

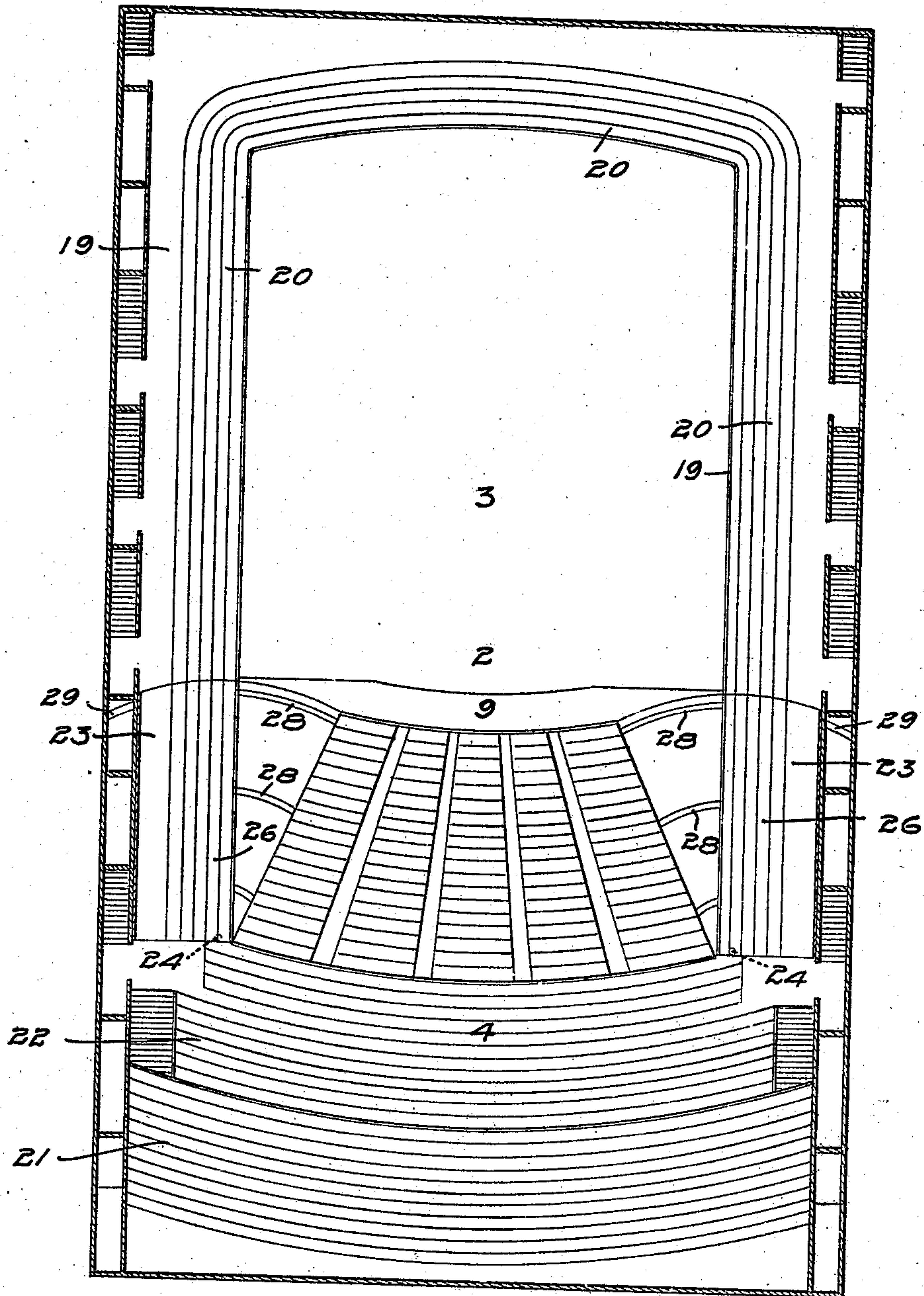
No. 847,692.

PATENTED MAR. 19, 1907.

C. A. REED & A. H. STEM.  
BUILDING CONSTRUCTION.

APPLICATION FILED JUNE 8, 1906.

4 SHEETS—SHEET 1.



WITNESSES  
*M. M. Linn*  
*C. S. Hanson*

FIG. 1.

