No. 868,073. PATENTED OCT. 15, 1907.

F. L. CAULKINS & F. WIENAND.

REED BOARD.

APPLICATION FILED OCT. 22, 1906.

2 SHEETS—SHEET 1.

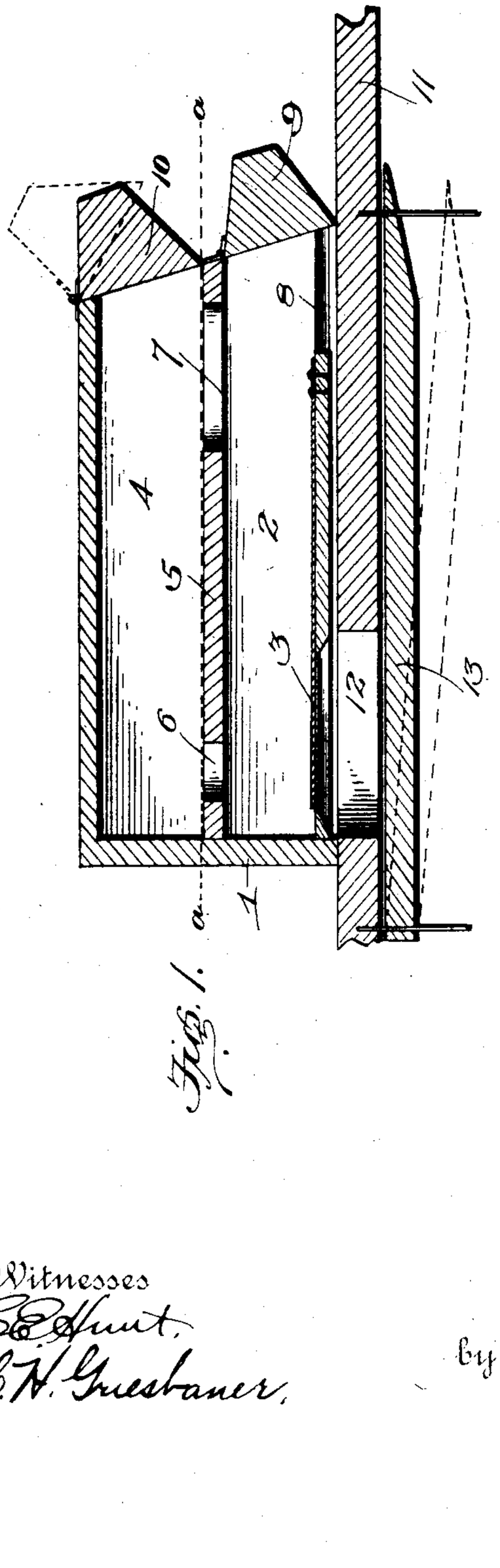

Fig. 1.

