

No. 753,176.

PATENTED FEB. 23, 1904.

W. J. STREET, JR.
PIANO.

APPLICATION FILED MAY 11, 1903.

NO MODEL.

2 SHEETS—SHEET 1.

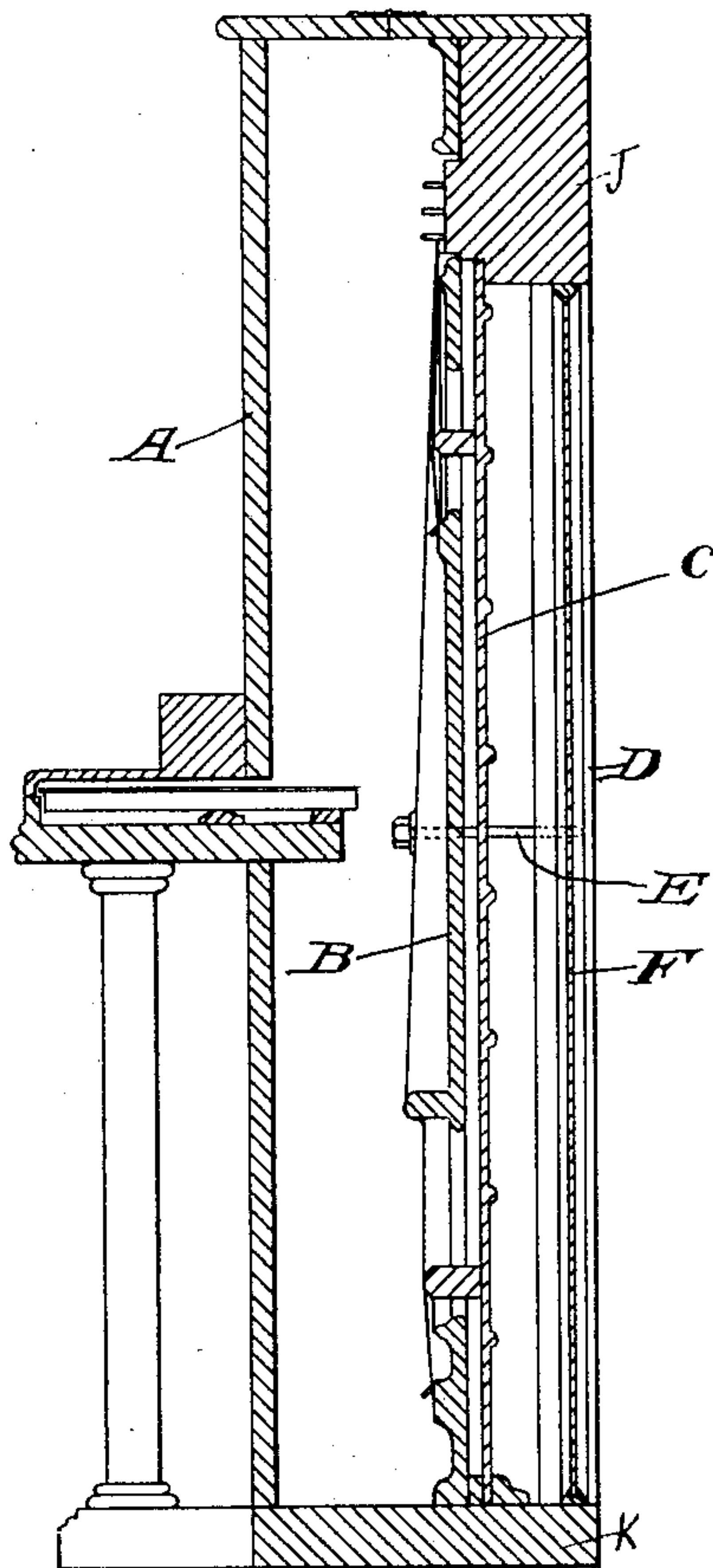
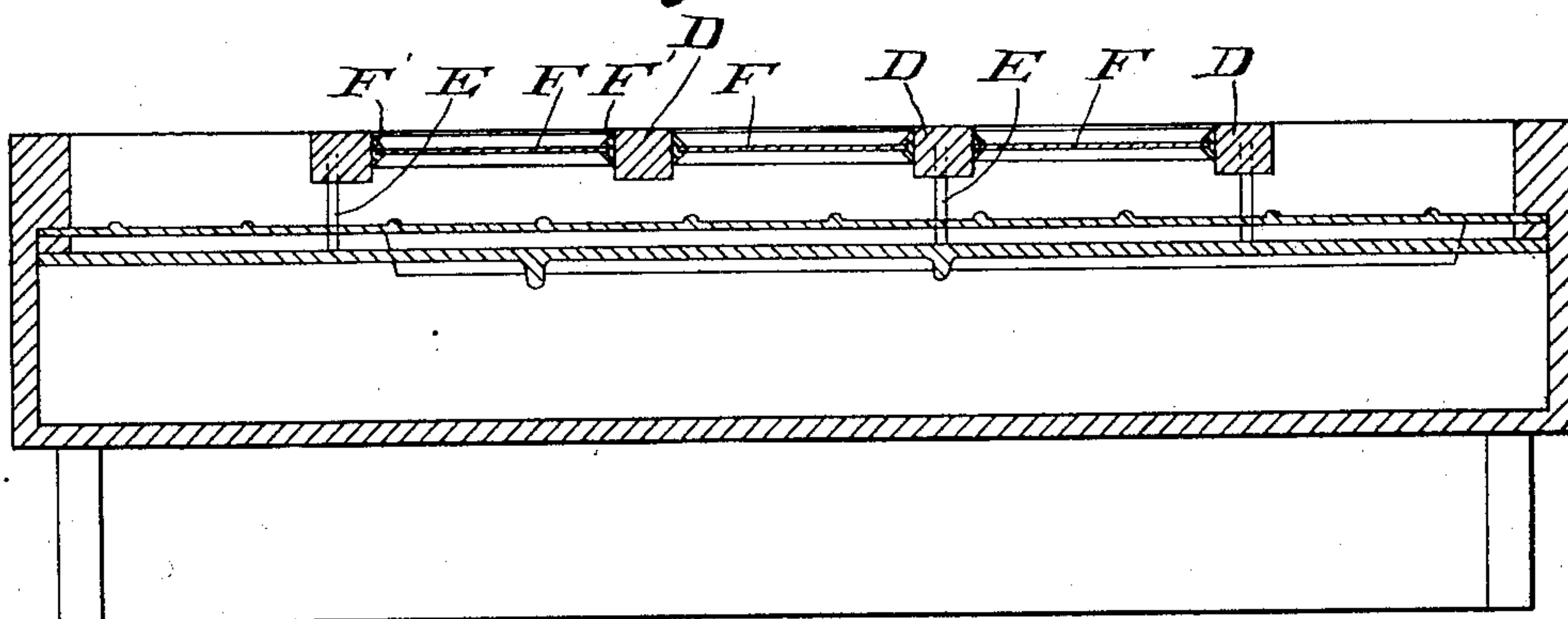


