(No Model.)

G. B. KELLY.

STRINGING DEVICE FOR PIANOFORTES.

No. 564,082. Patented July 14, 1896.

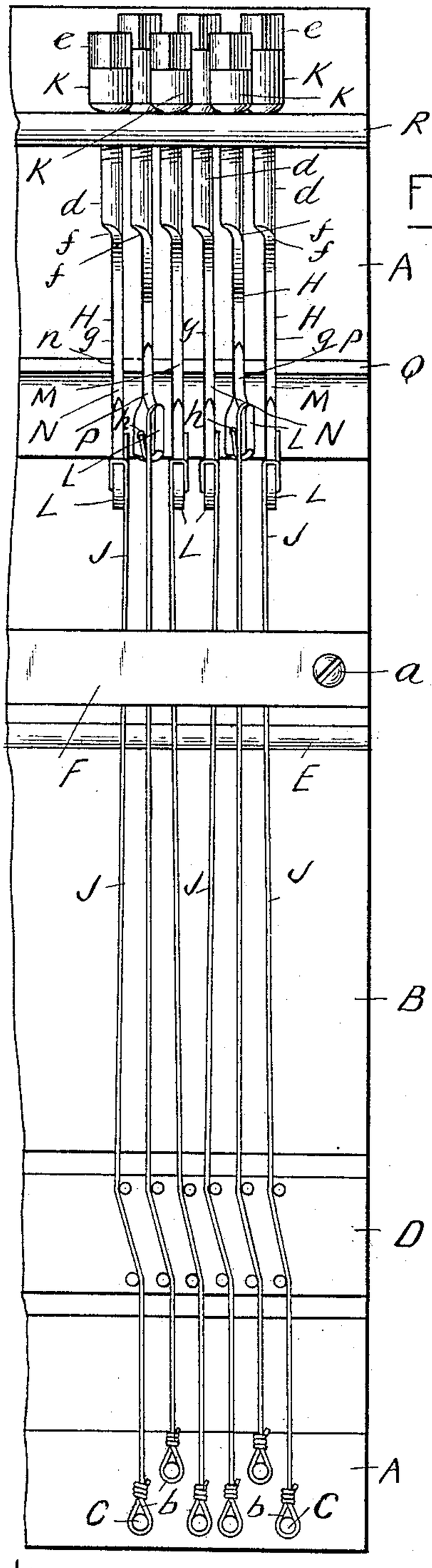

Fig. 1.

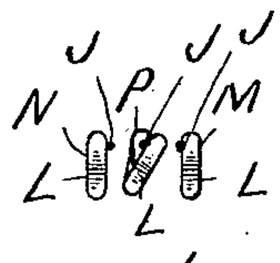

Fig. 3.

Fig. 2.

WITNESSES

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GEORGE B. KELLY, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO THE MASON & HAMLIN COMPANY, OF SAME PLACE.

STRINGING DEVICE FOR PIANOFORTES.

SPECIFICATION forming part of Letters Patent No. 564,082, dated July 14, 1896.

Application filed May 16, 1896. Serial No. 591,824. (No model.)

To all whom it may concern:

Be it known that I, GEORGE B. KELLY, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Stringing Devices for Pianofortes, of which the following is a full, clear, and exact description.

This invention relates to improvements in the stringing device for pianos described and shown in Letters Patent of July 24, 1883, No. 281,794.

The object of this invention is to construct and arrange the stringing device shown and described in said patent so that, with the wires or strings attached thereto, they will all extend in straight lines therefrom to the sounding-board bridge, and have each group of strings for each note brought together and there held in position for the hammer to properly strike them without any grooves or notches in the under side of the binder which is now used for spacing the strings or bringing them together for such purpose, the binder on its under side in this invention having no grooves or notches, but being straight and smooth; and the invention consists of a stringing device for pianos, constructed and arranged all substantially as hereinafter fully described, reference being had to the accompanying sheet of drawings, in which is represented in detail two groups or sets of strings for a piano, respectively, for two notes properly arranged and connected to their respective stringing devices.

Figure 1 is a plan view. Fig. 2 is a detail side view, and Fig. 3 is a detail end view to be hereinafter referred to.

In the drawings, A represents the usual metal frame of a piano; B, the sounding-board; C, the hitch-pins; D, the bridge on the sounding-board; E, the other bridge; F, the binder secured by screws *a;* H, the stringing device, and J the strings.

