W. B. ALLEN.

REVOLVING DOOR.

APPLICATION FILED JULY 17, 1912.

1,066,567.

Patented July 8, 1913.

2 SHEETS—SHEET 1.

Fig. 1.

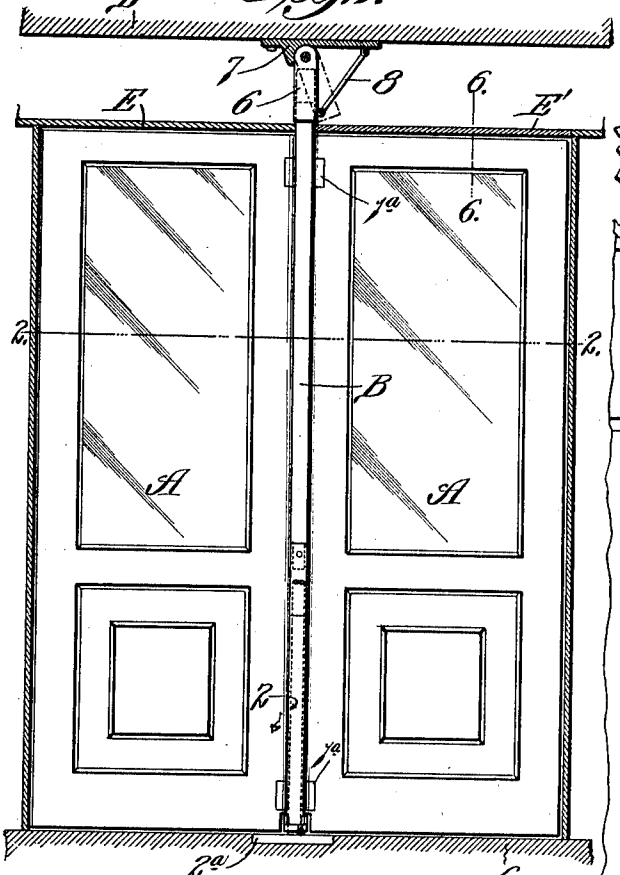


Fig. 2.

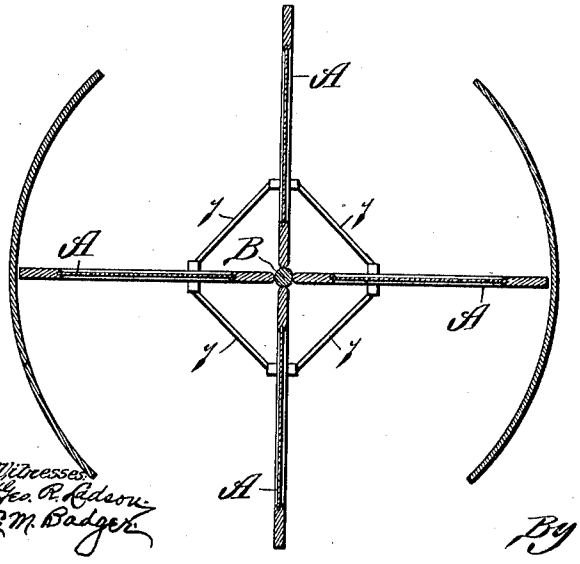
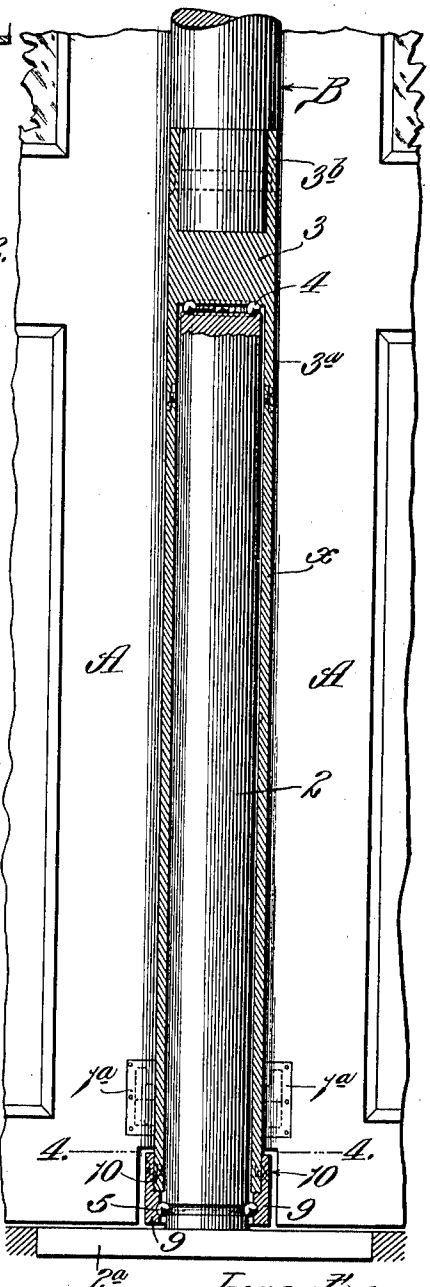


Fig. 3.



