No. 777,003. PATENTED DEC. 6, 1904.

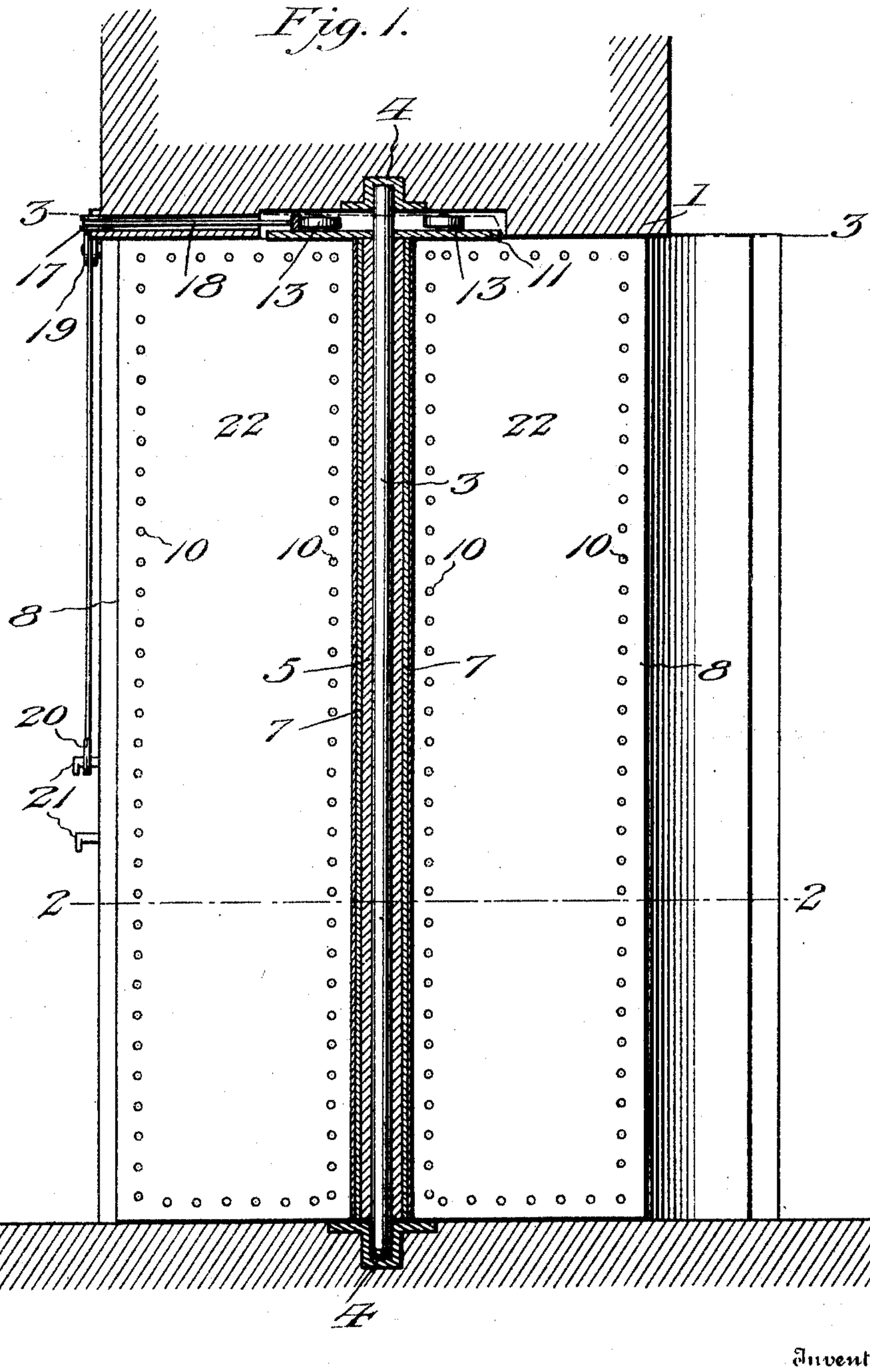
S. M. COLE.

ROTATING DOOR.

APPLICATION FILED MAR. 10, 1904.

NO MODEL. 2 SHEETS—SHEET 1.

Fig. 1.



Witnesses

Edwin F. McKee

Hubert D. Lawson.

Inventor

Sherman M. Cole

By Victor J. Evans

Attorney

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NO MODEL. 2 SHEETS—SHEET 2.

Fig. 2.

