2 Sheets--Sheet 1.

T. STODDART.

Reed-Organs.

No. 156,957. Patented Nov. 17, 1874.

Fig. 1.

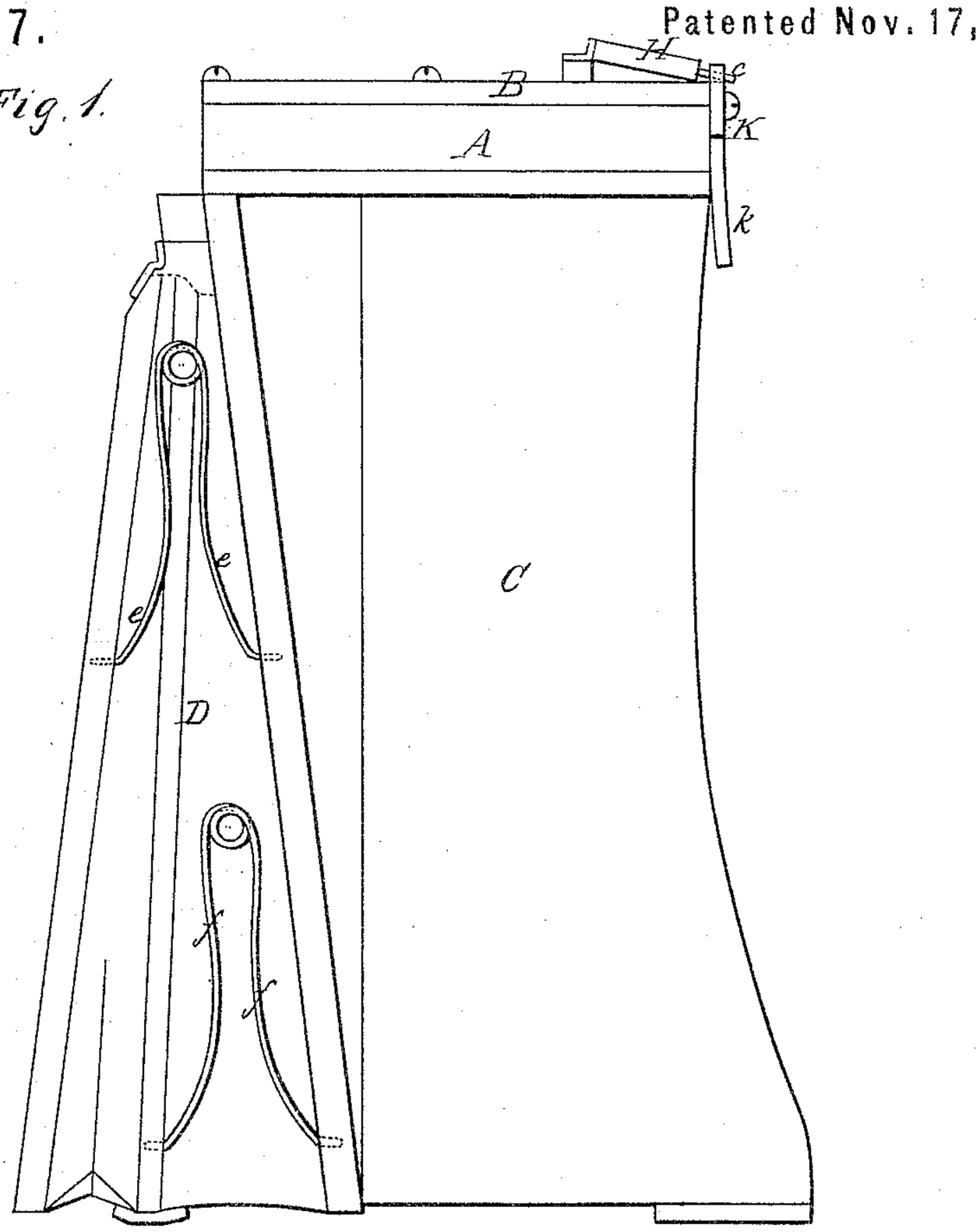
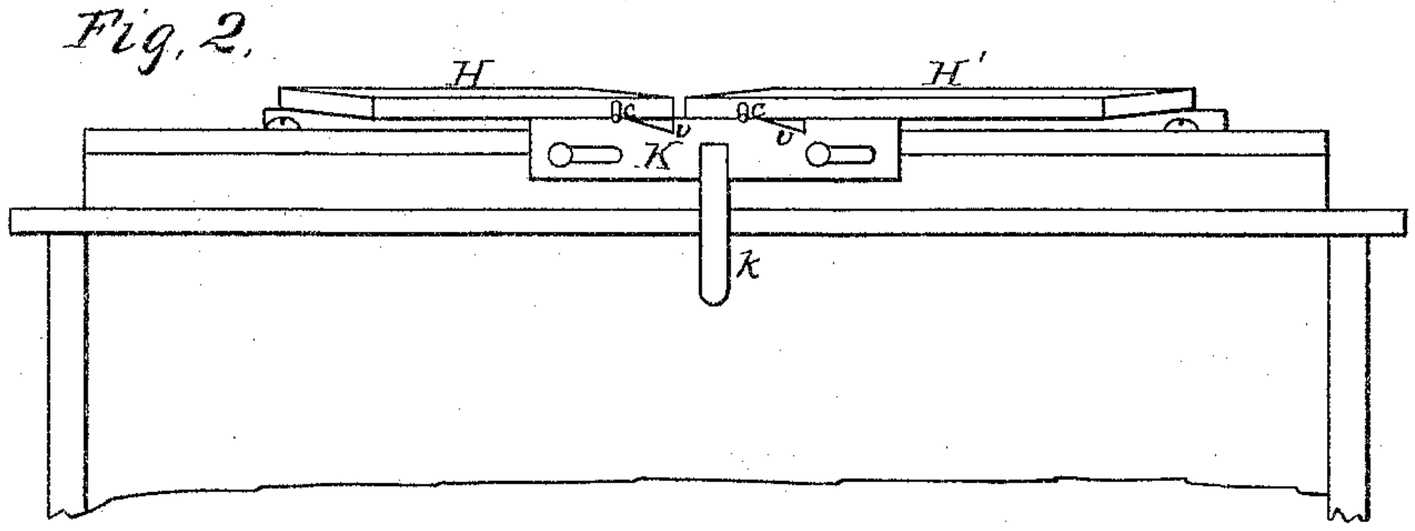


