(No Model.)

L. A. KINDLER.

STRINGING PIANOS.

No. 491,652. Patented Feb. 14, 1893.

Fig. 2.

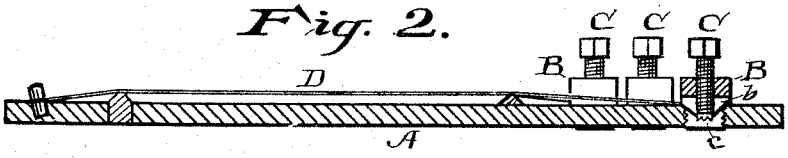


Fig. 1.

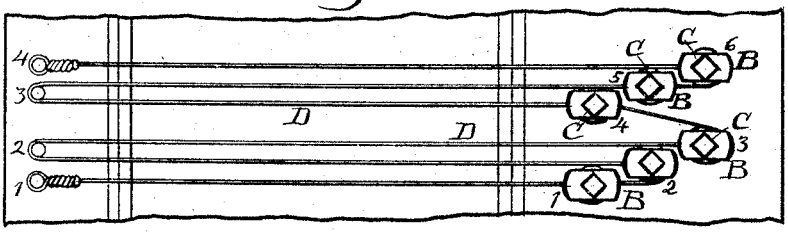


Fig. 3.

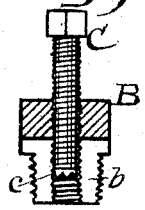
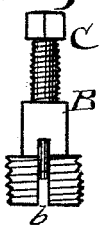


Fig. 4.



Witnesses

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UNITED STATES PATENT OFFICE.

LOUIS A. KINDLER, OF CLEVELAND, OHIO.

STRINGING PIANOS.

SPECIFICATION forming part of Letters Patent No. 491,652, dated February 14, 1893.

Application filed September 28, 1892. Serial No. 447,210. (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 grading the tension of the strings in tuning, and has for its objects to simplify and facilitate the work resulting in great economy of construction and operation.

In the accompanying drawings—Figure 1 is a plan view of part of a frame showing manner and means of stringing in accordance with my new plan. Fig. 2 is a longitudinal section of same. Fig. 3 is a detached sectional view of the stringing and tension screws. Fig. 4 is a transverse side elevation of same.

A represents a plate or frame commonly used for supporting the strings of a piano.

B B are screws having a slot *b*, set in one end of the plate A in the staggered form, in which are provided tension screws C, C, passing down through the heads of screws B, and into the slots *b*, and are provided with swiveled heads, *c*.

D D are the strings which I attach in a new manner as follows: Beginning at hitch pin 1 carry the string to and pass through the slotted screw 1, thence through slotted screw 2 thence back to and passing around hitch pin 2, then carrying the string back again and passing it through slotted screw 3, thence to slotted screw 4, and then carrying it back to and around hitch pin 3, and then back again to slotted screw 5, thence through slotted screw 6, and then back again to and fastening the end of string to hitch pin 4, thus stringing back and forth with one size of string without cutting and dispensing with the hitch pins at one end of the frame. The tension screws C C, bear upon the strings in the slots of the screws B, and are used for tuning. By this means the stringing of pianos is far more expeditiously, easily and economically performed.

Having described my invention I claim

1. In a piano stringing device the combination with frame A and strings D, of the slotted screws B B, and tension screws C mounted in the heads of screws B and provided with the swiveled nuts *c*, as and for the purpose specified.

2. In a piano stringing device the combination with frame A, slotted screws B having tension screws C provided with swiveled nuts *c*, mounted therein, of the continuous strings D, strung back and forth from the hitch pins and through the slotted screws B, substantially as and for the purpose specified.

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