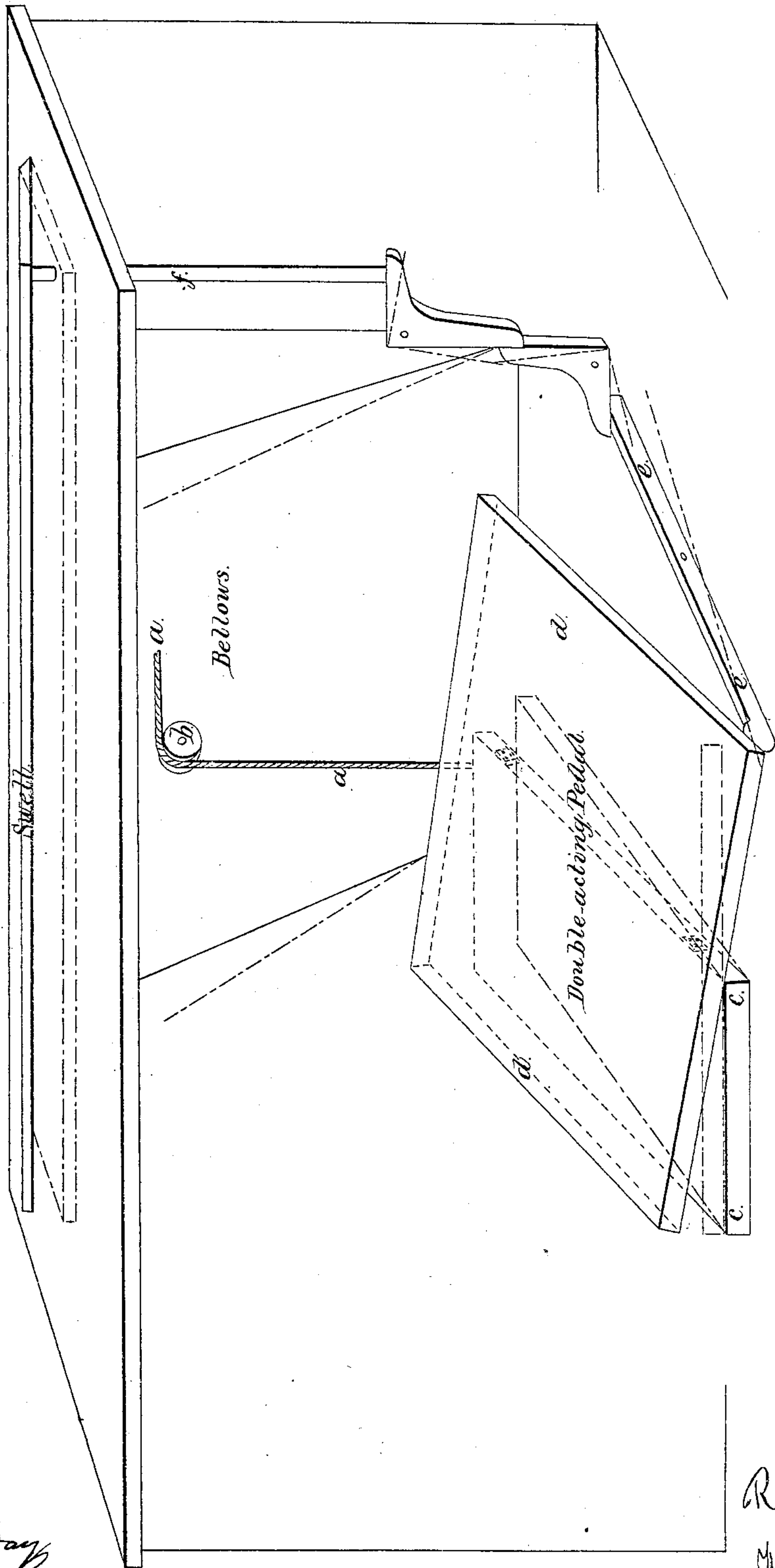


*R. W. Carpenter,
Musical Instruments,*

No 57,861,

Patented Sept. 11, 1866.



