

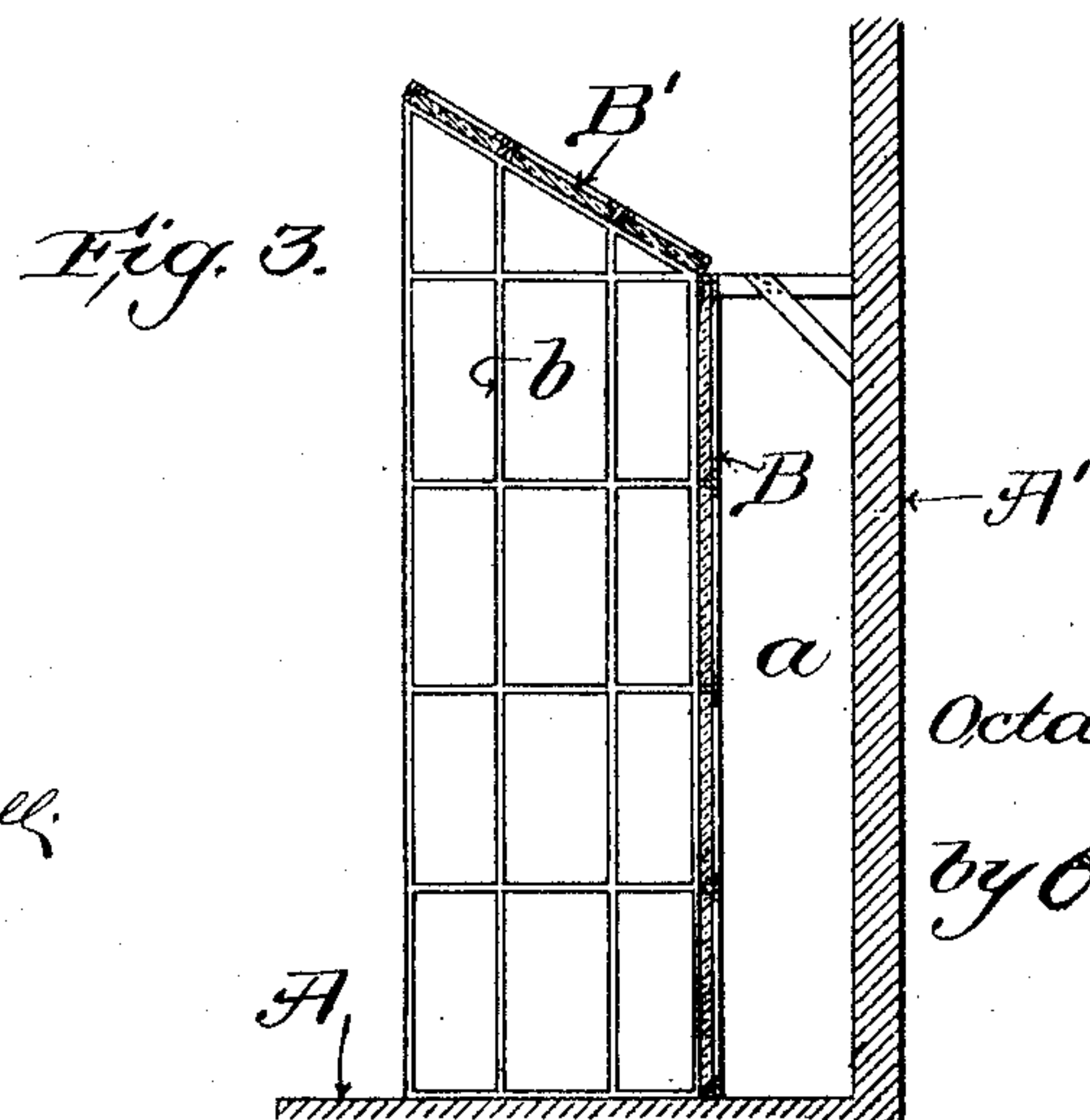
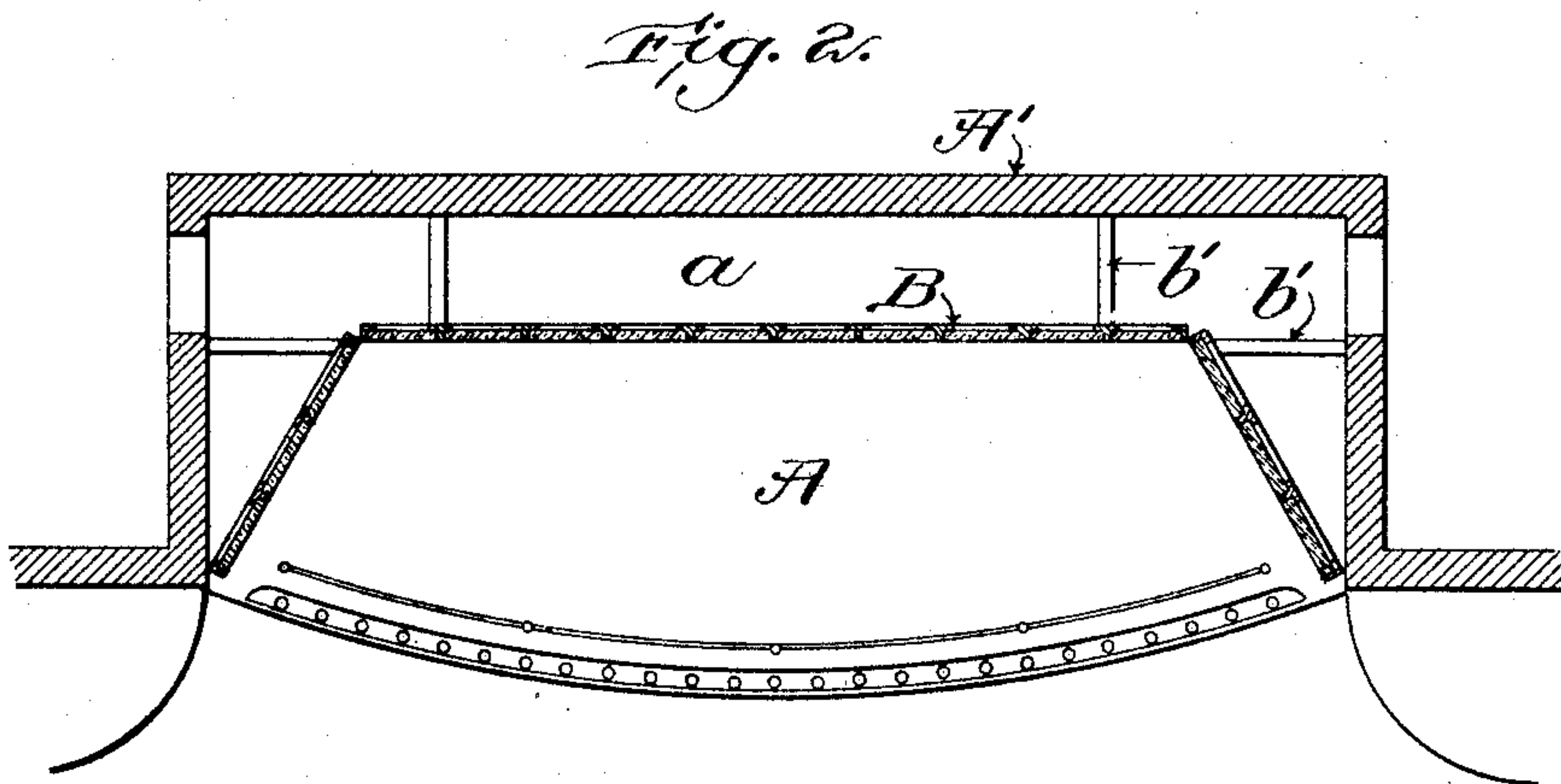
