(No Model.) 2 Sheets—Sheet 1.

J. & G. HATCH.

MUSIC STAND.

No. 418,368. Patented Dec. 31, 1889.

Fig. 1

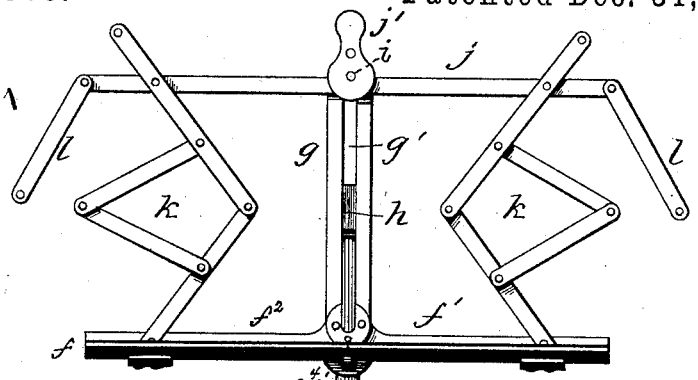


Fig. 2

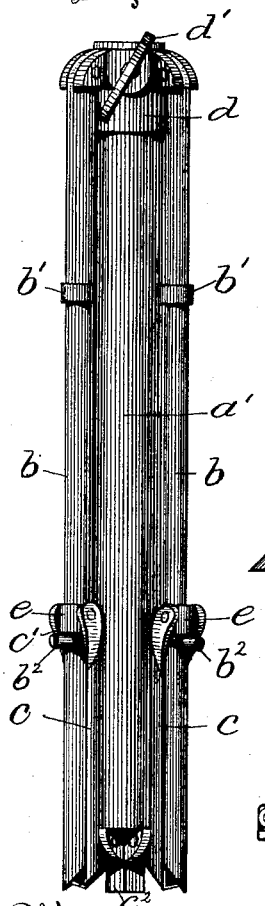


Fig. 4

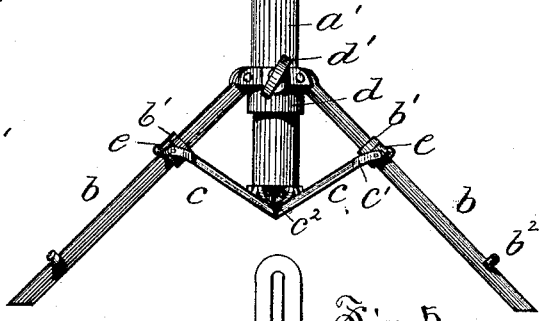
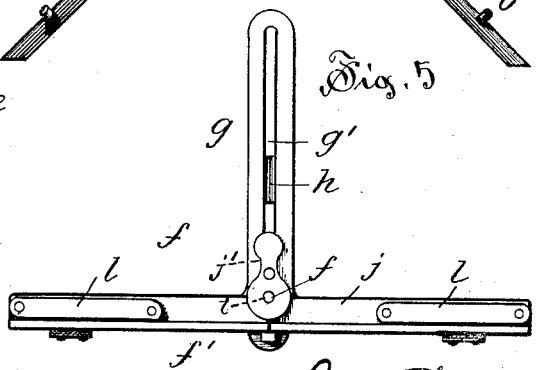


Fig. 5



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(No Model.) 2 Sheets—Sheet 2.

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Fig. 6.

