

Feb. 4, 1930.

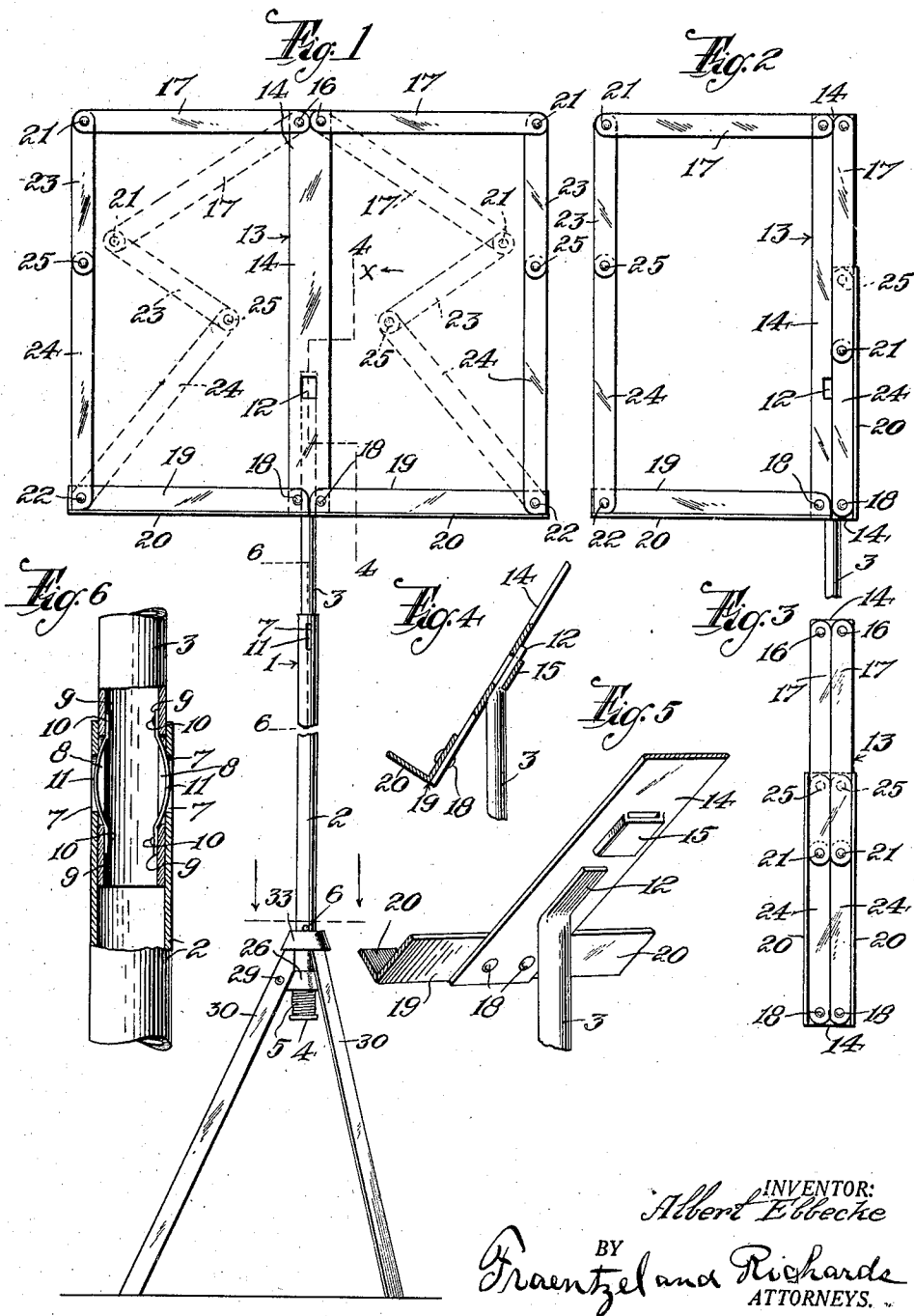
A. EBBECKE

1,745,845

MUSIC STAND

Filed Dec. 20, 1922

2 Sheets-Sheet 1



INVENTOR:
Albert Ebbcke
BY
Fraentzel and Richards
ATTORNEYS.

