

(No Model.)

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2 Sheets—Sheet 1.

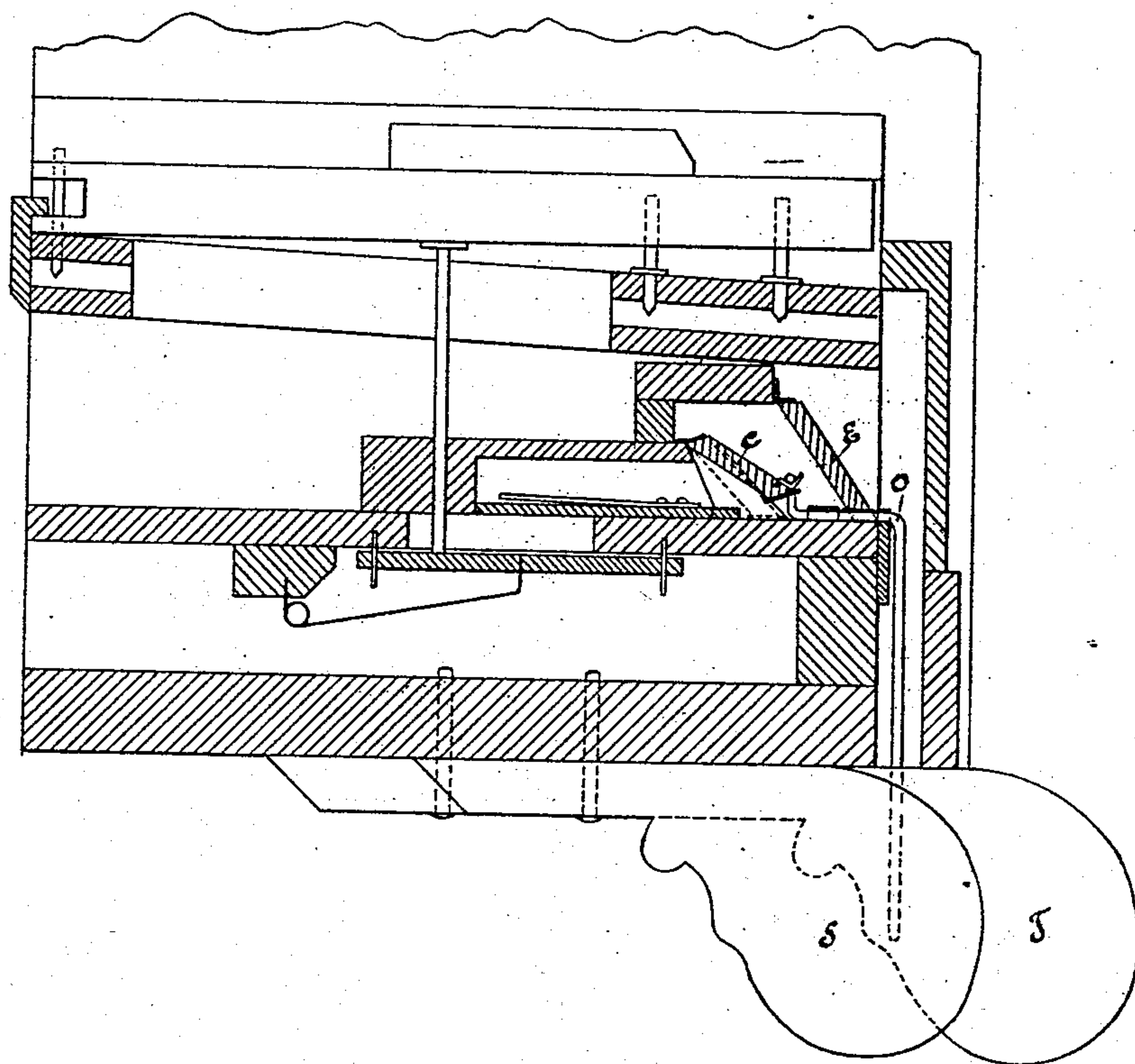
J. P. NYSTRÖM.

ORGAN STOP ACTION.

No. 395,503.

Patented Jan. 1, 1889.

Fig. 1.



Witnesses:

Henry Huber
Carl Klein

Inventor:

Johann Peter Nyström
by George A. Regener
Attorneys.

