

T. Atkins,
Cabinet Organ,
No. 47,081, *Patented Apr. 4, 1865.*

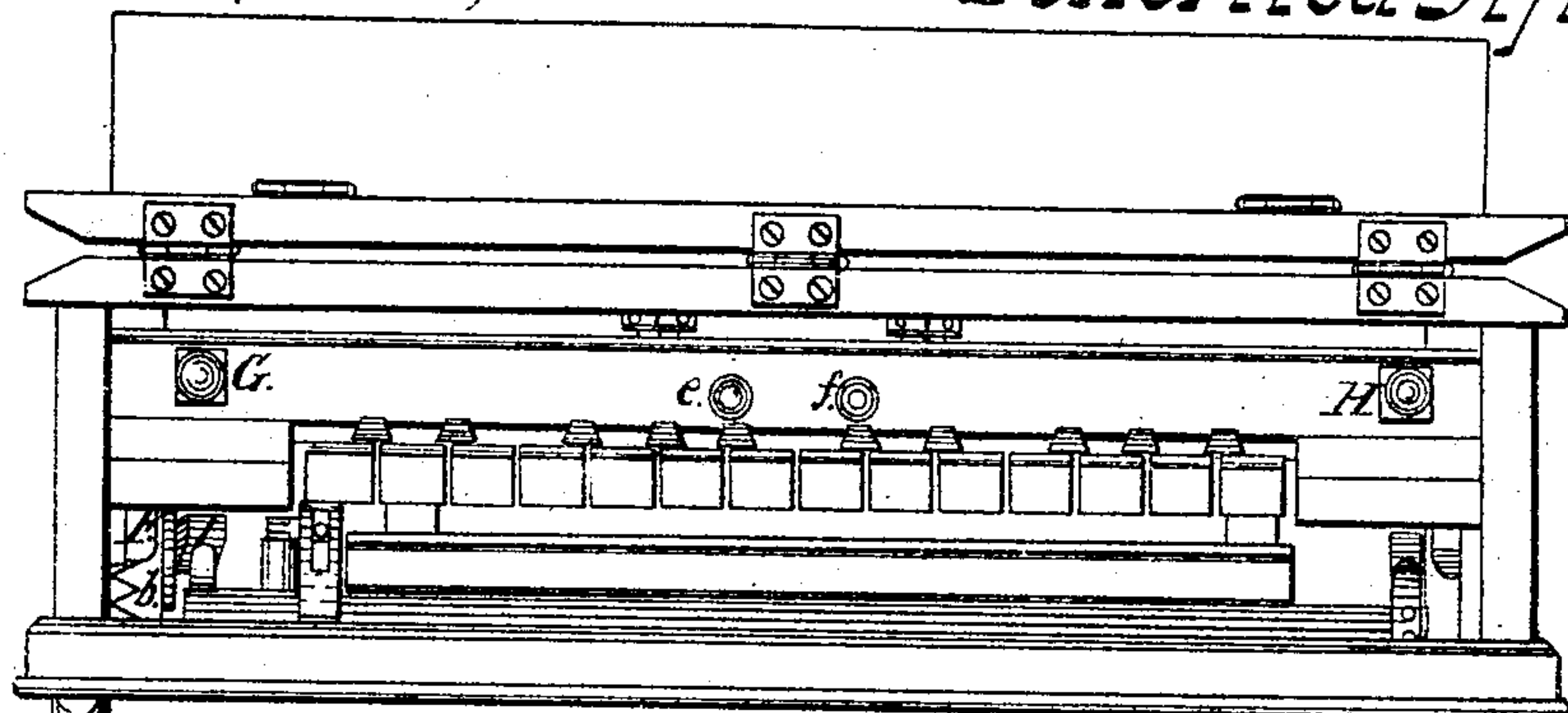


Fig. 1.

