

May 24, 1960

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2,937,602

BANK TELLER'S PROTECTIVE DEVICE

Filed Sept. 18, 1959

3 Sheets-Sheet 1

FIG. 1.

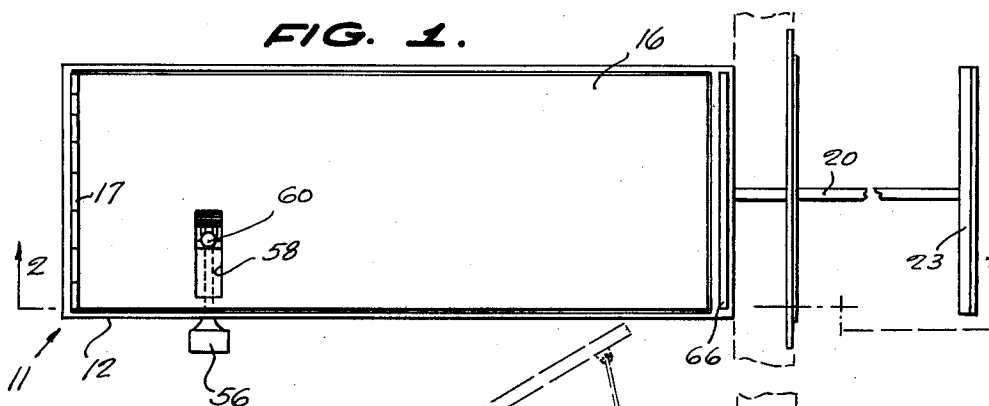
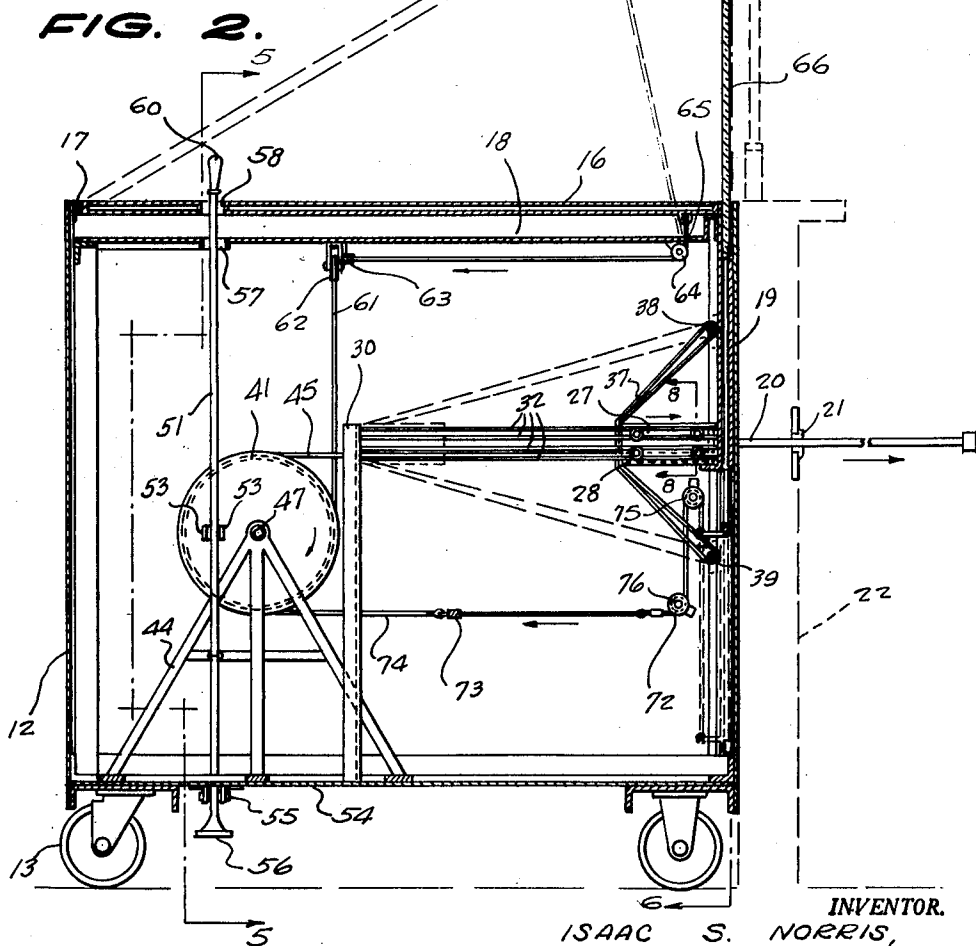


FIG. 2.



