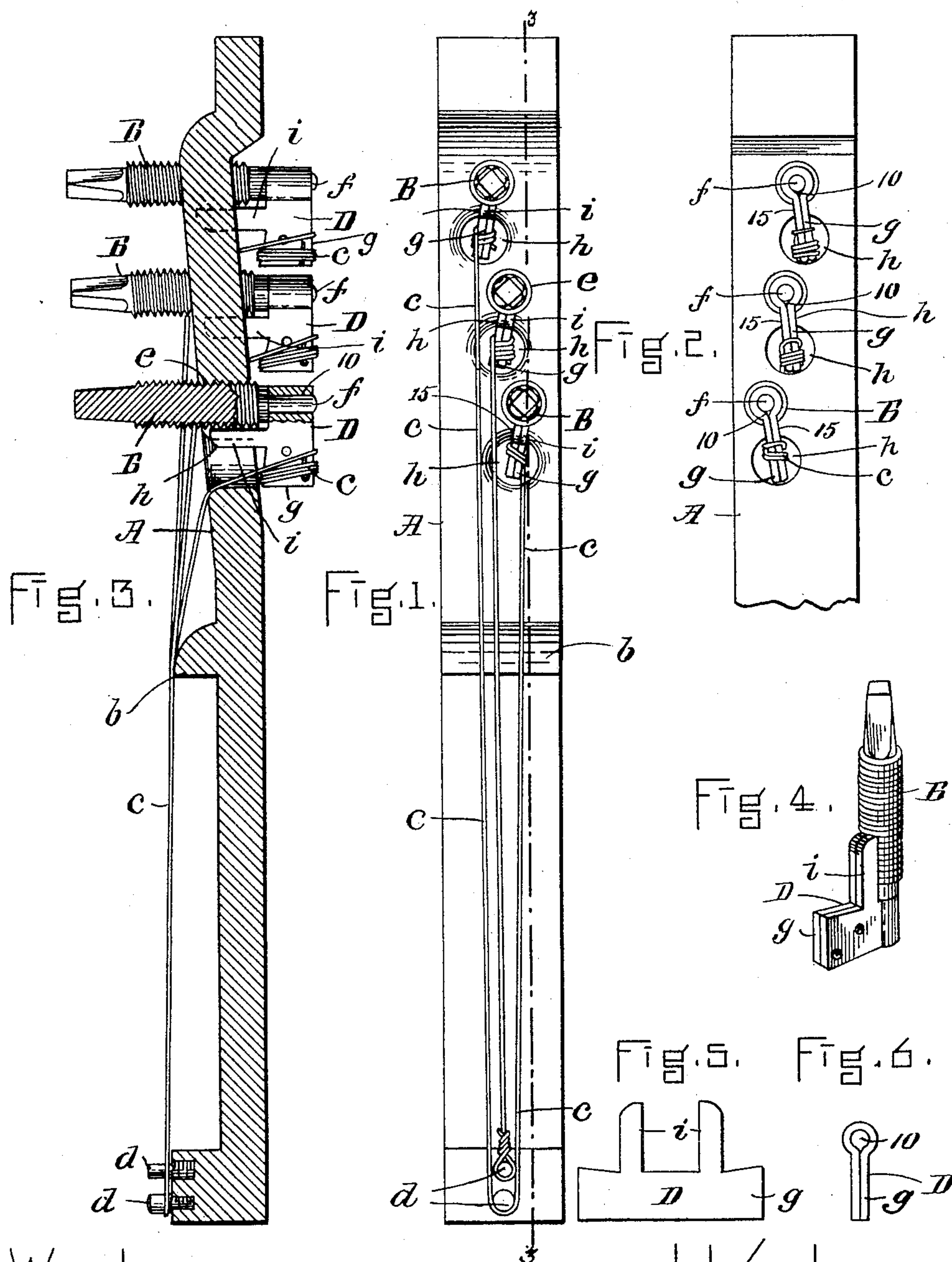


(No Model.)

G. M. GUILD.  
STRINGING AND TUNING DEVICE FOR PIANOS.

No. 584,725.

Patented June 15, 1897.



WITNESSES

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# UNITED STATES PATENT OFFICE.

GEORGE MORSE GUILD, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO LOUISE  
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## STRINGING AND TUNING DEVICE FOR PIANOS.

SPECIFICATION forming part of Letters Patent No. 584,725, dated June 15, 1897.

Application filed September 24, 1894. Renewed November 19, 1896. Serial No. 612,780. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE MORSE GUILD, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented certain Improvements in Stringing and Tuning Devices for Pianos, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a front view of a portion of the string-frame of a piano having my improved stringing and tuning device applied thereto. Fig. 2 is a view of the rear or under side of that portion of the string-frame to which my improved device is applied. Fig. 3 is a longitudinal vertical section on the line 3 3 of Fig. 1. Fig. 4 is a perspective view of one of the string-holders and its tuning pin or screw removed from the string-frame. Fig. 5 is a view of the sheet-metal blank from which the string-holder is made. Fig. 6 is a bottom view of the string-holder.

My invention relates to an improvement on the stringing and tuning device for which Letters Patent of the United States No. 417,674 were issued to me December 17, 1889. In my said patented device it was necessary to make the string holder or supporter of large size in order to bear the great strain to which it was subjected by the string attached thereto, and, furthermore, it was necessary to string the piano from the back or inner side of the string-frame, which increased the expense and caused much inconvenience. My present invention has for its object to overcome these difficulties and to enable me to string the instrument from the front side of the string-frame and to greatly reduce the size of the string-holder which is connected with the tuning pin or screw.

