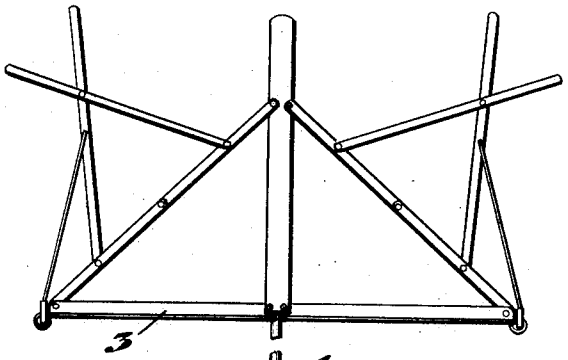
March 11, 1930. M. W. KRAUTH 1,750,273

MUSIC STAND

Filed July 20, 1927





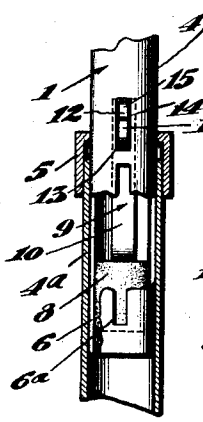


Fig. 5

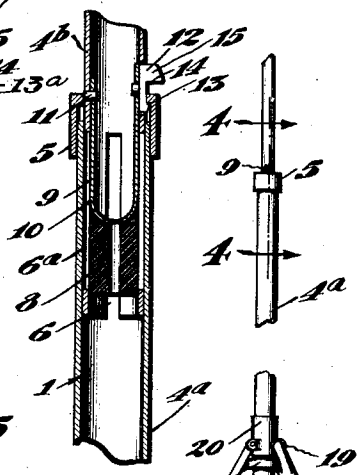


Fig. 4

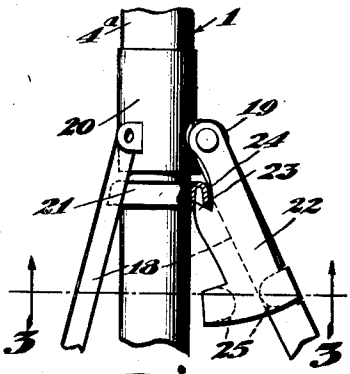


Fig. 2

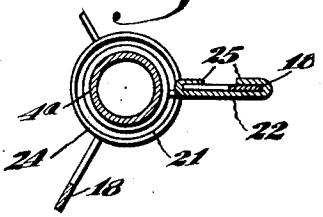


Fig. 3

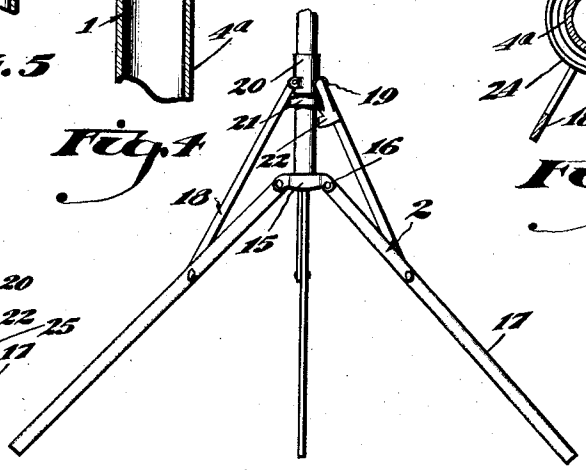


Fig. 1

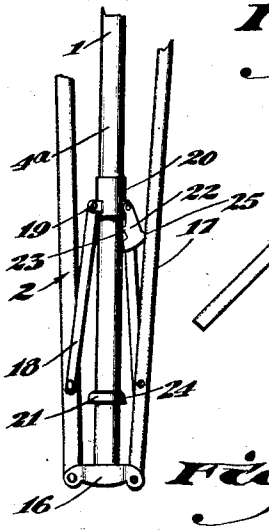


Fig. 6

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Patented Mar. 11, 1930 1,750,273

UNITED STATES PATENT OFFICE

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MUSIC STAND

Application filed July 20, 1927. Serial No. 207,241.

This invention relates to collapsible folding music stands in which a sheet holding rack is supported on an extensible post and the post mounted on a tripod arrangement of legs foldably attached to the lower end of the post.