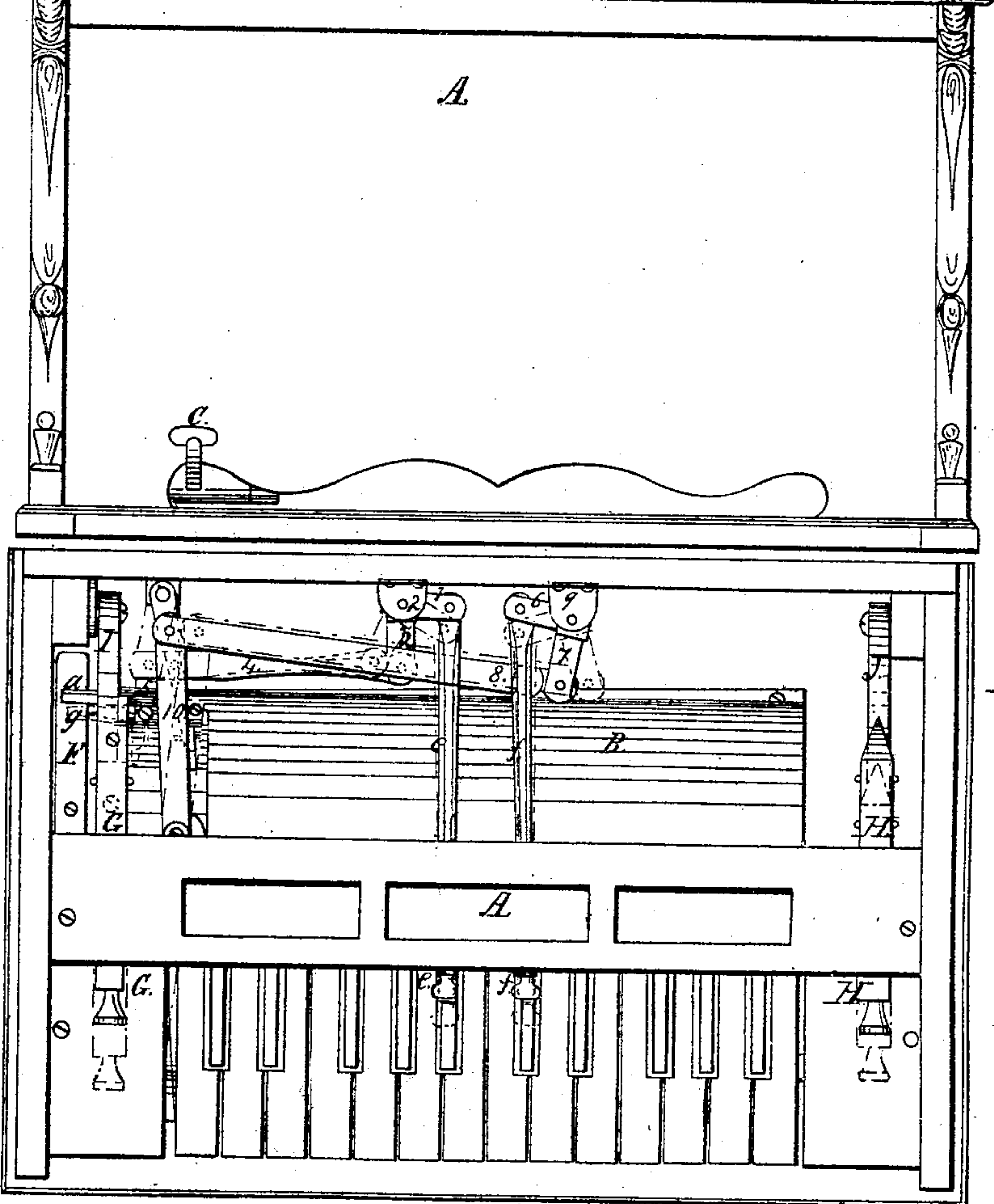


Fig. 2.