Feb. 4, 1930.

A. EBBECKE

1,745,845

MUSIC STAND

Filed Dec. 20, 1922

2 Sheets-Sheet 2

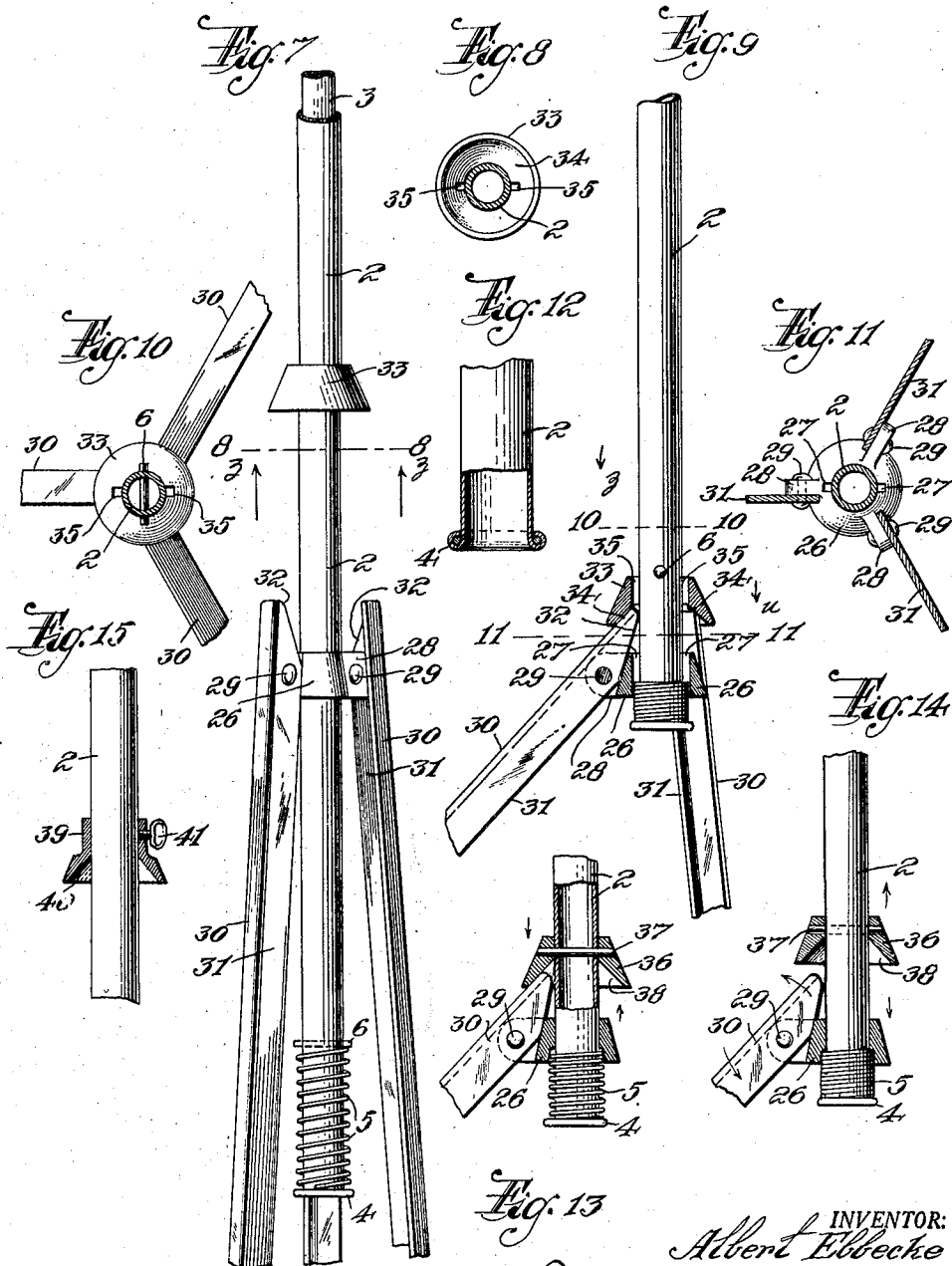


Fig. 13

INVENTOR:
Albert Ebbecke
BY
Graentzel and Richards
ATTORNEYS.