The invention is particularly directed to means on the extensible post for holding the post in extended position and also to a clasp embodied in the tripod arrangement of legs, for sustaining the tripod in set-up position.

Therefore, an object of this invention is to provide an extensible music stand post made up of tubular telescoping sections, having latching means at the respective junctures of the telescoping sections which automatically stop and sustain the extended post sections in full extended position and which are manually operable for release and consequent collapsing of the posts.

Another object is to provide tubular sections for the extensible post having their telescoping lower ends constructed for exerting expansion pressure frictionally engaging against the inner walls of the tube in which they are telescoped.

Another object is to provide a combination stop and clasp arrangement at the base of the extensible posts for sustaining the tripod arrangement of legs in uniform set-up position.

Further objects and advantages will be more fully set forth in the description of the accompanying drawings forming a part of this specification, in which:

Figure 1 is a front view of the music stand showing the same in set-up position, the length of the post being broken at various points to reduce the length of the same for convenience in illustration.

Figure 2 is an enlarged detail view of the pivotal sliding connection of the tripod arrangement of the legs to the extensible post, showing the clasp in operative position for sustaining the tripod in set-up position.

Figure 3 is a sectional view taken on line 3—3, Figure 2, detailing the attachment of the clasp to one of the legs of the tripod arrangement.

Figure 4 is an enlarged sectional view taken on line 4—4, Figure 1, detailing a detent arrangement for maintaining the joining sections of the extensible posts in extended position.

Figure 5 is a sectional view taken on line 5—5, Figure 4, further detailing the detent shown in Figure 4.

Figure 6 is a fragmentary view of the lower end of the music stand, showing the tripod arrangement of legs folded back on the extensible posts into a portable position and the clasp in inoperative disengaged position.

Referring to the drawings, the extensible post is indicated at 1, the tripod arrangement of legs at 2, and the music rack at 3. The rack is a foldable structure attached to the upper end of the top section of the extensible posts. The exact detail and manner of folding the rack for rendering it portable will not be described herein since it is not part of this invention.

The post 1 is made up of various tubular sections 4 telescopically engaged one within the other, gradually increasing in diameter from the top section to the lower and telescoped in that manner. Cooperable elements between the joining sections are provided for sustaining the various sections of the post in full extended position. These elements are the same for each joint of the post so that the description will read only as to one.

The upper end of the tubular section 4^a (see Figures 4 and 5) has a cap 5 secured thereto. The cap 5 has a bore concentric with the tube 4^a and of the same diameter as the inside diameter of the tube. The upper engaging tubular section 4^b extends through the cap and into the lower section 4^a in telescopic engagement. The lower end of the tube 4^b is slotted. These slots extend longitudinally of the tube and are disposed in pairs diametrically related as regards their construction and disposition. One pair 6 of these slots is cut all the way to the end of the tube and the other pair 6^a has its lower end closed not extending entirely to the end of the tube.

A compressible block or plug 8 is mounted within the lower end of the tube, its bottom edge being substantially at the lower ends of the closed slots. The effect of the com-

pressible block 8 is to force the split walls of the end of the tube outwardly against the inner walls of the tube 4^a within which it is telescoped, thereby providing a snug fitting sliding engagement. The closed slots allow intermediate bulging of the tube end sufficient to allow the plug to expand to such a degree as to hold the plug in place due to greater expansion at this point than at the end of the tube with the slots extending to the base of the tube allowing the necessary expansion of the lowermost end of the tube 4^b. This arrangement of slots allows a uniform expansion of the tube end under the action of the block 8 and sufficiently holds the plug in position when the tubes are completely telescopically disengaged.

In order to prevent the tubes from becoming completely disengaged and to lock them in extended post condition, a detent 9 is provided. This detent is disposed within the lower end of the tube 4^b directly above the expansible block 8, and comprises a U-shaped spring 10 having one arm thereof mounted on a pin 11, secured in the wall of the tube 4^b. The U-shaped spring is mounted longitudinally of the tube and has the detent element 12 secured to its other arm outer end. The detent element 12 is disposed within a slot 13^a in the wall of the tube opposite the pin 11 and moves radially of the tube against the action of the U-shaped spring. The element 12 extends completely through the wall and is provided with a pair of shoulders 13 and 14. The lower shoulder 13 is adapted to engage the underside of the cap 5. The tube 4^a does not extend all the way to the underside of the cap 5, so that there is a slight clearance left therein into which the head of the element 12 forming the shoulder 13 may move.

