

Bloomfield & Otis.

Piano Forte.

Nº 90,150.

Patented May 18, 1869.

Fig: 1

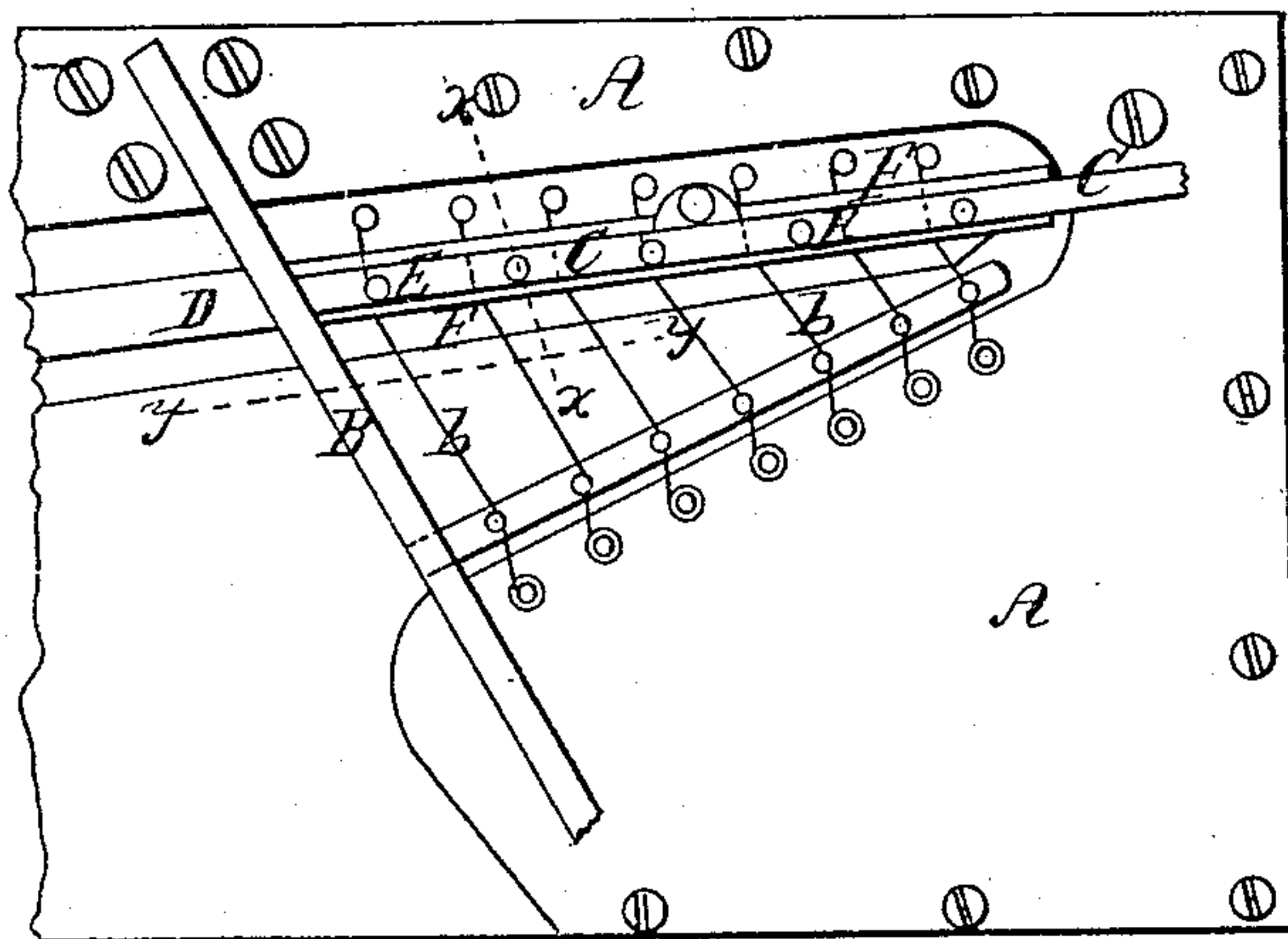


Fig: 2.

