

(No Model.)

A. KRAUTH.
MUSIC STAND.

No. 597,722.

Patented Jan. 25, 1898.

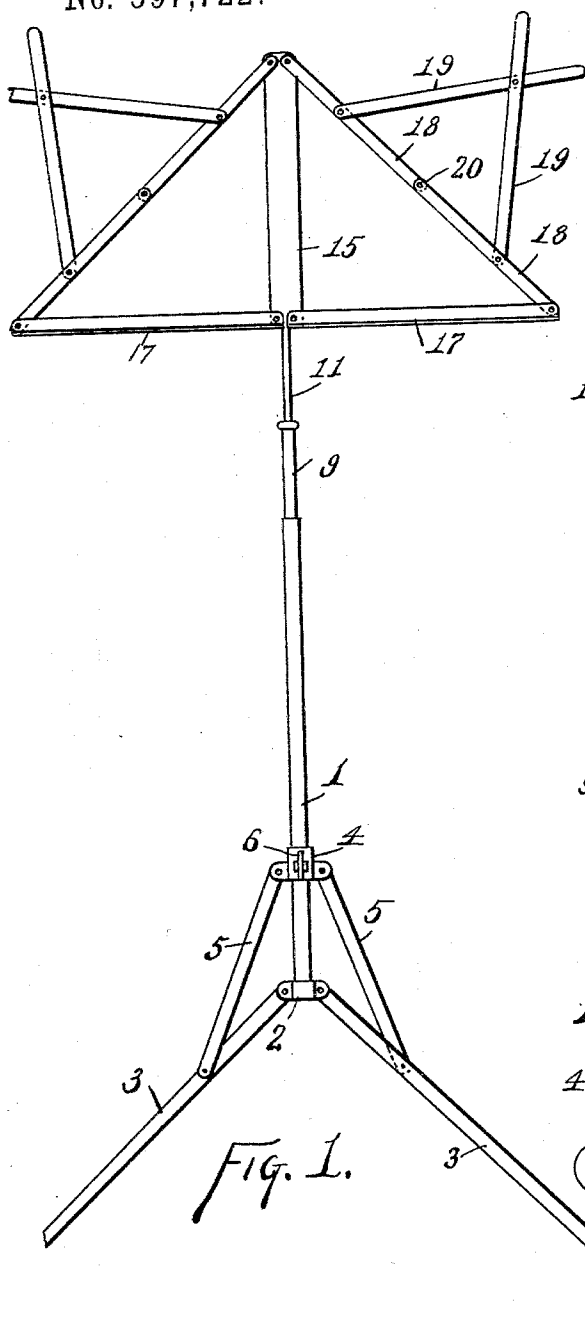
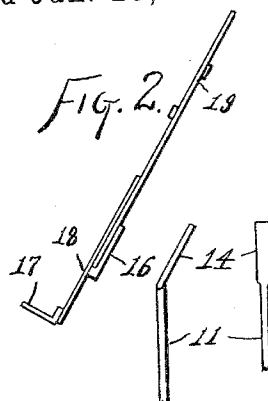


Fig. 3.

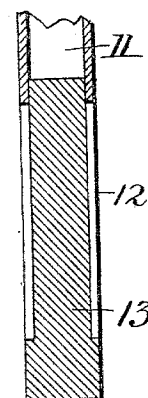
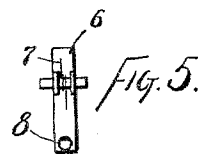


Fig. 6.



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UNITED STATES PATENT OFFICE.

ALBERT KRAUTH, OF HAMILTON, OHIO.

MUSIC-STAND.

SPECIFICATION forming part of Letters Patent No. 597,722, dated January 25, 1898.

Application filed August 22, 1896. Serial No. 603,626. (No model.)

To all whom it may concern:

Be it known that I, ALBERT KRAUTH, of Hamilton, Butler county, Ohio, have invented certain new and useful Improvements in Music-Stands, of which the following is a specification.

This invention pertains to improvements in that class of stands used by musicians for the support of sheet-music.

My improvements will be readily understood from the following description, taken in connection with the accompanying drawings, in which—

Figure 1 is a front elevation of a music-stand embodying my improvements; Fig. 2, a side elevation of the rack; Fig. 3, a side elevation and a front elevation of the shank connecting the rack with the top tube; Fig. 4, a vertical section of the tubes and runner; Fig. 5, a rear view of the latch, and Fig. 6 a vertical section of the lower end of the inner tube 11 and its expanding-plug.

In the drawings, 1 indicates the usual base-tube of a music-rack; 2, the usual spider secured on the base thereof; 3, the usual legs with their upper ends pivoted to the spider, the free ends of the legs being adapted, as usual, to extend downwardly and outwardly and rest on the floor and support tube 1 or to fold upward closely against and parallel with tube 1; 4, the usual runner arranged for free sliding motion on base-tube 1; 5, braces, one for each leg, their lower ends being pivoted to the legs and their upper ends being pivoted to the runner, as usual; 6, a latch pivoted to the runner; 7, a spring upon the latch tending to urge its lower end inwardly toward the axis of the runner; 8, a bolt projecting from the lower end of latch 6 inwardly through the runner and into and through a hole in base-tube 1, the hole being in such position as to be engaged by the bolt when the runner is down in the position corresponding with the downward open position of the legs, as when the music-stand is in use, the inner end of latch-bolt 8 projecting inwardly beyond the inner surface of tube 1 and having its upper surface beveled; 9, a second tube sliding telescopically within base-tube 1; 10, a disk fitting the bore of base-tube 1 and secured loosely on the lower end of tube 9 by means of an eccentric pivot, whereby the disk may

