

No. 666,137.

Patented Jan. 15, 1901.

C. R. S. J. HALLÉ.

METAL FRAME AND HITCH PIN PLATE FOR PIANOS.

(Application filed Aug. 14, 1900.)

(No Model.)

Fig 1

Fig. 2.

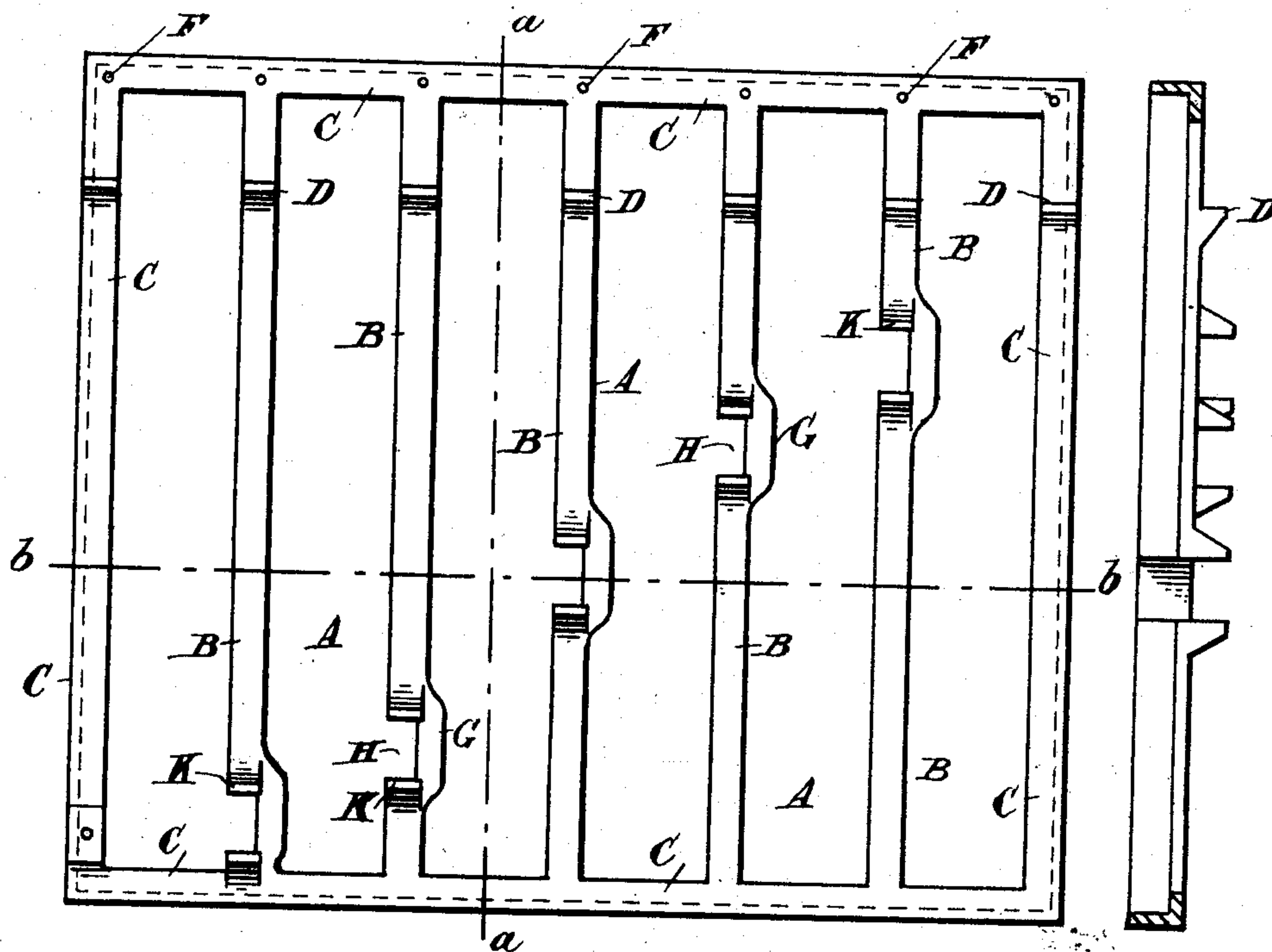


Fig. 3.

