Dec. 9, 1941. O. C. ARMSTRONG 2,265,885

TAIL ASSEMBLY FOR STRINGED INSTRUMENTS

Filed March 29, 1941 2 Sheets-Sheet 1

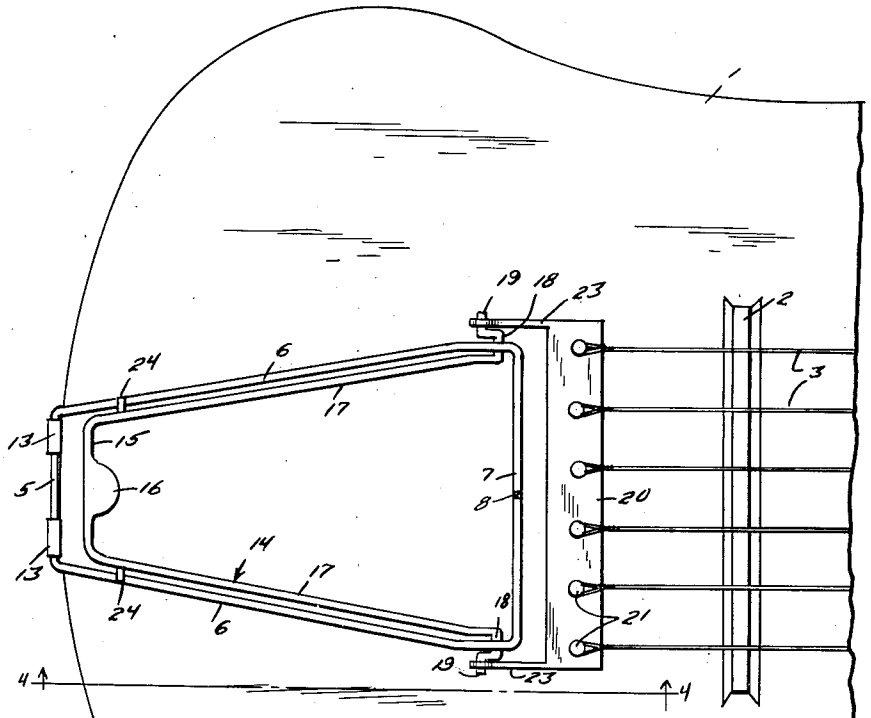


Fig. 1.

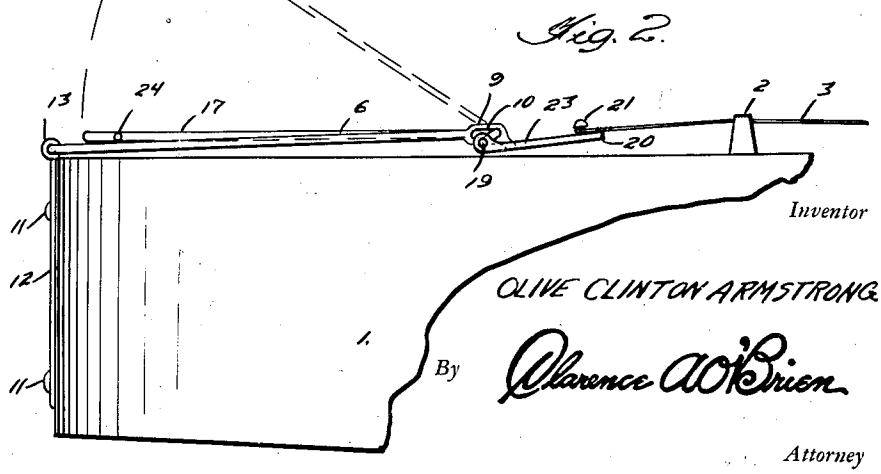


Fig. 2.