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C. M. Badger.

Inventor,
Walker B. Allen.
By Bakewell & Church Attys.

COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

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2 SHEETS—SHEET 2.

Fig. 4.

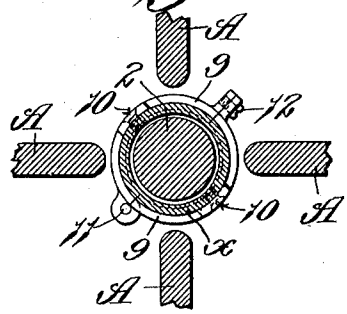


Fig. 5.

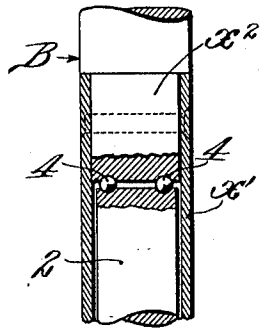


Fig. 6.

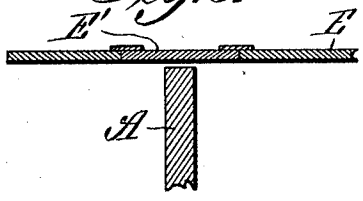


Fig. 7.

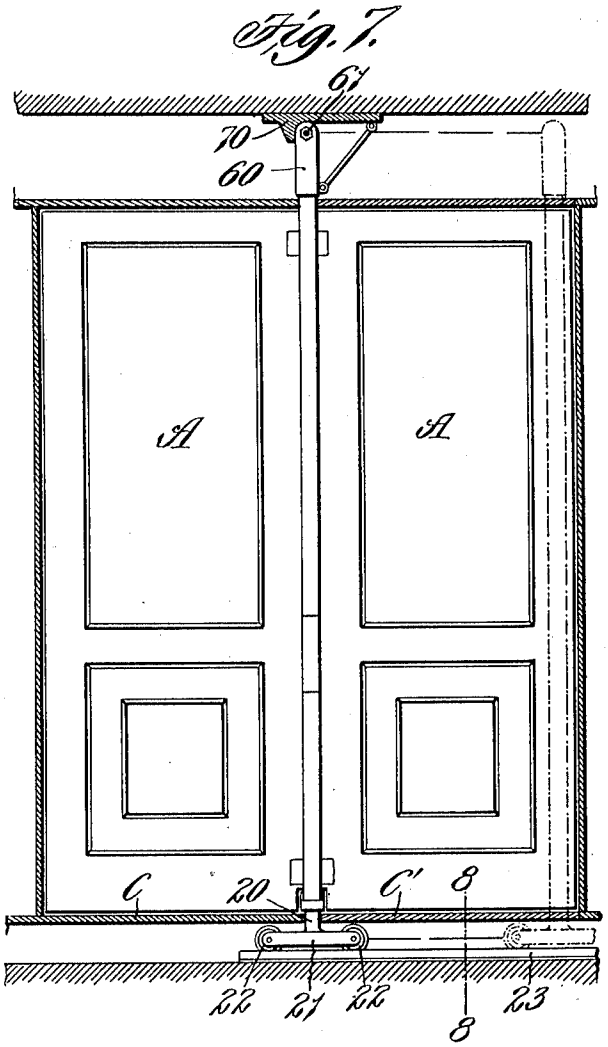
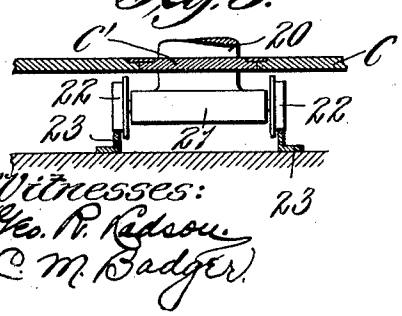


Fig. 8.



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UNITED STATES PATENT OFFICE.