Fig. 2.



WITNESSES

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THE GRAPHIC CO. PHOTO-LITH. 39 & 41 PARK PLACE, N.Y.

2 Sheets--Sheet 2.

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Fig. 3,

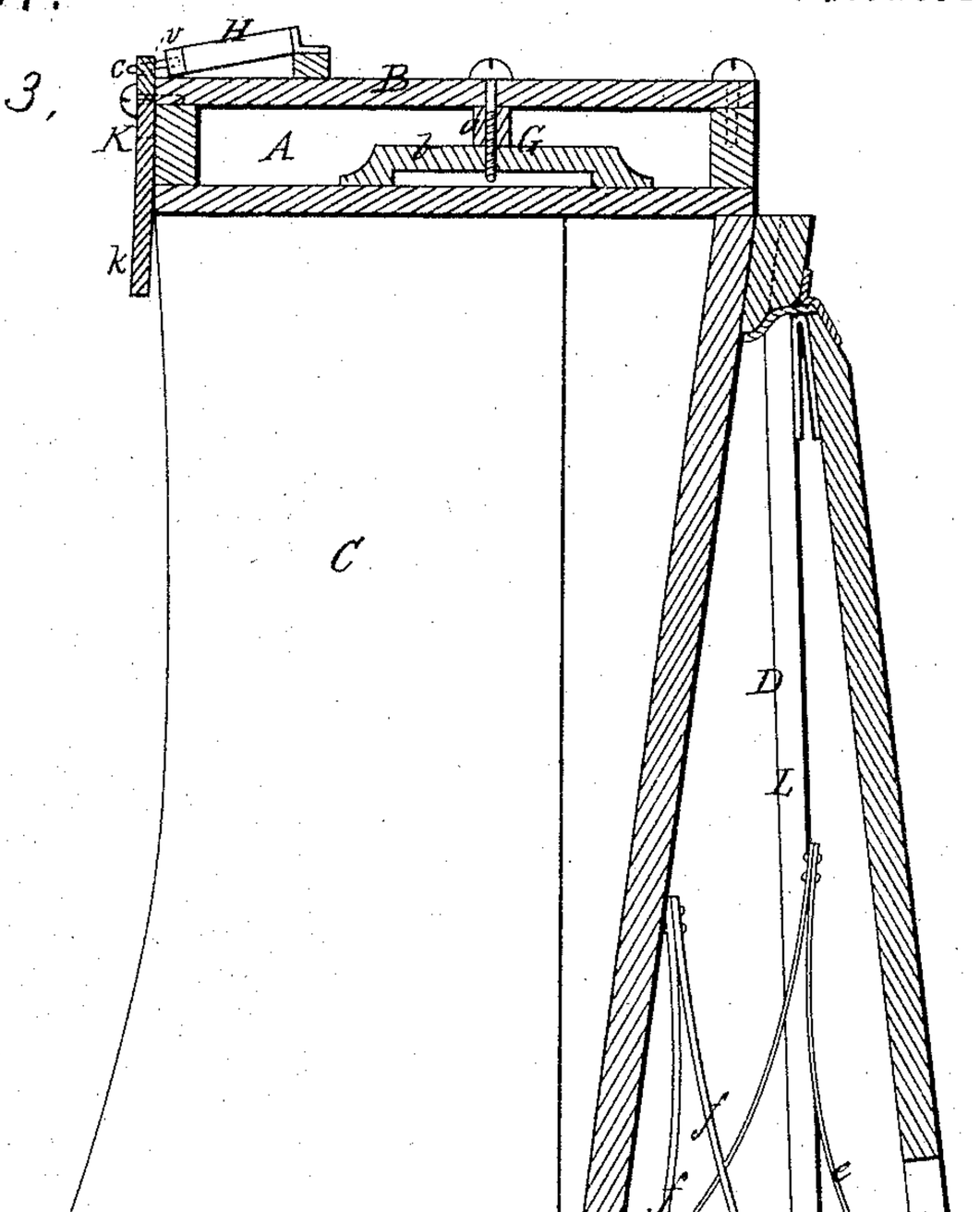
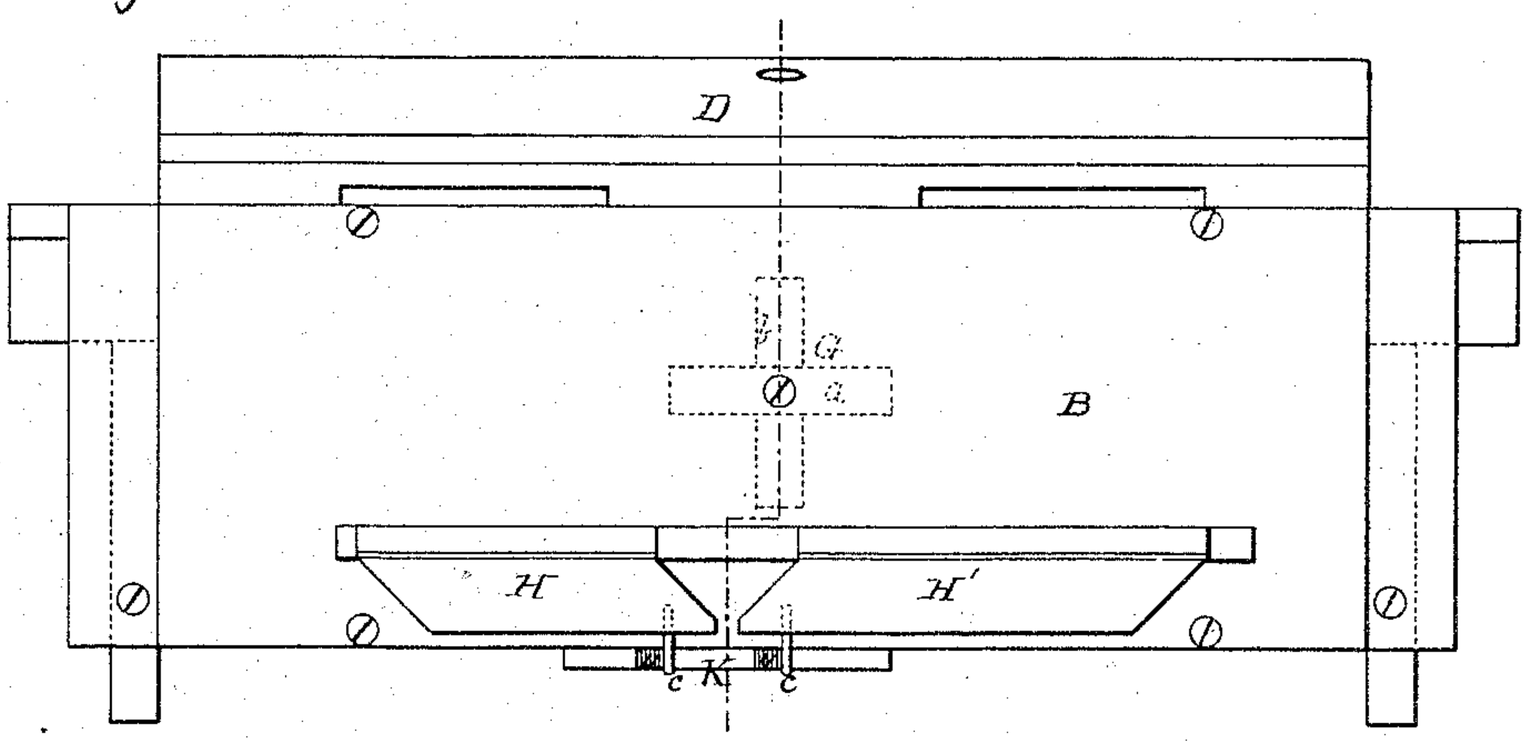


Fig. 4.