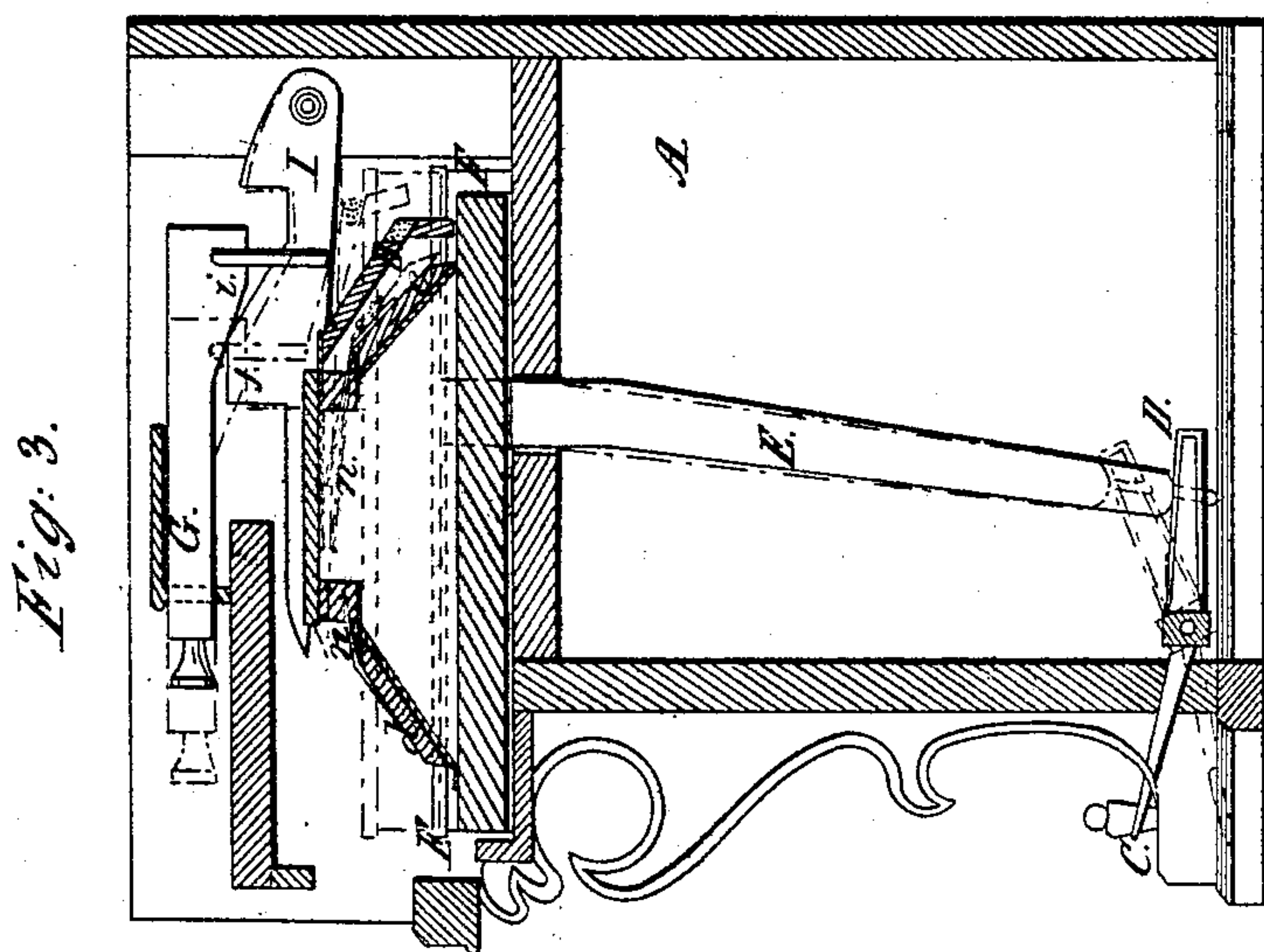
