

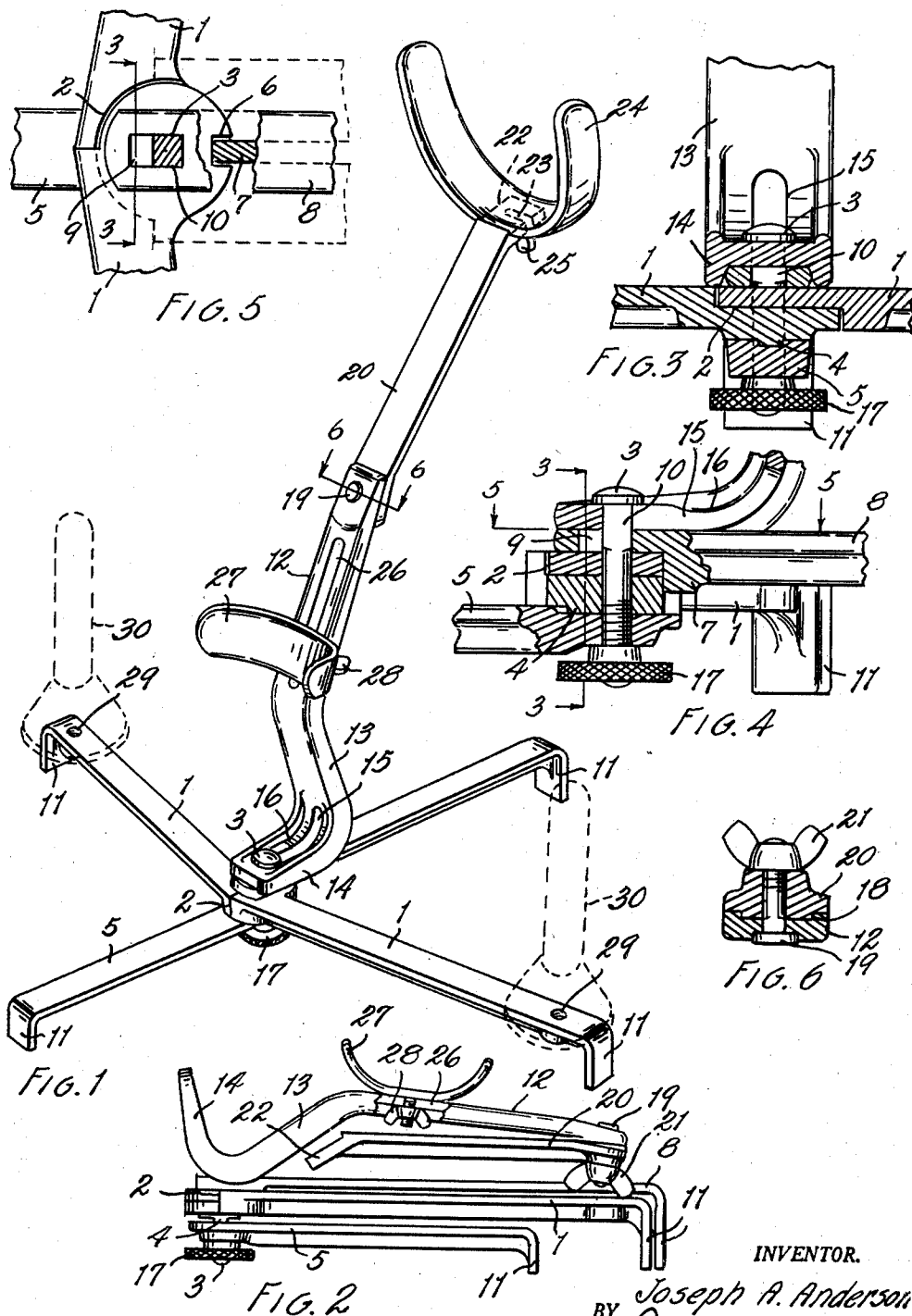
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MUSICAL INSTRUMENT RACK

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MUSICAL INSTRUMENT RACK

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This invention relates to improvements in a musical instrument rack.

The principal objects of this invention are:

First, to provide a novel form of musical instrument rack which is readily collapsible into a compact size for carrying in the pocket or case of a musical instrument.

Second, to provide a collapsible instrument rack with novel interlocking members which when erected will form a rigid support for one or more musical instruments.

