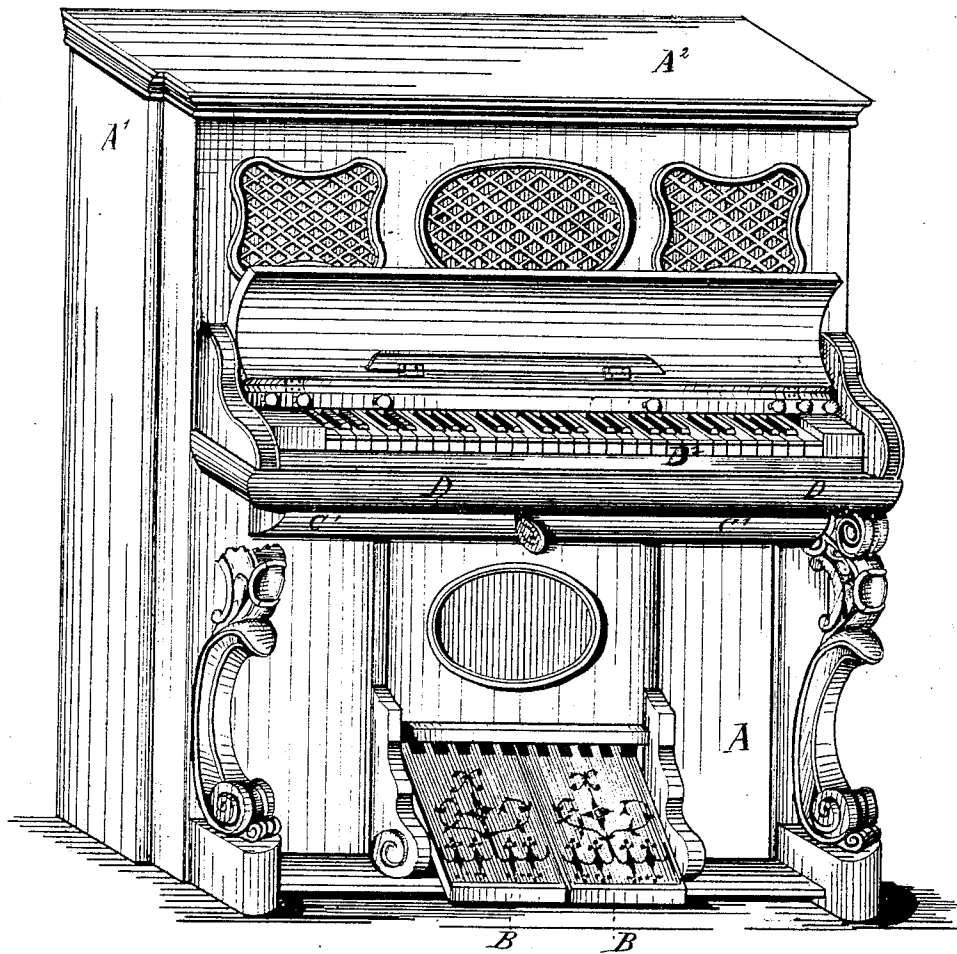


H. N. GOODMAN.
REED-ORGAN.

No. 170,078.

Patented Nov. 16, 1875.