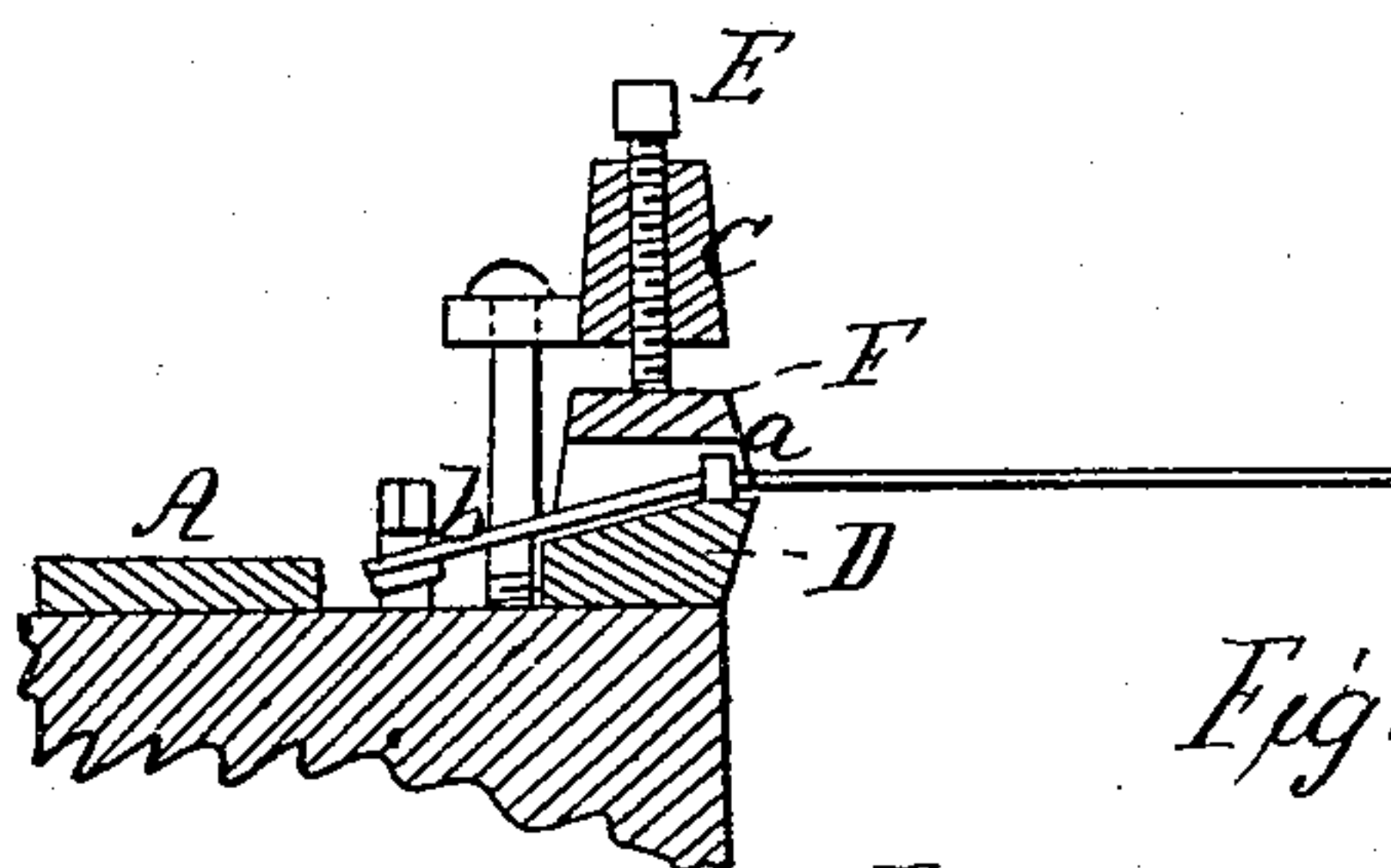
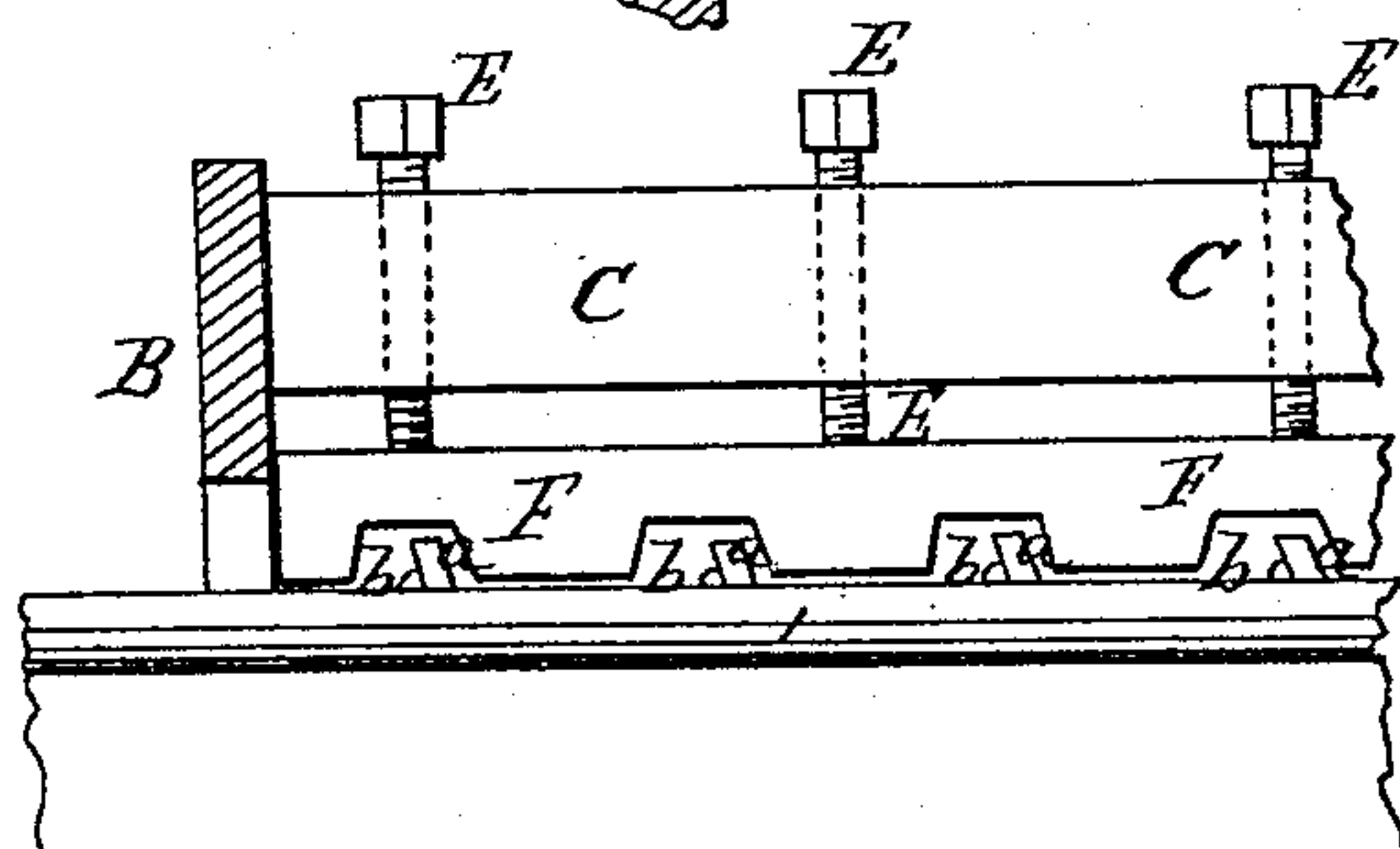