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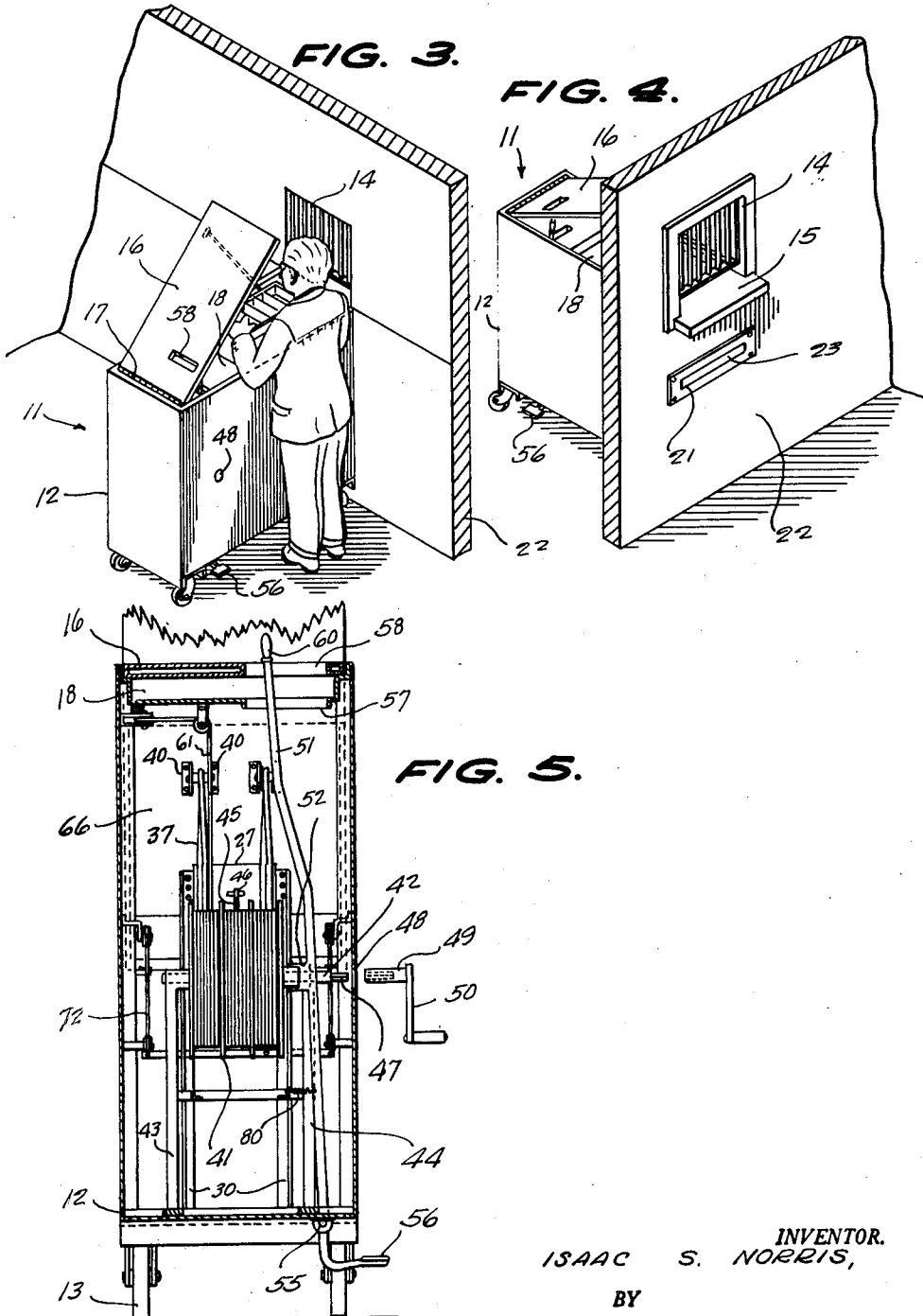
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3 Sheets-Sheet 2



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FIG. 8.

