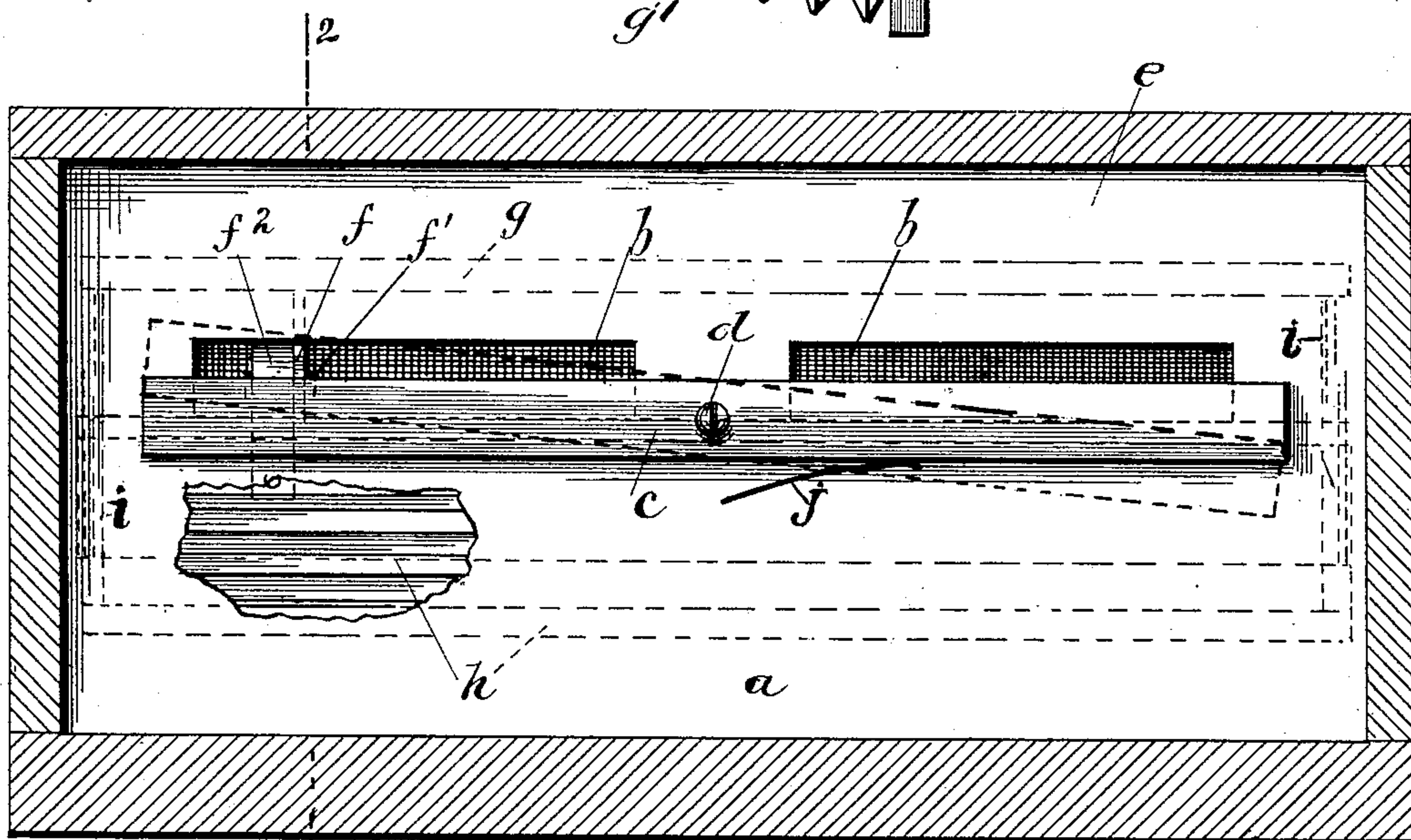