Fig. 1.



Witnesses *Fig. 2.*
Joseph R. Rohrer.
Margaret Hackett.

Inventor
William Jay Street, Jr.
by *Stewart & McMillan*
his Attorneys.

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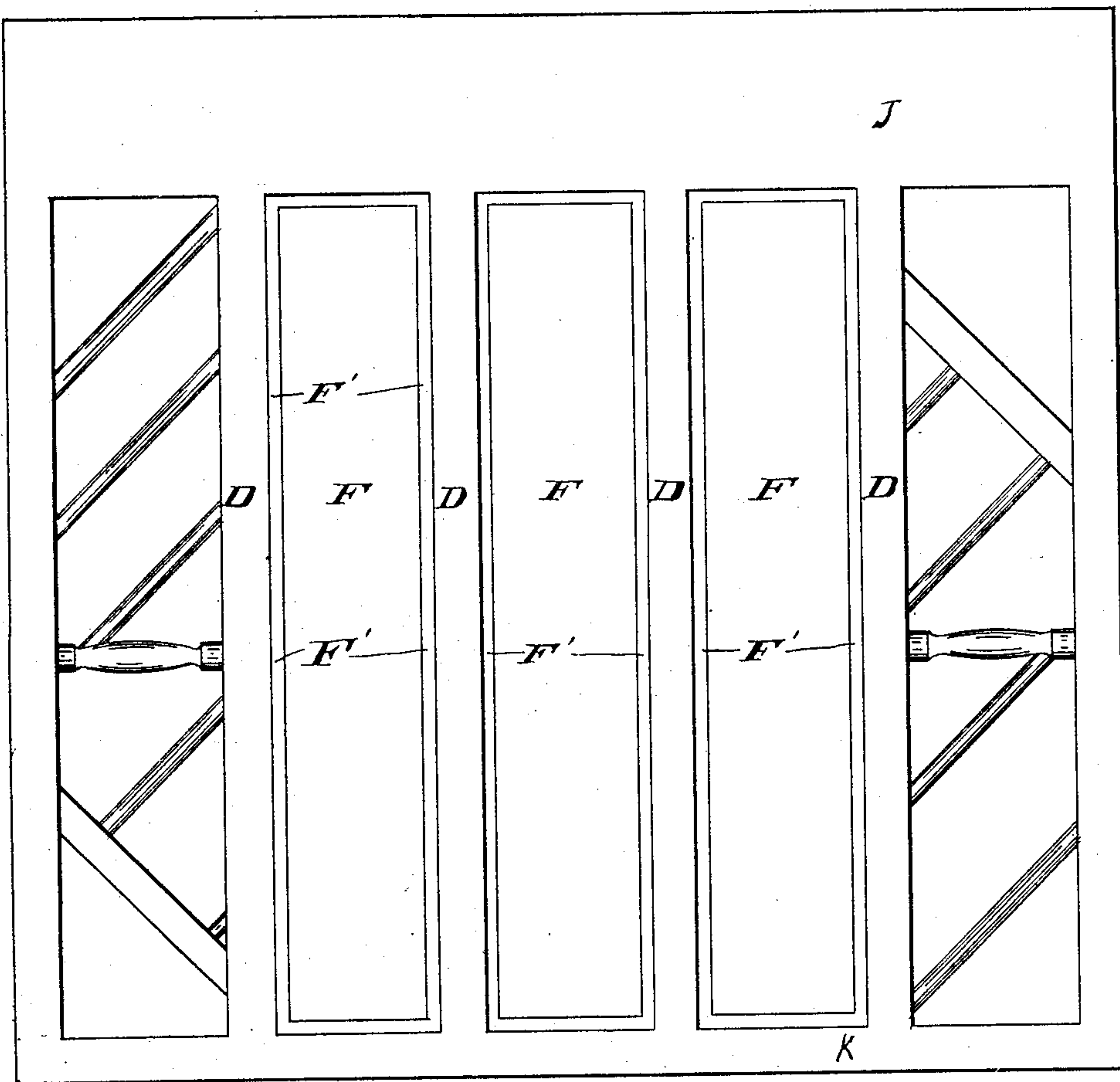


Fig. 3.

Witnesses

Joseph R. Rohrer.
Margaret Hackett

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UNITED STATES PATENT OFFICE.

WILLIAM JAY STREET, JR., OF MADISONVILLE, OHIO.

PIANO.

SPECIFICATION forming part of Letters Patent No. 753,176, dated February 23, 1904.

Application filed May 11, 1903. Serial No. 156 686. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM JAY STREET, Jr., a citizen of the United States, and a resident of Madisonville, in the county of Hamilton and State of Ohio, have invented a certain new and useful Improvement in Pianos, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which form a part of my specification.

My invention relates to pianos, and more particularly to upright pianos.

It consists of a tone-developer or an arrangement whereby, as its name indicates, the tone of such a piano may be broadened and increased in volume without in any way affecting the purity of the scale.

