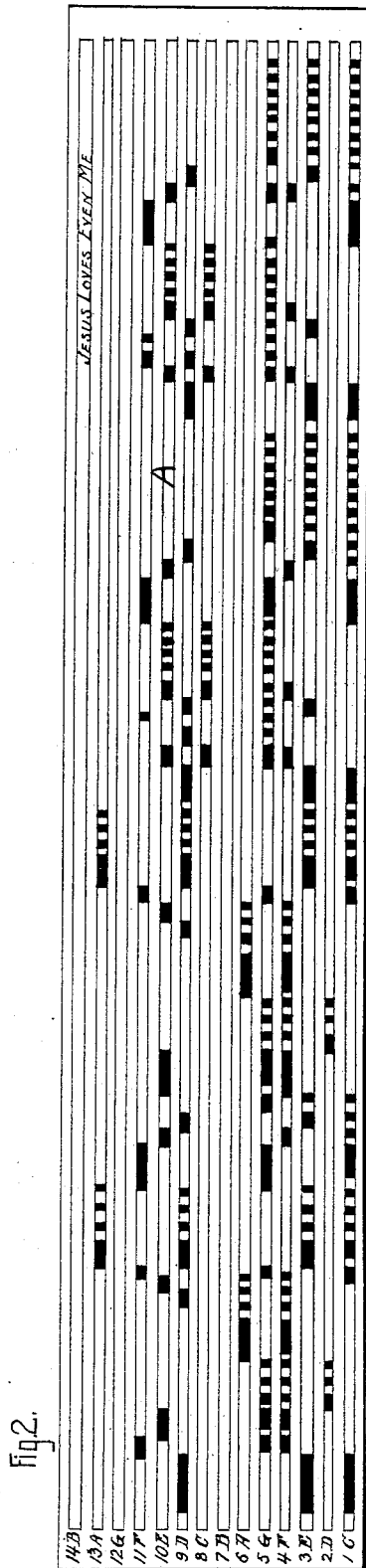


(No Model.)

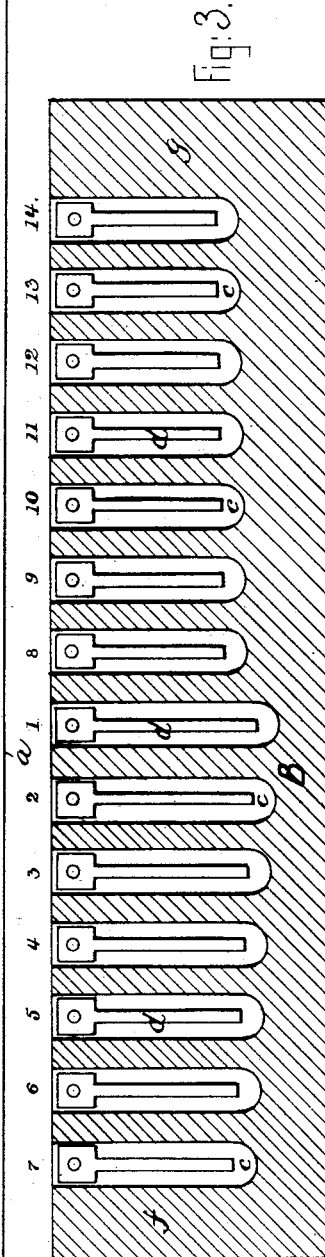
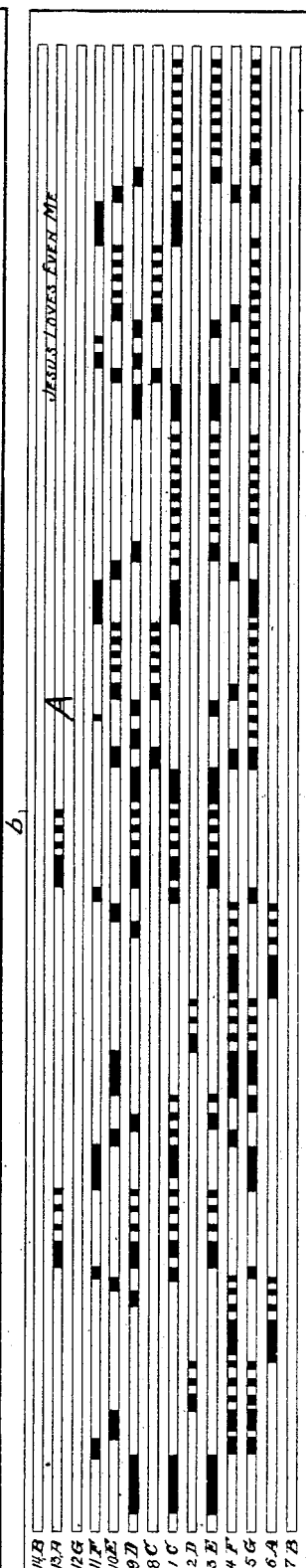
W. A. WEBBER.
MECHANICAL MUSICAL INSTRUMENT.

