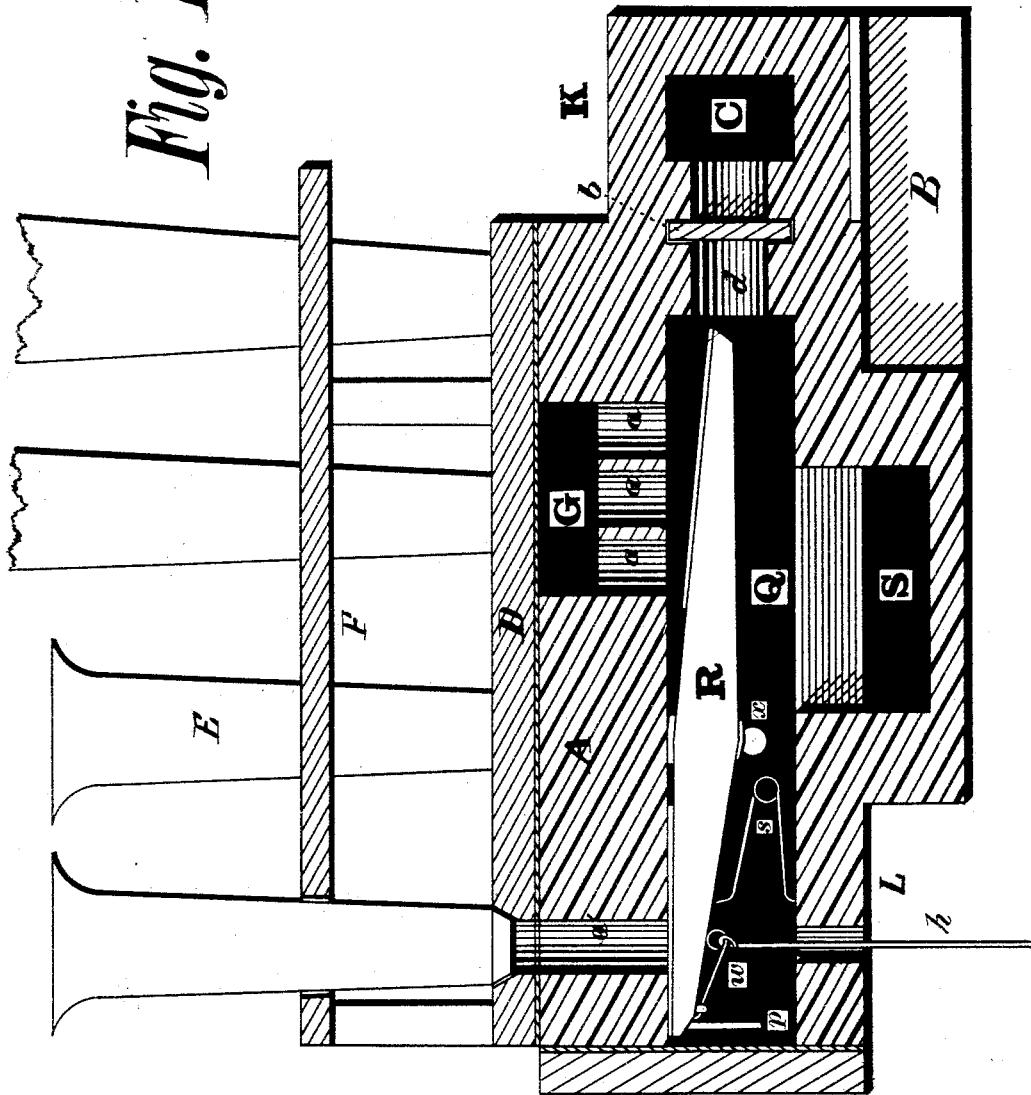


E. WHITE.
Melody-Chest for Organs.

No. 217,660.

Patented July 15, 1879.

Fig. 1.



