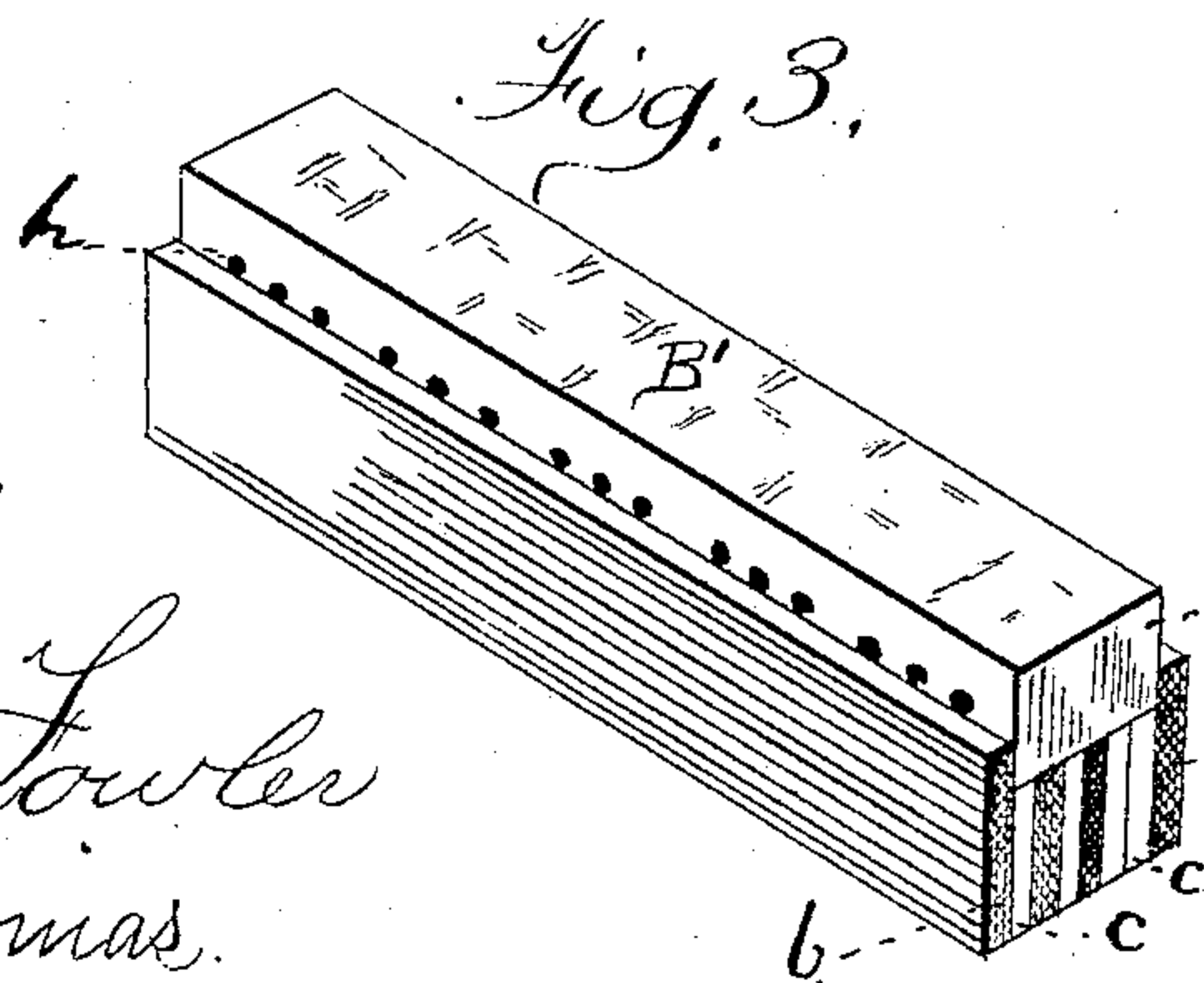
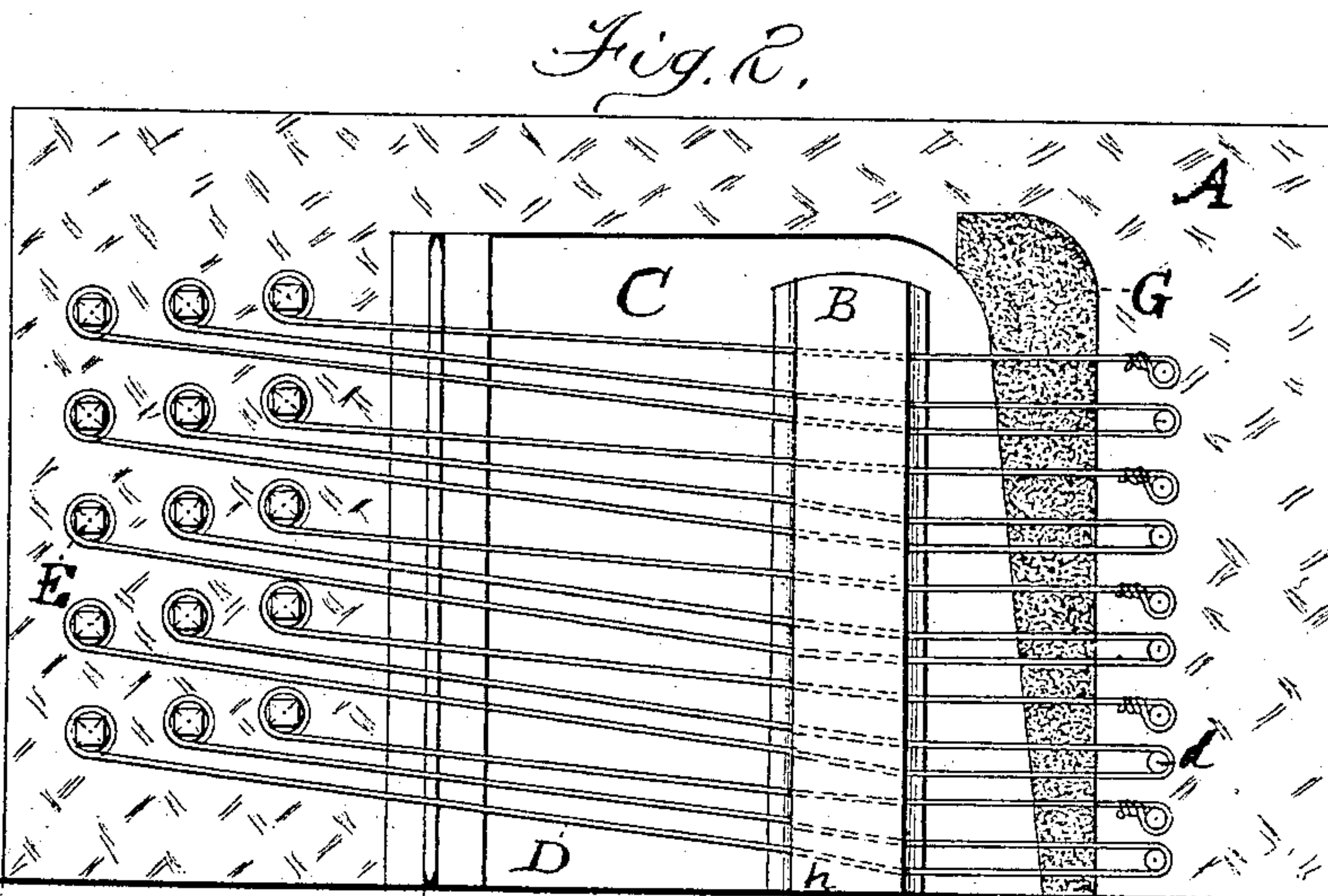
