

No. 606,748.

Patented July 5, 1898.

E. B. THORIN.

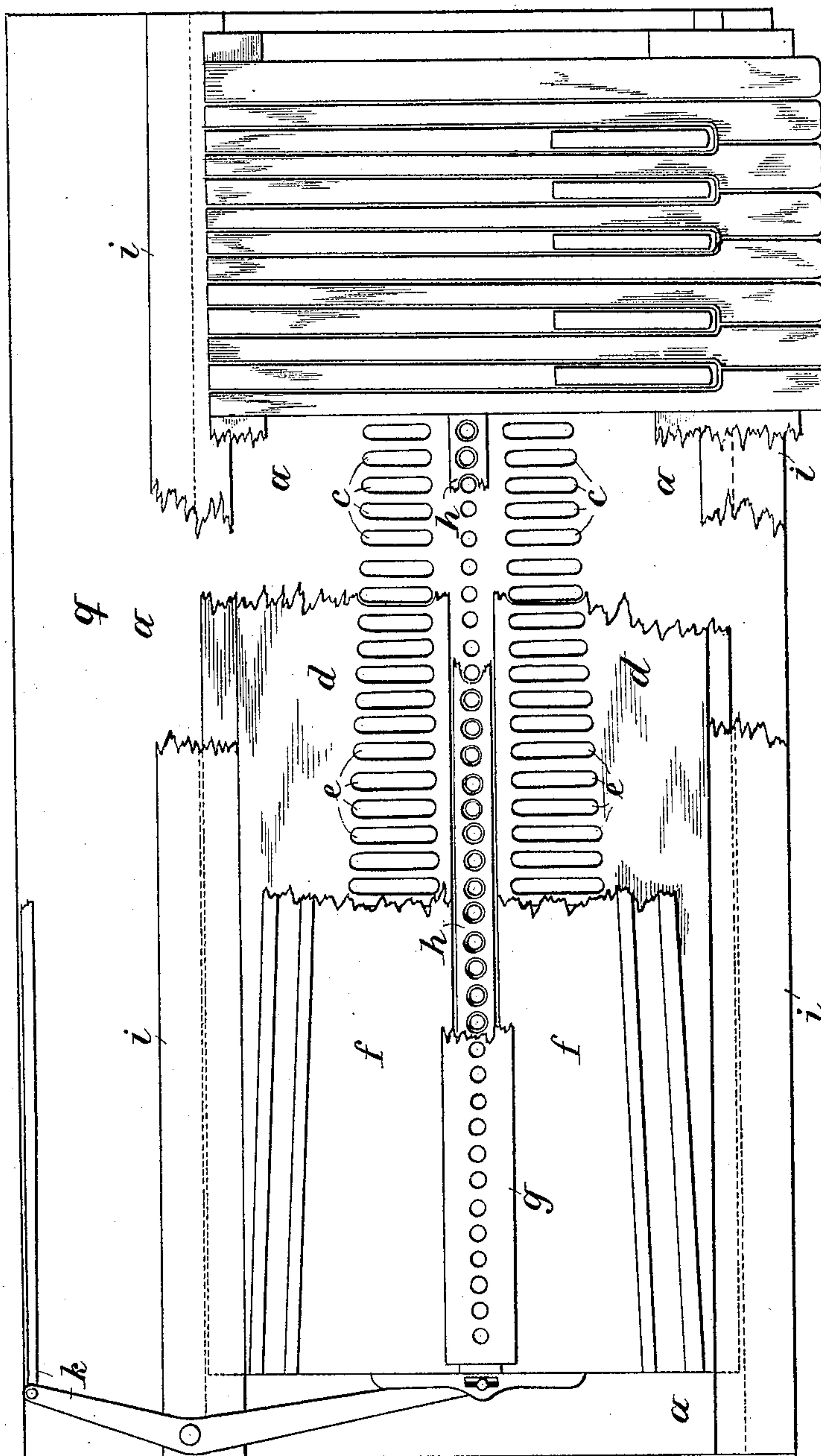
TRANSPOSING ACTION FOR ORGANS.

