

No. 682,067.

Patented Sept. 3, 1901.

C. R. S. J. HALLÉ.
PIANO STRING PLATE.

(Application filed Mar. 5, 1901.)

(No Model.)

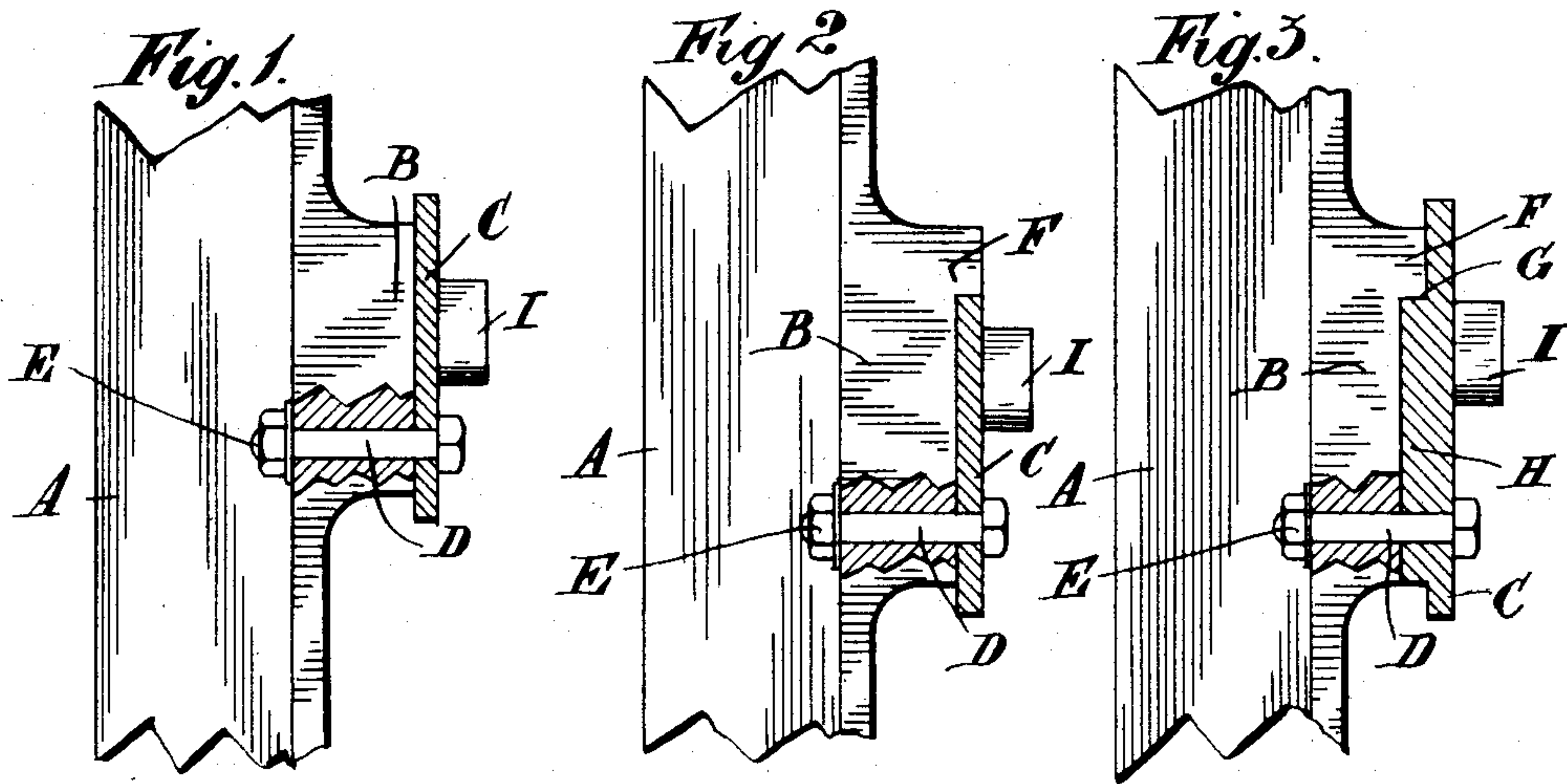
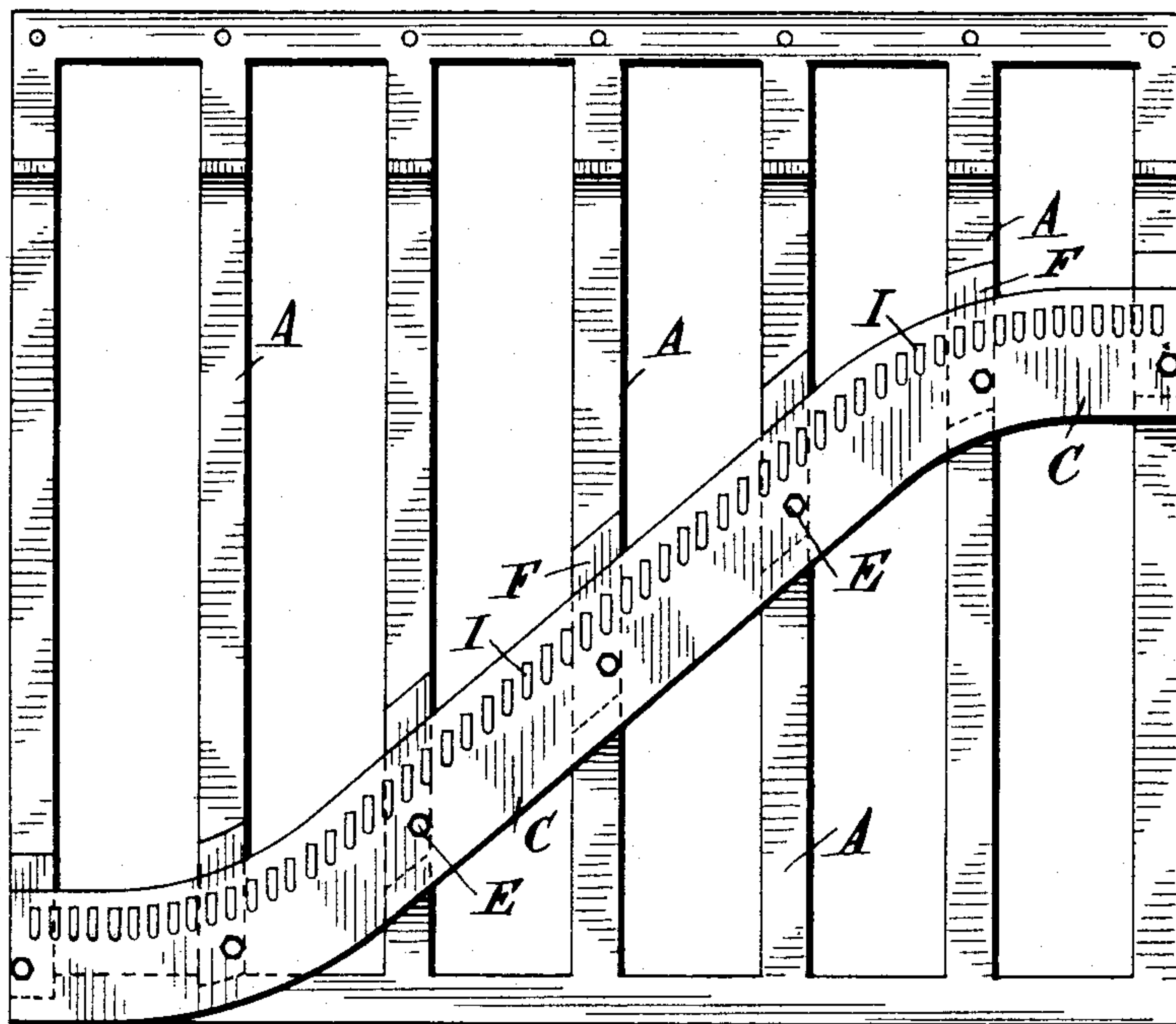


Fig. 4.



