

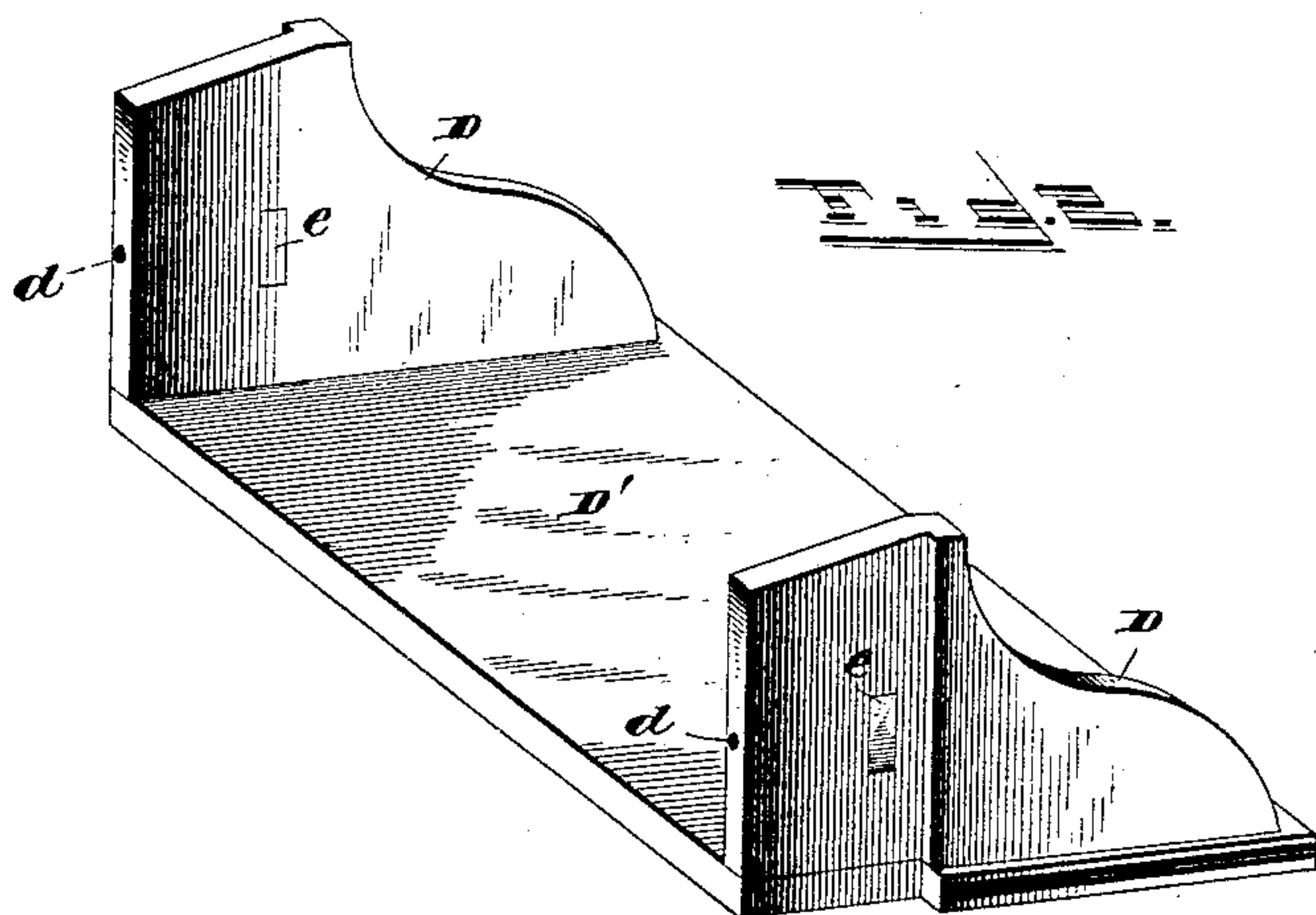