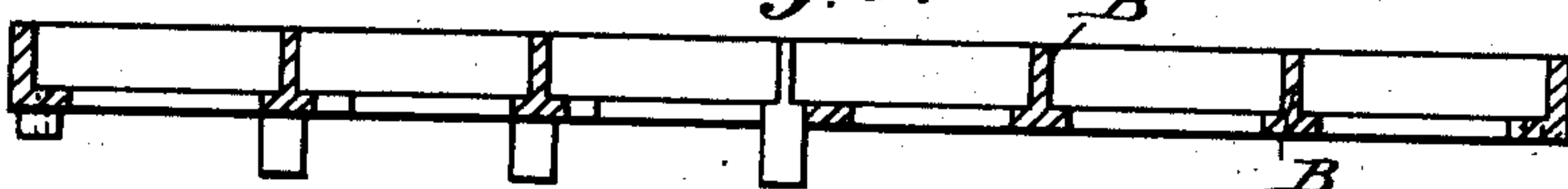


Fig. 4.

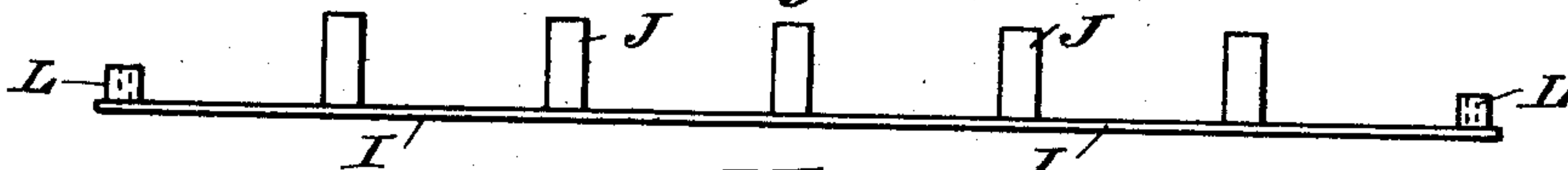
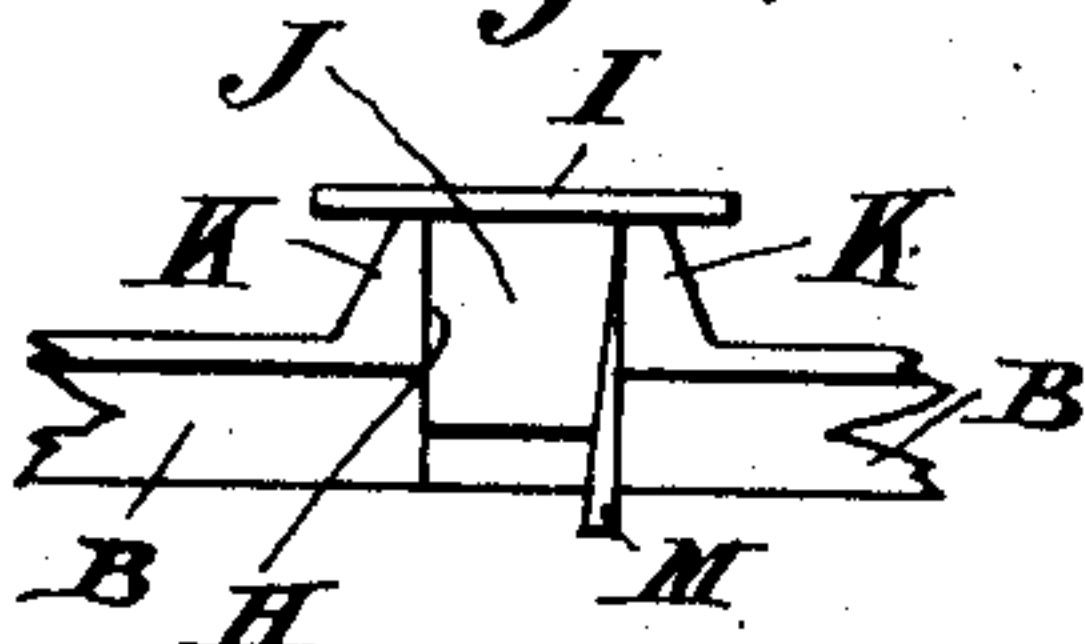


Fig. 5.



Witnesses

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UNITED STATES PATENT OFFICE.

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METAL FRAME AND HITCH-PIN PLATE FOR PIANOS.

SPECIFICATION forming part of Letters Patent No. 666,137, dated January 15, 1901.

Application filed August 14, 1900. Serial No. 26,890. (No model.)

To all whom it may concern:

Be it known that I, CLIFFORD ROBERT STEPHEN JOHN HALLÉ, a subject of the Queen of Great Britain, residing at 50 Lincoln's Inn Fields, London, England, have invented certain new and useful Improvements in the Construction of Metal Frames and Hitch-Pin Plates for Pianofortes, of which the following is a specification.