INVENTORS  
CHARLES A. REED  
ALLEN H. STEM  
BY *Paul & Paul*  
THEIR ATTORNEYS

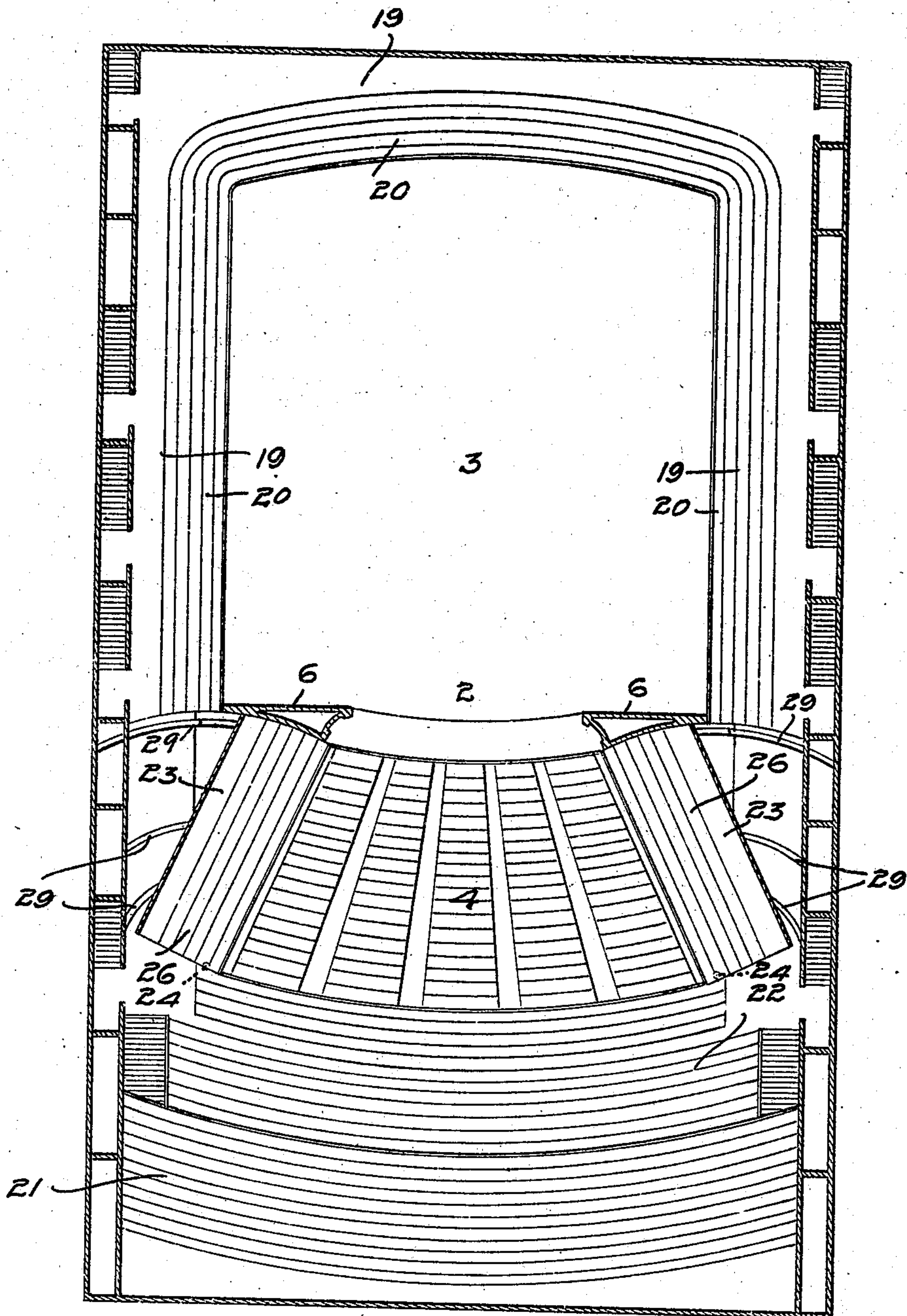
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4 SHEETS—SHEET 2.



WITNESSES

*M. M. Lewis*  
*O. G. Hanson*

FIG. 2.

INVENTORS  
CHARLES A. REED  
BY ALLEN H. STEM

*Paul & Paul*

THEIR ATTORNEYS



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4 SHEETS--SHEET 3.

