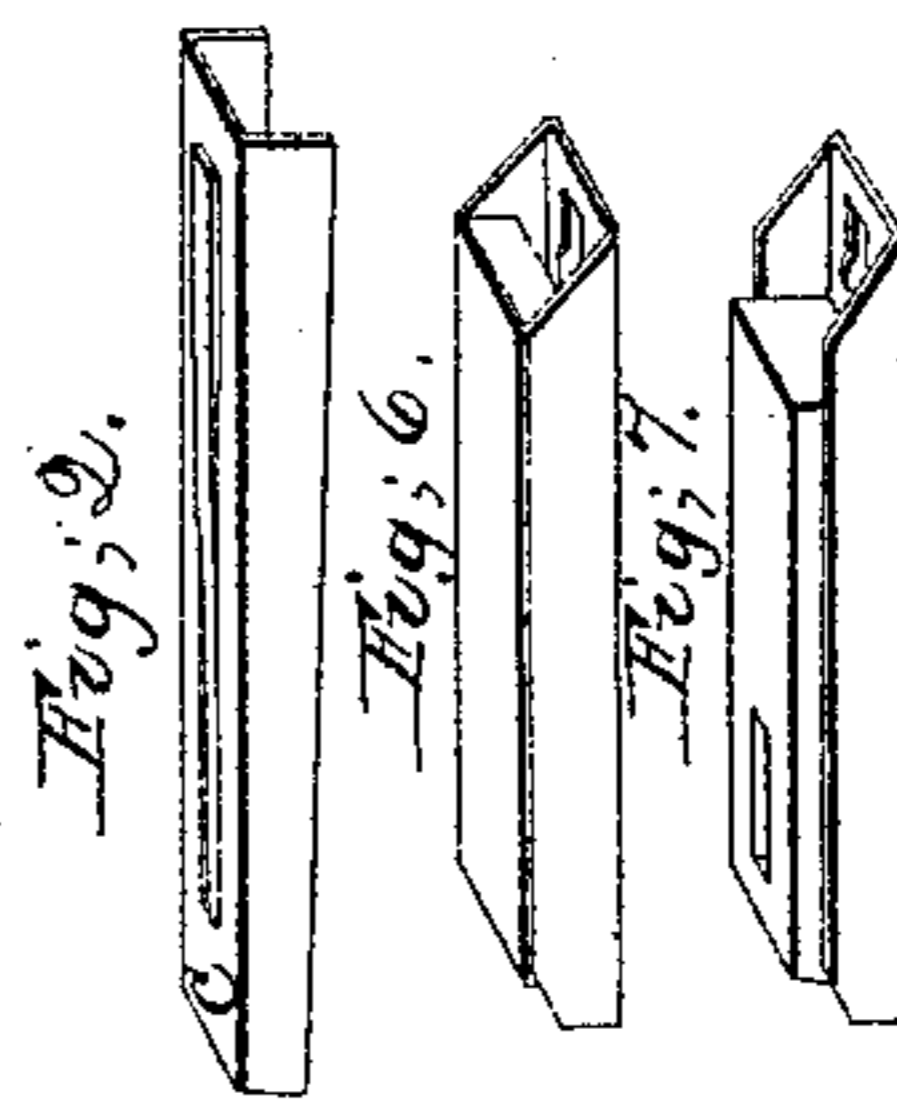