Third, to provide a collapsible rack for musical instruments which may be erected or collapsed with a minimum of effort.

Other objects pertaining to the details and economies of the invention will be apparent from the following description and claims.

The drawings, of which there is one sheet, illustrate a preferred form of my instrument rack.

Fig. 1 is a perspective view of my rack in erected position.

Fig. 2 is a side elevational view of my rack in collapsed position.

Fig. 3 is a fragmentary cross sectional view along the line 3—3 in Fig. 4.

Fig. 4 is a fragmentary vertical cross sectional view through the interconnected parts of my rack and showing the parts in erected position.

Fig. 5 is a fragmentary cross sectional view along the line 5—5 in Fig. 4.

Fig. 6 is a cross sectional view along the line 6—6 in Fig. 1.

My rack is designed primarily for the use of reed instrument players and is designed to support a musical instrument such as a saxophone and one or more clarinets within convenient reach of the musician.

The rack consists of a pair of side leg members 1 joined together by a lapped knuckle hinge joint indicated at 2 so that the legs are swingable about a hinge bolt 3 between an aligned extended position as illustrated in Figs. 1, 3 and 5 and a side by side collapsed position as illustrated in Fig. 2 and by the dotted lines in Fig. 5. The left side leg 1 is provided with a longitudinally extending tongue 4 which is arranged to fit within a mating groove formed on the top of a lower front leg 5 when the lower leg is rotated around the hinge bolt to an erected position approximately perpendicular to the side legs 1. The rear sides of the connected ends of the side legs 1 are provided with vertically extending notches 6 (see Figs. 4 and 5) which are aligned when the side legs are in extended position and which are arranged to receive the forward end of the vertical flange 7 formed on

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the underside of a rear leg 8. The rear leg 8 has its forward end lapped over the right side leg 1 and is provided with a slot 9 on its forward end which passes the hinge bolt 3, the hinge bolt being provided with a flattened portion 10 on its shank so that the hinge bolt is held against rotation in the rear leg 8. All of the legs are provided with downturned ends 11 forming feet of suitable lengths so that the legs will stand in a level position on the floor.

Positioned above the legs of the rack is a lower support member 12 of rearwardly opening channel-shaped cross section having a straight upper portion merging at its lower end with a rearwardly extending return bend portion which terminates in an arm 14 extending at an obtuse angle with respect to the upper portion of the arm. The web of the lower end 14 and the reversed curved portion 13 of the lower support member define a slot 15 through which the upper end of the hinge bolt 3 extends. The upper surface of the web of the lower support arm is cut away or reduced in thickness as at 16 along the slot 15 so that the head of the hinge bolt may slide easily along the slot when the hinge bolt is slightly loosened. A knurled thumb screw 17 is provided on the lower end of the hinge bolt for clamping the legs and lower support member in either collapsed or erected position.

The upper end of the lower support member defines a shallow groove 18 on the rearside thereof and an aperture for receiving the square shank of a short coupling bolt 19. The groove 18 is arranged to receive a mating tongue formed on the forward side of an upper support member 20 when the upper and lower members are in aligned relationship. A wing nut 21 is provided on the bolt 19 for clamping the upper and lower members together. The upper member 20 is turned slightly backwardly from the lower support and is provided at its upper end with a further rearwardly turned tip 22 defining a slot 23 opening to one side of the member and adapted to receive a stud bolt mounted in the center of a U-shaped support bracket 24. A thumb screw 25 is provided on the stud for clamping the upper bracket to the upper support member. Due to the rearwardly turned tip and arm of the upper support member the upper bracket 24 substantially overhangs the rear leg 8.

The straight portion of the lower support member 12 defines a slot 26 arranged to pass a stud secured to the center of a lower U-shaped support bracket 27. A wing nut 28 is provided for clamping the lower bracket on the lower support arm. The ends of the side legs 1 define threaded

apertures 29 for removably supporting suitable pins indicated by dotted lines at 30 for supporting clarinets or other musical instruments having straight barrels and the U-shaped support brackets 24 and 27 are arranged to conveniently support a saxophone.

