

E. OAKES.
Reed Organs.

No. 136,614.

Patented March 11, 1873.

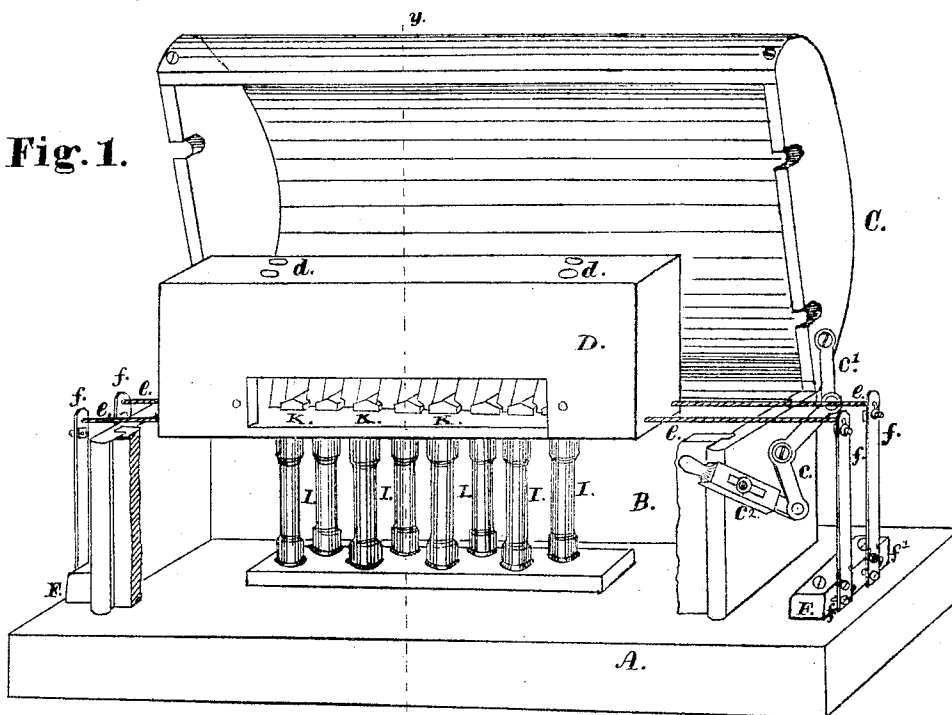


Fig. 3.

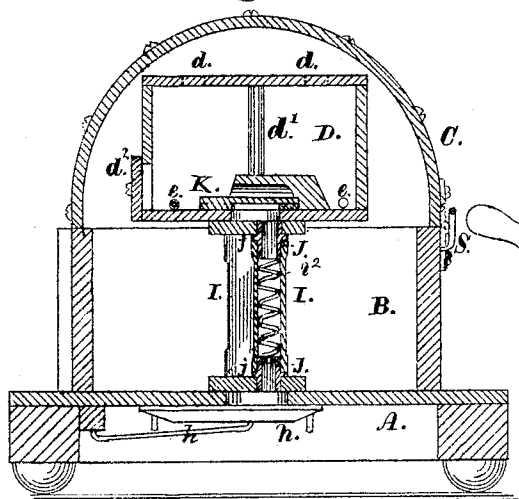


Fig. 2.

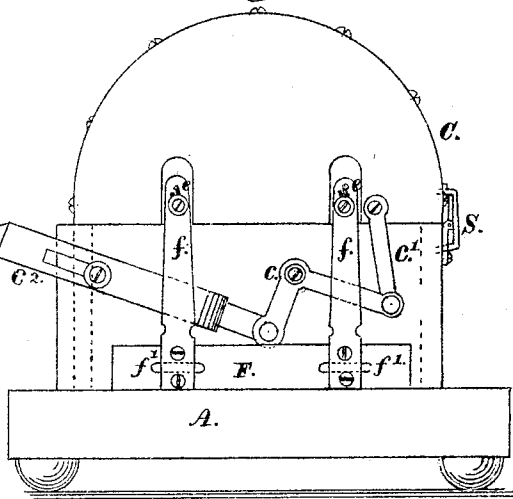


Fig. 4.

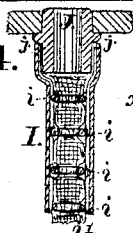
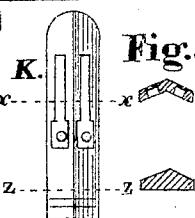


Fig.5.



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EDWARD OAKES, OF DANVILLE, ILLINOIS.

IMPROVEMENT IN REED-ORGANS.

Specification forming part of Letters Patent No. 136,614, dated March 11, 1873.

