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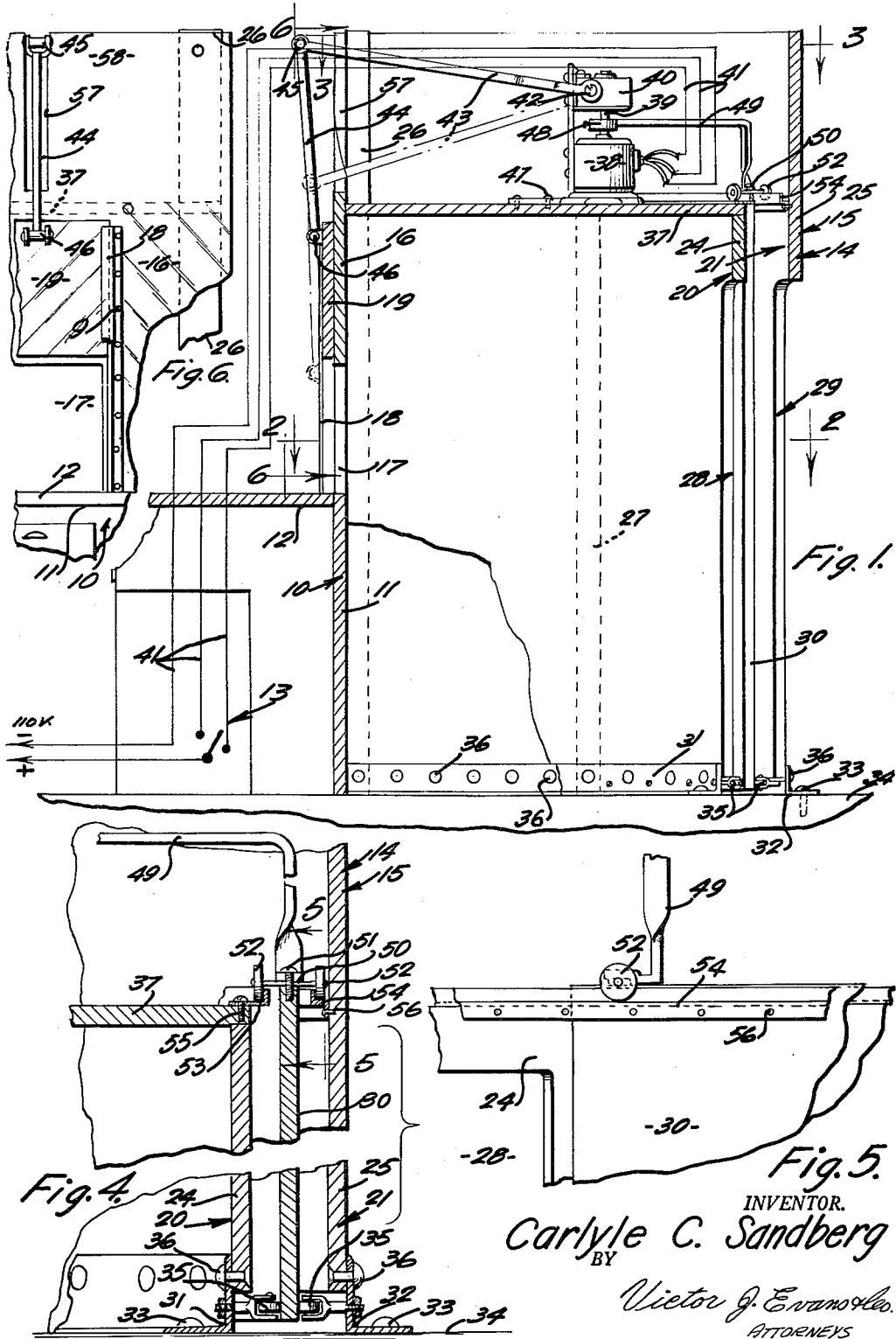
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3,046,914