UNITED STATES PATENT OFFICE

ALBERT EBBECKE, OF NEWARK, NEW JERSEY

MUSIC STAND

Application filed December 20, 1922. Serial No. 607,928.

This invention relates, generally, to improvements in music-stands; and, the present invention has reference, more particularly, to a novel and simply constructed music-stand, the various members of which are readily collapsible or foldable, so as to provide a music-stand, the parts of which, when the stand is not in use, can be disposed so as to occupy a minimum space, and to provide a small package which can be carried about without inconvenience to the musician.

The present invention, therefore, has for its principal object to provide a music-stand, the various parts of which are readily separable and collapsible, for arrangement of the parts in a small package, when the stand is not in use, but the parts of which can be easily and quickly brought into their adjusted and rigidly connected relation for the provision of a perfect music-stand for use by the musician.

Other objects of the present invention not at this time more particularly enumerated will be clearly understood from the following detailed description of the said invention.

With the various objects of the present invention in view, the said invention consists, primarily, in the novel collapsible music-stand hereinafter set forth; and, the said invention consists, furthermore in the novel arrangements and combinations of the several devices and parts, as well as in the details of the construction of the said parts, all of which will be more fully described in the following specification, and then finally embodied in the clauses of the claims, which are appended to and which form an essential part of the said specification.

The invention is illustrated in the accompanying drawings, in which:—

Figure 1 is a front elevation of a music-stand made according to and embodying the principles of the present invention; Figure 2 is a similar view of the music holder or rack of the stand, showing one-half the said holder or rack in its opened, and the parts of the other half of the holder or rack being represented in their folded or collapsed relation; and Figure 3 is a similar view of the said holder or rack, with all of its parts be-

ing represented in their folded or collapsed relation.

Figure 4 is a detail vertical sectional representation, taken on line 4—4 in said Figure 1, looking in the direction of the arrow *x*; and Figure 5 is a perspective view of the parts represented in said Figure 4, said view illustrating more particularly one manner of separably connecting the music-holder or rack, to the upper member of the collapsible standard of the music-stand.

Figure 6 is a detail vertical sectional representation, taken on line 6—6 in said Figure 1, said view being made on an enlarged scale, and showing one means of retaining the collapsible members of the standard in the extended relation.

Figure 7 is an elevation, on an enlarged scale, of the lower portion of the standard, showing the various members in their partially collapsed relation; and Figure 8 is a cross-section, taken on line 8—8 in said Figure 7, looking in the direction of the arrow *y*.

Figure 9 is an elevation of the parts represented in said Figure 7, but showing the said parts in their extended and locked relation, when the music-stand is in use; Figure 10 is a cross-section, taken on line 10—10 in said Figure 9, looking in the direction of the arrow *z*; and Figure 11 is a similar section, taken on line 11—11 in said Figure 9, looking in the direction of the arrow *u*.

Figure 12 is a view, partly in elevation and partly in vertical section, of the lower end-portion of the lower member of the collapsible standard of the music-rack.

Figures 13 and 14 are two views, partly in elevation and partly in vertical section, of a modified construction of connecting the foldable legs to the lower member of the standard, Figure 13 showing the parts in their rigidly connected relation; and Figure 14 illustrating the said parts about to be brought into their folded or collapsed relation.

Figure 15 is a detail view, partly in elevation and partly in vertical section of the lower tubular member of the standard, and a connector-slide thereon, illustrating another modified means for securing said slide in a fixed position upon said tubular member.

