Newsletter

of the British Violin Making Association

Editor: Shem Mackey

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ISSUE 7 BVMA SPRING 97

Editorial

Man V Machine

The 'machine' in violin making has always been a subject guaranteed to arouse healthy argument and in Marc Soubeyran and J. P. Dondelinger we have two correspondents putting forward the more positive viewpoint. Marc's thicknesser would seem a practical answer to an aspect of making that frankly no one will dispute is not the most creative part the process, but some would argue that to compromise at all is to bring the craft into disrepute and is the first stage in reducing it to the level of mass production. Jean Pierre takes the argument a stage further and argues, why not? A machine is just another tool, and in the hands of a craftsman can be as effective as the chisel or spokeshave. Would Stradivari have used the Router or Thicknesser if it was available? He may possibly have done. With such technical exactness at his fingertips he would most likely have relished the thought of a machine that could spit out exact copies of his favourite scroll time after time. With his money he would probably have had the super efficient and exact CNC version!!

Dartington Update

The Cat Quartet have been confirmed again to provide after dinner entertainment at this years conference. Those attending last year will remember their spirited performance and good-natured trial of the instruments brought along by the conference participants.

Brian Hart, Lignum and Michael will also be there in their capacity as trade exhibitors. Karel Moens, curator of instruments at the Brussels Conservatoire has confirmed his attendance as a speaker on "Problems of Authenticity with 16th Century Instruments". Jim Woodhouse has also confirmed and his subject will be the Bowed String. He will "explain what is going on when acceptable or unacceptable noises are made - how one instrument or string may seem to be 'easier to play' than another".

In past years attendance at the conference sometimes felt like being on a treadmill, from lecture to tea to lecture to lunch etc. To alleviate that rushed feeling, the number of lectures has been reduced to five. This should allow for a little more free time to chat with other makers and view the trade stands or to simply enjoy the fresh air and the grounds at Dartington Hall.

There will not be an exhibition of instruments from the Dietrich Kessler collection, as previously mentioned. As before, a raffle will take place after lunch on Sunday prior to departure.

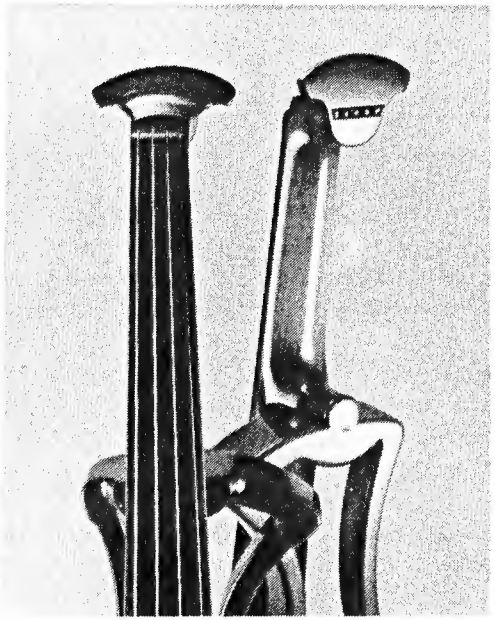
Dartington Hall, having received a great deal of additional help in organisation of the Conference, have offered free accommodation to the six BVMA organisers who are as follows: Judith Blackwell, Paul Collins, Shem Mackey, Marc Soubeyran, John Topham and Alan Ward.

Deadline

All copy for the next issue should reach the editor by 23 May. We need articles!!

Electric Violins: Facing the Amplifying Challenge

The emergence of the electric violin as an instrument with it's own identity has largely gone unnoticed by the mainstream violin world. The electric violin, to many people, still means a normal violin with some form of pick-up attached. ***Dave Bruce-Johnson*** *is one of the few British makers to take this form of instrument making seriously and has built up a world-wide reputation for quality of workmanship and sound through his 'Violectra' range of instruments. In this article he gives a brief background to the developments behind the electrification of the violin and explains his basic principles of good electric violin construction.*



Within the past 10-15 years, electric violins have established their place amongst the 450 year old craft of violin making.

Their rapid evolution has gone hand in hand with the development of bridge transducer technology and the demand on modern players to be more diverse in an ever increasing use of strings in popular music and amplified settings.

As a maker and restorer of stringed instruments of over twenty years (with 10 years in my own workshop), I have been fortunate to have had commissions and restorations in different fields from classical, baroque and modern violins, violas, cellos' and double basses, to lutes, mandolins, early and modern guitars and a variety of other stringed instruments.

Over the past five years, I have been busy manufacturing Violectra, a range of electric violins, violas and cellos' of my own patented design, making over 70 instruments.

Players who have bought them include Nigel Kennedy, Jean Luc Ponty, Icebreaker, The Pogues.....and Oasis (a Violectra quartet).

Towards the end of the 1980's I was often asked by my customers for advice on bridge traducers to amplify their acoustic instruments. Being aware of the problems they were having amplifying their acoustic instruments.

