P. GMEHLIN.

UPRIGHT PIANO ACTION FRAMES.

No. 190,306. Patented May 1, 1877.

Fig. 2.

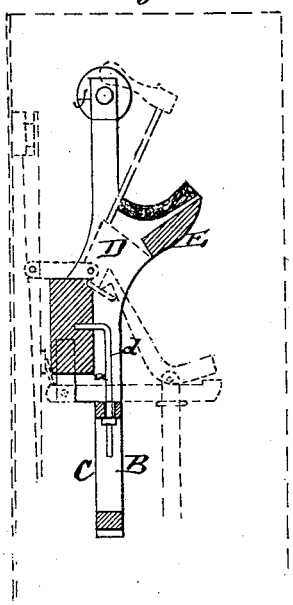


Fig. 3.

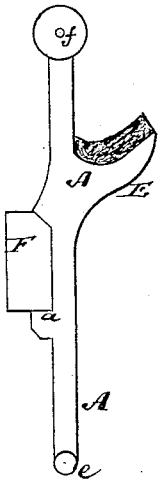
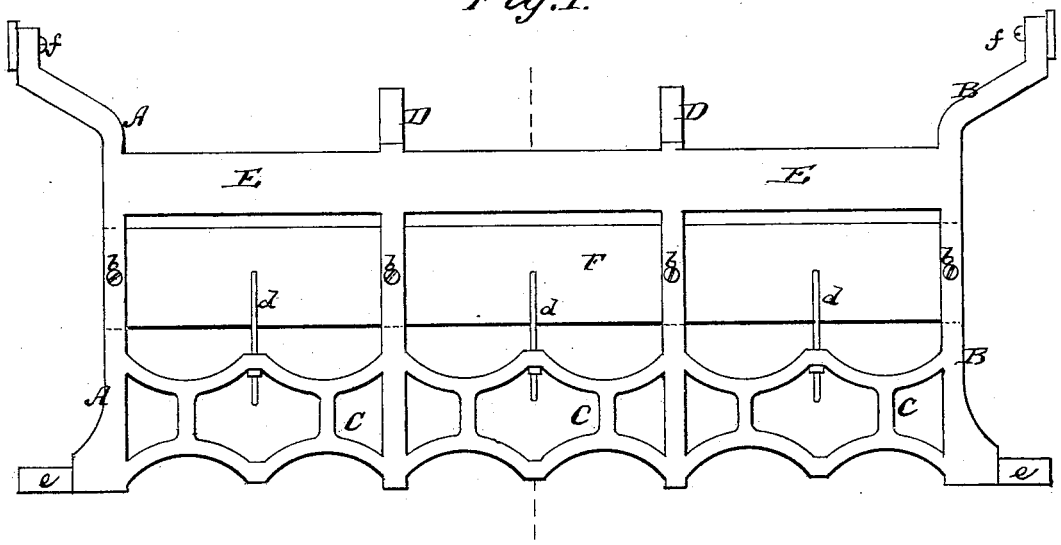


Fig. 1.



Witnesses:
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UNITED STATES PATENT OFFICE.

PAUL GMEHLIN, OF NEW YORK, N. Y.

IMPROVEMENT IN UPRIGHT-PIANO ACTION-FRAMES.

Specification forming part of Letters Patent No. **190,306**, dated May 1, 1877; application filed April 20, 1877.

To all whom it may concern:

Be it known that I, PAUL GMEHLIN, of New York city, New York, have invented a new and Improved Frame for Upright Pianos, of which the following is a specification:

Figure 1 is a front view of my action-frame; Fig. 2, a vertical transverse section, showing the tension-bolts; Fig. 3, a side view.

Similar letters of reference indicate corresponding parts in all the figures.

This invention relates to various improvements on action-frame for upright pianofortes.

The invention consists in the means invented by me for regulating the tension and position of the wooden hammer-rail on a metallic action-frame of an upright pianoforte, and also in the means provided by me for fastening the metallic frame and adjusting it, all as hereinafter more fully described.

In the accompanying drawing, the letters A and B represent the ends or uprights of my improved metallic action-frame, which ends or uprights are, by the horizontal plate C, combined into one rigid piece, they being, by preference, cast in one with said plate C, and also with intermediate uprights D D, clearly shown in Fig. 3, and with an upper cross plate or bar, E, also shown in the drawing.

The frame A B C D E thus made is provided with supporting-shoulders *a* in rear to receive the wooden hammer-rail F, which is placed upon said shoulders and against the face of the uprights A D B, and which, by suitable screws or bolts *b*, is fastened to the metallic frame. *d d* are bolts, which extend from the hammer-rail F into the plate C, as shown, and which can be used to straighten or to apply tension in requisite manner to said hammer-rail, in case it should be bent or otherwise require such adjustment.

The upper horizontal bar E of the frame may be used as a direct or indirect hammer-rest, but even if not so used, will serve to strengthen the entire frame, and to render the same more reliable.

The principal advantage of the wooden hammer-rail on the metallic frame is, that it facilitates the application of the parts of the action thereto, and permits their ready adjustment, while if the hammer-rail is formed of metal, the placing of the parts would be far more difficult, and their position much less secure. Moreover, the wooden rail serves also as a protection to, and strengthener for, the metallic frame, especially during transportation.

The lower ends of the uprights A B are made with outwardly-projecting pins *e e*, which can be put into suitable sockets for vibrating the frame backward and forward. The upper ends of the uprights A B are bent or extended laterally outward, as shown in Fig. 3, and provided with screws *f f*, which can be fastened against the piano-case. When the frame has been properly secured it can, by merely loosening the screws *f*, be at any time swung back to expose the action for repair or inspection.

I do not claim in this application the metallic action-frame herein described, made and cast in one piece, nor the combination therewith of the wooden hammer-rail, nor its combination with the shoulders *a*, as these points are the subject of another application for a patent, filed by me on the 2d day of November, 1876.

I claim in this application, and desire to secure by Letters Patent—

1. In combination with the metallic action-frame and wooden hammer-rail, the tension-bolts *d d*, substantially as and for the purpose described.

2. In combination with the metallic action-frame A B C, the horizontally-projecting pivot-pins *e* at or near the foot of the uprights A B, substantially as specified.

3. The uprights A B of a metallic action-frame, bent or extended laterally outward, and provided at their upper ends with screws *f f*, by which they can be fastened to the piano-case, substantially as specified.

4. The uprights A B of a metallic action-frame, provided at their lower ends with projecting pivot-pins *e*, and bent or extended laterally outward at their upper ends, to be fastened by screws *f* to the piano-case, substantially as specified.

Signed by me April 18, 1877.

PAUL GMEHLIN.

Witnesses:

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