

H. N. GOODMAN.
REED ORGAN.

No. 109,003.

Patented Nov. 8, 1870.

Fig. 1.

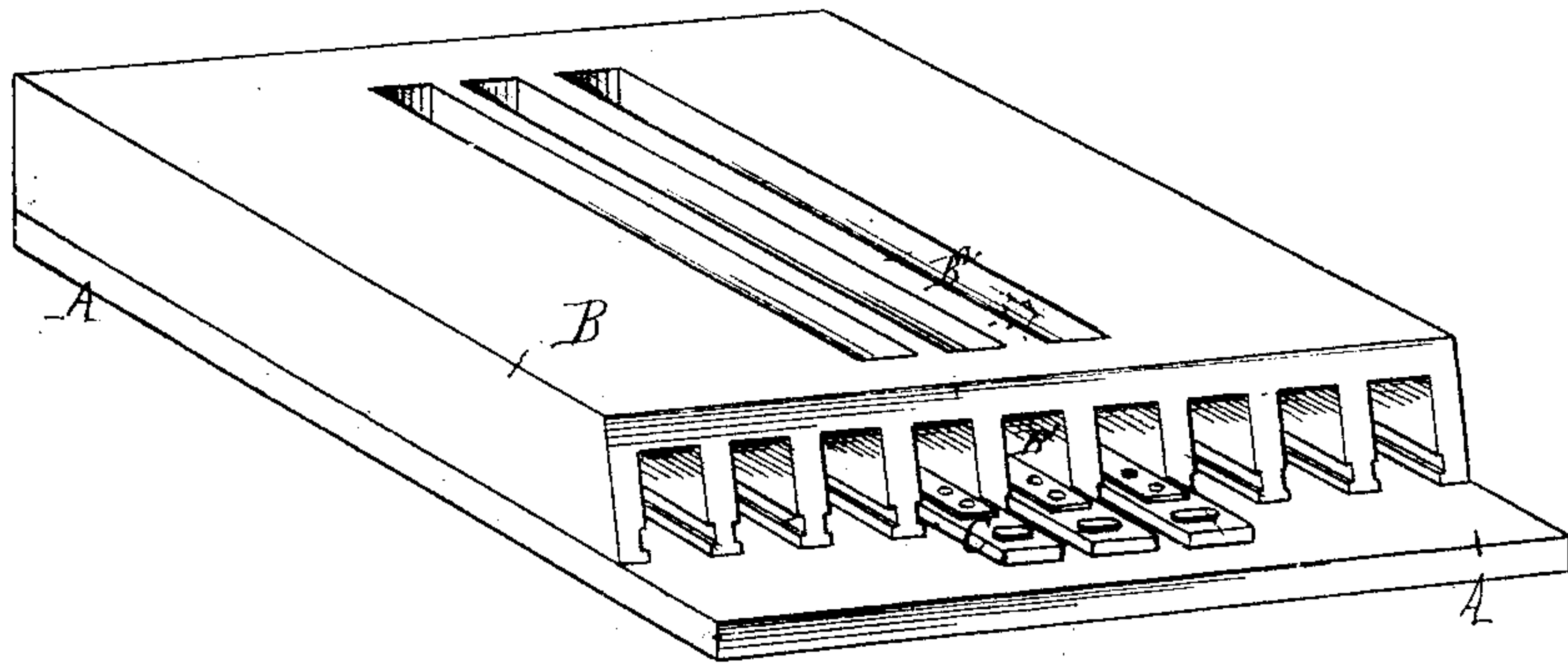
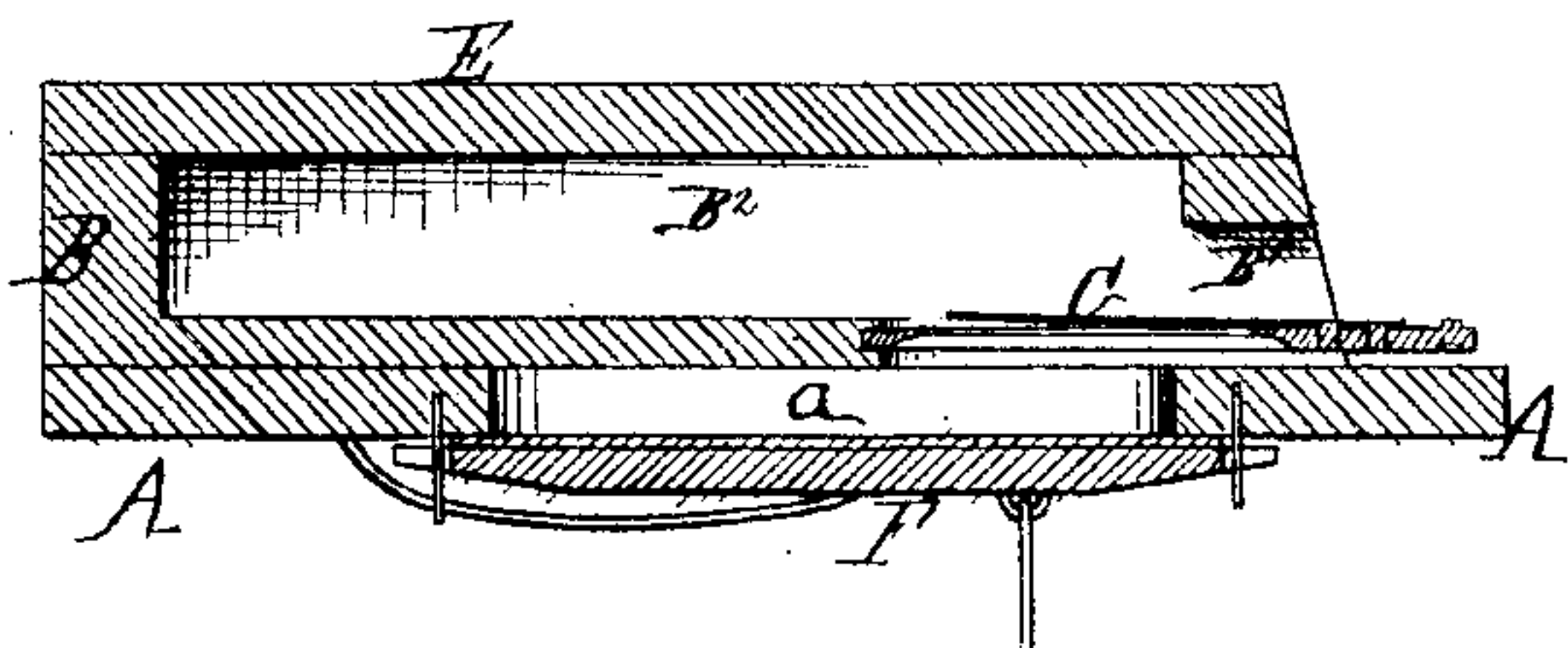