be turned to positions either concentric or eccentric with tube 9; 11, a top tube sliding telescopically within tube 9; 12, slits in the lower end of tube 11 to permit the expansion of the lower end of the tube, so as to snugly fill the bore of tube 9 and slide therein with resisting friction; 13, an elastic plug, as of rubber, inserted within the slitted lower end of tube 11, the plug projecting downwardly below the end of tube 11, and its projecting portion having a diameter sufficient to compressively fill the bore of tube 9, the expansive tendency of plug 13 thus tending to create friction between itself and the bore of tube 9, and also to expand the slitted end of tube 11 and create friction between that tube and the bore of tube 9; 14, a shank formed upon the upper end of top tube 11; 15, the usual vertical center strip of the music-rack; 16, the usual socket formed on the rear of this center strip and adapted to removably engage shank 14; 17, the usual ledge-strips with their inner ends pivoted to the base of center strip 15, the ledge-strips being pivoted, as usual, to lie horizontally in the same plane for use or to fold up inwardly close together and parallel with the center strip; 18, a brace-strip with its upper inner end pivoted to the top of center strip 15 and with its outer lower end pivoted to the outer end of one of ledge-strips 17, this brace-strip being formed of two separate strips pivotally united at a point intermediate between the end extremities of the entire brace-strip; 19, a pair of strips intersecting and pivoted together near their outer ends, their inner ends being pivoted to the separate sections forming brace-strip 18, and 20 the pivot connecting the two sections of the brace-strip 18, the parts 17, 18, 19, and 20 being duplicated at the other side of the rack.

By flexing inwardly at pivot 20 the brace-strip 18 will fold as the ledge-strip 17 is folded up parallel with center strip 15, rest-strips 19 at the same time flexing upon their outer pivot and folding together, bringing all of the elements of the rack structure into compact form parallel with center strip 15. The entire rack structure may thus be removed from shank 14 and form when folded a slim compact bundle.

By releasing latch 6 the runner 4 may rise upon base-tube 1, the legs and the braces 5

folding snugly up against the base-tube. In separating the legs for use the runner slides down the tube and becomes locked in proper position by the latch. The tube structure
 5 telescopically slides to produce a comparatively short bundle. When tube 9 slides down within tube 1, its lower end engages the beveled portion of the latch-bolt 8 and releases the latch and permits the runner to rise
 10 and the legs to fold up, no fingering of the latch being necessary. Pushing down upon tube 9 disengages the latch and permits the runner to rise and the legs to fold upwardly. Top tube 11 slides within tube 9 with sufficient friction to maintain it in position of adjustment, the friction being produced by the expansion of the slitted end of tube 11 and also by the expansion of the projecting lower portion of the rubber plug. By turning tube
 20 9 to bring it concentric with disk 10 the tube may freely slide up and down in base-tube 1. After the vertical adjustment has been made a very slight turn of tube 9 brings it eccentric to disk 10 and causes tube 9 to be firmly
 25 locked within the base-tube.

The inner sliding tubes of such devices have heretofore had their lower ends slitted, the resiliency of the slitted metal producing expansion and friction, and in some cases to
 30 such slitted end have been added interior movable spreaders, actuated by exterior devices, to forcibly expand the slitted end and perform the locking. In the first case the frictional locking is not satisfactory in degree
 35 and its capacity becomes very soon reduced in use, and in the second case there is an undesired complication of parts and difficulty of providing for reaching the movable locking parts from the outside of the outer tube.
 40 In my device the rubber plug employed produces a peculiarly satisfactory lock by the contact of its own outer surface with the inner surface of the tube, the lock being of a positive character within certain limits, as

distinguished from a mere frictional resistance. When force is applied to slide the inner tube, the first effect is to still further expand the rubber and increase the locking adhesion, an action totally absent in mere metallic contacts, and it is only when excessive
 50 force is applied that the bite of the rubber yields suddenly and the inner tube slides. The rubber also serves in expanding the slitted end of the tube and producing the resisting friction between metal and metal, permitting the employment of non-resilient metal in the inner tube and providing against destruction of the fit by wear of the metal.

I claim as my invention—

1. In a music-stand, the combination, substantially as set forth, of a vertical center strip, a ledge-strip with its inner end pivoted to the base of the center strip, a brace-strip with its upper end pivoted to the top of the center strip and with its lower end pivoted to the outer end of the ledge-strip and formed of two sections pivotally united, and a pair of rest-strips with their inner ends pivoted to the sections of the brace-strip and having their outer portions intersecting and pivotally
 70 united.

2. In a music-stand, the combination, substantially as set forth, of a base-tube having a perforation, legs with their inner ends pivoted at the lower end of said base-tube, a
 75 runner sliding on the base-tube, braces pivoted to the runner, a latch having a bolt projecting inwardly and adapted to engage and project through said perforation in the base-tube and present itself within the bore of said
 80 base-tube, and a second tube sliding telescopically within said base-tube and adapted to have its lower end engage said bolt and move the same outwardly.

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Witnesses:

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