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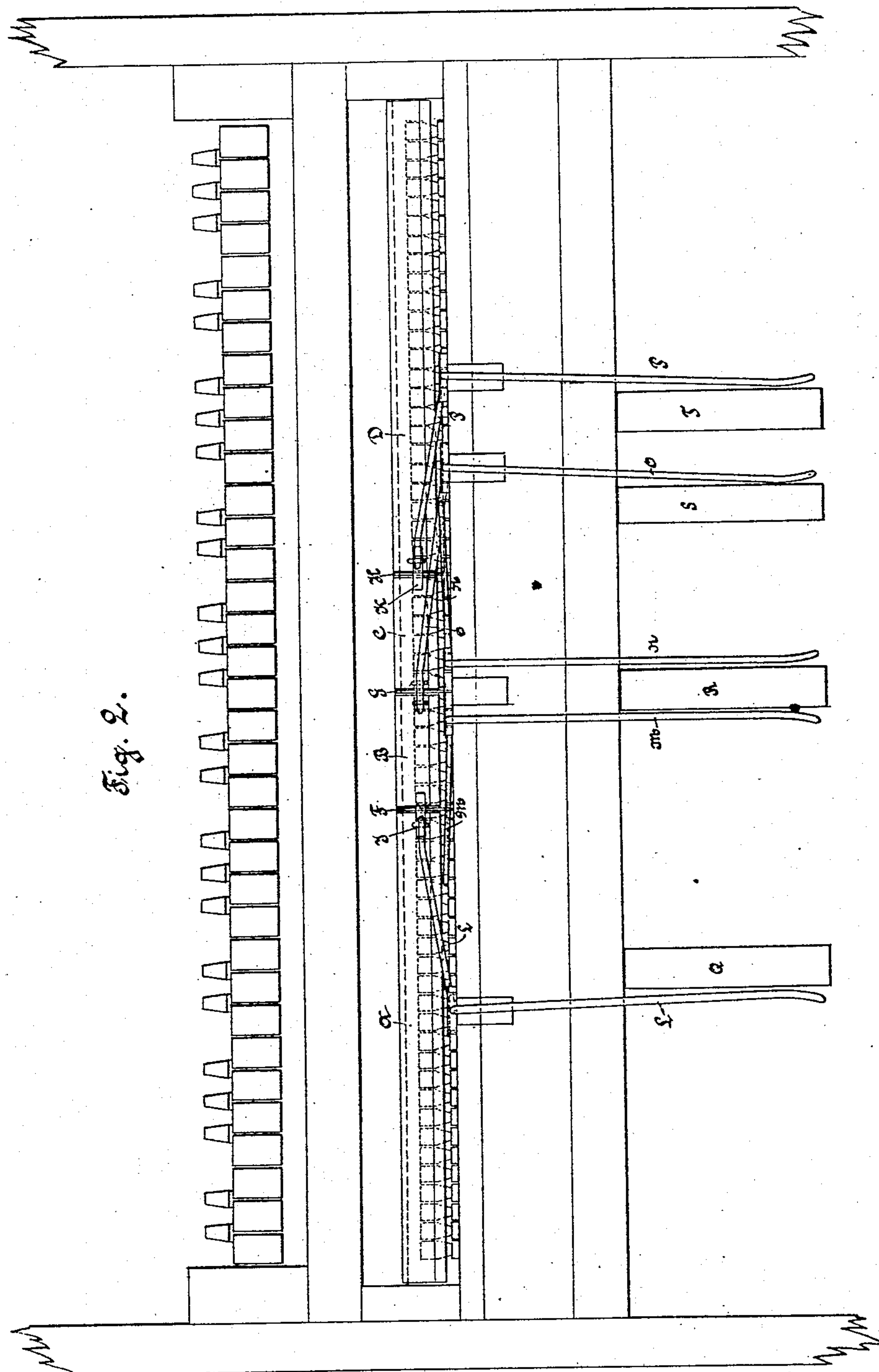
2 Sheets—Sheet 2.

J. P. NYSTRÖM.

ORGAN STOP ACTION.

No. 395,503.

Patented Jan. 1, 1889.



Witnesses:
Henry Huber
Earl Kuhn

Inventor:
Johann Peter Nyström
by Lorenz Paegener
Attorneys.

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UNITED STATES PATENT OFFICE.

JOHAN PETTER NYSTRÖM, OF CARLSTAD, SWEDEN.

ORGAN STOP-ACTION.

SPECIFICATION forming part of Letters Patent No. 395,503, dated January 1, 1889.

Application filed June 27, 1888. Serial No. 278,312. (No model.) Patented in Sweden August 30, 1887, No. 1,556, and in Norway September 16, 1887, No. 650.

To all whom it may concern:

Be it known that I, JOHAN PETTER NYSTRÖM, a citizen of Sweden, residing at Carlstad, Sweden, have invented certain new and useful Improvements in Organs, (for which Letters Patent heretofore were granted to me by the Government in Norway, dated September 16, 1887, No. 650, and Sweden, dated August 30, 1887, No. 1,556;) and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in organs; and the object of my invention is to provide certain new and useful improvements in the devices that control the passage of the air, by means of which the tones can readily be regulated and controlled.

The invention consists in the combination, with the organ-reeds, of a hinged forte lid or valve and additional hinged valves between the reeds and said forte-valves.

The invention also consists in the combination and construction of parts and details, as will be fully described and set forth hereinafter, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a transverse section of the wind-chest of an organ-bellows provided with my improvements. Fig. 2 is a front elevation of the same on a smaller scale, the "forte-valve" being removed.

Similar letters of reference indicate corresponding parts.