(Application filed Nov. 20, 1897.)

(No Model.)

3 Sheets—Sheet 1.

Fig. 1



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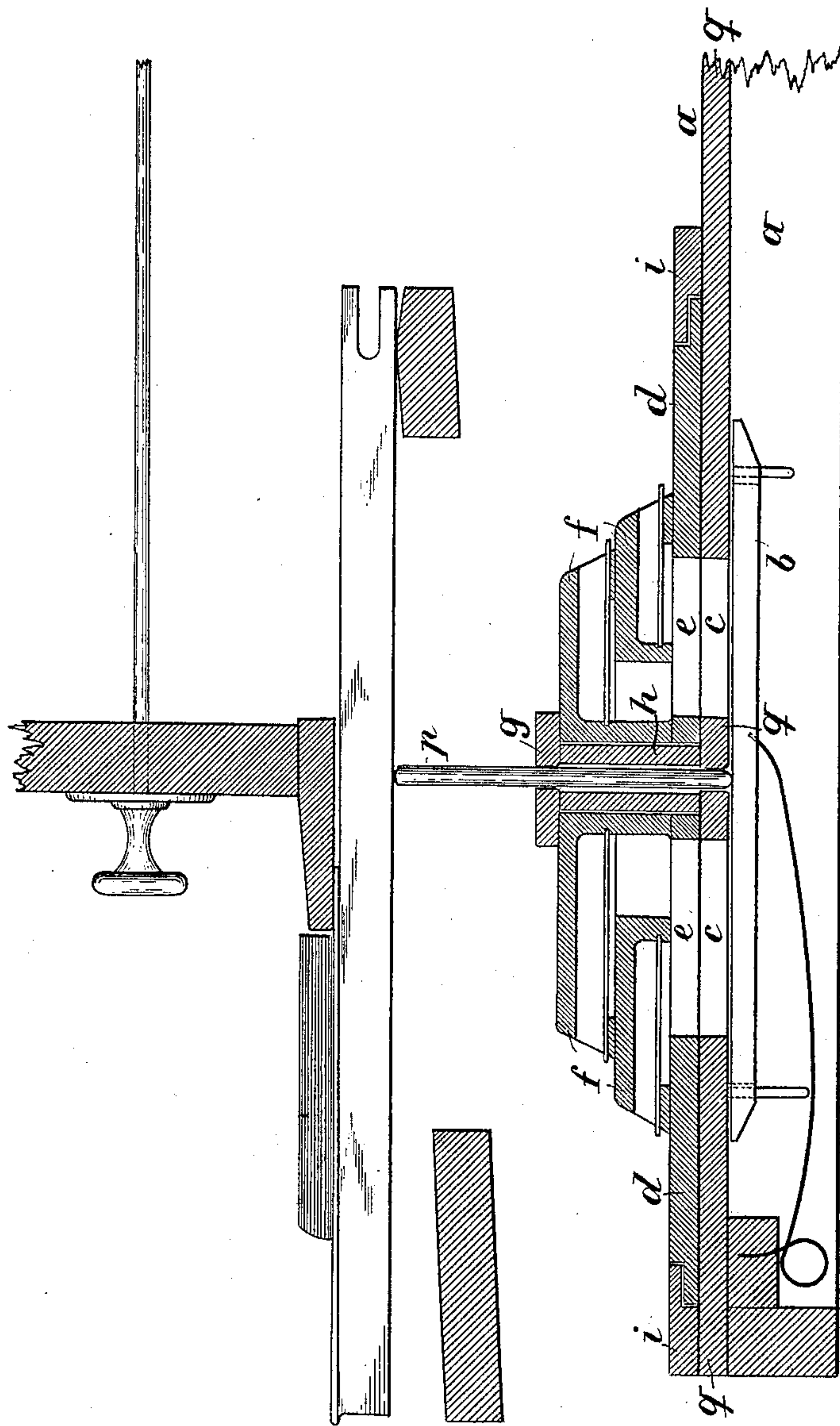
**TRANSPOSING ACTION FOR ORGANS.**

(Application filed Nov. 20, 1897.)

