

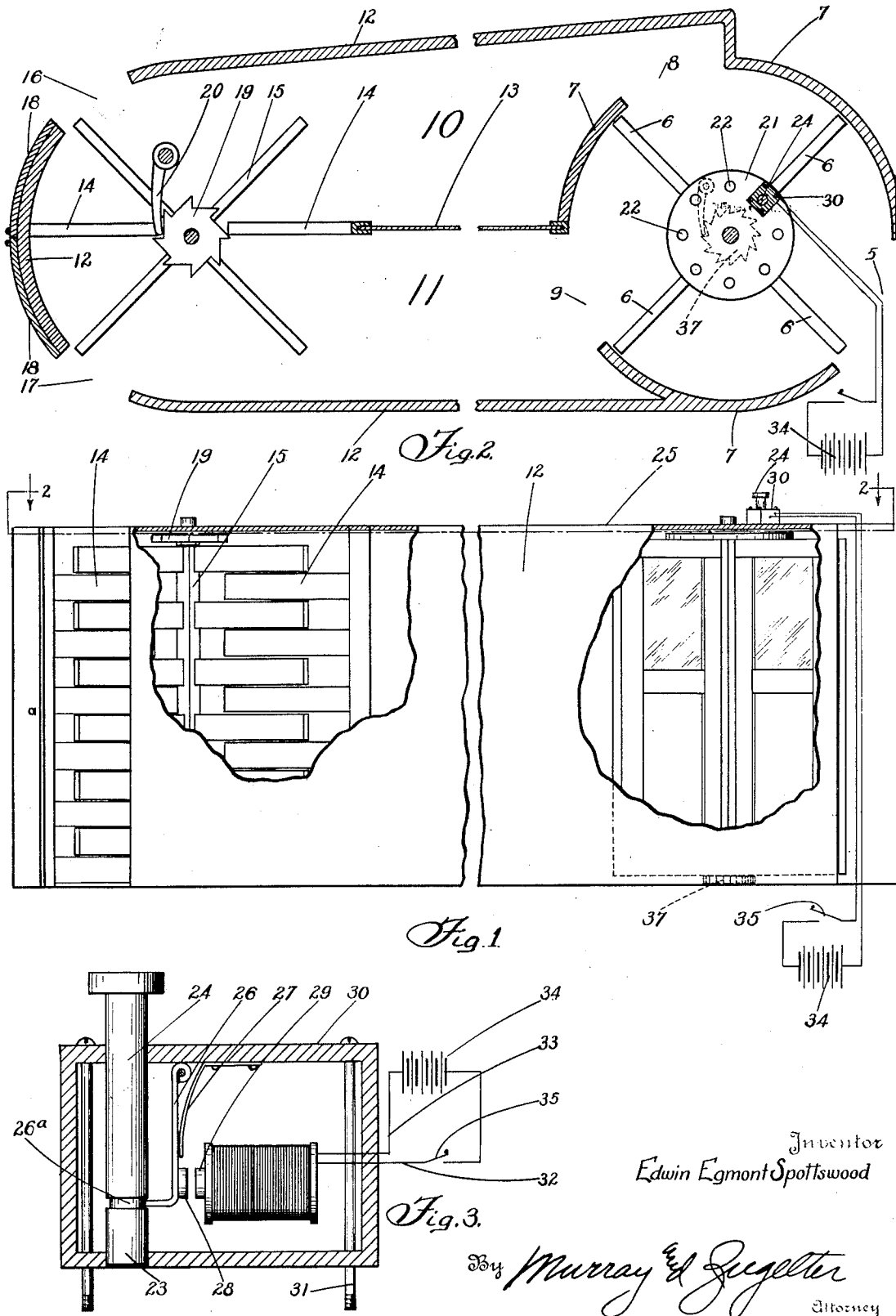
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SAFETY VESTIBULE

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SAFETY VESTIBULE.

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To all whom it may concern:

Be it known that I, EDWIN EGMONT SPOTTSWOOD, a citizen of the United States of America, and a resident of Cincinnati, in the county of Hamilton and State of Ohio, have invented new and useful Improvements in a Safety Vestibule, of which the following is a specification.

An object of my invention is to provide a novel form of trap vestibule for use especially in banks and the like wherein a robber or bandit would usually make his escape by mingling with patrons and other persons in the premises.

Another object is to provide a device of this kind which positively controls exit from a building.

Another object is to provide means of this kind which, when put into operation, will convert a portion of a normal exit passage-way into a locked cell.

Another object is to provide a device of this kind which may be put into operation from a plurality of locations about the building in which it is installed.

