

(No Model.)

A. BARDELL.

REED ORGAN.

No. 373,714.

Patented Nov. 22, 1887.

Fig. 1.

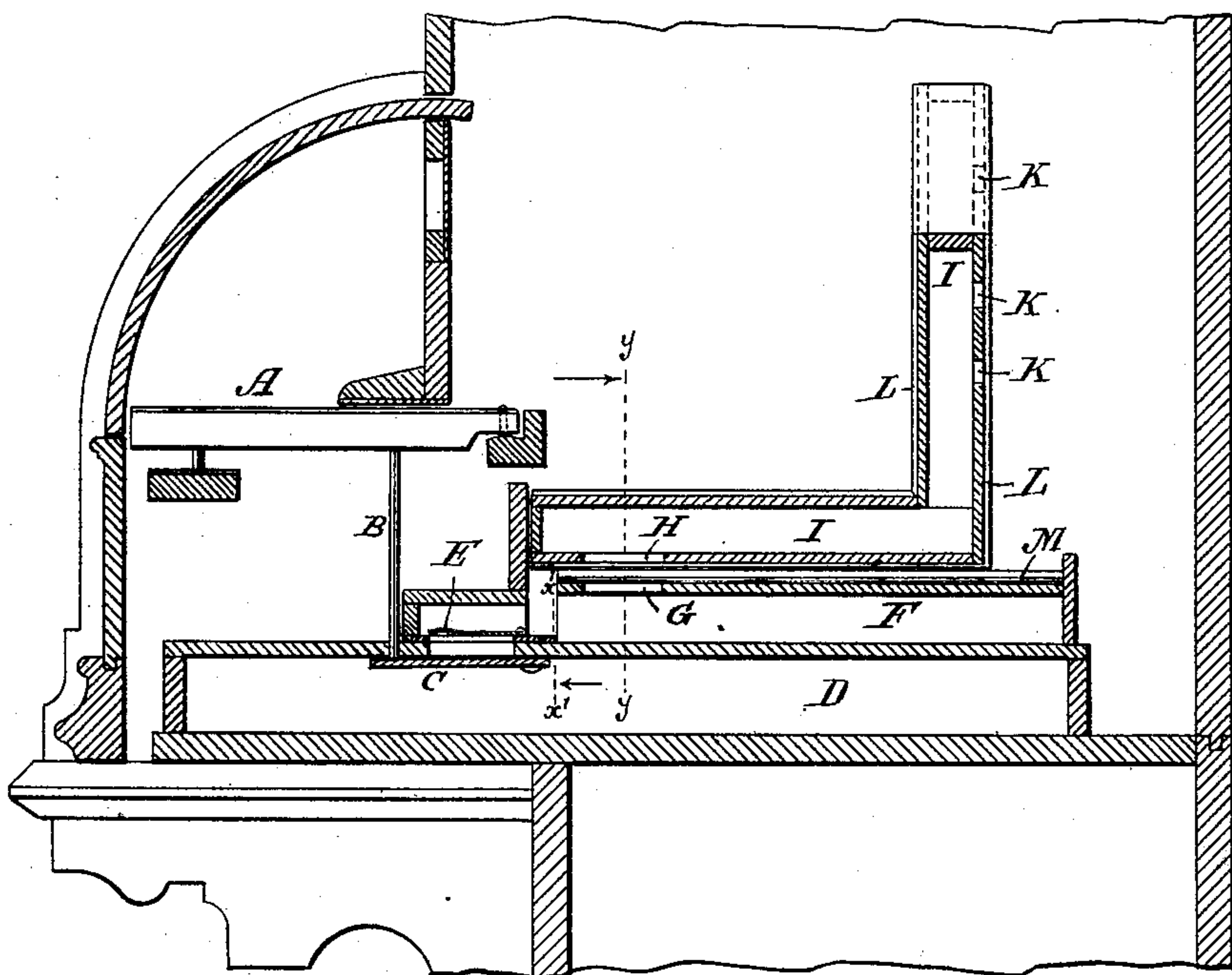


Fig. 2.