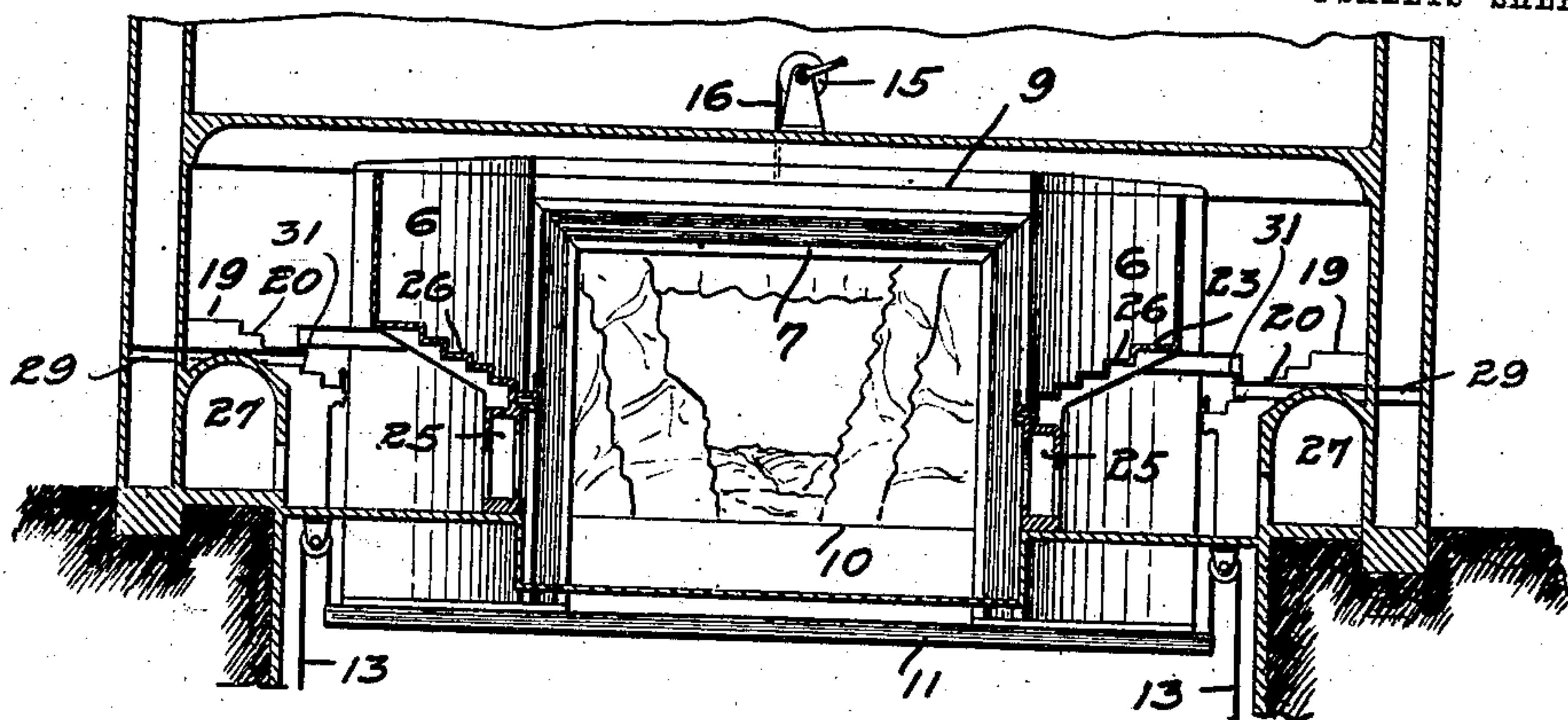


FIG. 3.