Similar characters of reference are employed in all of the said above described views, to indicate corresponding parts.

Referring now to the said figures of the drawings, the reference-character 1 designates the main standard of the music-stand, the same in the present case being shown as comprising two tubular and telescopically arranged members or extensions 2 and 3, of any suitable lengths and any desired cross-section. It will be understood, however, that this number of members or extensions may be increased, if desired.

At its lower extremity, the said tubular member or extension 2 is provided with a bead, as 4, or other suitable stop, upon which rests the lower end-portion of a coiled spring 5, the said spring loosely encircling the lower portion of the said member or extension 2, and being disposed between the said stop 4 and a pin 6, or the like, extending laterally across the said member or extension 2, substantially as shown in Figures 1, 7 and 9 of the drawings. At its upper end-portion, the member or extension 2 is provided in its opposite sides with longitudinally extending slots 7, and in its lower end-portion, the member or extension 3 is also provided in its opposite sides with longitudinally extending slots 8, in registration with the said slots 7. Spring-members, as 9, are secured by means of pins 10, or otherwise, within the tubular end-portion of said member or extension 3, each spring-member 9 being provided with an outwardly extending and suitably shaped retaining member, or bowed portion 11, adapted, when the members or extensions 2 and 3 have been brought into their extended relation, to project into the registering slots 8 and 7, and thereby rigidly maintaining the telescopically arranged members or extensions 2 and 3 in their extended relation shown in said Figure 1 of the drawings, and as will be clearly understood from an inspection of Figure 6. To slide the said member or extension 3 into its collapsed relation with the member or extension 2, pressure is applied by the operator upon the oppositely bowed portions 11 of the said spring-members 9, so as to force said bowed portions 11 out of their holding or retaining engagement from the portions bounding the slots 7 of the tubular member or extension 2, which permits the said member or extension 3 to be slipped down into the said member or extension 2, into a collapsed or nested relation therewith, as will be clearly understood. I am aware, of course, that in lieu of this form of retaining means, other suitable construction of retaining means may be employed for securing the several telescopically arranged tubular members or extensions in their extended relations, and for permitting the same to be brought into a closed or collapsed relation. At its upper extremity, the uppermost member or extension,

in this case the member 3, is angularly bent, as at 12, the said bent end being suitably flattened for separable attachment thereto of a foldable music-holder or rack, in a manner substantially as shown in Figures 4 and 5 of the drawings.

This holder or rack is indicated by the reference-character 13, and the same comprises a centrally disposed plate or bar 14, formed at a suitable point with a rearwardly extending strap, as 15, preferably pressed out of the said plate or bar 14, which provides a receiving socket for the reception of the said bent end 12 of the member or extension 3, for angularly and rigidly securing the said music-holder or rack in its detachable or separable relation to the extended members of the standard of the music-stand, as will be clearly evident. Pivotally mounted upon suitable pins or rivets 16 at the upper end-portion of the said plate or bar 14 is a pair of oppositely extending arms 17, and similarly mounted upon suitable pins or rivets 18 at the lower end-portion of said plate or bar 14 is a pair of oppositely extending arms 19, said arms being formed along their lower marginal edges with right-angled flanges 20, whereby suitable supports are provided for the placing of sheets or books of music thereon, as will be evident.

At their outer end-portions, the arms 17 are provided with pivot-pins or rivets 21, and the said flanged supporting arms 19 are similarly provided at their outer ends with pivot-pins or rivets 22. Pivotally mounted upon the pivot-pins 21 of the respective arms 17 are links 23, and pivotally mounted upon the pivot-pins 22 of the respective supporting arms 19 are other links 24, each pair of links 23 and 24 being also respectively pivotally connected by means of pivot-pins or rivets, as 25. This arrangement of the various members permits the music-holder or rack to be brought into its opened-out position indicated in Figure 1 of the drawings; or, when the members are moved inwardly toward the plate or bar 14, as indicated in the dotted outline in said Figure 1, then the said members of the music-holder or rack may be brought into their folded or closed relation, as indicated in Figure 3 of the drawings.