Inventor

OLIVE CLINTON ARMSTRONG

By Clarence O'Brien

Attorney

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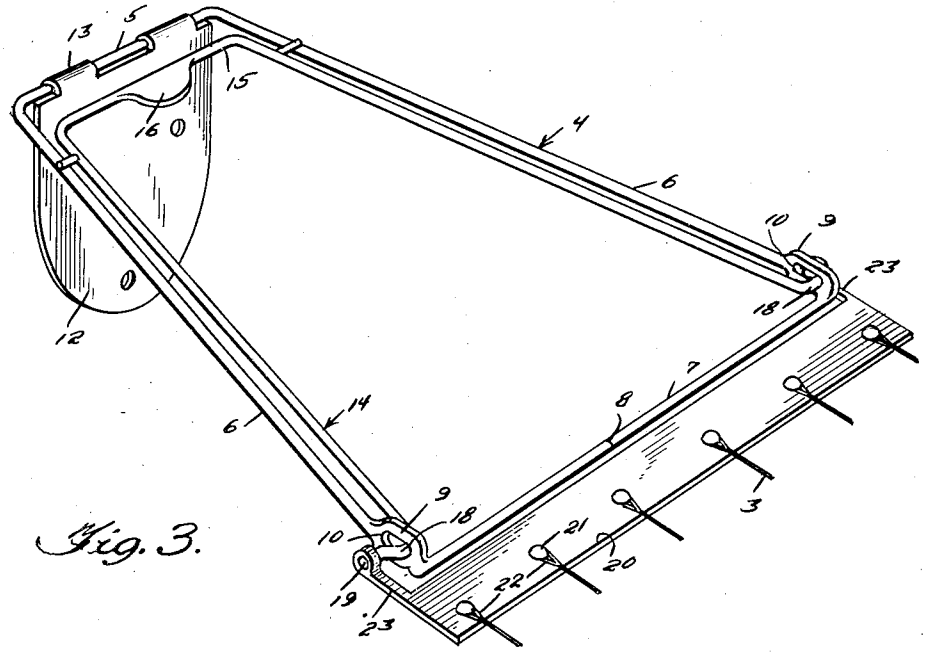


Fig. 3.

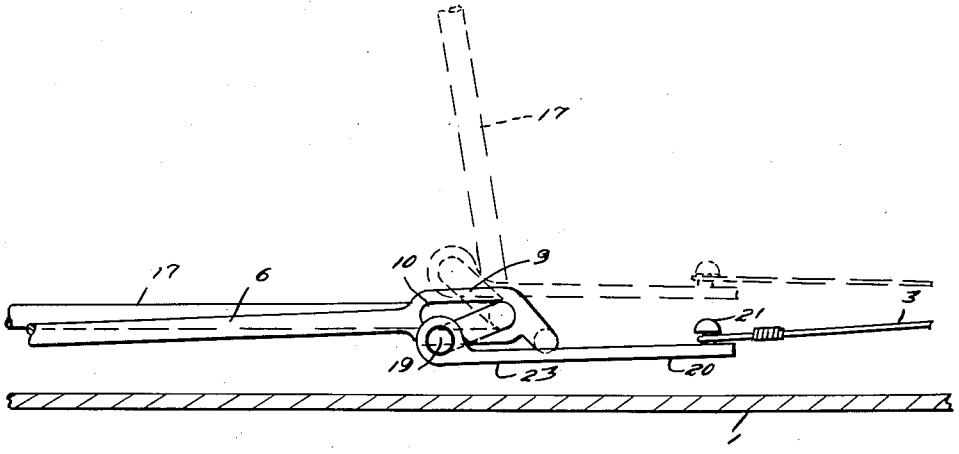


Fig. 4.

Inventor

OLIVE CLINTON ARMSTRONG

By Clarence A. O'Brien

Attorney

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TAIL ASSEMBLY FOR STRINGED INSTRUMENTS

Olive Clinton Armstrong, Delavan, Ill.

Application March 29, 1941, Serial No. 385,951

1 Claim. (Cl. 84—299)

My invention relates to improvements in tail assemblies, the primary object in view being to provide practical, inexpensive means for ready attachment to any stringed instrument and which is operative to relieve the tension on the strings when the instrument is not in use, and to quickly tension all strings simultaneously to tuned pitch.

Another object is to provide means of the character and for the purpose above set forth which is light in weight, yet strong, will not vibrate or chatter, is easy to operate and inexpensive to manufacture.

Other and subordinate objects are also comprehended by my invention, all of which, together with the precise nature of my improvements will be readily understood when the succeeding description and claim are read with reference to the drawings accompanying and forming part of this specification.

In said drawings:

Figure 1 is a fragmentary view in top plan illustrating the preferred embodiment of my invention applied,

Figure 2 is a view in side elevation,

Figure 3 is a view in perspective of the tail assembly detached, and drawn to an enlarged scale, and

Figure 4 is a fragmentary view in section taken on the line 4—4 of Figure 1.

Reference being had to the drawings by numerals, I have illustrated the preferred embodiment of my invention therein, as applied to a guitar, and as exemplifying a preferred practice of the invention, the guitar being shown fragmentarily, as sufficient for present purposes, and being designated as a unit by the numeral 1, the bridge being designated by the numeral 2 and the strings shown at 3.