Each string is secured to its respective stringing device passing under the binder over the sounding-board bridge D and connected by its loop end *b* to its respective hitch-pin C.

The stringing devices, as shown, are arranged in two groups of three each and each is composed of wire having round shanks *d*, screw-threaded to receive a screw-nut K, which has a square head *e* for operating it. From the point *f* downward each stringing device is flattened or made thin, making a flat blade *g* at one side of the shank, and at its lower end it is provided with a hook L and a hole or opening *h*, and from the point *f* downward to the point *m* each blade is bent edgewise, as shown. The two outer ones M N of each group are bent forward, and the middle one P of each group is bent backward, as shown in Fig. 3 more particularly, so that the flat part *g* of each stringing device below the point are all brought substantially in the same vertical plane, side by side, but with sufficient space for the strings without touching each other.

The flat part *g* of each stringing device when in place is disposed in a groove *n* in a transverse guide-rail Q, which serves to prevent lateral movement and any twist or turn of the same.

Each shank *d* of the stringing devices extends through a hole in a flange or rib R of the iron plate, a screw-nut K screwing onto the projecting shank end, which brings its strings to their proper tension.

Each string by its loop *b* is placed over its respective hitch-pin. The other end of the string is passed through the hole *h* in its stringing device, and the string then turned or looped one or more times over and around its hook, and the device secured in place by screwing up its screw-nut K.

The description so far embodies substantially what is shown in the patent referred to, but in this invention the strings are secured on different sides of the stringing devices. The middle stringing device of each group of stringing devices is shorter than its outer ones and is constructed differently in order to attain the object of the present invention.

As shown in the patent, each string is secured to its respective stringing device so that it extends therefrom on the same or left side. The stringing devices are all of the same length and their hook ends are all in the same transverse line. This necessitates the spreading of the stringing devices somewhat apart in order to have sufficient room for the strings and hooks without interfering with each other,

which separates the strings so much that in order to bring them near enough together where the hammer strikes them transverse grooves or notches are required in the under side of the binder in which the strings are disposed, which necessitates the strings converging thereto, and which then diverge to the sounding-board bridge, which is objectionable for various reasons and is obviated in the present invention.

In this invention the middle stringing device in each group is shorter than the outer ones, bringing its hook back or above the other hooks, as shown, and its hook is bent or twisted over laterally to one side, as shown in Figs. 1 and 3, more particularly in order to have its string, when attached thereto, midway between the two outer strings, as shown. In the two outer ones the ends of the strings are passed through their respective holes from their inner sides, and each string looped or turned over its hook, so that it extends downward therefrom from the inner side of its stringing device, while the string to the middle stringing device is placed through the hole from the left side, Fig. 1, and then looped or turned over the hook for it to extend therefrom on its left side, which is the upper side as it is bent or twisted. This brings the middle string midway between the two outer strings, as shown. The lateral bending or twisting of the hook with its string, as shown, and the strings of the outer hooks being on their inner sides, brings the strings close together, so they can pass in straight lines to their sounding-board bridge, dispensing with the usual grooves or notches in the under side of the binder.

The hook end of the central stringing device can be bent or twisted to either side. Another advantage of this invention over the arrangement of the stringing devices as described and shown in said patent is that the liability of the strings where secured to their stringing devices touching or interfering with one another is entirely obviated in this invention.

Having thus described my invention, what I claim is—

1. A stringing device having a flattened or thin lower hooked end and a screw-threaded shank, its hook end being bent twisted or inclined laterally or sidewise.

2. A stringing device having a flattened or thin lower hooked end, a screw-threaded shank, its hook end being bent, twisted or inclined laterally or sidewise and provided with a hole or opening for the passage of the string through it.

3. A stringing device having a flattened or thin lower hooked end, a screw-threaded shank bent or inclined edgewise between its threaded shank and its flattened or thin portion or blade, its hook end being bent, twisted or inclined laterally or sidewise.

4. A group of three stringing devices disposed side by side, each having a flattened or thin lower hooked end, the middle one shorter than the outer two, to bring its hook end above or beyond the hooked end of the others, the strings secured to the outer stringing devices and extending therefrom on their inner sides, the hook end of the middle stringing device being bent, twisted or inclined laterally and its string secured thereto and extending therefrom on the upper side of the hook.

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

GEORGE B. KELLY.

Witnesses:
EDWIN W. BROWN,
LEONA C. ARNO.