and the occasional electric instrument. I became interested in why the violin family didn't amplify with very satisfactory results. The main crux of the matter seemed to stem from the fact that the acoustic violin is made with complete devotion (from the makers viewpoint) to the acoustic properties that it will produce and "amplify" through it's soundbox chamber, and perhaps secondly; the relationship .of the proportion of the instrument to the player, and thirdly; the artistic execution and appreciation of this. In effect, makers have striven for the past 450 years to perfect an acoustical "amplifying" chamber which projects the tonal qualities of the wood. In the process of wanting to electronically amplify the acoustic violin, in fact we duplicate the process of amplification,
firstly; by creating the sound at source on the instrument, and secondly; by transmitting this energy by microphone (air waves) or by transducer (wood vibration) to an amplifier.
Microphones have been the traditional means of amplification. The highly responsive condenser microphone used in the controlled environment of a recording studio, can reproduce the full harmonic range of the instrument as it is heard in the acoustic setting. When playing live, dynamic microphones offer a more robust option, responding to the air space immediately around it. Mounted on a stand, it limits the players movement. New microphone systems can be attached to the instrument by a tailpiece or soundhole clip, or even by replacing the endpin as an internal microphone fitting. However, problems of unwanted electrically produced feed back can occur when the sound from the amplifier or speaker is " picked up" by the instrument's acoustic frequency and re-sensed by the microphone causing a loop of amplification that results in a shrill howling noise. Feed back is affected by the variable acoustic properties of the instrument; the volume and phase between the microphone and the amplifier; the position of the player; and the reflective acoustical properties of the room. The source of the sound for microphones is through the air as for acoustic sound production. As a result wooden tonal qualities are heard secondhand through the microphone and can sound thin or harsh with a lack of depth or tone.
Another option is to use piezo transducers that are made of two electrically charged ceramic plates that sense the string vibration and convert it into an electric signal. The bridge is the obvious point to place the transducers because it stands between the pressure of the string tension and the body underneath (piezo actually means "pressure" in Greek). Means of fitting can vary from using self-adhesive tape, glue, to wedging the transducer between the wing and the foot of the bridge or between the bridge and the front plate; or putting a pre-fitted unit into a conventional or specially made bridge.
However fitting a transducer to an acoustic instrument bridge may change the instruments acoustic response, when it is played unamplified. Against this, it produces a strong signal and a fuller bodied sound as it is sensing the wood vibration and sending the signal directly to the amplifier.
The blending of a bridge transducer with a microphone system can offer the player some control by mixing the "wooden" and "air" responses. However, whether used separately or as a blended system for acoustic instruments, ultimately, (in my opinion) the amplification system is still "listening" to the acoustic cavity and has an added thin, boxy or hollow quality to the sound.
Is it the physiology of the acoustic violin that is wrong for amplification?
By acknowledging that this may be the case, we open the challenge for electric violin makers. By reducing or removing the acoustic properties of the violin body, a more direct signal can be sent to the amplifier. Solutions along this route include blocking off the "f" holes or filling the soundbox of an acoustic instrument; building a semi-acoustic body of smaller acoustic capacity or a body reinforced with thicker or solid parts through it; suspending the front plate without an acoustical body, a frame outline construction; or a solid bodied instrument with no acoustic soundbox. Another option is to use new materials such as carbon fibre, plastics and resins, glass, aluminium and other metals, requiring new manufacturing processes.
Each solution presents it's own questions. How is the sound production increased or reduced by changing the

BVMA

mass of the body ? How does changing the mass affect the weight and balance for the player ? How does it affect the playing response of the new instrument? As a response to new electric instrument design, bridge technology has made paralell developments, often custom made for each type of instrument. Piezo bridge transducers have been at the forefront of electric instrument amplification systems and can be made of wood, metal or resin composites. The response and tonal qualities are critically controlled by changing the mass of the bridge and it's flexibility and rigidity. A balanced, strong output can be produced by placing one or two piezo elements under each string. This, as well as an accurate warmth of wooden tone, has made piezo transducers a popular choice for electric instruments.

As amplification has the role of providing the voice for the electric instrument, special amplifiers have been developed for piezo transducers. Piezo devices are of high impedence usually of 1 megaohm+ and it is important to have a matching input with the amplifier. The quality of the signal from the instrument is paramount for good tone. However the signal can be modified by electronic equalisation which adds or takes away a range of harmonic frequencies. However, players need to be aware that the quality and length of leads or the use of radio mikes can reduce the full harmonic range and modify the signal from source to final sound.Effect processors offer a range of sounds as used with electric keyboards and guitars etc. With the use of a special bridge and translator system the electric violin can play with MIDI language and create and synthesise endless variety of sounds.

VIOLIN, VIOLA AND CELLO MAKING
REPTON SCHOOL, REPTON, DERBYSHIRE
20-26 July 1997

Previously held at Loughborough University

Tutors: Wilfred Saunders, Patrick Jowett and Andrew Finnigan

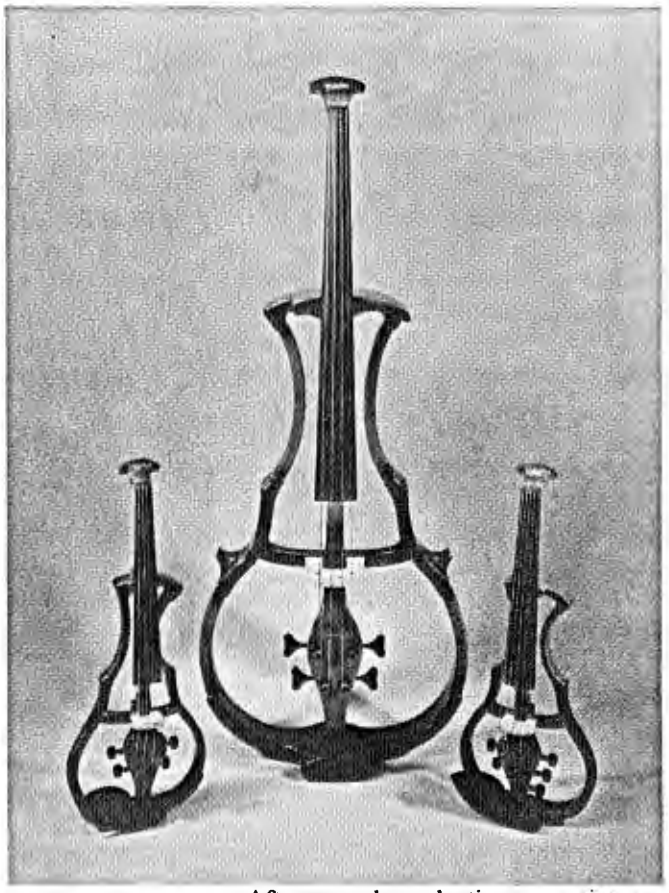
A one week course, held in a workshop environment, designed to meet the needs of the discerning maker, who is looking for the finer points of design, practical method, tool technique, fitting up etc. The week provides an invaluable opportunity to meet and mix with other makers in a stimulating and lively atmosphere.

The tutors are well established professional makers. The course, in it's nineteenth year is now being held in the beautiful surroundings of Repton School, mid-way between Derby and Burton-upon-Trent. It can be residential or non-residential.

For further details The Violin Making Summer School
Sandra Jowett (Course Administrator)
139 Musters Road, West Bridgford
Nottingham NG2 7AF
Telephone: 0115 9818612

VIOLECTRA: LEADING ELECTRIC VIOLIN DESIGN

"I thought David Bruce Johnson's electric violin and the sound it made marvellous...really a revelation...as though a doctor were to say "now I want you to do without lungs in the future"-BEVIS HILLIER Comment about Violectra viola July 1995.



Violectra are constructed with an outline frame of selected maple and do not have an acoustic soundbox. It is a radical concept for makers and players to accept that an instrument can function without a soundbox. By using a piezo bridge system the force of the string tension on the body is amplified directly as wood vibration. The load of the string tension on the bridge is spread across the arched frame in the centre of the body which results in an active response. The clarity and strength of signal, depth of tone, and open response similar to an acoustic instrument, has put a smile on many a doubtful face.

