

Feb. 14, 1933.

B. NASTROM

1,897,708

BANK PROTECTING DEVICE

Filed Nov. 25, 1930

3 Sheets-Sheet 1

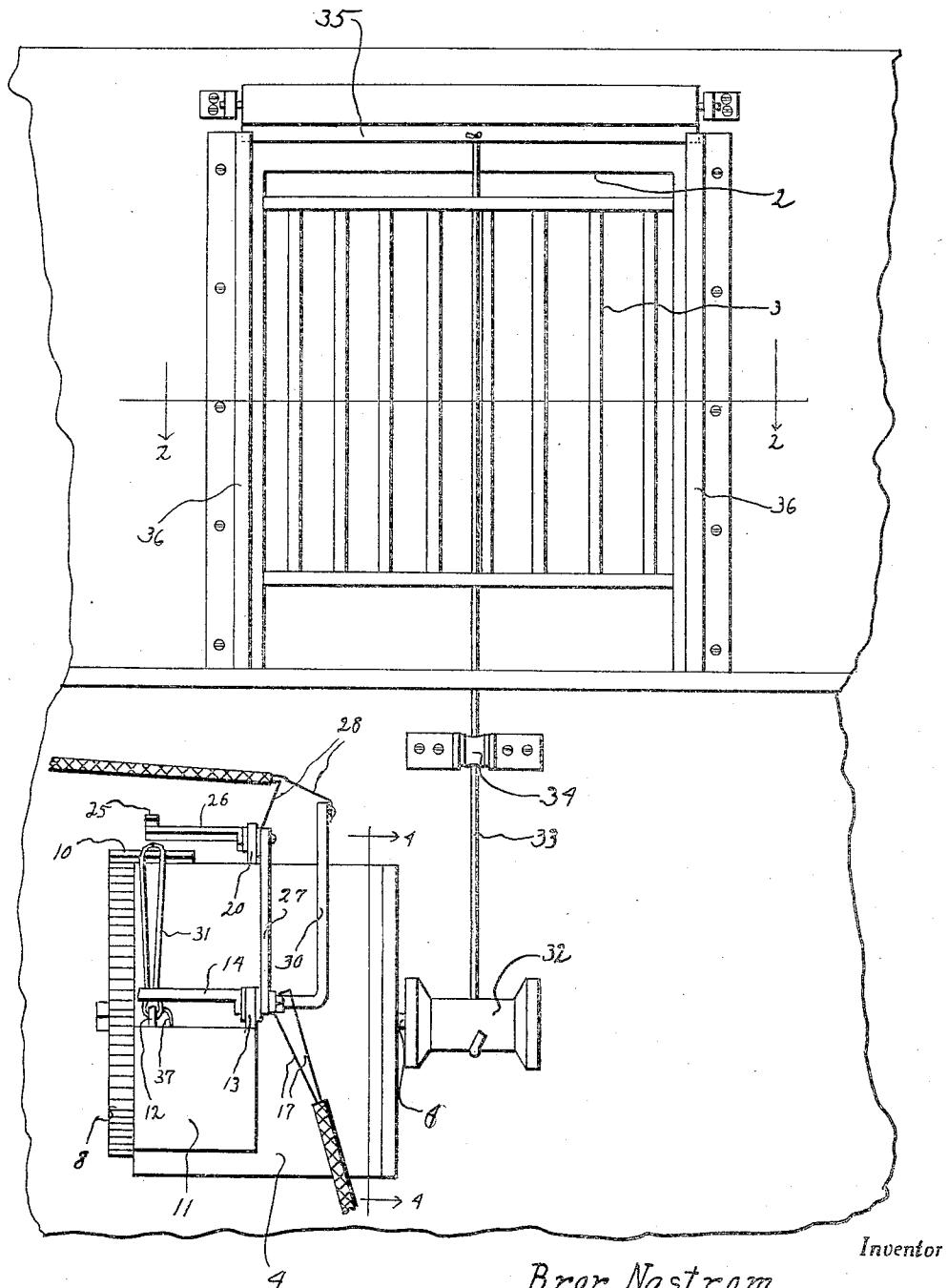


Fig 1

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3 Sheets-Sheet 2

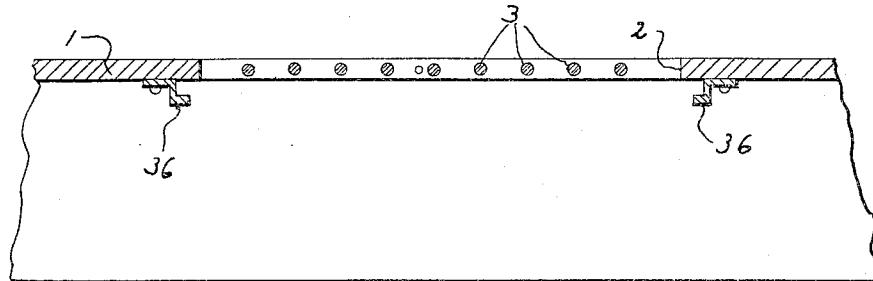