Fig. 1



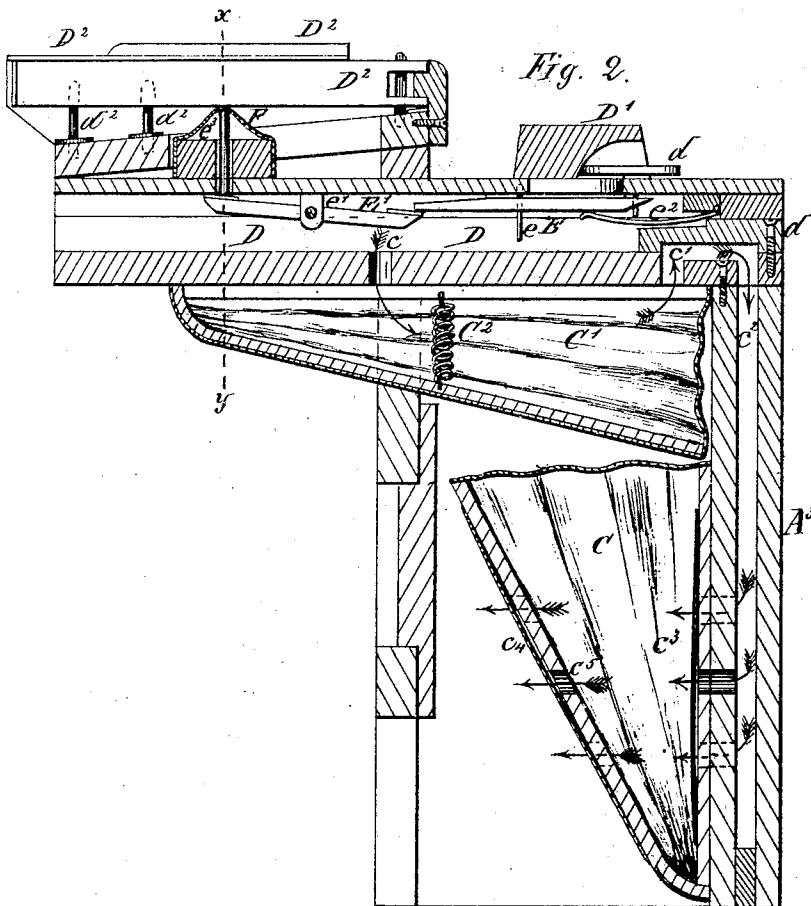
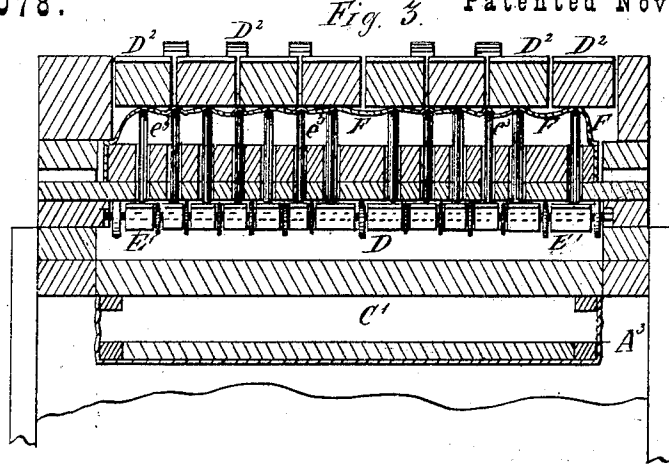
Witnesses
Henry Orth
Chas. Jacobson

Inventor
Horatio N. Goodman
by *N. H. Doubleday* atty.

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UNITED STATES PATENT OFFICE.

HORATIO N. GOODMAN, OF SYRACUSE, NEW YORK.

IMPROVEMENT IN REED-ORGANS.

Specification forming part of Letters Patent No. **170,078**, dated November 16, 1875; application filed September 6, 1875.

To all whom it may concern:

Be it known that I, HORATIO N. GOODMAN, of Syracuse, in the county of Onondaga and State of New York, have invented certain new and useful Improvements in Reed-Organs; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawing, and to the letters of reference marked thereon, which form a part of this specification.

Figure 1 is a perspective view of an organ embodying my improvement. Fig. 2 is a vertical transverse section of so much of an organ as is necessary to illustrate the invention, and Fig. 3 is a vertical longitudinal section of the same, taken on line *x y*, Fig. 2.

It is frequently urged against reed-organs (or cabinet-organs) as they have been heretofore constructed, that they are clumsy and heavy to handle, and awkward and inelegant in appearance, owing to the size and inartistic proportions of the cases.

The object of my present invention is to obviate these objections, and to produce an instrument which shall be symmetrical in its design, and, therefore, pleasing to the eye.

To this end the invention consists in adapting a case made in the form, proportion, and size of an upright-piano case for the reception of the working parts of an organ; by providing such case with an opening immediately below the key-board, to receive the hinged end of the exhaust-chamber of the bellows; by constructing an air-passage or air-trunk in or upon the rear wall of the case; and in certain other construction and adaptations of the working parts of the organ, which shall render it convenient to place it within a case of the desired form, as will be fully explained.

