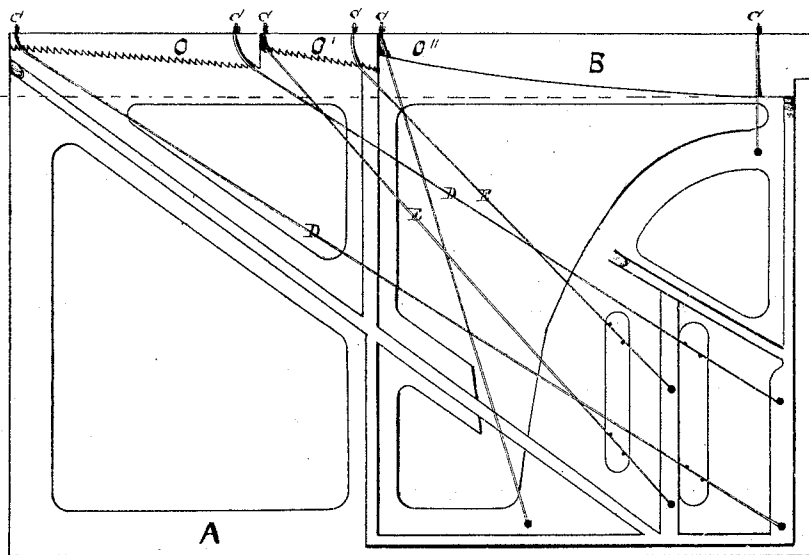


A. HARTENSTEIN.
Upright Piano-Fortes.

No.149,307.

Patented April 7, 1874.

— Fig. 1. —



— Fig. 2. —



Witnesses

Carl J. M. Roster.

Jacob W. Loeper

Inventor. *Albert Hartenstein*

UNITED STATES PATENT OFFICE.

ALBERT HARTENSTEIN, OF INDIANAPOLIS, INDIANA.

IMPROVEMENT IN UPRIGHT PIANO-FORTES.

Specification forming part of Letters Patent No. **149,307**, dated April 7, 1874; application filed June 28, 1873.

To all whom it may concern:

Be it known that I, ALBERT HARTENSTEIN, of Indianapolis, in the county of Marion and State of Indiana, have invented certain Improvements in Piano-Fortes, of which the following is a specification:

My invention relates to that class of pianos known as upright square; and it consists in the construction and arrangement of the bridge over which the strings pass to the tuning-pins, the object being to both cheapen the bridge, and at the same time to provide for overstringing in such a manner as to bring the greatest practicable number of strings to the middle of the sounding-board, as well as securing a greater length of string, and thereby greatly increasing the tone and power of the instrument within a small space.

Figure 1 is a front elevation of the frame and sounding-board of an upright piano embodying my invention. Fig. 2 is a top edge view of the same.

A is the cast-iron frame now usually employed to sustain the strings. B is the bridge near the top of the frame, over which the strings pass to the tuning-pins C, the latter being arranged in the top edge of the frame, as shown, so as to allow the bridge B to be placed at the top edge of the frame, and thereby

increase the length of the strings. The bridge B is cast with and made part of the frame A, though it may be made in a separate piece, and is divided into three sections, O O' O'', constructed and arranged as clearly shown in the drawing, the sections O O' having notches on the edges, as shown, through which the diagonal strings D E pass to the tuning-pins C.

The advantages claimed for this construction and arrangement of the bridge B are cheapness, together with comparative freedom from fretting of the strings where they pass through the notches.

The arrangement of the pins C possesses an additional advantage in the facility and convenience with which they may be turned, by means of a suitable key, in tuning the instrument. The plain section O'' of the bridge is the part that the short strings pass over.

I claim as my invention—

The bridge B, provided with the sections O O' O'', in combination with the frame A and tuning-pins C, all constructed and arranged substantially as and for the purpose set forth.

ALBERT HARTENSTEIN.

Witnesses:

CARL J. M. KOSTER,
JACOB W. LOEPER.