After sound production, my aim as a maker is to make an instrument which is user-friendly, aesthetically pleasing and suitable to the rigours of performing life ! The strength of the design of Violectra lies in the features of it's durability and weight balance. By using a frame construction of a streamlined body shape, reversing the stringing from behind a reduced headstock behind the nut, and using guitar machined tuning heads behind

the bridge, the weight falls over the shoulder end and is comfortable to hold.
It became apparent that by eliminating the soundbox from the violin also meant the challenge to produce the sound from the instrument had also changed. Gone are the intricacies of adjusting the soundpost for achieving maximum response. The electric production of sound eliminates the variable harmonic frequencies of the acoustic soundbox.
With no soundbox another exciting dimension became easily available to the evolution of the electric violin. By adding extra strings, 5 and 6 string models are available. The extra string tension created actually equates to a larger bodied sound using the piezo "pressure" sensitive bridge system. The fifth string adds a viola pitch 'C' to the violin. A five string viola or cello can have a high 'E' or low 'F'. These options provide new challenges in music for players and composers to explore. A violin can play in viola and cello pitches, a viola in both violin and cello, and the cello in viola or double bass.
I customise each fingerboard I make, including my four string models to ensure the best playability of profile weight and balance. Although there are few guidelines for makers to follow, my work in the past with the five string acoustic double bass helped determine the correct fingerboard and bridge shapes for 5 and 6 string models. Most makers use a fingerboard of the same curve across it's width from end to end. As the fingerboard is tapered and not paralell, the strings path crosses over the cylindrical shape and a bump would occur in the centre. To achieve a flat surface from end to end of the string, a complex curve, based on the conical shape of the tapered fingerboard, would result in a larger radius curve at the nut end than at the bridge end. By instinct, some makers add this extra curve at the nut although too much curve results in harder work for the player. The final shape of the fingerboard is not required to be flat but slightly hollowed from end to end to allow the strings to vibrate freely. This is achieved by checking along the string's path with a straight edge, and shaping the appropriate amount of clearance for each string (and removing the bump from cylindrical shaped fingerboards in the process !).
Bridge arcs are fitted to correspond to the fingerboard shape and the required string heights off the fingerboard. The curve (in my opinion) remains the same with the exception of the 5 and 6 string models. With multi-stringed instruments, the player needs to adapt their bowing attack on the fourth string as it has now become an internal string on the fingerboard. To help the player, I often set the fifth (and sixth) strings slightly lower, with a roll-off effect on the bass side of the bridge shape. Ideally, this shape should be reflected in the shape of the fingerboard for a multi-stringed instrument. Apart from this issue, a change in the playing position of the first string in relation to the player's bowing angle was more disconcerting to new players of multi-stringed instruments. I think it is necessary to make adjustments to the neck angle and the shape of the fingerboard to compensate for this and allow for continuity for the player.
The four stringed violin or viola often has the neck set slightly towards the treble side towards the players bowing arm. To maintain a similar bowing position for the first string the neck angle can be corrected to remain level with the body on a five-string instrument and sloping slightly towards the bass side for a six-string model. The reverse would apply to a cello or double bass as the instrument is bowed from the opposite side. It is important that an electric violin still feels like a violin to the player. To ensure this, each Violectra model is based on the proportion and dimensions of classical instruments and can be fitted with any conventional chin rest or shoulder rest. However, players are often excited by a feature that is not usually available when buying a traditional instrument - Violectras can be made in a wide range of colours as stains, tints, sunbursts, pearlescent or metallic finishes, from pearl white...antique gold...sea blue...bottle green...scarlet red...metallic black...or whatever colour you can dream of !
Violectra has developed with the co-operation of my customers for which I am grateful. I have worked with my customers requirements whether it be to copy the dimensions and proportions of their existing instruments so that they can easily change between them, or undertaking special projects of fingerboard inlays, customised work etc. Encouraging this two way process is vital to the evolution of any musical instrument.
As new innovations in instrument design and bridge transducer technology develop, the boundaries for the amplified violin family are still open. In solving some of the problems of instrument amplification, electric violins have found their place, and offer new opportunities to the ever-changing music world.

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The Changes from Baroque to Modern Violins.

Ephraim Segerman *discusses the technology of the changes that converted the baroque violin to a modern one. From the evidence, he cannot find support for either a systematic increase in string stop or in pitch.*

From late in the 18th century to early in the 19th, when the structural changes were made, there was no rise in pitch except in Italy. By the last quarter of the 18th century, all of Italy except Rome (which remained about a tone lower) had settled on Lombardy pitch, which was the same as German Cammerton (unchanged at about half a semitone lower than modern since before Praetorius). Rome finally conformed after 1800 (Cosio's colourful report of this could have been the origin of the surmise about rising pitch). Paris pitch of almost a semitone higher than modern during the second half of the 18th century dropped to a'= 435 within the first few decades of the 19th. English concert pitch was at about that figure from the first half of the 18th century. Nevertheless, there was a pitch rise in the middle of the 19th century. Orchestral woodwinds throughout Europe temporarily forced a rise of orchestral pitch of up to a semitone. This was not associated with any structure changes, since violins had essentially become fully modern.

The modernisation of baroque violins did not systematically lengthen the string stop. Violins have always varied in size and string stop. Modern violins are rigidly classified into full, 7/8, 3/4, 1/2, sizes etc. with all the smaller than full size considered to be cheaper training instruments for those with not fully grown hands. All sizes of early violins were played by professionals. Praetorius's violin happened to be a particularly small one with the bridge shifted towards the tailpiece as much as it could go tot get a longer string stop. The string stop of the violin measured in the Talbot manuscript (c. 1694) was 13 inches, slightly long for a modern full-sized one. The evidence of lengthening seen on quite a few modernised baroque necks was to bring smaller instruments up to the more valued full-size specification.

The purpose of the modernisation seems to have been both to get greater projection and to make playing in higher positions easier once using the chin for position changes became standard. Jobs for musicians on the payroll of wealthy patrons or noblemen had been steadily evaporating, and the main other way of making a living playing was for bigger audiences (in poorer acoustics) in public concerts. Stainer violins lost supremacy in reputation to those of Stradivari because the latter had greater projection.

Making the bridge taller improves projection. Bowing only moves the string back and forth in the direction of the bow motion. This mainly rocks the bridge about some point between its two feet, the oscillations of which transmit the energy to the soundboard. A taller bridge increases the leverage of the string forces on the top of the bridge about that point. Decreasing the obtuse angle that the strings make over the bridge can somewhat improve projection as well . This happens because a larger fraction of the oscillation in string tension during string vibration gets transmitted by the bridge to the belly (this mainly affects the octave to the fundamental since that is the frequency of tension oscillations).

