

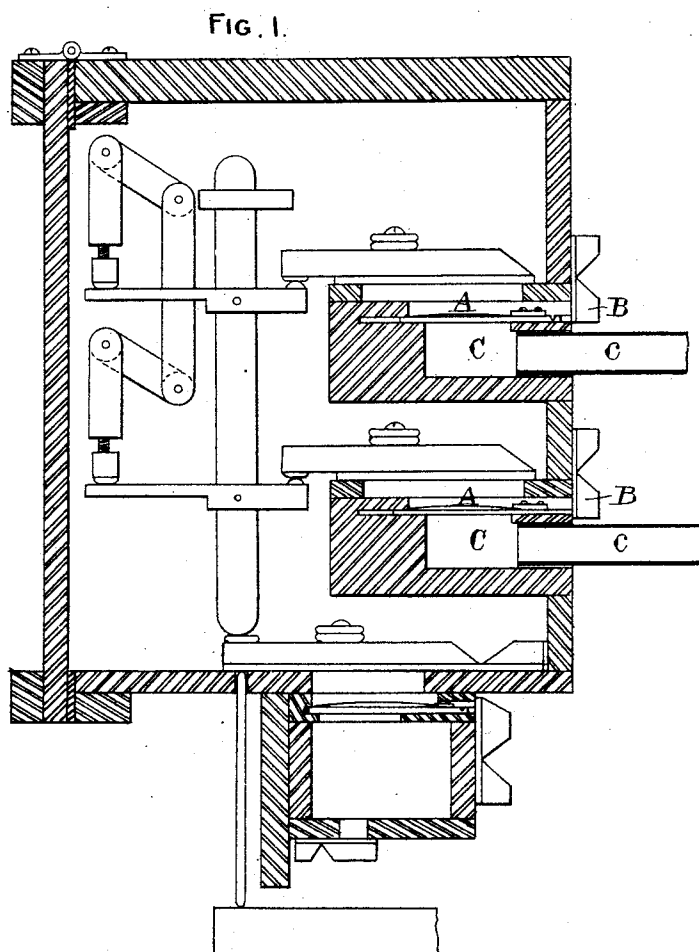
(No Model.)

5 Sheets—Sheet 1.

J. B. HAMILTON.
REED ORGAN.

No. 472,789.

Patented Apr. 12, 1892.



Witnesses:

