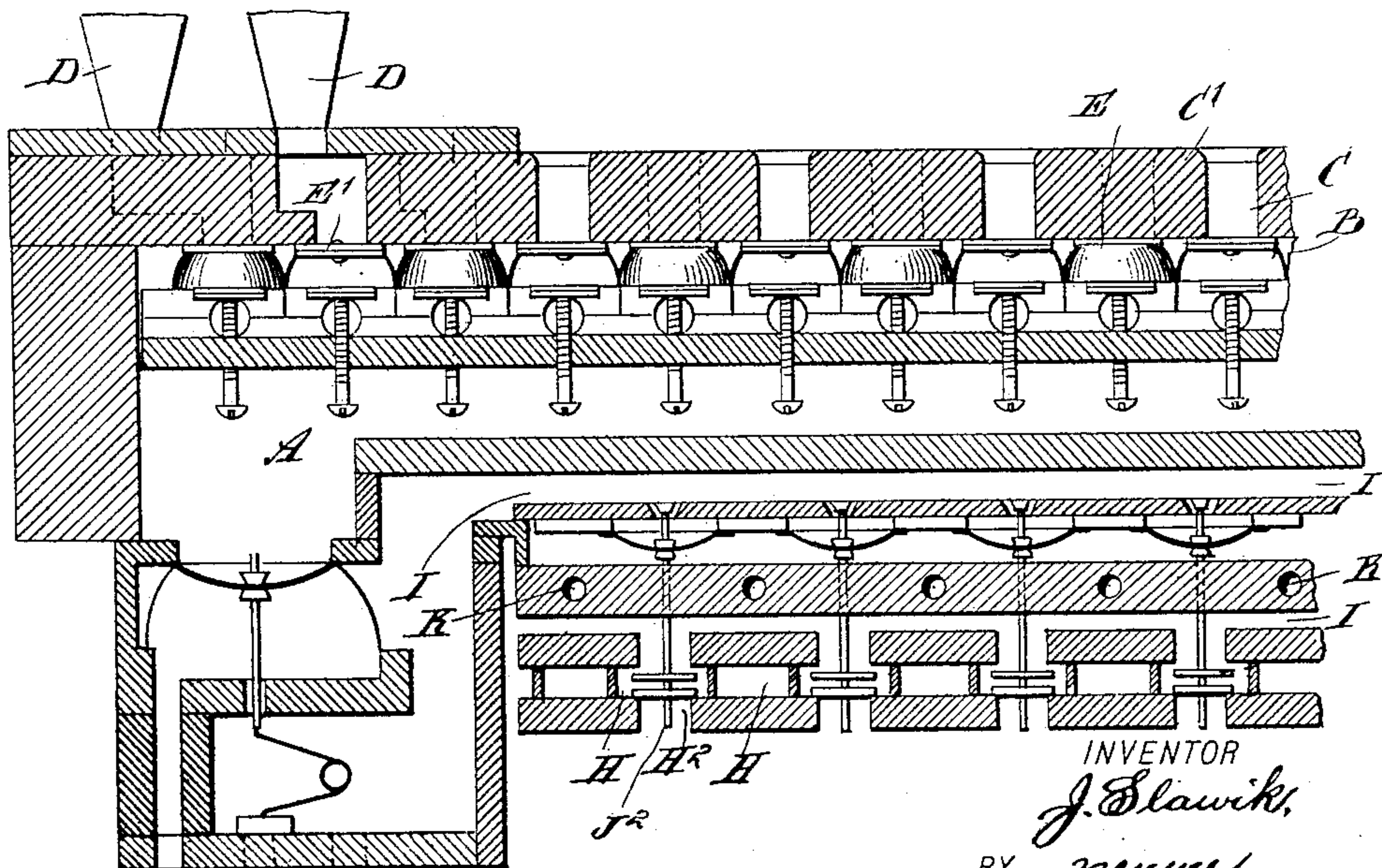