*Witnesses.
Thomas Day
Andrew Stewart*

*Inventor.
R. W. Carpenter
by his attorney
Wm. H. Hall*

UNITED STATES PATENT OFFICE.

R. W. CARPENTER, OF BRATTLEBOROUGH, VERMONT.

IMPROVEMENT IN MUSICAL INSTRUMENTS.

Specification forming part of Letters Patent No. **57,861**, dated September 11, 1866; antedated September 2, 1866.

To all whom it may concern:

Be it known that I, R. W. CARPENTER, of Brattleborough, in the county of Windham and State of Vermont, have invented a certain new and useful Improvement in Musical Instruments for operating the swell, which I call "a double-acting pedal;" and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, making a part of this specification, and to the letters of reference marked thereon.

The swell of an organ is usually operated by some special means that requires a particular and separate movement for its adjustment; and in those varieties of the instrument usually termed "cabinet-organs," in which the bellows is worked by the musical performer, any arrangement that interferes with the manipulation of the keys or the working of the pedals is objectionable. On raising the swell, for instance, by a separate pedal, the performer can use but one foot on the bellows-pedal at the time when the greatest volume of air is required; and in a similar manner any movement required for operating the swell by the knee, or by an attachment worked by the heel on the ordinary pedal, must necessarily obstruct the action upon the bellows. This difficulty has led to the attempt to work the swell by an attachment to the bellows, which acts upon the swell at a certain point or position of the bellows; but the obvious objection to any such device is that it leaves the swell only secondarily under the control of the performer, and not directly.

The object of my invention is to work the swell by the same pedal that operates the bellows, and to accomplish it in such a manner that either the bellows or the swell may be acted upon either separately or simultaneously. For this purpose my invention consists in making the pedal in two parts that are hinged together, so that they may be worked together as a single pedal by the ordinary motion of the foot to operate the bellows; and when it is desired to open the swell a slight preponderance of the pressure of one foot or of the feet on one side of the pedal causes the jointed part to bear sidewise upon a lever connected with the swell. The pedal

is susceptible, therefore, in fact of two distinct motions or vibrations—one, as usual, to operate the bellows, and the other, transverse in direction, to bear upon the swell; and both motions may be made together by a single movement of the foot or feet of the performer.

To enable others skilled in the arts to which it appertains to make and use my invention, I will proceed to describe its construction and operation with reference to the drawing, which represents only those portions of an instrument that are directly dependent upon the operation of the pedal. The black and red lines indicate respectively the extreme position of the moving parts.

The bellows is operated in the ordinary manner by a cord, *a*, leading over a pulley, *b*, and secured to the lower portion, *c*, of the double pedal, which is hinged and vibrates in any of the well-known methods. The bellows is therefore operated by the usual means and in the usual manner. To operate the swell the upper portion, *d*, of the pedal is hinged at or about the middle to one edge of the lower portion, so that when the preponderance of the pressure of the foot or feet is upon its unsupported side it bears upon and depresses the rounded end of a lever, *e*, that operates the swell by means of the cranks and rod *f*, (shown in the drawing,) or in any other convenient manner. While the upper portion of the pedal lies flat on the lower portion the rounded end of the lever *e* quietly remains at rest with the swell closed; but if, at any position of the pedal, it is desired to open the swell, it may be instantly accomplished by simply bearing upon one side of the pedal; and during the whole time that the upper portion of the pedal remains uniformly tilted the swell is kept uniformly open, although the whole pedal may be at the same time actively worked upon the bellows.

I claim as my invention, and desire to secure by Letters Patent—

The double-jointed pedal, susceptible of a double or duplex movement, in combination with the lever *e*, substantially as described.

R. W. CARPENTER.

Witnesses:

L. G. MEAD,

ANDREW DODGE.