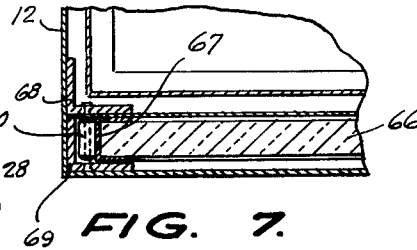
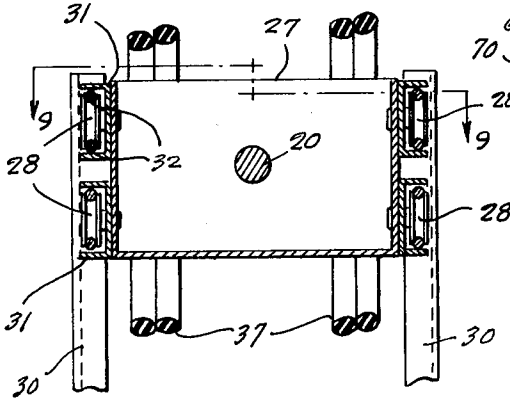


FIG. 7.

FIG. 6.

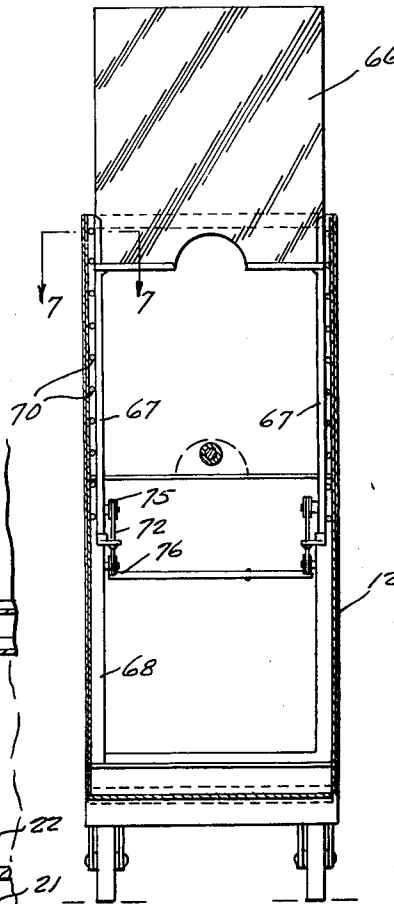
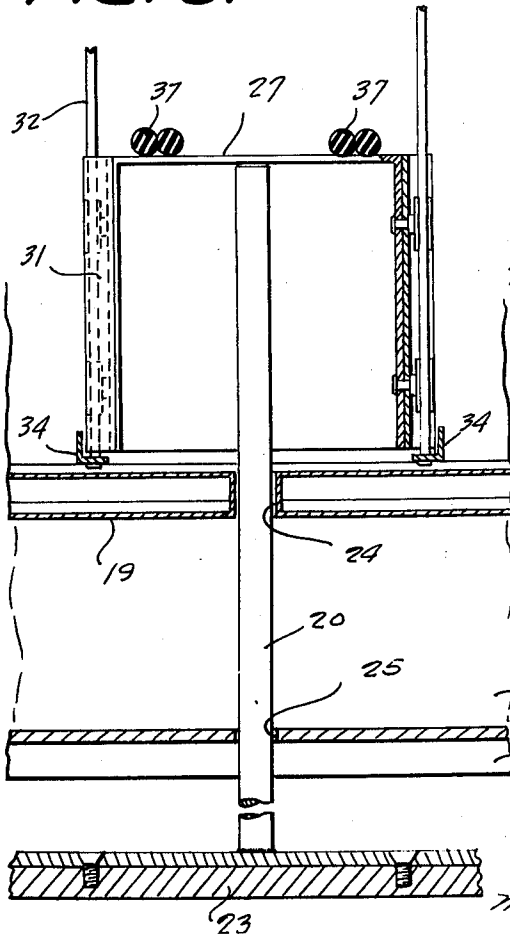


FIG. 9.



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BANK TELLER'S PROTECTIVE DEVICE

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6 Claims. (Cl. 109—12)

This invention relates to burglar protection devices, and more particularly to a protective cabinet structure for use by a bank teller and adapted to be used by the teller to prevent a robbery.

A main object of the invention is to provide a novel and improved bank teller's protective device which is simple in construction, which is relatively compact in size, and which is adapted to be positioned adjacent a bank teller's window in a position to be used by the bank teller in the event a person attempts to execute a robbery at the teller's window.

