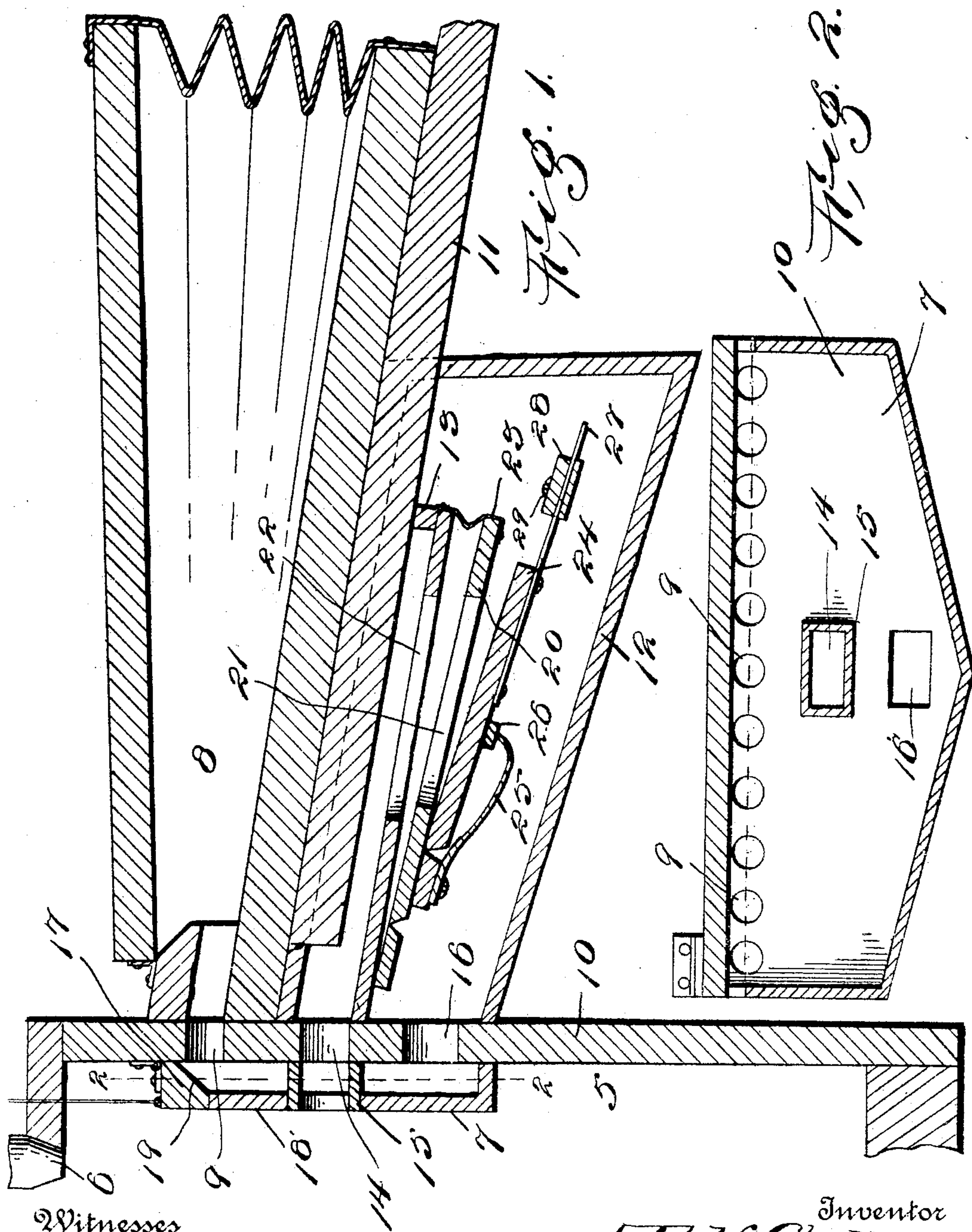


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T. V. CHALLINOR.
TREMOLO FOR ORGANS.

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Witnesses
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UNITED STATES PATENT OFFICE.

THOMAS V. CHALLINOR, OF CHATHAM, CANADA.

TREMOLO FOR ORGANS.

No. 797,719.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, THOMAS V. CHALLINOR, a subject of the King of England, residing at Chatham, in the Province of Ontario, Dominion of Canada, have invented certain new and useful Improvements in Tremolos for Organs; and I do hereby 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.

This invention relates to organs, and more particularly to tremolos therefor, the object of the invention being to provide a construction wherein the tremolo will be controlled entirely within the wind-chest without noise and which, furthermore, will not be brought into operation after the stop is drawn until the keys are operated.