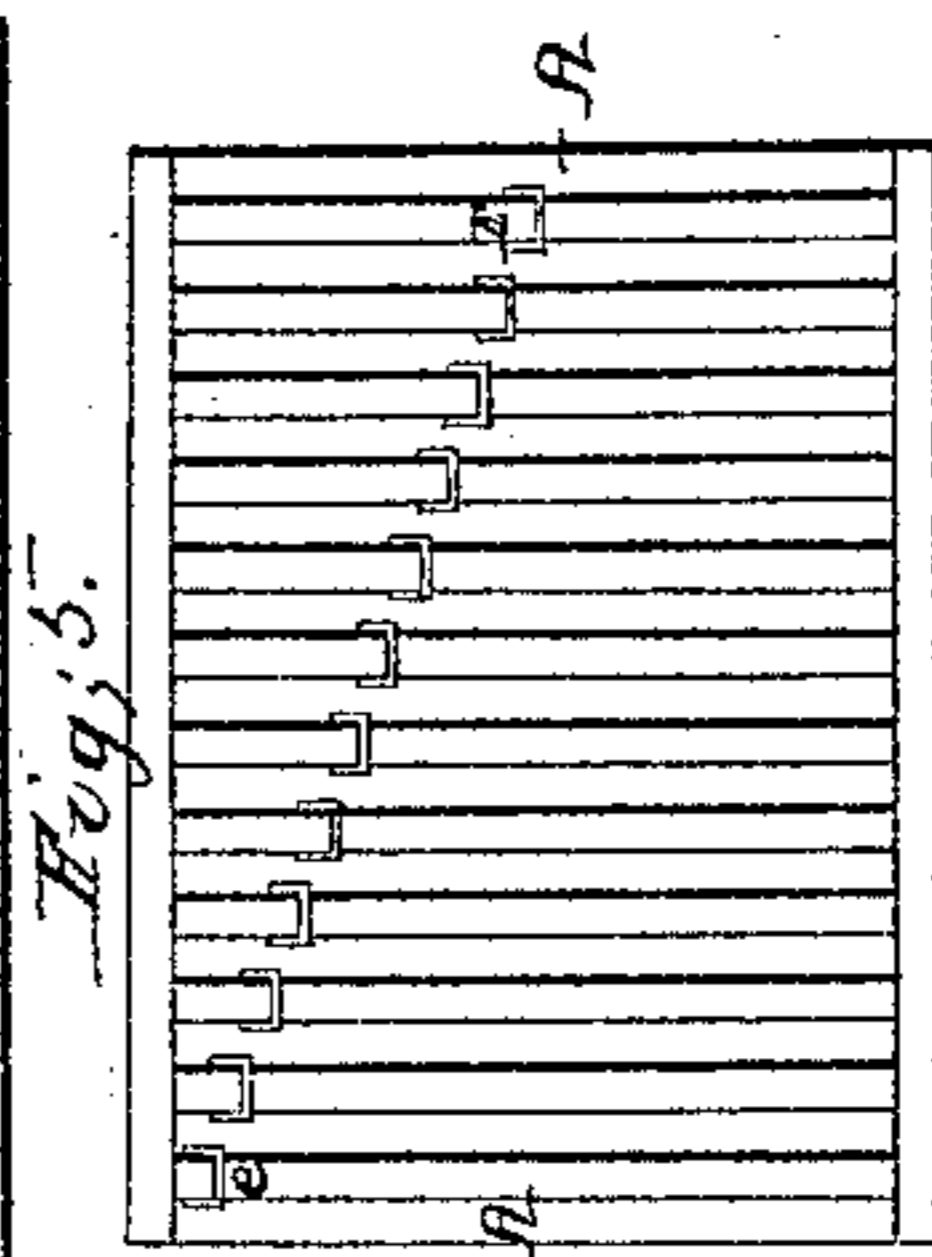
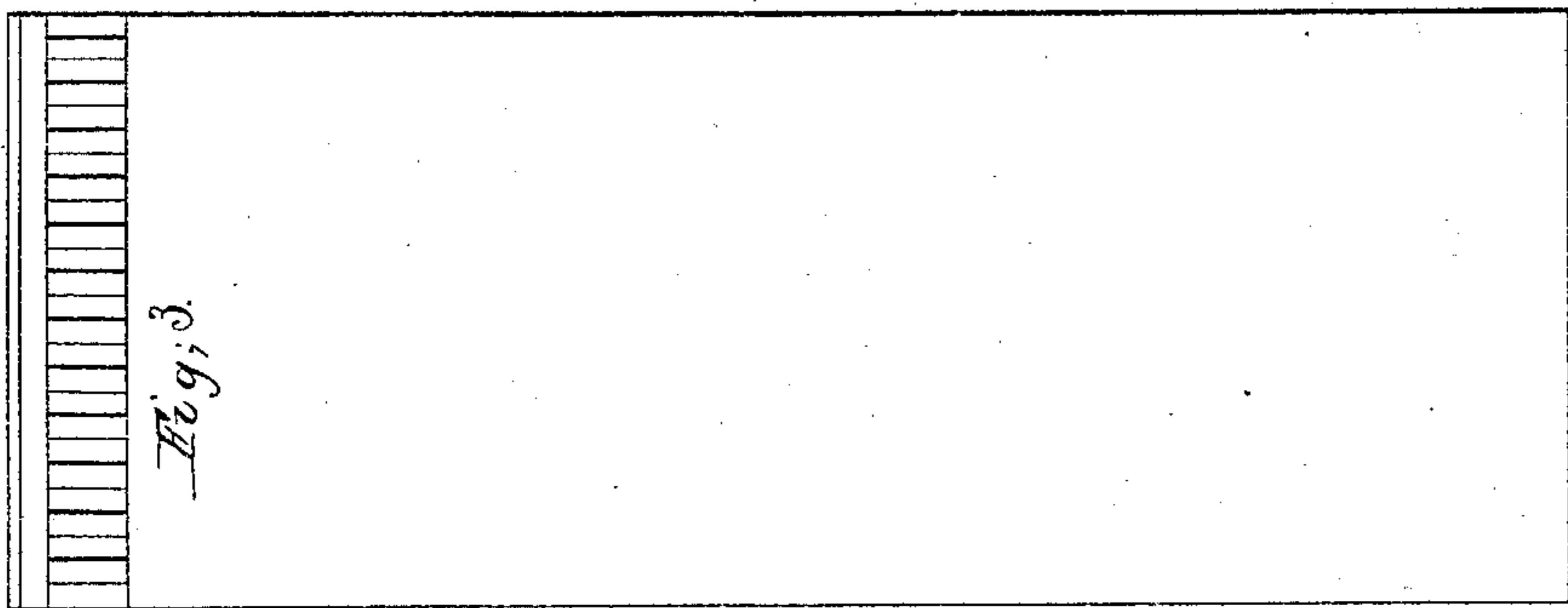