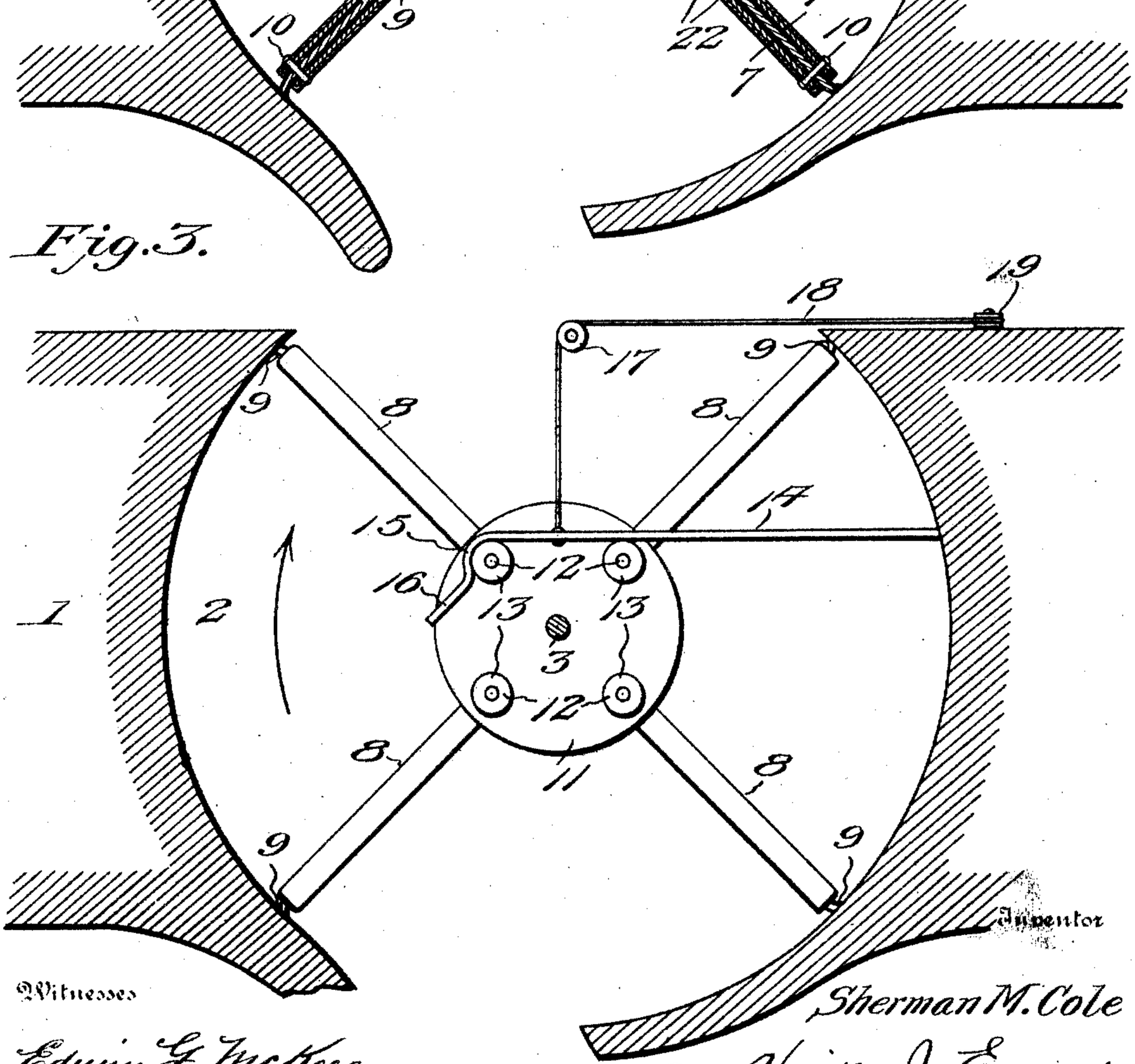

Fig. 3.

Witnesses

Edwin F. McKee

Herbert D. Lawson.

Inventor

Sherman M. Cole

By Victor J. Evans

Attorney

No. 777,003. Patented December 6, 1904.

UNITED STATES PATENT OFFICE.

SHERMAN M. COLE, OF ANAMOSA, IOWA.

ROTATING DOOR.

SPECIFICATION forming part of Letters Patent No. 777,003, dated December 6, 1904.

Application filed March 10, 1904. Serial No. 197,558. (No model.)

To all whom it may concern:

Be it known that I, SHERMAN M. COLE, a citizen of the United States, residing at Anamosa, in the county of Jones and State of Iowa, have invented new and useful Improvements in Rotating Doors, of which the following is a specification.

My invention relates to new and useful improvements in revolving doors; and its object is to provide a durable device of this character which is especially adapted for use in exits of fireproof structures and which is so arranged as to permit the passage of persons therethrough without at any time producing a draft through the exit.

A further object is to provide means whereby the door is permitted to rotate in one direction only.

With the above and other objects in view the invention consists of a core which is secured upon a revoluble shaft arranged within the center of the exit, and secured to this core are wings which are arranged at right angles to each other and are formed of suitable fireproof material. Arranged upon the top of the wings is a cap, and rollers are secured to this cap in alinement with the wings, and two of them normally contact with a spring-retaining strip located within the exit. This strip is so shaped as to prevent the door from revolving in one direction. Means, however, are provided for removing the strip from engagement with the rollers, so as to allow the door to rotate in both directions, if desired.