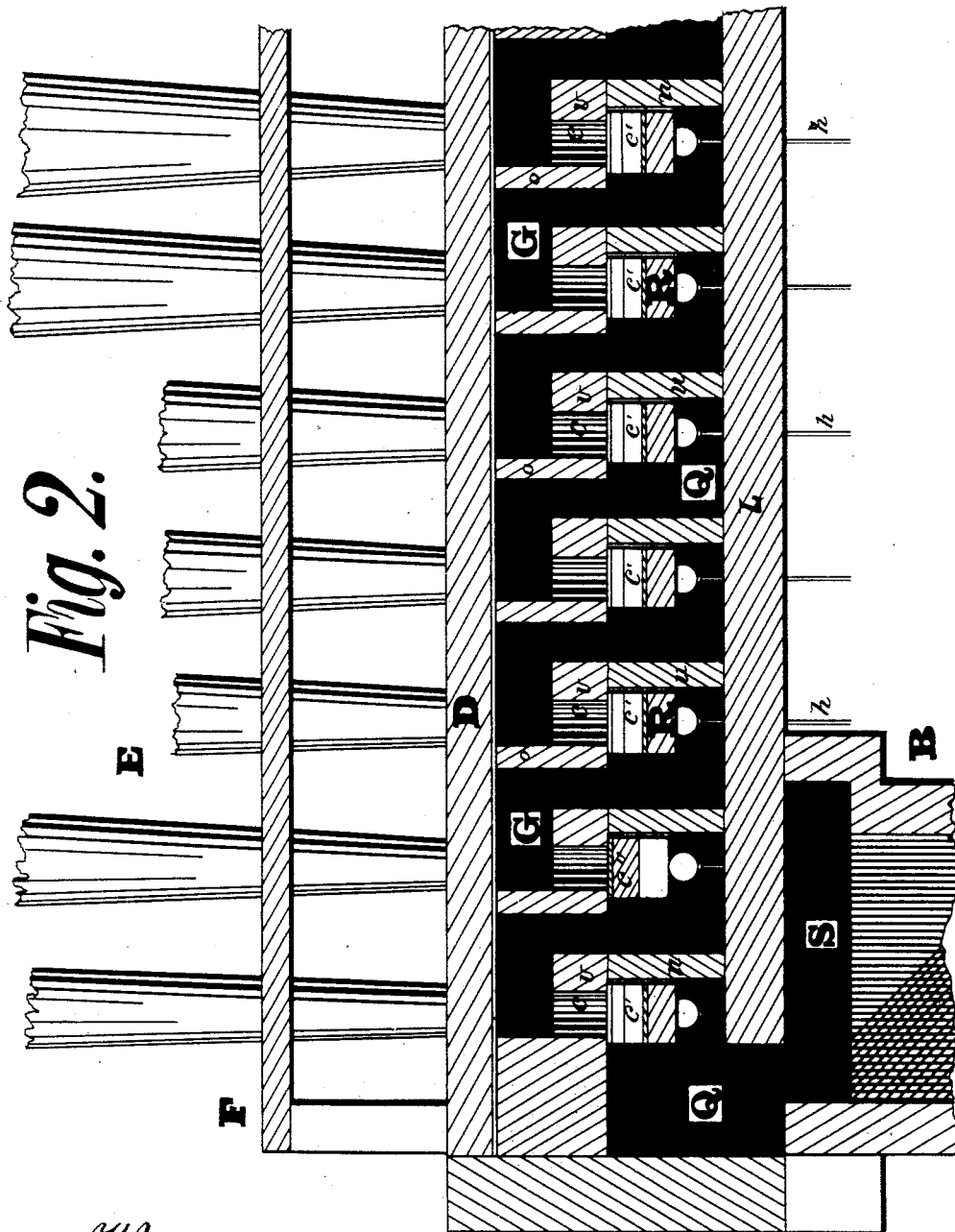
Witnesses.
Nottingham Smith
Joseph B Wright

Inventor.
Edward White

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Witness.
Wattingham Smith
Joseph B Wright