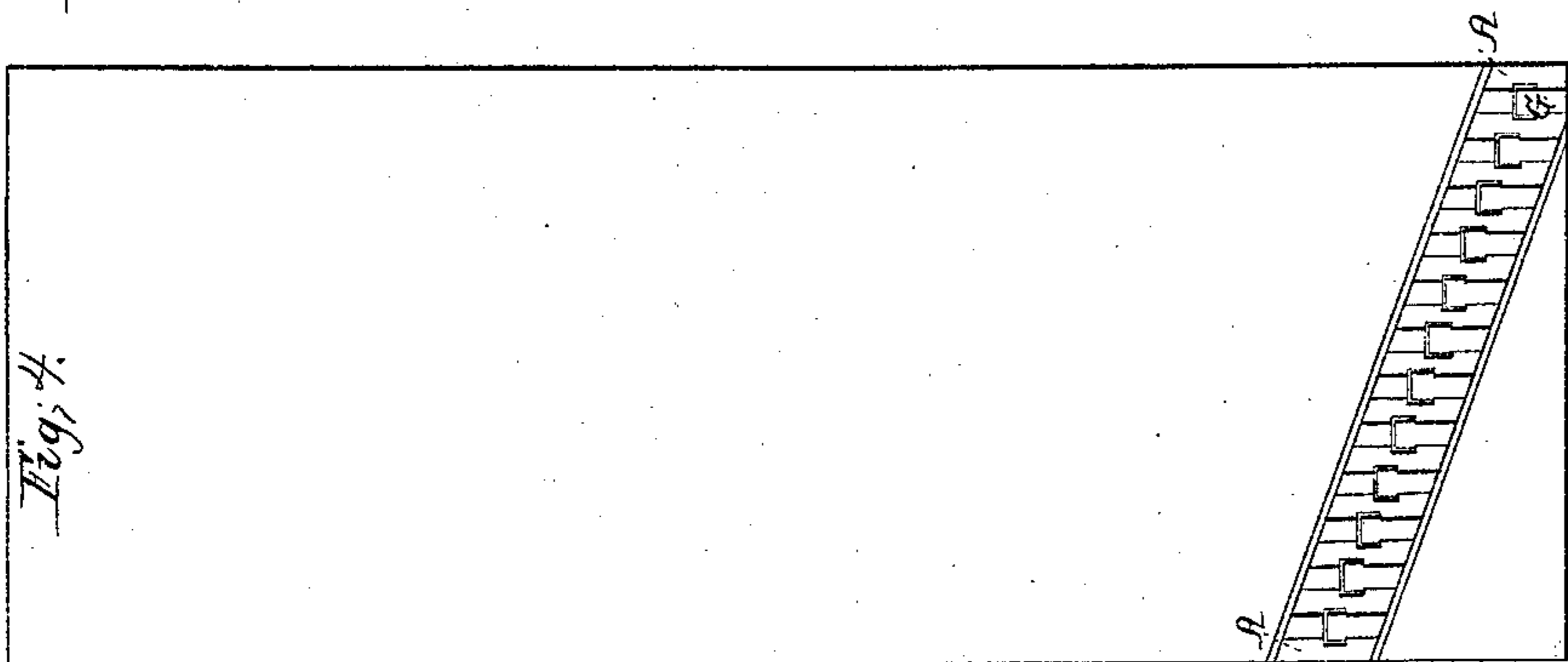