SAFETY DEVICE FOR BANKS OR THE LIKE

Filed June 1, 1960

2 Sheets-Sheet 1



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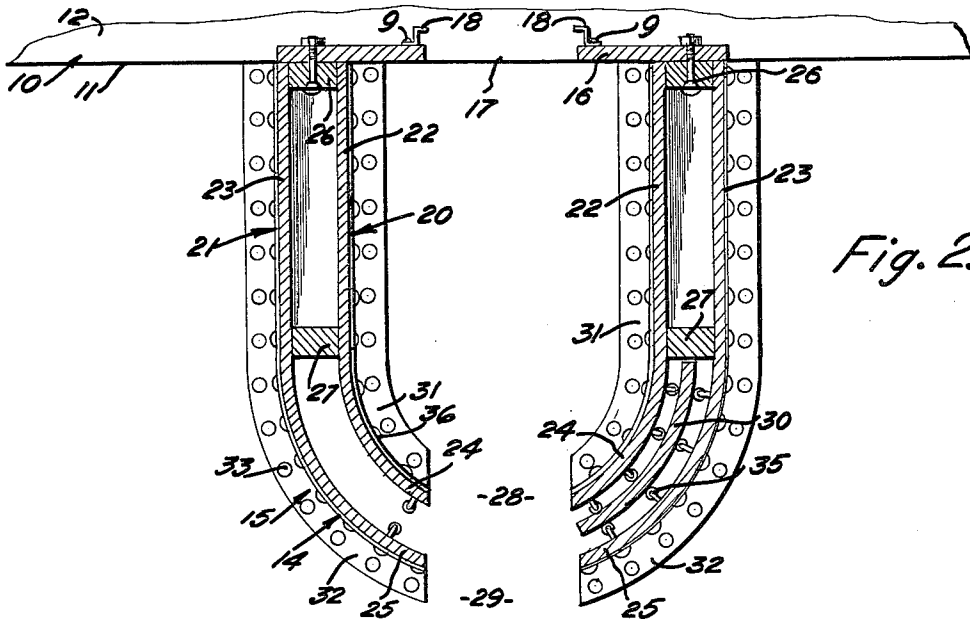


Fig. 2.

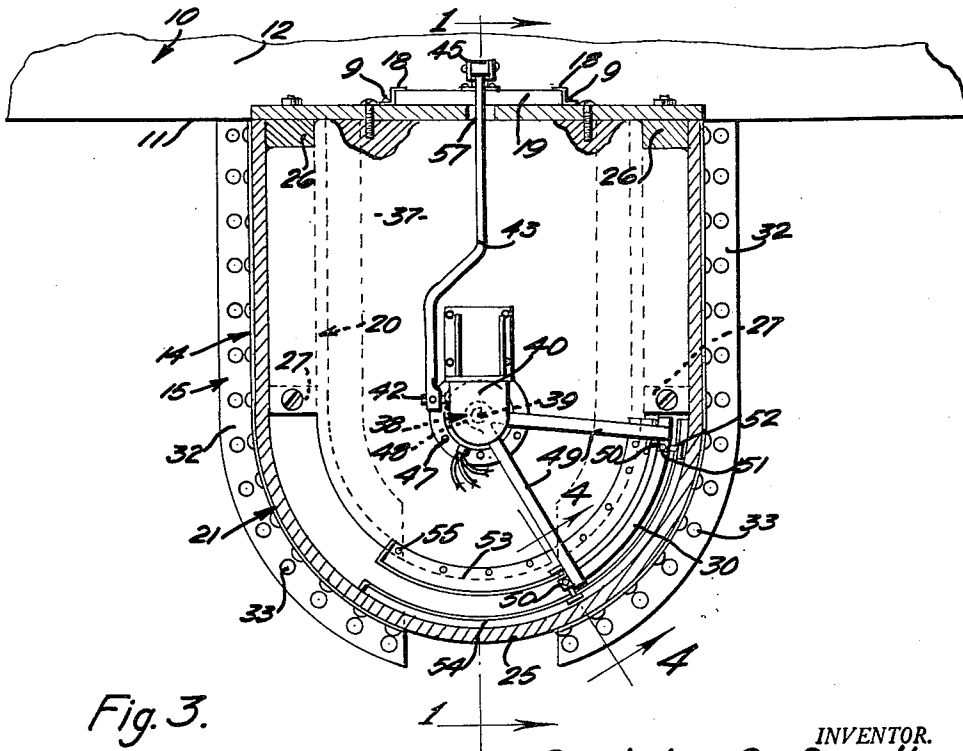


Fig. 3.

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SAFETY DEVICE FOR BANKS OR THE LIKE
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1 Claim. (Cl. 109-5)

This invention relates to a safety device for banks or the like, and wherein according to the present invention there is provided a means which can be actuated by a bank teller or other person in order to simultaneously trap a burglar or robber and at the same time provide a means for protecting the bank employee from possible harm at the hands of the robber.