Fig: 3.



Witnesses;

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United States Patent Office.

EDWARD BLOOMFIELD AND DWIGHT P. OTIS, OF NEW YORK, N. Y.

Letters Patent No. 90,150, dated May 18, 1869.

IMPROVEMENT IN PIANO-FORTES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern :

Be it known that we, EDWARD BLOOMFIELD and DWIGHT P. OTIS, of the city, county, and State of New York, have invented a new and useful Improvement in Piano-Fortes; and we do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents a plan or top view of our piano-forte improvement.

Figure 2 is a detail transverse section of the same, taken on the line *x x*, fig. 1.

Figure 3 is a vertical longitudinal section of the same, taken on the line *y y*, fig. 1.

Similar letters of reference indicate corresponding parts.

The object of this invention is to strengthen the treble-section of the bridge in a piano-forte, by applying screw-pressure to a bar of lead or other heavy material, placed upon the bridge.

These bridges are subjected to a considerable strain, and are apt to vibrate with the sound-boards, whereby the tone is very much injured.

In a good instrument, the treble-bridge should be perfectly solid, and can, nevertheless, not be made very high, as it should not project far above the sound-board.

The bridges have therefore been frequently weighted, but the weights were generally insufficient, unless made altogether too thick and clumsy.

We have avoided these inconveniences, by applying screw-pressure to a bar placed upon the bridge, the screws working through a brace projecting from and formed on the metal top-plate of the piano. The bar is thereby firmly secured upon the bridge, and a clear

sound will be produced, as the bridge cannot vibrate the least.

A, in the drawing, represents the metal top-plate of a piano.

B is the cast-iron brace of the same, nearest the treble-section of the piano.

An arm, C, is cast on or fastened to the plate A and brace B, as shown, so that it will be directly above the treble-section of the bridge D.

E E are a series of screws fitted through the arm C, their lower ends resting on a bar, F, that is placed upon the bridge, as shown.

The bar F is made preferably of lead, as the same does not vibrate at all, but it may be made of any other suitable material.

The bar F is notched, as shown in fig. 3, to receive the pins *a*, and to let the strings *b* pass through.

By turning the screws E, the pressure upon the bar F and bridge D can be regulated to make the latter solid without straining it.

We are aware that screw-pressure has heretofore been applied to the treble-bridge of pianos, but this we do not claim broadly; but

What we do claim, and desire to secure by Letters Patent, is—

The combination of the heavy notched bar F, screws E, and arm C, with the bridge D, all arranged and operating substantially as herein shown and described, for the purpose specified.

The above specification of our invention signed by us, this 6th day of January, 1869.

EDW. BLOOMFIELD.
DWIGHT P. OTIS.

Witnesses:

FRANK BLOCKLEY,
E. GREENE COLLINS.