F. C. Lighte,

Stringing Pianos,

No. 35,766, Patented July 1, 1862.

Fig. 1.

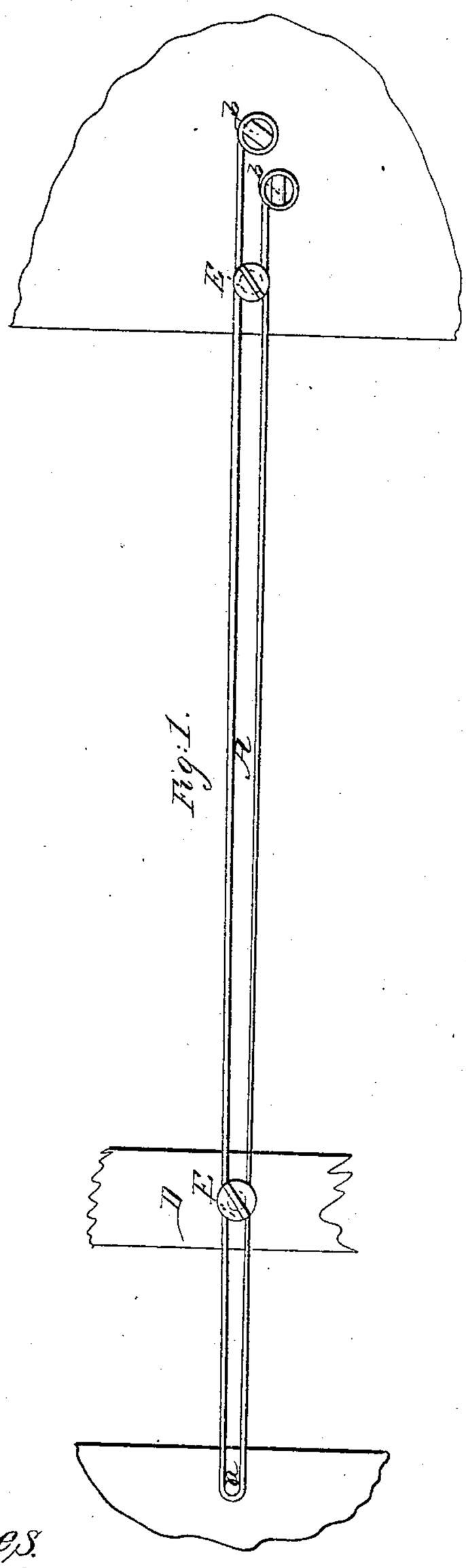
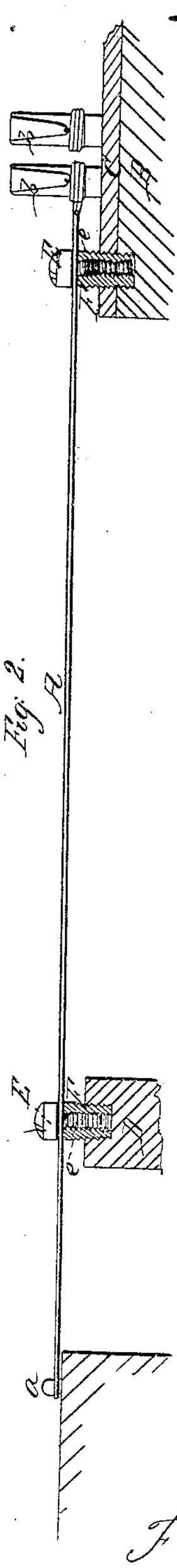


Fig. 2.



Witnesses.
James Laing
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UNITED STATES PATENT OFFICE.

FERDINAND C. LIGHTE, OF NEW YORK, N. Y.

IMPROVEMENT IN PIANO-FORTES.

Specification forming part of Letters Patent No. **35,766**, dated July 1, 1862.

To all whom it may concern:

Be it known that I, FERDINAND C. LIGHTE, of the city, county, and State of New York, have invented a new and useful Improvement in Piano-Fortes; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a plan view illustrating the application of my invention to one of the strings of a piano-forte. Fig. 2 is a vertical sectional view corresponding with Fig. 1.

Similar letters of reference indicate corresponding parts in both figures.

This invention relates to the employment in piano-fortes of what are termed "string-clamps," for clamping the string at the points between which it should vibrate and preventing any vibration in the portions beyond those points. In such clamps as previously constructed and applied the drawing together of the two jaws or portions of the clamp on opposite sides of the string is effected by means of a screw which screws into the string-bearing and secures the clamp thereto without any independent or positive action upon the said jaws or portions of the clamp, and the consequence is that from various causes—as the occasional settling of the lower or back portion of the clamp into the wood of which the said bearing is composed, the shrinking of the wood, or the settling of the bearing itself—the clamp is apt to become loose upon the string, and thus its object is defeated.

This invention consists is so applying the clamping-screw as not only to make it serve the purpose of attaching the upper or outer portion of the clamp to the bearing, but to screw into the lower or inner portion of the clamp, and thus produce an independent or positive clamping action between the two portions of the clamp themselves, thereby obviating any liability of the clamp to become loose upon the string.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

The string A represented is one of the double strings.

B is the wrest-plank, and C the plate which covers it.

D is the sound-board bridge; *a*, the hitch-pin, and *b b* the tuning-pins.

E E are the upper or outer portions of the string-clamps, consisting of the heads of two screws, *c c;* and F F are the lower or inner portions of the said clamps, consisting of hollow sockets screw-threaded externally to screw tightly into the string-bearings, one of which consists of the sound-board bridge D, and the other of the wrest-plank B and plate C, and tapped internally for the reception of the screws *c c*. The sockets F, applied to the wrest-plank, though represented as screwing into both the plank and the plate C, may screw into either one without screwing into the other. If it screws into the wrest-plank only, when a plate, C, is applied to cover the said plank, the hole provided in the plate for the passage of the screw is large enough for the screw to pass through it without touching.

In applying my invention, as represented in the drawings, the sockets F F are screwed into their places before the string is applied, or before it is tightened up by the tuning-pins *b b*, and after the application of the string the screws *c c* are inserted between the two parts of the string and into the said sockets, and screwed down to produce the clamping of the strings between their heads E E and the outer ends of the sockets, the screws thus serving not only to attach the upper portions of the clamp to the bridge D and the wrest-plank, but to clamp the strings between the heads E E and the sockets F F by a positive action which is independent of the attachment of the clamps to the said bridge and plank.

It is not absolutely necessary that the sockets F F screw into the bridge D and the wrest plank or plate C, as they may merely rest upon the said bridge and plank or plate, and be secured by screwing the screws *c c* into the said bridge and plank or plate, as well as into the said sockets; but in this modification of my invention, as in the plan first de-

scribed, the socket and the head of the screw are made to clamp the string with a positive action of the said screw independent of that which attaches the clamp to the bridge and plank or block.

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

So applying the clamping-screw *c* that it not only serves to attach the upper or outer portion, E, of the clamp to the bridge D or wrest-plank B, but by screwing into the lower portion, F, of the clamp serves to produce a positive and independent action of the two portions of the clamp upon the string, substantially as herein specified.

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Witnesses:
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