7.10.3.4 The Rickenbacker vibrato

According to GRUHN'S GUIDE TO VINTAGE GUITARS, as early as 1932 an electric Rickenbacker guitar was built with a Kauffmann vibrato – that's 20 years ahead of the Stratocaster, after all. The version described here is, however, not this archetypical guitar but a later variant from the golden 1960's, when the Byrds, the Beatles and the Who helped to create a short period of blossoming of the Rickenbacker tulips. To be specific: it's a model Nr. 335 from 1966. The bridge consists of a u-shaped rail open to the top in which standing "forks" can be shifted back and forth via adjustment screws. In a recess, the forks carry a small roller on which the string rests. The whole thing is tightened up in such a remarkably rigid fashion (at least it is on the investigated guitar) that even the rollers cannot be moved (anymore?). So, is this the perfect bridge? Well, there are 4 screws inserted through the U-shaped rail; they rest on a metal plate (**Fig. 7.122**). With 3 screws, we would achieve a defined bearing but with 4 screws the situation remains undefined. The height of the bridge needs to be very carefully adjusted so that all 4 screws transmit approximately the same force – and then we need to hope that this adjustment never changes again. If we moreover mount heavy strings and take the vibrato arm off …

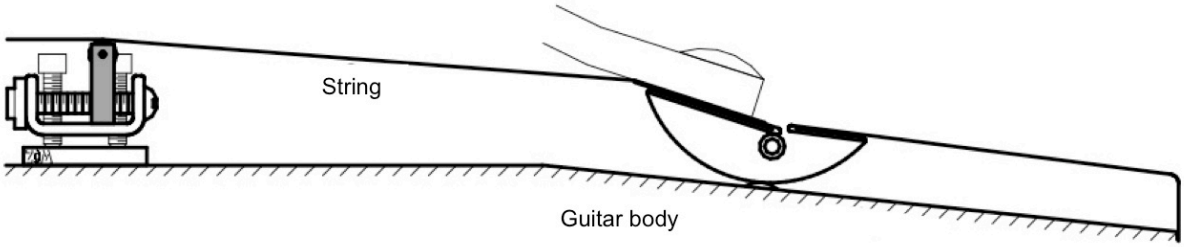

Fig. 7.122: Side view of the Rickenbacker vibrato (1960's vintage).

The spring-loaded tailpiece rivals Fender's ideas when it comes to ingenious simplicity: a u-shaped sheet metal into which 2 further sheets are hooked – done. The vibrato lever serves to bend the u more closed or more open, and changes the string tension that way. Once the strings have been inserted into the tailpiece, the latter for starters won't cause any problems. The latter may, however, occur at the bridge: first because the bearing there is undefined, and second because the bend angle of the string is, at 5°, even smaller than that on the Jazzmaster. It should be noted when considering these numbers that they are measurements on individual guitars; any production tolerances from the 1960's were not looked into.

The Rickenbacker 335 is not a solid body guitar but has a hollow body with a 4 mm strong, vibration-happy top. Compared to a Les Paul, this "semi-acoustic" build leads to higher conductance values and thus to a stronger damping of partials (Chapter 7.11). However, much faith in a well thought out vibration design is not coming our way: the top is stabilized on its lower side with a rather archaic cross-bracing, but then a ½"-cutter was used to mill slots into the top for the pickups – with the cutter taking no prisoners and clearing its way through part of the bracing, as well. Of course: pickups have first priority in the electric 6-string. What's in the way gets removed.

