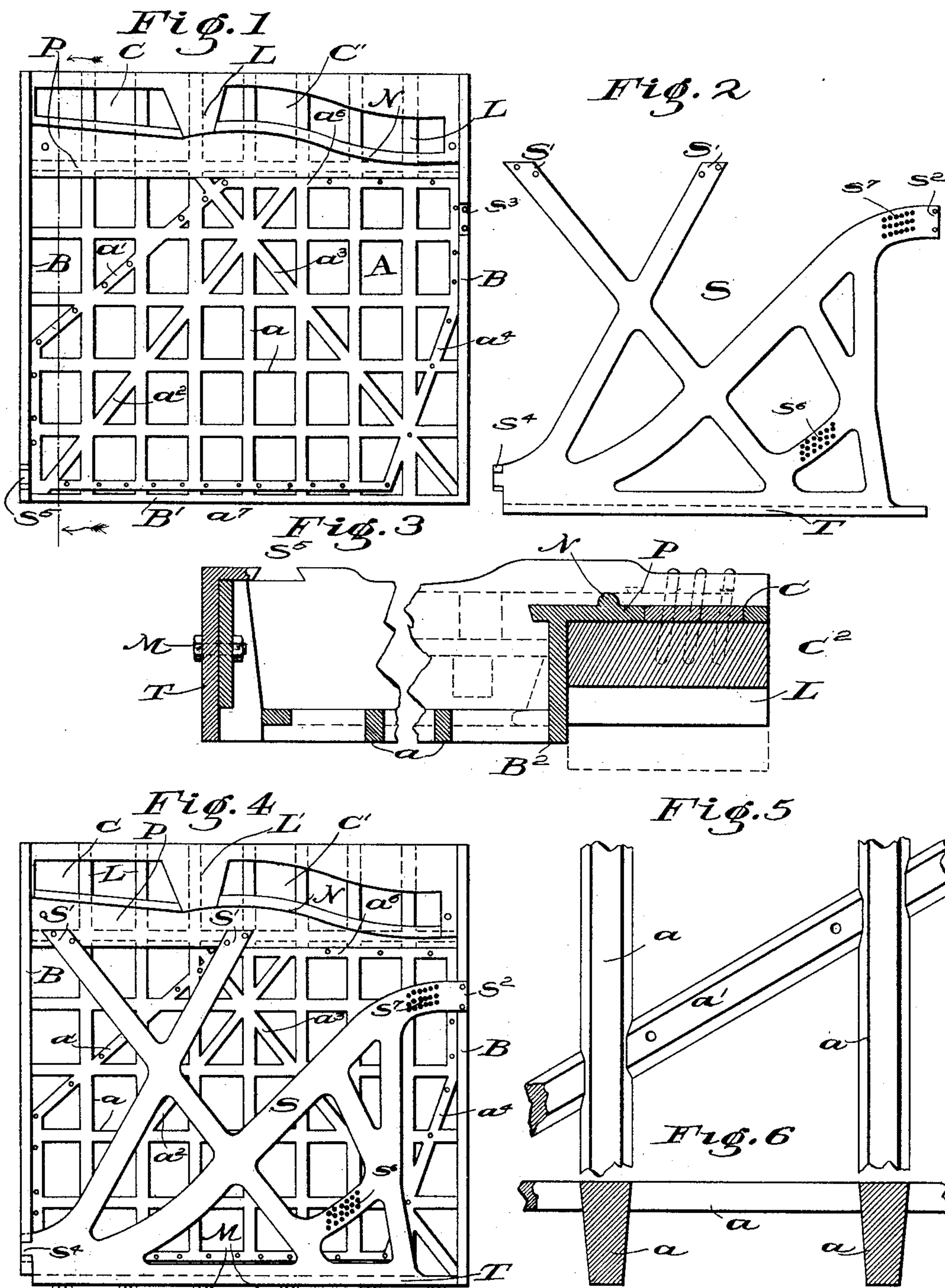


(No Model.)

W. SIEGEL.
FRAME FOR PIANOS.

No. 594,570.

Patented Nov. 30, 1897.



Witnesses:-

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UNITED STATES PATENT OFFICE.

WILLIAM SIEGEL, OF STADE, GERMANY.

FRAME FOR PIANOS.

SPECIFICATION forming part of Letters Patent No. 594,570, dated November 30, 1897.

Application filed January 25, 1897. Serial No. 620,606. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM SIEGEL, a citizen of the Kingdom of Prussia, and a resident of Stade, in the Kingdom of Prussia and German Empire, have invented certain new and useful Improvements in Frames for Pianos, of which the following is a specification.

