2 Sheets—Sheet 1.

A. R. KOERBER & J. SHERIDAN.

REED-ORGAN.

No. 192,583. Patented July 3, 1877.

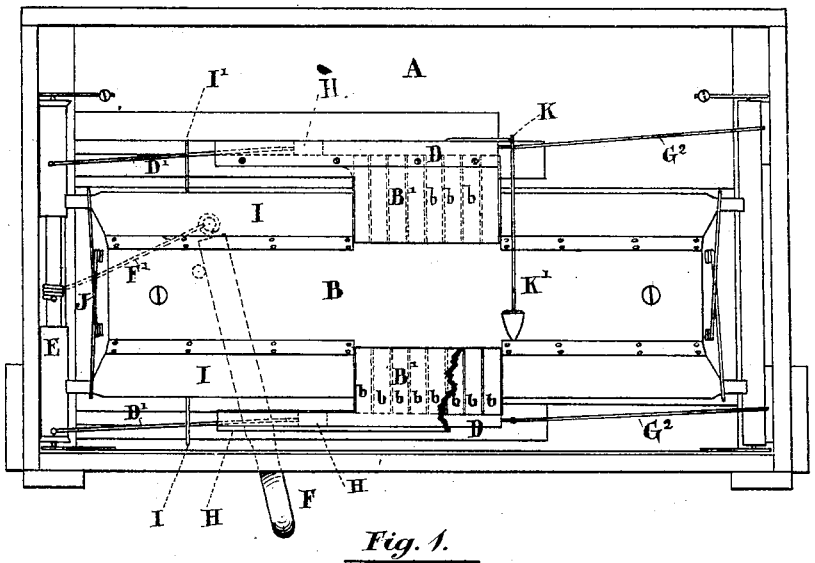

Fig. 1.

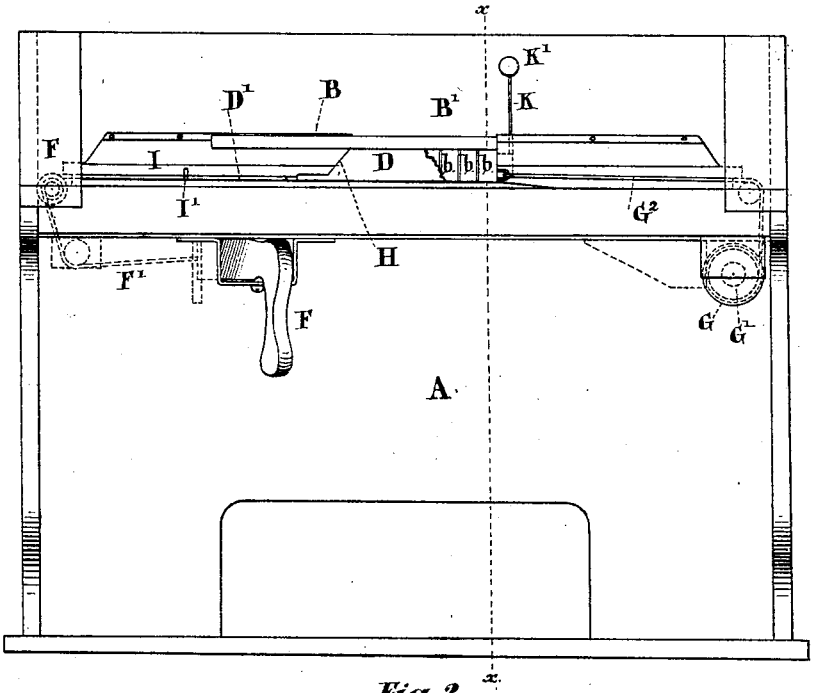

Fig. 2.

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2 Sheets—Sheet 2.

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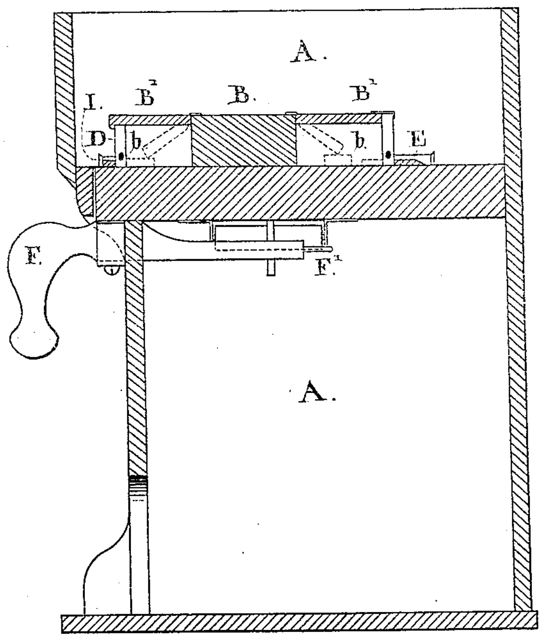

Fig. 3.