The invention also consists in the further novel construction, combination, and arrangement of parts, hereinafter more fully described and claimed, and illustrated in the accompanying drawings, in which—

Figure 1 is a central vertical section through my improved revolving door in position within an exit. Fig. 2 is a section on line 2 2, Fig. 1. Fig. 3 is a section on line 3 3, Fig. 1.

Referring to the figures by numerals of reference, 1 is a partition having an exit 2 therethrough, the side walls of which are concave and are concentric with a vertical shaft 3, arranged within the center of the exit and bearing at the top and bottom thereof within sockets 4. Secured to this shaft is a core 5, having longitudinally-extending ribs 6, which are integral therewith and are arranged at right angles to each other. L-shaped plates 7, preferably formed of sheet metal, are interposed between every two ribs and are riveted or otherwise secured thereto, and when all of these plates are secured in position wings 8 are formed thereby, said wings being arranged at right angles to each other and extending to points adjacent the concaved walls of the exit 2.

Strips 9 of suitable flexible material—such as asbestos, cloth, &c.—are arranged within the wings 8 and are secured therein by bolts or rivets 10, which extend along the edges of the wings, and these strips 9 project from the free edges of the wings and are adapted to contact with the walls of exit 2 and prevent the circulation of air through said exit when the door is in place therein. Secured to the upper ends of the wings 8 is a disk or cap 11, on which are arranged pins 12, and one of these pins is located above each wing 8. Revolubly mounted on the pins are rollers 13, which are arranged to successively contact with a spring-strip 14, extending into the exit from one wall thereof and arranged above the cap 11. This spring has a hooked end 15, from which extends an inclined projection 16. A pulley 17 is revolubly mounted upon the top of the exit 2, and extending therearound is an operating-strip 18, one end of which is secured to the strip 14 adjacent the hook 15, while the other end passes over a pulley 19, located on one side of the partition 1 and terminates in a hook 20, which is adapted to be placed into engagement with either of two hooks 21, secured to the partition.

A covering 22, of asbestos, is arranged upon the outer faces of each wing 8 and is retained in place thereon by the rivets or bolts 10, before referred to.

The door is adapted to be rotated ordinarily in direction of the arrows shown in Figs. 2 and 3. During this rotation the roller 13 will be brought successively into contact with the inclined extension 16, and the same will be pressed backward, so as to permit the door to readily rotate. When, however, an effort is made to rotate the door in any direction, the rollers

will come into contact with the hook 15, which will lock the door and prevent it being turned. However, should it be desirable to turn the door in either direction the strip 14 can be drawn laterally, so as to remove the hook from the path of the rollers by pulling on the strip 18 and placing the ring 20 in engagement with the lower hook 21. The asbestos which is provided for the door renders the same absolutely fireproof, and the peculiar shape of the walls of the exit, together with the disposition of the wings 8, is such as to prevent the circulation of air through the exit. The device is thus rendered especially adapted for use in fireproof structures or, in fact, in any structure where a fireproof door is desired.

In the foregoing description I have shown the preferred form of my invention; but I do not limit myself thereto, as I am aware that modifications may be made therein without departing from the spirit or sacrificing any of the advantages thereof, and I therefore reserve the right to make such changes and alterations as may fairly fall within the scope of my invention.

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

1. A revoluble door comprising a core, wings extending laterally therefrom, rollers secured upon the wings, a hooked spring-strip normally contacting with and engaging one of the rollers, and means for retracting the spring from engagement therewith.

2. A revoluble door comprising a core, wings extending laterally therefrom, a cap upon the wings, rollers revolubly mounted upon the cap, a hooked spring-strip normally contacting with and engaging one of the rollers, an inclined extension to the strip, and means for removing the strip from engagement with the roller.

3. A revoluble door comprising a core, longitudinally-extending ribs thereon at angles to each other, angular plates secured to the ribs and forming wings, a fireproof covering upon each wing, a flexible strip within and projecting from each wing, and means for preventing the rotation of the door in one direction.

4. A revoluble door comprising a core, longitudinally-extending ribs thereon at angles to each other, angular plates secured to the ribs and forming wings, a fireproof covering upon each wing, a flexible strip within and projecting from each wing, means for preventing the rotation of the door in one direction consisting of a cap secured upon the door, rollers thereon in alinement with the wings, a hooked spring-strip normally contacting with and engaging one of the rollers, an inclined extension at the free end of the strip, and means for removing the strip from engagement with the roller.

5. A revoluble door comprising a core, wings extending laterally from the core at angles to one another, rollers secured to and revoluble with the wings, a spring-strip normally contacting with the rollers, and means for retracting the spring from engagement therewith.

6. A revoluble door comprising a core, wings extending laterally therefrom, a spring-strip normally engaging the door to prevent rotation thereof in one direction, and means for retracting the spring from engagement with the door.

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

SHERMAN M. COLE.

Witnesses:
A. H. MOREY,
JOHN H. PECK.