

## String locks

### Effective clamping mechanisms for stringed instruments

#### Invention

One of the factors affecting the tuning stability of stringed instruments, such as electric or acoustic guitars, is the fastening of the two ends of the strings. This fastening process can be optimized with high-quality components both on the tuners and on the bridge. To this end, dedicated devices such as locking tuners are used, providing an integrated clamping mechanism that facilitates string winding. For non-serially equipped instruments, retrofitting is expensive and sometimes involves irreversible conversion processes requiring a specialist's work; it may be undesirable as it compromises the original status of the instrument (a valuable collector's item, for instance). The invention presented herein involves small clamping components called bullets that require no conversion, the process is fully reversible at any time.



Figure 1

#### Commercial Opportunities

These clamping components significantly enhance tuning stability for all stringed instruments while reducing the time required for the (re-)stringing as follows:

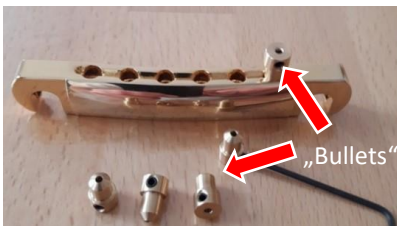


Figure 2



Figure 3

1) On the tuners (usually at the headstock): After the string is fed through the hole in the tuner peg itself, it is passed through the clamping component ("bullet"), where it is clamped and fastened with a built-in screw using an Allen wrench. The string tension created upon tuning of the string provides an intimate connection between the bullet and the tuner peg (see Fig. 1).

2) On the bridge or tailpiece (usually on the body): The clamping component is pressed onto the string, which has already passed through the bridge or tailpiece (stop-tailpiece, for instance) and is clamped analogously to 1) (see Fig. 2).

3) The bridge or tailpiece can be entirely replaced with an integrated array of screws that engage the strings perpendicularly (see Fig. 3).

The use on bridges and tailpieces is not limited to Les-Paul®-style like stop-tailpieces. Telecaster®- or Stratocaster®- like instruments and other stringed

instruments besides electric guitars can benefit from it as well. Variants 2) and 3) use the standard ball-ends provided with the strings to fasten them on the tuners.

#### Current Status

All three components listed were adapted for use with various guitars and tested successfully. On behalf of University of Münster, we extend the invitation to acquire commercial licenses. A patent is pending for this invention.

An invention of the University of Münster.

#### Competitive Advantages

- Affordable, simple complement to lock strings
- No instrument conversion work necessary
- Can be used flexibly – on the tuners, bridge, or tailpiece

#### Technology Readiness Level

123456789

System complete and qualified

#### Industries

- Instrument making
- Luthier components

#### Ref. No.

5899

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