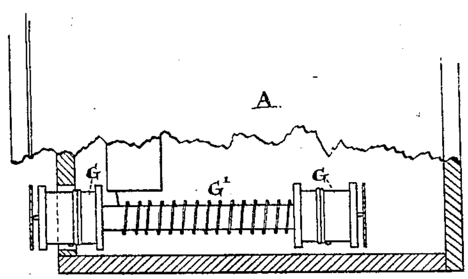

Fig. 4.

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UNITED STATES PATENT OFFICE.

ALEXANDER R. KOERBER AND JAMES SHERIDAN, OF TORONTO, ONTARIO, CANADA.

IMPROVEMENT IN REED-ORGANS.

Specification forming part of Letters Patent No. **192,583**, dated July 3, 1877; application filed May 17, 1877.

To all whom it may concern:

Be it known that we, ALEXANDER RUDOLPH KOERBER, music-teacher, and JAMES SHERIDAN, piano-tuner, both of the city of Toronto, in the county of York, in the Province of Ontario, Canada, have jointly invented certain new and useful Improvements on Musical Reed-Instruments, which improvements are fully set forth in the following specification, reference being had to the accompanying drawings.

Our invention consists of mechanism arranged to govern the swell of the accompaniment treble and bass notes, so that the swell of each note can be distinctly separated, one from the other, at the middle of the instrument, or at the point where the treble and bass are used for the same purpose; the object being to give greater elegance and variety of expression to the notes, as the swell may be confined to one, two, or more of the notes or given to all, as desired.

In the accompanying drawing, Figure 1 is a plan, Fig. 2 a longitudinal elevation, and Fig. 3 a cross-section, of a reed-instrument embodying our improvements; Fig. 4, a detail view, the upper portion of the instrument being removed to expose mechanism.

A is the instrument-case, which may be constructed in any of the usual designs, the arrangement of the treadles, bellows, &c., being as usual. B is the reed-chamber. At the center of the reed-chamber, being that portion which corresponds to the central or accompanying notes, the swell-opening of a section, B′, is isolated from the swells of the bass and treble notes. This central section is subdivided into a number of passages or wind-inlets, *b*, corresponding with, and connected to, the accompaniment notes. Over the front faces of the dividing-partitions of section B′ valves D are placed. These valves are arranged to slide back and forth a distance equal to the length of section B′, opening or shutting, as it is moved, the mouths of the subdivisions *b*, the number of subdivisions opened corresponding to the distance that the valves are moved. The valves D are connected by cords D′ to a differential roller, E, which roller is operated, to open the central swell, by a cord, F′, from a pivoted knee-lever, F, of the usual description. The valves are closed by the reaction of the torsional strain of a spiral spring, G, coiled on a differential roller, G^1, which roller is connected to the valve by cords G^2. (Shown in Fig. 4.) The action of opening the valve D by pressing on the lever F coils the cord upon the roller E, and uncoils the cord upon the roller G^1, at the same time twisting the spring G, and developing the power which returns the valve to its closing position immediately the pressure on the knee-lever is removed.

The bass ends of the valves D are finished with a gradual inclination, and the parts are so proportioned that when the valves D have been withdrawn so far as to open all, or nearly all, the notes of the central section, the inclined ends H will engage with a projecting rod, I′, on the bass-swell valves I, and open the bass-swell valves. When the valves D move back, the spring J automatically closes the bass-swell again.

To one of the valves D is attached a rod, K, bent forwardly to clear the swell-chamber, and provided at the end with a suitable pointer or face-plate, K′. This rod, being attached to the valve D, has communicated to it the same motion, and we use it, in connection with a suitable graduated slot in the case of instrument, as an indicator to show how many notes are open to the swell.

There are, of course, different methods of arranging the mechanical details of construction; for instance, different forms of springs or a weight could be used in lieu of the spiral spring G to draw the valve D back. The valves D could also be applied at the top or bottom of the central section without departing from the spirit of our invention.

The advantages gained by our improvements are, that the swell of the treble and bass accompanying notes can be distinctly separated from each other, and the bass notes can be run along into the treble notes an octave or more, or vice versa, at the will of the performer.

We claim as new and desire to secure by Letters Patent—

1. A musical reed-instrument in which the central portions of the reed-cells are connected

with an independent section of the reed-chamber, subdivided to correspond with the central or accompanying notes, and closed by a variable-swell valve, which valve can be operated to open or close one or more or all of the subdivisions of said section at the will of the performer.

2. The combination, with the reed-chamber B, provided with the subdivided central section B′, of the variable slide-valves D, substantially as shown and described.

3. The pivoted knee-lever F, cord F′, differential roller E, and cords D′, in combination with the valves D, substantially as shown and described.

4. The differential spring-roller G^1 and cords G^2, in combination with the valves D, substantially as shown and described.

5. The valves D, with wedge-shaped ends H, in combination with the bass-swell valves I, substantially as shown and described.

6. The indicating-pointer K K′, attached to the valve D, substantially as shown, and for the purpose specified.

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JAMES SHERIDAN.

Witnesses:
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FRANK MUNRO.