

C. E. ROGERS.

STRINGING AND TENSION DEVICES FOR PIANO-FORTES.

No. 171,047.

Patented Dec. 14, 1875.

Fig. 1.

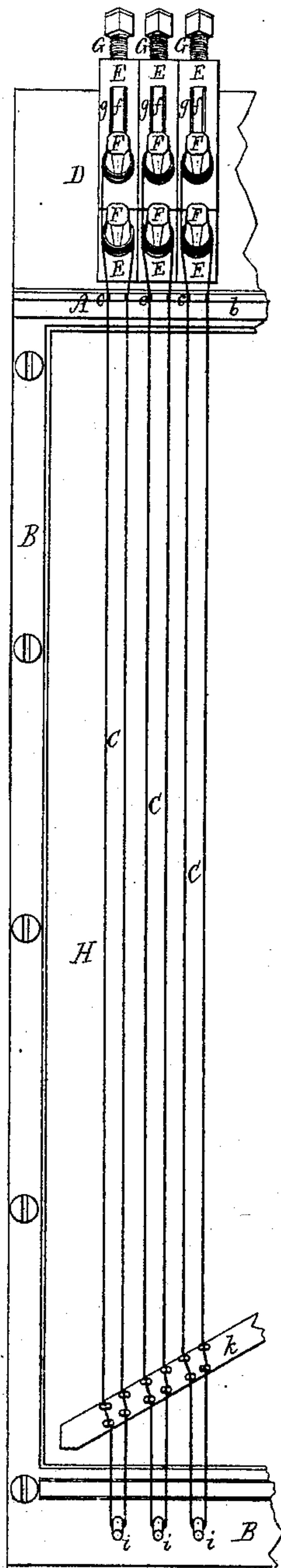


Fig. 2.

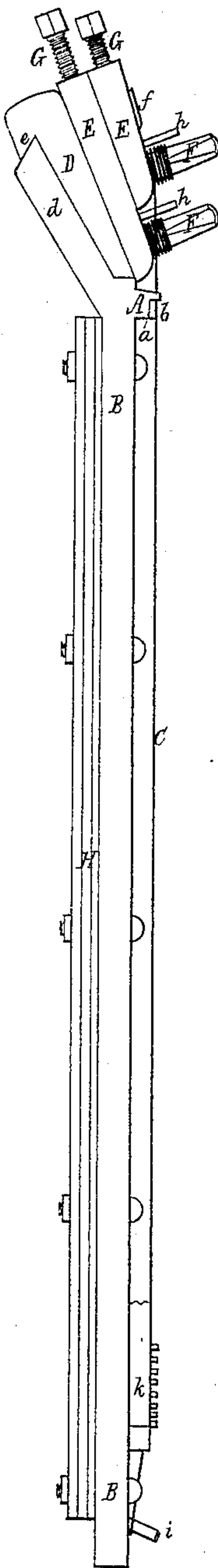


Fig. 3.

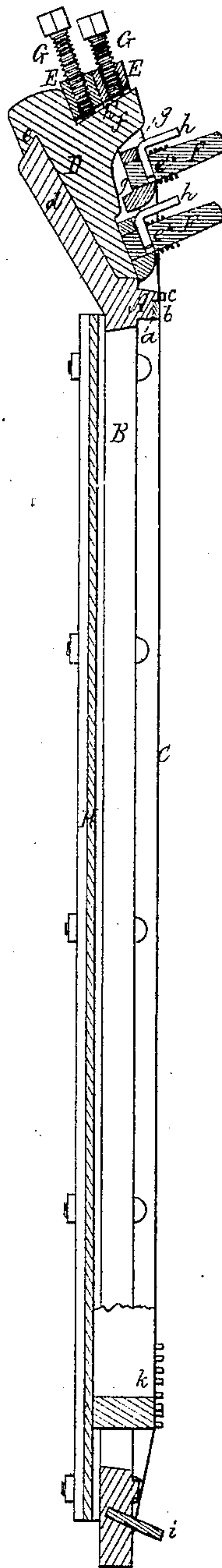


Fig. 4.  
F ⊕ e'

Witnesses.