As usually constructed the string-plate is connected by suitable bolts to the posts which form the back frame of the piano, and more or less tension is induced in the string-plate by means of these bolts. Any vibration of the plate is carried back to the posts to which these bolts are connected. In carrying out my invention I connect these posts by diaphragms, which of course vibrate in unison with the posts, and thereby act in a manner as an auxiliary sounding-board, which vibrates in unison with the usual sounding-board, and thereby greatly broadens the tone, being assisted in this by the sounding-board itself.

In the drawings, Figure 1 is a vertical section through an upright piano, showing my improved tone-developer in position; Fig. 2 is a cross-section through the same, and Fig. 3 is a rear elevation of a piano with my improvement attached.

A is the piano-case; B, the string-plate; C, the usual sounding-board; D, the posts forming, together with the top and bottom pieces J and K, the rear frame of the piano, and E the bolts connecting said string-plate B to the posts D.

F F are thin diaphragms of wood mounted between the posts E and the top and bottom pieces J and K, preferably by means of grooved moldings F', provided with grooves in which the edges of the diaphragms F fit snugly. The moldings F are secured to adjacent faces of the posts in any convenient

manner. Of course any other method of securing the diaphragms to the posts may be adopted; but I find that the one described is the most preferable one, in that it is the most convenient.

In the drawings is shown a piano having four posts, with the diaphragms, which form the tone-developer placed in the three middle spaces between said posts. Of course I do not wish to limit myself to this exact arrangement, as my tone-developer may be applied to pianos in which more posts are used, and it is not necessary to limit the number of diaphragms to any particular number. I find the arrangement shown and described, however, as one giving the best results.

I find that the arrangement of the diaphragms as above described greatly increases the breadth and richness of the tone over that ordinarily obtained, and they act as a tone-developer or auxiliary sounding-board somewhat analogous to the back of a violin.

It will of course be understood that my invention is not limited to a piano, but may be applied to any similar musical instrument having such parts and arrangements as are set forth in the preceding specification.

Having thus described my invention, what I desire to claim as new, and cover by Letters Patent, is—

1. A piano, having posts forming the back thereof, and a vibratory diaphragm mounted between two of said posts and wholly within the rear plane thereof, said diaphragm being secured at its edges to those faces of the posts adjacent each other.

2. A piano, having posts forming the back thereof, and a plurality of vibratory diaphragms mounted between said posts and wholly within the rear plane thereof, said diaphragms being secured at their edges to those faces of the posts adjacent each other.

3. In a musical instrument, the combination with the sounding-board, string-plate, posts, and bolts connecting said string-plate and posts, of one or more vibratory diaphragms connecting said posts, said diaphragms being secured at their edges to those faces of the posts adjacent each other.

4. In a piano, the combination with a string-

plate, sounding-board, posts, grooved mold-
ings on the adjacent faces of said posts, and
bolts connecting said string-plate and posts,
of one or more diaphragms mounted between
5 said posts and engaging the grooves of said
moldings.

5. A piano having top and bottom pieces,
posts connected thereto and forming the back
of the piano, and a vibratory diaphragm
10 mounted between two of said posts and the
top and bottom pieces and wholly within the
rear planes thereof, said diaphragm being se-
cured at its edges to the faces of said top and
bottom pieces and posts.

15 6. In a musical instrument, the combination
with the top and bottom pieces, of a sound-
ing-board, string-plate, posts, bolts connect-

ing said string-plate and posts, and one or
more vibratory diaphragms mounted between
said posts and top and bottom pieces, said dia- 20
phragms being secured at their edges to the
faces of said posts and top and bottom pieces.

7. In a piano, the combination with the top
and bottom pieces, of a sounding-board, string-
plate, posts, bolts connecting said string-plate 25
and posts, one or more vibratory diaphragms
mounted between said posts and top and bot-
tom pieces and grooved moldings on said posts
and top and bottom pieces and adapted to en-
gage said vibratory diaphragms.

WILLIAM JAY STREET, JR.

Witnesses:

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CLARENCE E. MEHLHOPE.