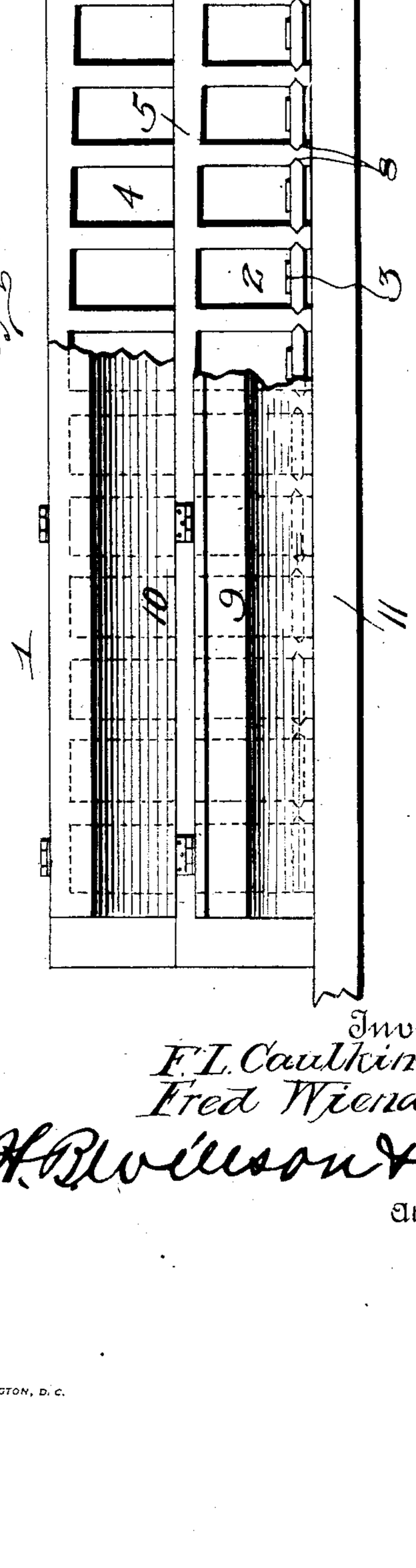

Fig. 2.

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2 SHEETS—SHEET 2.