(No Model.)

**3 Sheets—Sheet 2.**

Fig. 2



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Fig. 3

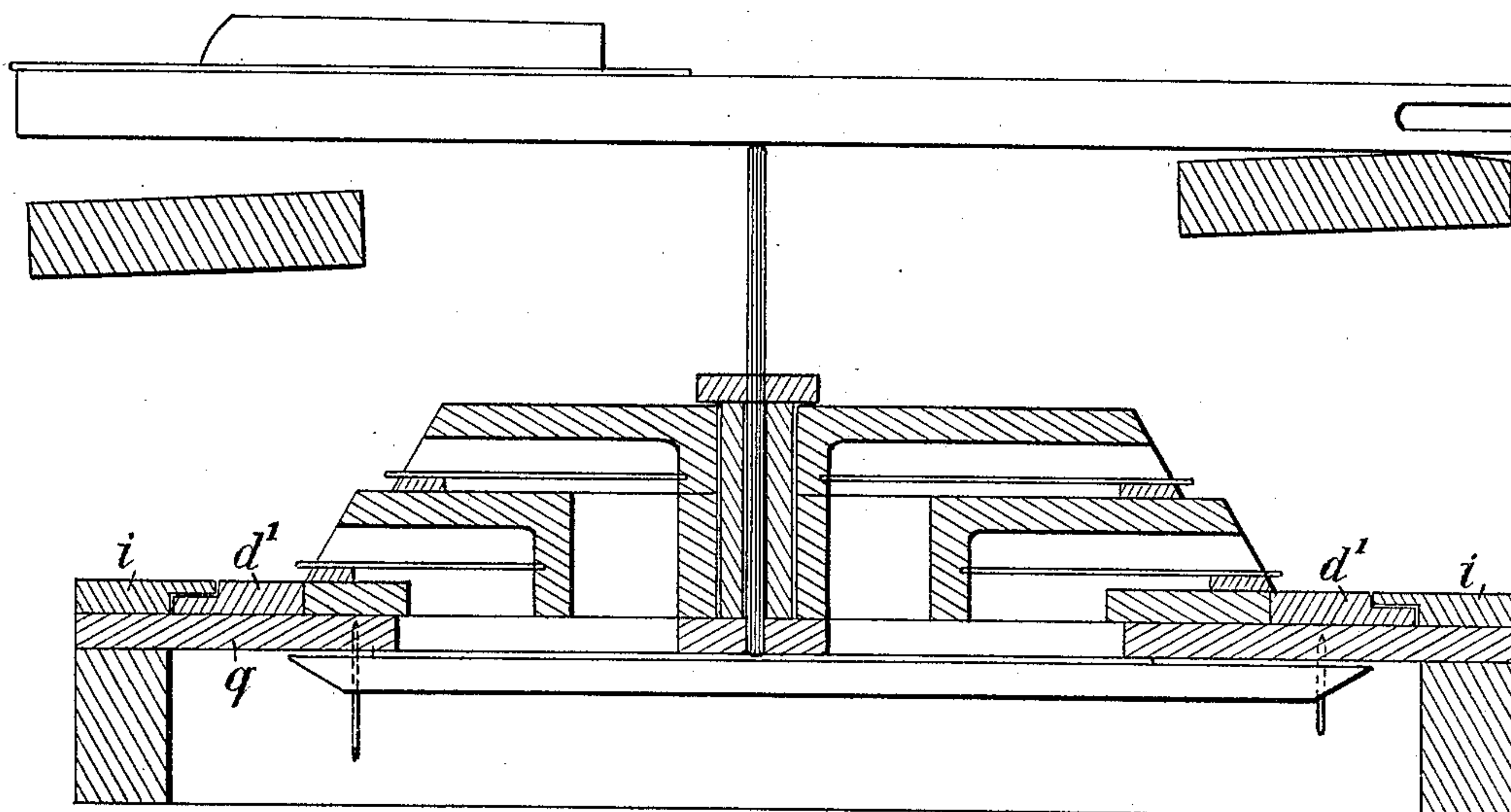