No. 261,413.

Patented July 18, 1882.



WITNESSES {
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UNITED STATES PATENT OFFICE.

WILLIAM A. WEBBER, OF MEDFORD, MASSACHUSETTS.

MECHANICAL MUSICAL INSTRUMENT.

SPECIFICATION forming part of Letters Patent No. 261,413, dated July 18, 1882.

Application filed April 13, 1882. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM A. WEBBER, of Medford, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Mechanical Musical Instruments, of which the following is a full, clear, and exact description.

This invention relates to that class of mechanical musical instruments such as the "orguINETTE" and "organina," so known, which employ a strip or sheet of paper having parallel rows of perforations representing the notes of a musical tune; and this invention consists, first, of an arrangement of the rows of perforations in the music-sheet, whereby many objections and disadvantages belonging to such music-sheet as the rows of perforations have been heretofore arranged are avoided and other important advantages secured, all as will be apparent from the description hereinafter given thereof; second, of an arrangement of the reeds in the reed-board hereinafter described to correspond with the arrangement of the rows of perforations in the music-sheet above referred to.

In the accompanying plate of drawings, Figures 1 and 2 are diagrams of a perforated music-sheet having its perforations making up the tune arranged in rows in Fig. 1 in accordance with this invention, and in Fig. 2 as heretofore. Fig. 3 is a section through a reed-board, showing an arrangement of reeds to suit the present improved arrangement of the rows of perforations in the music-sheet.

In the drawings, A represents a perforated music-sheet having a series of equidistant and parallel rows of perforations, each running lengthwise of the sheet, which is of a width to accommodate fourteen rows, as shown in Figs. 1 and 2. The several rows are numbered from 1 to 14, inclusive.

The several rows of perforations having figures 1 to 7, inclusive, respectively against them represent the bass-notes. The row with figure 1 against it is the lowest bass-note, and from that the notes run up in the regular order of the scale, ending with the highest bass-note at the row with figure 7 against it.

The several rows of perforations having figures 8 to 14, inclusive, respectively against them represent the treble-notes. The row with fig-

ure 8 against it is the lowest treble-note, and from that the notes run up in the regular order of the scale, ending with the highest treble-note at the row with figure 14 against it.

As heretofore arranged (see Fig. 2 of the drawings) these several rows of perforations numbered from 1 to 14, inclusive, were arranged so that the notes represented by them ran in regular order across the sheet from edge to edge thereof, bringing the lowest bass-note at one edge and the highest treble-note at the other edge of the sheet, and between these two rows the other notes of the base and of the treble running from the lowest bass-note to the highest bass-note, and then with the lowest treble-note next in line with the highest bass-note to the highest treble-note.

As arranged under this invention (see Fig. 1 of the drawings) the lowest bass-note is made the central row of perforations, and from that first the remaining bass-notes, in regular order, make the several rows of perforations to one edge, *a*, of the music-sheet, and the several treble-notes, in regular order with the lowest treble-note in a row next to the lowest bass-note, make the several rows of perforations to the other edge, *b*, of the music-sheet.