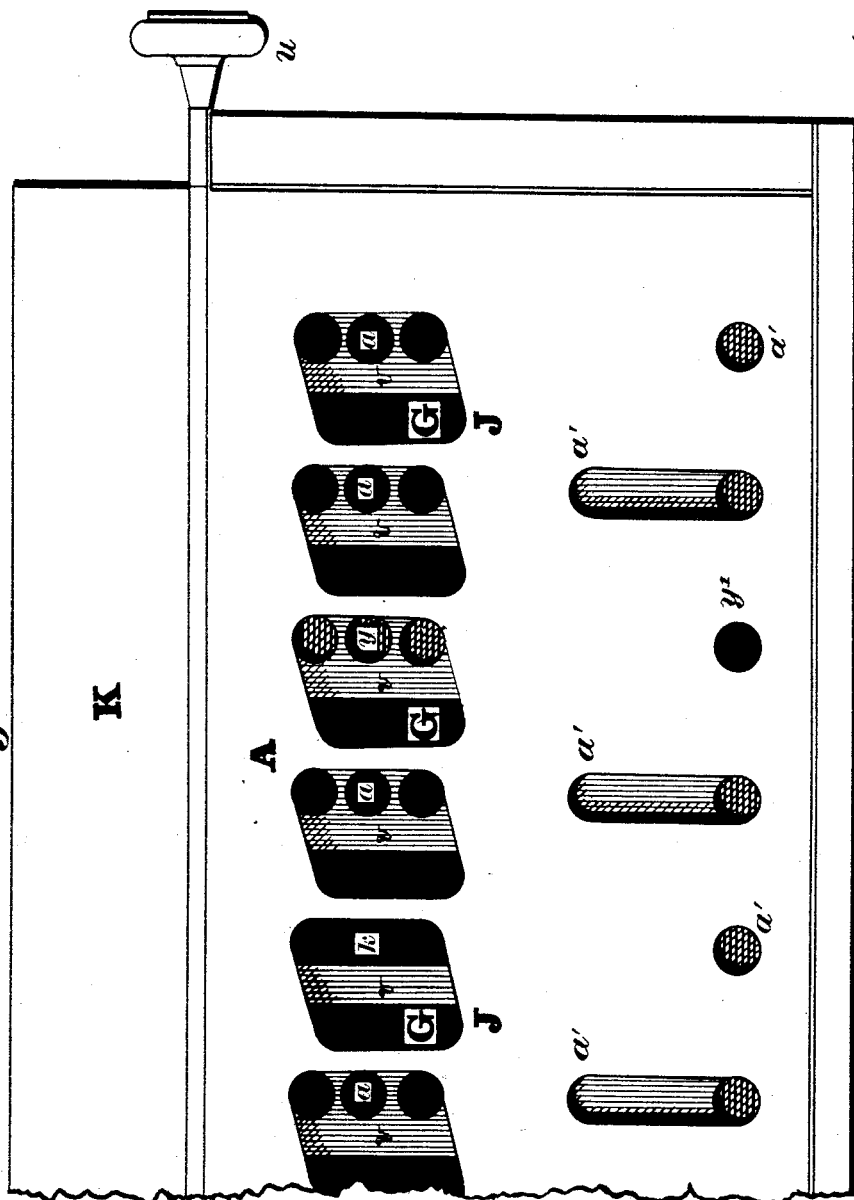
Inventor.
Edward White

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Fig. 3.



