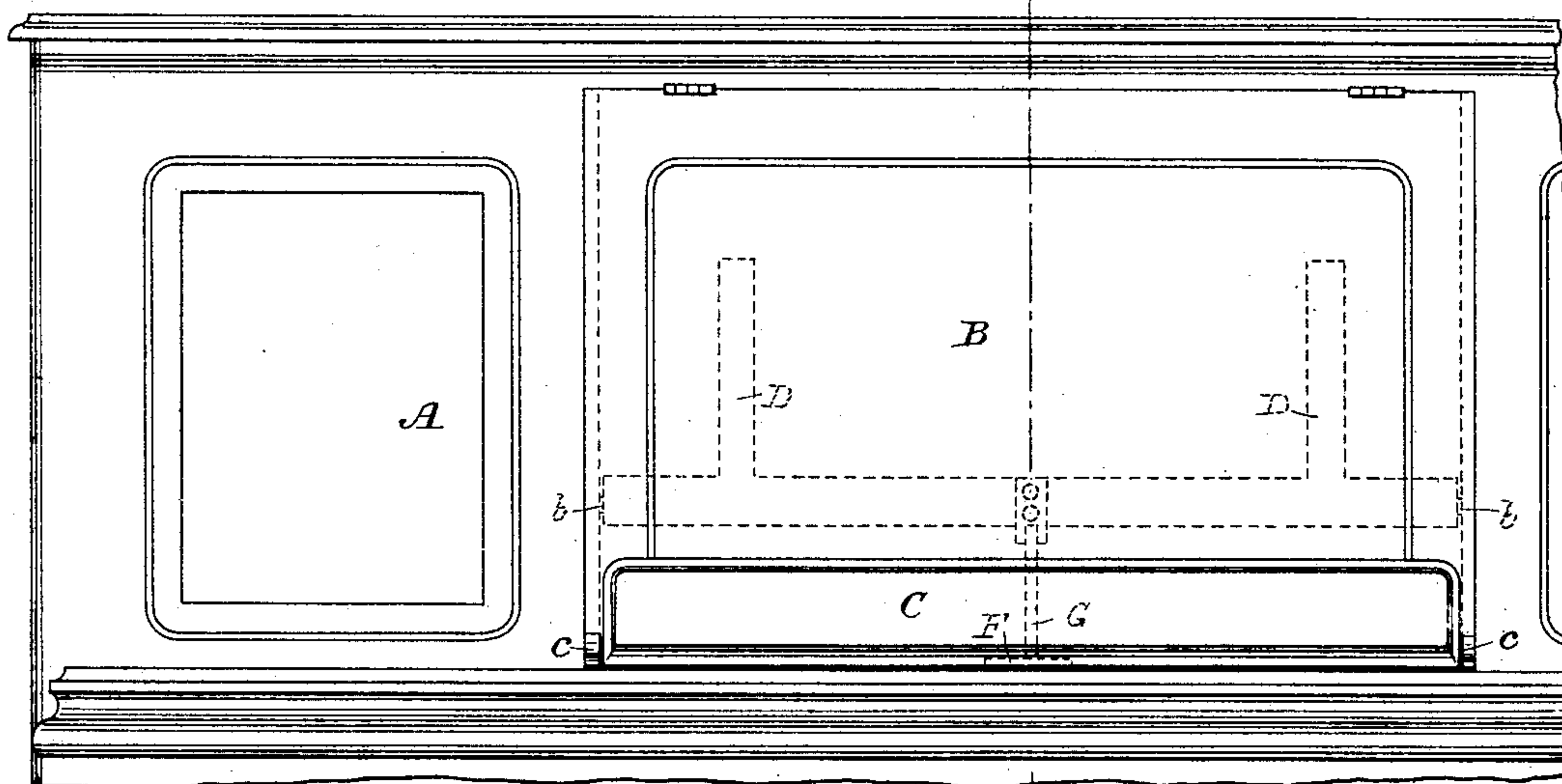


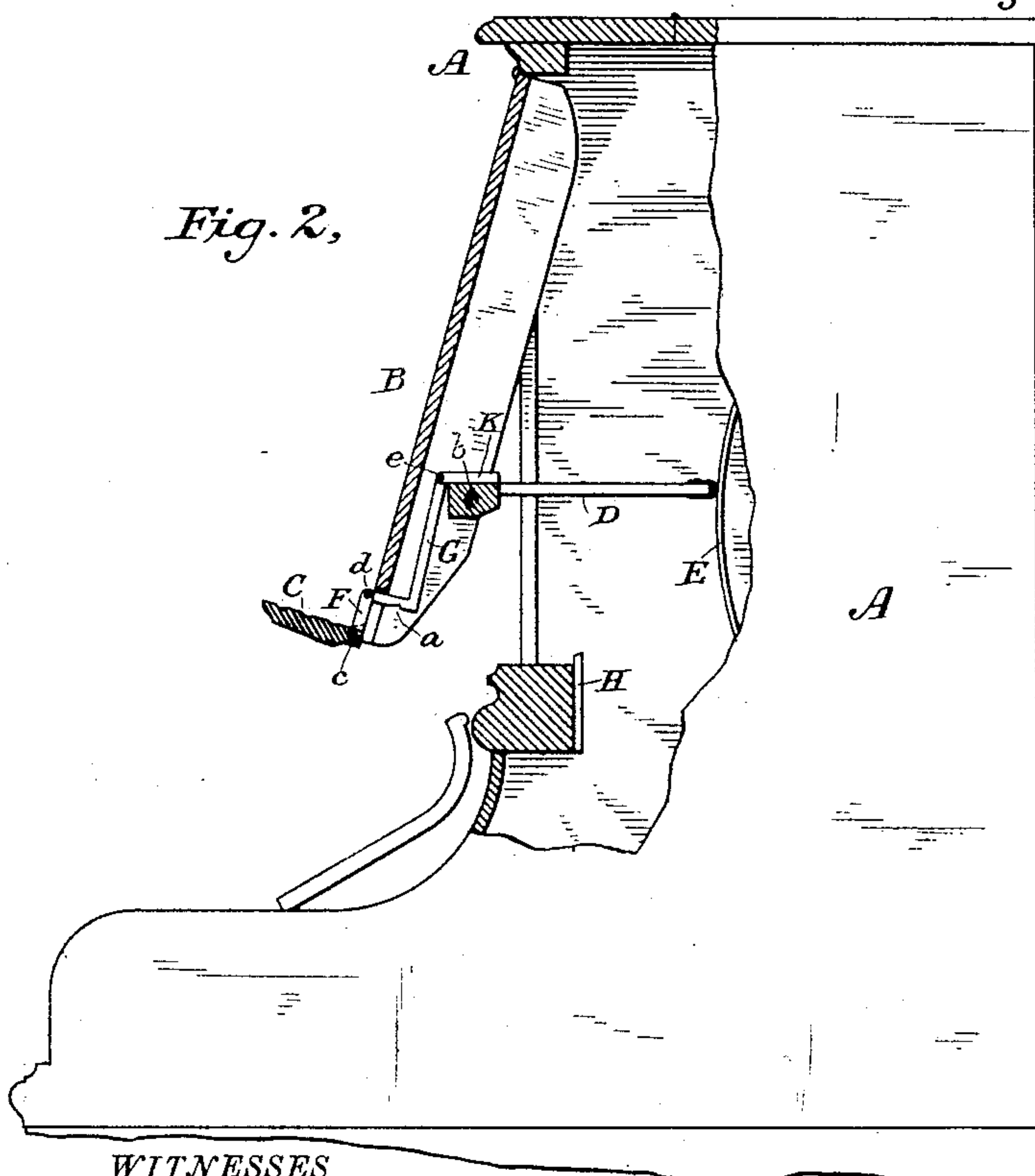
H. BEHNING.  
MUSIC RACK FOR PIANOS.

Patented Aug. 8, 1882.

2



3



*WITNESSES*

Wm A. Skinkle  
Geo N. Brett.

INVENTOR

*Henry Behning,*

*By his Attorney*

William H. Kenyon.



# UNITED STATES PATENT OFFICE.

HENRY BEHNING, OF NEW YORK, N. Y.

## MUSIC-RACK FOR PIANOS.

SPECIFICATION forming part of Letters Patent No. 262,351, dated August 8, 1882.

Application filed April 14, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY BEHNING, of New York city, in the county and State of New York, have invented certain new and useful Improvements in Music Desks for Upright Piano-Fortes and Similar Instruments; 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 letters of reference marked thereon, which form a part of this specification.

My invention relates more especially to that class of instruments in which the music-rack forms part of the front casing above the keyboard or rests in an upright position within a recess of the same when not in use as a music-rack, and when in use as a music-rack has its lower end swung outward and is supported in that inclined position.

The object of my invention is to provide simple and convenient means for firmly supporting the rack in its inclined position when in use, securing it in its upright position when not in use, and readily changing it from one position to the other with the least possible effort on the part of the performer and the least possible liability to disarrangement on the part of the mechanism, and to secure simplicity and economy in manufacture.

To that end my invention consists of the various parts constructed and combined in such a manner as hereinafter described and claimed.

Referring to the accompanying drawings, which illustrate my invention, Figure 1 is a front view of a portion of the upper part of an upright piano-forte. Fig. 2 is a view, partly in section on the line 2 3, of the music-rack and connected parts when swung out as it is in use; and Fig. 3, a similar but enlarged view of the parts when the rack is closed or swung in.

Like letters of reference indicate like parts.

A is the upper casing of the instrument.

B is the music-rack, and in the arrangement shown in the drawings acts as the middle panel of the instrument when swung back into its vertical position. It is hinged above to the frame A in any convenient way.