The second half of the 18th century saw a large increase in playing in high positions. In Leopold Mozart's time (the middle of the century), the range of playing on the top string was an octave and a fifth, and the length of the fingerboard only catered for this range. Before then, occasional virtuosos (e.g. Locatelli) played much higher than this (even higher than a modern fingerboard), and they fingered the string in mid-air past the fingerboard. (Modern baroque violinists playing Locatelli need a longer fingerboard because their strings are thinner than originally used, and one needs a minimum thickness-to-length ratio for this to work well). By the 1790's it was normal to have a two-octave fingerboard and position changes in the music required supporting the instrument between the chin and the shoulder practically all of the time.

The neck of the violin in earlier baroque times was decidedly thicker as one went to higher positions, and so was the fingerboard because of the wedge shape. Thus the distance between the left thumb and the rest of the fingers increased considerably with higher positions, and a squeezing component helped "crawling" back to lower positions without using the chin (the chin was only used if there was no time

for a "crawl"). When the use of the chin became standard most of the time, the "crawling" procedure was abandoned and if one kept the distance between the thumb and the other positions to a minimum in lower positions, playing in higher positions became more comfortable. This requires eliminating the wedge in the fingerboard and thinning the neck for even thickness over as long a length as possible, making the curve where the bottom of the neck goes into the heel much sharper.

Another effect of the continuous use of the chin was the attack by perspiration on the part of the tail gut that was exposed at the top of the tailpiece. This led to new tailpiece designs which eliminated that exposure, and were otherwise chin-friendly (the chin-rest was not invented yet).

With the bridge taller and the fingerboard wedge eliminated, the top of the fingerboard would have to be brought back to it's proper relationship with the strings, and that was done by resetting the neck onto the body back at an angle. To keep that angle change to a minimum, the top of the neck was raised above where it had been before (i.e. at the top of the soundboard where the neck and body meet) and a piece of wood was added to fill the space this creates between the neck heel and the heel button of the back. This change amounted to adopting the design of the relative relationship between the neck and the body that had been used by viols throughout the baroque.Changing the neck angle happens also to decrease the obtuse angle the strings make over the bridge, thus increasing the force with which the string tension makes the bridge press on the soundboard. The soundboards of old venerated and expensive instruments distorted slightly from the added pressure, and to minimise this, there was a tendency to use a heavier bass bar and a thicker soundpost. For more surface area of support, the ends of the soundpost were carved to be flush with the plates, while before, they were often dome-shaped. For the same reason, bridge feet got wider by adding thin toes. When string tension increased considerably in the second quarter of the 19th century, whichever instruments were not modified to reduce soundboard distortion (induced by bridge pressure) when the neck was angled back, were so modified then. The problem was more a problem of increased fussiness about distortion than actual danger to instrument structure or function.

It is very likely that early violin makers, as modern ones usually do, used some method to optimise the vibration characteristics of their top and back plates before assembly. That includes optimisation of the effect of the bass bar. It is fortunate that such optimisation can usually be made both with a shorter lighter bass bar and a longer heavier one. Heavier longer bass bars were also used in the baroque, and those presumably were not replaced, usually not recognised as original.

The craftsmen who replaced the necks probably had trouble getting the nails out, and often had to replace the neck

block. Probably to avoid such trouble in the future, they designed a dovetail joint between the neck and neck block that kept the desired alignment between the neck and body (while the glue hardened) without having to use nails. To maintain strength with the dovetail cut in, the new neck block was usually bigger than the original one. The piece sticking out from the neck in the dovetail replaced strength against the neck splitting in the heel that was lost in the thinning.

How far the changes would eventually go was not clear in the period when they were being made, so the changes and new instruments made then were often to a variety of intermediate designs of neck and fingerboard. So an earlier instrument that was continually kept up to date would probably have suffered several modifications between its baroque and modern state, and the sequence could well have been different in different places.

Boston Early Music Festival & Exhibition

This years festival and exhibition, the ninth for this biennial musicfest, will be held from June 10-15 1997. This years central theme will be the French and Italian Baroque. A full programme of concerts is planned with leading musicians from all over the world. The exhibition, which runs concurrently, will feature over 125 displays by international instrument makers, book and manuscript dealers, publishers and accessory manufacturers.

Further details are available from the Festival office; Boston Early Music Festival Inc. P.O. Box 2632, Cambridge, MA 02238. U.S.A.

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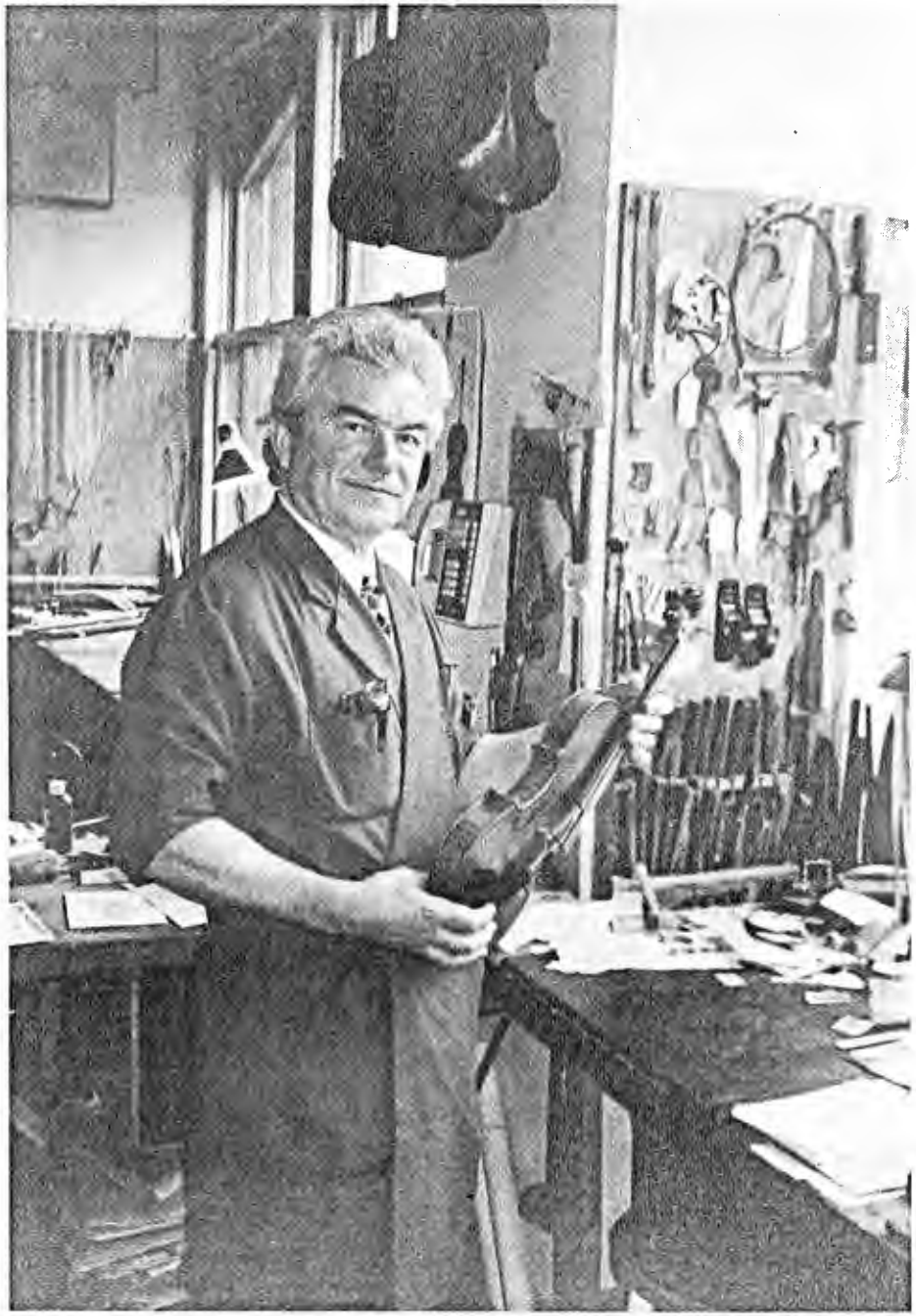