As will be most readily seen in Fig. 2 the rack may be collapsed into a very compact shape by loosening the thumb screw 17 and wing nuts 21, 25 and 28. The upper support bracket 24 may be removed from the upper support member and the lower support bracket may be turned into the plane of the lower support member 12. The upper support arm 20 may then be rotated to lie along the back of the lower support arm and may be clamped in this position by retightening the wing nut 21, the rearwardly turned upper portion of the upper arm providing clearance for the wing nut. The lower support member may be slid forwardly to move the hinge bolt 10 along the slot 15, the arm rotating backwardly toward the rear arm 12 as the head of the hinge bolt passes along the return bend of the lower support arm. It will be noted that the side flanges of the lower support member overlap and engage the sides of the rear leg 3 maintaining the rear leg and lower support member in aligned relationship. The rear leg 3 may then be pulled backwardly to move the square shank 10 of the hinge bolt to the forward end of the slot 15 which will move the flange 7 of the rear leg out of the notches in the side legs 1. The side legs may then be rotated into side by side collapsed position underneath the rear leg 3 and the front leg 5 may be dropped away from the left side leg to clear the groove 4 from its mating tongue so that the front leg may be rotated into an aligned position below the side legs 1. If desired the thumb screws 17 and wing nut 21 may then be tightened to clamp the parts of the racks in collapsed position. It should be noted that the cut away portion 16 of the web of the lower support member permits the rack to be collapsed or erected with a very small motion of the thumb screw 17. As soon as the hinge bolt is loosened sufficiently to slide the lower support member under the head of the hinge bolt, the cut away portion 16 will automatically provide sufficient clearance to drop the front leg 5 below the tongue on the left side leg.

The rack is thus provided with rigid interlocking members in both erected and collapsed position so as to firmly support the instruments placed thereon and is still readily collapsed into a short compact bundle which is no longer than the rear leg 3. The rearwardly extending character of the support arm provides a support readily adapted to receive the curved form of a saxophone and the rack is easily and quickly adjusted to either erected or collapsed position.

Relative terms such as right and left, front and back, upper and lower have been used for convenience of description only since obviously the tongue and groove joints and relative lapping of the ends of the leg members could be reversed and still produce the same interlocking results. I have thus described a highly practical embodiment of my rack adapted for supporting saxophones and clarinets and have not attempted to show various modifications thereof for supporting other instruments as such modifications should be readily apparent without further disclosure.

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

1. A collapsible musical instrument rack com-

prising a pair of legs having a lapped knuckle hinged joint between the inner ends thereof and foldable into side by side relationship, the inner ends of said legs having vertical notches therein which are aligned when said legs are extended, a third leg having a tongue and groove locking engagement with said pair of legs when in extended position, a fourth leg having a lapping engagement with said other legs and having a slot in the inner end thereof, a common hinge bolt connecting said legs and extending through said slot, said fourth leg having a tongue engageable in said notches in said pair of legs to form a tongue and groove locking engagement in erected position releasable by moving said fourth leg longitudinally of the leg relative to said hinge bolt, a lower support member having a return curved lower end and with flanges engageable with the sides of the uppermost of said legs, said lower member defining a slot along the return curve thereof through which said hinge bolt extends, said hinge bolt having a flattened shank engageable with said slot in said fourth leg to prevent relative rotation therebetween, a nut threaded on said hinge bolt for clamping said legs and member together, an upper member having a releasable lapped tongue and groove pivoted joint with the upper end of said lower support member, and instrument support brackets releasably secured to said upper member and said lower member.

2. A collapsible musical instrument rack comprising a pair of legs having lapped knuckle hinged joint between the inner ends thereof and foldable into side by side relationship, the inner ends of said legs having vertical notches therein which are aligned when said legs are extended, a third leg having a tongue and groove locking engagement with said pair of legs when in extended position, a fourth leg having a lapping engagement with said other legs and having a slot in the inner end thereof, a common hinge bolt connecting said legs and extending through said slot, said fourth leg having a tongue engageable in said notches in said pair of legs to form a tongue and groove locking engagement in erected position releasable by moving said fourth leg longitudinally of the leg relative to said hinge bolt, a lower support member having a return curved lower end, said lower member defining a slot along the return curve thereof through which said hinge bolt extends, said hinge bolt having a flattened shank engageable with said slots in said fourth leg and lower support member to prevent relative rotation therebetween, a nut threaded on said hinge bolt for clamping said legs and member together, an upper member having a releasable lapped tongue and groove pivoted joint with the upper end of said lower support member, and instrument support brackets releasably secured to said upper member and said lower member.