E. J. Griswold
S. C. Connor

Inventor

James Baillie Hamilton
By his Attorneys
Howson and Howson

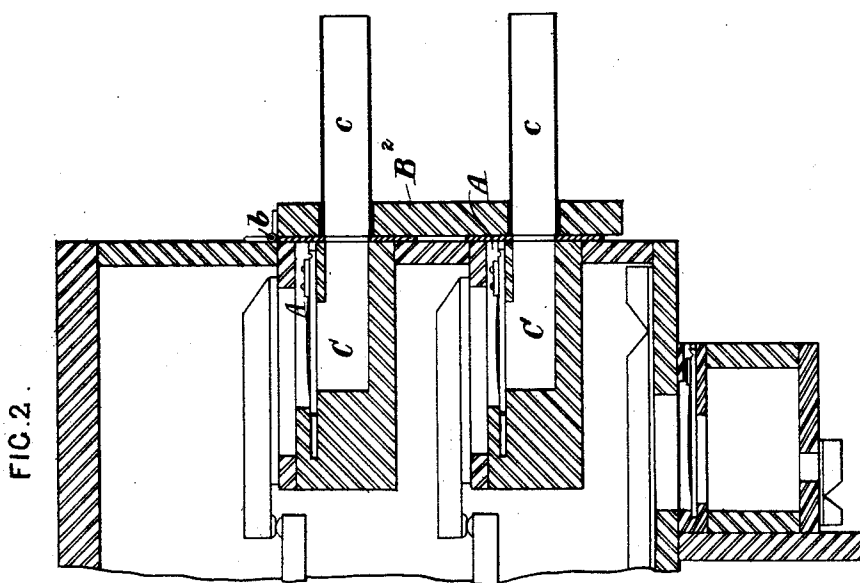
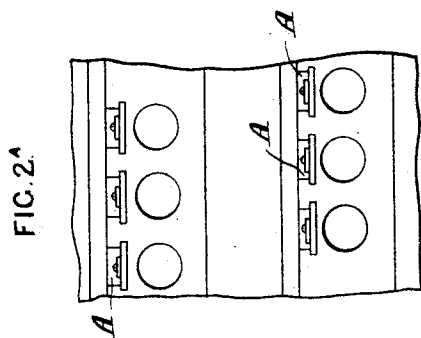
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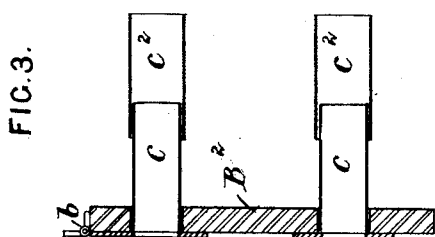
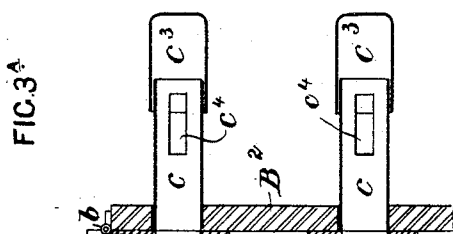
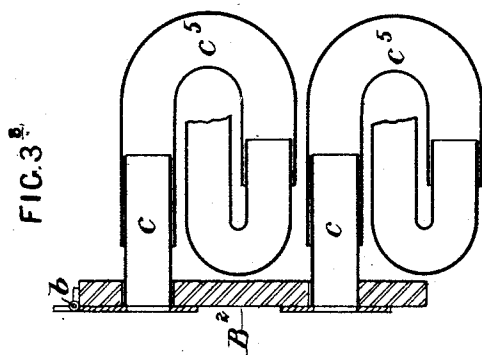
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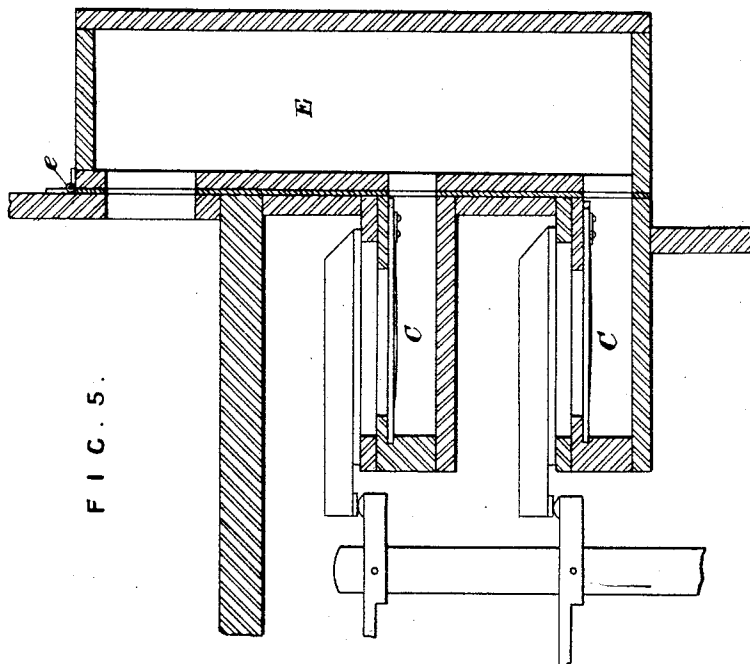


FIG. 5.

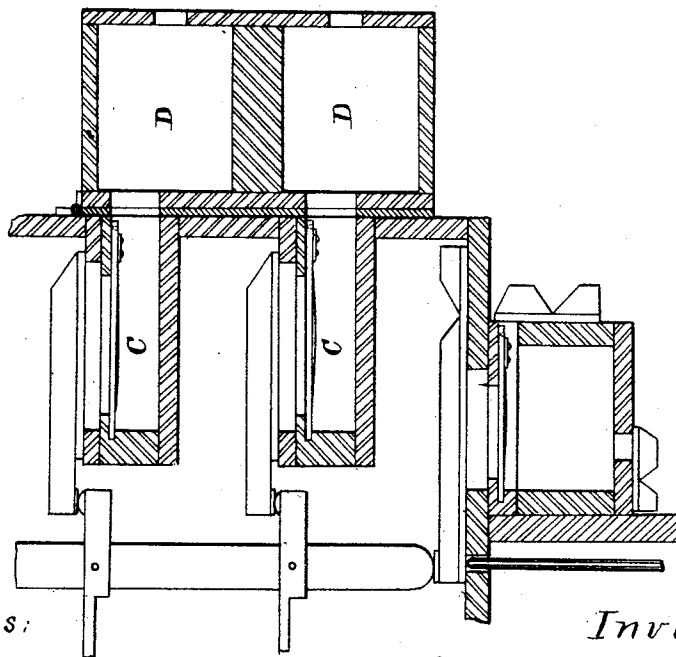


FIG. 4.

