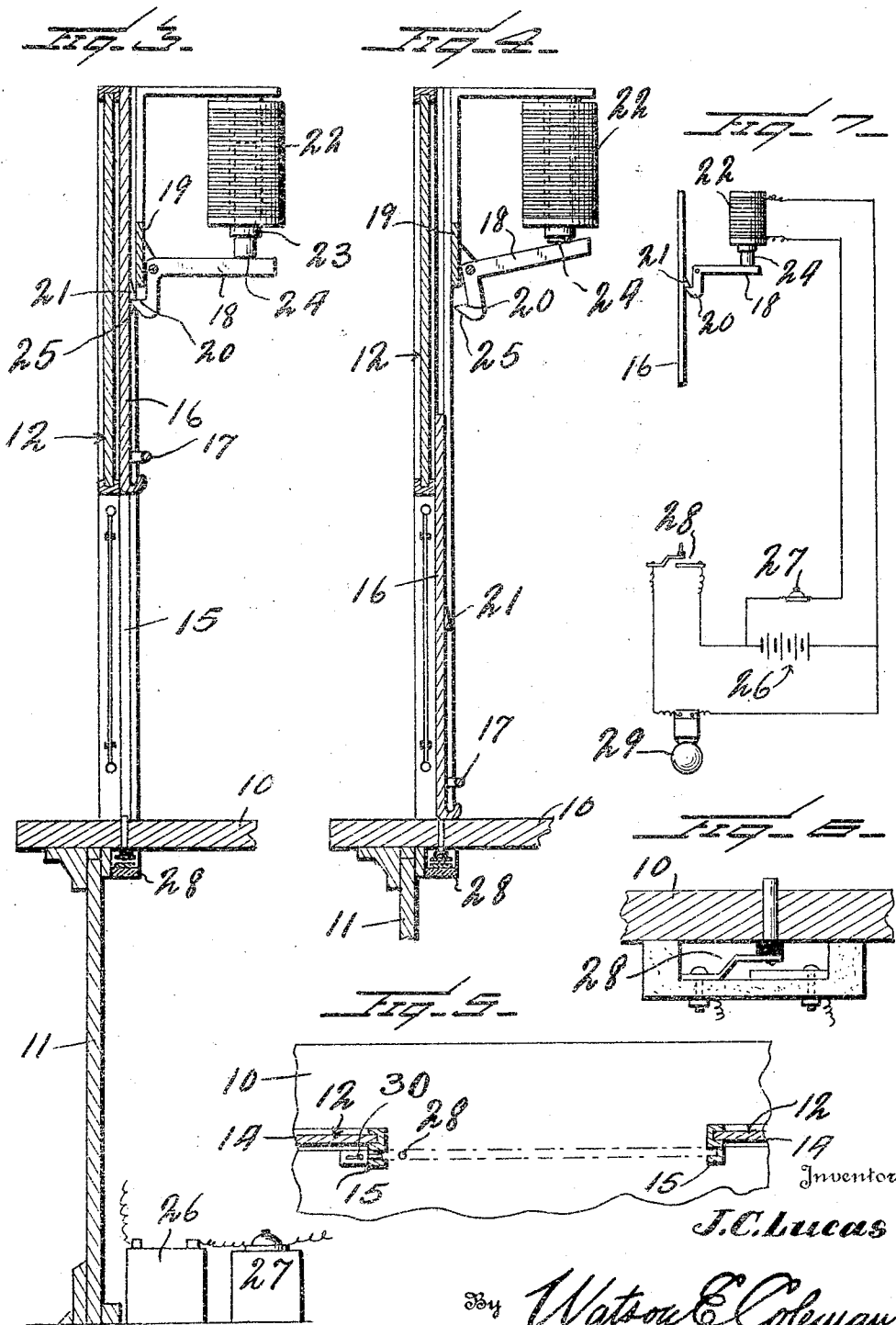
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Inventor

J. C. Lucas

By *Watson E. Coleman*
Attorney

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UNITED STATES PATENT OFFICE.

JOSEPH CLAUD LUCAS, OF BLANDINSVILLE, ILLINOIS.

BANK PROTECTOR.

Application filed November 26, 1924. Serial No. 752,493.

This invention relates to devices for protecting cashiers and other officials at the windows of banks, and particularly to devices of that character in which there is a shield adapted to be shifted into position in front of the cashiers' or paying-tellers' windows or any of the other windows in the bank cages whenever there is danger of an attempt being made to rob the official.

One of the objects of the invention is to provide a device of this character which is very simple, which may be actuated by any official of the bank pressing a convenient button and which so operates that when this button is pressed a shield will drop down in front of the window, this shield being bullet-proof and being made of one sheet of bullet-proof material.

A further object is to provide a device of this character which, when the shield drops, will cause the sounding of an alarm.

A still further object is to provide means to prevent the raising of the shield from the exterior of the window and to provide a shield which is of sufficient length as to entirely protect the official at the window, the partition wall separating the lobby of the bank from the officers of the bank being preferably made of steel or other bullet-proof material for a certain width so as to form a bullet-proof band protecting the officials behind the partition.

Other objects will appear in the course of the following description.

My invention is illustrated in the accompanying drawings, wherein:—

Figure 1 is an exterior elevation of a bank partition provided with my improvements;

Figure 2 is a rear elevation of the construction shown in Figure 1 and showing diagrammatically the wiring whereby the various magnets are operated;

Figure 3 is a vertical sectional view on the line 3—3 of Figure 2, showing the shield raised;

Figure 4 is a like view to Figure 3, showing the magnet energized and the shield lowered;

Figure 5 is a section on the line 5—5 of Figure 2;

Figure 6 is a fragmentary section showing the push button in the sill of the counter;

Figure 7 is a diagrammatic view showing the circuit within which the magnet 22 and the push buttons 27 and 28 are arranged.