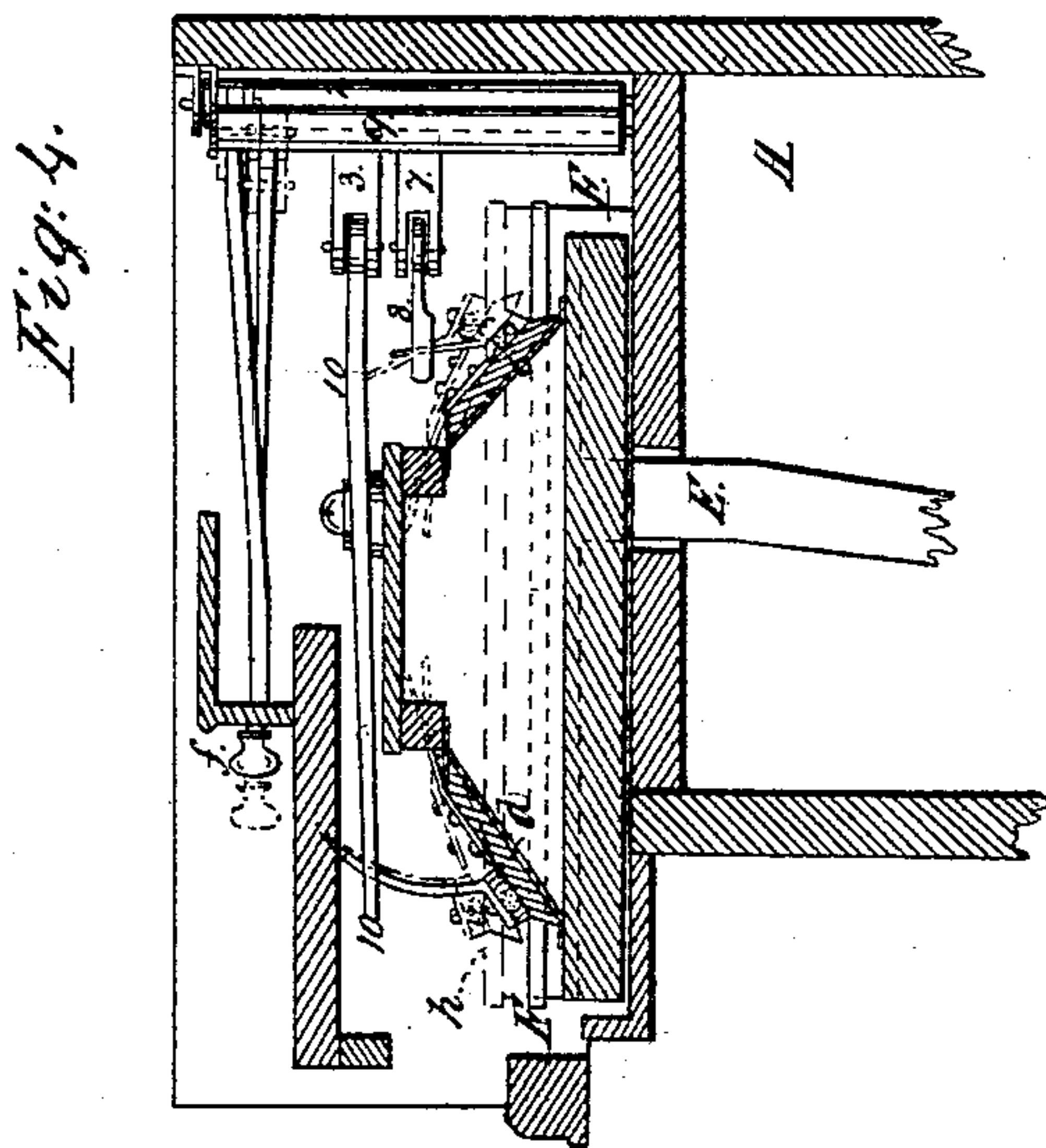
Witnesses.