Fig 2

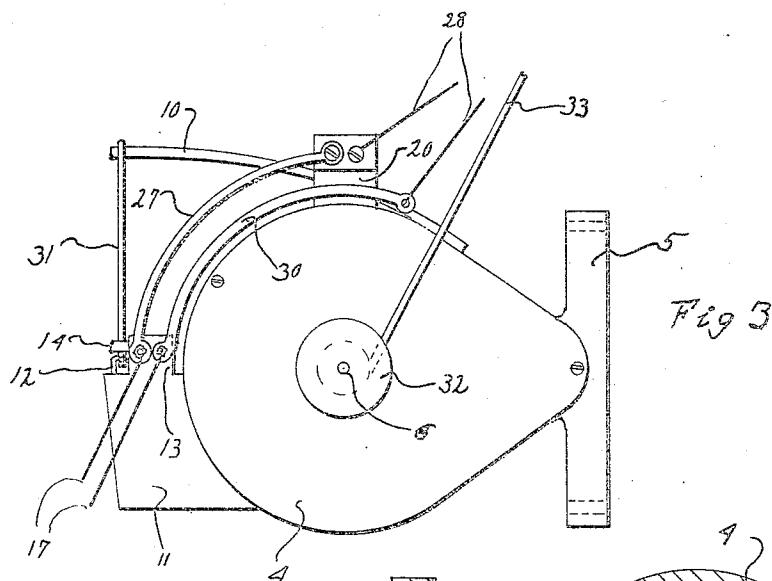


Fig 3

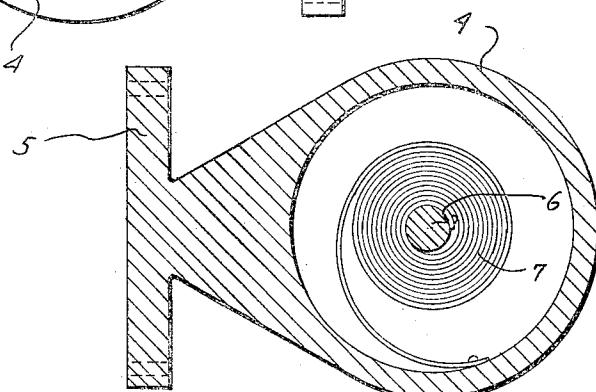


Fig. 4

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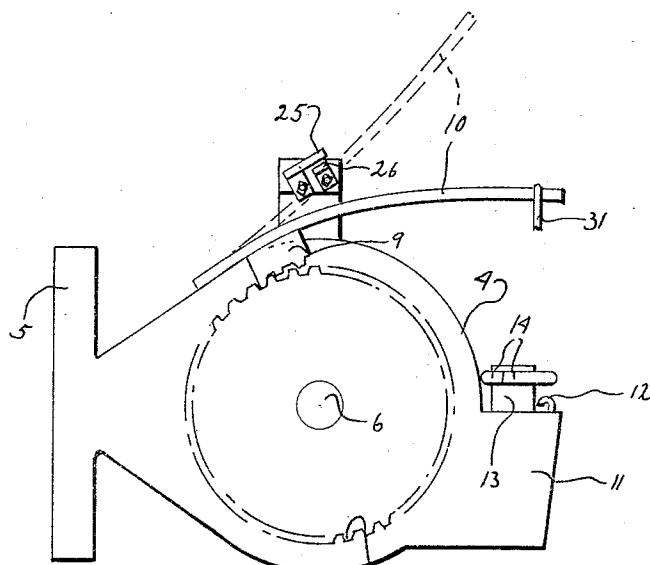
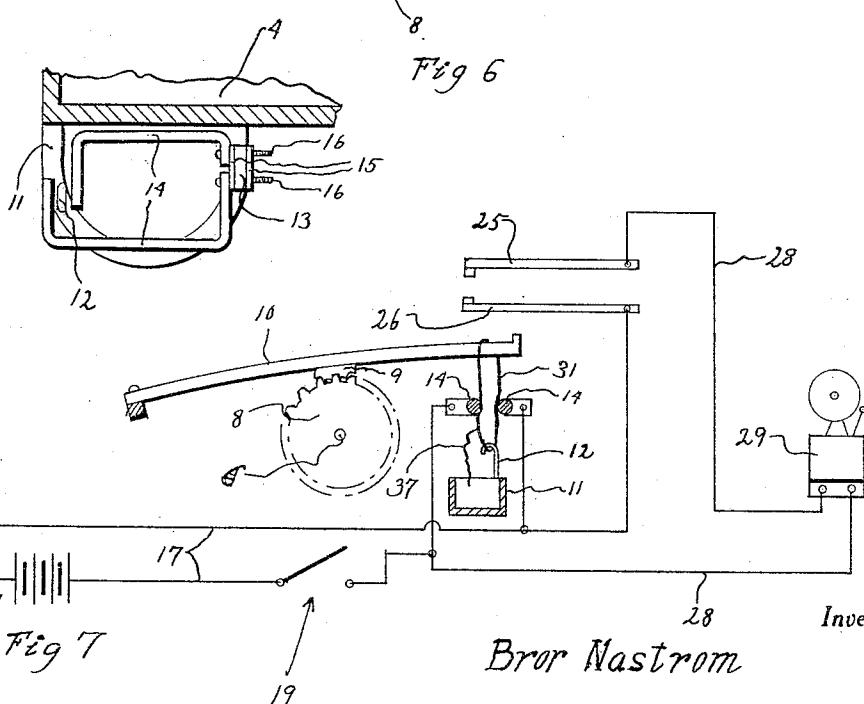