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PIANO STRING-PLATE.

SPECIFICATION forming part of Letters Patent No. 682,067, dated September 3, 1901.

Application filed March 5, 1901. Serial No. 49,861. (No model.)

To all whom it may concern:

Be it known that I, CLIFFORD ROBERT STEPHEN JOHN HALLÉ, a subject of the King of Great Britain, residing at 50 Lincolns Inn Fields, London, England, have invented certain new and useful Improvements in Means of Attaching and Firmly Securing Bent Side Plates to the Iron Frames of Pianofortes, of which the following is a specification.

The object of my invention is an improved mode or means of attaching bent side plates or hitch-pin plates to iron frames of pianofortes by bolts and bearing pieces or blocks in such manner that said plates are held firmly and immovably secure to withstand the strain of the strings under tension.

My invention will be understood by the following description, aided by the accompanying drawings, in which—

Figure 1 is a part side sectional elevation of a portion of a frame-bar, showing a hitch-pin plate bolted thereto. Fig. 2 is a part side sectional elevation of a portion of a frame-bar to the raised portion of which a hitch-pin plate is bolted, the raised portion being provided with a shoulder against which the hitch-pin plate abuts. Fig. 3 is a part side sectional elevation of a portion of a frame-bar to the raised portion of which a hitch-pin plate is bolted, the raised portion being provided with a shoulder against which a thicker portion on the under side of the hitch-pin plate abuts. Fig. 4 is a front elevation of a complete frame with the hitch-pin plate in position.

For the purpose of my invention as applied to iron frames in which vertical bars A of T-section are employed I cast said bars with raised portions or bearing-pieces B, upon which the bent side or hitch-pin plate C is laid, each bearing-piece B being formed on the bar A in the respective vertical position it should occupy with regard to the curvature or shape of the bent side plate C, from near the bottom of the frame at one side toward the top at the other side, as at Fig. 4. The bent side or hitch-pin plate C is firmly clamped or secured to those raised bearing-pieces B by bolts D, passed through holes drilled or formed in the plate C and through each bearing-piece

B, the bolts D being tightened up by nuts E, preferably at the back.

In some cases, as at Fig. 2, I cast shoulders or abutments F on the raised bearing-pieces B for one edge of the bent side plates C to abut against, in which case the bolts D would be relieved of the strain of the strings, which would be borne by the abutments F and would serve only to clamp the plate C to the bearing-pieces B.

In the two examples, as at Figs. 1 and 2, just described, the bent side plate C is preferably formed of a plain plate of steel; but it may be of cast-iron, of two or more thicknesses, the shoulder G of a thicker portion H on the underside of the plate C abutting against wide abutments F on the raised bearing-piece B on the T-bars of the frame, the thinner portion projecting over and covering the abutments F. By this latter construction I am enabled to make use of cast-iron for the bent side plate without necessitating the employment of a heavy plate of one thickness all through.

I represents the hitch-pins or lugs.

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

1. In a piano, the combination with the piano-frame, of projections formed on the bars of said frame and each provided with a shoulder, a hitch-pin plate mounted against said projections and having one edge thereof abutting against said shoulders, and means for securing said plate to the said projections.

2. In a piano, the combination with the frame thereof, of projections formed on the bars of the said frame, a hitch-pin plate mounted against said projections, and means extending through the plate and projections for securing the plate to the frame.

3. In a piano, the combination with the frame thereof, of a series of projections formed integral with the bars of the frame, and each provided with a shoulder, a hitch-pin plate having its underside formed with a thickened portion abutting against the shoulder of the projections, and means for securing the plate to the frame.

4. In a piano, the combination with the frame thereof, of a series of projections

formed integral with the bars of the frame and
each provided with a shoulder, a hitch-pin
plate having its under side formed with a
thickened portion abutting against the shoul-
5 der of the projections, and bolts extending
through the said plate and projections for se-
curing the plate to the frame.

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

CLIFFORD ROBERT STEPHEN JOHN HALLÉ.

Witnesses:

WM. O. BROWN,

IRENEO FRANCO. VALHO.