To this end my invention consists in a string-frame having a threaded hole for the tuning pin or screw and a slot or aperture for the string cut entirely through the frame and communicating with said threaded hole, combined with a threaded tuning pin or screw carrying at its inner end a swiveling string-holder having one end of the string secured thereto, said string-holder being adapted to be passed from the front or outer side of the

string-frame through the string-aperture therein at the same time that the tuning pin or screw is inserted within the said frame, whereby the necessity of gaining access to the rear or inner side of the string-frame is entirely avoided, as hereinafter more particularly described.

In the said drawings, A represents the metallic string-frame of an upright piano which is provided, as usual, with a rest *b* for the strings *c*, which are secured in the usual manner by means of hitch-pins *d*, projecting from the string-frame A, or secured to said frame in any other suitable manner.

The string-frame A is provided with threaded holes *e* for the reception of the threaded tuning or straining pins B, which are screwed through the frame, as shown, and provided with heads suitably shaped to receive a tuning wrench or key. Each pin B has its inner end turned down to form a journal *f*, upon which is fitted a string-holder D, which is provided with a projection *g*, having one or more holes to receive the string *c*, which is coiled several times around said projection before the string-holder is placed upon the journal *f* of the tuning-pin, the string *c* extending through a slot or aperture *h*, cut entirely through the string-frame and communicating at one end with the threaded hole *e*, which receives the tuning-pin, as shown in Fig. 3.

Each string-holder is preferably composed of a piece of sheet-steel cut or punched out to form a blank of the shape shown in Fig. 5, which is then doubled over, as shown in Fig. 6, to form an aperture or bearing to receive the journal *f* of the tuning-pin B. This string-holder D, besides having the projecting portion *g*, to which is attached the end of the string *c*, is provided with a lateral extension *i*, which lies within the string slot or aperture *h* and takes a bearing against the side of the tuning-pin B, as shown in Figs. 3 and 4, thereby stiffening and strengthening the holder and enabling it to be made smaller and lighter and to better resist the great strain to which it is subjected by the draft of the string.

It will be seen that the inner or cylindrical portion of the string-holder, which receives



the journal *f* of the tuning-pin, is of such diameter that it will pass freely through the threaded hole *e*, while the projection *g* and extension *i* are quite narrow and are adapted to pass easily through the string slot or aperture *h*, which communicates with the said hole *e*, and consequently the string-holder, after having been placed on the tuning-pin B, can be passed from the front or outside of the string-frame A through the string-aperture *h* at the same time that the tuning-pin B is inserted within its threaded hole *e*, thereby greatly facilitating the operation of stringing a piano, while the necessity of gaining access to the rear or inner side of the string-frame to string the piano or make repairs is avoided and a material saving in time and labor thereby effected. The narrow portion 15 of the string-aperture *h* also serves as a guide for the extension *i* of the string-holder, which, together with the projection *g* of said holder, slides within the aperture *h* as it is moved by the tuning-pin B, the string-holder being thus prevented from turning with the tuning-pin as the latter is screwed in or out to put the desired tension upon the string.

The above-described stringing and tuning device can be applied at a very small expense, is exceedingly simple, strong, and durable, free from liability to get out of order, and will hold the strings firmly and securely in place, thus preventing the piano from getting out of tune except by the stretching of the strings.

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

1. In a piano, a string-frame having a threaded hole for the tuning-pin, and having a string slot or aperture cut entirely through the frame and communicating with said threaded hole, combined with a tuning-pin carrying at its inner end a swiveling string-holder having one end of the string secured thereto, said string-holder being properly shaped and adapted to be passed together with the string secured thereto from the front or outer side of the string-frame through the same, and having a projection adapted to fit within the string-slot and take a bearing against the side of the tuning-pin, said string-slot forming a guide for said projection, whereby the string-holder is prevented from

turning with the tuning-pin, substantially as set forth.

2. In a piano, a string-frame having a threaded hole for the tuning-pin, and having a string slot or aperture cut entirely through the frame and communicating with said threaded hole, combined with a tuning-pin having at its inner end a journal of smaller diameter than the body of the screw, a string holder or supporter swiveling upon said journal and having one end of the string secured thereto, said holder being shaped to be passed through the string-frame from the front or outer side and having a projection *i* adapted to fit within the string-slot and take a bearing against the side of the tuning-pin, all operating substantially as and for the purpose described.

3. In a piano, the combination, with a string-frame A having a threaded hole *e* for the tuning-pin and having a string slot or aperture *h* cut entirely through said frame and communicating with said threaded hole, of a tuning-pin B having one end shaped to receive a wrench or key by which it may be turned, and carrying at its opposite end a swiveling string holder or supporter D mounted on a journal *f* formed at the inner end of the tuning-pin and of less diameter than the body of the same, said string-holder having a projection *g* to which one end of the string is secured, and being provided with an extension *i* fitting within the string slot or aperture, the latter forming a guide to prevent the string-holder from turning with the tuning-pin, substantially as set forth.

4. In a piano, the combination, with the string-frame having a threaded hole for the tuning-pin and having a string slot or aperture cut entirely through the frame and communicating with said threaded hole, and a tuning-pin having a journal at its inner end, of a string-holder composed of sheet metal doubled or folded together to form a bearing for the journal of the tuning-pin, and having an extension *i* and a projection *g* to which the string is attached, substantially as set forth.

Witness my hand this 18th day of September, A. D. 1894.

GEORGE MORSE GUILD.

In presence of—

P. E. TESCHEMACHER,  
R. HENRY MARSH.