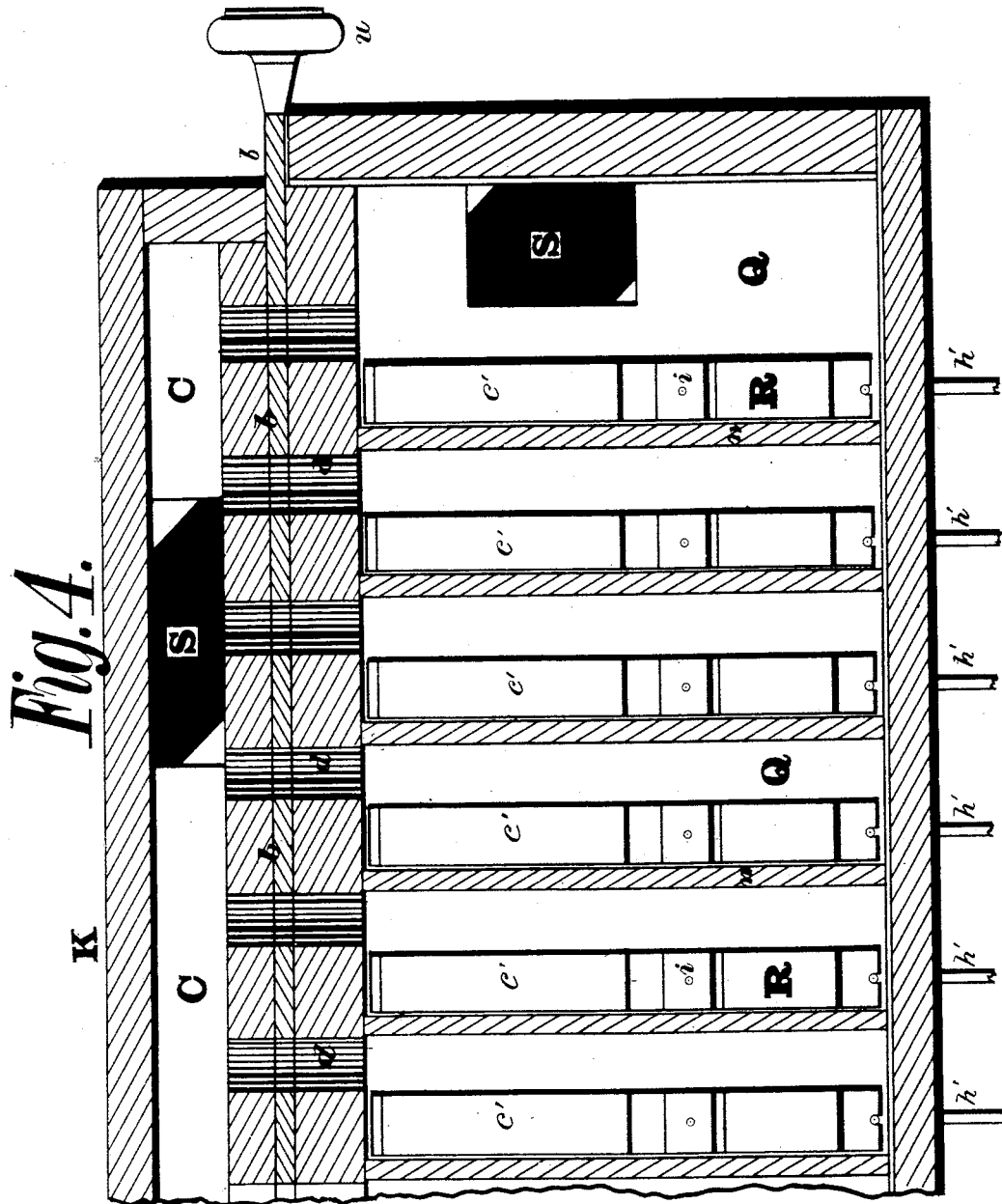
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Woltingham Smith
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Edward White

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Witnesses.
Walterham Smith
Joseph B. Wright

Inventor.
Edward White

UNITED STATES PATENT OFFICE.

EDWARD WHITE, OF NEW YORK, N. Y.

IMPROVEMENT IN MELODY-CHESTS FOR ORGANS.

Specification forming part of Letters Patent No. **217,660**, dated July 15, 1879; application filed August 15, 1878.

To all whom it may concern:

Be it known that I, EDWARD WHITE, of the city, county, and State of New York, have invented a single and double acting Solo or Melody Chest; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a cross-section of my invention. Fig. 2 is a longitudinal section at right angles with Fig. 1. Fig. 3 is a plan of the groove-board with the upper board removed. Fig. 4 is a horizontal section cutting through the pallet-chambers.

Like letters designate corresponding parts in all of the figures.

In Fig. 1, A represents a groove-board; G *a a'*, apertures therein. D is an upper board, provided with apertures corresponding with *a'* in the groove-board. K is a wind-chest, which supplies the pallet-chambers Q with air by means of the openings *b*. *d* is a slide, running in a grooved guideway, with openings therein corresponding with opening *d*, for the purpose of opening and closing communication between chamber C and pallet-chamber Q. B is a wind conveyance, which communicates with wind derived from the bellows of an organ, or from some other source, and supplies it to chamber C; thence through aperture *d* to pallet-chamber Q, or through wind-pipe S to first pallet-chamber, whence it passes on to the remaining pallet-chambers through apertures *a* and G. R is a double pallet, resting on the regulating-button *x*, and is kept in the position as shown by the pallet-spring *s*. *h* and *w* represent a pull-down, pallet-eye, and spring. *p* is a pin to guide the pallet when being pulled down.