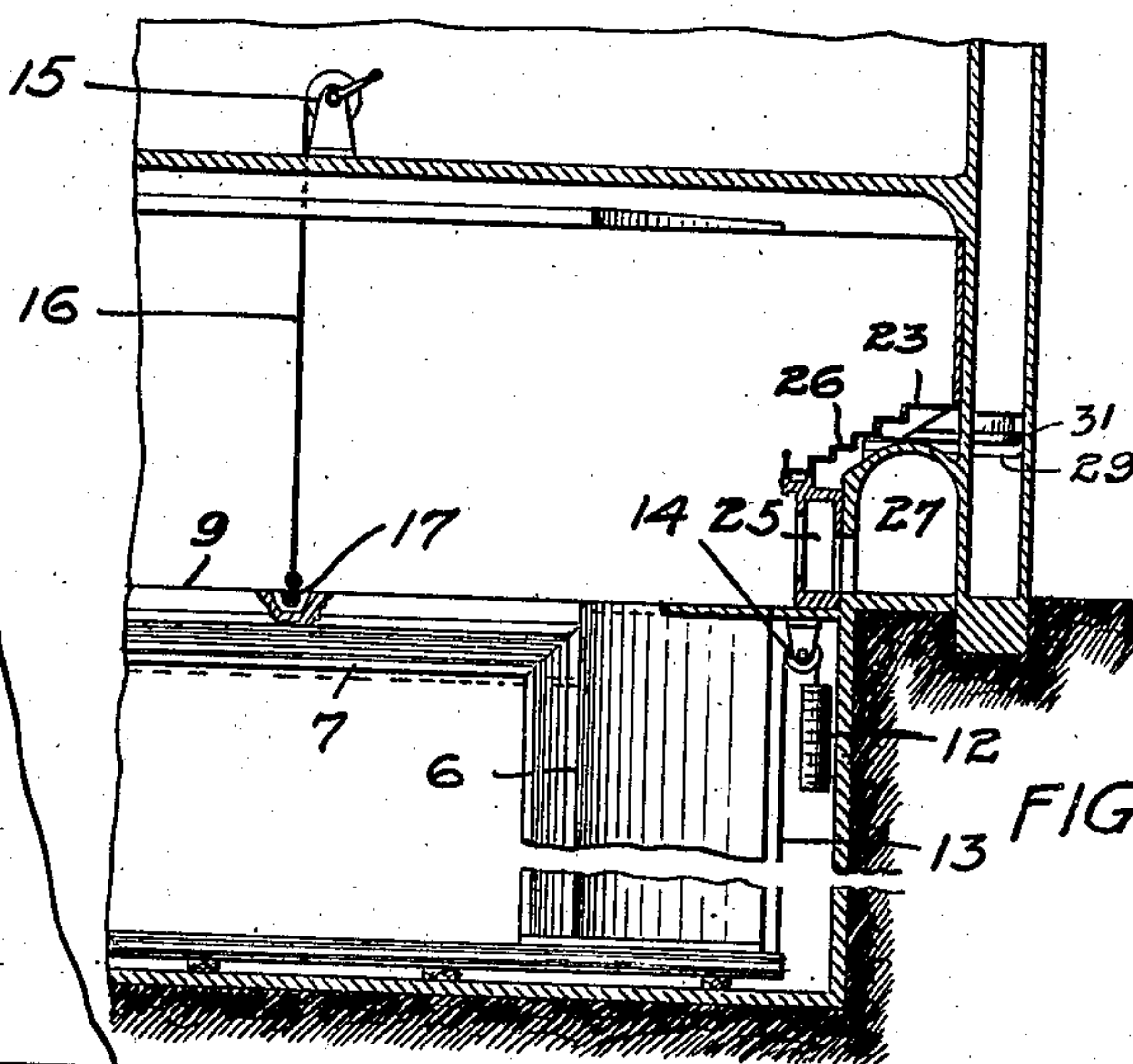
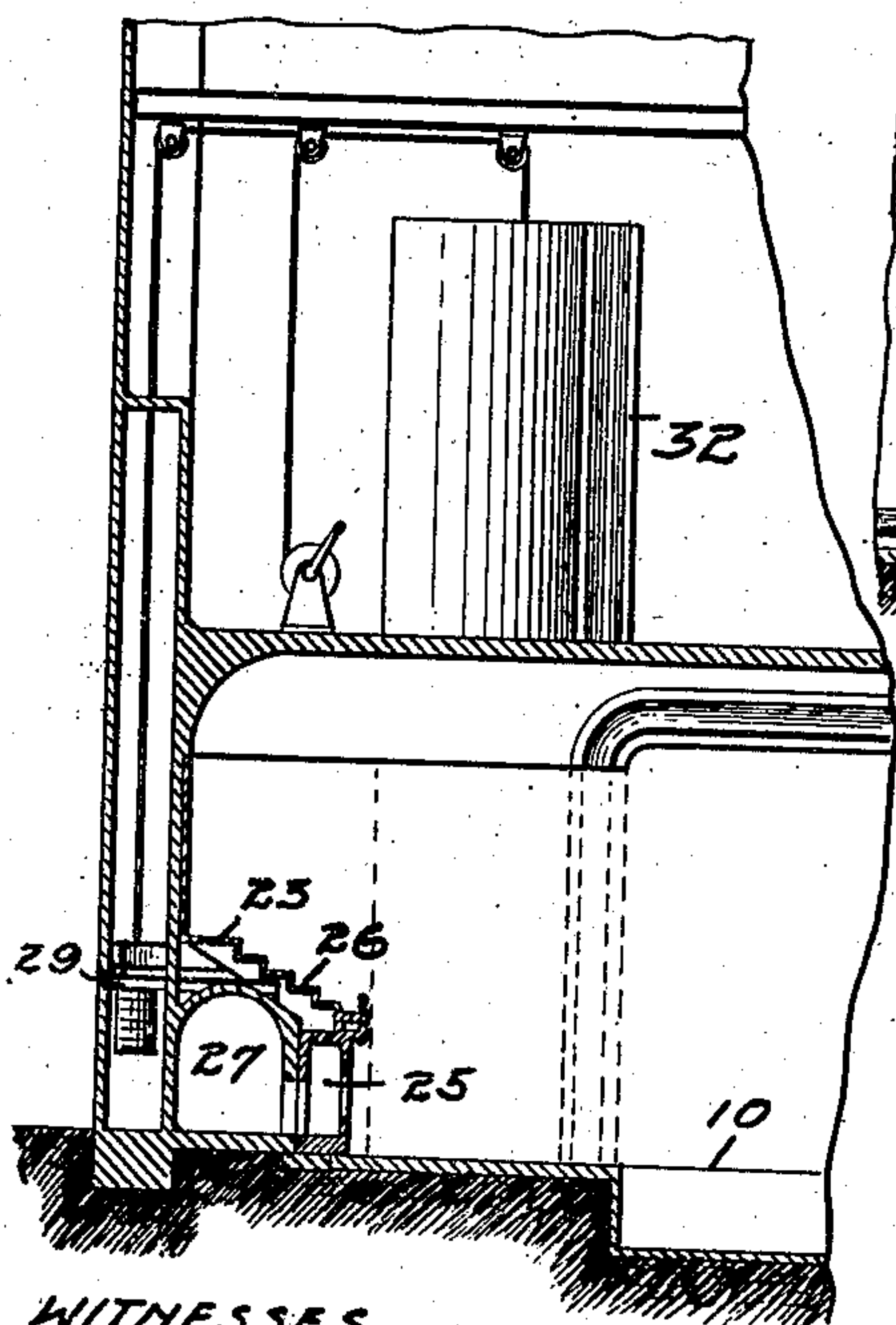


FIG. 4.