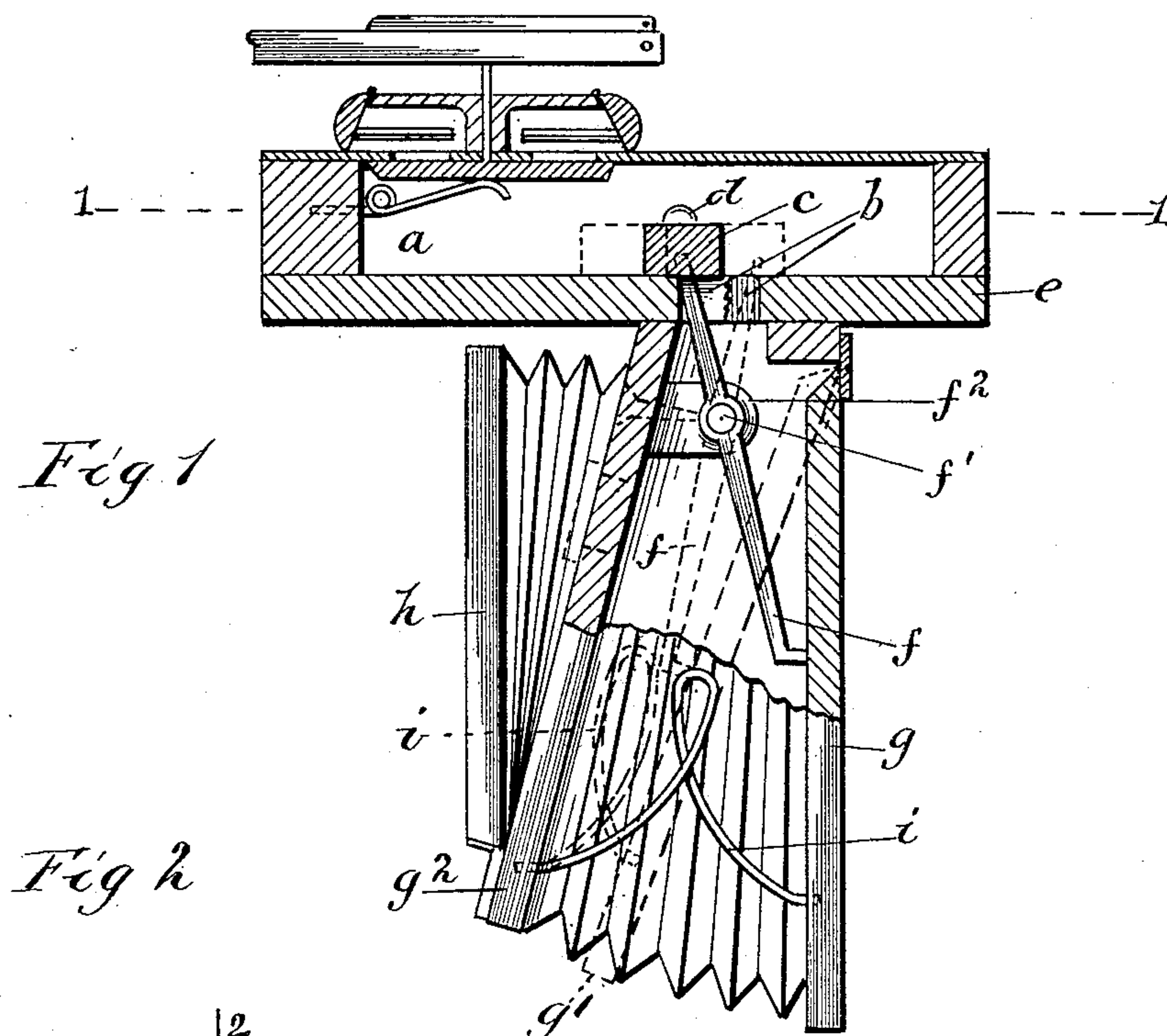