In the longitudinal section, Fig. 2, B represents the wind conveyance, and S a chamber leading to a pallet-chamber, Q. L is the pull-board, through which the pull-down wires *h* pass. *nn* are partitions extending across the pull-board L and beneath the groove-board, said partitions forming the pallet-chamber Q, R being the pallet contained therein. *c'* represents the soft packing upon the pallets R, which comes in contact with the air-passages,

as shown at *c'*. G are openings within the groove-board, each opening communicating with two of the pallet-chambers by means of the air-passages *c*. D is the upper board, and F a rack for holding the pipes E.

In Fig. 3, A represents a top plan of the groove-board, *a'* and *y'* being openings leading to the pallet-chambers below. Said openings conduct air to the pipes above. J represents a recess cut into the groove-board, about two-thirds of said recess extending about one-half way through the board, while the remaining third is cut entirely through, as seen at G. On opposite sides of the recesses holes are bored through, as seen at *a*. Said holes in each of said recesses communicate with a pallet-chamber directly over the pallet. The middle third of the recesses *v* covers the partitions which form the pallet-chamber. Thus the openings *a* and G within the recesses communicate with adjacent pallet-chambers, whereby a communication is formed the entire length of the solo-chest. *u* is a knob for drawing the slide between the wind-chest K and pallet-chamber.

In the horizontal section, Fig. 4, Q represents the pallet-chamber; R, pallets therein, and K the wind-chest, which supplies wind to the pallet-chambers through the openings *d*. *b* is a slide for closing said communication.

The operation of my invention is as follows: In order to play a solo by single notes upon my solo-chest the slide *b* must be closed, thus causing the wind to pass into the pallet-chamber Q by means of the passage S, as seen in Figs. 2 and 3. As these pallet-chambers all communicate by means of the passages *a* and G, they become filled with air at an equal pressure. Whenever a note is required the pallet beneath the pipe which produces said note is drawn down, thus allowing the air to pass to said pipe. Now, in order to prevent any other note being played simultaneously, I provide a double pallet, or a pallet which is suspended or supported by a fulcrum situated at a suitable point between its two ends, said pallet being of such a form that when it is drawn down to produce a note the opposite end is brought up in contact with aperture *a*, whereby communication is cut off with all of the pallet-

chambers below said closed apertures. Thus, no note can be sounded below the note being played until the pallet is closed over the opening leading to the pipe being played, after which communication is opened with the lower pallet-chambers, and another lower note can now be produced.

Thus it will be seen that when a key is pressed down, and a note produced, a note cannot be played below that key, and whenever a note is played above the one below instantly ceases; but whenever two or more notes are to be played at the same time the slide *b* must be drawn, thus allowing a direct communication between the pallet-chamber and wind-chest *K*.

The spring and pallet-eye *w* is for the purpose of increasing the leverage of the pallet, and for springing downward, whenever that movement of the key should be greater than that of the pallet.

The solo-chest can be provided with two or more stops, and by appropriate slides made to operate singly, or in combination, also in combination with the full organ.

The principle here involved can also be applied to reed-organs.

I am aware that melody-chest attachments for organs have been heretofore in use, said

attachments being for the purpose of playing an air by single note upon a special stop, said air to be played upon the same key-board upon which the full organ is played, said attachment being arranged in combination with the stop, so that the melody may be played as a solo, or together with the full organ. To this special feature I lay no claim.

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

1. The pallet *R*, pallet-chamber *Q*, and apertures *a*, *G*, and *a'*, all combined and arranged to operate as described, and for the purpose specified.

2. In combination with the pallet-chamber *Q* and apertures *a*, *G*, and *a'*, the wind-chamber *C*, air-passages *d*, and slide *b*, all constructed and arranged as described, for the purpose set forth.

3. The spring *w* and pull-down wire *h*, in combination with pallet *R*, constructed and arranged as described, and for the purpose specified.

EDWARD WHITE.

Witnesses:

EUGENE CHEVALLIER,
JAS. L. KEMP.