WITNESSES  
M. M. Linn  
C. L. Hanson

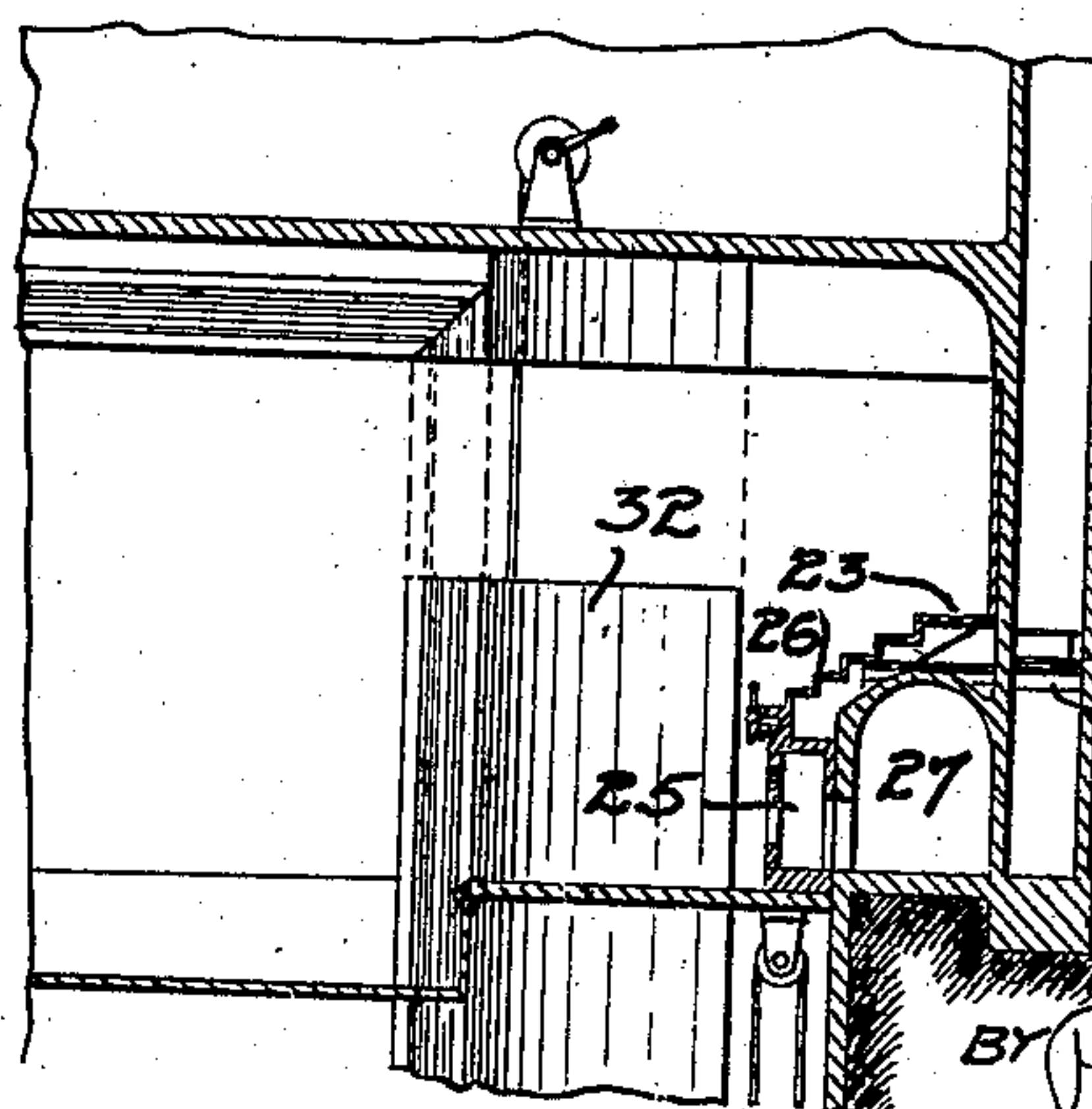


FIG. 9.