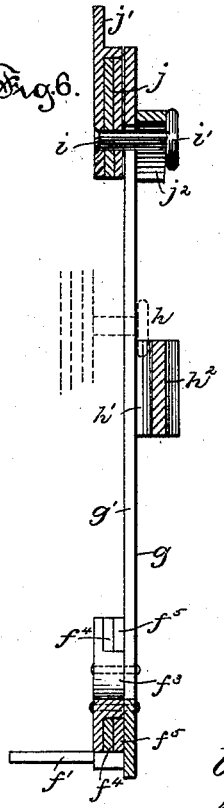
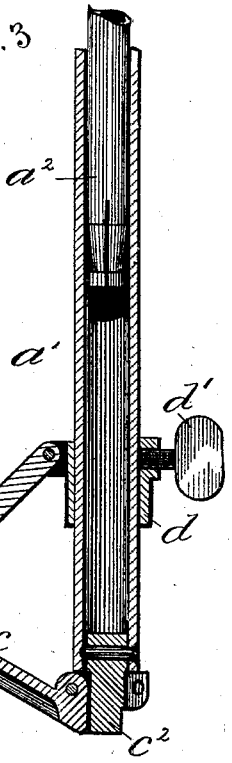
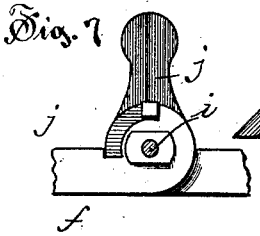
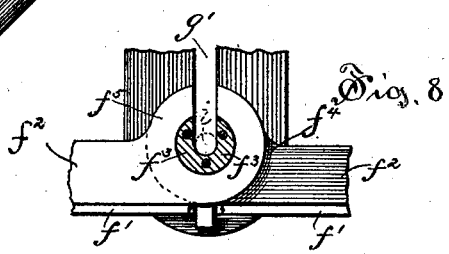


Fig. 3.







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UNITED STATES PATENT OFFICE.

JONATHAN HATCH AND GEORGE HATCH, OF SOUTH WINDHAM, CONNECTICUT.

MUSIC-STAND.

SPECIFICATION forming part of Letters Patent No. 418,368, dated December 31, 1889.

Application filed May 31, 1887. Serial No. 239,836. (No model.)

To all whom it may concern:

Be it known that we, JONATHAN HATCH and GEORGE HATCH, both of South Windham, in the county of Windham and State of Connecticut, have invented certain new and useful Improvements in Music-Stands, of which the following is a full, clear, and exact description, whereby any one skilled in the art can make and use the same.

Our invention relates to the class of music-stands that are so made as to fold readily into convenient size for transportation or packing, and are provided with arms whereby they may be held with the parts in an extended position to support music, books, or the like on a holder supported on the upper end of the stand.

The object of our invention is to provide a device of this class that may be readily operated in extending or collapsing; and our invention consists in details of the several parts of the device and their combination, as more particularly hereinafter described, and pointed out in the claims.

Referring to the drawings, Figure 1 is a view of our improved stand in elevation, showing the parts extended. Fig. 2 is a detail view on enlarged scale of the lower section of the standard, showing the legs folded. Fig. 3 is a detail view on enlarged scale, in section, of the base of the standard, of the brace, and of the leg pivoted thereto. Fig. 4 is a detail view of the book-support when folded. Fig. 5 is a detail front view of the support unfolded, but not extended. Fig. 6 is a detail view on enlarged scale, in vertical section, through the center standard of the frame, showing the locking device that holds the frame extended. Fig. 7 is a detail rear view of the finger-piece, showing how it is connected to the cross-bar of the frame. Fig. 8 is a detail view showing the joint in the lower bar of the frame-work and at the bottom of the central standard.

In the accompanying drawings, the letter a denotes the standard as a whole, and a', a^2, and a^3 the telescoping sections thereof, that may be of any convenient number; b, the legs, and c the braces. The legs b, at their upper end, are pivoted to a collar d, that slides freely on the lower section of the standard, except when fastened thereto by means of the clamp-screw d', and each leg passes through a collar e, that is pivoted between the forked ends c' of the braces c, while the outer end of the brace is pivoted to the lower end of the standard. Each of these braces is preferably hollowed out on the side next the leg, so that the lower end of the latter when the parts are folded up, as shown in Fig. 2, lies snugly within the hollow of the braces, and the end of the leg resting against a sloping shoulder on the lower end of the brace. The purpose of this hollowing out of the braces and the use of the shoulder is to guide the legs outward as the collar to which they are pivoted is slid outward, so that when the stop b' on the leg encounters the collar e the braces will be thrust outward and extend the legs into the position shown in Fig. 1, so that by tightening the clamp-screw d' the legs will be firmly held in an extended position. When so extended the bottom ends of the braces strike against the rest c^2 and make an extremely rigid structure. The pins b^2 on the legs are located so that by contact with the collar e the legs may be prevented from sliding upward too far in folding them.