The object of the invention is to provide a bank safety device which includes a mechanism that can be conveniently and readily operated as for example by means of a foot switch which is readily accessible to the bank teller or other employee so that in the event that a hold-up is attempted, the robber or burglar will be trapped in an enclosure, and at the same time a protective door will be closed between the bank teller and robber so as to prevent injury or harm to the bank employee.

Another object of the invention is to provide a safety device which will have the practical effect of helping to deter would-be bank robbers or the like since in order to transact business before the bank teller or other employee, it is necessary for a person to enter an enclosure or housing so that if the person attempts foul play such as robbery or burglary, the closure can be quickly sealed off in order to prevent escape of the hold-up person and also a door will be quickly closed to prevent the robber from inflicting injury or harm on the bank employee.

A further object of the invention is to provide a safety device for banks or the like which is extremely simple and inexpensive to manufacture.

Other objects and advantages will be apparent during the course of the following description.

In the accompanying drawings, forming a part of this application, and in which like numerals are used to designate like parts throughout the same.

FIGURE 1 is a vertical sectional view taken through the bank safety device of the present invention, and with parts broken away and in section.

FIGURE 2 is a sectional view taken on the line 2-2 of FIGURE 1.

FIGURE 3 is a sectional view taken on the line 3-3 of FIGURE 1.

FIGURE 4 is a sectional view taken on the line 4-4 of FIGURE 3.

FIGURE 5 is a sectional view taken on the line 5-5 of FIGURE 4.

FIGURE 6 is a sectional view taken on the line 6-6 of FIGURE 1.

Referring in detail to the drawings, the numeral 10 indicates a portion of a counter such as a counter in a bank, and the counter 10 includes a vertically disposed front portion 11 and a horizontally disposed top portion 12, FIGURE 1. According to the present invention there is provided a safety device for use in a bank or the like, and wherein the safety device is constructed so that customers who are transacting business with tellers or other employees in the bank will have to enter an enclosure so that in the event that a person attempts a hold-up or robbery, the enclosure can be sealed off and also a door can be closed in order to protect the bank teller working behind the counter 10 from injury or harm.

The numeral 13 indicates a switch which can be operated by foot pressure by the teller or other employee, or if desired the switch 13 may be of the type which is manually operated by the bank employee. The numeral 14 indicates an enclosure which is shown to comprise a generally hollow housing 15, and this housing includes a ver-

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tically disposed front wall 16 which extends upwardly from the top portion 12 of the counter 10. The lower portion of the front wall 16 is provided with an opening 17, and normally this opening is uncovered or open, but in the event that a robbery is attempted, a door 19 will be quickly moved down to close off the opening 17 so that the hold-up person in the housing 15 will not be able to inflict harm or injury on the bank teller positioned behind the counter 10. The door 19 is vertically slidable, and the side edges of the door 19 are mounted for sliding movement in a pair of spaced parallel vertically disposed tracks 18, and the tracks 18 are adapted to be secured on opposite sides of the opening 17 to the wall 16, as for example by means of securing elements 9, FIGURE 2.

The housing 15 is shaped to include spaced apart inner and outer wall members 20 and 21, FIGURE 2, and these spaced apart wall members each include generally straight side portions 22 and 23 respectively, and these wall members also include generally curved rear end portions 24 and 25. Studs or posts 26 and 27 which are vertically disposed, are interposed or positioned between the inner and outer wall members 20 and 21, as shown in the drawings, and the studs 26 are longer than the studs 27. There is provided in the rear ends of the inner and outer wall members 20 and 21, registering aligned openings or spaces 28 and 29, and normally these openings 28 and 29 are open so that a customer can readily pass through these openings and into the interior of the enclosure 14 as for example when business is to be transacted. However, in the event that the person within the closure attempts a hold-up or robbery, then the openings 28 and 29 are adapted to be quickly sealed off so as to prevent the person from escaping from the enclosure and whereby police can then be summoned so that for example the wrongdoer can be apprehended. The numeral 30 indicates a curved closure or door which is slidably mounted between the wall members 20 and 21, and this closure 30 is mounted for movement into and out of opened or closed relation with respect to the openings 28 and 29, as later described in this application.

Arranged contiguous to the lower outer portion of the enclosure is a pair of spaced apart support members 31 and 32, FIGURE 4, and these support members may be secured to the floor of the bank or other building as for example by means of securing elements 33 which can extend into the floor 34. A plurality of spaced apart guide wheels 35 are connected to the support members 31 and 32, and these guide wheels 35 are adapted to engage the lower end of the sliding closure 30 in order to help maintain this closure in its proper position as it moves between the members 20 and 21. The lower ends of the wall members 20 and 21 are adapted to be fastened to the support members 31 and 32, as for example by means of securing elements 36.