Rene Morel

An Interview with Rene Morel

by Michael Hill

One of my highlights so far since moving to New York has been the opportunity to talk with Mr. Rene Morel in his New York shop situated on West 54th Street. Rene Morel's influence goes much further than his tonal adjustments for some of the top virtuosi in the world-including Yo Yo Ma, Isaac Stern, Itzhak Perlman, Pinchas Zukerman and Ralph Kirshbaum.

His influence also extends to the overwhelming number of restorers now working in New York who have trained and worked with Mr. Morel, first of all his partner Emmanuel Gradoux Matt, Sam Zygmuntowicz and Horacio Pineiro to name but a few. He talks of his early years, how he sees the future of restoring and for me the most interesting, tonal adjustment.

The Early Years

Rene Morel was 12 years old and still at school when he began working on instruments with his first teacher Marius Didier. At the time of his graduation he had made 12 violins and helped his father build a double bass, before going to Amedee Dieudonne's- one of the leading teachers in the world of his day. Dieudonne demanded to be paid for his teaching, however, he was so impressed with the young Morel's talent that he applied for a government scholarship. As a result Rene received a small amount of money "enough for my going dancing and flying".

Before putting your hands to a violin, Dieudonne would assess your learning ability with tool handling. He would tell his pupils after a month or two if he didn't think they possessed the necessary skill to continue. Not many would relish the working conditions of his workshop. With a 7.30 am start, a 50 hour week and no heating-the average production expected to stay at Dieudonne's was 2 violins a week, in the white without the scroll (Eugene Guinot making three a week!). His workshop made a total of 56 different models. He was also extremely anxious that anyone would think that any part of his instruments were made by machine. The workshop was therefore machine free and had no gas- "whenever we had to heat an iron it would be by the wood fire. Summer like winter" Morel points out that this level of production, with such clean precision, may seem an almost unbelievable task by today's standards.

Some large companies would order instruments to be made at Dieudonne's (their model to be respected in every detail) and would put their name to it.

They would take the violins finished on the outside but with the graduations, bass bar and varnishing to be completed by themselves.

After 3 years Rene left Dieudonne's and went to work for Bossard Bonnel in Brittany. They wanted him to sign a contract for life!, so after one year he returned to Dieudonne's- this time to gain more restoration experience.

It was at this point that Rene's passion for flying almost changed the direction of his life. On gaining his civil flying license his cousin bought the plans of an aeroplane called the "Minicab" from Marcel Dassault. With him Rene spent every spare minute flying and building his first plane before training with the NATO Alliance in 1947/48, eventually flying jet propelled F84's. He was ready to quit violin making. Only 19 years old, he needed two signatures to allow him to join the French airforce but his mother refused, keen that he should continue the family tradition having lost her brothers in the war. He contented himself with building a second aeroplane with his cousin and flying every weekend. Rene returned to making violins with the firm of Lamberte Fournier and it was during this time that Rene was dreaming of going to America, possibly to fly.

When Rene was offered a job at Kagan & Gaines in Chicago in 1955 he decided to take it, believing the best instruments were now finding their way to the States. He found Chicago very hard- "No French bread, no French wine, so cold in June and so hot in July and August. I couldn't eat or sleep - only ice cream! I didn't like it". Fortunately, four months later, he was introduced to Rembert Wurlitzer by Emile Ouchard. When he realised that Rene was a pupil of Dieudonne's, like himself, Wurlitzer hired him on the spot.

It was at Wurlitzer's that he met Simone F. Sacconi- "a genius". Sacconi was a huge influence on Rene- "he transferred my ability for making new instruments to restoration---His greatest genius was to convey to you his own view of what needed to be done on an instrument- and by this he knew how to evaluate your skill. He also understood your lack of ability to recognise and absorb the characteristics of a famous maker bringing you to see what you were lacking without raising his voice--- Amedee Dieudonne developed my hands, Sacconi developed my head and eyes". One anecdote Rene likes to tell his pupils about Mr. Sacconi is "One day, a few months after my arrival at Wurlitzer's, one of the greatest violins of Guarnerius Del Gesu came into the shop. Right away the Master called me, handed it to me and asked "what do you think of this?" I turned the instrument in all different positions, and being naïve about it I said " Maestro, I think I would have to get dust In my eyes before I could cut a scroll so lumpy!" He looked at me with his charming smile and very softly said "Rene, I think you would have to wipe it off!"