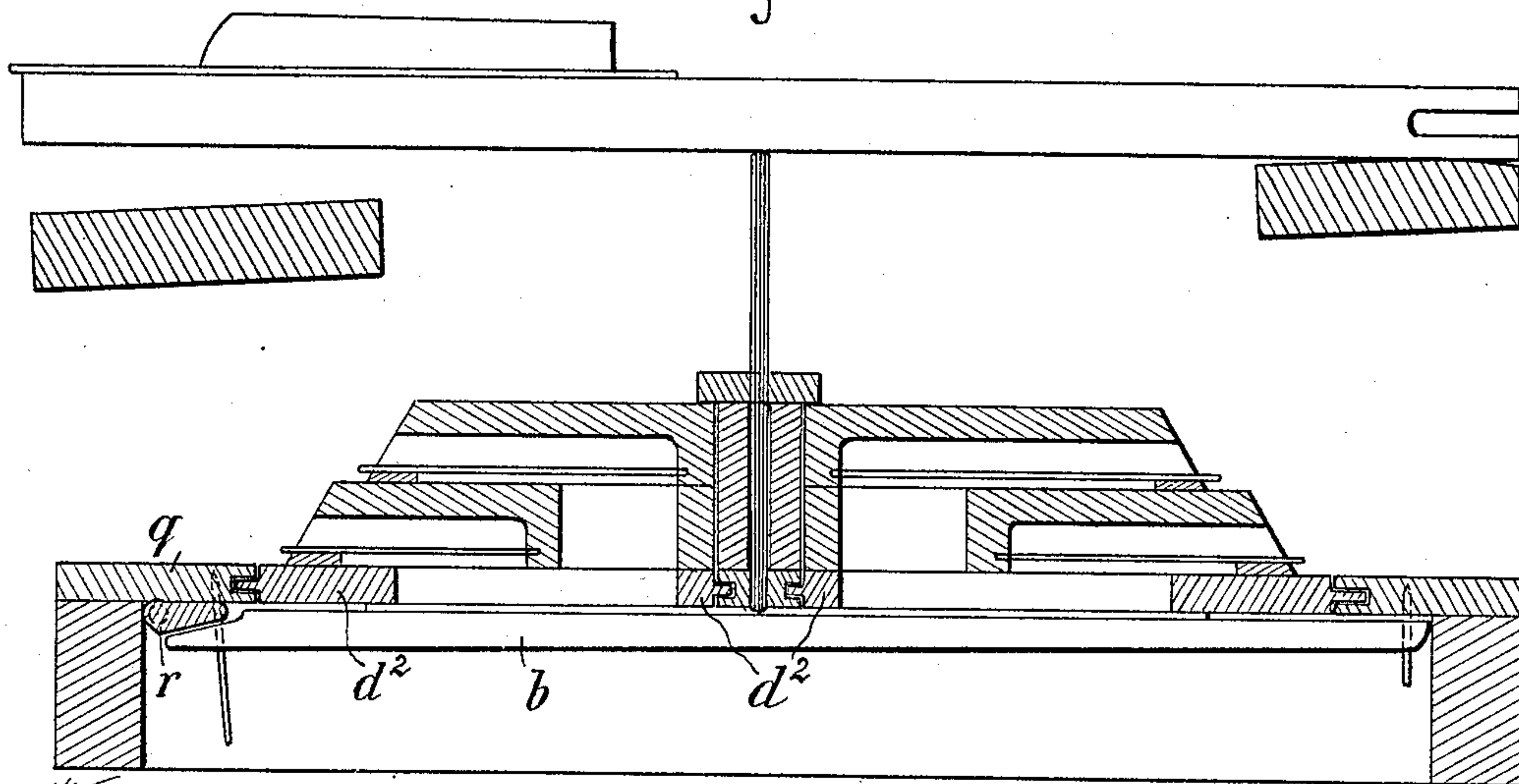


Fig. 4



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# UNITED STATES PATENT OFFICE.