WALKER B. ALLEN, OF ST. LOUIS, MISSOURI, ASSIGNOR OF ONE-HALF TO JOHN C. KEIL, OF ST. LOUIS, MISSOURI.

REVOLVING DOOR.

1,066,567. Specification of Letters Patent. Patented July 8, 1913.

Application filed July 17, 1912. Serial No. 710,005.

To all whom it may concern:

Be it known that I, WALKER B. ALLEN, a citizen of the United States, residing at St. Louis, Missouri, have invented a certain new and useful Improvement in Revolving Doors, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to revolving doors, and has for its object to provide an efficient revolving door of simple construction that will not get out of order easily and which is so designed that the bearing which supports the weight of the door is located adjacent the point where pressure is applied to the door during the operation of revolving the door. To this end I have devised a revolving door which comprises a rotatable center column to which the wings or sections of the door are connected, and a standard or stationary supporting member arranged in said center column and coöperating with a bearing member on the column that is located at approximately the center of the door.

Figure 1 of the drawings is an elevational view of a revolving door constructed in accordance with my invention; Fig. 2 is a horizontal sectional view taken on approximately the line 2—2 of Fig. 1; Fig. 3 is an enlarged vertical sectional view of part of the center column and the vertical standard that supports the weight of the door; Fig. 4 is a horizontal sectional view taken on the line 4—4 of Fig. 3; Fig. 5 is a detail vertical sectional view illustrating a slight modification of my invention; Fig. 6 is a vertical sectional view taken on the line 6—6 of Fig. 1; Fig. 7 is an elevational view illustrating another modification of my invention; and Fig. 8 is a vertical sectional view taken on the line 8—8 of Fig. 7.

Referring to Figs. 1 to 4 of the drawings which illustrate the preferred form of my invention, A designates the wings or door sections of a revolving door, said wings being arranged at an angle to each other, as shown in Fig. 2, and mounted in such a manner that they will revolve about a vertical axis located at the center of the door opening. The door herein shown is provided with four wings or door sections A that are held in operative position with relation to each other by means of braces 1 of any suitable type, as shown in Fig. 2, and said door sections are connected to a center column B that preferably extends from the top to the bottom of the door opening. Any suitable means may be used for connecting the door sections A to the center column B, such, for example, as hinges 1^a consisting of interlocking members on the door sections and on the center column which are so designed that the door sections can be folded together after the braces 1 have been released.

The bearing that supports the weight of the door is located intermediate the top and bottom edges of the door preferably at approximately the center of the door. In the embodiment of my invention shown in Figs. 1 to 4 a vertically disposed standard or support 2 projects upwardly through the center column B and coöperates with a member 3 inside of said center column to support the entire weight of the door, the bearing member 3 being preferably located a slight distance below the transverse center of the door or at a point where pressure is applied to the wings A of the door during the operation of revolving the door.

In order to reduce the friction between the upper end of the standard 2 and the bearing member 3 on the door I interpose a friction-reducing bearing between the said parts, the bearing herein shown consisting of balls 4 that are arranged in coöperating annular raceways formed in the upper end of the standard 2 and in the under side of the member 3 in the center column B. The door-supporting standard 2 is provided at its lower end with a base 2^a which is securely anchored to the floor C at approximately the center of the opening which the door closes, and, if desired, ball bearings 5 can be arranged between the outer surface of the standard 2 and the inner surface of the center column B adjacent the lower end of said standard, as shown in Fig. 3, so as to reduce the friction between said parts caused by the rotary movement of the center column around the standard 2. Means are provided for holding the upper end of the center column B in position so as to reduce the lateral

12. A revolving door comprising a center column provided with wings or door sections, a vertical standard in the lower portion of said column that projects upwardly into said column and terminates some distance below the upper end of same, a bearing in said column that transmits the weight of the door directly to said standard, a laterally movable member to which said standard is connected, and means for normally holding the center column in a vertical position at the center of the door opening.

In testimony whereof I hereunto affix my signature in the presence of two witnesses, this fifteenth day of July 1912.

WALKER B. ALLEN.

Witnesses:
WELLS L. CHURCH,
GEORGE BAKEWELL.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."

J. McE. AMES.

UNDERFRAME.

APPLICATION FILED MAR. 18, 1910.

1,066,568.

Patented July 8, 1913.

