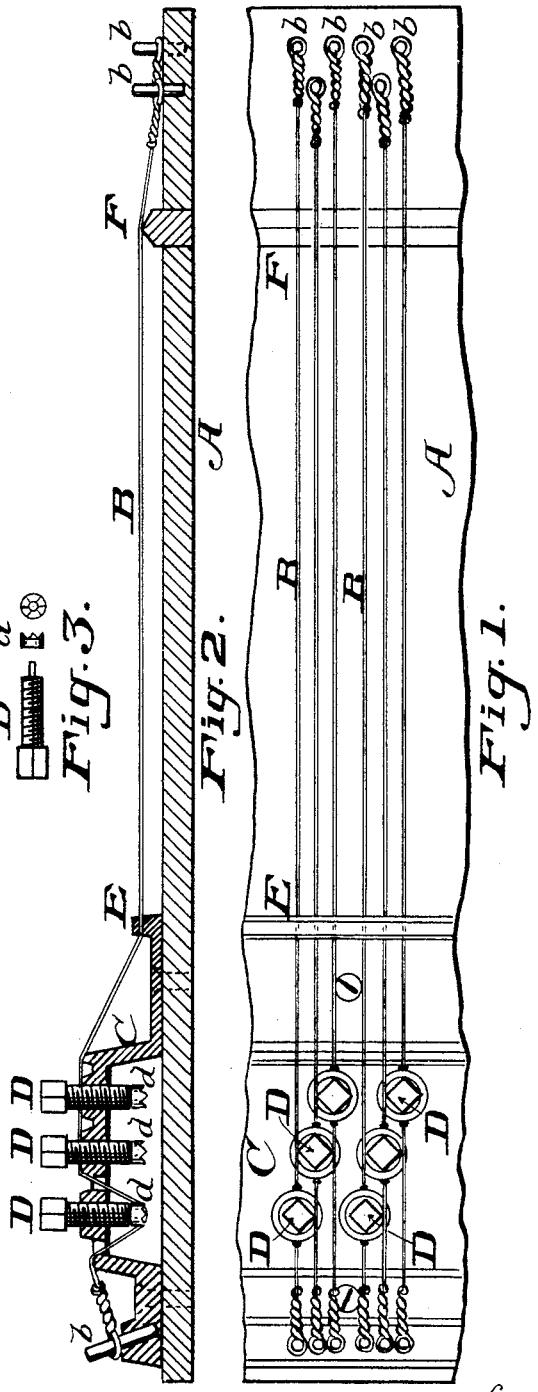
(No Model.)

L. A. KINDLER.

STRINGING PIANOS.

No. 454,911. Patented June 30, 1891.



WITNESSES:

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UNITED STATES PATENT OFFICE.

LOUIS A. KINDLER, OF CLEVELAND, OHIO.

STRINGING PIANOS.

SPECIFICATION forming part of Letters Patent No. 454,911, dated June 30, 1891.

Application filed January 29, 1891. Serial No. 379,594. (No model.)

To all whom it may concern:

Be it known that I, LOUIS A. KINDLER, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Stringing Pianos, of which the following is a specification.

This invention relates to the stringing of pianos and the means of regulating the tension of the strings for tuning; and it consists in the novel construction and combinations, as hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a front elevation of a part of a frame having a few strings, showing my improvement. Fig. 2 is a longitudinal section of the same. Fig. 3 is a view of one of the adjusting-screws.

A represents a metal frame, which may be of any of the well-known forms.

B B are the strings, which are looped and attached at both ends to hitch-pins *b b*.

C is a metal bridge-frame firmly secured across one end of said frame A, in which the hitch-pins for one end of the strings are placed. In the elevated portion of said bridge-frame are arranged adjusting-screws D D, in staggered position to admit of close arrangement of the strings.

The screws D D are provided on their lower ends with swiveled nuts *d d*, having notches in their faces for catching and holding the strings, and the screws have square or sexagon heads for convenience of turning them. Through said bridge C are made holes or slots in conjunction with each screw-hole, through which the strings are passed in stringing, so that the adjusting-screws may bear upon the strings for regulating their tension. The bridge-frame is also provided with a flange E, having perforations, through which the strings are also passed.

F is a sounding-board bridge.

From the foregoing it will be seen that the tension of the strings is readily adjusted by the said screws D pressing upon and stretching them to any degree desired.

Having described my invention, what I claim is—

1. In a piano-stringing device, the combination, with bridge-frame C, having agraffe E integral therewith, and having the staggered screw-holes, provided with slots for the strings B, of the screws D, having swiveled nuts *d*, as and for the purpose specified.

2. The combination of frame A, strings B, bridge-frame C, having staggered screw-holes and slots, adjusting-screws D, having swiveled nuts *d* for regulating the tension of the strings, substantially as and for the purpose specified.

LOUIS A. KINDLER.

Witnesses:
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