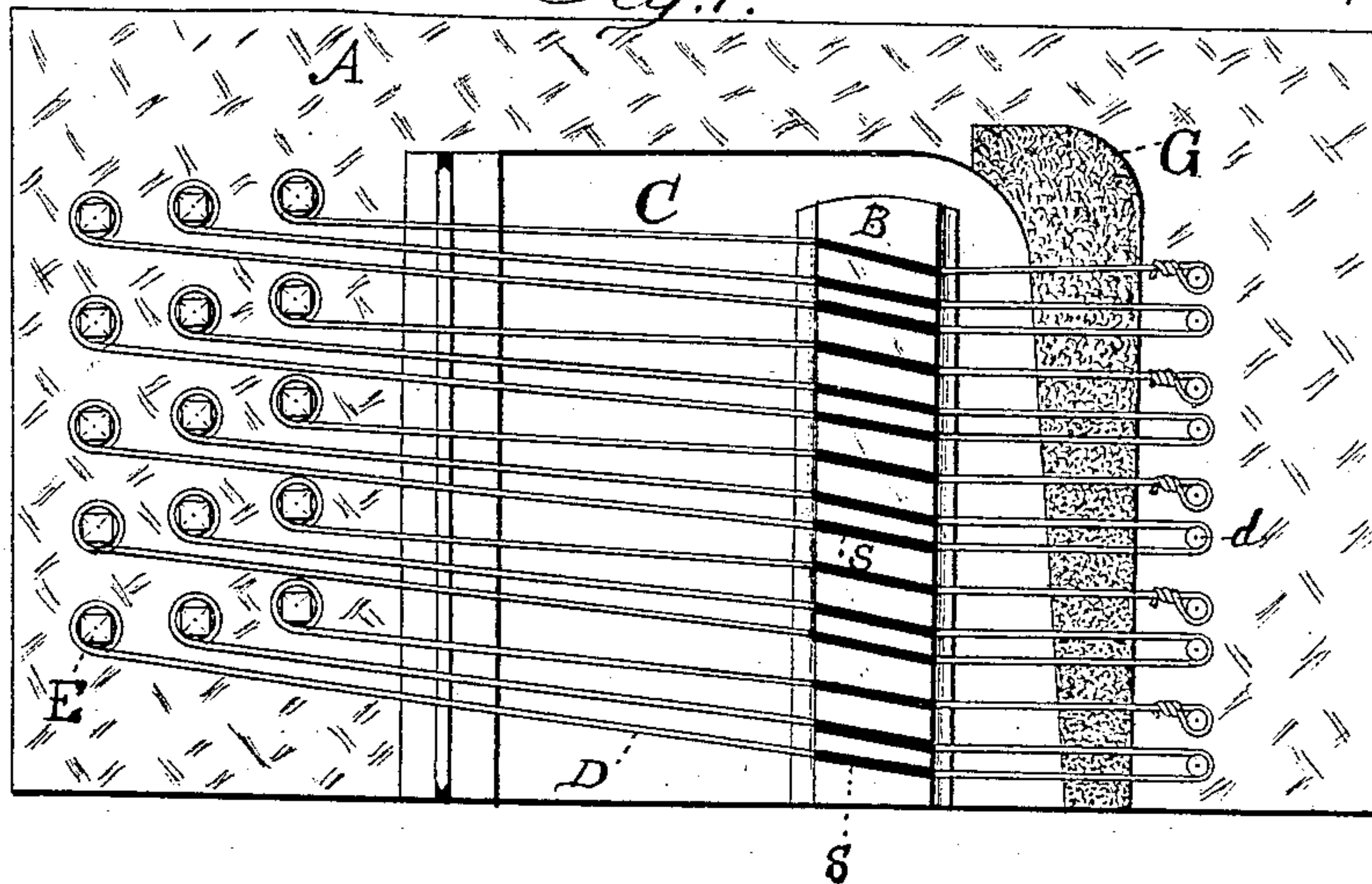