There is further provided a horizontally disposed top wall or ceiling 37 which is arranged in the upper portion of the housing 15, and a reversible electric motor 38 is supported on the top wall 37, FIGURE 1. A shaft 39 is driven by the motor 38, and the shaft 39 is connected to a gear reducer 40. The numeral 41 indicates wires or conductors which serve to electrically connect the switch 13 to the motor 38. The motor 38 is adapted to be fastened to the top wall 37 in any suitable manner, as for example by means of securing elements 47. Driven from the gear reducer 40 is a stub shaft 42 which is connected to one end of an arm 43, and the arm 43 has its other end pivotally connected as at 45 to the upper end of a link 44. The lower end of the link 44 is pivotally connected as at 46 to the vertically movable door 19, as shown in the drawings.

There is further provided a collar or bushing 48 which is affixed to the shaft 39, and secured to the collar 48

or formed integral therewith is a pair of angularly arranged bars 49, and a bracket 50 is provided on the outer end of each of the bars 49. The brackets are fastened to the upper end of the sliding closure 30, as for example by means of securing elements 51, FIGURE 4. Connected to the brackets 50 are rollers or wheels 52 which function as guide rollers for the sliding closure 30, and these rollers 52 engage tracks 53 and 54. These tracks 53 and 54 may be secured in place as for example by means of securing elements 55 and 56.

From the foregoing, it is apparent that there has been provided a safety device which is especially suitable for use in banks or the like, and with the parts arranged as shown in the drawings, it will be seen that an employee such as a bank teller is adapted to work or be positioned behind the counter 10 and when a customer wishes to transact business with the employee, the customer passes through the openings 29 and 28 and into the interior of the enclosure 14. The door 19 is normally in a raised position so that money or the like can pass back and forth between the teller and the customer through the opening 17 and after the customer completes the transaction, the customer can leave the enclosure through the openings 28 and 29.

However, in the event that a person enters the bank and attempts a hold-up or robbery, then the teller places his or her foot on the switch 13 to close the switch and this will actuate the motor 38 since the motor 38 is connected to the switch 13 through the medium of the conductors or wires 41, and the electrical circuit for these parts may include a suitable connection to a source of electrical energy. When the motor 38 is actuated by the closing of the switch 13, the shaft 39 will be rotated and since the collar 48 is fastened to the shaft 39, it will be seen that the collar 48 will turn, and since the bars 49 are affixed to the collar 48, this will result in movement of the bars 49 so that for example the bars 49 will move in a clockwise direction, FIGURE 3. This movement of the bars 49 causes the closure 30 to move so that for example the closure 30 will move from the position shown in FIGURE 2 into a position so that it blocks or closes the openings 28 and 29, it being noted that the brackets 50 on the ends of the bars 49 are secured to the upper end of the closure 30 as for example by means of securing elements 51. The closure 30 will slide smoothly or close properly due to the provision of the guide members such as the rollers 52 which slide on the tracks 53 and 54. In addition there is provided the guide wheels 35 to help maintain the lower end of the closure 30 in its proper position as it moves back and forth into and out of opened or closed relation with respect to the openings 28 and 29.

At the same time that the closure 30 is being moved into closed position with respect to the openings 28 and 29 so that the robber cannot escape from the closure, the door 19 will be quickly moved down from the position shown in FIGURE 1 to a closed position with respect to the opening 17 so that the robber cannot inflict harm on the bank employee. Thus, as the shaft 39 is actuated by the motor 38, the gear reducer 40 will be actuated so as to rotate the shaft 42 and this will cause counter-clockwise movement of the arm 43, FIGURE 1, so that the arm 43 moves from solid line position of FIGURE 1 to the broken line position of FIGURE 1 and this will cause the link 44 to move the door 19 down into closed relation with respect to the opening 17. As shown in the drawings the wall 16 is provided in its upper end with a vertically disposed slot or cutout 57 which provides clearance for the arm 43 as for example when the arm 43 moves in the solid line position of FIGURE 1 to the broken line position of FIGURE 1.

The parts can be made of any suitable material and in different shapes or sizes.