Sacconi's ability to keep an open mind played a large part in embracing new ideas. Rene remembers in particular a Rogeri cello with badly damaged ribs in the shop for restoration. Sacconi stood nervously to one side ripping his hair out while he watched a young Morel planing the damaged ribs to 3/10th of a millimeter. He explains, previous to that restoration at the shop, they removed some of the original wood then would glue a veneer of maple as a cross ply with a counterpart...backing it up with thin zinc protected with wax paper, (this he didn't have in France). "We used to line the counterpart with very hard paper and use dry soap to prevent the varnish from gluing to the paper". When Sacconi asked him what he was going to do he replied "We will bend new ribs and we will glue them in the counterpart against the original remains, so we will have the new ribs inside, with the original varnish on the outside." This became the established method. Rene emphasises that a trust had developed over the years, between the two men. He had already worked on minor rib repairs but the cello mentioned was substantially more damaged.

Rene had endeavoured to bring this openness into his own workshop. He keeps a close eye on the development of his workers and according to their ability and the instrument they are working on- he will give them some flexibility in their methods. When he feels secure in the persons ability to concentrate he feels "it is not dangerous anymore, it becomes feasible" Some instruments he doe's not like to gamble with at a critical point in a restoration he may take over and recommend the worker observe him. He confesses to learning from lesser skilled workers warning "don't ever criticise the person below you".

Rene remembers at the beginning of his career visiting all the Paris shops and not seeing inside one! He vowed then

that if he ever had his own shop things would be different.

THE NEXT GENERATION

When asked how he saw the next generation of restorers and where he thought they might come from, his answer was quite mixed. In terms of making good instruments he is amazed at the unbelievable skill and talent of today's luthiers witnessed by himself as a judge at the Manchester cello competition. The transition from maker to restorer without training he sees as a difficult process. He believes if you have a luthier who establishes himself in a city to make new instruments and finds himself unable to sell enough, this forces him into repairs and restoration, often teaching himself from books.

When they go beyond their capabilities " some instruments instead of being restored are damaged".

Although he acknowledges that a certain amount can be gleaned from books and schools-it is individual tuition at the bench that develops the worker- "You have to take each person as an individual to find out his ability, his skill, his talent, and you develop from there. Each and every person is different" Rene argues "it takes a person 10 years after schooling, under supervision, to practise the same restoration a few times before you would call this person a restorer". He sees a lot of people rushing into the limelight the minute they have finished a named instrument, leaving after only 2-3 years of working for him to set up

on their own, this he sees as a big mistake!

Rene remembers Sacconi opening his eyes to the difference between making and restoring, explaining to him the necessity of captivating the exact feeling of the maker, the way the wood is carved. When you look at an instrument for a detail and "I point it out and you don't see it, maybe you say it is wrong or maybe you have an open mind and say 'Maestro maybe you see what I don't see. But can you explain it further?' Replying " this is the way to learn".

TONAL ADJUSTMENTS

Throughout the world Rene Morel has a reputation second to none for sound adjustments. His customers travel from around the world to have him adjust their instruments. He emphasises the importance of deferring to the performers' taste rather than your own- "through experience you should be able to advise the player. The sound he feels comfortable with you should be able to describe to him, because the sound he hears is not the one he projects. That is very, very tricky". Again he advises against an individualistic approach " Take one Stradivarius or one Del Gesu and I will take ten violinists of the top and I will have ten different sounds. I repeat strongly, that those who believe they are going to adjust one violin and that's the way the violin should be set up, and it should sound its' very best and its going to be good for everybody else, and if everybody else cannot play on it that's their fault- I say that person is a fool. He should train his ear and he should train his understanding of what that performer wants, not what he thinks he knows...if we all had the same tastes, we'd all be married to the same woman!"

He watches them play their instruments for him and "from that time my eyes are as important as my ears" going on to say "By looking , you know the person, you can see the way the bow bends, you can see how much the string bends, how much pressure, how much speed, how far from the bridge, how close to the bridge- all of these have a factor on the sound. If you tell a person 'you have too much bow speed or are too slow, or press too hard or not enough' he's going to say ' who are you to tell me what to do?' You have to develop some sort of sixth sense and feel for that person. Through experience and strong attention you know the sound that will come out. The sound is hollow because maybe the string is too loose and you have to make the string tension harder. Also when you move the post and you give the ability to that performer to get more support or less support according to his feelings. He'll find that tone point (the tone point is when he goes into the core of the sound) and from there he makes the box vibrate to the maximum. Then he has the best sound for that violin with that violinist. There are a very few exceptions where there are some instruments that will suit any player"

The amount of travelling instruments are expected to do and the weather

change from country to country can cause a lot of extra work when tonal adjusting. "Especially when an instrument comes from England to the USA in winter. The central heating will dry every apartment and hotel of New York unless you get a humidifier (wood under a microscope looks like a natural sponge from under the sea, if you put a natural sponge on the shelf it will go hard but put it in water....and it gets soft. Wood is cellulose, with open pores.) We go from 98% moisture or a little higher with a plane journey of about 7 hours. The player then goes to his hotel in Manhattan and its about 40% or less! The wood in London is swollen, it comes into New York and shrinks, sometimes causing weather cracks. So travelling creates quite a problem- but it also has an effect on the sound. When they come here in the winter they sound but they don't sound too good...I have heard the London Symphony here in New York and when I heard their string section I was flabbergasted!... As the instrument is wet, the soundpost gets loose and the sound becomes hollow. As you play the bottom string on the bass side (C & G) you try to have a soft note and it doesn't ring. Its just a fact of nature, the humidity.

I met Aaron Rosand recently and he recalled Mishca Elman having a goldfish bowl of bridges and soundposts. When I asked Rene if he knew the story he thought it was an exaggeration adding " but I never saw the bowl ! but its possible. He used to have 3, 4 or 5 bridges in his case for the height and I would number them upwards" He explained the reasoning behind this. "He was the only one who played on the violin strings like a cellist, with his fingers flat on the board with long fingernails . To him the height of the bridge was important as the position of the soundpost. As I explained earlier about the wood absorbing and releasing moisture, that effects the fingerboard height. As the top swells from the moisture it bends slightly between the bridge and the foot of the neck, causing the pitch to drop. This increases the string height, but also loosens the string tension . When it dries it regains normal height but Mischa Elman couldn't stand it - to a 1/4 mm he would feel the height difference, so he would change the bridges using the numbered system.

When I asked Rene about his remarks at the Metropolitan Exhibition of Del Gesus when he mentioned sometimes putting the soundpost on the outside of the bridge, and how he was able to achieve a balanced even sound, he replied "The Del Gesu is a dark instrument, it sounds from the guts like a baritone-if you want to compare to the Stradivarius which is a soprano sounding from the throat. So, in order to achieve the body, the core of sound , the support (the Del Gesu being the favoured instrument for the strong player), as you dig with a slow and deep bowing the Guarneri will allow you to go as much as you want. The Stradivarius however will crack...before going too deep. When it comes to the Del Gesu, if you want to achieve that (there is the exception to the rule and it depends on the player), then you have no other way or you won't make the player happy".

