

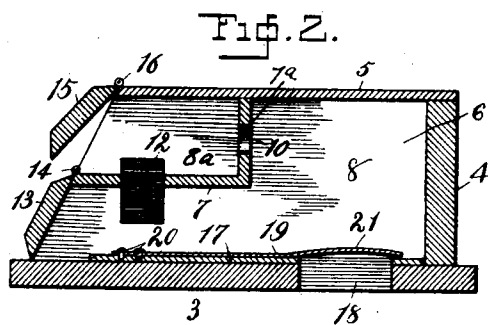
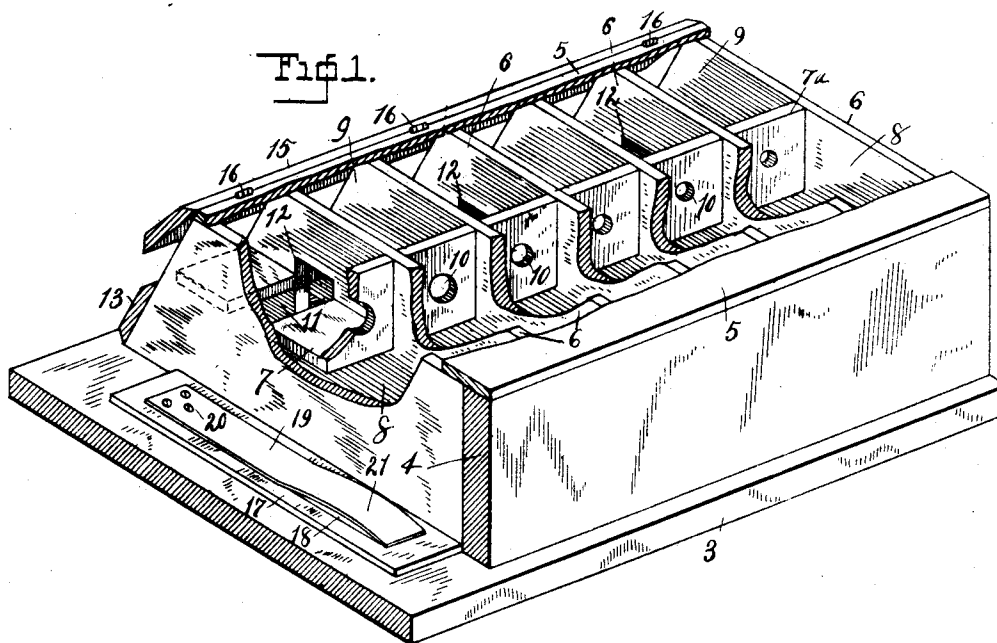
No. 866,711.

PATENTED SEPT. 24, 1907.

W. F. BULTMANN.

REED ORGAN.

APPLICATION FILED AUG. 31, 1906.



WITNESSES:

Mathew Marty
Chas. F. Bassett

INVENTOR

William F. Bultmann

BY

Fredrick S. S. S. S.
ATTY.

UNITED STATES PATENT OFFICE.

WILLIAM F. BULTMANN, OF ELGIN, ILLINOIS.

REED-ORGAN.

No. 866,711.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, WILLIAM F. BULTMANN, a citizen 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-Organ, of which the following is a specification.

This invention relates to improvements in the construction and arrangement of the reed cells of organs or similar musical instruments. The particular improvements that form the subject matter of this application for patent, relate to the invention in reed organs patented August 27, 1895, to Wm. Seybold, No. 545,100. As will appear from said patent, the invention covered thereby, embodies in combination with the main or reed cells, auxiliary or resonance cells, which are in permanent communication with the reed cells. Said invention consists further in providing independent sets of mutes for the reed cells and the resonance cells. In said patented invention, it has been found the construction is defective in that it is necessary to open the mutes of the reed cells as well as the mutes of the auxiliary cells in order to get the desired results. It has also been found that in said construction, the volume of sound is limited owing to the small capacity of the reed cells, the presence of dead walls and the limited means of communication between the latter and the resonance cells or chambers. My invention overcomes these objections and secures positive advantages, as will hereinafter appear.

Referring to the accompanying drawing, which forms a part of this application:—Figure 1 is a perspective view of a portion of the reed cells and sound board of an organ embodying my invention with parts removed and broken away, to more clearly disclose the construction; Fig. 2 is a vertical cross section through the reed-cells.

Referring to the details of the drawing:—3 represents an organ reed board of ordinary construction, in which are provided the air passages 18 for the reeds 19 which are secured by screws 20 to the plates 17, and have the usual bent or vibrating portion 21. For each reed there is a reed cell 8, and between each pair of reed cells, is a vertical partition 6, in which an opening 12 is cut opposite the heel portion of the reed. Arranged between every two vertical partitions 6, is a partition 9 which has no opening therein. Between the vertical partitions are transverse partitions 7 which extend horizontally for a portion of the length of the reed cell and about midway its top and bottom walls and then extend upwardly as at 7^a to the board 5 which forms the top of the reed cell. In the horizontal portion of each partition 7, is formed a rectangular opening 11, and in the vertical portion 7^a is a circular opening 10. Each partition 7, 7^a with the walls 6 and 9, form an auxiliary or resonance cell 8^a within the cell 8, the front end of which is adapted to be closed

by a mute 15, which is hinged at 16 to the top 5. It will thus be seen that there are, as in the Seybold invention, two sets of cells, one designated as reed cells and lettered 8, and the other as the auxiliary or resonance cells, and lettered 8^a. It will also be seen that there are two passage-ways from the auxiliary cells to the reed cells, namely:—the openings 10 and 11, respectively. For each pair of reed cells, I prefer to provide one auxiliary cell, in communication therewith.

The reed cells are provided with a mute 13, in the usual manner, and it may be opened or left closed depending on the results desired.

By extending the partition 7 for approximately only one-half of the length of the reed cell, I provide a reed cell of greater section above the toe or vibrating portion of the reed, in which to conduct the air to the reed, the result of which is an increased volume of sound, and the ability to produce the tones of a pipe organ of relatively great volume. With this construction, it is also possible to close the mute 13 as shown in Fig. 2, and draw the air for the reeds entirely through the auxiliary cells 8^a, a condition not possible in the Seybold construction.

It will be noted that the openings 10 are of different sizes and the area of same will be governed by the capacity of the respective reeds; and it will also be noted that air entering the reed cells through the openings 11, will descend at the heel of the reed, while the air entering said cells through the openings 10 will descend near the toe of the reed. It has been found that this arrangement effects the desired vibration of the reeds and produces the best results.

Having described my invention, I claim:—

1. In an organ, a reed-board having a plurality of chambers therein, each of said chambers being divided by vertical and horizontal walls into a reed-cell and a resonance-cell, the latter occupying the forward and upper portion of the chamber, said resonance cell having communication through said walls with the reed-cell, in combination with separate mutes for the reed cells and the resonance cells.
2. In an organ, a reed-board having a plurality of chambers, each of said chambers being divided by a horizontal and a vertical partition, into a reed cell and a resonance cell, said partitions having openings therein whereby communication is effected between the reed-cells and the resonance cells, in combination with separate mutes for the reed-cells and resonance cells.
3. In an organ, a reed-board having a plurality of chambers arranged in communicating pairs, each chamber being subdivided into a reed-cell and a resonance cell and provided with a plurality of openings between said cells, in combination with separate mutes for the series of reed-cells and the series of resonance-cells.

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

WILLIAM F. BULTMANN.

Witnesses:

ROBERT ACKERMAN,
MARTHA HELPER.