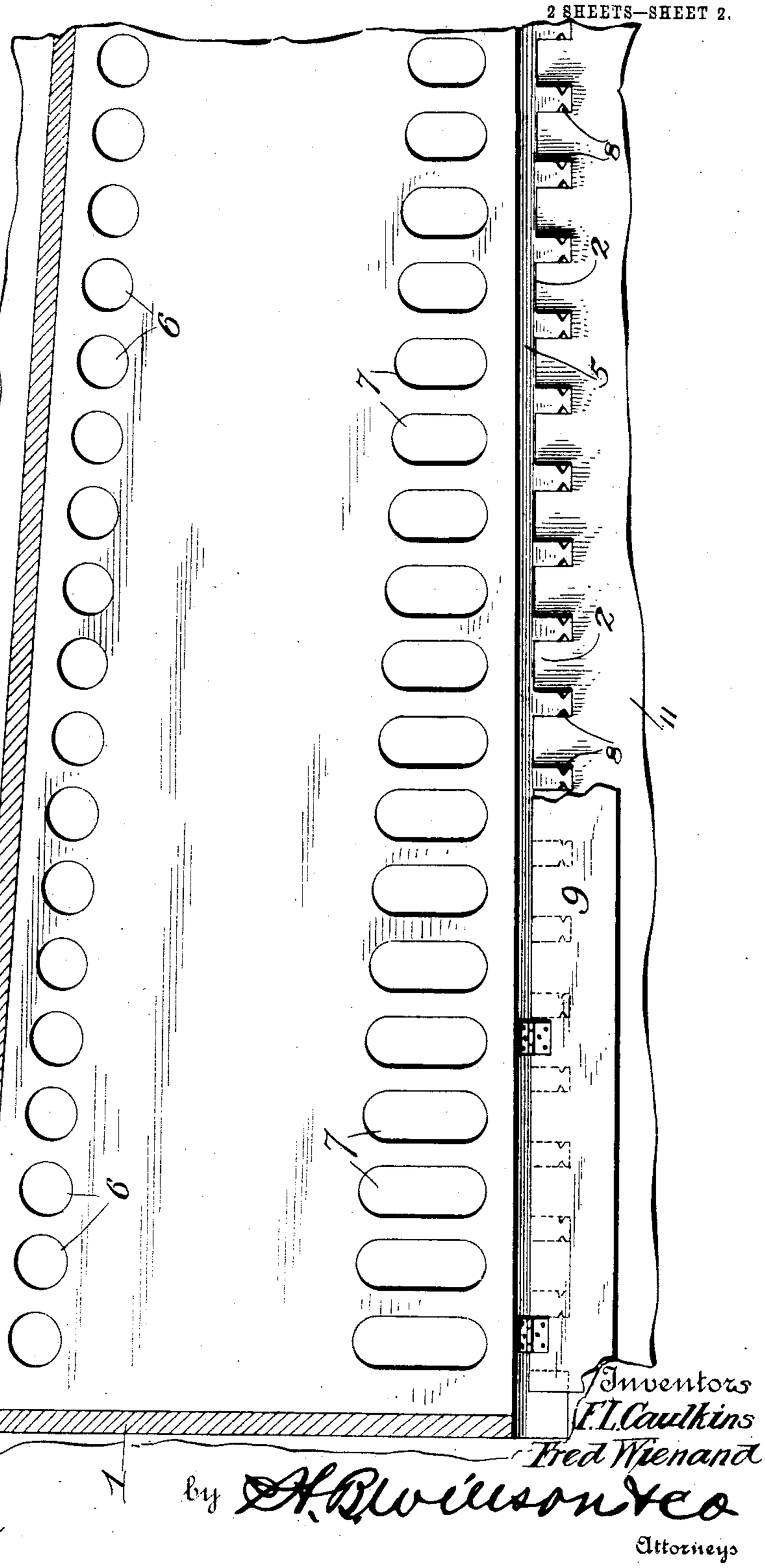

Fig. 3.

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UNITED STATES PATENT OFFICE.

FRANK L. CAULKINS AND FRED WIENAND, OF ELGIN, ILLINOIS.

REED-BOARD.

No. 868,073. Specification of Letters Patent. Patented Oct. 15, 1907.

Application filed October 22, 1906. Serial No. 340,081.

To all whom it may concern:

Be it known that we, FRANK L. CAULKINS and FRED WIENAND, citizens of the United States, residing at Elgin, in the county of Kane and State of Illinois, have invented certain new and useful Improvements in Reed-Boards; and we do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

Our invention relates to improvements in reed boards for organs, particularly with reference to the provision of an auxiliary cell for each reed cell, having air circulating passages between them, for furnishing a volume of air to the reed, adding to the resonance and improving the tone quality thereof, and it consists in the construction and arrangement of devices hereinafter fully described and claimed.

In the accompanying drawings: Figure 1 is a vertical transverse sectional view of a reed board embodying our improvements; Fig. 2 is a partial front elevation of the reed board, showing the lower, reed cells, and the upper, auxiliary cells; and Fig. 3 is a longitudinal horizontal sectional view, taken on the plane indicated by the line *a*—*a* of Fig. 1.

In accordance with our invention, the reed board 1, is provided, in addition to the cell 2 for each reed 3, with an upper, auxiliary cell 4, divided therefrom by a board 5. Air passages 6, 7, are made in said board, so that each reed cell is connected to the auxiliary cell by said passages, each passage 6 being above the point of the tongue of the reed and each passage 7 being above the heel of the tongue of the reed. The perforations 7 are of larger area than the perforations 6 and are preferably elongated in the direction of the length of the reed and they increase in length toward the bass or lower notes, thereby permitting the passage of sufficient air to prevent the choking of any of the reeds, the openings 6 preferably remaining of the same size and shape from one end of the instrument to the other. The reed cells 2 have grooves 8 in their sides for the reception of the reeds, and the series has a mute 9, which normally remains closed, and is only opened for removing or tuning the reed. The series of auxiliary cells 4 has a mute 10, for sound-producing purposes.

The sounding board 11 has an air passage 12 for each reed cell, reed, and valve 13, as is usual in organs. The valves are of the usual construction and are operated by the usual keys and connections, not here shown, as they constitute no part of our present improvements.

By providing the auxiliary cells and perforating the floor 5, or horizontal partition between the cells, as above described, whenever a valve 13 is opened under any reed the air rushes through the cell 4 and the openings 6 and 7 into the lower cell 2 and thence through the reed 3 and opening 12. whereby the reed is vibrated and the vibrations give to the instrument a pipe tone quality that is very desirable.

From the foregoing description, taken in connection with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention, as defined by the appended claims.

Having thus described our invention, what we claim as new and desire to secure by Letters-Patent, is:—

A reed board provided with two series of cells, one above the other, the partition between the series being provided with two openings for each pair of cells, one above the tip and the other above the heel of the reed, the opening over the heel being larger than the one over the tip and elongated in the direction of the length of the reed, the openings over the tips of the reeds being of the same size throughout the length of the board and the larger openings increasing in length toward the lower or bass end of the board, and a mute for each series of cells.

In testimony whereof we have hereunto set our hand in presence of two subscribing witnesses.

FRANK L. CAULKINS.
FRED WIENAND.

Witnesses:
CHARLES A. LIGHTNER,
EMIL SCHNEPF.