**INVENTORS**  
**CHARLES A.**  
**REED**  
**ALLEN H.**  
**STEM**

BY *Paul & Paul*  
THEIR ATTORNEYS

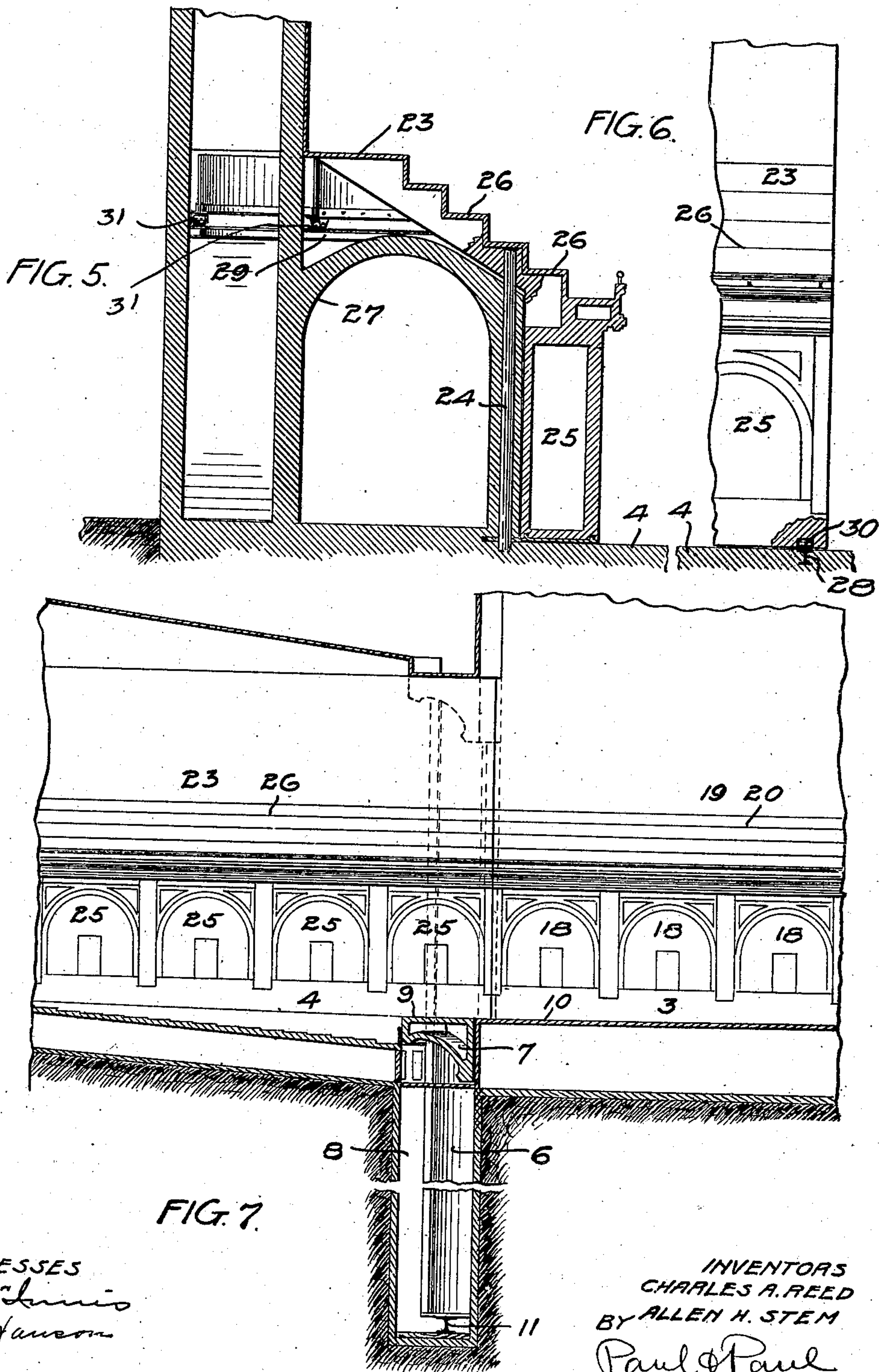
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4 SHEETS—SHEET 4.



WITNESSES  
M. M. Linnio  
C. G. Hanson

INVENTORS  
CHARLES A. REED  
BY ALLEN H. STEM

Paul & Paul

THEIR ATTORNEYS



# UNITED STATES PATENT OFFICE.

CHARLES A. REED, OF NEW YORK, N. Y., AND ALLEN H. STEM, OF ST. PAUL, MINNESOTA.

## BUILDING CONSTRUCTION.

No. 847,692.

Specification of Letters Patent.

Patented March 19, 1907.

Application filed June 8, 1906. Serial No. 320,718.

*To all whom it may concern:*

Be it known that we, CHARLES A. REED, of New York, county of New York, and State of New York, and ALLEN H. STEM, of St. Paul, county of Ramsey, State of Minnesota, have invented certain new and useful Improvements in Building Construction, of which the following is a specification.

This invention relates to improvements in the construction of buildings; and the principal object of the invention is to provide a building having a large auditorium that may be quickly changed into a small auditorium provided with a stage by moving certain parts of the building which will harmonize and form a part of the architectural effect of the building when used for either purpose.

The invention consists generally in providing an auditorium with horizontal movable wall-sections including seating or other desirable parts of an auditorium.

Another object of the invention is to provide a building with an auditorium or audience-room having a removable proscenium wall or arch, which may be placed in position when the room is divided into two parts by the horizontally-movable seating-sections and which may be removed when the room is converted into a single auditorium.

Other objects of the invention will appear from the following detailed description, taken in connection with the accompanying drawings, in which—

Figure 1 is a horizontal section of an auditorium embodying our invention, the movable box and balcony-section being in position to permit the entire room to be used as a single auditorium and the proscenium wall and arch being removed. Fig. 2 is a similar view showing the movable box and balcony-section in its forward position. Fig. 3 is a transverse section showing the balcony in its forward position and the proscenium wall and arch in position. Fig. 4 is a similar view showing the balcony in its back position and the proscenium wall and arch removed. Figs. 5 and 6 are details of the movable balcony. Fig. 7 is a detail showing the means for receiving the proscenium-arch when the same is not in use. Figs. 8 and 9 are detail sections showing means for removing the proscenium-walls while the arch is permanently fixed in position.