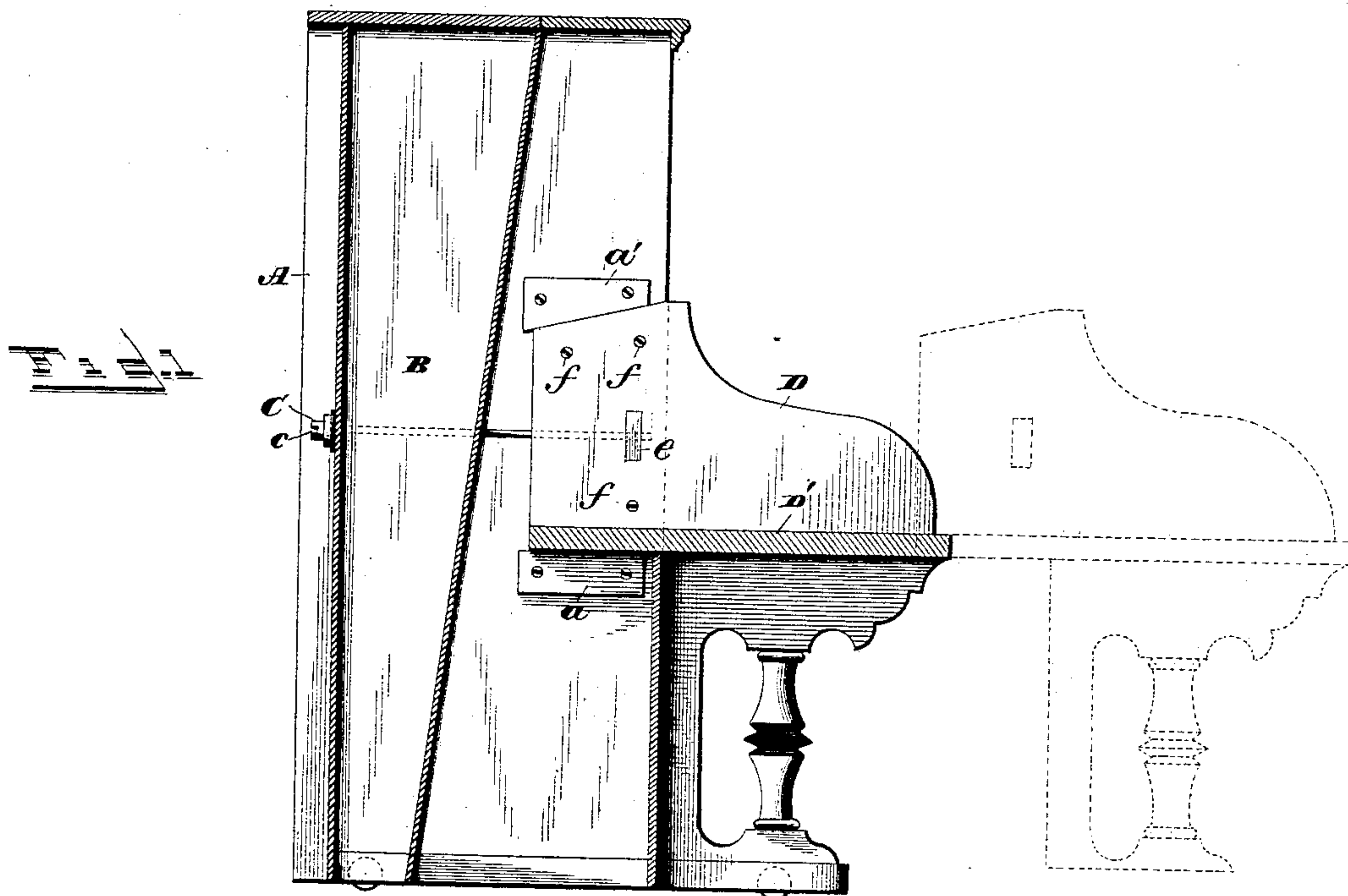
(No Model.)