To all whom it may concern:

Be it known that I, EDWARD OAKES, of Danville, in the county of Vermillion and State of Illinois, have invented certain Improvements in Reed-Organs, of which the following is a specification:

My invention relates to an improvement in reed-organs; and consists, first, in the suspension of a vibrating case, containing the reeds, upon cords or wires attached to springs which are attached to the body of the instrument or to the wind-chest, the object being to allow the reed-case the greatest possible freedom for vibration, so that the vibratory motion of the reeds may be communicated to the shell of the case, and thus increase and modify the tone. Said reed-case is connected to the wind-chest by means of flexible tubes, which serve to carry the air actuating the reeds from the reed-chambers inside the case to the valves communicating with the wind-chest. Second, the construction of said flexible tubes and the nipples to which they are attached in such a manner as to interfere as little as possible with the free vibration of the reed-case. Third, in a swell-box having a cover which is made to open and close by means of toggle-levers, which are connected with the stops in front of the key-board and knee-swell lever. The object of the swell-box is to enable the performer to control the volume of tone. Fourth, the construction of an arched or angular reed-block so that two (2) reeds may be conveniently placed upon one block, the arched form of the block enabling the tuner to file one of the reeds without danger of injuring the other. The two reeds may be of the same or different pitch, as desired.

Figure 1 is a perspective view of a part of a reed-organ, and embodies my invention. Fig. 2 is an end view of the same. Fig. 3 is a vertical transverse section on the dotted lines *y y*, Fig. 1. Fig. 4 is an enlarged section of the flexible tube and nipple, and Fig. 5 is a plan and transverse sections of the arched reed-block on the dotted lines *x x* and *z z* of the plan.

A represents the top of the wind-chest; B, the swell-box, provided with a hinged cover, C. This cover is operated by means of the toggle-lever *c*, lever *c'*, and a rod, *c''*, that is connected with one of the stops in front of the key-

board and the knee-swell lever. A spring, *s*, on the swell-box balances the weight of the cover. By this arrangement of the covered swell-box the volume of tone is increased or diminished as the cover is opened or closed. D is the vibrating case containing the reeds K K, and has the openings *d d* conveniently placed for the admission of air into the case. A sound-post, *d'*, is erected inside of the case, connecting its upper and lower sides, for the purpose of carrying the vibrations of the reeds, and rendering the case more sonorous. A portion of one side of the case is made movable, as shown at *d''*, (see Fig. 3,) and may be taken off when it is desired to get at the reeds for cleaning or repairs. The reed-case is suspended on cords or wires *e e e e*, which are fastened to the case and to the springs *f f f f*. These springs are attached to blocks F F on the wind-chest, or to the body of the instrument, by means of screws. A wire, *f'*, is placed between the spring, and the block forms a pivot so that the tension of the spring may be regulated at will by means of the attaching-screws. I is a flexible tube, made as thin as possible to add to its flexibility. To prevent it from collapsing in use, a series of ribs or rings, *i i*, Fig. 4, is introduced, made of some sufficiently rigid and light material, and connected together lengthwise of the tube by a webbing or light woven fabric, *i'*, or a very light spiral spring, *i''*, Fig. 3, may be introduced inside the tube for the same purpose. J J are nipples, consisting of a hollow cylinder, with the collar *j* thereon, and are secured to the bottom of the reed-case and to the top of the wind-chest. They serve to make a convenient attachment for the tubes. The end of each tube, being placed over the nipple, is held in place by the retractile force of the material. *h h* are the valves communicating with the wind-chest. They are operated from the key-board in the usual manner. K, Fig. 5, is an arched or angular reed-block, designed to be used for double reeds. This form of block facilitates the tuning of the reeds, as in tuning a slip is placed under the reed, to support it in filing. The reeds being set at an angle on the arched block, only one of them can come in contact with the file at one time, the opposite reed being always outside the rake of the file. The block is solid at its outer end, as

shown by the sectional view on the dotted lines *z z*, and cut away, as shown on the dotted lines *x x*, to allow a free vibration of the reeds.

I claim as my invention—

1. The vibrating reed-case D, separate and apart from the keys and the body of the instrument, and suspended by means of cords or wires and springs, substantially as specified.

2. The adjustable springs *f f f f*, in combination with the wires *e e e e* and the vibrating reed-case D, substantially as specified.

3. The flexible tubes I I, with the ribs *i i*, or with a spiral spring, *i²*, as described, and in combination with the nipples J J, substan-

tially as specified, and for the purpose set forth.

4. The combination of the swell-box B and cover C, said cover operated with the toggle-lever *c*, lever *c¹*, and rod *c²*, or other equivalent devices, with the vibrating reed-case D, substantially as described, and for the purpose set forth.

5. The arched reed-block K, as shown in Fig. 5, substantially as described, and for the purpose set forth.

EDWARD OAKES.

Witnesses:

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