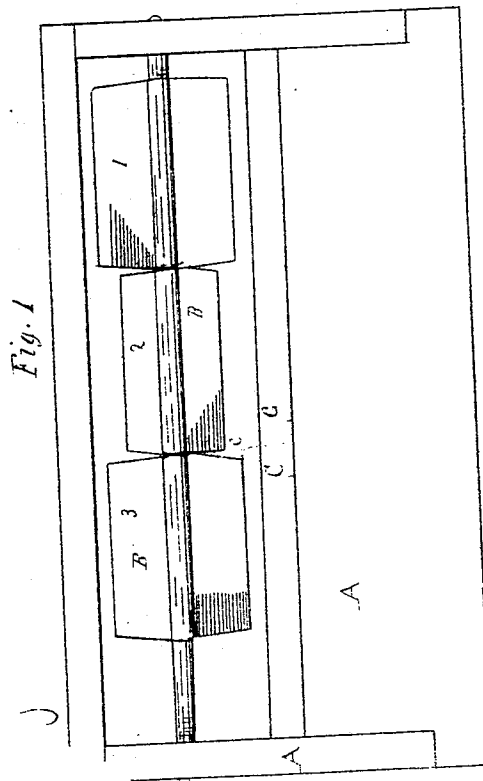
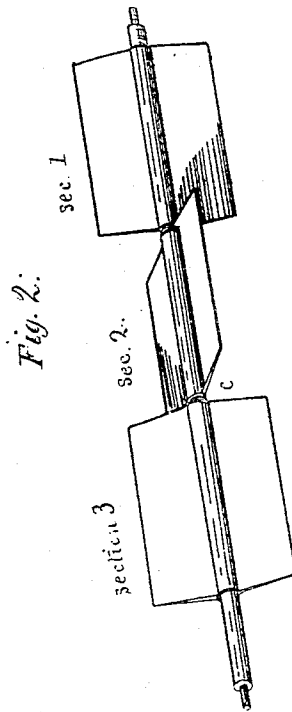


A. Hitchcock.

Producing a Vibrating Swell in Organs.

N^o 73719

Patented Jan. 28, 1868.



Witnesses

Saml W. Bur
A. G. Rogers

Inventor

Alonzo Hitchcock

United States Patent Office.

ALONZO HITCHCOCK, OF NEW YORK, N. Y.

Letters Patent No. 73,719, dated January 28, 1868.

MODE OF PRODUCING A VIBRATING SWELL IN ORGANS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL TO WHOM IT MAY CONCERN:

Be it known that I, ALONZO HITCHCOCK, of the city, county, and State of New York, have invented a new and improved Mode of Producing a Swell in Musical Instruments, like the harmonium, reed or pipe-organ; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The nature of my invention consists in dividing a fan into transverse sections, as shown in Figure 2, when the fan has but two wings or blades, the wings of each section to stand at right angles, or nearly so, to its contiguous section.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

I construct my fan of the lightest material practicable, such as paper and cloth, with a single blade passing through or radiating from the centre of the shaft, as seen in section 1, fig. 2. I then make another section (section 2) in the same way, but set it at right angles to section 1; and then another, section 3, set at right angles to section 2, and so on to as many sections as may be desirable. I propose making those angles adjustable in certain cases, and using two or more fans to each section.

The operation of this fan, when revolving on the reeds of the harmonium or pipe-organ, can best be described by reference to the instrument itself. When the keys are played, the fan to be operated by any mechanical device. I now use the foot in connection with a ratchet and spring, and should always be revolved over from the performer. Now, let the intersection (as at *c*) of any of the sections of the fan strike the scale, say, between the middle *C* and the first *G* above, as at *C G*, fig. 1; then if one wing in section 3 is in advance, when the two keys, *C* and *G*, are pressed down, a current of air is driven from the end of the wing towards *G*, and the effect is to produce a swell on *G*; and when the wing next in section 2 comes up, a current of air is set in motion towards *C*, and a swell is produced on *C*, and thus the swell alternates between *G* and *C* and between *C* and *G*, producing a vibrating swell or roll peculiarly delightful to the ear. It may with propriety be called a vibrating swell.

Figure 1 shows the case *A A* and relative position of the fan in a cabinet-organ or harmonium.

I do not claim a fan consisting of a single blade or blades, continually from end to end of its axis, such having been already patented; but

What I do claim as an improvement thereon, and for which I desire to secure Letters Patent, is—
The construction of a fan in sections, substantially as described, for the purposes herein set forth.

Witnesses:

DAN'L W. BALDWIN,
A. G. ROGERS.

ALONZO HITCHCOCK.