Just as I was about to leave Rene's shop Isaac Stern arrived for a tonal adjustment so I asked him abut Rene's technique- this was his reply.
"There is nothing like it, it is like a shot to the veins which numbs any other pains, it's like being given wings to soar high above !" I guess that answers that!

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Acknowledgements

The great generous support from Dietmar Machold, all at Machold's New York and Jason Schneider (photography Adviser).

Committee Report John Topham

Doe to some people, and particularly Helen Challoner of Dartington Hall, being ill at the beginning of the year, we were only able to hold a committee meeting on the 7th March where nearly everybody turned up. Helen had come to finalise arrangements for September's violin conference at Dartington. More about that later.
Marc opened the meeting, proposing that committee meetings should be held on a regular basis. He suggested we hold our meetings on the second Wednesday of every October, January, April and July, starting with October this year or after the AGM. It is hoped that if people know the date of these meetings, they may be able to attend and contribute. A few people are doing a lot of work at the moment and any help to reduce the load will be gratefully received.
Florian reported that we had £2284.52 in our Nat West current account and £3759.83 in the Woolich account. One of the larger expenses since the last meeting was the headed note for the four centuries exhibition. I reported that we now have 256 paid members, the last of those having joined a few days ago.
Subject to final approval at the AGM, the committee has taken the decision to allow those committee members who have to come a long way for meetings to claim travel expenses. They will be awarded every six months on the presentation of relevant receipts.
We are all disappointed with the poor turn-out at the AGM and discussed a few possibilities to make the occasion a bit more interesting. Any suggestions would be gratefully received, but we had thought to combine it with a "makers day" sometime in November, where makers can turn up with their wares and display them to as many prospective

buyers as possible. We will keep you posted with any further ideas

We went on to discuss the scheme proposed by the Benslow Trust to buy a number of instruments for the benefit of people who are not able, for various reasons including financial ones, to play on good instruments. Christoph Gotting was willing to basically organise the BVMA's part in the plan. They had asked us if we could provide a framework of quality assessment and judges to assess the instruments. Again we will keep you posted of developments.

We then discussed the next conference at Dartington in September. Helen mentioned that she had been in contact with everybody involved and arrangements were in place. We will be able to use the Barn this year which we could not last year because of it's refurbishment. However, she did say that there will have to be a £5 charge on the conference attendance to cover the cost. I am happy to say though that BVMA members will be able to get a £5 discount again this year.

Finally, in Any Other Business, Paul handed around a final draft for the suppliers list which should be with this issue of the newsletter. We must thank Paul Collins for all the hard work he has put into compiling and formatting the list. It will be a very useful document. Shem, our dear editor, asked if committee members could think about ways to generate articles for the newsletter. This goes for you as well. Any subject to discuss or air, please get in contact with Shem and see your name in print! That's all for now, good luck and good making!

Edward Withers Ltd. 230 Years of Violin Craft in Soho by Adam Whone.

Adam Whone's history of Withers chronicles the company from it's outset in 1765 as Norris & Barnes, both pupils of Thomas Smith, and carried on by Richard Davis from 1818. Davis was later joined by his brother William and this is the partnership later portrayed under the alias of Dawes in Charles Reade's romance of Jack Lott, "Jack of All Trades". During this period the shop moved to 31 Coventry St. and after continuing for a time under William Davis it first entered into the ownership of the Withers family when it was taken over in 1846 by Edward Withers. In 1881 Edward (the second) relocated to 22 Wardour St. And despite the odd rift the shop remained under the immediate control of the family until the retirement of Stanley Withers in 1969. The Withers name was prolonged under the ownership of Dietrich Kessler and latterly Adam Whone, who in 1989 moved the shop out of Soho to Windmill St.

There are many familiar names associated with Withers over the years including Macautel, George and Jack Lott, Boullangier, Gaida, Wulme-Hudson and the previously unknown Thomas Carter, although anyone interested to learn of bowmakers involved with the shop will be disappointed. The list is brought up to date with several active members of the BVMA. Both William Davis and Edward Withers were responsible for enticing over a number of French craftsmen from influential Paris workshops, serving to highlight the contact between the violin houses of London and Paris. They must have contributed greatly to the melting pot of multinational workmen already active in London and indeed many went on to open their own shops in the same area. However the reference to Thomas Carter illustrates the difficulty that exists in identifying many others employed either within the confines of the shop or as outworkers. According to Carter's business card, he worked "30 years for Davis" and yet his efforts, like so many others, will remain unidentified unless as is occasionally seen, an instrument has been, perhaps surreptitiously, signed inside.

After beginning with some background information on contemporary violin houses and the London music scene, Adam Whone continues with chapters on Norris & Barnes, R. & W. Davis and J.F. Lott. Most of the text then concerns itself with the four significant generations of the Withers family and their numerous recreational and professional activities. There follow sixteen colour plates of instruments commissioned or made in the workshops between c.1846 and c.1930, before concluding with short chapters about Dietrich Kessler and the author. Interspersed amongst the 112 pages are almost seventy black and white plates of letters, receipts, family portraits and prominent musicians associated with the firm over the years.

Priced at £30 + £3.50 p&p in the U.K.,it is a rather modest amount in comparison to several recent publications.

Andrew Fairfax.

Two Centuries of British Bowmakers

*The very recently re-patriated Bowmaker, **Peter Oxley**, is beginning work on a book on British bowmakers. He tells us about it here.....*

There have been over the years, many excellent books published, relating to the lutheric trade which, due to their merits or a lack of any subsequent challenger, have become standard works of reference. The glaring exception within this canon, it would seem, has been any serious work concerning the master British bowmakers of the last two centuries. Whilst not wishing to dismiss William C. Retford's interesting "Bows and Bowmakers", a short book written in 1963 where only twenty pages are concerned specifically with the British bow, "these notes" as the author himself apparently described them, formed the last published specific bow book of any substance relating to our own past bowmakers.

It was with this situation in mind that last year, together with A.J. Brown, a writer/musician colleague, I began planning a book provisionally entitled "Two centuries of British Bowmakers". I am very pleased to announce that this work is to be published by Paul Childs' "Magic Bow Publications" in association with Peter Biddulph. We are aiming for publication in the year 2000, the exact date being very much dependant on the amount of archival information we are able to unearth.