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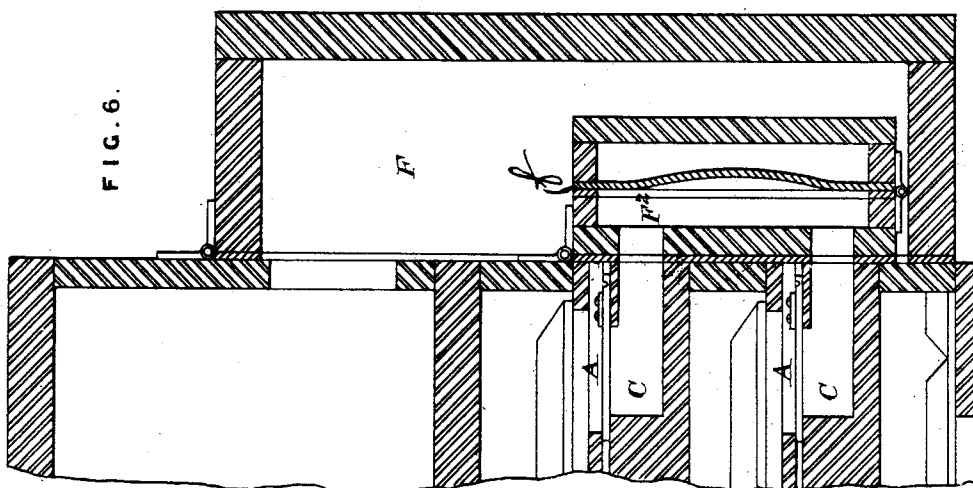
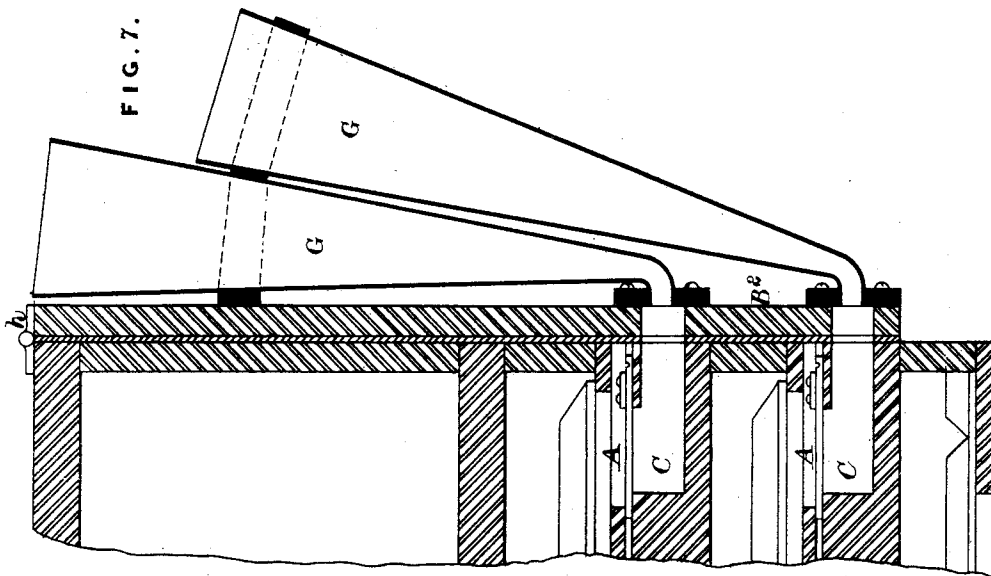
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UNITED STATES PATENT OFFICE.

JAMES BAILLIE HAMILTON, OF LONDON, ENGLAND.

REED-ORGAN.

SPECIFICATION forming part of Letters Patent No. 472,789, dated April 12, 1892.

Application filed December 29, 1891. Serial No. 416,419. (No model.)

To all whom it may concern:

Be it known that I, JAMES BAILLIE HAMILTON, gentleman, a subject of the Queen of Great Britain and Ireland, residing at Argyle Lodge, Kensington, London, England, have invented certain Improvements in Reed-Organ or Like Musical Instruments, of which the following is a specification.