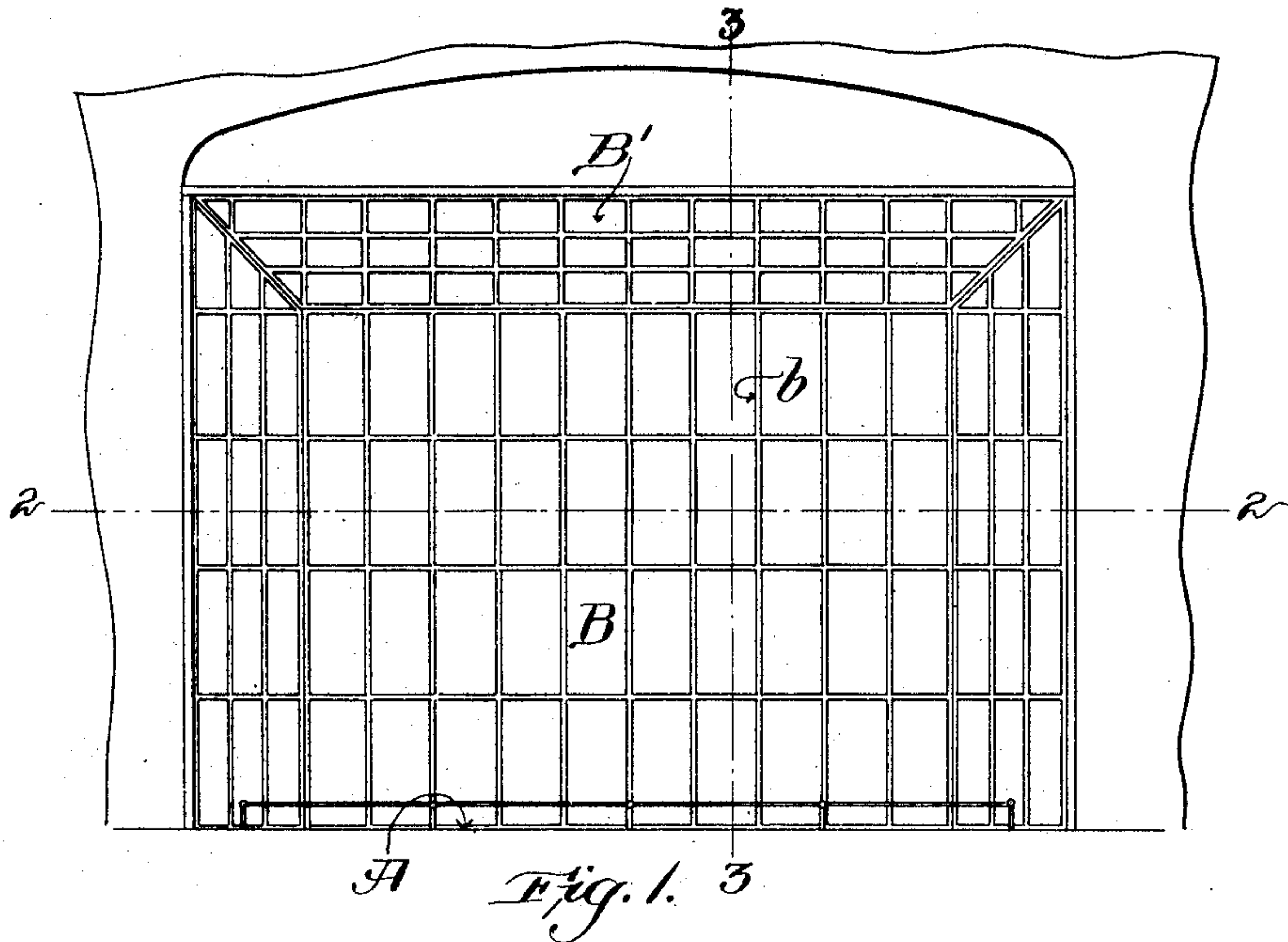
No. 631,843.