(No Model.)

J. R. BROWN.
PIANO FORTE BRIDGE.

No. 291,143.

Patented Jan. 1, 1884.



Witnesses;

Walter Fowler
L. M. Thomas.

Inventor,
a John R. Brown
per M. Harris
att'y

UNITED STATES PATENT OFFICE.

JOHN R. BROWN, OF JAMESTOWN, NEW YORK.

PIANO-FORTE BRIDGE.

SPECIFICATION forming part of Letters Patent No. 291,143, dated January 1, 1884.

Application filed August 19, 1882. (No model.)

To all whom it may concern:

Be it known that I, JOHN R. BROWN, of Jamestown, in the county of Chautauqua and State of New York, have invented certain new
5 and useful Improvements in Piano-Forte Bridges; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to
10 make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

The object of my invention is to strengthen and lighten the sound-board bridge of the piano-forte and increase the power, lengthen the vibration, and relieve the sound-board bridge from all metallic effects, all of which will be fully set forth in the following specifications and accompanying drawings—

20 Figures 1 and 2 showing a plan view, and Fig. 3 a sectional view, of the bridge.

Heretofore in the manufacture of piano-forte bridges metallic bridge-pins and other metallic devices have generally been used to get the
25 bearings or cut-off and hold the strings in position; but these pins being put into the bridge about half an inch, and following the way of the grain of the wood at such short intervals, tends to load and weaken the bridge
30 and render it unable to stand the tension that is brought to bear upon it, so that when old the sound is weak and metallic, caused by the strings vibrating against the metallic pins. They are also liable to get loose and out of order, and tend to destroy the full, smooth resonance of sound which is desirable, and which I obtain without their use.

In the drawings, Fig. 3 represents a section of my improved bridge, which for strength and
40 durability I build up of a combination of veneers and end wood, *b b c c* being the long wood or veneers, and *B'* the end wood, which are firmly glued together, the veneers not only forming the main body of the bridge, but the
45 side veneers, *b b*, coming up on the sides of the end wood, *B'*, (through which the strings pass,)

to give strength and durability to the bridge, and being secured to the sound-board in the usual way.

To hold the strings in position and to do away
50 with all pins or other metallic devices, I simply bore holes $\frac{1}{2}$ through the end wood *B'* and put the strings through them, and tighten in the usual way. I sometimes cut the wood out down to the holes, forming a groove or slot,
55 into which the strings may be readily inserted, as shown at *s*, Fig. 1. This makes it more convenient to string. These holes or slots may be at any desired distance from the top or face of the bridge. 60

Piano-forte sound-board bridges have sometimes been composed of alternate layers of hard and soft wood veneers, with the ordinary metallic bridge-pins, and sometimes the base of the bridge has been made of wood, having
65 a cap with a metallic plate and screws to hold the strings in position; but these do not free the sound-board bridge of metallic devices, which is the greatest object of my invention.

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

1. A piano-forte sound-board bridge composed of veneers and end wood, the veneers forming the base and partly inclosing the sides
75 of the end wood, substantially as shown and described, and for the purpose set forth.

2. A piano-forte sound-board bridge composed of veneers and end wood, the veneers forming the base and partly inclosing the
80 sides of the end wood, which has holes or grooves for holding the strings and governing their bearing and position, substantially as shown and described, and for the purpose set forth. 85

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

JOHN R. BROWN.

Witnesses:

W. H. TRUESDALE,
M. HARRIS.