A further object of the invention is to provide an improved bank teller's protective cabinet, the cabinet being relatively inexpensive to manufacture, being easy to move to its intended position, and being provided with means to simultaneously close same and actuate protective members thereof, whereby to frustrate an attempted robbery at the teller's window at which the device is positioned.

A still further object of the invention is to provide an improved bank teller's protective cabinet structure which is provided with a cover which normally is biased to an open position and which is provided with protective members which are normally held in retracted positions, the device being arranged so that when desired the cover will be closed and simultaneously therewith, the protective members will be extended to protective positions, one of said protective members being arranged so that it will strike an attempted robber as it is being extended, whereby to frustrate an attempted holdup at a teller's window at which the device is positioned.

Further objects and advantages of the invention will become apparent from the following description and claims, and from the accompanying drawings, wherein:

Figure 1 is a top view of an improved bank teller's protective device constructed in accordance with the present invention, and showing the striking member thereof in an extended position and the other movable members thereof in positions corresponding to those assumed thereby when a bank teller operates the device to frustrate a robbery.

Figure 2 is a vertical cross sectional view taken on the line 2—2 of Figure 1.

Figure 3 is a perspective view taken from the inside of a bank teller's compartment and illustrating the manner in which the protective device of Figures 1 and 2 is disposed adjacent the teller's window in its normal open position.

Figure 4 is a perspective view showing the teller's window and the wall portion adjacent thereto, as seen from the front, the wall portion being broken away to reveal a rear portion of the protective device, as employed in Figure 3.

Figure 5 is a vertical cross sectional view taken on the line 5—5 of Figure 2.

Figure 6 is a vertical cross sectional view taken on the line 6—6 of Figure 2.

Figure 7 is an enlarged horizontal cross sectional view taken on the line 7—7 of Figure 6.

Figure 8 is an enlarged vertical cross sectional view taken on the line 8—8 of Figure 2.

5 Figure 9 is a horizontal cross sectional view taken on the line 9—9 of Figure 8.

Referring to the drawings, 11 generally designates a bank teller's protective device according to the present invention. The protective device 11 comprises a generally rectangular cabinet 12 which is mounted on the castors 13 disposed at its respective bottom corner portions so that the cabinet may be readily moved to an intended location, for example, to a position adjacent to a bank teller's window 14, as illustrated in Figures 3 and 4. As shown in Figures 3 and 4, the cabinet 12 is of sufficient height so that it extends to a level subjacent to the bottom margin of a teller's window 14, and within convenient reach of the horizontal counter portion 15 provided at the bottom of the window.

20 The cabinet 12 is provided with the hinged top cover 16, said cover being hinged at the transverse rear end portion of the top of the cabinet 12, as shown at 17, whereby the cover may be elevated to an upwardly and forwardly inclined position, allowing access to a cash tray 18 provided in the top portion of the cabinet. The cover 16 is biased to the upwardly and forwardly extending open position thereof shown in dotted view in Figure 2 and illustrated in full line view in Figures 3 and 4, by suitable spring means provided, for example, in association with the hinge 17. Such spring means is well known per se and in itself forms no part of the present invention.

The cabinet 12 is provided with the vertical front wall 19, said front wall being formed at its upper intermediate portion with an aperture 24 adapted to slidably receive the horizontally extending bar member 20 associated with a transversely extending striking bar 23 normally seated in a horizontal recess 21 provided in the wall 22 subjacent the teller's window 14. Thus, the horizontal striking bar 23 is normally housed in a position substantially flush with the wall 22, and the supporting bar 20 associated therewith extends slidably through an opening 25 and projects inwardly from the wall 22 at a position wherein it is registrable with the front opening 24 of cabinet 12 when the cabinet is located immediately behind the window 14, as shown in Figures 3 and 4.

Designated at 27 is a generally box-like carriage member which is provided at its side walls with the vertically spaced, outwardly facing longitudinal channel members 31, 31 in which are journaled the respective pairs of rollers 28, 28, the rollers being located adjacent the respective ends of the side walls of the box-like member 27. The rollers are supported between respective pairs of horizontal, longitudinally extending rods 32, 32 which are rigidly mounted in the cabinet 12, the rear ends of the rods being secured to upstanding vertical supporting bars 30 and the forward ends of the rods being secured to respective vertical upstanding angle bars 34, 34 secured adjacent the front wall 19 of the cabinet. As shown in Figure 9, the vertical forward angle bars 34, 34 define forward stop means for the carriage member 27, whereas the rear vertical angle bars 30 define stop means limiting the rearward movement of the carriage member.