C is the music-desk, constructed in any convenient way—as, for instance, to be ornamental when closed, as in Fig. 1, and by channeled grooves to prevent slipping of the music when opened, as in Fig. 2. C is hinged at *c* to B in such a way that from the position shown in Fig. 2, where it is perpendicular, or nearly so, to B, it is free to swing up into the position shown in Fig. 3, where it is parallel to B.

D is a supporting leg or arm, hinged at *b* to ears projecting backward from B, and hinged in such a way as to be free to move from the position shown in Fig. 2, where it is perpendicular, or nearly so, to B, into the position shown in Fig. 3, where it is parallel to B. It is so arranged upon B laterally that when its long end descends and it assumes the position perpendicular to B it shall strike upon and rest against one of the supports E of the action or any convenient fixed part of the instrument. Two or more arms, D, may be employed, as shown in dotted lines in Fig. 1, each striking against a proper support, in which case such arms should all form part of or all be rigidly connected with a simple horizontal strip, which strip should be hinged at *b b* to ears projecting from B, as also indicated in dotted lines in Fig. 1.

The brass link F is firmly screwed to C, as shown in Fig. 3. F is pivoted at *d* to the smaller arm of the bent link G, the longer arm of which is pivoted at *e* to the short link K, which latter is firmly screwed to D, as shown in Fig. 3. The short arm of the bent link G is preferably notched, as shown at *a*, Fig. 3, to act as a catch on a projecting piece, H, which is screwed to the frame of the instrument. B is cut away just enough to enable this chain of links F G K to be moved from the position shown in Fig. 3 to the position shown in Fig. 2, after which any further motion in that direction is prevented in any suitable manner by interposing parts of B, (not shown in the drawings,) and thus C is held and firmly maintained in the position shown in Fig. 2, no matter what the weight that is resting upon it may be, and D is prevented from slipping downward beyond its position in Fig. 2.

The operation of the device is as follows: Starting with the position of the parts shown in Fig. 3, the performer at the instrument has



merely to unfold or fold down the desk C, when the parts will all be found in the position shown in Fig. 2, the very first movement of C raising the end *d* of the link F and the whole of the link G bodily, and thereby releasing the catch, allowing the whole panel B to swing out, and simultaneously throwing down the supporting-legs D. The act and operation of closing is equally simple. A slight pressure closing C upon B will simultaneously close D upon B and throw the link G down, thus allowing B to swing into its vertical position as a panel and catching it there.

I am aware that the desk and supporting-arms of a hinged rack have been connected together by a cord in such a way that the closing of the desk upon the rack closed the supporting-arms upon the rack, and the unfolding of the supporting-arms from the rack unfolded the desk from the rack; but the cord connection was such that beyond this there was no interaction between the parts—as, for instance, the unfolding of the desk from the rack did not cause the supporting-arms to unfold from the rack; and, again, the firm holding of the desk in a position unfolded from the rack, as by the weight of music, did not hold the supporting-arms in their unclosed or supporting position, nor prevent them from folding upon the rack and thus yielding to the weight. I am also aware that a desk pivoted to a hinged rack has been at the same time connected directly with the frame of the instrument by a link-connection in such a way that when the desk was unfolded from the rack the said link-connection forced the whole rack outward from the frame, except where the rack was hinged to the frame, and then acted as a supporting-arm, though only acting as such supporting-arm efficiently when the desk was weighted, and having no such operation at all except when pivoted or hinged to the frame, and not being connected with the rack except through the desk. Neither of these devices is capable of accomplishing what my improvement accomplishes, and I do not claim them. I believe myself to be the first who ever con-

nected a desk and supporting-arms to each other and both to a hinged rack in such a way that neither was capable of motion independently of the other; but the joint motion of both was irrespective of any movement of the rack itself and irrespective of the position or presence of a frame.

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

1. In a hinged rack, a desk and one or more supporting-arms, said desk and supporting-arms being connected by intermediate mechanism with each other and both with the rack, as described, whereby the unfolding of either the desk or the supporting-arms from the rack shall simultaneously unfold the other from the rack and the closing in of either upon the rack shall simultaneously close in the other on the rack, substantially as and for the purposes set forth.

2. In a hinged rack, a desk and one or more supporting-arms, said desk and supporting-arms being connected by intermediate mechanism with each other and both with the rack and a latch device, all as described, whereby the unfolding of the desk from the rack shall simultaneously raise the latch, locking the rack, and throw out the supporting-arms, and the closing in of the desk upon the rack shall simultaneously draw in the supporting-arms and throw down the latch, substantially as and for the purposes set forth.

3. The combination, substantially as and for the purposes set forth, of the frame or support A, the rack B, the desk C, the supporting-arms D, and the links F, G, and K, all connected as described.

4. The combination, substantially as and for the purposes set forth, of the frame or support A, the rack B, the desk C, the supporting-arms D, the links F, G, and K, and the catch H, all connected as described.

HENRY BEHNING.

Witnesses:

LOUIS H. NAUMANN,  
MILLER C. EARL.