*S. W. Piper*  
*L. W. Müller*

*Charles E. Rogers*

*by his attorney.*

*R. H. Ledy*

# UNITED STATES PATENT OFFICE.

CHARLES E. ROGERS, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO THE  
ROGERS UPRIGHT-PIANO COMPANY, OF SAME PLACE.

## IMPROVEMENT IN STRINGING AND TENSION DEVICES FOR PIANO-FORTES.

Specification forming part of Letters Patent No. **171,047**, dated December 14, 1875; application filed  
October 23, 1875.

*To all whom it may concern:*

Be it known that I, CHARLES E. ROGERS, of Boston, of the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Piano-Fortes; and do hereby declare the same to be fully described in the following specification and represented in the accompanying drawings, of which—

Figure 1 is a front elevation; Fig. 2, an edge view; and Fig. 3 a longitudinal section of the string-frame of an upright piano-forte provided with my invention. Fig. 4 is a transverse section of one of the straining-pins, such section being taken through its two diametric holes for receiving the bent stop-pin, to be hereinafter described.

In making the metallic string-frame of a piano-forte I construct the upper string, supporting ledge A of the metallic string-frame B, with a rabbet, *a*, and I arrange therein a strip or cushion, *b*, of leather or other proper soft and yielding material, for the strings C C, &c., to bear upon next to their notches *c c* in said ledge. Furthermore, in carrying out my invention, I apply to the upper portion *d* of the metallic frame a separate bar, D, hooked at its upper part upon the said portion *d* in manner as represented at *e*. This bar D I provide with a series of abutments or lugs *f f* extended from it in manner as shown, or, instead of such bar and lugs cast together, such a series of lugs may be extended directly from the upper part or bar of the frame.

The reason I prefer the separate bar D is because it can be cast with its lugs much better or easier, and with less expense and risk, than can the metallic frame be cast with such a set of lugs.

Each lug extends up within the slots *g g* of two slides, E E, formed as shown, one being shorter than the other, and resting on it. There is a pair of such slides to each string C. Each of the slides has a straining-pin, F, inserted in and projecting from it in manner as shown. Each of said pins, besides having a hole made through it for reception of the string, has two or more other holes, *e' e'*, made transversely through it diametrically.

A bent pin, *h*, when inserted in one of these latter holes, and also in the slot of the slide, in manner as shown, serves to prevent the straining-pin from revolving. Furthermore, in each slide there is screwed a screw, G, with its point against the inclined upper edge *h'* of the lug *f* that extends up within the slot of the slide. Each string C, looped at its middle on one of a series of hitch-pins, *i i i*, arranged as shown, is carried, in the usual manner, across and upon the bridge *k* of the sounding-board H, after which its ends are passed short distances through its pair of straining-pins F F. This having been done, these pins are to be revolved so as to wind the wire upon them until its slack or stretch may have been taken out. This having been done, the bent pins *h* are to be inserted in the straining-pins and in the slots of their pair of slides. After this, by screwing the screws G G of the pair of slides against the lugs the slides may be moved endwise, so as to strain the string and tune its two parts in unison.

By means of the devices as explained a very perfect tuning of the strings can be effected without danger of the tuning-pins slipping or not holding fast in their sockets.

The cushioned ledge A prevents vibration of those parts of the string that are between such ledge and the straining pins, and therefore prevents the noise consequent upon such vibration.

I claim as my invention as follows:

1. The combination of the slotted slide E, its straining-pin F and operative screw G, all arranged as set forth.
2. The combination of the slotted slides E E, their straining-pins F F and screws G G, with the string-frame B and the lugs *f f* to extend from it, or a separate bar applied to it, as described.
3. The separate bar D, provided with the hook *e*, and the series of lugs *f*, all arranged as and for application to the string-frame B and the slides E, as specified.

CHARLES E. ROGERS.

Witnesses:

R. H. EDDY,  
J. R. SNOW.