A further object of the invention is to provide a construction wherein there will be no waste of wind.

Other objects and advantages of the invention will be understood from the following description.

In the drawings forming a portion of this specification and in which like numerals of reference indicate similar parts in the several views, Figure 1 is a sectional view through a portion of a wind-chest, a suction-bellows connected with the chest, a tremolo, and an inner chamber in a structure embodying the present invention. Fig. 2 is a section on line 2 2 of Fig. 1.

Referring now to the drawings, there is shown a wind-chest 5, in which are engaged reeds or pipes 6, through which is drawn the wind when the instrument is to be played. In the wind-chest 5 is a supplemental chest 7, with the upper portion of which communicates the suction-bellows 8 through perforations 9, formed in the wall 10 of the wind-chest, this wall 10 being common to the main and supplemental chests, as illustrated.

Beneath the bellows-board 11 is arranged a box 12, in the upper portion of which is formed a chamber 13, which communicates with the wind-chest 5 through the wind-passage 14, which is formed through a box 15, that passes through the supplemental chamber 7. The lower portion of the box 12 communicates with the lower portion of the supplemental chest 7 through the wind-passage 16. The supplemental chest is permanently closed excepting at the top, where there is hinged a mute 17, the wall 18 of the supplemental

chest terminating short of the top of the wind-passages 9, so that when the mute is raised there will be a substantially direct flow of wind from the chest 5 across the upper end of the supplemental chest 7 to the passages 9. The inner side of the mute 17 is beveled, as shown at 19, so that the wind in its upward passage through the supplemental chest 7 is directed to the passages 9.

A board 20 is hinged to the lower face of the bottom of the box 13 and has an opening 21, which registers with the opening 22 in the bottom of said box. The bottom of the box 13 is slanted, as illustrated, and the board 20 is connected at its sides and lower end with the bottom of the box 13 by means of the collapsible material 23, which is folded after the manner of the ordinary bellows sides. A tremolo-valve 24 is hinged at one edge against the lower face of the upper end portion of the lower edge 20 and is held normally and yieldably in position to close the opening 21 by means of a leaf-spring 25, which is fixed at one end to the board 20 and bears with its opposite end against the block 26 on the lower face of the tremolo-valve. An arm 27 is secured to the tremolo-valve 24 and extends from the free end thereof and is provided with a shiftable weight 28, provided with set-screws 29. It will be understood that the farther the weight 28 is from the hinge of the valve 24 the farther the valve will stand from the port 20, and the slower will be the vibration of the valve.

With the mute 17 in closed position, as illustrated, wind will be drawn through the reeds or pipes into the wind-chest 5, thence through passage 14 to compartment or chamber 13, thence through openings 22 and 21 into the bottom of the box 12, thence through the passage 16 to the supplemental chest 7, and thence through the passages 9 to the bellows. The result will be that the pipes or reeds will be sounded and the tremolo-valve 24 actuated to produce the tremolo. When it is desired to dispense with the tremolo, the mute 17 is raised and the wind from the chest 5 then passes directly to the passages 9 and through them to the bellows. The tremolo will then not be operated.

The tremolo is connected with a stop in the usual manner which need not be illustrated for raising and lowering it, and it will be noted that as soon as the mute is raised its effect upon the tone ceases. Furthermore, there is no vibration in the tremolo, and

consequently no objectionable noise when the pipe or reeds are not sounding. It will be noted that when the mute is up the wind from the main chest to the passages 9 passes downwardly, so that there is no suction created in the supplemental chest 7, such as would draw air through the passage 14 to the chamber 13, and thence through the tremolo to operate the latter and cause a rattling and a modification of the tone.

It will be understood that the supplemental chest need not extend the full compass of the organ.

It will be understood that the invention may be embodied in an organ having either a suction-bellows or a blast-bellows and having either pipes or reeds, that modifications of the specific construction shown may be made, and that any suitable materials and proportions may be used for the various parts without departing from the spirit of the invention.

What is claimed is—

The combination with a wind-chest, of a supplemental chest therein, a mute for closing the upper end of the supplemental chest, a bellows communicating with the supplemental chest through a wind-passage which lies partly above a wall of the supplemental chest, whereby when the mute is raised, there will be a direct downward flow of wind from the main chest and the wind-passage leading to the bellows, a box having a wind-passage leading from the main wind-chest and a wind-passage leading to the supplemental wind-chest, and a tremolo in the path of the wind between said passages.

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

THOMAS V. CHALLINOR.

Witnesses:

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