3 Sheets—Sheet 1.

S. J. CROCKETT.

Reed-Organ.

No. 216,944. **Patented July 1, 1879.**

Fig: 1.

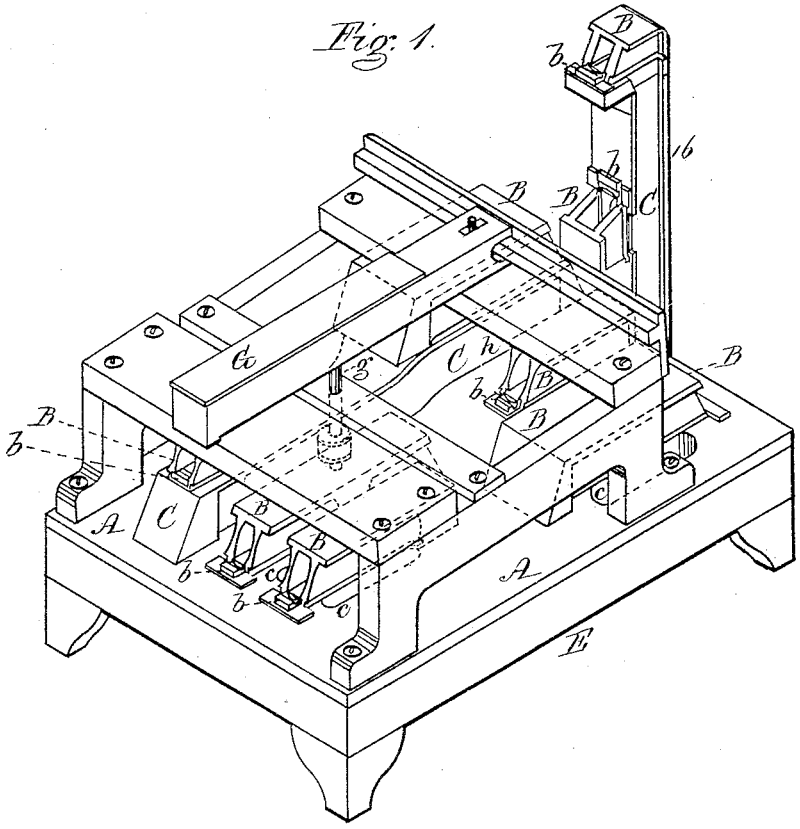
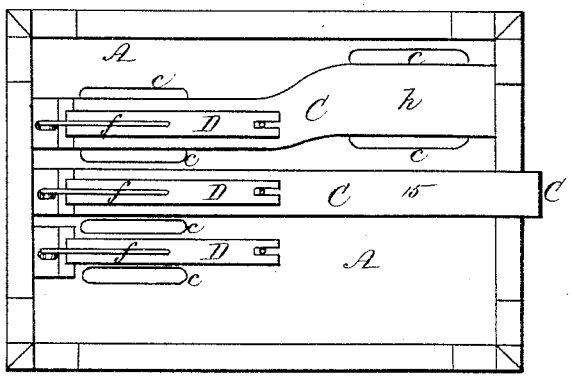


Fig: 2



Witnesses
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Inventor,
Samuel J. Crockett
per P. E. Teschemacher
Atty

