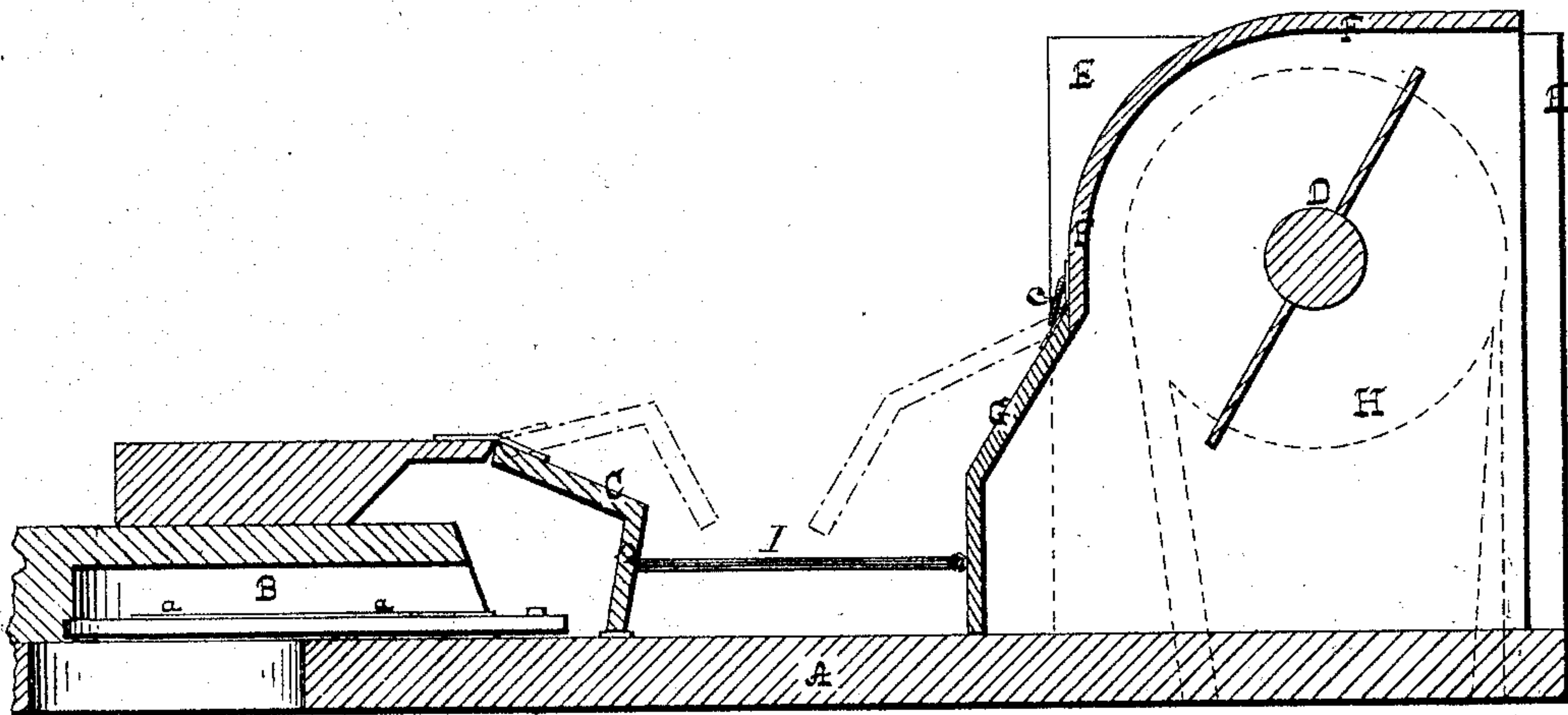


L. K. FULLER.
Reed-Organ Tremolos.

No. 160,316.

Patented March 2, 1875.



WITNESSES:

Arthur C. Fraser.

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UNITED STATES PATENT OFFICE.

LEVI K. FULLER, OF BRATTLEBOROUGH, VERMONT, ASSIGNOR TO J.
ESTEY & CO., OF SAME PLACE.

IMPROVEMENT IN REED-ORGAN TREMOLOS.

Specification forming part of Letters Patent No. **160,316**, dated March 2, 1875; application filed
December 30, 1874.

To all whom it may concern:

Be it known that I, LEVI K. FULLER, of Brattleborough, in the county of Windham, in the State of Vermont, have invented certain Improvements in Reed-Organs, of which the following is a specification:

This invention relates to an improvement in the construction and arrangement of the tremolo attachment with respect to the reeds in a reed-organ; and consists in the interposition of a screen or shade partially inclosing the tremolo-fan, and provided with a swell, between the said fan and the reed-cells, the latter being provided with the ordinary swell in the usual manner, and both operated preferably by the knee of the player.

In the drawing, the figure is a transverse section through the reed-cell and tremolo-fan of a reed-organ, showing my improvements therein.

In the usual construction and arrangement of the tremolo-fan no means are provided for varying its action upon the reeds aside from the ordinary swell.

For illustrating my improvement, A is a reed-board; B, a reed-cell; *a*, a reed, and C a swell, all constructed and arranged in the usual manner. These features form no part of my invention in themselves, but only in their relation to other elements, which I will now describe. D is a tremolo-fan of the usual kind, connected with and deriving motion from a motor-wheel in the case E. F is a screen or shade, which partially surrounds the fan D on the side adjoining the reed-cells, substantially as represented. To the lower edge of this shade, and forming a continuation thereof, is hinged a swell, G, which, when closed, is interposed between the tremolo and the reeds *a*, thus intercepting the tone from the reeds, either wholly or in part, as may be desired. The shade F and swell G extend lengthwise of the reed-board as far as desired, and the former has end boards H, in which the tremolo-fan has bearings. The swell G closes automatically by means of a spring, *c*, in the usual manner, and is oper-

ated, together with the swell C, by the knee of the player, in the ordinary way. A bar, I, serves to connect the two swells C and G, so that both may be operated simultaneously by the same mechanism. The dotted lines in the figure indicate the positions of the swells C and G when open.

It will be readily understood that when the swell G is gradually opened by the player a crescendo tremolo effect will be produced upon the reeds, a reverse operation producing a diminuendo, thus adding materially to the range of expression under the control of the player.

The precise method of operating the swell G is not important, and I have shown no device for that purpose. I prefer, however, that it should be connected with the ordinary knee-swell lever in the usual way.

I claim as my invention—

1. The shade F, provided with a swell, G, constructed and arranged so as to be interposed between the tremolo-fan D and the reed-cells B, substantially in the manner shown, and for the purposes set forth.

2. The shade F, having its sectional contour wholly or partially curved concentric with the tremolo-fan D, when the said shade is provided with a swell, G, hinged thereto, and arranged to wholly or partially intercept the sound or tone on its way from the reed-cells to the tremolo-fan, substantially in the manner shown, and for the purposes specified.

3. The combination of the tremolo-fan D and shade F, provided with a swell, G, attached thereto, with the reed-cells B, reeds *a*, and reed-swell C, all arranged to operate in conjunction with each other in the manner substantially as shown, and for the purpose set forth.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

LEVI K. FULLER.

Witnesses:

L. W. HAWLEY,
J. E. TILSON.