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Inventor.

Thomas Atkins
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UNITED STATES PATENT OFFICE.

THOMAS ATKINS, OF CINCINNATI, OHIO.

IMPROVEMENT IN CABINET ORGANS OR HARMONIUMS.

Specification forming part of Letters Patent No. 47,081, dated April 4, 1865.

To all whom it may concern:

Be it known that I, THOMAS ATKINS, of Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Cabinet Organs or Harmoniums; and I do hereby declare the following to be a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 represents a front elevation of the instrument with the cover raised and swung back. Fig. 2 represents a top plan with the cover removed to better show the operation of the mechanism underneath it, as seen in the black and red lines. Figs. 3 and 4 represent vertical transverse sections through the instrument, and also showing by black and red lines the action of the mechanism.

Similar letters of reference where they occur in the separate figures represent like parts of the instrument in all cases.

The nature of my invention consists in opening and closing the stops of an organ, harmonium, or similar wind instrument, by means of a foot or knee pedal and without requiring the lifting of the hands from the keys.

To enable others skilled in the art to make and use my invention, I will proceed to describe the same with reference to the accompanying drawings and the letters of reference and marks thereon.

A represents what I term a "cabinet organ or harmonium," the bellows being omitted from the drawings as not material to a full understanding of my invention. I would, however, remark that I propose to use what is known as an "exhaustion bellows," which is common in wind instruments of this kind.

B is the common melodeon-swell, which is never air-tight, and which is raised by the pedal C, which, through the connecting-levers D E, raises a bar or lifting piece, F, over which a projecting arm, *a*, on this swell B extends; and when the pressure upon the pedal is removed the lifting-bar F descends, aided, if necessary, by the spring *b*, and the swell descends with it to its former position.

Underneath the swell B there is an air-tight stop or swell, *c*, and in front of the instrument a similar stop or swell, *d*, both or either of

which may be opened or closed by the pedal C as follows: Near the center of the instrument, and just above the keys are two knobs or slides, *e f*, the one, *e*, being connected by arms and links, 1 2 3 4 5, to a sliding arm, *g*, on the swell *c*, which arm when shot out, as shown by the red lines in Fig. 2, extends over the pedal lifting piece or bar F, so that when the pedal is operated the swell *c* will also be operated by it. The other knob or slide, *f*, is connected to its swell *d* by a series of arms and links, 6 7 8 9 10, to a sliding arm, *h*, on said swell *d*, so that when the knob or slide *f* is drawn out its several connected parts will assume the positions shown in red lines in Fig. 2, and shoot out the sliding arm *h* over the lifting-piece F, so that as said lifting-piece is raised by the pedal C, or lowered by removing the weight from the pedal, so will the stop or swell *d* be likewise raised or lowered, as the case may be; but it may be necessary sometimes that the stops or swells *c* and *d* should be raised and held up so as not to be influenced by the pedal or its lifting-bar F, while the common melodeon-swell B may combine to be operated by it all times. For this purpose I arrange as follows: At each end of the key-board there are draw-stops G H, which are respectively connected to the swells *c* and *d*, and which, when drawn out, as shown by the red lines, raise up their respective swells out of reach of the action of the pedal or its lifting-piece F, while the common swell B remains in action with it. The draw-stops G H have inclined planes *i* underneath them, which act against other inclined planes, *j*, on the pivoted pieces I J underneath them, and these pieces I J, when pressed down by drawing out the stops G H, come against curved arms *n* on the swells, respectively, and raise and hold them up. Thus all the stops or swells may be raised and lowered by the pedal C, without taking the hands from the keys—or a part of them only—or a part may remain down or up, as the case may be, or as the fancy of the user may prompt. The air-tight stop *c* can be raised to a greater or less extent by drawing out its stop G less or more, and when a small amount of air is admitted through it to the reeds it produces a very soft, sweet, and distant-like tone, not hitherto produced on this instrument.

When the instrument is to be used with its

full tone, the draw-stops *e f* are drawn out so as to shoot the slides across the pedal-raising piece F, so as to be able to bring all the reeds into use at pleasure, or to shut them off, as the case may be, and as above described. In ordinary instruments of this kind the performer must take his hands off from the keys to move in the draw-stops G H, whereas by my arrangement he need only raise his foot or toe from the pedal to stop the music. When the center slide-stops *e f* are drawn out, the performer may select any draw-stop he wishes to use or play upon, and by the use of the pedal add as many stops as are on the instrument with a gradual "crescendo" or "diminuendo," which gives a very fine musical effect.

In the drawings I have represented an instrument intended for two sets of reeds only, and have therefore shown but two draw-stops—

one at each end, G H—but I do not confine myself to this number, as more or less may be used and controlled by the pedal C, or by a similar one otherwise placed; and instead of a foot-pedal it may be a knee-pedal.

Having thus fully explained the nature, object, and purpose of my invention, what I claim therein as new, and desire to secure by Letters Patent, is—

So arranging the stops or swells of an organ or harmonium with regard to a common lifting-piece, F, operated by a foot or knee pedal, as that they may all, or any one, two, or more of them be opened or closed by said pedal without raising the hands from the keys.

THOMAS ATKINS.

Witnesses:

SAMUEL C. MCCORNICK,
JACOB KUNKEL, Jr.