S. J. CROCKETT.

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Fig. 3

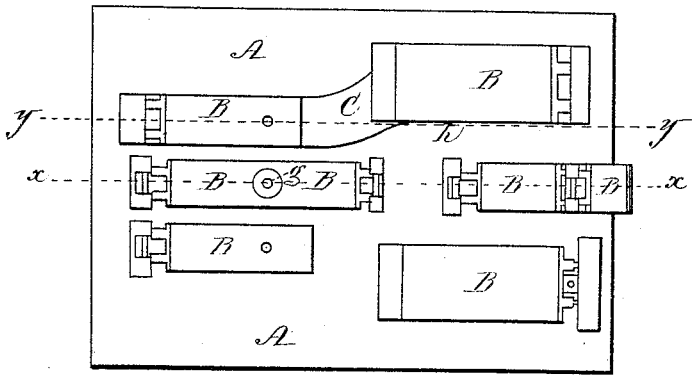

Fig. 4

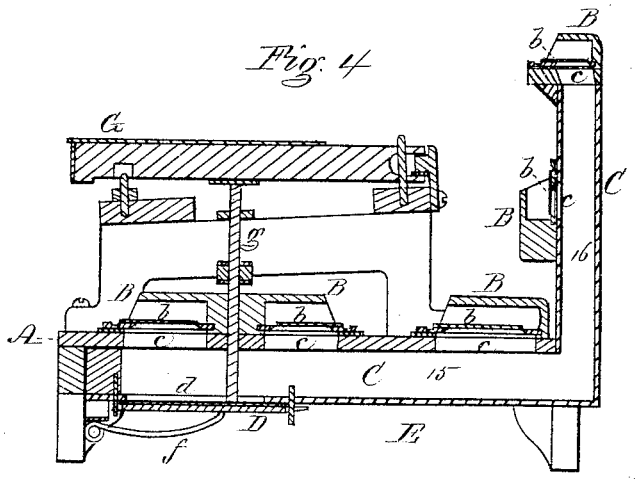

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Fig. 5

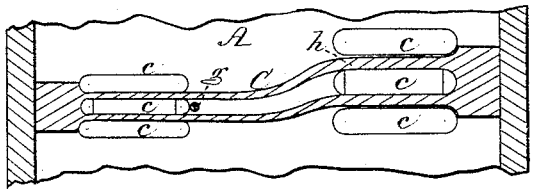
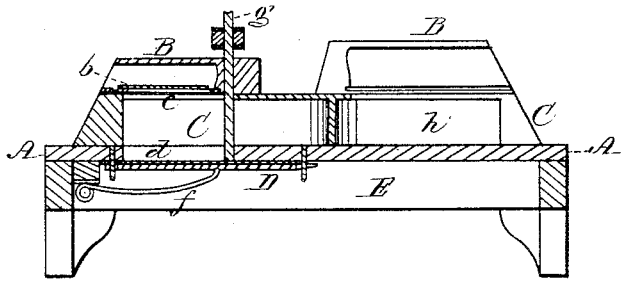


Fig. 6



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UNITED STATES PATENT OFFICE.

SAMUEL J. CROCKETT, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO THE NEW ENGLAND ORGAN COMPANY, OF SAME PLACE.

IMPROVEMENT IN REED-ORGANS.

Specification forming part of Letters Patent No. **216,944**, dated July 1, 1879; application filed January 25, 1879.

To all whom it may concern:

Be it known that I, SAMUEL J. CROCKETT, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain Improvements in Reed-Organs, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a perspective view of a portion of a reed-organ constructed in accordance with my invention. Fig. 2 is a plan of the under side of the same. Fig. 3 is a plan of the upper side with the key-frame removed. Fig. 4 is a vertical section on the line *x x* of Fig. 3. Fig. 5 is a horizontal section through one of the air-tubes on the under side of the valve-board, looking up. Fig. 6 is a vertical section on the line *y y* of Fig. 3.

My invention relates to certain improvements in reed-organs; and consists in certain details of construction, as hereinafter set forth and specifically claimed.

To enable others skilled in the art to understand and use my invention, I will proceed to describe the manner in which I have carried it out.

In the said drawings, A represents the valve-board of a reed-organ as ordinarily constructed, and B the reed cells or chambers, within which are fitted the reeds *b*, under each of which is a slot or narrow aperture, *c*, leading into an air-tight tube, C, a portion of which is represented in Fig. 2 as located on the under side of the board A. In the bottom of this tube C is a valve-opening or discharge-orifice, *d*, covered by a valve, D, through which the air is drawn into the wind-chest E, when a vacuum is produced therein by means of the bellows. (Not shown.) This valve D is opened against the resistance of a spring, *f*, to sound one or more of the reeds *b* connected with the tube C, by means of the tracker-pin, *g*, extending up to the key-lever G, by which it is depressed.

