

P. GMEHLIN.

Improvement in Piano-Fortes.

No. 129,727.

Fig. 1.

Patented July 23, 1872.

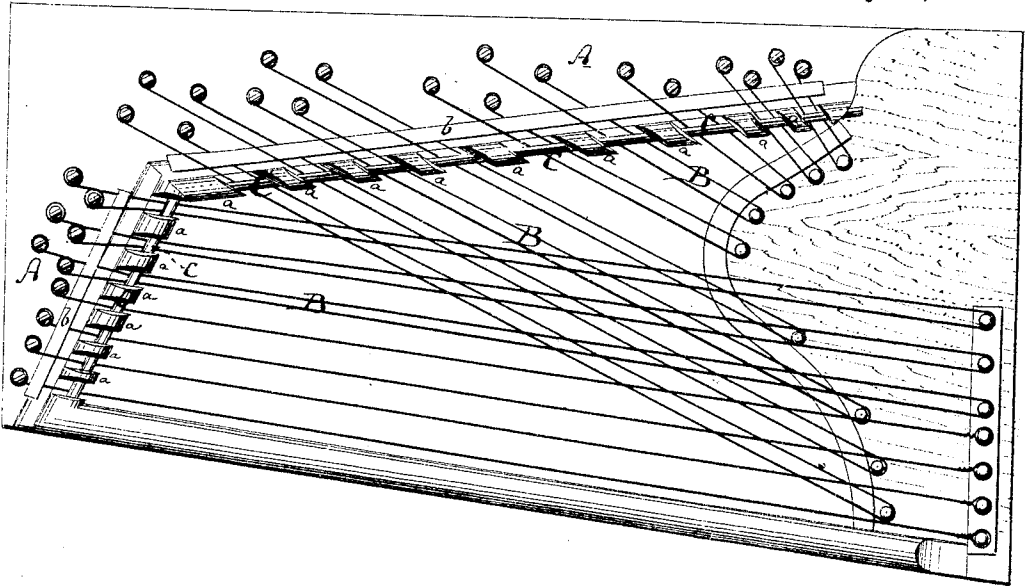


Fig. 2.

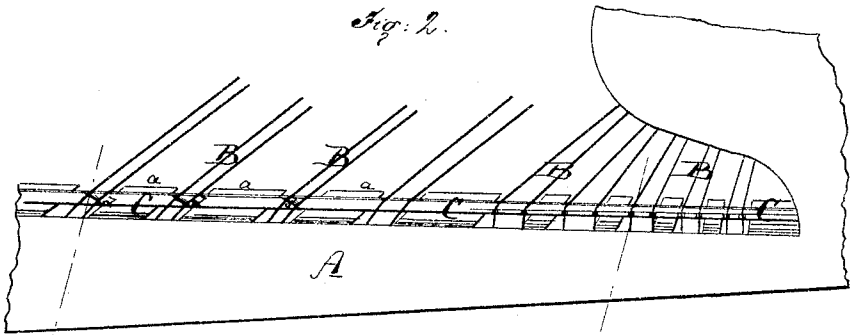


Fig. 3.

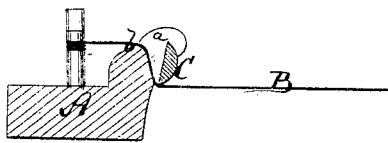
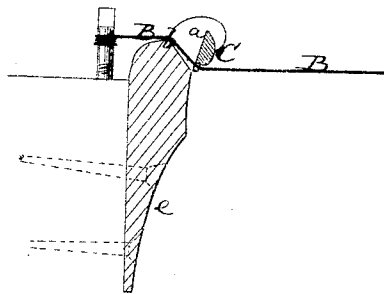


Fig. 4.



Witnesses:

Chas. Nida
W. A. Graham

Inventor:

P. Gmehlín

PER

Wm. J. C.

Attorneys.

UNITED STATES PATENT OFFICE.

PAUL GMEHLIN, OF NEW YORK, N. Y.

IMPROVEMENT IN PIANO-FORTES.

Specification forming part of Letters Patent No. 129,727, dated July 23, 1872.

Specification describing a new and useful Improvement in Piano-Fortes, invented by PAUL GMEHLIN, of New York city, in the county and State of New York.

In the accompanying drawing, Figure 1 is a top view of the interior of a piano-forte, showing my invention. Fig. 2 is a bottom view of my invention. Figs. 3 and 4 are transverse sections of the same.

Similar letters of reference indicate corresponding parts.

This invention relates to a new manner of sustaining the strings of a piano-forte, with the object of dispensing with the expensive agraffe and bridge systems heretofore in use or proposed.

The invention consists principally in forming hooks on the plate of the instrument, and resting a bar against the under sides of the same in such manner that the said bar will be unsupported above each string, as the hooks are placed between the cores of strings. This dispenses with the necessity of perforating the hooks for the admission of the strings, for as soon as the hooks were placed in the way of the strings they would only be agraffes, while by being removed entirely from the direction of the strings they are solely supports for the bar, and can in consequence be readily formed on the plate, without great regard to appearance or special form.

A in the drawing represents the plate of the piano. It is made of suitable form, according to the style and shape of the piano, which may be a grand, square, or other instrument. B B are the strings. On the inner edge of the plate A are formed projecting hooks *a*, one

between every pair of "cores" or sets of strings C is a bar of soft metal, ivory, or other material, placed against the under side of the hooks *a*, to extend along the inner side of the plate A. The strings are drawn under the bar and then up over a projecting rib, *b*, of the plate. The bar serves thus to define the length of the vibrating portion of each string. It may be notched on the under side or recessed to receive the strings, or may have oblique edges *d d* (Fig. 2) formed on its under side, to equalize the vibrating portions of the strings of one core or set. The hooks *a* can easily be cast on the plate A, and serve, therefore, by holding the bar C free in line with each set or core of strings, to give all necessary support to the latter and to insure the full effect of the harmony to be derived from them. Instead of being directly cast or formed on or fastened to the plate A, the hooks *a* may be formed on separate sections of plate, which are in that case provided with pendent ears *e* to be screwed to the wrest-plank, as indicated in Fig. 4.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The hooks *a*, separately formed on the plate A, between the cores or sets of strings, and holding the bar C, substantially as herein shown and described.

2. Also, the bar C, notched or grooved on the under side, to define the position of the strings or their vibrating lengths, as set forth.

PAUL GMEHLIN.

Witnesses:

A. V. BRIESEN,
T. B. MOSHER.