The upper shoulder 14 is the lower edge of a head 15, the head 15 being the portion engaged by the operator to depress the detent. Normally, that is, during sliding movements of the upper tube within the lower, the outer end of the head 15 is engaged against the inner bore of the lower tube. As the upper tube is drawn outwardly, the detent head 14 is forced outwardly by the detent spring action and causes the lower shoulder to abut the underside of the cap 5. This spring action of the detent also holds the detent head 15 in such position that the shoulder 14 thereof engages the top of the cap 5, thereby preventing collapsing or telescoping movement of the tubes. It is then necessary to depress the detent by manual operation or engagement thereof, forcing it within the outline of the tube so that the tube may be slid within its companion tube.

The arrangement herein described at the juncture of each pair of telescoping tubes provides a very convenient means for sustaining the posts in extended position, the operator merely drawing the posts in extended position by pulling them out as far as it is possible, and returning the same to collapsed position merely by manual pressure on each detent and a general pressure applied to the posts.

The tripod arrangement of legs at the bottom of the post is mounted as follows: A leg attaching pivot bracket 15 having three ears 16 thereon is suitably secured to the end of the lowermost tube of the post. Legs 17 of bar metal have their upper ends pivotally attached to these ears. Sustaining rods 18 are provided for each leg, these rods 18 being pivoted intermediate of the legs at one end and pivoted at the opposite end to ears 19 formed on a slidable carrier collar 20 engaged about the lowermost tube, this collar 20 being of proper inner diameter to provide a smooth sliding over the lower tube. Movement of the collar 20 or movement of the legs 17 slides said member along the length of the lower tube during collapsing and setting up of the tripod. A double flanged ring 21 (see Figure 2) is concentrically welded or secured in a convenient manner to the lowermost tubular section of the post. The concentric ring 21 is disposed a sufficient distance above the pivot points for the legs to allow downward movement of the slidable collar 20 to a point for proper disposition of the legs of the tripod, serving as a stop to provide setting up of the tripod legs in proper spread.

A clasp 22 is provided for engaging the concentric ring 41 for preventing collapse of the set-up tripod. This clasp 22 is pivotally secured to an ear 19 by the pivot pin holding the rod 18 thereto and has a sliding movement adjacent and against the side of the particular rod. On the inside of the clasp 22 adjacent the concentric ring 21, there is a hook portion 23 formed therein, this hook portion 23 adapted to swing in engagement with the underside of the outer flange 24 of the tubular flanged concentric ring at the time when the legs are in proper set-up position and the sliding member 20 is drawn substantially down to the concentric ring. Pivotal movement of the clasp 22 is limited by means of a pair of oppositely disposed clip portions 25 formed on its outer end, these clip portions adapted to engage over the leg edges during operative and inoperative positions of the clasp.

The concentric ring 21, as shown in Figure 2, is of inverted U-shape in cross section and the hook portion of the clasp engages the outer portion of the U-shaped ring. The operator in disengaging the clasp from its operative position merely forces the outer end of the clasp away from the posts and the hook portion thereupon is moved outwardly so as to be disengaged from the concentric ring when the slidable collar 20 is moved upwardly during collapsing of the tripod.

Having described my invention, I claim:

1. A latching means for a post supporting tripod, comprising, a carrier slidably mounted on the post, links pivotally connected to the carrier and to the respective legs of the tripod, an abutment formed on said post intermediate the base of the post and the carrier, a latch pivotally attached to a link pivot on said carrier, said latch moving adjacent to a side of the link and a pair of clips formed on the outer end of the latch, said clips adapted to engage the respective edges of the link for limiting movement of the latch and said latch having a hook portion adapted to engage the abutment for locking the tripod in set-up position.

2. A latching means for a post supporting tripod, comprising a carrier collar slidably mounted on the post, links having their respective ends pivotally secured to the carrier collar and the respective legs of the tripod, an abutment formed on said post intermediate of the carrier collar and the base of the post, and a latch member pivotally attached to one of the link pivots on said carrier collar, said latch frictionally engaging a side of the link for maintaining the latch in set position and said latch having a hook portion adapted to engage the abutment for maintaining the tripod in set-up position.

In witness whereof, I hereunto subscribe my name.

MARIE WILLIAM KRAUTH.