Patented Aug. 29, 1899.

O. L. APTHORP.
SOUNDING BOARD FOR MUSIC HALLS.

(Application filed Mar. 22, 1899.)

(No Model.)



Witnesses:
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UNITED STATES PATENT OFFICE.

OCTAVIE L. APTHORP, OF BOSTON, MASSACHUSETTS.

SOUNDING-BOARD FOR MUSIC-HALLS.

SPECIFICATION forming part of Letters Patent No. 631,843, dated August 29, 1899.

Application filed March 22, 1899. Serial No. 710,054. (No model.)

To all whom it may concern:

Be it known that I, OCTAVIE L. APTHORP, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in new and useful Sounding-Boards for Music-Halls, of which the following is a specification, reference being had therein to the accompanying drawings.

Figure 1 is a view, looking toward the stage, of a music-hall stage provided with one form of my new sounding-board. Fig. 2 is a horizontal sectional view at line 2 2 of Fig. 1, looking downwardly. Fig. 3 is a vertical section on line 3 3 of Fig. 1.

The object of my invention is to construct music halls or rooms, public or private, and especially public music-hall stages, with sounding-boards which comprise vibrant vertical portions and preferably, in addition thereto, vibrant forwardly-extending portions, as hereinafter explained.

In the drawings illustrating the principle of my invention, A represents the floor or stage, and A' a rear vertical wall, which is of masonry or other material and which represents the usual rear and side walls of a stage.

B is the vertical vibrant sounding-board, preferably of glass, mounted in suitable frames *b*, say of lead. The sounding-board is mounted at a distance from wall A, so as to form the air-space *a* between the structural wall A and the sounding-board B, thus allowing the vertical walls to become vibrant or sonorous. The braces *b'*, used for supporting the sounding-board B, may be disposed at any suitable point and in any suitable manner. The forward extension B' forms a supplemental overhead sounding-board and is preferably used in connection with the vertical sounding-board, and when used is to be made continuous therewith in order that there may be no escape for the sound-waves at its lower edge. If the vertical board B were

mounted directly upon the structural wall A', it would not be so efficient a sounding-board for the sound-waves striking against it, because it would be less vibrant than is the case when the board is backed up by an air-cushion. The frame which holds the planes or sections of glass in place should be made low and smooth on the outer or sound-receiving side. Any hard polished material may be substituted for the glass; but I prefer glass, not only because it affords a smooth and perfect surface for the reception of the sound-waves without any metallic sound—such as arises from brass or silver, for example—but also because I am thereby enabled to produce beautiful color effects by means of colored glass in the frame and lights behind or at the sounding-board.

I am the first, so far as I know, to construct a music-hall room with a hard polished vertical wall against which the sound-waves proceeding from the instruments may impinge, and such a sounding-board, even when mounted directly upon a structural wall, produces much better acoustic effects than where the sound-waves have been allowed, as heretofore, to strike upon the irregular, unpolished, and softer surfaces.

The use of glass in sounding-boards, as herein suggested, is deemed by me especially desirable because of its peculiar sonorous quality.

What I claim is—

The combination of a stage or other floor with a structural wall and a sounding-board of glass rising above the floor with a space between it and the structural wall.

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

OCTAVIE L. APTHORP.

Witnesses:

EDWARD S. BEACH,
E. A. ALLEN.