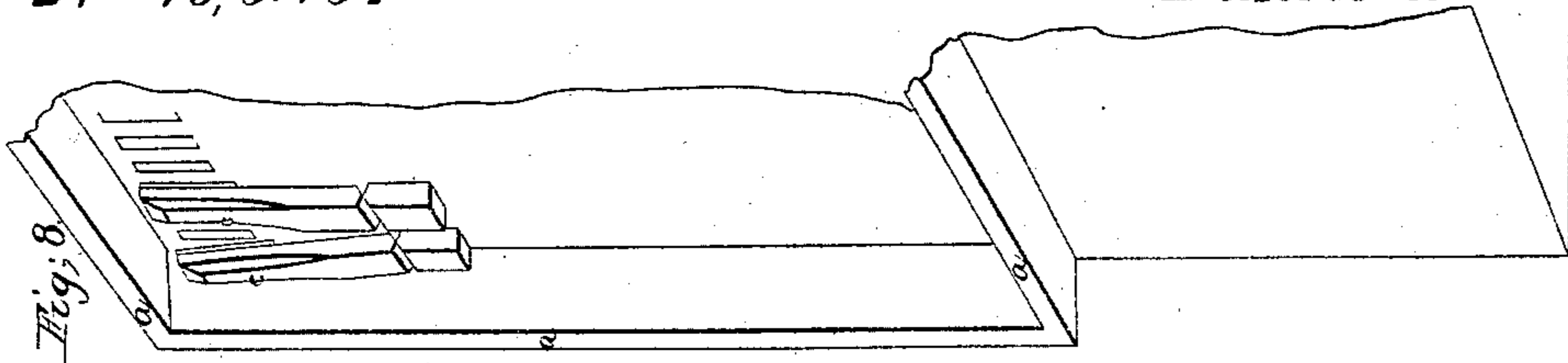