These and other objects are attained by the means described herein and disclosed in the accompanying drawings, in which:

Fig. 1 is a side elevational view of a structure of my invention, parts being broken away.

Fig. 2 is a view taken on line 2—2 of Fig. 1.

Fig. 3 is a cross sectional view of one form of operating mechanism forming a detail of my invention.

As shown in the plan view in Fig. 2 an entrance way 5 to a bank or similar building is provided with a set of normally revolving doors 6 surrounded by casing walls 7 and having a passage 8 for entry into the building from the interior of the casing 7 and an exit passage 9 for exit from the building into the interior of the casing 7. The casing 7 is substantially enclosed within the elongated chamber comprising an entrance corridor 10 and an exit corridor 11 bounded by side walls 12 and having a suitable partition 13 therein for separating the passage-ways 10 and 11. The partition 13 connects with the casing 7 adjacent the passage 9 at its one end and with the stationary bars 14 of a one way turn stile 15 mounted in alignment with its opposite end. The passage-ways 16 and 17 control communication between the corridors 10 and 11

respectively and the interior of the bank or building proper. These passages 16 and 17 are controlled by suitable sliding doors 18 which may be provided with any approved type of snap lock (not shown). The turn stile 15 is provided with any suitable mechanism for insuring one-way rotation such as a ratchet 19 and pawl 20.

From the foregoing it will be apparent that all persons entering and leaving the bank must first pass through the entrance 5 which would be positioned adjacent the street. Upon entering a person would pass through the passage-way 5 and walk between two adjacent revolving doors 6 in the casing 7 and push the door 6 before him to leave by way of passage 8 and then walk through the entrance corridor 10 passing through the turn stile 15 and entering into the bank or building proper through the passage 16. Upon leaving the bank or building he would enter the passage 17 and move the turn stile 15 to enter the exit corridor 11, thence through exit passage 9 into casing 7 and push a revolving door 6 before him and finally leaving through the entrance 5.

A plate 21 is mounted upon the top of the revolving door structure 6 and is secured thereto by any suitable means. The plate 21 is provided with a plurality of perforations 22 which are adapted to receive the end 23 of a locking bolt 24 mounted upon the ceiling or roof member 25 which serves as a cover for the entire structure disclosed. As the revolving door 6 rotates, the perforations 22 pass successively below the end 23 of the bolt lock 24. The bolt lock 24 is normally retained in a raised position by means of a catch 26 supported by a yielding spring 27. The catch 26 carries an armature 28 which is positioned adjacent and adapted to be attracted by a suitable electromagnet 29. This latching mechanism may be housed within a suitable casing 30 mounted upon the ceiling 25 in any suitable manner such as by bolts 31. Conductor wires 32 and 33 are connected to the opposite ends of the windings on the electromagnet 29 and also embrace a suitable source of electric current such as a battery 34. A suitable switch 35 serves to complete the circuit whereupon the electromagnet 29 becomes energized and attracts the armature 28 and removing the catch 26 from its retaining notch 26^a in the bolt 24 whereupon the end 23 of said bolt

will drop on to the plate 21 in the path of the perforations 22 therein. As the revolving doors 6 are rotated the end 23 will drop into one of the perforations 22 and thus
 5 lock the doors against further rotation. It will be readily apparent to those skilled in the art that a number of switches 35 may be connected in the same circuit and positioned in various parts of the building so that the
 10 bolt 24 may be released to lock the revolving doors 6 from any desired point. It will also be readily apparent that the sliding doors 18 may be arranged for automatically closing by the use of any approved means.
 15 Mechanical means may also be used for releasing bolt 24.

From the foregoing it will be apparent that upon release of the bolt 24 the corridor 11 will be transformed into a locked
 20 cell, since the revolving doors 6 are locked by the bolt and the turn stile 15 cannot be revolved to permit exit from the corridor 11 to the passage 17. Furthermore the closing of the sliding doors 18 will seal the
 25 entire structure into a closed chamber and if a robber or bandit, trapped in the corridor 11 should prove to be desperate, tear gas or the like may be admitted to the closed chamber in order to render the trapped
 30 person submissive.

One or more of the switches 35 may be attached to suitable treads within the corridor 11 and so constructed as to be rendered
 35 inoperative during the day time and adapted to be set or rendered automatically operative at other times so that the structure will operate automatically at such times as the bank or place of business may be closed.
 40 A bank using a structure of my invention would also be provided with a secondary entrance which would normally remain locked and bolted and which would be used only for the purpose of permitting customers to leave the bank proper or to admit
 45 police or the like when the trap might be in operation. The revolving doors 6 are preferably equipped with a ratchet device 37 for insuring one way rotation. This device may be carried either at the base of the
 50 doors as shown, or may be carried by the plate 21.