The several telescoping sections of the stand may be provided with any convenient device for holding them extended, while the upper section is provided with an arm a^4, that is inclined with the axis of the standard, so that the book-supporting frame that is attached thereto may be held at the proper inclination. This book-supporting frame f is made up of the base f', that is made of metal, with the flange f^2 on the rear side, and in two sections that are hinged together at their center by the hollow pivot f^3. The center standard g of the frame is held to the base f by being secured to the end of the hollow pivot f^3 at this central point, and it has a lengthwise slot g', that is closed at the opposite ends. About midway of its length there is fastened to this upright g a block h, that has a channel h' on its front surface to permit the head of the stud i to slide past it, while it has on its back the tapering and dovetailed socket h^2, into which the projec-

tion of the upper end of the standard fits to support the frame thereon. The upper cross-bar j of this frame is hinged at its central point, and has attached at this point the finger-piece or handle j', and is attached by means of the stud i to the center standard g of the frame, the shank of the stud fitting and sliding in the slot g' inside of the central standard g. The base and the upright cross-bar of this frame are connected with each other by means of the folding frame-work f^3, made up of thin strips of metal pivoted together and to the aforesaid parts, as shown in Fig. 1 of the drawings. The upper cross-bar of the frame also bears the fingers l, that may be turned in the plane of the frame, so as to hold a leaf of music or of a book supported on the frame. The frame, being in the folded position shown in Fig. 4, may be extended to the position shown in Fig. 5. Then by grasping the holder or finger-piece of the upper cross-bar the frame is extended to the position as shown in Fig. 1, the head of the stud i sliding on the cam-lug i^2 and locking the parts in the extended position.

The frame may be folded up by reversing the operations just described. It is important that the joint in the base of the frame should be so formed as to allow room for the shank of the stud i to lie in the center about which the parts of the base hinge, and this is accomplished by using the slotted pivot f^3, with the slot g' opening to its center on its upper side and enlarging the adjacent ends of the base, as shown in Fig. 8, overlapping them, and fitting them upon this hollow pivot f^3. When the two parts of the base of the frame are folded upward the overlapping ends f^4 f^5 of the base slide past each other and over the shank of the stud i, that lies in the center of the hollow pivot f^3. This pivot is fastened to the upright center piece g of the frame by means of rivets passed through the end of the standard and into or through the slotted pivot f^3, as shown in Figs. 6 and 8.

We claim as our invention—

1. In a music-stand, in combination with the standard a, the legs b, the sliding collar d, pivoted to the upper ends of the legs and having a clamp-screw d', the braces c, pivoted to the lower end of the standard and bearing in their forked ends a collar e, pivoted thereon, and through which the legs slide, and the stops b^2, fastened on the legs, all substantially as described.

2. In combination with the standard a, the sliding collar d, with its clamp-screw d', the legs b, and the braces c, each hollowed to receive the leg that slides in the collar pivoted to the fork thereof, and having a shoulder against which the lower end of the leg abuts when the parts are folded up, all substantially as described.

3. In combination, the folding back support f, having a sectional base f', with its parts pivoted on the hollow pivot f^3, the slotted standard g, secured to the base of the frame f, the block h, secured to the standard g and having the socket h^2, the upper cross-bar j of the frame f, hinged at its central part on the stud i, the shank of which is movable in the slot g' of the standard g, the several side parts and cross-bars of the frame f, pivotally connecting the base and upper cross-bar of the frame, and the standard a, having its upper end adapted to engage the socket in the block h, all substantially as described.

4. In combination with the standard a, the legs b, each pivoted to the collar d, that slides on the standard and has a clamp-screw d', the hollow braces c, having a shoulder at the lower end in the path of movement of the legs in opening, and the stop c^2, all substantially as described.

5. In combination with the supporting-standard a, the folding frame f, having the base f', with the upright g, the said base f' being formed of parts that overlap each other and are pivoted on a hollow pivot k, the central slot g' in the standard, extending through and into the said pivot, and the upper cross-bar of the frame f, having the stud i, that is movable along the groove g', all substantially as described.

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