M. T. Landfeur,

Reed Organ,

N<sup>o</sup> 10,848.

Patented May 2, 1854.

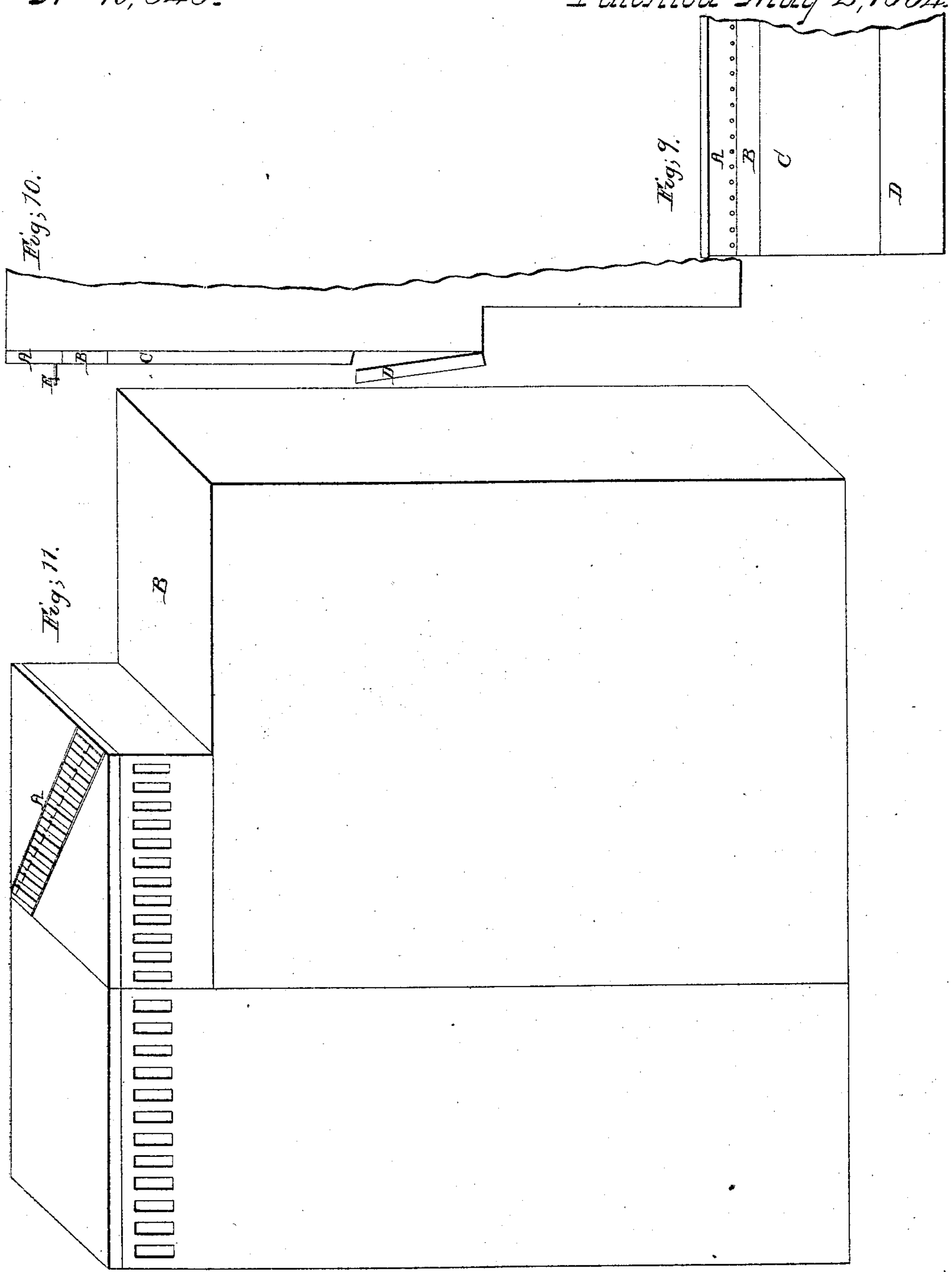


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# UNITED STATES PATENT OFFICE.

M. T. LUNDFEUR, OF MANCHESTER, CONNECTICUT.

## REED-BOX FOR MUSICAL INSTRUMENTS.

Specification of Letters Patent No. 10,848, dated May 2, 1854.