Bullet proof glass is adapted to be used in certain portions of the device. For example the wall 16 is made

of bullet proof glass, which is transparent, and the portion of the wall 16 above the ceiling 37 may be painted as indicated by the numeral 58. The short studs 27 only extend up as far as the top wall or ceiling 37, while the long studs 26 extend up beyond the top wall 37, and portions of the top wall 37 are cut away in order to provide clearance for the long studs 26, as for example as shown in FIGURE 3. Thus, the wall 37 rests on top of the short studs 27. The counter 10 is made of a suitable material but glass is not used in making the counter. However, the large sheet or wall 16 above the counter is glass which is bullet proof. In addition, the sliding window or door 19 is adapted to be made of bullet proof glass or plastic, and bullet proof plastic or glass can be used in certain other parts of the device. The door or closure 30 is of bullet proof glass, and the inside wall member 20 is also made of bullet proof glass, and the portion of the outer wall 21 above the ceiling 37 is adapted to be painted or otherwise coated. The motor 38 rests on or is supported on the ceiling or top wall 37. As shown in FIGURE 1 for example, the outside wall portion 25 extends up several feet above the top wall 37 to hide the motor 38 and its associated parts. The wall 16 is made entirely of transparent material such as a suitable bullet proof glass or plastic. The various operating parts such as the motor are adapted to be arranged above the ceiling or top wall so that they are concealed and the top wall may be painted or otherwise coated as desired. The entire enclosure is adapted to be made of transparent material so that the interior of the enclosure can be readily observed from the exterior thereof, and the various studs can also be made of a suitable transparent material. The door 19 and closure 30 are simultaneously actuated as previously described.

The enclosure is adapted to be arranged adjacent the counter of a bank or the like, and wherein the enclosure is constructed so that one person at a time enters the enclosure to take care of his or her business at a bank, market or any other locality as for example when checks are being cashed, or where money is being handled. The chamber or closure is adapted to be placed in front of a business counter so that a person can walk therein in order to take care of his or her business, and the teller is adapted to sit or stand on the other side of the enclosure behind the counter and the purpose of the enclosure is to provide protection for the teller and bystanders, and in addition provide a means whereby the suspect can be apprehended. The teller is protected by the sliding transparent door 19 which is controlled by the switch 13 that can be readily actuated by the teller. The members 31 and 32 are fastened to the enclosure as for example by means of securing elements 36, and these members 31 and 32 are fastened to the floor by means of the securing elements 33 and this arrangement serves to anchor or maintain the enclosure in the desired position in the bank or other building. The parts can be secured together in any suitable manner, as for example by means of bolts, screws or the like.

With the present invention, banks or other businesses will have greater protection against burglary or robbery and wherein persons will have less tendency to try and commit such a crime since the chances of being successful at such a crime will be minimized. The openings 28 and 29 and 17 are open at all times except when the switch 13 is actuated.

Minor changes in shape, size and rearrangement of details coming within the field of invention claimed may be resorted to in actual practice, if desired.

What is claimed is:

In a device of the character described for use in a bank or the like wherein there is provided a counter which includes a vertically disposed front portion and a horizontally disposed top portion, the improvements consisting in providing a safety device which includes a switch arranged below the top portion of the counter,

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an enclosure comprising a housing embodying a vertically disposed front wall extending upwardly from the top portion of said counter, there being an opening in the lower portion of said front wall, tracks arranged on opposite sides of said opening, a vertically movable door 5 slidably mounted in said tracks and said door being mounted for movement into and out of opened and closed relation relative to the opening in the front wall, said enclosure further including spaced apart inner and outer wall members with each including generally straight side 10 portions and curved rear end portions, vertically disposed studs between the side portions of said inner and outer wall portions, there being registering aligned openings in the rear portions of said inner and outer wall members, a closure slidably mounted between said inner and outer wall members, and said closure being mounted for 15 movement into and out of opened and closed relation with respect to the aligned openings in the rear portions of the wall members, support members connected to the lower ends of said wall members, a plurality of guide 20 wheels connected to said support members for engaging the lower portion of said closure; a horizontally disposed

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top wall in the upper portion of said enclosure, a motor on said top wall electrically connected to said switch, a shaft connected to said motor, a gear reducer operatively connected to said shaft, an arm connected to said gear reducer, a link connecting said arm to said door, a collar on said shaft, a pair of angularly arranged bars connected to said collar, brackets on the outer ends of said bars, said brackets being fastened to the top of said closure, rollers connected to said brackets, and tracks having said rollers arranged in engagement therewith.

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