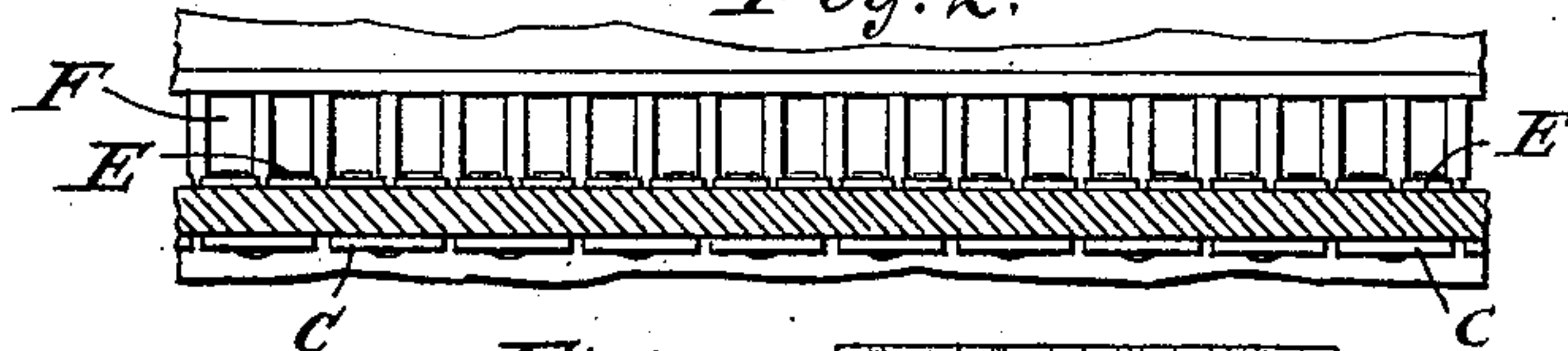
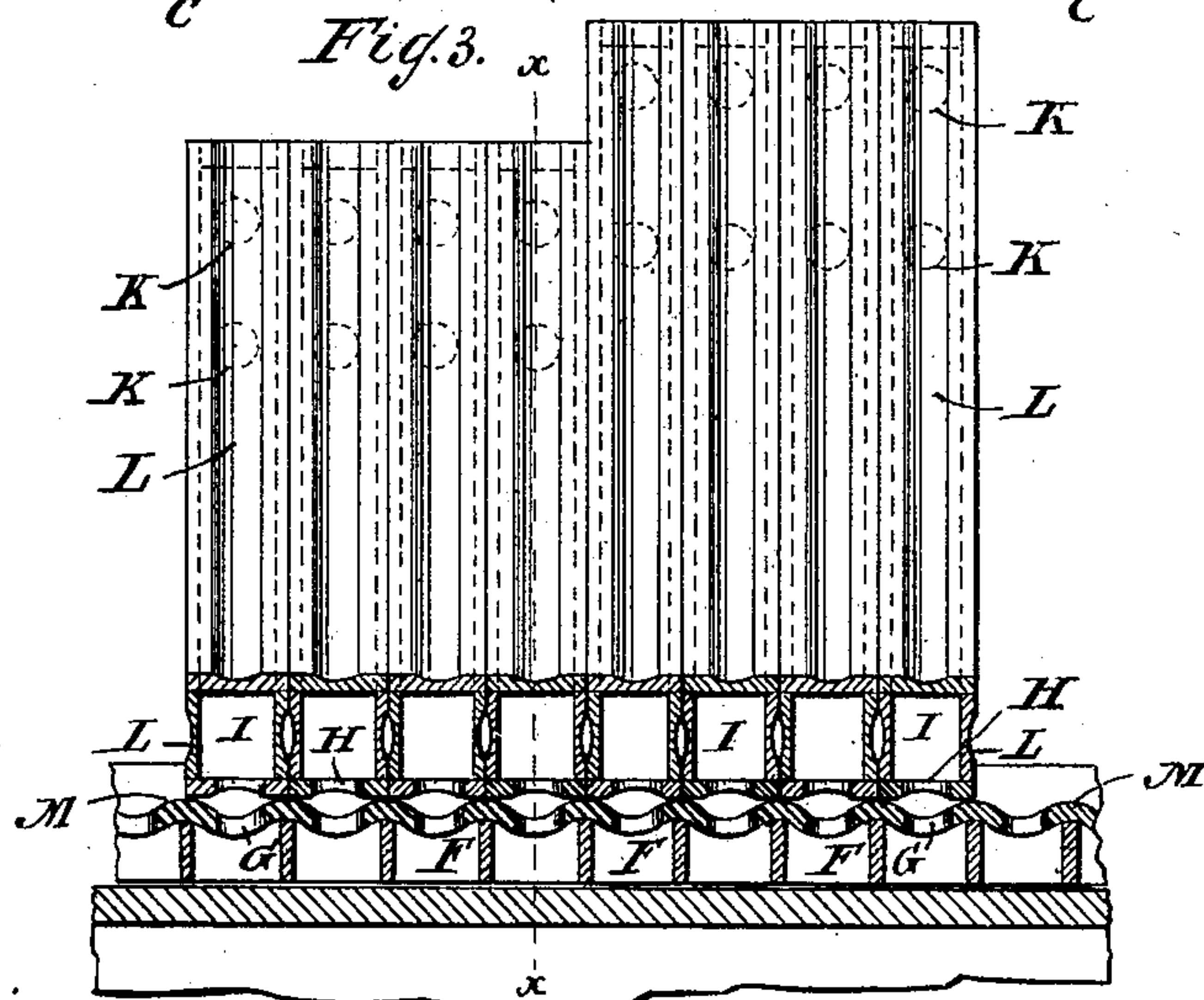


Fig. 3. x



WITNESSES:

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REED-ORGAN.

