
NEWS FOR CELLISTS AUTUMN 2019

Cello peg article

Cello pegs can be the *bête noir* of our playing lives if they're not working well. They can refuse to budge or, equally, refuse to stay put and in times of low humidity can let go completely and leave you with loose strings when you open your case.

In our article on pages 2 - 3, we describe the ideal design and function of traditional cello pegs and also look at the latest versions of geared pegs, designed to make our playing lives easier.



New cellos and bows

The Cello Exchange has sold several cellos over the last six months and we're happy to announce the arrival of fine cellos by Betts and Wamsley as well as some lovely English cellos from the Kennedy and Preston Schools.

We've also just received twenty new bows from some of our favourite contemporary bow makers, including Bernd Etzler, Christian and Herbert Wanka, John Aniano, Mark Drehmann and Josef Gabriel, as well as some talented Brazilian makers, so there's a wonderful selection here to explore for anyone seeking a new bow. We can post bows to you if you can't make it to Ely.

New website launch

It doesn't feel long since we last upgraded our website. Unlike cello design, which has stayed stable for centuries, nothing stands still for long in the online world and we've just published a re-designed and more responsive version of our site. The address remains the same as before (www.aitchisoncellos.com) and we hope that you'll find the new site enjoyable and easy to use, particularly on mobiles and tablets.

If you spot any issues or have any suggestions, your feedback would be very much appreciated.

Cello wisdom: cleaning strings

Cellists are such a supportive community that we've decided to feature practical tips and advice from cellists for cellists.

Our first topic is cleaning old rosin from strings. It's well known that alcohol dissolves rosin beautifully, but there's an associated risk of damaging your varnish if alcohol drips onto it. **Catherine Wilmers** and **Elizabeth Juett** both use alcohol wipes called 'Sterets' to clean rosin from their strings. These wipes have a very small quantity of alcohol in them which will not drip onto your instrument as you rub them onto the strings. As long as you dispose of the used wipe carefully, well away from your varnish, they are a very effective technique. Sterets are inexpensive and easily available online.

Felix Schmidt has discovered a novel and very simple technique for cleaning rosin from strings: he recommends using a small piece of a fresh green scouring pad (the sort you'd normally use for scrubbing the base of a saucepan after burning the baked beans.) The rough dry pad quickly rids the string surface of rosin build up without causing any damage – and without leaving behind those annoying wisps of yellow fabric when you use a traditional duster for the job. Many thanks to Catherine, Elizabeth and Felix for their help.

If you have any practical suggestions you'd like us to share with fellow cellists, please let us know and we will be delighted to feature them in a future newsletter and on the website.

CELLO PEGS OLD & NEW

Traditional wooden pegs were originally designed for use with gut strings. Modern metal strings are not elastic enough to be fine-tuned with traditional pegs, which led to the development of alternative tuning solutions. The most widely used fine tuning method today is the integration of fine tuners into the tailpiece. A new generation of geared pegs are now a viable alternative.

Disadvantages of fine tuners. One drawback of using tailpiece tuners is that it is difficult to tune at the same time as bowing the instrument. Fine tuners also tend to drag the head of the bridge towards the tailpiece, causing the bridge to warp. Tailpiece tuners also adjust string tension so finely that it's hard to search for the pitch clearly. Many players get round this by pressing the string end in the peg box to see if it needs sharpening or lowering.

Traditional peg design. The basic principle behind the design of traditional wooden pegs is very simple: the tapered peg shaft should turn smoothly inside matching tapered holes in the peg box. Moderate inward pressure on the peg should create sufficient friction for it to grip firmly in the hole as the desired pitch is reached, when used in conjunction with some form of peg paste (part lubricant, part gripping agent).

The taper of peg shafts varies, depending on their age and the wood from which the peg was made, but the standard ratio for an ebony cello peg taper is 1 in 25. The taper for softer woods, for example box wood, is steeper as box wood wears more quickly.

Peg paste. After creating beautifully shaped pegs and peg holes, the final ingredient for smooth peg function is the use of a good peg paste. The most popular peg paste is made by W E Hill & Sons in a durable lipstick-like dispenser. Traditionalists also use a combination of dry soap and chalk (soap for lubrication, chalk for grip). We also like to use old, hardened plasticine as it can have a subtly different quality from commercial peg paste. If you use too much paste it will squeeze out and the peg won't grip enough – just take the peg out and wipe the excess off with a rag or paper.

How to fit strings for good peg function. Traditional pegs rely on being held into the taper by friction, but a poorly fitted string can encourage it to loosen and even pull the peg out. Here is the luthier's tried and tested method of fitting strings:

Start by threading the string through the hole in the relevant peg, allowing just a few millimetres to poke through the other end of the hole. Wind the string smoothly and evenly onto the peg, travelling for a couple of turns towards the thin end of the peg, then guide the string so that it crosses back over the earlier windings towards the fat end of the peg.