ERNST BENJAMIN THORIN, OF STOCKHOLM, SWEDEN.

## TRANSPOSING ACTION FOR ORGANS.

SPECIFICATION forming part of Letters Patent No. 606,748, dated July 5, 1898.

Application filed November 20, 1897. Serial No. 659,322. (No model.) Patented in Germany May 24, 1897, No. 11,302; in Sweden August 12, 1897, No. 8,196, and in England September 18, 1897, No. 21,469.

*To all whom it may concern:*

Be it known that I, ERNST BENJAMIN THORIN, of Stockholm, in the Kingdom of Sweden, have invented a new and Improved Transposing Action for Reed-Organs, of which the following is a full, clear, and exact description.

My invention consists in a transposing action for reed-organs, whereby the transposition can be made at any time, even during the playing on the instrument. Besides, the construction of my improved transposing organ is much more simple and cheaper than any other hitherto known, as will be easily understood from the following description.

The invention forming the subject of this application is the same as that for which Letters Patent were granted me in Sweden August 12, 1897, No. 8,196; in Germany May 24, 1897, No. 11,302, and in Great Britain September 18, 1897, No. 21,469.

On the annexed drawings, Figure 1 is a plan view, and Fig. 2 a vertical cross-section, of the contrivance. The cells in the reed-boards are not drawn in Fig. 1. Figs. 3 and 4 are also vertical cross-sections showing slight modifications in the practical performance of the invention.

Referring first to Figs. 1 and 2, *a* is the wind-chest. *g* is the upper board or lid of the wind-chest. *f* is the reed-board or so-called "reed-cell" board, which supports the reeds in slots or cells formed therein. *cc* are valve-openings in the upper board of the wind-chest. *bb* are the reed-valves for controlling the air communication between the wind-chest and the reed-cells.

The characteristic of my invention is that I make the reed-board or reed-boards movable relatively to the wind-chest in such a manner that the reed-board or reed-boards may slide in their longitudinal direction along the wind-chest. For that purpose I apply the reed-boards on an extra board or slide *d*, which may be moved in suitable guides on the upper board of the wind-chest. According to Figs. 1 and 2 the reed-board is glued on the upper surface of the slide, so that the latter extends under the reed-board between that and the upper board of the wind-chest. In this case the slide *d* must of course be pro-

vided with openings *e*, which coincide upward with the cells or slots in the reed-board and downward with the valve-openings in the upper board of the wind-chest, so that air can pass from a reed-cell through the slide *d* and the upper board *g* of the wind-chest when the corresponding reed-valve is open. When the slide is moved lengthwise, its openings, and thus also the cells in the reed-board, which of course partake in the movement, will communicate with other reed-valve openings *c* in the upper board of the wind-chest. Thus the transposition is effected.

The upper pin-lath *g*, which is secured to the lath *h*, glued onto the upper board of the wind-chest, serves, together with the lath *h*, as guide for that edge of the slide *d* on which the reed-board is situated, while the other edge of the slide is guided by an angular lath *i*, secured to the wind-chest.

In order to still more secure the tightness between the slide *d* and the upper board of the wind-chest, there may, if necessary, be used springs which press the slide against the wind-chest, thus compensating eventual wearing.

For actuating the slide any suitable lever arrangement may be used which connects the slide or reed-board with a so-called "register" or "stop-knob" projecting on the front side of the organ—for instance, above the keys. Said register may be movable forward and backward or upward and downward or to the right and left. Sometimes I connect the lever arrangement with one or two pedal-levers which may be actuated by the feet. Instead of said lever apparatus a simple arm or handle may be fastened to the slide or reed-board in such a manner that it projects through a horizontal slot in the front side of the casing, so that by moving said arm or handle to the right or left the slide and reed-board will simultaneously be moved in the same direction. The projecting arm or handle may be actuated by hand or knee. Of course the slide also can be actuated by means of a crank with toothed wheel engaging a rack on the slide or reed-board or by any other suitable means.