The central tube C (shown in Figs. 2 and 4 and partially in Fig. 1) extends horizontally under the board A, at the rear end of which it turns at a right angle and extends up vertically, the horizontal portion 15 being provided with three reeds, and the vertical portion 16 with two reeds, one at the extreme top, the chamber or cell B of each reed communicating through an aperture, *c*, with the air-tube C. This tube, which can be of straight, curved, angular, or irregular form, and of wood or other suitable material, may be of any desired length and extend in any suitable direction, and may have connected with it one or any desired number of reeds, all of which, without regard to their distance from the key-lever G, can be sounded by the opening of the single valve D, and the additional valves with their connecting mechanism heretofore employed are thus dispensed with, and the construction of the instrument thereby greatly simplified.

Each reed-cell B may be provided with the ordinary stop-valve or mute applied to its mouth, in order that one reed only, or any desired number of those connected with an air-tube; C, may be sounded by depressing the key-lever G belonging to the valve D of that tube; and it is obvious that with this construction it requires no more pressure upon the key-lever to sound all of the reeds connected with its air-tube C than to sound a single one, and consequently the hardness of touch which results from coupling additional valve mechanism with the keys when additional reeds are to be sounded is entirely avoided.

Another great advantage resulting from this construction is that it allows of reeds of different pitch being placed at any convenient distance apart, whereby the quality and volume of tone of each reed or set of reeds are rendered more prominent and a much better effect is produced.

The ordinary reeds used are of a standard scale or width with respect to the length of the key-board; and in instruments as heretofore constructed where an extended scale was used, the reed-cells and reeds of this scale, on account of their extra width, could not be located directly beneath their respective keys. These wide reed-cells have been placed under the key-board, in which case they extended beyond its ends; and they have also been placed in the rear of the key-board, where there was ample space to accommodate them; but in either case it was necessary to employ addi-

tional valves or valve mechanism, which complicated the construction of the instrument and rendered the touch harder.

Where my air-tube C is employed, the reed or reeds of the extended scale can be applied thereto, as seen in Figs. 2 and 3, the air-tube being made of extra width at the part *h*, where the wide reed-cell and reed are applied thereto, the tubes being curved more less according to the positions of the wide portions with respect to straight narrow portions beneath the key-levers; and it will thus be seen that the extra valves or valve mechanism heretofore used for the extended-scale reeds are entirely dispensed with, thus still further simplifying the construction, while the touch of the instrument is also rendered much lighter.

On the left-hand side of Fig. 1, top of Fig. 3, and in Fig. 6, the air-tube C is represented as placed on the upper surface of the valve-board A through which is formed the valve-opening *d*, commanded by the valve D, which is depressed by a tracker-pin and key-lever, as usual.

With this arrangement the reed cells or chambers B (the one in the rear being the cell of the extended scale) are applied to the upper side of the tube C, the aperture *e* under the reed leading directly into the tube, and the operation being the same as previously described.

If desired, a single reed located at any convenient distance from its key may be employed in connection with each air-tube C, which will result in an improvement in the tone of the instrument.

Although the organ represented in the drawings is provided with a valve-board, the latter may, if desired, be dispensed with, as it is not essential to the construction of an organ embodying my improvements. I prefer, however, to use a valve-board, as described.

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

1. An air-tube, C, provided with a single valve, D, and constructed with a wide portion, *h*, to allow of the application thereto of a reed of an extended scale, substantially as described.

2. An air-tube, C, provided with a single valve, D, and having one portion of a width adapted for a reed of the usual scale, and another portion of increased width, to allow of the application thereto of a reed of an extended scale, substantially as and for the purpose described.

Witness my hand this 23d day of January, A. D. 1879.

SAMUEL J. CROCKETT.

In presence of—

P. E. TESCHEMACHER,

W. J. CAMBRIDGE.