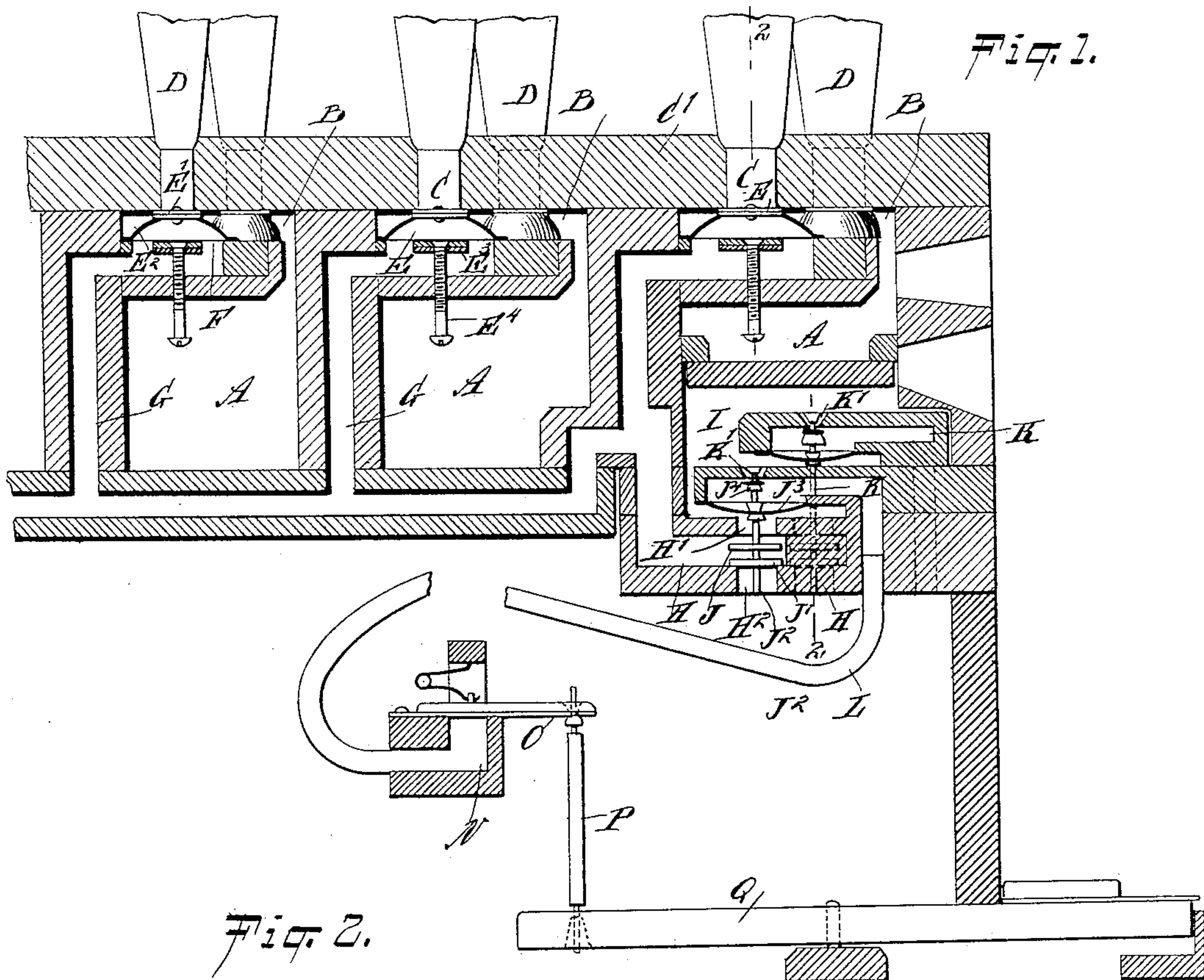