65 The carriage member 27 is biased forwardly, namely to a position adjacent the forward vertical angle bars 34, 34, by a pair of heavy elastic bands 37, 37 having their end loops engaged respectively around top and bottom transversely extending pins 38 and 39 mounted between respective pairs of opposed angle brackets 40, 40 located above and below the carriage member 27 on the inside surface of the front wall of the cabinet 12. The

heavy elastic bands 37 engage the rear wall of the carriage member 27 and act to bias the carriage member forwardly, as is clearly apparent from Figure 2. As shown in Figure 9, the horizontal bar 20 extends into the carriage member 27 when the protective device is positioned in the manner illustrated in Figures 3 and 4, and the carriage member 27 may be retracted to its rear-most position, permitting the striking bar 23 to be normally seated in the recess 21. As will be presently explained, when the carriage member is released, the tension stored up in the elastic bands 37 projects the striking bar 23 forwardly with considerable force.

Designated at 41 is a cable reel which is mounted on a transversely extending shaft 42 journaled in upstanding bearing brackets 43, 44 mounted in the rear portion of the cabinet 12. Wound on the cable reel 41 is a first cable 45 which is connected to the rear wall of the box-like carriage member 27 at a fastening loop 46, as shown in Figure 5.

The reel shaft 42 is provided with a squared end 47 which is located adjacent an opening 48 provided in one of the side walls of cabinet 12, whereby the squared socket portion 49 of a suitable hand crank 50 may be at times inserted through the opening 48 to engage with the squared shaft end 47, allowing the reel 41 to be rotated in a direction to wind up the cable 45. This retracts the carriage member 27 and stores up projecting force in the elastic bands 37.

Designated at 51 is a triggering lever which extends substantially vertically through the cabinet 12 adjacent one end of the reel 41 and which is provided at its intermediate portion with a detent lug 52 lockingly engageable between a pair of projections 53, 53 provided on the reel 41, so as to hold the reel against rotation when the cable 45 has been wound up thereon and the carriage member 27 is in its retracted position substantially in abutment with the vertical rear stop bars 30, 30. The lever 51 is pivoted to the bottom wall 54 of cabinet 12 at 55, the lower portion of the lever comprising the outwardly extending foot pedal 56 which projects outwardly from beneath the cabinet side wall below the crank opening 48, as is clearly shown in Figure 5. The top portion of lever 51 extends through respective guide slots 57 and 58 provided in the bottom wall of the cash tray 18 and in the top cover 16, as is clearly shown in Figure 2, the top end of the lever 51 being provided with a handle 60 projecting above the cover 16 when the cover is in its closed position.

An additional cable 61 is wound on the reel 41, said additional cable 61 extending over respective guide pulleys 62, 63 and 64 provided in the upper portion of cabinet 12 subjacent the bottom wall of the cash tray 18, and extended upwardly through an opening 65 in the bottom wall of the cash tray, being attached to the forward marginal portion of the cover 16.

When the carriage member 27 is retracted to a position substantially in abutment with the rear stop bars 30, 30, the cable 61 will be sufficiently released to allow the cover 16 to open substantially to the dotted view position shown in Figure 2. However, when the cable reel 41 is released, for example, when the lever 51 is rotated clockwise, from the position thereof shown in Figure 5, as by stepping on the pedal 56, the force of the elastic bands 37 will cause the cable 61 to be wound up on the reel, closing the cover 16, as well as projecting the carriage member 27 forwardly to act upon the striking bar support rod 20.

Designated at 66 is a vertical transparent panel of heavy glass, preferably bullet-proof glass, which is slidably mounted in the upper portion of the front wall of the cabinet 12 and which is supported on a suitable frame including a pair of vertical bar members 67, 67 located in the forward vertical corner portions of cabinet 12. The frame of the cabinet includes respective pairs of angle bars 68 and 69 located at the forward corner

portions of the cabinet, the bars being spaced apart, as shown in Figure 7 to define a guide channel receiving the side margins of the transparent panel 66 and the associated supporting bars 67. Guide rollers 70 are provided in the space between the parallel flanges of the angle bars 68 and 69, said guide rollers guiding the edges of the panel 66 and the channel-shaped support members 67 for vertical movement.