In all of the drawings, 2 represents an audience-room or auditorium of any preferred size and shape. This room may be used as a single auditorium, as shown in Fig. 1, or we may divide it into two parts, one part forming a small auditorium and the other part forming a stage. Any suitable seating arrangement may be provided for either part of the room. The part of the room marked 3 in the drawings forms the stage, and the part marked 4 forms a small auditorium when the room is divided. We have here shown the part 3 of the room surrounded on three sides by suitable boxes 18, and we have also shown this part of the room provided above the boxes with a balcony 19, having the floor 20 thereof arranged in steps, upon which suitable seats may be placed. The part 4 of the room is also preferably provided with boxes on three sides and with a gallery 21 and a balcony 22, the balcony 22 being preferably on the same level with the balcony 19.

For the purpose of dividing the room into two parts when a small auditorium and stage are desired we provide upon each side of the room a horizontally-removable seating-section 23. This is preferably formed with boxes 25 below, corresponding to the fixed boxes 18, and with a balcony-section 26 above the boxes, corresponding to the balconies 19 and 22. These movable sections may be swung back against the wall of the building, as shown in Fig. 1, where they stand parallel with said wall, or they may be swung forward into the position shown in Fig. 2, where they serve to divide the large room into two parts, with a stage-opening between their innermost portions. These movable seating-sections provide an architectural feature common to both the large auditorium and the small auditorium, and they permit the change from one to the other to be quickly made. They also harmonize and form a part of the architectural effect of the building when used for either purpose. While we have shown these movable sections provided with boxes below and balcony-sections above, it will be understood that any seating arrangement may be provided therein that will conform to the seating arrangement of the other part of the building. We also prefer to provide in connection with the hori-



zontally-movable seating-sections movable  
 proscenium walls 6 and arch 7, and we prefer  
 to make these walls vertically movable. We  
 have shown and prefer to use a pit 8, ar-  
 5 ranged directly below the proscenium walls  
 and arch and adapted to have said walls and  
 arch lowered into it, thereby bringing the  
 top 9 of the arch on a level with the floor 10  
 of the part 3 of the room. The top of the  
 10 arch closes the pit when the walls and arch  
 are lowered into the pit. The portion of the  
 pit that receives the arch has preferably a  
 level floor and serves as an orchestra-pit  
 when the proscenium walls and arch are in  
 15 use. We prefer to employ an I-beam 11,  
 which forms a support for said walls when  
 lowered into the pit. (See Fig. 7.) We pre-  
 fer also to counterbalance said walls and arch  
 by means of weights 12, attached to suitable  
 20 cords or cables 13, that pass over pulleys 14,  
 and we also prefer to provide a suitable wind-  
 lass 15, having a cord or cable 16, provided  
 with a hook 17, adapted to engage a suitable  
 stud or other connection in the top of the  
 25 arch, whereby by turning said windlass the  
 proscenium walls and arch may be raised and  
 lowered together.

When the movable seating-sections are  
 moved inward to the position shown in Fig. 2  
 30 and the proscenium walls and arch are in  
 their elevated position, the part 3 of the  
 room may be used as a stage, and this part  
 of the room is therefore preferably pro-  
 vided with a level or substantially level floor  
 35 10, while the part 4 of this room is provided  
 with an inclined or sloping floor, which slopes  
 toward the proscenium-wall and is adapted to  
 have suitable seats supported thereon.

Instead of providing the removable pro-  
 40 scenium walls and arch we may, if preferred,  
 provide a fixed arch or a fixed cross-piece at  
 the top of the proscenium-opening, in which  
 case we employ vertically-movable wall-sec-  
 tions 32. These sections may be raised  
 45 above the ceiling of the room or may be  
 lowered into pits provided below the floor to  
 receive them. (See Figs. 8 and 9.) In each  
 instance we prefer to counterbalance the  
 wall-sections and to provide a suitable wind-  
 50 lass for raising and lowering the same.

We also prefer to provide the part 3 of the  
 room, or at least the part of it adjacent to the  
 proscenium walls and arch, with a higher  
 ceiling than is provided for the part 4 of the  
 55 room, so that a suitable stage-loft may be  
 arranged in the rear of the proscenium-walls  
 and above the part of the floor 10 that con-  
 stitutes the stage.