It will be readily apparent to those skilled in the art that separate turn stiles 15 may be employed in each of the corridors 10 and
 55 11 in places where the plan of the building would render such a modification more desirable.

What I claim is:

1. In a device of the class described the
 60 combination with a casing having a pair of longitudinally disposed noncommunicating corridors therein, a revolving door controlling entrance to and exit from the casing at one end, a turn stile structure controlling
 65 exit from one of the corridors and entrance

to the other of the corridors at the opposite end of the casing, and controllable means for locking the revolving door against movement whereby a locked chamber is provided in the second mentioned corridor.

2. In a device of the class described the
 70 combination with a pair of casing walls, a partition between said casing walls and substantially parallel thereto whereby an entrance corridor and an exit corridor is
 75 formed, a revolving door controlling entrance to the entrance corridor and controlling exit from the exit corridor, a one way turn stile controlling exit from the entrance corridor and entrance to the exit corridor, means for locking the revolving door
 80 against rotation whereby the corridors are locked at one end and sliding doors for controlling the free ends of said corridors.

3. In a trap structure for building
 85 entrances and the like the combination with a pair of spaced walls, a partition extending in substantial parallelism with the walls and spaced therefrom whereby a pair of corridors is formed between the walls, a
 90 revolving door mounted in alignment with the partition and controlling communication between the corridors and the outside at one end of the corridors, a one way turn stile mounted in alignment with the opposite
 95 end of the partition and controlling exit from one corridor and entrance to the other corridor at the other end of the corridors, and controllable means for automatically locking the revolving door whereby
 100 a locked chamber is formed in one of the corridors.

4. In a trap structure for building
 105 entrances and the like the combination with a pair of spaced walls, a partition extending in substantial parallelism with the walls and spaced therefrom whereby a pair of corridors is formed between the walls, a revolving door mounted in alignment with the partition and controlling communication between the corridors and the outside at one
 110 end of the corridors, a one way turn stile mounted in alignment with the opposite end of the partition and controlling exit from one corridor and entrance to the other corridor at the other end of the corridors, controllable means for automatically locking the revolving door whereby a locked chamber is formed in one of the corridors, and sliding
 115 doors mounted adjacent the turn stile.

5. In a trap structure for building
 120 entrances and the like the combination with a pair of spaced walls, a partition extending in substantial parallelism with the walls and spaced therefrom whereby a pair of corridors is formed between the walls, a revolving door mounted in alignment with the partition and controlling communication between the corridors and the outside at one
 125 end of the corridors, a one way turn stile
 130

mounted in alignment with the opposite end of the partition and controlling exit from one corridor and entrance to the other corridor at the other end of the corridors, and electrically controllable means for automatically locking the revolving door whereby a locked chamber is formed in one of the corridors.

6. In a device of the class described the combination with a casing having an entrance opening at its one end and a pair of openings at its opposite end, a partition extending longitudinally of the casing whereby there is provided a pair of corridors within the casing, revoluble means for controlling communication between the single opening at the one end of the casing and the respective corridors within the casing, said corridors being noncommunicating a turn stile mounted at the other end of the casing and controlling communication between the pair of openings and their respective communicating corridors, means for closing the last mentioned two openings, and controllable means for locking the first mentioned revoluble means against movement whereby one of the corridors is locked against exit.

7. In a device of the class described the combination with a casing having a pair of longitudinally disposed noncommunicating corridors therein, a revolving door controlling entrance to and exit from the casing at one end, a turn stile structure controlling exit from one of the corridors and entrance to the other of the corridors at the opposite

end of the casing, and controllable means for locking the revolving door against movement whereby one of the corridors may be selectively locked against exit and against entrance and exit.

8. In a device of the class described the combination with a casing having noncommunicating corridors therein, a revolving door controlling communication between the corridors and one end of the casing, locking means for said revolving door, remote control means for actuating the locking means, and means controlling communication between the corridors and the other end of the casing.

9. In a safety vestibule the combination with three spaced and substantially parallel walls for providing a pair of noncommunicating corridors of a revolving door positioned at one end of the intermediate wall for controlling entrance to one of the corridors and exit from the second of said corridors, a turnstile positioned in alignment with the other end of the intermediate wall and controlling exit from the first mentioned corridor and entrance to the second mentioned corridor, controllable means for locking the revolving door and a pair of auxiliary sliding doors mounted adjacent to turnstile for effecting control of the corridors adjacent to said turnstile.

In testimony whereof, I have hereunto subscribed my name this 31st day of December, 1924.

EDWIN EGMONT SPOTTSWOOD.