T. Gilbert,

Piano Frame,

No. 5,202, Patented July 24, 1847.

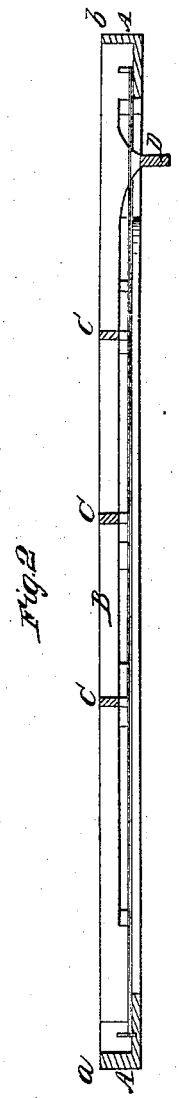

Fig. 2.

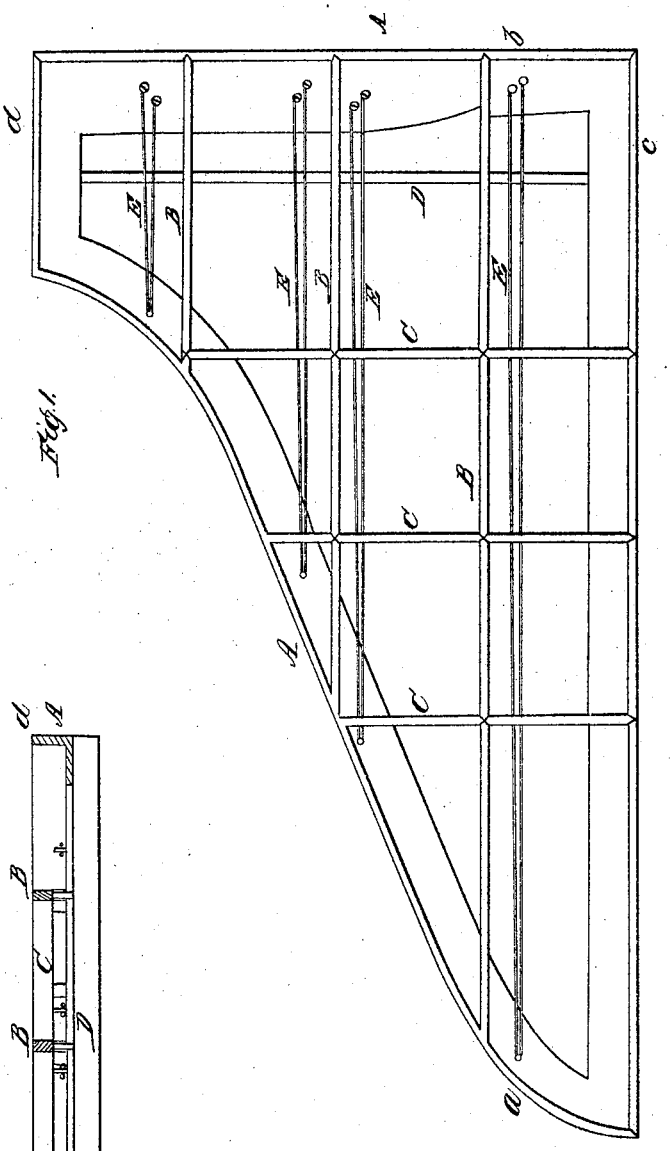

Fig. 1.

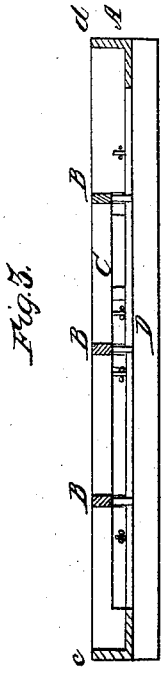

Fig. 3.

UNITED STATES PATENT OFFICE.

TIMOTHY GILBERT, OF BOSTON, MASSACHUSETTS.

METALLIC FRAME FOR PIANOFORTES.

Specification of Letters Patent No. 5,202, dated July 24, 1847.

To all whom it may concern:

Be it known that I, TIMOTHY GILBERT, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Metallic Frames for Grand Pianofortes; and I do hereby declare that the same is fully described and represented in the following specification and accompanying drawings, letters, figures, and references thereof.

Of said drawings Figure 1 represents a top view of my improved cast iron frames for pianofortes. Fig. 2 is a longitudinal and vertical section taken through *a b* of Fig. 1. Fig. 3 is a transverse and vertical section taken through *c*, *d*, Fig. 1.

A denotes the main part of the frame and B, B, B, the longitudinal strengthening bars made and combined together in the usual form and manner.

My improvement consists in applying to said frame and longitudinal bars, transverse or cross bars C, C, C, which I cast in connection with the long bars, and main part of the frame. I apply beneath the frame, and transversely near the head of it, a deep cross bar D, which I also cast to the frame, and to the longitudinal bars B, B, B. Both the longitudinal and transverse bars B, B, B, and C, C, C, should in general be elevated somewhat above the strings F, F, &c., which extend from the curved part *a*, to the head piece *b* of the frame as seen in the drawings. The hitch pins of the strings are inserted in the curved part *a*, while the straining pins are arranged in the head plate *b*.

The cast iron frames heretofore made having been constructed with longitudinal bars only, in order to counteract the strain on the curved plate and screw or head plate of the frame, such bars operated only as struts in the direction of their lengths. They do not prevent to any material extent, the curved part of the frame from springing inward or from twisting down to which it is liable from the manner in which the strain of the strings is brought to bear upon it. The cross bars C, C, C, operate to prevent not only the bending inward of the curved part of the frame, but the torsion strain upon the said curved part.

What I claim is—

The combination of the cross bars, with the longitudinal bars, and straight and curved sides of the main frame, in the manner as described, whereby the said cross bars, serve as supports to the same, in order to prevent their springing out of place, laterally, as specified, thus making the frame itself do all the work of supporting the strains of the strings, and avoiding the employment of the usual bolts, and wooden framework (other than the case or frame of the instrument) to which the iron frame is usually confined, the cross bar beneath the frame, serving the purpose of an important support to the head of the frame, and also to the sounding board, the end of which is to be attached directly or indirectly to it.

In testimony whereof I have hereto set my signature this first day of February, A. D. 1847.

TIMOTHY GILBERT.

Witnesses:

R. H. EDDY,

S. W. WALDRON, Jr.