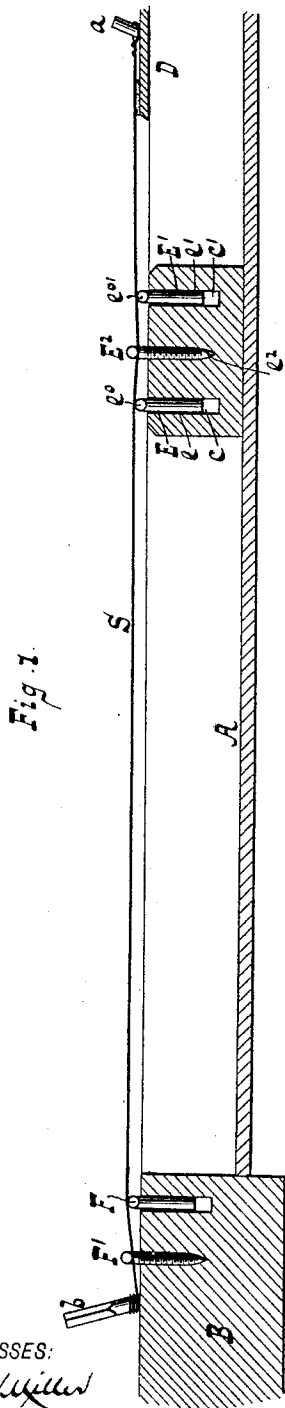


(No Model.)

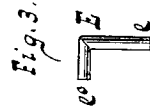
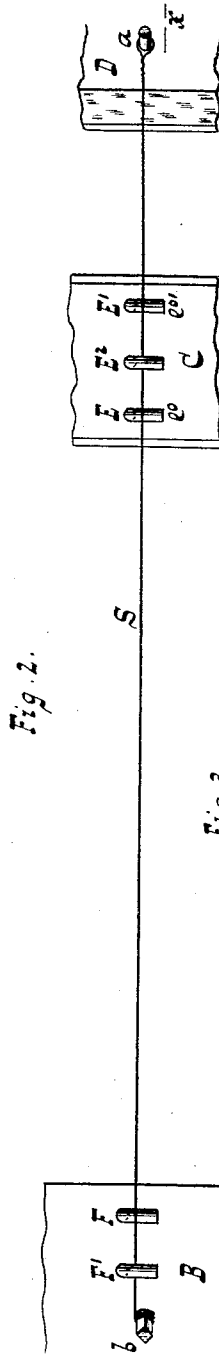
D. L. BOLLERMANN.
STRINGING PIANO FORTES.

No. 478,912.

Patented July 12, 1892.



WITNESSES:
William Miller
Edward Wolff



INVENTOR:
Dominik L. Bollermann
BY
Van Lentwood & Hauff
ATTORNEYS.

UNITED STATES PATENT OFFICE.

DOMINIK L. BOLLERMANN, OF NEW YORK, N. Y., ASSIGNOR TO ARTHUR BOLLERMANN, OF SAME PLACE.

STRINGING PIANO-FORTES.

SPECIFICATION forming part of Letters Patent No. 478,912, dated July 12, 1892.

Application filed April 14, 1892. Serial No. 429,150. (No model.)

To all whom it may concern:

Be it known that I, DOMINIK L. BOLLERMANN, a citizen of the United States, residing at New York, in the county and State of New York, have invented new and useful Improvements in Stringing Piano-Fortes, of which the following is a specification.

My invention is based on the discovery that the tone of a string is materially improved if the same is free to roll to and fro round its own axis on the supports at the ends of its sounding-section; and the invention consists in the novel devices hereinafter described and claimed for obtaining this mode of operation.

In the accompanying drawings, Figure 1 represents a longitudinal vertical section of a piano-forte strung according to my invention. Fig. 2 is a plan or top view of the same. Fig. 3 is a detached side elevation of one of the supports.

In the drawings, the letter A designates the sounding-board.

B is the wrest-plank, C the bridge, and D the hitch-pin block.

The string S extends from the hitch-pin *a* to the wrest-pin or tuning-pin *b*. In the bridge C are formed two holes *c c'* for the reception of the shanks *e e'* of right-angled supporting-pins E E', a side view of one of which is shown in Fig. 3, and between the holes *c c'* is formed an additional hole *c²* for the reception of the screw-shank *e²* of a depressor E², which is formed like the supports E E', with the only difference that its shank is provided with a screw-thread, while the shanks of the supports E E' are left smooth. By means of the depressor E² that portion of the string which is situated between the supports E E' is depressed, as seen in Fig. 1, so that said string is retained in contact with the lateral heads *e² e'²* of said right-angled supporting-pin. In

the wrest-plank B are formed two holes, one for the plain shank of the right-angled supporting-pins F and the other to receive the screw-shank of the depressor F'. The heads of the right-angled supporting-pins E E' F and of the depressors E² F' are convex or cylindrical, so that the sounding portion of the string is free to roll to and fro round its own axis on the supports E and F. From this description it will be seen that the string S extends in a straight line over the bridge C, so that it has no tendency to twist the bridge, and the operation of tuning a piano-forte strung according to my invention is materially facilitated.

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

1. In a piano-forte, the combination, with a string, of right-angled supporting-pins located at the ends of the sounding portions of the string and having their lateral heads provided with convex surfaces, and means for depressing the string upon the lateral heads of the right-angled supporting-pins, substantially as described.

2. In a piano-forte, the combination, with a string, of right-angled supporting-pins located at the ends of the sounding portions of the string and having their lateral heads provided with convex surfaces, and screw-threaded depressors screwed into the bridge and wrest-plank and having lateral heads which rest on the string, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

DOMINIK L. BOLLERMANN.

Witnesses:

WM. C. HAUFF,
E. F. KASTENHUBER.