3. A collapsible musical instrument rack comprising a pair of side leg members having a knuckle hinge joint between the inner ends thereof and foldable between an extended and a side by side relationship, the inner ends of said legs having vertical notches therein which are brought into aligned cooperating relationship when said legs are extended, a rear leg having a flat inner end lapped upon the joint of said side legs and provided with a vertically projecting flange the forward end of which is arranged to engage said notches when said legs are erected, a front leg having a lapped interlocking engagement with the inner ends of said side legs when said legs

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are erected, a common hinge bolt extending through the inner ends of said legs, said rear leg defining a slot through which said bolt extends whereby said rear leg is movable longitudinally of itself to disengage the flange thereon from said notches, a support member having an extending bend on the lower end thereof, said bend defining a slot through which said hinge bolt extends whereby said member may be slid along said hinge bolt to tilt the upper end of the member between a generally horizontal position overlying the upper of said legs and a rearwardly sloping erected position, and a clamping member on said hinge bolt for clamping said legs and support member together, the thickness of said support member being reduced toward the top thereof and along said slot whereby a small movement of said clamping member will permit a greater loosening of said legs by moving said support member to position said bolt in the thinned portion of said support to permit disengagement of the lapped interlocking engagement of said front leg.

4. A collapsible musical instrument rack comprising a plurality of leg members having an interlocking and hinge joint between the inner ends thereof and foldable into side by side relationship, a common hinge bolt extending through the inner ends of said legs, said bolt having a flattened surface non-rotatably engaging one of said legs, said one leg defining a slot through which said flattened surface extends whereby said one leg is movable longitudinally of itself to disengage part of the interlocking portion of said joint, a support member having a bend on the lower end thereof, said bend defining a slot through which said hinge bolt extends whereby said member may be slid along said hinge bolt to tilt the upper end of said support member between a generally horizontal position overlying said legs and a rearwardly sloping position, and a clamping member on said hinge bolt for clamping said legs and member together.

5. A collapsible musical instrument rack comprising a plurality of leg members having an interlocking and hinge joint between the inner ends thereof and foldable into side by side relationship, a common hinge bolt for said joint extending through the inner ends of said legs, a support member having a return bend on the lower end thereof, said return bend defining a slot through which said hinge bolt extends whereby said member may be slid along said hinge bolt to tilt the upper end thereof between a generally horizontal position overlying said legs and a rearwardly sloping position, the walls along the sides of said slot decreasing in thickness along said slot toward the rear thereof, and a clamping member on said hinge bolt for clamping said legs and member together.

6. A collapsible musical instrument rack comprising a plurality of leg members having an interlocking and hinge joint between the inner ends thereof and foldable into side by side relationship, a common hinge bolt for said joint ex-

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tending through the inner ends of said legs, said bolt having a flattened surface non-rotatably engaging one of said legs, said one leg defining a slot through which said flattened surface extends whereby said one leg is movable longitudinally of itself to disengage part of the interlocking portion of said joint, a support member having a bend on the lower end thereof, said bend defining a slot through which the flattened portion of said hinge bolt extends whereby said member may be slid along said hinge bolt to tilt the upper end thereof between a generally horizontal position overlying said legs and an erected position, and a clamping member on said hinge bolt for clamping said legs and member together, said member being tapered in thickness along said slot.

7. A collapsible musical instrument rack comprising a plurality of leg members having an interlocking and hinge joint between the inner ends thereof and foldable into side by side relationship, a common hinge bolt for said joint extending through the inner ends of said legs, said bolt having a flattened surface non-rotatably engaging one of said legs, said one leg defining a slot through which said flattened surface extends whereby said one leg is movable longitudinally of itself to disengage part of the interlocking portion of said joint, a support member having a bend on the lower end thereof, said bend defining a slot through which the flattened portion of said hinge bolt extends whereby said member may be slid along said hinge bolt to tilt the upper end of said support member between a generally horizontal position overlying said legs and an erected position, and a clamping member on said hinge bolt for clamping said legs and member together.

8. A collapsible musical instrument rack comprising a plurality of leg members having an interlocking and hinge joint between the inner ends thereof and foldable into side by side relationship, a common hinge bolt for said joint extending through the inner ends of said legs, a support member having a bend on the lower end thereof, said bend defining a slot through which said hinge bolt extends whereby said member may be slid along said hinge bolt to tilt the upper end thereof between a generally horizontal position overlying said legs and an erected position, and a clamping member on said hinge bolt for clamping said legs and member together in erected position.

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