The object of my invention is to provide means whereby any required arrangements of tubes or cavities can be used in connection with their respective reeds and reed-chambers (whether the reeds be acted upon by pressure or by suction) in such manner that while an air-tight connection is secured between such tubes or cavities and the reed-chambers the reeds are readily accessible for tuning or other purpose. The openings by which the rows of reeds are inserted are covered by means of a flap extending along the rows and resembling what is technically known as a "mute" in American organs; but it is so enlarged and modified that it is adapted to carry or constitute the tubes or cavities which I wish to place in communication with the reed-chambers whether the reeds therein be acted upon by pressure or suction, the reeds being disposed accordingly. I hinge or equivalently attach the flap, mute, structure, or frame aforesaid so that it can be turned or closed to put the reed-chambers and the tubes or cavities which it carries into communication, or be turned up or removed so as to give access to the reeds. If tubes be used in connection with the reed-chambers, they may be adjustable in length or opening by means of telescopic construction or by adjustable caps, and they may be straight or of other desired form.

The structure aforesaid may be a prolonged or continuous box or chamber containing cavities or establishing communication by passages which are air-tight with another large common chamber and hinged so as to give access to the reeds. The foregoing arrangements are applicable for suction as well as pressure, and therefore are suitable for application to automatic musical instruments operated by a perforated strip, band, or disk. This being the general nature of my invention, I now proceed to describe, with reference to the accompanying drawings, constructions according thereto.

Figure 1 represents a "stop" with the action and appliances that I usually employ. The reed-cells A in this instance are closed by a flap or mute B, which performs its usual function of keeping the reed-cell air-tight. The reed ports or tubes C are represented as being fitted with small pipes c, which are short enough to afford the operator access to the reeds.

In Fig. 2 the tubes c are shown as being prolonged to an extent that would render it difficult or impossible for the tuner to have access to the reeds. To obviate this, the said tubes are inserted in the flap or mute B³, which is so enlarged and modified as not only to perform its original function of closing the reed-cells A, but also of carrying the reed-tubes c in such a way that when the said flap or mute is closed an air-tight connection is established between each reed and its tube c.

Fig. 2^A represents the front of the stop when the flap or mute is removed, the reeds remaining in their cells and being then accessible to the tuner. The flap or mute is represented as being hinged on the upper edge b; but it may be hinged on its side, like a door, or at any other convenient part. I term this form of mute a "tubular" mute.

Figs. 3, 3^A, and 3^B represent various forms which the tubular mute may assume. Fig. 3 represents the tubes as being furnished with a sliding open cap c². Fig. 3^A shows them with a closed cap c³, adjustable to open or close, more or less, a slit c⁴. Fig. 3^B shows the tubes as being in the form of a coil and furnished with a sliding joint c⁵, somewhat like a trombone.

Fig. 4 represents what I term a "cellular mute" or flap, the mute itself constituting the cavities D, which I wish to place in air-tight communication with the reed-chambers. In this figure the reeds are shown in the position which they occupy when suction is employed; but the cellular mute would have the same position if the reed were operated by pressure.

Fig. 5 represents what I term a "conductor-mute" E—i. e., one whose office is to conduct the tone from the reed-ports into a large resonance box or cavity common to several notes. This conductor-mute E is represented as hinged at the part e, so that when the mute is raised the reed-cells are exposed, and when

it is closed air-tight communication is established by means of the conductor-mute with the large resonance-cavity. This method is applicable to either pressure or suction wind.

5 Fig. 6 shows a modification of a conductor-mute F, having a second or internal mute F² or cover furnished with a screen *f*, of leather or other flexible material, by which the tone issuing from the reed-ports can be controlled.

10 Fig. 7 represents my enlarged mute, performing the functions of a rack or stand for organ-pipes G, in air-tight connection with the reeds and hinged at *h*. It will be seen that however long the pipes may be they can at
15 once be turned into a position which will render the reeds accessible in their cells.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed,
20 I declare that what I claim is—

1. In reed-organs or like musical instru-

ments, a mute or flap for the reed-cells, provided with openings adapted to be placed in air-tight communication with the reed-chambers whether the reeds therein be acted upon 25 by pressure or by suction, substantially as hereinbefore described.

2. In reed-organs or like musical instruments, a mute or flap for the reed-cells, constructed to carry or constitute the tubes or 30 cavities which are to be placed in air-tight communication with the reed-chambers, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of 35 two subscribing witnesses.

JAMES BAILLIE HAMILTON.

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