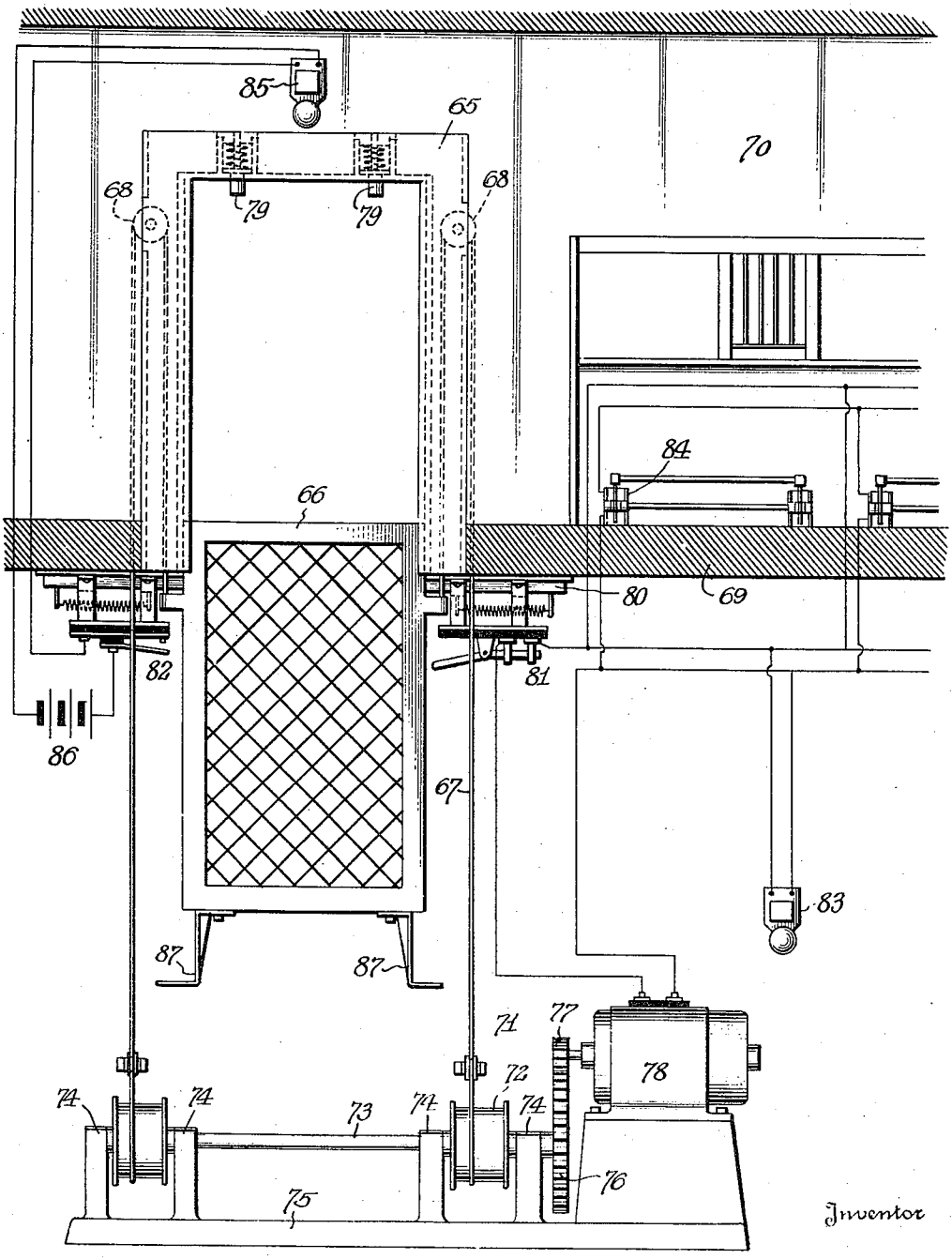
J. B. MITCHELL.

SAFETY DOOR FOR BANKS.