Connected to the lower ends of the respective supporting channel members 67, 67 are flexible cables 72, said cables being connected through respective coiled springs 73 to the ends of additional flexible cables 74 wound on the cable reel 41. The cables 72 extend around respective sets of guide pulleys 75 and 76 provided in the cabinet 12 and being arranged so that the portions of cables 72 connected to the springs 73 are substantially horizontally aligned with the bottom portion of the cable reel 41, as is evident from Figure 2.

As will be readily apparent, when the cable reels 41 is in its wound up condition, namely, in the position thereof wherein the carriage member 27 is retracted substantially into abutment with the stop bars 30, the cable 74 will be unwound sufficiently to allow the transparent panel 66 to be lowered to a position wherein it is substantially fully housed in the top forward portion of the cabinet 12. However, when the reel 41 is released to allow the carriage member 27 to be moved forwardly to the position thereof shown in Figure 2, the cable 74 will be wound up on the reel 41, elevating the transparent panel 66 to the obstructing position thereof illustrated in Figure 2, namely, to a position wherein it substantially covers the teller's window 14 when the apparatus is arranged in the position illustrated in Figures 3 and 4.

Normally, the device is arranged in the manner illustrated in Figures 3 and 4, namely, with the cover open and with the carriage member 27 retracted so that the transparent panel 66 is lowered and so that the carriage member is held substantially in abutment with the stop bars 30 by the locking engagement of the lever 51 between the projections 53, 53. Under these conditions the striking bar 23 is seated in the recess 21 and the supporting rod 20 thereof is in a position wherein its inner end is substantially contained in the carriage member 27.

It will be understood that the supporting rod 20 need not necessarily be received in the carriage member 27 in the normal cocked position of the apparatus, and that it is merely necessary that the supporting rod 20 be in the path of forward movement of the carriage member when the carriage member is released, in order that impact may be delivered by the carriage member to the rod 20 so as to project the striking bar 23 forwardly.

When an attempt is made by a person at the teller's window 14 to perpetrate a holdup, the teller steps on the pedal 56, which rotates the lever 51 in a clockwise direction, as viewed in Figure 5, releasing the reel 41. This releases the carriage member 27, projecting the striking bar 23 forwardly, and simultaneously closing cover 16 and elevating the bullet-proof transparent panel 66. This simultaneously closes the cash tray 18 and blocks the teller's window 14, as well as projecting the striking bar 23 forwardly with sufficient force to stun the would-be robber and thus frustrate his attempt to perpetrate the robbery.

As will be readily apparent, the apparatus may be easily reset by winding up the cable 45 on the reel 41 by means of the winding crank 50, the lever 51 being operated from above by means of its handle 60, so that the reel 41 may be held in its cocked position by engaging the lever 51 between the locking projections 53, 53 in the manner above described.

The locking lever 51 may be suitably biased toward its locking position, for example, by the provision of a biasing spring 80 connected between the lower portion of the lever, as shown in Figure 5, and the supporting frame associated with the bearing brackets 43, 44. Thus, the

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spring 80 biases the lever 51 in a counterclockwise direction around the pivot shaft 55, as viewed in Figure 5, namely, to a position urging the lever toward the cable reel 41.

While a specific embodiment of an improved bank teller's protective device has been disclosed in the foregoing description, it will be understood that various modifications within the spirit of the invention may occur to those skilled in the art. Therefore, it is intended that no limitations be placed on the invention except as defined by the scope of the appended claims.

What is claimed is:

1. A bank teller's protective device comprising a cabinet provided with a hinged top cover, means biasing said cover to an elevated open position, a horizontal, forwardly movable striking member slidably mounted in said cabinet, means biasing said striking member to a forward position in the cabinet, a cable reel rotatably mounted in said cabinet, respective flexible cables wound on said reel and connected to said top cover and said striking member, said last-named biasing means being of sufficient strength to simultaneously close said top cover and project said striking member forwardly when the cable reel is released, means to rotate said cable reel against the force of said last-named biasing means and wind up the cables thereon, and manually operated detent means lockingly engageable with said cable reel to releasably hold same with the cables wound thereon.