Slidably mounted upon the tubular extension 2 is a sleeve 26, which is transversely slotted, as at 27, and as indicated in Figures 10 and 11 of the drawings, the said sleeve being also rotatably mounted upon said extension 2, so that it can be moved longitudinally upon said extension to points either above or beneath the projecting end-portions of the pin 6, said end-portions of the pin passing into and through the slots or grooves 27 of said sleeve 26, in the manner and for the purposes hereinafter more fully specified. As shown, the said sleeve 26 is also provided with suitably spaced and radially projecting

ears or lugs 28 with which are pivotally connected, by means of pivot-pins 29, or in any other suitable manner, substantially as illustrated in Figures 1, 7, 9 and 11, the upper end-portions or extremities of suitable supports or legs 30. The said supports or legs, which are preferably made of a light material, as aluminum, are usually made in the form of angle-iron, the flanged members 31 of the said supports or legs 30 being angularly cut away at their upper extremities, as at 32, to provide suitable retaining or locking ends, adapted to be made to enter and engage the inner cone-shaped bore-portions 34 of another and a locking sleeve, as 33, as shown in said Figure 9, and for the purposes hereinafter more fully described. This last-mentioned sleeve 33 is also slidably mounted upon the tubular member or extension 2, said sleeve being also rotatable upon said extension 2, and being provided with longitudinally extending slots or grooves, as 35, which permit of the said locking sleeve 33 also to be moved either above or beneath the projecting ends of the previously mentioned pin 6, as will be clearly evident.

Having in the foregoing described the main construction of music-stand embodying the principles of the present invention, I will now briefly set forth the manner of setting up the stand for use by the musician, and when not in use bringing the several members of the stand into their folded and collapsed relation, for bringing the device into a small package, which can be placed in the music roll, or the like, so as to be carried without inconvenience to the musician.

In setting up the stand, the sleeve 26 is moved in a downward direction upon the tubular member or sleeve 2, and over the projecting ends of the pin 6, said ends of the pin being passed through the slots or grooves 27, until it rests upon the upper end of the spring 5, in which position the said sleeve 26 is held by giving it a slight turn upon the member or extension 2. A further movement of the sleeve 26 in a downward direction upon the member or extension 2, suitably compresses the coils of the spring 5 in a manner shown in Figure 9 of the drawings, thereby allowing the pivoted supports or legs 30 to be spread outwardly, with their sharp or angular ends 32 resting against the outer surface-portions of the said member or extension 2. The locking sleeve 33 is now also moved in a downward direction upon said member or extension 2, and over the projecting ends of the pin 6, said ends of the pin being passed through the slots or grooves 35, so that the receiving or socket-portion 34 of the sleeve 33 will rest upon and over the sharp or angular ends 32 of the outwardly spread supports or legs 30. When in this position, the sleeve 33 is slightly turned, where- by the compressed spring 5 and the projecting

ends of the pin 6, will maintain a rigid supporting relation of these elements, as will be clearly understood from an inspection of said Figure 9 of the drawings. The telescopically arranged members or extensions, as 2 and 3, are now brought into their extended relation, shown in Figure 1 of the drawings, the members or extensions being rigidly locked or maintained in such extended relation, by the action of the bowed portions 11 of the spring-members 9 with slotted portions of the said extensions, as indicated in Figure 6 of the drawings, or by the action of any other suitable locking or retaining means adapted to be employed in lieu of the said spring-members 9. Next, the pivotally connected members of the music-holder or rack 13 are brought into their opened-out relation shown in said Figure 1, and then connected with the standard of the music-stand by insertion of the angularly bent and flat end of the uppermost member or extension, as 3, in the receiving space formed between the back of the plate or bar 14 and the strap 15. All of the various elements having thus been brought into an assembled relation, a complete music-stand ready for use by the musician is thus produced, as will be clearly evident. To fold the device, when not wanted for further use, the music-holder or rack is slipped off from its connected relation with said end-member 12, and closed up, the parts thereof assuming the positions indicated in Figure 3 of the drawings, and then by a proper manipulation of the spring-members 9, and of the sleeves 33 and 26, the various elements of the standard can be brought into their closed or collapsed relation, so that the collapsed members of the standard and the closed members of the music-holder or rack can be placed side by side, in the form of a very small package, which can be placed in the music-roll or satchel of the musician, or it may be placed in the instrument case, or otherwise carried about without inconvenience to the musician.