Fig 5



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## UNITED STATES PATENT OFFICE

BROR NASTROM, OF HOLDREGE, NEBRASKA

## BANK PROTECTING DEVICE

Application filed November 25, 1930. Serial No. 493,193.

This invention relates to a bank protecting device and has for its primary object to provide, in a manner as hereinafter set forth, a device of this character embodying a novel construction and arrangement of parts for freeing certain fumes or gases to the atmosphere for frustrating an attempted hold up or robbery of the bank.

Another important object of the invention is to provide a bank protecting device of the aforementioned character embodying an electrically actuated audible signal which may be located at any desired point and which is sounded when the device functions to frustrate the robbery.

Still another important object of the invention is to provide a bank protecting device of the character described embodying means for lowering a curtain or screen over the teller's or cashier's window when a hold up or robbery of the bank is attempted.

Other objects of the invention are to provide a bank protecting device which will be simple in construction, strong, durable, efficient and reliable in operation and which may be manufactured and installed at low cost.

All of the foregoing and still further objects and advantages of the invention may become apparent from a study of the following specification, taken in connection with the accompanying drawings wherein like characters of reference designate corresponding parts throughout the several views and wherein:

Figure 1 is a view in front elevation showing a bank protecting device in accordance with this invention mounted in operative position.

Figure 2 is a horizontal sectional view taken substantially on the line 2—2 of Figure 1 and looking in the direction indicated by the arrows.

Figure 3 is a view in side elevation of an essential portion of the device.

Figure 4 is a vertical sectional view taken substantially on the line 4—4 of Figure 1.

Figure 5 is a view in side elevation of the portion of the device illustrated in Figure 3 and looking at the opposite side thereof.

Figure 6 is a fragmentary view in horizontal section through a portion of the spring housing or casing and showing the receptacle for the reception of powder, etc., mounted thereon and certain of the electric contacts constituting a part of the invention, said receptacle and contacts being shown in top plan.

Figure 7 is a diagrammatic view of the invention.

Referring to the drawings in detail, it will be seen that the reference numeral 1 designates the usual partition or wall in a bank building having therein a cashier's or teller's window 2 in which is mounted the usual guard grill 3.

A housing or casing 4 is provided with an integral, apertured base portion 5 for securing said housing on the partition or wall 1 beneath the window 2. A horizontally disposed shaft 6 is journalled in the housing or casing 4 and projects beyond the side walls of said housing or casing. A spring 7 is mounted in the housing or casing 4 on the shaft 6 and has one end anchored to the housing or casing 4 and its other end anchored to the shaft 6 in a manner to drive said shaft 6 in one direction after the spring 7 has been placed under tension or wound, as will be apparent.

A gear 8 is fixed on one end portion of the shaft 6 exteriorly of the housing or casing 4 and is adapted for engagement by a toothed block 9 fixed on an intermediate portion of a leaf spring 10 having one end rigidly secured by suitable means on the housing or casing 4.