My improved tail assembly comprises as its basic element, a floating skeleton frame, of rod-like material, having a rear straight, transverse end 5, sides 6, preferably converging forwardly for the greater portion of their length, and a front transverse end 7. The frame 4 is formed of a single piece of metal, preferably, welded together in the center of the front bar 7 as at 8. Adjacent the front end 7, the sides 6 of the frame 4 are flattened, as at 9, and provided with a pair of opposed longitudinally extending slots 10 in the flattened portions lying in a vertical plane.

Suitably secured, as by screws 11 to the back end of the guitar 1, in the longitudinal center thereof, is an anchoring plate 12 having a pair of upper edge hinge barrels 13 formed thereon and projecting slightly above the top of the guitar 1. The rear end 5 of the frame 4 is journalled in said barrels 13 so that the frame is vertically swingable on said plate 12.

Fitting within the frame 4, is a manipulative, bail-like lever 14 of rod-like material having a transverse rear end 15 formed with a central, flat, finger grip portion 16, a pair of side arms 17 terminating in a pair of outwardly extending, lateral trunnions 18 slidably and rotatably mounted in the before mentioned slots 10, respectively, and which, in turn, terminate outwardly of the sides 6 of the frame 4 in a pair of cranks 19.

Between the bridge 2, and the front end 7 of the frame 4 is an elongated, flat, string adjusting bar 20 having upstanding studs 21 to which the strings 3 are attached by the usual loops 22 thereon, said bar having a pair of rearwardly extending end arms 23 pivoted on the cranks 19.

As will now be seen, the lever 14 is operative to swing the same on the trunnions 18 downwardly and rearwardly into the frame 4, or, upwardly and forwardly out of said frame. In this connection, it will be noted that the cranks 19 are offset from the trunnions 18 of the lever 14 so that under rearward swinging of said lever into the frame 4, said cranks are rotated rearwardly about the axis of swinging movement of said lever to exert pull on the bar 20 and thereby tension the strings 3 over the bridge 2. Also, a pair of lateral studs 24 are provided on the lever 14 to overlie and abut the sides 6 of the frame 4 so as to limit downward and rearward swinging of the lever 14 and establish the normal position thereof in the frame 4, and the cranks 19 are off-set from the plane of the lever 14 to be swung, in the normal position of the lever 14, past a dead center position relative to the axis of the trunnions 18 and the axis of swinging movement of the frame 4, whereby, under pull exerted on said cranks 19 by the springs 3, a dead center, overthrow lock is provided yieldingly holding the lever 14 down in normal position. Obviously, by swinging the lever 14 upwardly and forwardly until the cranks 19 are swung upwardly and forwardly past dead center position, the described lock may be broken and, under further forward swinging of said frame 14 and cranks 19 the strings 3 loosened from their stretched position.

It may be further explained, at this point, that the lever 14 is sufficiently resilient to permit flexing of the side arms 17 thereof together and

the slots 10 are of sufficient length to permit the cranks 19 to be withdrawn through the same under such flexing of said arms so that the lever may be detached from the frame 4 if desired, and also attached thereto by reaction of said arms and aligning the cranks 19 with said slots.

As will be manifest, by first tuning the strings 3, in the usual manner, after the same are loosened, they may be tightened simultaneously by tensioning the same through the described operation of my improved tail assembly and into substantially tuned relation.

The foregoing will, it is believed, suffice to impart a clear understanding of my invention without further explanation.

Manifestly the invention, as described, is susceptible of modification without departing from the inventive concept, and right is herein reserved to such modifications as fall within the scope of the subjoined claim.

What I claim is:

A tail assembly for a stringed instrument comprising a skeleton frame of rod-like material, means to mount said frame on the rear end of the instrument for vertical swinging movement above the latter, a string adjusting bar adapted for attachment of the rear ends of the strings thereto, and a bail-like lever pivotally mounted on said frame for swinging movement into and out of the same and operatively connected to said bar to exert under swinging of the same into the frame a pull on said bar in opposition to the tension exerted by said strings, said operating connections comprising cranks on said lever and arms on said bar pivotally connected to said cranks, said cranks being swingable under swinging of the lever into said frame to move said pivots below the axis of said cranks and the lines of pull exerted by said strings to form an overthrow dead center lock opposing the tension exerted by the strings, said frame having longitudinal slots therein in which the cranks are journaled and from which the cranks may be withdrawn to detach the lever from the frame, and said lever including flexible crank carrying arms manipulative to withdraw the cranks from said slots.

OLIVE CLINTON ARMSTRONG.