This invention relates to certain improvements in the construction of piano-frames to prevent the several parts composing the frame from warping and becoming dislocated relatively to each other, thus subjecting the strings to unequal strains, which would impair the tuning. In order to effect this object, the entire frame must be so constructed that it will possess great rigidity and provide secure means for supporting the wrest or tuning pins.

In the accompanying drawings, Figure 1 shows a plan view of the improved back section of the piano-frame; Fig. 2, a plan view of the top or front section thereof to be applied to the frame-section shown in Fig. 1; Fig. 3, an enlarged sectional view of a portion of the back section, this view being taken at a point indicated by the line X X, Fig. 1, looking in the direction of the arrow; Fig. 4, a plan view of the back section with the top or front section secured thereon; Fig. 5, a plan, and Fig. 6 a sectional end elevation, of a part of the middle skeleton frame, showing a diagonal bar connecting two parallel bars thereof.

The essential features of my improved piano-frame are the skeleton back section A, formed of rectangularly-disposed cross-ribs a , connected by diagonal ribs $a^1 a^2 a^3 a^4$, and an exterior integral stiffening-flange embracing three sides of the frame, comprising the side flanges B and the end flange B'. The side flanges are connected by an integral cross-flange B² and top flange P, connecting the same at a point intermediate the length of the same.

Extending rearwardly from the lower edge of the flange B² are ribs L, which, together with top flange P and the flange B², form an inclosure to receive the pin-board C². (Shown in Fig. 3.)

C C' designate openings in the flange P through which the wrest or tuning pins pass to seat in the pin-board.

One of the ribs L is formed with an up-

wardly-extending flange which connects with the top flange P, as indicated at L', Fig. 1, for strengthening the frame at this point. The pin-board is in this manner firmly fixed to the reinforced stay-bound frame and is therefore well adapted to resist the enormous pull upon the strings when they are properly stretched and attuned.

The overstrung bass-string and short treble-string plate S is cast separately, as shown in Fig. 2, to rest with its projections S' S' on the inner edge of the flange P, to which it is secured by screws. The ends S² of said plate S fit in a recess S³, and the end S⁴ locks into a dovetailed groove S⁵ of frame B, at which points the said frame is further connected to said frame by screws.

The plate S has an L-flange T at its lower edge, which fits closely up against the end plate B' of the exterior stiffening-flange and is secured thereto by bolts and nuts M, as shown in Fig. 3, in a suitable manner to give the utmost stability to the said plate and thus hold the string posts or pins attached thereto at S⁶ and S⁷ upon fixed and immovable scroll-shaped ribs which comprise the main or body portion of said plate.

The diagonal ribs $a^1 a^4$ and the exterior rectangularly-disposed ribs $a^6 a^7$ have screw-holes, by which means a sound may be secured thereto in a simple, secure, and effective manner.

The flange P is further provided with an agraffe-flange N, upon which the strings are affixed by an agraffe-plate in a well-known manner to securely hold the strings and prevent end vibration thereof.

By means of the above-described framing the various parts comprising the frame are securely held together and provide struts and stretchers which effectually oppose the strains which are brought thereon by the ordinary cross arrangement of strings, and, while sufficiently light, the said frame will fully withstand the enormous stress of the strings equally in all directions and prevent the unequal yielding to the pull of the strings whereby their lengths and tensions, and hence their tone, would undergo proportionate change.

The plate S is easily and securely attached to the exterior and skeleton section of the frame, and, because of its angle-plate or L-

flange T connection therewith, the said plate-section S not only serves as a skeleton brace for the section A, but provides a rigid bar for connecting the lower ends of the overhung 5 bass and short treble strings to the frame.

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

1. A piano-frame comprising a back section formed of rectangularly-disposed cross- 10 bars and diagonal bars, an integral vertical flange extending around three sides of the back section, a cross-flange connecting the side flanges intermediate the length of the same, a tuning-pin board secured in the frame 15 outside of and abutting against the cross-flange, and a top section secured to the back section, substantially as described.

2. A piano-frame comprising parallel bars and an integral exterior stiffening-flange embracing three sides of the same, a cross-flange 20 B² and a top flange P connecting the side

flanges, the cross-bars extending beneath the top flange, a tuning-pin board secured in the receptacle formed by the extending ends of the bars, the cross-flange B² and the top flange 25 P and openings in the top plate through which the tuning-pins project, substantially as described.

3. A piano-frame comprising a rectangular exterior flange, a skeleton-frame plate contained therein and a superposed plate S, having an L-flange to fit the side of one of the exterior plates and overlies the skeleton-frame plate, substantially as described. 30

In testimony that I claim the foregoing as 35 my invention I have signed my name in presence of two subscribing witnesses.

WILLIAM SIEGEL.

Witnesses:

W. HAUPT,
HENRY HASPER.