SPECIFICATION forming part of Letters Patent No. 373,714, dated November 22, 1887.

Application filed July 21, 1887. Serial No. 244,905. (No model.)

To all whom it may concern:

Be it known that I, ALFRED BARDELL, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented new and useful Improvements in Musical Instruments, of which the following is a specification.

This invention relates to improvements in musical instruments—such as organs, melodeons, and the like—as set forth in the following specification and claims, and illustrated in the accompanying drawings, in which—

Figure 1 is a section in the plane $x x$, Fig. 3. Fig. 2 is a section in the plane $x' x'$, Fig. 1, and on a larger scale than Fig. 1. Fig. 3 is a section in the plane $y y$, Fig. 1.

Similar letters indicate corresponding parts.

In the drawings, the letter A indicates a key connecting by a pin or wire, B, with the valve C. When the key is actuated so as to open the valve, air passes from the wind-chest D and actuates the reed E, so as to cause vibration of air in the pipe F. A sound is thus produced.

In Fig. 2 are shown two reeds, E, for each valve C.

The pipes F have openings G communicating with openings H in the sounding-pipes I. As seen in Fig. 1, the sounding-pipes are formed in two parts, placed at an angle to one another, whereby the sounding-pipes are lengthened while occupying a comparatively small space. The proper lengthening of the sounding-pipes I increases their efficiency. Said sounding-pipes are provided with one or more exit-openings K for the escape of the sound, and the sides or walls of the sounding-pipes are thinned, as at L, by being hollowed or concaved. The thinning of said walls makes said walls vibratory, so that they readily respond to the sound or vibrations of air, and the pipes I thus serve to increase the volume of sound emitted from the instrument.

By providing each organ or melodeon pipe F with a sounding-pipe, I, made to act in connection with said organ or melodeon pipe, the volume of sound will be increased; also, by making the roof or cover or side M, Fig. 3, of the pipe F corrugated, bent, or wavy, the surface of

said roof will be increased; and as said roof is vibratory, proper increase of its surface tends to increase the volume of sound. By properly placing a wavy or corrugated cover, M, over a series of pipes, F, said cover M can be made to act as an efficient sounding-board.

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

1. The combination, in an organ or melodeon, of the wind-chest D, the reed-pipe F, having an opening, G, and the sounding-pipe I, having an opening, H, communicating with the reed-pipe and provided with an opening or openings, K, for the escape of the sound, substantially as described.

2. The combination, in an organ or melodeon, of the wind-chest D, the horizontal reed-pipe F, having the opening G, the valve C, controlling the passage of air from the wind-chest to the reed-pipe, and the sounding-pipe I, having the opening H, communicating with the reed-pipe, the sounding-pipe extending horizontally above the reed-pipe and at one end extending vertically and provided at its upper portion with an opening or openings, K, for the escape of the sound, substantially as described.

3. The combination, in an organ or melodeon, of the wind-chest D, the reed-pipe F, and the sounding-pipe I, in communication with the reed-tube and having its walls concaved, so as to vibrate, substantially as described.

4. The combination, in an organ or melodeon, of the wind-chest D, the reed-pipe F and the sounding-pipe I, in communication with the reed-pipe, and above the same and at one end extending vertically, the sounding-pipe having its walls concaved so as to vibrate, substantially as described.

5. The combination, in an organ or melodeon, of the wind-chest D, the reed-pipes F, the sounding-pipes I, in communication with the reed-pipes, and the corrugated roof M, covering the reed-pipes below the sounding-pipes, substantially as described.

6. The combination of the horizontal reed-pipes F and the sounding-pipes I above the same, said pipes having communicating open-

ings G H with the corrugated roof M, covering the reed-pipes below the sounding-pipes, substantially as described.

7. The combination, with an organ or melodeon, of a reed-pipe, F, and a sounding-pipe, I, said pipes arranged beside each other and having communicating openings G H, substantially as described.

In testimony whereof I have hereunto set my hand and seal in the presence of two subscribing witnesses.

ALFRED BARDELL. [L. S.]

Witnesses:

W. C. HAUFF,

E. F. KASTENHUBER.