The string should end up next to but not squashed up against the side of the peg box. The windings should travel evenly along the peg and not go over each other except where the string crosses itself as you change the direction of the winding. This crossover encourages the string to 'lock' itself onto the peg and helps to stop it from slipping.

Pegs and humidity. Even if your pegs and peg holes are perfect, it's worth being aware that changes in humidity can cause problems. If humidity levels become very high, the wood of the peg and the peg box can swell up so much that the peg can't be moved and if you try too hard to turn the peg, you may break the head off. Historically, players used to knock immovable pegs out with a hammer, and you can see the resulting damage on old peg boxes.

Needless to say, this technique isn't recommended and doesn't always work. The contemporary solution is to take the cello into an air-conditioned environment that will dry out the pegs and allow you to move them again. Conversely, during periods of low humidity, for example in very cold weather, pegs will shrink and loosen in the pegbox, causing the strings to come down.

The best remedy for either problem is to use your pegs more frequently. If the pegs are turned regularly as the humidity changes, their position will change accordingly, and they will adapt to changing climatic conditions.

Wear and tear. Worn pegs tend to develop a 'shoulder' or ridge on the fat end of the shank which eventually makes it impossible to push the peg into the hole. A skilful and knowledgeable person can file the shoulder away and make a new bearing surface.

When worn down pegs stick too far through their holes, the best solution is to glue a spiral bushing into the peg hole and re-fit it to the peg, rather than to cut the peg shorter. Fitting spiral bushings involves cleaning each peg box hole and gluing a shaving of wood around the circumference of the hole in a spiral form. This is an excellent solution and allows the pegs to move very smoothly.

Problems with new pegs. Pegs should be well seasoned before they are shaped for an individual cello, otherwise they will season during use and become oval in section. When a peg becomes oval, it also makes the peg hole oval as it compresses the softer cross-grain areas in the hole. Oval pegs go in and out of the hole as you turn them, and they tend to hold very well at some angles but very poorly at others. The only solution to this problem is for a luthier to file the pegs round again by hand, after which the compressed areas in the peg box holes usually recover spontaneously. If the peg box holes are permanently damaged by oval pegs, it will be necessary for a luthier to fit spiral bushings to the peg holes,

Wood choice. The most traditional and functional wood for pegs was rosewood as it is strong, oily and self-lubricating, but due to over harvesting and CITES restrictions it's now virtually impossible to get hold of good quality rosewood. For the time being, the best available wood for pegs is ebony. The other traditional wood for pegs is box wood but even the best quality box is softer than ebony. Good quality contemporary European box wood is a lot harder than box wood grown in the tropics which can be very soft and difficult to use.

Geared pegs. With the arrival of metal strings, a variety of tuning devices were developed, the most popular being the integral adjuster tailpiece. Over the years such tailpieces have become lighter and more reliable, but recently a new option has emerged. Advances in precision manufacturing technology have made it possible to produce tuning

pegs that look traditional but have miniature planetary gears hidden in the shank or head.

The most significant advantage of geared pegs is that they make it easy and comfortable to tune the pegs with your left hand while bowing with the right. Their function is far less affected by changes in humidity. Tuning from the peg also makes it much easier to keep your bridge straight as the pegs have far less effect on the bridge than tailpiece adjusters. Finally, they open up more choices in tailpiece design which for some cellos could have tonal benefits. The only obvious disadvantage of geared pegs is that it is slower to fit new strings.

Two geared peg designs have been available for some years and they are surprisingly different. The **Wittner** peg has a greater reduction ratio (ie more turns of the head for each turn of the shank) the outside parts are made entirely of plastic and the gears are located in the head which makes the peg head a bit chunky in appearance.

The **Peg Head** design (also sold as **Knilling**) has less gearing reduction and a braking mechanism which means you must pull the head of the peg out slightly before you turn it and push it back in to lock it. The gears are located in the shank which is made of metal, finished black or dark brown depending on whether you choose an ebony or rosewood head. As well as wood type, you can choose between a 'Hill' or 'Swiss' head design, both of which are very traditional in appearance.

When fitting a new string to a geared peg, you still need to cross the over string on itself so that it grips the peg, as described above. You don't need fine tuners so you can have a lighter tailpiece if that's an advantage for your cello, or you can remove the tuners from a Bois d'Harmonie tailpiece or alternatively, you can buy a traditional tailpiece without adjusters.