When the movable seating-sections are  
 60 moved forward and the proscenium-walls are  
 in position, the part of the room in the rear  
 of the proscenium-walls serves as a stage and  
 the part 4 of the room forms a medium-sized  
 auditorium. The building is then adapted  
 65 for use as a regular theater. When the

movable seating-sections are moved back  
 against the side walls, the boxes 25 are in line  
 with the fixed boxes at the sides of the room  
 and the movable balcony-sections are in line  
 with the fixed side balconies and the proscen- 70  
 ium-walls are removed. By placing a  
 false floor over the inclined floor in the part  
 4 of the room a single auditorium with its  
 main floor practically level, with boxes  
 around the four sides and with balconies 75  
 over the boxes extending back over the cor-  
 ridors and with a gallery at one end above  
 the balcony, (which gallery may also extend  
 over the foyer of the building,) is provided.

The main level floor may be furnished with 80  
 seats, or this floor or any part of it may be  
 used as an arena for horse-shows or other  
 exhibition purposes.

If preferred, the ends of the movable seat-  
 ing-sections that are toward the part 3 of the 85  
 room may be provided with closed walls, in  
 which case these walls will form the proscen-  
 ium-walls when the seating-sections are  
 moved forward to the position shown in Fig.  
 2 of the drawings. In other words, the pro- 90  
 scenium-walls and the movable sections may  
 be made integrally, in which case the proscen-  
 ium-walls will move horizontally with the  
 movable seating-sections. This is an ob-  
 vious modification that is clearly within the 95  
 scope of our invention.

We claim as our invention—

1. The combination, in an auditorium or  
 audience-room, of horizontally-movable seat- 100  
 ing-sections arranged upon opposite sides of  
 the room and adapted to be moved toward or  
 from each other, whereby the room may be  
 divided into two parts with the space be-  
 tween said movable sections forming a stage  
 or proscenium opening.

2. The combination, in an auditorium or  
 audience-room, of horizontally-swinging seat- 105  
 ing-sections arranged upon opposite sides of  
 the room and adapted to be moved toward or  
 from each other whereby the room may be 110  
 divided into two parts with the space be-  
 tween said movable sections forming a stage  
 or proscenium opening.

3. The combination in an auditorium or  
 audience-room, of horizontally-swinging seat- 115  
 ing-sections arranged upon opposite sides of  
 the room and adapted to be moved toward or  
 from each other, whereby the room may be  
 divided into two parts with the space be-  
 tween said movable sections forming a stage 120  
 or proscenium opening, and movable proscen-  
 ium-walls provided in connection with said  
 swinging seating-sections, substantially as  
 described.

4. The combination in an auditorium or 125  
 audience-room, with horizontally-movable  
 seating-sections adapted to be moved toward  
 or from each other to divide the room and  
 form a comparatively small audience-room  
 or amphitheater and a stage, the space be- 130



tween said movable sections forming a proscenium-opening, and movable proscenium-walls and an arch provided in connection with said movable seating-sections.

5 5. The combination, in an auditorium or audience-room, with movable proscenium-walls, of horizontally-swinging balcony-sections adjacent to said walls, for the purpose specified.

10 6. The combination with an auditorium or audience-room having seating-sections around the room, two of the opposite sections being capable of movement toward one another and out of line with the contiguous  
15 seating-sections to divide the room into two parts and form a stage, and a comparatively small audience-room, the space between said movable sections forming a stage or proscenium opening, and vertically-movable proscenium-walls provided in connection with  
20 said seating-sections, and means for raising and lowering said walls.

7. The combination, with an auditorium or audience-room, of movable seating-sections arranged to be moved toward one another to divide the room into a smaller amphitheater and stage, the space between said movable sections forming a stage or proscenium opening, proscenium-walls and an arch  
25 provided in connection with said movable seating-sections and adapted to be moved vertically to an operative or inoperative position, and means for raising and lowering said walls and arch.

35 8. The combination, with an auditorium or audience-room of vertically-movable proscenium-walls dividing said room into two parts, a pit arranged beneath said proscenium-walls and forming an orchestra-pit  
40 when the walls are raised, and means for low-

ering said walls into said pit, for the purpose specified.

9. The combination, with an auditorium or audience-room, of vertically-movable proscenium walls and arch dividing said room  
45 into two parts, a pit arranged beneath said walls and arch and forming an orchestra-pit when the walls and arch are raised, and means for lowering said walls and arch into said pit and said arch when lowered closing  
50 the top of said pit, for the purpose specified.

10. The combination, with an auditorium or audience-room, of horizontally-movable seating-sections and movable proscenium-walls dividing said room into two parts, a  
55 level floor in the part of the room at the rear of said walls, and an inclined floor sloping toward said walls in the other part of the room and means for raising and lowering said walls, for the purpose specified.  
60

11. The combination in an auditorium or audience-room with horizontally-movable seating-sections arranged upon opposite sides of the room and adapted to be moved toward or from each other to divide the room into a  
65 smaller audience-space and a stage, the space between said movable sections forming a stage or proscenium opening, and movable proscenium-walls provided in connection with said movable sections.  
70

In witness whereof we have hereunto set our hands this 16th day of April, 1906.

CHARLES A. REED.

ALLEN H. STEM.

Witnesses as to Charles A. Reed:

HENRY HOUGHTON,

HARRY O. AUSTIN.

Witnesses as to Allen H. Stem:

RALPH MATHER,

C. E. VANKIN.