*To all whom it may concern:*

Be it known that I, MERVIN T. LUNDFEUR, of Manchester, in the county of Hartford and State of Connecticut, have invented a new and Improved Arrangement and Setting for Reed-Boxes of Musical Instruments; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 represents a back view of the method of arranging and setting a series of reed-boxes (each box in a separate chamber of dimensions to suit the length and width of the box, and the volume of the sound) for the bass not running up the scale from G an octave below the lowest G, on the piano, to D inclusive. Fig. 2 is a view of the reed-box (seen in end view in Fig. 1, as inserted in grooves cut across the grain of the wood in the sides of the chambers) made of sheet brass bent to form three sides of a square tube and the reed inserted as usual, but two or three times as thick as those set in the old way. Fig. 3, is the front cover of the chambers and has the usual air-escapes, one for each chamber. Fig. 4, is the cover for the back of the chambers, and consists of two pieces, space being left for the insertion of the reed-boxes, this being closed by a slide packed with soft cotton. Fig. 5, represents in top view the second series of chambers and reed-boxes of smaller dimensions but similar to those arranged for the first series, and moving up the scale from D inclusive to C inclusive one octave above middle C. Fig. 6, represents my method of arranging the third series of reed boxes by inserting a strip of wood between the sides of the box, leaving a space between the wood and the reed thereby to continue the scale up about two octaves above C, above mentioned. These boxes are fastened to a board with the usual air-openings, but the air is received through and passes along the chamber formed by the strip of wood. Fig. 7, represents the method of blocking the reed boxes with wood having mortices directly over the reed these mortices being short chambers, and the reeds acting or speaking quick enough for piano music at a very high pitch of sound which is obtaining a very important desideratum.

These several series, the last continuous

of its antecedent, arranged in a chest about 20 in. high 4 in. deep, 36 to 38 inches long, the chambers for the bass notes (beginning on and filling the left hand end of the box), standing perpendicularly the whole height, the second series passing from front to back at the top of the chest, and next the first series; the first series of reed boxes being thus horizontally and the second series standing perpendicularly. From the second nest of chambers and to the right hand, is placed a floor, on which the third and fourth sets of reed boxes (mounted as seen in Figs. 6 and 7) are fastened and ranged till the number required is exhausted. It will thus be seen that a large portion of that part of the chest containing the second, third and fourth series is unoccupied and when this chest is placed on the air-chest it virtually becomes a part of the air chest. In building up these nests the grain of wood runs with the arrows marked on the several figures—which increases the velocity of the air and improves the tone of sound over the metal tubes used in organs.

These reed boxes are operated in the usual way by a bellows and valves brought into action by the usual or any convenient method. In Fig. 8, (designed to show swell-box) the openings and valves are seen in line to which no further reference is required. The mechanical proportions are determined by rules well known in the workshop, and need not be enumerated. The nature of my invention, it will be seen therefore relates to furnishing to each reed-box a chamber of dimensions suited to the length and width between it and the air-escapes, as represented and described in varieties of chambers or their equivalents seen in the drawings of the four series—the position of the reed boxes in said chambers, and the construction of the same whereby I obtain increased power and improved quality of tone and quickness of speaking sound never before obtained in like instruments. Each chamber is thus adapted to the volume of air vibrated in the production of each note, and this air, thus measured out is isolated from the rest until it escapes, the duration of the isolation being according to the pitch of the note, the pitch being determined by the reed, and the location of the reed box being also an item in the arrangement because as the scale is ascended the chamber is shortened or reduced in size or capacity.

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

1. My method of inserting reed boxes in chambers of graduated length, and depth,  
5 and width, as described, and represented and for the purpose set forth.
2. Tubing or chambering the reed boxes as described and represented in Fig. 6, and for the purpose set forth.
- 10 3. Blocking the reed-box, and morticing

the block when it overties the locality of the reed as described and represented in Fig. 7, and for the purpose set forth.

In testimony whereof I have hereunto signed my name before two subscribing wit- 15  
nesses.

MERVIN T. LUNDFEUR.

Witnesses:

WILLIAM SCOTT,  
JOHN WIMHUTER.