Fig. 2.



Witnesses.

Alphonse
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Inventor.

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United States Patent Office.

HORATIO N. GOODMAN, OF SYRACUSE, NEW YORK.

Letters Patent No. 109,003, dated November 8, 1870.

IMPROVEMENT IN REED-ORGANS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, HORATIO N. GOODMAN, of Syracuse, county of Onondaga, State of New York, have invented a new and useful Improvement in Reed-Organs, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing making part of this specification, in which—

Figure 1 is a perspective view of my improved reed-board, with the cap or top board removed, and

Figure 2 is a vertical sectional view taken longitudinally of the reed-tubes.

The invention relates to that class of reed-organs in which the reed is actuated by an exhaust instead of by a direct blast, and consists in forming a series of reverberatory-chambers (preferably one to each reed) in the reed-board, said chambers being located in the rear of the reeds, that is, calling the end of the tube at which the reed is inserted and withdrawn the front end.

The object of this improvement is threefold—first, to economize space; the second to obtain a chamber possessing the highest degree of resonance, this end being promoted in the construction by the chamber being made in the same piece practically with the reed-board, and also by being located on the lower or sounding-board, or, as it is sometimes called, the base of the reed-board. The third point gained is providing each reed with a separate chamber, whereby its sounding wave is kept temporarily more distinct from and uninfluenced by the wave from any other reed, and can therefore be manipulated and modified as its own peculiarities may require.

In the drawing—

A represents the lower or sounding-board of a reed-organ or melodeon of the class in which the reeds are actuated by an exhaust.

B is the intermediate or tube-board, provided with chambers B¹, in which the reeds C are placed.

In the ordinary reed-boards the chambers B¹ are cut of only sufficient length to admit of the introduction of the reeds, and terminate at the back ends of said reeds at c, my improvement consisting in extending the channels beyond the ends of the tubes, thus forming a series of reverberatory-chambers, B², (one to each reed, these chambers serving to increase the volume and modify the tone, as will be hereinafter explained.

E is the top board or cap forming the upper wall of the chamber B². In fig. 1 this cap is removed to

show the chamber, but in practice it is glued or otherwise fastened securely to its place.

F is a valve closing the orifice *a* in sounding-board A, over which the reed C is placed. The action of this valve and the exhaust-bellows to be used in connection with the reed-board is so well known to those familiar with the arts that I need not explain them in detail.

From the above description of my invention it will be seen that the form and size of chambers B² may be varied to adapt them to the pitch of the corresponding reeds or to any other circumstances which may require a modification of either the volume or quality of the tone. These variations may be made when the chambers are being cut, and then, should further modifications be required, they can be effected by gluing suitable blocks into the chambers.

I do not wish to confine myself to the construction of chambers which I have just described; that is, of gradations of size or of change in form, to make them correspond to the pitch or other peculiarities of the reeds with which they are employed, for I regard these modifications as being in the nature of details by which my invention may be rendered more perfect in its operation.

The effect of these single chambers is materially different from that produced by the ordinary swell-box in reed-organs, as the only function of this box is to muffle the tone in a greater or lesser degree as the swell-leaf or fold is more or less opened; but my chambers are permanent in their relation to the individual reeds and the character of the change effected by them, whether as regards increase in volume or modification in quality—is nearly the same whether used with or without a swell-box or muffling-chamber, which is connected with and affects them all in common.

Having now described my invention,

What I claim as new, and desire to secure by Letters Patent, is—

In a reed-organ which is operated by an exhaust the reverberatory-chamber B² formed in the reed-board, and arranged in rear of the reed-tubes, for conducting or modifying the sound-wave produced by the reed.

In testimony whereof, I have hereunto set my hand this 17th day of September, A. D. 1870.

HORATIO N. GOODMAN.

Witnesses:

WILLIAM A. BENNETT,
FRANK P. HALE.