An open topped receptacle 11 is formed integrally with the housing or casing 4 on the free end of said housing or casing and has mounted on its top a hook 12. Also mounted on the top of the receptacle 11 is an upstanding leg 13 upon which is mounted and electrically insulated therefrom a pair of contacts 14 having their free ends spaced from each other and disposed adjacent the hook 12. The free end portions of the contacts 14 are disposed in spaced parallelism with each other in a horizontal plane. Insulating plates 15 are disposed on the opposite

vertical sides of the lug 13 and screws 16 secure the contacts 14 in position, said screws projecting through the lug 13 and the insulating plates 15.

- 5 Current conducting wires 17 are connected with the contacts 14 and are connected with positive and negative sides of a battery 18 (see Figure 7). It is understood, of course, that any other suitable source of electric current supply may be utilized. A normally open switch 19 is interposed in the electric circuit which includes the contacts 14 and the battery 18 and it is also to be understood that any desired number of the switches 19
- 10 may be in this circuit and said switches may be located at any desired points in the bank.

An upstanding lug 20 is mounted on top of the housing or casing 4 and mounted rigidly thereon and electrically insulated therefrom are the laterally extending resilient contact fingers 25 and 26 which have their free end portions disposed in spaced, superposed relation above the leaf spring 10 for engagement by said leaf spring in a manner to engage the contact 26 with the contact 25. An arcuate current conducting rod 27 electrically connects the contact finger 26 with one of the conductor wires 17, said conductor rod 27 having its ends secured to the lugs 13 and 20 and provided with integral eyes through which suitable securing elements pass.

A current conducting wire 28 is connected with the contact finger 25 and is in circuit with the battery 18. The conductor wire 28 has interposed therein a signal bell 29. The conductor wire 28 is electrically connected with the conductor wire 17, which is free of the conductor rod 27, by an arcuate conductor rod 30 (see Figure 3).

40 A fusible loop 31 of current conducting material is engaged with the hook 12 and over the free end portion of the leaf spring 10 in a manner to retain said leaf spring in lowered or inoperative position as indicated in full lines in Figure 5 of the drawings and out of engagement with the contact finger 26. The fusible loop 31 extends between the contacts 14 and electrically connects said contacts. A spool or drum 32 is fixed on the other end portion of the shaft 6 and has connected thereto for winding thereon a cable 33 which passes over a suitable guide wheel 34 and has one end connected to a suitable curtain or screen 35 mounted on a spring roller above the window 2.

Guides 36 are mounted vertically on opposite sides of the window 2 in which the curtain or screen 35 operates. An ignitable fuse 37 is connected with the fusible loop 31 and depends therefrom into the receptacle 11 on the housing or casing 4. In use, a suitable flash powder (not shown) is placed in the receptacle 11 and a capsule (also not shown) is placed in the flash powder, said capsule

65 preferably containing tear gas. When the

switch 19 or one of the switches 19 is closed electric current flows from the battery 18 through the fusible element 31 and returns to the battery, and the fusible element 31 is melted and releases the leaf spring 10. When released, the leaf spring 10 springs upwardly to the position illustrated in broken lines in Figure 5 of the drawings and engages the contact finger 26 with the contact finger 25 for closing the electric circuit in which the signal bell 29 is interposed thus actuating said signal bell.

When the leaf spring 10 springs upwardly, the toothed block 9 is disengaged from the gear wheel 8 and the shaft 6 is thus released and driven in a direction by the spring 7 to wind the cable 33 on the spool or drum 32 and lower the curtain or shade 35 over the window 2. When the fusible element 31 becomes red hot and it is about to melt, the fuse 37 is ignited thereby and ignites the flash powder in the receptacle 11. The flash powder explodes and disconcerts the would be robber and the heat of the burning flash powder melts the capsule and releases the tear gas and disables the would be robber. The comparatively heavy conductor rods 27 and 30 are provided to prevent damage being done to the electric circuits by the heat of the burning flash powder in the receptacle 11.

It is believed that the many advantages of a bank protecting device in accordance with this invention will be readily understood, and although the preferred embodiment of the invention is as illustrated and described, it is to be understood that changes in the details of construction may be had which will fall within the scope of the invention as claimed.

Having thus described my invention, what I claim as new is:

In a bank protecting device and in combination with a spring lever for normally holding a window guard in inoperative position and closing an alarm circuit when the lever is in position for releasing the guard, a fusible loop for holding the lever in position holding the guard in an inoperative position, said loop passing over the lever, a receptacle located under the loop, a hook on the receptacle engaging the loop and forming an anchor for the same, a pair of spaced bars between which the loop passes and which are contacted by the two side portions of the loop and a circuit, including a switch, connected to the bars.

In testimony whereof I affix my signature.  
BROR NASTROM.