Referring now to Figures 13 and 14 of the drawings, in lieu of the locking sleeve 33 herein-above described, I may use a sleeve 36 which is secured in a fixed position upon the tubular member or extension 2 by means of a pin 37, or other suitable fastening means, the said sleeve 36 being also formed with a cone-shaped receiving portion, as 38, with which the angular end-portions 32 of the pivoted legs 30 are adapted to be brought into separable retaining engagement, as will be clearly understood from an inspection of said Figures 13 and 14.

In Figure 15, I have shown still another form of locking sleeve 39, also provided with a cone-shaped receiving portion 40, for the reception of the angular end-portions 32 of the pivoted legs 32, said sleeve 39 being provided with a suitable set-screw, as 41, for

securing said sleeve in the desired position upon the tubular extension 2, substantially as shown.

Of course I am fully aware, that various changes may be made in the general arrangements and combinations of the several devices and parts, as well as in the details of the construction of the said parts, without departing from the scope of the present invention as set forth in the foregoing specification, and as defined in the clauses of the claims which are appended thereto. Hence, I do not limit my present invention to the exact arrangements and combinations of the several devices and parts, as described in the said specification, nor do I confine myself to the exact details of the construction of the said parts, as illustrated in the accompanying drawings.

I claim:—

1. In a collapsible device of the character described, the combination of a standard provided with a bead at its lower end, a sleeve mounted for sliding and rotary motion on said standard, a coil spring encircling the standard between said bead and sleeve, so as to exert upward moving pressure upon the latter, a plurality of legs pivoted to said sleeve, so as to fold into positions parallel to the standard while being capable of swinging outward into angularly extended relation to said standard, the upper ends of said legs extending beyond their pivotal points, being tapered from their inner toward their outer edges and being adapted to be swung into stopped engagement with said standard to limit the angular extension of said legs, means on the standard and adapted to receive said upper ends of said legs to maintain the latter in extended position, said legs being so held subject to release by a downward sliding movement of said sleeve against the compression of said spring.

2. In a collapsible device of the character described, the combination of a standard provided with a bead at its lower end, a sleeve mounted for sliding and rotary motion on said standard, a coil spring encircling the standard between said bead and sleeve so as to exert upward moving pressure upon the latter, a plurality of legs pivoted to said sleeve, so as to fold into positions parallel to the standard while being capable of swinging outward into angularly extended relation to said standard, the upper ends of said legs extending beyond their pivotal points being tapered from their inner toward their outer edges and being adapted to be swung into stopped engagement with said standard to limit the angular extension of said legs, a second sleeve mounted for sliding and rotary motion on the standard and having a receiving portion in its lower end adapted to receive said upper ends of said legs to maintain them in extended position, and a pin

secured in said standard and extending transversely thereof, the ends of said pin projecting beyond the periphery of said standard and disposed in position to hold said second sleeve in leg-engaging position and simultaneously compress said spring between the bead and leg-carrying sleeve, each of said sleeves being provided with a pair of diametrically opposite grooves whereby upon rotation of the sleeves their grooves will be brought into register with the projecting ends of said pin and permit the sleeves to be slid into inoperative position on the standard.

In testimony that I claim the invention set forth above I have hereunto set my hand this 15th day of December, 1922.

ALBERT EBBECKE.