(No Model.)

J. SLAWIK.
ORGAN ACTION.

No. 599,199.

Patented Feb. 15, 1898.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JOSEPH SLAWIK, OF BLOOMFIELD, NEW JERSEY.

ORGAN-ACTION.

SPECIFICATION forming part of Letters Patent No. 599,199, dated February 15, 1898.

Application filed April 2, 1897. Serial No. 630,389. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH SLAWIK, of Bloomfield, in the county of Essex and State of New Jersey, have invented a new and Improved Organ-Action, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved organ-action arranged to insure a positive and quick closing and opening of the valve for the sounding device.

The invention consists of certain parts and details and combinations of the same, as will be fully described hereinafter and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in both the figures.

Figure 1 is a transverse section of the improvement, and Fig. 2 is a sectional front elevation of the same on the line 2 2 of Fig. 1.

As illustrated in the drawings, the wind-chest A is arranged below the duct B, leading to the valve-seats C, formed in the top board C' of the action, the said seats being connected with the reeds, pipes, or other sounding devices D. Each of the seats C is normally closed by a diaphragm-valve E to prevent the wind from the wind-chest A from passing to the corresponding sounding device D unless the corresponding key is pressed by the operator, as hereinafter more fully described.

Each valve E is provided with a metallic valve-disk E', adapted to engage the seat C and arranged in the middle of a diaphragm E², made of leather or other suitable material and fastened at its circular edge upon the bottom of the duct B over an opening F, separate from the wind-chest A and connected with the exhaust-pipes G. The exhaust-pipes G connect with chambers H, each having two valve-seats H' and H², of which the latter opens to the atmosphere, and the valve-seat H' connects with a wind-chest I, as plainly shown in Fig. 1. Valves J and J', secured on a valve-stem J², are adapted to be seated alternately on the seats H' and H²—that is, when the valve J' is on its seat H² the valve J is off its seat H', so that air from the wind-chest A can pass into the chamber H and to the pipe G to press against the under sides of

the diaphragm-valves E and hold the valve-disks E' on the seats C.

When the valve-stem J² moves upward, the valve J engages the seat H' to cut off the connection between the wind-chest I and the corresponding chamber H and pipe G. At the same time the valve J' moves into an open position to allow the wind in the chamber H and pipe G to escape through the valve-seat H² to the atmosphere.

The valve-stem J² is fastened on the diaphragm J³, separating the wind-chest I from the duct K, connected by a tube L with the chamber N, closed by a pallet O, connected by a link P with the key Q of the keyboard.

On the stem J², above the diaphragm J³, is arranged a valve J⁴, adapted to be seated in a seat K' for connecting the wind-chest I with the corresponding duct K. The diaphragm J³ forms a motor to move the check-valve J⁴ and the double valve J J'.

Now when the several parts are in the position shown in Fig. 1 the wind from the steam-chest I can pass through the seats K' into the various ducts K and to the chambers N, and when the operator presses the key Q and opens the pallet O air can then escape from the chamber N, and a reduction of pressure takes place in the corresponding pipe L and duct K, so that the diaphragm J³ for this duct is forced upward to close the valves J⁴ and J and to open the valve J', so that an exhaust takes place in the chamber H and the corresponding pipe G. When this takes place, the preponderance of pressure on the top of the diaphragm-valve E causes the latter to move downward off its seat C to allow the wind from the wind-chest A and duct B to pass through the seat to the sounding device D to sound the same.

The downward movement of the diaphragm-valve E is limited by a stop E³, extending into the opening F and held on a screw E⁴, screwing in the top of the wind-chest A, as plainly shown in the drawings, so as to permit of adjusting the stop E³ to regulate the distance the valve E is to open. When the operator releases the pressure on the key Q, the pallet O closes and the valves J⁴ and J will be moved downward into an open position and the valve J' into a closed position over the exhaust-valve seat H², so that air

from the wind-chest I can again pass into the corresponding chamber H and from the latter, by the exhaust-pipe G, to the opening F, to press against the diaphragm-valve E, so as
5 to force the same back into a closed position to close the seat C and to shut the wind from the duct B and wind-chest A off from the sounding device. The latter then ceases speaking.

Now it will be seen that by the arrangement described a positive opening and closing of the diaphragm-valves for the sounding device is obtained, so that there is no danger of missing a tone whenever a key is pressed.

Having thus fully described my invention,
15 I claim as new and desire to secure by Letters Patent—

1. An organ-action provided with a diaphragm-valve adapted to open and close a passage leading to a sounding device, an exhaust controlled by the key and connected
20 with one side of the said valve, a wind-chest connected with the other side thereof, so that on pressing a key the air is exhausted from one side of the diaphragm-valve, and the preponderance of pressure from the wind-chest
25 on the other side of the valve causes the latter to open to allow the air from the wind-chest to pass to the sounding device to sound the same, and an adjustable stop for limiting
30 the opening movement of the said diaphragm-valve, as set forth.

2. An organ-action comprising a diaphragm-valve adapted to open and close a passage leading to the sounding device, an

exhaust connected with one side of the said 35 valve, a wind-chest connected with the other side thereof, a chamber having connection with the wind-chest and with the exhaust and with the outer air, a device for controlling the connection between the wind-chest and 40 the exhaust and between the latter and the open air; the said device comprising three valves, a stem for carrying the valves, and a diaphragm supporting the valve and arranged between the wind-chest and an exhaust-duct, 45 substantially as shown and described.

3. An organ-action comprising a diaphragm-valve adapted to open and close a passage leading to the sounding device, an exhaust connected with one side of the said 50 valve, a wind-chest connected with the other side thereof, a chamber having connection with the wind-chest and with the exhaust and with the outer air, a device for controlling the connection between the wind-chest and 55 the exhaust and between the latter and the open air; the said device comprising three valves, a stem for carrying the valves, and a diaphragm supporting the valve and arranged between the wind-chest and an exhaust-duct, 60 a valve-chamber connected with the said duct and having a valve controlled by the key, substantially as shown and described.

JOSEPH SLAWIK.

Witnesses:

TOBIAS VELDEN,
ABE SCHLOSS.