2. A bank teller's protective device comprising a cabinet provided with a hinged top cover, means biasing said cover to an elevated open position, a horizontal, forwardly movable striking member slidably mounted in said cabinet, means biasing said striking member to a forward position in the cabinet, a cable reel rotatably mounted in said cabinet, respective flexible cables wound on said reel and connected to said top cover and said striking member, said last-named biasing means being of sufficient strength to simultaneously close said top cover and project said striking member forwardly when the cable reel is released, means to rotate said cable reel against the force of said last-named biasing means and wind up the cables thereon, manually operated detent means lockingly engageable with said cable reel to releasably hold same with the cables wound thereon, a vertical front panel member slidably mounted in the upper forward portion of said cabinet, and means to elevate said panel member above the top of the cabinet responsive to the release of said cable reel.

3. A bank teller's protective device comprising a cabinet provided with a hinged top cover, means biasing said cover to an elevated open position, a horizontal, forwardly movable striking member slidably mounted in said cabinet, means biasing said striking member to a forward position in the cabinet, a cable reel rotatably mounted in said cabinet, respective flexible cables wound on said reel and connected to said top cover and said striking member, said last-named biasing means being of sufficient strength to simultaneously close said top cover and project said striking member forwardly when the cable reel is released, means to rotate said cable reel against the force of said last-named biasing means and wind up the cables thereon, manually operated detent means lockingly engageable with said cable reel to releasably hold same with the cables wound thereon, a vertical front panel member slidably mounted in the upper forward portion of said cabinet, and an additional flexible cable wound on said cable reel and being constructed and arranged to elevate said panel member above the top of the cabinet responsive to the release of said cable reel.

4. A bank teller's protective device comprising a cabinet provided with a hinged top cover, means biasing said cover to an elevated open position, a horizontal, forwardly movable striking member slidably mounted in

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said cabinet, means biasing said striking member to a forward position in the cabinet, a cable reel rotatably mounted in said cabinet, respective flexible cables wound on said reel and connected to said top cover and said striking member, said last-named biasing means being of sufficient strength to simultaneously close said top cover and project said striking member forwardly when the cable reel is released, means to rotate said cable reel against the force of said last-named biasing means and wind up the cables thereon, a lever pivoted to said cabinet, a pair of locking projections on the cable reel spaced to receive said lever therebetween to releasably hold the cable reel against rotation, and a release pedal member on the lower portion of the lever projecting outside the cabinet for at times rotating the lever to disengage same from said locking projections.

5. A bank teller's protective device comprising a cabinet provided with a hinged top cover, means biasing said cover to an elevated open position, a horizontal, forwardly movable striking member slidably mounted in said cabinet, means biasing said striking member to a forward position in the cabinet, a cable reel rotatably mounted in said cabinet, respective flexible cables wound on said reel and connected to said top cover and said striking member, said last-named biasing means being of sufficient strength to simultaneously close said top cover and project said striking member forwardly when the cable reel is released, means to rotate said cable reel against the force of said last-named biasing means and wind up the cables thereon, a lever pivoted to said cabinet, a pair of locking projections on the cable reel spaced to receive said lever therebetween to releasably hold the cable reel against rotation with the cables wound thereon, a release pedal member on the lower portion of the lever projecting outside the cabinet for at times rotating the lever to disengage same from said locking projections, a vertical front panel member slidably mounted in the upper forward portion of said cabinet, and means to elevate said panel member above the top of the cabinet responsive to the release of said cable reel.

6. A bank teller's protective device comprising a cabinet provided with a hinged top cover, means biasing said cover to an elevated open position, a horizontal, forwardly movable striking member slidably mounted in said cabinet, means biasing said striking member to a forward position in the cabinet, a cable reel rotatably mounted in said cabinet, respective flexible cables wound on said reel and connected to said top cover and said striking member, said last-named biasing means being of sufficient strength to simultaneously close said top cover and project said striking member forwardly when the cable reel is released, means to rotate said cable reel against the force of said last-named biasing means and wind up the cables thereon, a lever pivoted to said cabinet, a pair of locking projections on the cable reel spaced to receive said lever therebetween to releasably hold the cable reel against rotation with the cables wound thereon, a release pedal member on the lower portion of the lever projecting outside the cabinet for at times rotating the lever to disengage same from said locking projections, a further front panel member slidably mounted in the upper forward portion of said cabinet, and an additional flexible cable wound on said cable reel and being constructed and arranged to elevate said panel member above the top of the cabinet responsive to the release of said cable reel.

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