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UNITED STATES PATENT OFFICE.

THOMAS STODDART, OF WAUPUN, WISCONSIN.

IMPROVEMENT IN REED-ORGANS.

Specification forming part of Letters Patent No. **156,957**, dated November 17, 1874; application filed August 17, 1874.

To all whom it may concern:

Be it known that I, THOMAS STODDART, of Waupun, in the county of Fond du Lac and State of Wisconsin, have invented a new and valuable Improvement in Reed-Organs; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a representation of a side view of my reed-organ. Fig. 2 is a front view, Fig. 3 is a central vertical sectional view, and Fig. 4 is a top view, of the same.

This invention has relation to reed-organs; and it consists in the construction and novel arrangement of the double-action back or upper exhaust, whereby one part is made to yield before the other, in such a manner as to produce a tone more softened than the ordinary tone of the organ, and of the sound brace or bridge connecting the reed-board to the bottom of the wind-chest, as hereinafter set forth.

In the accompanying drawings, the letter A designates the wind-chest, and B the reed-board, constructed in the ordinary manner. C designates the supporting-frame of the instrument. D represents the upper or back exhaust, one portion of which is designed to be exhausted on weak springs, as indicated at *e*, producing a soft tone; and, when exhausted, presses on the strong springs *f*, on which the other portion is exhausted, producing the usual loud tone.

It is immaterial to which portion of the back exhaust the weaker springs are applied, as this portion will always yield first, producing the desired effect.

The springs may be arranged either internally or externally, as may be thought most desirable.

G designates the sounding bridge or brace, located under the middle portion of the reed-board, and connecting the same with the bottom of the wind-chest, on the principle of the sound-post in a violin. This sound-brace is designed to be independent of the usual screwed edge connecting the reed-board and wind-chest, and is preferably constructed in two portions, *a* and *b*, one running at right angles with the other, and bearing against each other at their middle portions, as illustrated in the drawings. Or the oblique arrangement may be employed, if thought desirable. Instead of being in two portions, the sounding-bridge may be made in one piece; but it is not so convenient in the construction.

H designates the bass, and H′ the treble, coupler-platforms, hinged at their rear edges, so that their front edges may be raised or lowered. These platforms or tables are provided with coupling-rollers, and arms to operate in depressing the valves of the octave in the manner indicated in the patent of A. W. Wilcox, No. 86,335, dated January 26, 1869; or other suitable couplers may be provided. These coupler-tables are independent of each other, and are, respectively, provided with pins *c*, or other suitable devices, whereby they are designed to engage with the inclined planes *v v* of the knee-slide K, arranged in suitable bearings, and provided with depending arm *k*, located in front, and in a suitable position to be readily operated by the knee, thereby throwing the couplers "on" or "off" according to requirement. By means of this T-shaped slide the performer is enabled to give the couplers a quick and positive movement, which is adapted for the most rapid execution.

Instead of constructing the springs of the two portions of the back exhaust of the relative degrees of elasticity above described, I may find it desirable to use springs approximating somewhat in strength, so that, while the weaker spring will always permit one portion of the exhaust to yield first, yet the stronger springs will commence to yield before the weaker ones have ceased. If the weaker springs are applied between the inner and outer boards of a bellows, as illustrated in the drawings, that portion thereof which is between the frame or board L and the outer board will be first operated when the treadle is actuated, and, the reflex action being slight, owing to the comparative weakness of the extending springs *e*, the reeds will speak in a softened tone, the usual "forte" sounds being produced, when desired, by means of the strong springs *f*, which, by a more forcible distension of the portion of the

bellows between the frame or board L and the inner board thereof, cause a more rapid and stronger exhaust through the reeds.

What I claim as new, and desire to secure by Letters Patent, is—

1. In combination with the bellows and exhaust-boards of a reed-organ, the springs *e f*, arranged, respectively, as and for the purpose set forth.

2. The combination, with the reed-board and the bottom of the wind-chest, of the sounding-bridge, substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

THOMAS STODDART.

Witnesses:

A. NUDD,

SAM. CHAMBERLIN.