APPLICATION FILED NOV. 21, 1919.

1,413,233. Patented Apr. 18, 1922.



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UNITED STATES PATENT OFFICE.

JOSEPH B. MITCHELL, OF DETROIT, MICHIGAN.

SAFETY DOOR FOR BANKS.

1,413,233. Specification of Letters Patent. Patented Apr. 18, 1922.

Application filed November 21, 1919. Serial No. 339,693.

To all whom it may concern:

Be it known that I, JOSEPH B. MITCHELL, a citizen of the United States of America, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Safety Doors for Banks, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to safety doors for banks and similar institutions, and the primary object of my invention is to provide a building with electrically actuated doors for all of the exits of the building, so that all of the doors may be simultaneously closed to prevent the exit being used, the doors being especially designed to entrap undesirable persons, as robbers, in the building and prevent escape by the exit.

Another object of my invention is to furnish bank doorways with doors that may be raised and lowered relative to a cellar, vault or other compartment beneath the main banking floor, and novel means, electrically controlled is employed for raising the door without any danger of pedestrians or customers entering or leaving the bank being injured by the doors when placed in operation.

A further object of my invention is to furnish a bank with doors that may be closed by any of the clerks or officials of the bank, the door operating mechanism being placed in operation by foot pressure and without the use of a hand, so that should robbers enter a bank and request the officials to hold up their hands it is possible for the officials to close all the exits of the bank and prevent escape of the robbers, it of course being understood that the windows are barred or of such a nature as to prevent escape therethrough.

A still further object or my invention is to provide a burglar trap, including alarms or signals, which will prevent the escape of burglars after having entered the trap, and it is in this connection that my invention aims to prevent the burglarizing of suburban or remote institutions that are without police protection.

The above are a few of the objects attained when a bank is equipped with my invention, and others will hereinafter appear as the nature of the invention is better understood.

Reference will now be had to the drawing showing a sectional view of a portion of a building having a doorway provided with a door and operating mechanism therefor in accordance with my invention.

The reference numeral 65 indicates a doorway having a door 66 slidable therein and attached to the sides of the door 66 are cables 67 extending over sheaves 68 arranged in the side walls of the doorway 65. The cables 67 extends downwardly through the floor 69 of the banking room over sheaves 71 and are attached to drums 72 and adapted to be wound thereon when said drums are revolved by a shaft 73, journaled in bearings 74 on the motor base 75. The shaft 73 has a gear wheel 76 meshing with a gear wheel 77 operated by a motor 78 on the base 75, and when the motor is placed in operation the door 66 is raised in the doorway 65. The upward movement of the door 66 is cushioned by spring pressed buffers 79 in the top of the doorway 65, said buffers preventing the door from being slammed shut.

I provide slide latches 80 on the ceiling of the compartment in which the motor 78 is located, said slide latches being retained in a retracted position by the side edges of the door 66, but immediately upon the door reaching a closed position the slide latches 80 are released to extend under the lower edge of the door and lock it in a closed position.

Adjacent the slide latches 80 are switches generally designated 81 and 82, the switch 81 being in circuit with the motor 78, a signal 83 and treadle switches 84.

The switch 82 is in circuit with a signal 85 and a suitable source of electrical energy 86, and the switches 81 and 82 are adapted to be closed by a trip member 87 at the lower edge of the door 66, the switch 81 being closed in advance of the switch 82.

What I claim is:—

In a bank building, a wall provided with a doorway, a floor provided with an opening at said doorway, a door slidable in said doorway and the floor opening and adapted to

completely close said doorway, electric motor operated cables for raising said door, latches carried by the bottom of said floor adapted to support the lower edge of said door when raised, a switch supported from said floor at one of said latches adapted to be operated by said door to control the raising of said door by said cables, and another switch remote from said doorway adapted for placing the motor operated cables in operation to raise the door.

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

JOSEPH B. MITCHELL.

Witnesses:
KARL H. BUTLER,
ANNA M. DORR.