In the drawings, A represents the front of the case, A¹ the end, A² the top, and A³ the back. B B are the treadles connected with and operating the "feeders" of the bellows in any usual or approved manner. C are the feeders, and C¹ the exhaust-chamber. D is the wind-chamber, into which the air passes from the reeds, which are shown at *d*, D¹ being the reed-board.

It will be observed that the board which forms the bottom of the wind-chest also constitutes the upper stationary part of the exhaust-chamber, and that by this construction I am enabled to reduce the thickness of that part which projects beyond the front A of the case at the key-board. C² is a spring used to distend or expand the exhaust-chamber. *c* is an inlet or air-passage from the wind-chest into the exhaust-chamber. *c*¹ is an air-passage or throat formed in the bottom board of the wind-chest opening into the exhaust-chamber, and leading to a similar throat, *c*², in the back A³ of the case, or back board or stationary portion of the feeder or feeders C, this throat opening into this feeder, so that there is a continuous passage from the wind-chest D to the feeder C through the exhaust-chamber C¹, broken only by the valve *c*³. *c*⁴ is a valve over the outlets *c*⁵ in the hinged board of the feeder.

As I am desirous of making the wind-chest D as thin as is practicable, for the sake of the appearance of that portion which projects in front of the part A of the case, I usually employ a cap, *d*¹, which is rabbeted or grooved upon the under side, to form a part of the throat *c*¹; but I may, under some circumstances, form the throat wholly in this bottom board or on the under side thereof, or I may attach back leather C³ of the exhaust-chamber to the back of the case A³, or of the feeder, and cut a throat through this back board into the throat *c*², although I prefer the construction shown. D² are the keys, pivoted at their rear ends, and provided with steady-pins *d*² at their front ends, in any approved manner. E is a fulcrum-valve pivoted at *e* to the under side of the top board of the wind-chest, and covering the aperture through this board into the reed-cell. The front end of this fulcrum-valve is chamfered upon its upper surface, so that this end may be actuated by the lever E' to open the valve, as will be readily understood. Of course there must be a valve for each reed-cell, and a closing-spring, *e*². Lever E' is pivoted at *e*¹. *e*³ is a tracker-pin resting upon lever E', and depressing the front end of said lever whenever the corresponding key is pushed down.

In order to prevent the leakage of air into the wind-chamber around the pitmen, I em-

ploy a flexible packing-strip, F, arranged substantially as shown, either above or below the tracker-pins, and interposed between them and either the keys D² or the levers E', as the case may be, the edges of this strip being secured to the top of the wind-chamber or to a steady-strip thereon. I usually prefer to make this packing-strip of thin rubber, but may use any suitable material, care being taken to furnish sufficient slack to allow each pitman to be depressed the requisite distance without displacing any other pitman.

I claim—

1. A reed-organ bellows, having a vertical feeder hinged at the lower end, and an exhaust-chamber arranged at right angles thereto, and hinged at the front, substantially as set forth.

2. A wind-chest, the bottom of which is provided with an air-passage leading to the exhaust-chamber, and also with a throat leading to an air-passage in the back of the feeder or feeders, substantially as set forth.

3. The flexible packing-strip F, in combination with the tracker-pins e³, and the wind-chest D, substantially as set forth.

4. The combination of the flexible packing-strip E, the tracker-pins e³, the lever E' and fulcrum-valves E, with the wind-chest D, substantially as set forth.

5. The herein-described organ-case, provided with an opening below the key-board to receive the exhaust-chamber of the bellows, substantially as set forth.

6. The herein-described organ-case, consisting of the narrow upright part, and the projecting key-board, having the opening below the same, in combination with the bellows made in two parts, arranged at right angles to each other, the vertical portion being arranged within the case, and the horizontal portion projecting beneath the key-board, substantially as set forth.

In testimony that I claim the foregoing as my own I have affixed my signature in presence of two witnesses.

H. N. GOODMAN.

Witnesses:

S. H. BEVINS,

F. B. HINSWORTH.