Most all organs in use heretofore have been provided with a hinged lid or valve, E, of Fig. 1, by means of which the strength of tone could be governed. When said lid or valve is lowered, so that its cloth packing rests upon the bottom of the wind-chest, the air can only pass to the reeds through the minute interstices of the cloth packing, whereby the soft and full "normal tone" is produced. When the lid or valve E is raised, the passage of the air is unobstructed and the tone is greatly increased in force, even if it loses some in quality. Behind the forte-lid E, I provide the additional lids or valves A B C D, which are in line and close tightly against the actuating-levers and are provided with soft-cloth packings for said levers. At their ends they are

separated by thin partitions F, G, and H. The said lids or valves are provided on their bottom edges and ends with leather packing.

When, for example, the lid or valve C, Fig. 1, is lowered into the position shown in dotted lines, a small space remains between the inner side of said lid and the front of the reed-hole, said space being of triangular form in cross-section and uniting or bringing in communication with each other all the reed-holes situated behind said lid or valve. In a like manner all the reed-holes behind any other lid or valve are united or brought in communication when said other lid or valve is lowered.

The lids or valves A B C D are to be raised or stand open when tones of normal strength shall be produced. In case a "diminuendo" is desired in any part of the bass or treble, the corresponding lid is lowered gradually until closed, whereby the force of the tone is decreased to the very faintest "pianissimo," resembling a distant echo. The cause of this effect is, in the first place, that the packing of the lids A B C D is much tighter than the packing of the lid E. Furthermore, the lids A B C D are placed close to the reed-holes, so that, as above mentioned, only a very narrow passage is provided for the air to reach the reeds that are open. The strength of the tone thus depends upon the size of the triangular space. In case the lids are so hung as not to form any triangular space whatever in front of the reeds, said lids act as sound-mufflers and deaden the sound altogether.

In place of the four lids or valves described two can be used, the partitions F and H being removed, so that the lids A and B form one of the valves and C and D the other. We then have the lid or valve A B for producing the piano effect in the bass and the lid C D for the same purpose in the treble. With both of these lids, which can be manipulated separately, and with the lid E the following combinations of strength of the tones in bass and treble can be produced:

Bass.....	Treble,
Normal.....	Normal,
Normal.....	Forte,
Normal.....	Piano,
Forte.....	Forte,
Forte.....	Piano,
Piano.....	Piano,

all of which combination can be properly

shaded by moving the lids more or less from the stops.

As shown in Fig. 2, four lids are used, which permit of a still greater number of combinations of tones. These lids are to be held open by springs. The lid or valve A is provided at one end with a clip, I, projecting over the edge of the lid or valve B, so that when the lid or valve A is lowered it presses down the lid or valve B; but when the lid or valve B is lowered it does not necessarily lower the lid or valve A. A like clip, K, is secured to the lid or valve D and projects over the lid or valve C. With this arrangement "piano" can be produced in the middle register by a single operation.

To produce piano-tones on the middle register, the valves B and C are lowered; for the treble the lids C and D are lowered; for the treble and middle register the lids B, C, and D are lowered; for the bass the lids A and B are lowered; and for the bass and middle register the lids A, B, and C are lowered. The angle-lever L has one end connected with the lid or valve A, and the other is adjacent to the knee-lever Q. The lever P has one end connected with the lid or valve D and the other end adjacent to the knee-lever T. In case it is desired to manipulate the organ with two inner valves only, these levers are used, as by pressing the knee-lever Q outward the lids A and B are lowered at the same time, and by pressing the knee-lever T the lids C and D are lowered at the same time, the player being thus enabled to produce piano in bass or treble, or both, at the same time. The angle-lever O has one end connected with the two lids B and C, and the other end is adjacent to the knee-lever S, the said knee-lever S being set back slightly. By moving the knee inward and then pressing on the knee-lever S, the lever O is manipulated in such a manner as to close the valves B and C and produce piano-tones in the middle registers. The angle-levers M and N, which are connected with the forte lid or valve E, are located at opposite sides of the knee-lever R, which can swing to the right or left, so that

either knee can be used for raising the forte lid or valve—that is to say, the knee that is not engaged in holding down a piano lid or valve in the bass or treble can be used for raising the forte-valve.

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

1. In an organ, the combination, with a series of organ-reeds in a single row divided into groups, a lid or valve hinged in front of each group, levers for operating the lids or valves, and a forte lid or valve pivoted to the wind-chest extending in front of the entire row of reeds and the hinged lids or valves of the same, substantially as set forth.

2. In an organ, the combination, with a series of organ-reeds divided into groups, a hinged lid or valve in front of each group of reeds, transverse partitions between the ends of the lids or valves, a forte lid or valve extending along the wind-chest in front of the above-mentioned lids, and levers for actuating the lids or valves, substantially as herein shown and described.

3. In an organ, the combination, with a series of organ-reeds divided into groups, of a lid or valve hinged in front of each group, clips secured on the ends of same and extending over upon the ends of the adjacent lids, and angle-levers for operating said lids or valves, substantially as herein shown and described.

4. In an organ, the combination, with a series of reeds, of a hinged lid or valve in front of the reeds, an angle-lever, the upper end of which is connected with a lid or valve, and a swinging knee-lever at the side of the lower shank of said angle-lever but independent of the same, whereby, by pressing on the knee-lever, the angle-lever is operated, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

JOHAN PETTER NYSTRÖM.

Witnesses:

ADOLF JOSEFSON,
C. G. JANSON.