Referring to these drawings, 10 designates

the sill of a cashier's window or the window of any other officer such as the paying teller, bookkeeper, receiving teller or the like, and 11 the partition which extends downward from this sill. Above this partition 11 extends a partition 12 which extends upward to the ceiling, the upper part of which partition may be made of grill-work 13 or be solid, as desired. That part of the partition below the grill-work 13 down to the shelf or sill 10 is preferably lined with a three-sixteenths of an inch steel plate 14. The cashier's window is of the usual form but on the inside of this window there are provided guides 15, and sliding in these guides is a relatively heavy shield 16 which may be made also of three-sixteenths of an inch thick steel plate. This window is provided with a handle 17 at its lower end. The window is supported by means of an angular latch 18 which is pivoted upon a supporting bar 19 which extends across and is attached to the guides 15. This angular latch has an outwardly projecting arm which constitutes the armature of an electro-magnet, the depending portion of this lever being formed at its lower end to provide an inwardly projecting latch tooth 20. The weight of the arm 18 urges this latch tooth inward, and mounted upon the shield 16 is a keeper 21 with which the latch tooth is adapted to engage. This keeper is preferably beveled upwardly and inwardly upon its inner surface so that when the window is shifted upward the latch will rise and slip over the keeper and will then drop into place below the keeper, thus holding this shield in its fully raised position.

Mounted upon a bracket carried by the frame in any suitable manner is an electro-magnet 22 having a hollow core 23, and operating within this hollow core 23 is a relatively heavy plunger 24 which has the characteristics of a solenoid which, when the coil is energized, will be drawn up, thus relieving the weight which normally bears upon the arm 18 and thus permitting the shield to drop. Under normal circumstances the weight of the plunger is borne by the arm 18 and, therefore, the downwardly extending latch 20 is forced inward into engagement with the keeper and the shield is supported. The extremity of the catch 20 is slightly beveled at 25 and the keeper 21 is so shallow that when there is no weight upon this arm 18 the shield will drop, that

is the keeper will force the depending arm of the latch outward and as a consequence there is nothing to support the shield.

The electro-magnet is connected in circuit with a battery 26 or any other suitable source of electric energy, and this battery in turn is connected to a floor button 27. Preferably there will be as many shields as there are openings in the partition between the lobby of the bank and the cages or official quarters, and preferably all of the electro-magnets 22 of these several windows will be connected in the same circuit with the battery and with a series of push buttons located at various points as, for instance, adjacent the paying-teller's cage, the receiving-teller's cage, etc. Thus whenever any official of the bank is suspicious of the actions of a person standing in front of his window he simply depresses the most convenient push button, or anyone else may depress a push button which is near to him, thus causing not only the dropping of the shield which is immediately in front of their own window but all of the shields in front of all the other windows. A burglar alarm might also be connected in this circuit so that when any one of the push buttons is depressed, the burglar alarm is sounded, and preferably there will be a contact button 28 disposed on the sill 10 immediately beneath the shield so that when this shield descends it will strike the contact button 28 and cause the closing of a circuit through a burglar alarm 29 in an obvious manner. Preferably also there will be a spring latch 30 on the sill 10 which will engage with the shield when lowered so that when the shield drops, the latch will operate and the shield will be held in its lowered position against any efforts on the part of those outside to lift it, thus fully protecting the bank officials.

It will be seen that this safety shield may be placed inside of the bank cage or railing or exterior to the bank cage and that full protection is afforded the bank employees and the funds by the bullet-proof steel plates disposed behind the partition 12 and between the various windows of the bank. Thus when a window is dropped, a bullet-proof shield is afforded around all bank cages and the funds. Obviously any number of windows can be installed and operated from several of the contact buttons in the bank. Preferably the lower edge of the shield is slightly rolled in order that no serious damage will be done to the hands of employees in case the shield should accidentally drop while the hands are outstretched. A rubber or other buffer might

also be used on the lower edge of the shield. It will be seen that the shield is longer than the window so that when it is down it will extend above the opening of the window, thus thoroughly protecting the official standing behind the window, and it will further be noted that the steel lining to the partition is of a width to reach even above the heads of the officials between the windows, thereby making a complete steel screen between the officials and the public.

Attention is called to the fact that this shield is formed of one piece of material and will be relatively heavy so that as soon as it is released it will drop quickly, and furthermore as it is latched it cannot be lifted by the person attempting to rob the bank, and inasmuch as an alarm is sounded as soon as the shield has completely fallen there is but little likelihood of the robber getting away.

I claim:—

1. In a bank, a partition having a window opening, guides mounted on each side of the window opening, a shield mounted in the guides of the window opening, the shield being of bullet-proof substance and having a length sufficient so that when the shield is dropped it will entirely close the window opening, a latch normally holding said shield in raised position and including an outwardly projecting lever arm, a keeper on the window with which the latch is adapted to engage, a weight normally resting upon said arm, an electro-magnet disposed above the arm and adapted when energized to lift said weight and permit the shield to lift the arm and move downward, and means for energizing the electro-magnet including a circuit having a circuit closer therein.

2. In a construction of the character described, a structure having an opening, a shield adapted to close the opening and urged by gravity toward its closed position, a latch normally holding said shield open and having an outwardly projecting lever arm, a keeper on the window with which the latch is adapted to engage, a weight normally resting upon the lever arm and holding the latch in engagement with the shield, an electro-magnet disposed above the weight and adapted to lift the same when energized to thereby permit the shield to escape the latch and close, and means for energizing the electro-magnet including a circuit breaker.

In testimony whereof I hereunto affix my signature.

JOSEPH CLAUD LUCAS.