R. M. BENT.

PIANO CASE.

No. 389,436.

Patented Sept. 11, 1888.



Richard M. Bent.

INVENTOR

by *[Signature]* Attorney

WITNESSES  
*G. S. Elliott.*  
*C. M. Johnson*



# UNITED STATES PATENT OFFICE.

RICHARD M. BENT, OF NEW YORK, N. Y.

## PIANO-CASE.

SPECIFICATION forming part of Letters Patent No. 389,436, dated September 11, 1888.

Application filed July 19, 1888. Serial No. 230,367. (No model.)

*To all whom it may concern:*

Be it known that I, RICHARD M. BENT, a citizen of the United States of America, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Upright-Piano Frames; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters or figures of reference marked thereon, which form a part of this specification.

My invention relates to certain new and useful improvements in the construction of upright-piano frames, the object thereof being to provide a frame or case for upright pianos which will be provided with detachable arms and key-bottom which can be removed from the frame or case, so that the same will occupy less than the ordinary space in transportation, thus enabling pianos of this class to be moved in narrow and crooked stair and hall ways or through narrow doorways; and my invention consists in providing guides and securing-bolts for the removable arms and key-bottom, as will be hereinafter fully set forth, and specifically pointed out in the claims.

In the accompanying drawings, Figure 1 is a sectional view of a piano frame or case, showing my improvement applied thereto, the dotted lines indicating the removable portion thereof. Fig. 2 is a detail perspective view of the side arms and key-bottom to which the keys are attached. Fig. 3 is a detail perspective view of the securing-bolt detached, with one-inch-square receiving-nut.

A refers to the end or side portion of an upright-piano case or frame, which may be of ordinary construction, and to the inner sides of these side or end portions are secured guide-blocks *a* and *a'*, which are rigidly secured thereto. The upper guide-block, *a'*, is inclined or beveled on its lower edge, as shown.

To the rear of the inner sides of the side pieces, A, are securely glued or otherwise attached posts or standards B, which are tapered, the widest portions thereof being nearest the top of the piano-case, and through these posts are perforations, through which the clamping-bolts pass. These clamping-bolts are pro-

vided with key-ended heads and collars, and with a transverse slot, *c*, so that said bolt can be turned either by a wrench or screw-driver. 55

The arms D D are suitably connected to the key-bottom D', above which is located the key mechanism. The key-frame on which the keys are pivoted is secured firmly and permanently to said key-bottom D', which is supported entirely by the side arms and can be removed from the piano-frame with said side arms. The side arms, D D, are provided with perforations *d d*, through which the screw-threaded ends of the bolts C pass to engage with the nuts *e*, which are let into the side pieces, D. When it is desired to detach the side arms to reduce the size of the case, so that the piano can be moved through winding halls or narrow stair or door ways or the parts of the piano shipped in separate boxes, the bolt C is loosened until it is out of contact with the nut, and the screws *f f* are unscrewed, when the side arms, keys, and key-bottom can be readily removed from the main portion of the case by drawing the same outwardly, these parts all being removable together. 60 65 70 75

The beveled tops of the side arms and wedge-shaped pieces *a' a* insure the removable portion being properly inserted, so as not to disarrange the parts of the action mechanism. The outer edges of the side arms are recessed or shouldered to leave a projection to abut against the sides A and limit the inward movement thereof. 80 85

The consoles and lower foot-pieces are secured in the usual manner, so that they can be readily removed and replaced.

In practice ordinary screws to remove the side arms from the frame have been found to be insufficient, as the wood is liable to shrink and permit the parts to become loose and throw the key-operating mechanism out of position. The use of the bolt hereinbefore described overcomes these objections. 90 95

The manner hereinbefore described of reducing the width of a piano-case does not necessitate the employment of skilled workmen, as the parts may be separated or put together by a person of ordinary intelligence without in the least disarranging the keys and action. 100

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with a piano case or frame having standards B B, with perforations, through which the bolts C C pass, of the removable side arms, D D, with portions which extend within the piano case or frame, and nuts  
5 let into said portions, with which the bolts engage, said bolts having slotted key-ended heads, whereby they can be turned either by wrench or screw-driver, substantially as shown, and  
10 for the purpose set forth.

2. The combination, with a piano case or frame having blocks or guides *a* and *a'* secured thereto, of side arms, D D, with inwardly-extending portions which engage with said guides  
15 or blocks, shoulders to limit the inward movement of the side arms, and bolts C C, for securing said side arms removably to the frame,

substantially as shown, and for the purpose set forth.

3. The combination, in a piano case or frame, 20 of the side pieces, A', provided with guides *a* and *a'*, the upper guide, *a'*, being inclined on its lower edge, side arms, D D, having their upper edges which extend within the case inclined, as shown, and bolts C C, adapted to  
25 pass through the main portion of the frame and engage with nuts secured to the side arms, substantially as and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

RICHARD M. BENT.

Witnesses:

CHAS. H. B. LAIRD,  
S. N. SIMONSON.