A rational choice? Like many musicians and luthiers, we love traditional, simple things like wooden pegs, but from a rational viewpoint we think there is a good case for using geared pegs. We know several luthiers who use them including Netherlands-based viol maker Gesina Leidmeier who uses the Peg Head design all the time. Very many thanks to Gesina for her invaluable advice about installing and using these pegs.

SELECTED CELLOS & BOWS

CARLO ANTONIO TESTORE c.1730

L.O.B: 29½" (755mm) String length: 27¼" (691mm)

£320,000

A superb example of Testore's work in excellent condition.

This versatile cello would make an exceptional chamber instrument, especially within a string quartet, and has an exquisite solo voice. Beare certificate.

FENDT CELLO c.1800

L.O.B: 29¼ (743mm) String length: 27" (682mm)

£95,000

This exceptional cello was made by Bernhard Simon Fendt between 1798 and 1809 when he worked for Thomas Dodd in Covent Garden. The cello has a rich, generous tone and an even, quick response. The condition is outstanding.

FLORENTINE CELLO c.1750

L.O.B: 30" (760mm) String length: 27¼" (693mm)

£75,000

A handsome Italian cello labelled Lorenzo Carcassi with a colourful, deep, fine tone and powerful upper register projection. Previously played by an orchestral principal and soloist. In good restored condition.

J&A Beare letter.

BETTS CELLO c.1810

L.O.B: 28¾" (730mm) String length: 26¾" (679mm)

£tbc

A fine Betts cello in very good condition with a refined, even and satisfying tone and quick response. The varnish is a very beautiful red brown. Certificate from J&A Beare 2002.

WILLIAM EBSWORTH HILL CELLO 1876

L.O.B: 29" (735mm) String length 27½" (694mm)

£40,000

A rare example of the work of William Ebsworth Hill with a smooth, expressive tone, in very good condition after a full restoration in our workshop.

PETER WAMSLEY CELLO c.1740

L.O.B: 745mm (29¼") String length: 685mm (27")

£30,000

A beautiful Peter Wamsley cello in good repaired condition with a rich, warm, crisp tone of great quality and dark red craqueled varnish. Branded WAMSLEY under the button.

PRESTON SCHOOL CELLO c.1800

L.O.B: 29" (740mm) String length: 26½" (679mm)

£25,000

An attractive English cello with painted on purfling in very good condition with a clear, crisp, even tone, a quick response and good projection.

KENNEDY SCHOOL CELLO c.1830

L.O.B: 29" (738mm) String length: 27¼" (693mm)

£20,000

A handsome Kennedy School cello in good repaired condition with a beautiful resonant tone.

GERONIMO BARNABETTI CELLO c.1880

L.O.B: 30¼" (770mm) String length: 27" (683mm)

£10,000

The second instrument of a renowned orchestral leader, this Barnabetti cello is in excellent condition, with a warm tone.

Selected Cello Bows

| | | | |
|----------------------------|------|-----|---------|
| Victor Fétique | 76.0 | S | £17,500 |
| F N Voirin | 76.2 | S | £15,000 |
| John Dodd | 86.6 | S | £13,500 |
| Claude Thomassin | 76.0 | S | £12,000 |
| W E Hill & Sons | 76.0 | S | £9,000 |
| Samuel Allen | 78.8 | S | £8,000 |
| W E Hill & Sons (Johnston) | 81.0 | S | £8,000 |
| W E Hill & Sons (Yeoman) | 78.9 | S/T | £7,500 |
| A R Bultitude | 80.8 | G/T | £7,000 |
| C H K Schmidt | 80.0 | G | £7,000 |
| Matt Wehling | 81.8 | G | £6,410 |
| David Forbes (Dodd copy) | 80.0 | S | £5,640 |
| Hill (Albert Leeson) | 75.5 | S | £5,000 |
| Roger Zabinski | 82.5 | S | £4,900 |
| Christian Wanka | 81.0 | G | £4,770 |
| Evan Orman (Dodd copy) | 80.6 | S | £4,700 |
| Bernd Etzler | 81.6 | S | £4,500 |
| Mark Drehmann | 80.5 | S | £4,270 |
| John Aniano | 83.7 | S | £4,270 |
| Bernd Etzler | 81.3 | S | £3,800 |
| Richard Grünke | 80.8 | S | £3,300 |
| Herbert Wanka | 82.0 | S | £3,130 |
| Bernd Etzler | 81.2 | S | £3,000 |
| H R Pfretzschner | 83.0 | S | £2,750 |
| Heinz Dolling | 77.8 | S | £2,500 |
| J P Bernard | 84.3 | S | £2,060 |
| M Francisco | 82.0 | S | £1,500 |
| Siqueira | 82.0 | S | £1,150 |
| Luan Ruy | 81.1 | N | £900 |