When, as shown in the drawings, two slides are used, they must of course be connected



with each other in such a manner as to be moved in exactly the same degree simultaneously when actuated.

The slide *d* need not necessarily extend  
5 under the reed-boards; but it may be glued  
on one or both longitudinal edges of said  
reed-boards. In such case the openings *c* are  
dispensed with and the cells or slots in the  
reed-boards communicate directly with the  
10 reed-valve openings. Such a modification is  
shown in Fig. 3 in vertical section. *d'* is the  
slide, and *q* the board, of the wind-chest. As  
the reed-board seen from above is wedge-  
shaped, the slide *d'*, glued on its non-parallel  
15 side, must of course also be wedge-shaped,  
but contrarily, so that the free edge of the  
reed-board may be parallel with the free edge  
of the slide. The slide may also consist of a  
part of the upper board of the wind-chest, so  
20 that the valve-openings *c* will partake in the  
movement of the slide. Such an arrange-  
ment is shown in Fig. 4 in vertical section.  
*q* is the upper board of the wind-chest, and  
*d<sup>2</sup>* is the movable part of it. In this case a  
25 special device is necessary for bringing the  
valves *b* out of contact with the slide when  
the latter is moved. In the case illustrated  
said device consists of an eccentrically-piv-  
oted rib *r*, which when turned downwardly  
30 will act upon the valves *b*, so that all the lat-  
ter are opened simultaneously and thus  
brought out of contact with the slide in order  
not to damage the valves or their coverings  
during the transposition. In this case the  
35 slide must of course be made so much longer  
than the wind-chest as not to be brought out  
of contact with the side walls of the wind-  
chest even when moved to its uttermost po-  
sition.

40 It will be seen from the above description  
and from the drawings that my construction  
is much more simple and cheaper to manufac-  
ture than any hitherto used, as the usual se-  
ries of transposing keys or levers and every  
45 other expensive means are altogether dis-  
pensed with. In fact, my construction is the  
simplest and cheapest possible, and at the

same time its function is very good and re-  
liable.

I claim—

1. In a reed-organ, a reed-board adapted to  
slide along the wind-chest. 50
2. In a reed-organ a reed-cell board adapted  
to slide along the wind-chest and means for  
moving said reed-cell board relatively to the 55  
wind-chest.
3. In a reed-organ a transposing action con-  
sisting of movable reed-board or reed-boards  
adapted to slide along the series of reed-  
valves. 60
4. In a reed-organ a transposing action con-  
sisting of reed-boards movable in guides along  
the wind-chest and means for moving said  
reed-boards by moving a knob or other part,  
projecting in the front of the organ. 65
5. In a reed-organ a device for transposi-  
tion, consisting of reed-cell boards movable  
in guides lengthwise upon the upper board  
of the wind-chest and means for moving said  
reed-boards in their guides by actuating a 70  
stop-knob or such like in front of the organ.
6. In reed-organs a board or slide adapted  
to move in guides lengthwise upon the upper  
board of the wind-chest, a reed-cell board  
fastened on the slide, and slots or openings 75  
in the slide, said slots or openings communi-  
cating upward with the cells of the reed-cell  
board and downward with the reed-valve  
openings of the upper board of the wind-chest,  
and means for actuating the slide or reed-cell 80  
board from the front of the organ.
7. In reed-organs with movable reed-boards,  
the extra boards *d d* fastened to the reed-  
boards *f f*, the guides *i i* and *g, h*, connection  
between the reed-boards or extra boards, and 85  
means for actuating the connected reed-  
boards or extra boards.

In witness whereof I have hereunto signed  
my name in the presence of two subscribing  
witnesses.

ERNST BENJAMIN THORIN.

Witnesses:

CARL P. GERELL,  
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