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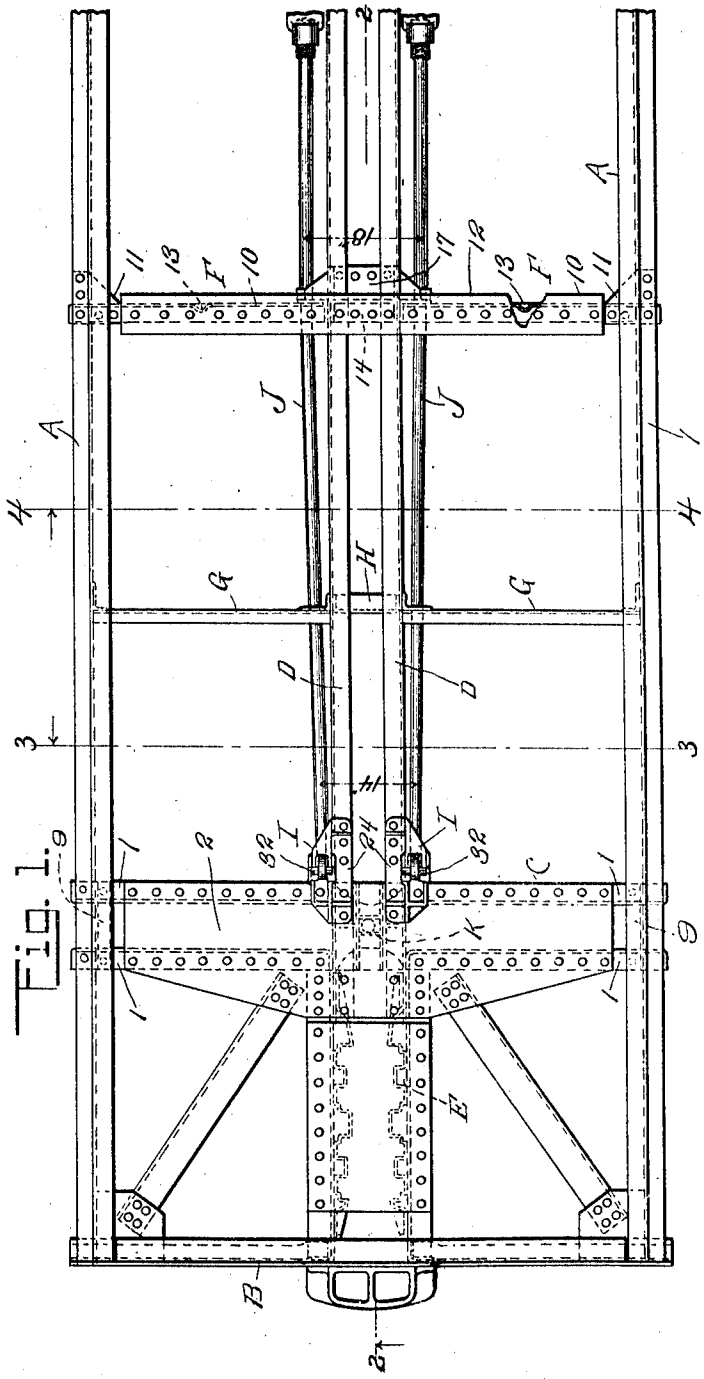


Fig. 1.

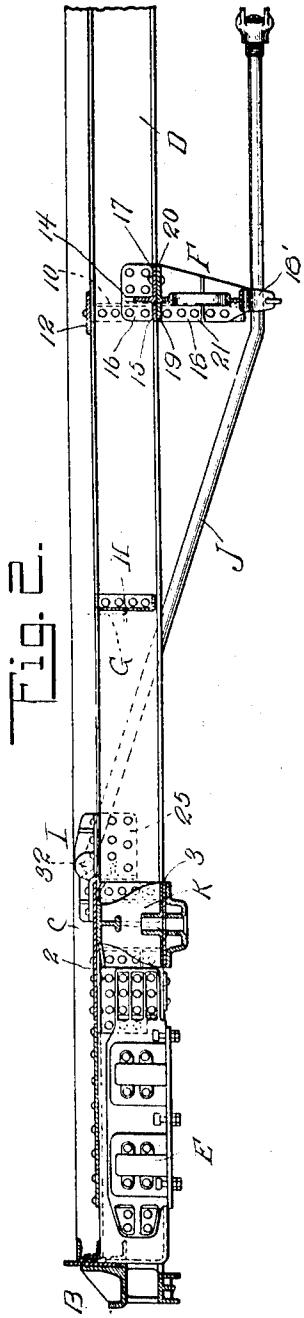


Fig. 2.

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