My invention has for its object the simplification of the construction of pianofortes and the improvement of tone by the use of iron resistance-frames, the bars of which are arranged behind the soundboard. To accomplish this in a manner whereby great strength is obtained in the connection of the hitch-pin plate to the frame, while the method of attachment is exceedingly simple, I have devised the following iron frame, which will be easily understood from the accompanying drawings. This system is available for either grand or upright or oblique pianos.

Figure 1 is a plan of my improved frame. Fig. 2 is a vertical section on line *a a*, Fig. 1.

Fig. 3 is a cross-section on line *b b*, Fig. 1. Fig. 4 is a side or edge view of the hitch-pin plate, the hitch-pins not being shown. Fig. 5 shows one of the lugs of the hitch-pin plate in position, fixed with a wedge.

The frame is preferably cast in one piece and consists of a series of T-shaped bars *b*, held together or cast with a surrounding edge frame *C* of Γ-shaped bars. The T-shaped bars have projections *D* cast on them a few inches from the top, as shown in Figs. 1 and 2, which form a support for the wrest-plank, which is bolted at the top through holes *F* or slots in the top of the frame *C*. At the required distances from the wrest-plank projections *D* the bars *B* are kinked or bulged on one side, as at *G*, to form recesses *H* in the bars, and at the top and bottom of these recesses blocks *K* are cast on the bars *B*, of the requisite height to raise the hitch-pin plate.

The hitch-pin plate *I*, Fig. 4, is cast with projections *J*, of an oblong shape, which projections fit into the aforesaid recess *H* in the bars *B*, the plate *I* itself resting upon the blocks *K*. The ends of the hitch-pin plate *I* carry lugs *L*, which are shorter and rest on

the bars *C* behind projections *K* and are attached by bolts or otherwise to the bars *C*.

One edge of the projections *J* of the hitch-pin plate may be beveled or angled to admit of a wedge being driven from the back of the frame between such projections and the back part of the recess *H* in the bars *B*, so as to insure the lugs *J* being firmly held in the recesses *H*, as shown in Fig. 5, (*M* being the wedge in position,) the bar *B* being broken off above and below the recess *H*.

In making the frame or back of the piano complete with wrest-plank and soundboard the bottom edge of the wrest-plank is cut to allow the projections *D* to embed themselves into it, so that the bottom edge of the wrest-plank is level or nearly level with the bottom of the projections *D*. A slip of wood is then glued onto the bottom edge of the wrest-plank, resting also on the bars *B*. Similar slips are then screwed onto the Γ-shaped bars *C* through holes in those bars. These slips form the gluing-surface for the soundboard. The soundboard is made with holes in it, so that it may pass freely over the blocks *K* on the bars *B* without touching at any part and is glued onto the aforesaid slips. When the soundboard is in position, the hitch-pin plate is dropped into its position, the ends *B* are bolted, and the greater the strain on the plate the more firmly the lugs *J* are held in the recesses *H*, the hitch-pin plate being in fact self-locking.

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

1. A metallic frame for pianos consisting of T-shaped end and side bars, a series of Γ-shaped bars connecting said end bars together and provided each with a recess, and a pair of projections carried by each of the bars and between which is arranged said recesses.

2. A frame having a series of bars connecting the ends together, said bars each provided with a suitably-arranged recess, a projection carried by each of the bars near the top thereof, and a pair of projections carried by each of the bars and between which the recess thereof is arranged.

3. A frame having a series of bars connect-

ing the ends together, said bars each provided with a recess and a bulged portion, a projection carried by each of said bars, and a pair of projections carried by each of said bars 5 below the first-mentioned projection and between which the recess thereof is arranged.

4. A frame having a series of bars connecting the ends together and each provided with a recess, a pair of projections carried by each 10 of said bars and between which the recess thereof is arranged, and a hitch-pin plate provided with a series of projections adapted to be secured in said recesses.

5. A frame having a series of bars connecting the ends together and each provided with 15 a recess, a projection carried by each of said bars and adapted to support a wrest-plank, a pair of projections carried by each of said bars and between which the recess thereof is 20 arranged, a hitch-pin plate engaging said

pairs of projections, and a series of projections carried by said plate and adapted to be secured in said recesses.

6. A frame having one of its ends provided with a series of openings to secure a wrest- 25 plank thereto, a series of bars connecting the ends of said frame together, and each provided with a suitably-disposed recess, a projection carried by each of said bars and adapted to support a wrest-plank, a hitch- 30 pin plate, and means connected thereto and engaging in said recesses for securing said plate to said bars.

In testimony whereof I have hereunto set my hand in presence of two subscribing wit- 35 nesses.

CLIFFORD ROBERT STEPHEN JOHN HALLÉ.

Witnesses:

EDMUND S. SNEWIN,
WM. O. BROWN.