In Fig. 3, B is the reed-board, having a series of reed-chambers, *c*, and reeds *d* arranged in a row along the length of the board, and at equal distances apart, corresponding to that of the rows of perforations in the music-sheet. These reeds *d* represent the notes of the scale covered by the tune of the music-sheet A, as shown in Fig. 1, and the arrangement of its rows of perforations, and, as a consequence, the lowest bass-note is the middle reed, the highest bass-note the reed at one end, *f*, and the highest treble-note the reed at the other end, *g*, of the board.

The other reeds of the board first between the center or lowest bass-reed and the end or highest bass-reed are the bass-notes in regular order of succession from the lowest bass-note at the center up to the highest bass-note at the end, and second between the center or lowest bass-reed and the end or highest treble-reed are the treble-notes in regular order of succession from the lowest treble-note at one side of the center bass-note up to the highest treble-note at the end.

As shown in Fig. 3, a number is placed against each reed, and these numbers are in accordance with the arrangement of the reeds as above described, and with the numbering of the rows of perforations in the music-sheet in Fig. 1.

As well known, in arranging the notes of a musical tune in rows of perforations along the length of a sheet or strip of paper to be used in mechanical musical instruments—such as the orguINETTE or organina and others of similar character—the notes of the bass, and especially the very lowest of them, are oftener either of greater length or of more frequent repetition than any of the others of notes making up the music-sheet, and the notes of the treble, and especially of the very highest of them, are oftener either of lesser length or of less frequent repetition than any of the others of the notes making up the music-sheet.

Heretofore, as the rows of perforations were arranged in the music-sheet, these bass-notes were at one side of the central row of the sheet, and with the lowest bass-note the nearest to the edge of the sheet, and from thence to the highest bass-note and thence from the lowest treble-note to the highest treble-note in regular order, ending with the highest treble-note at the other edge of the sheet and running up in regular order. By this disposition of the bass and treble notes the music-sheet at and along its edge from which the bass-notes begin is necessarily greatly weakened and rendered exceedingly liable to be ruptured, and, furthermore, to be displaced in the operation of the mechanical musical instrument, thereby causing many serious annoyances in the playing of the tune—such as, for instance, a lack of strength to the sound of the bass-notes, because of the leakage of air, from the displacement of the sheet at its edge having the bass-note and a running of the sheet to one side or the other from its proper course through the instrument if paper of any thinness be used, because of the lack of strength at the edge of the music-sheet having the bass-notes compared with the strength at the opposite edge

of the music-sheet having the treble-notes. These several disadvantages are overcome by the present improved arrangement of the bass notes therein described—to wit, the location of the lowest bass-note at the central row of perforations and running upward from that at one side of said central row to the highest bass-note in the row nearest one edge of the paper, and at the other side of said central row from the lowest treble-note to the highest treble-note in the row nearest the other edge of the paper, for reasons which are obvious in view of what has been previously stated concerning the old arrangement of the bass and treble notes of the several rows of perforations to the music-sheet.

Although fourteen rows of perforations have been particularly shown and described, obviously the number of rows may be more or less than fourteen.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In combination with a mechanical musical instrument, a perforated music-sheet which has its note-holes arranged in parallel rows, with the lowest bass-note at the central row and the remaining bass-notes in the rows at one side thereof and the treble-notes in the rows at the other side of said central row or lowest bass-note, all substantially as and for the purposes described.

2. In a mechanical musical instrument, a reed-board, B, having reed-chambers *c* and reeds *d*, arranged, as described, with the lowest bass-reed at the center and the remaining bass reeds at the side thereof running toward one end of the board, the treble-reeds running from the center toward the other end of the board, substantially as set forth.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

WILLIAM A. WEBBER.

Witnesses:

EDWIN W. BROWN,
WM. S. BELLWS.