(No Model.)

J. R. HESSLER.
ORGAN.

No. 451,124.

Patented Apr. 28, 1891.



Witnesses
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UNITED STATES PATENT OFFICE.

JACOB R. HESSLER, OF CHICAGO, ILLINOIS.

ORGAN.

SPECIFICATION forming part of Letters Patent No. 451,124, dated April 28, 1891.

Application filed July 23, 1890. Serial No. 359,690. (No model.)

To all whom it may concern:

Be it known that I, JACOB R. HESSLER, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Organs, which are fully set forth in the following specification, reference being had to the accompanying drawings, forming a part hereof, and in which—

10 Figure 1 shows the construction of an organ according to my invention in transverse section on a plane 2 2 of Fig. 2, the upper part of the air-reservoir to below the lower end of the lever f being shown in section, so as to
15 show the internal construction of the several parts, and a part of the space between the two throats being also broken away, so as to show a part of the farther throat. The spring i is here shown on the outside, although it is
20 generally and properly on the interior of the said reservoir, because by this arrangement both positions of its spring can be shown most clearly and conveniently; but both springs i are shown on the interior of the bellows in
25 Fig. 2. Fig. 2 shows my said construction in plan view below a plane 1 1 of Fig. 1, a hole being broken through the foundation-board e , so as to expose part of the bellows h and the board g^2 , to which the bracket f^2 is attached, the latter being shown in broken lines, as are
30 also the other parts under said board.

The valve c in its normal position is shown in full lines in both Figs. 1 and 2 and in broken lines when the bellows has been nearly
35 exhausted of its air and partly closed.

Like letters of reference denote like parts throughout.

As heretofore constructed the bellows-throat b or air-passage from the air-chamber a into
40 the bellows-reservoir permitted an unobstructed flow of air, because there was no mechanism to control such air-passage, and the consequence has been that there was a sharpening of the treble and a flattening of the bass notes
45 relatively to each other in each octave as well as at both extremes of the key-board when the bellows moved at or near either extreme of its motion, and in practice it was found necessary to tune the reeds when the bellows-reservoir was at or near the center point of
50 its motion in order to avoid such trouble as far as possible. By means of my new con-

struction herein shown the passage of the air through said throats is regulated and controlled in such a manner as to overcome the
55 said difficulty, and in order to attain the said end I construct my said improved mechanism in substantially the following manner, namely: I place a single valve c over the throats b and fulcrum it on a pin d about midway be-
60 tween the said throats and so that one-half of its width shall cover one-half of the width and entire length of each throat. To the fixed side g^2 of the bellows-reservoir and on the
65 bass end of the instrument and at such distance from the fulcrum d as experience proves to be desirable and within the bellows-reservoir I attach a bracket f^2 , to which is attached a lever f , which is fulcrumed on a pin f' , attached to said bracket f^2 . The lower end of said lever
70 f touches the moving bellows side g when the bellows are open, and its upper end extends through the throat into the valve c , and the side of the lever at that end touches the front
75 side of the throat. When through the bellows-exhaust h the bellows side g is made to assume the position g' , (shown here in broken lines,) it causes the lever f to assume a new position, and thus throw the valve c into a
80 correspondingly new position, as shown by the new or second position of the said parts in broken outlines. The springs i constantly react against the compression of the bellows caused by the action of the bellows-exhaust
85 h , and the varying force with which these springs act causes a constant fluctuation of the air-current in its passage through the throats. By means of my construction this current is checked at the bass end and in-
90 creased at the treble end, as it should be, and thereby a uniform tone of the instrument is produced at all positions of the bellows-reservoir. A spring j , in any suitable position, as here shown, for example, will throw the valve
95 c back to its normal position when the bellows-chamber is extended, or the lower end of the lever f may be fastened to the board g . Then the said spring may be dispensed with, as the springs i will then perform that function.

What I claim is—

1. In an organ, the combination, with the air-chamber and spring-actuated bellows, of a valve adapted to partially open and close

the bellows-throats, for the purpose substantially as specified.

2. In an organ, the combination, with the air-chamber and spring-actuated bellows, of
5 a valve adapted to open and close the bellows-throat by means of a lever connecting said valve and bellows, for the purpose substantially as specified.

3. In an organ, the combination, with the

air-chamber and spring-actuated bellows, of 10
a reciprocating valve adapted to open and close the bellows-throats, for the purpose substantially as specified.

JACOB R. HESSLER.

Witnesses:

WM. ZIMMERMAN,
AMASA ORELUF.