In brief, our intention is to produce a reference work of the highest quality that will illustrate the hitherto unglorified merits of great British bowmakers. We intend to produce a book that may be regarded as the "definitive" resource for some decades to come.

We propose that the breakdown of subjects and chapters will be as follows:

Chapter one: The Dodd Family

The most thorough biography to date of the family. This will include information solely related to the Dodds' activity as bowmakers. Also included in this section would be John Dodd's possible connection with the Tourte family. The second part of this chapter would present the technical details of their bows, representing a continuum encompassing their entire oeuvre.

Chapter two: The Tubbs Family

Same format as above. This will lead us via James Tubbs to the firm of W.E. Hill.

Chapter three: Other Historical makers

Chapter four: W.E. Hill & Sons containing:

1. Method of production
   a. Choice of materials
   b. Templates
   c. Division of labour
   d. Apprenticeship system

2. Exposing the makers from their marks. An attempt will be made to recognise the hands of individual makers throughout the Hill workshops history. Thus we may be able to know a particular Hill bowmaker from his work in much the same way we can divine a particular bowmakers hand on a bow stamped Vuillaume. In the Hill case, we do anticipate this being a more difficult task, due to the prevalent use of templates.

3. Grading of the bows; the meanings of the different brands; the designation of the various mounts and decorations (fleur de lis, shields etc.).

4. Value of the bow relative to the violin over the course of Hills history, taking into account their practice, at a certain period, of including a bow in the purchase price of one of their instruments.

Chapter five: W.E. Hill & Sons and the contemporary legacy.

This will highlight the makers who worked at Hills and who subsequently continued to work under their own names. This chapter will contrast the styles of these makers during their tenure with W.E. Hill & Sons with their subsequent work post-Hills.

Included in the biographical section for each maker, we hope to have a brief interview in which the maker will talk about their training, influences and their own solutions to the functioning of the bow, i.e. round versus triangular sticks etc..

Chapter six: Contemporary makers since the end of the hill firm. As with the makers covered in the preceding chapter, there will be biographical details and an accompanying interview.

Appendices

1. Materials (means of production, availability, alternative materials i.e. the cane bow made by Cocker).

2. Players comments regarding English bow playing characteristics; a contrast between bows of the English and French schools.

3. A note to players- care of the bow: advice for maintenance. This will include advice about hair-tension, replacement of lappings/thumb-pieces, general wear on the handle, ensuring the mechanism of the frog and button remain satisfactory, replacement of pearl parts etc..

In addition to the above, we are very pleased to inform that Mr. W.D. Watson has kindly agreed to write a foreword for the book.

Regarding the inclusion of contemporary bowmakers, the publishers and writers have agreed that these should be limited to makers that have had a formal apprenticeship/training or to those that have been established in the U.K. as professional bowmakers for a minimum of eight years.

During the forthcoming years, if any readers have outstanding examples of British bows that they would be happy to submit for inclusion, please write to: Peter Oxley, 2 Larkins Lane, Old Headington, Oxford OX3 9DW.

We very much hope that this book will throw some light on our unsung heroes of the archeterie world!!

Renaissance Wax

Anyone attending the Dartington Violin Conference 1995 and who was present during Charles Beares talk will recall his condemnation of the 'spiriting-off' method of polishing old instruments and the use of shellac based polishes. He mentioned a very fine wax which had superseded all others as a final polish on the instruments in the workshop at J&A Beare Ltd. 'Microcrystalline Wax' or, as it is better known by it's trade name, 'Renaissance Wax' has been used in conservation and restoration for a number of years. Louise Dandy works as a conservator and gilder in the City of London Guildhall Art Gallery and in the first of the "New Products", explains the origin and uses of this Renaissance Wax and even includes a recipe!

Formulated by the former Director of Research at the British Museum, and manufactured by Picreator Enterprises this is a blend of fossil origin waxes, which shows marked advantages over traditional wax polishes based for instance on beeswax or carnauba. In appearance it is white with a consistency similar to that of furniture Its main advantage lies in that it does not contain the acids normally occurring in the natural saponifiable waxes, which can rise spontaneously through oxidation or hydrolysis. Renaissance wax will remain neutral and therefore completely safe on the most vulnerable of surfaces.

The salve can be used on any solid surface, including wood, ivory, metal and paper. It may be applied and used for simply removing surface dirt, adjusting the optical quality, enhancing the appearance or excluding moisture. As it provides protection against moisture and vapour, dirt will not be attracted to the treated surface. The wax can be used to stabilise painted or varnished surfaces that are liable to bloom, the hardness of the matured wax coating can provide protection from heat as well as finger marks which can easily be buffed away with a soft cloth.

Method of Use.

As a cleaning agent;

A small amount of the wax can be applied direct to the object with the aid of cotton wool. Once the dirt is removed, the surface may be polished with a clean cotton wool pad covered with a piece of soft silk.

To Polish;

The surface is first wiped with a piece of soft silk to remove the dust.

A small amount of the salve is then placed in the palm of the hand where it quickly softens.

A piece of cotton wool wrapped in thin soft silk is then charged with the softened wax and used to polish the

surface with the minimum of pressure. The wax may be removed with white spirit.

Basic Recipe For Renaissance Wax.

100g Cosmolloid 80H (Microcyrstalline wax M.P =85o C)

25g Wax A (a Polyethylene wax M.P.=98-108oC)

300ml a high flash point hydrocarbon solvent (White Spirit)

Method.

Cut the wax into small pieces.

Melt together,taking care to ensure the P.E. wax is dispersed evenly in the mixture.

The molten liquid is then poured quickly into the white spirit (taking strict precautions against fire risk)

Constantly stir the mixture while cooling.

Store in an air-tight jar.

Microcrystalline Wax.(Melting Point = 85deg C)

This is a semi-synthetic wax isolated as a by-product from the refining of petroleum.

A crystalline thermoplastic, with long hydrocarbon molecules: intermolecular bonding is very weak due to its lack of polar side groups: so the solid wax is very soft. However the strength is improved without adversely affecting its other properties by adding polythene wax.

Polythene A Wax. (Melting Point =98-108oC)

This is a hard wax derived from Polyethylene. It has an excellent solvent binding capacity and owing to its fine crystalline structure gives rise to smooth opaque pastes with great stability to heat.

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CV. Horie Butterworths
Science for Conservators Books 1 and 2 The Conservation Unit
Painting Materials
RJ. Gettens GL. Stout Dover
The Conservation of Antiquities and Works of Art
Plenderleith. (For stockists, see suppliers list under Piereator Enterprises.)

Woodlathe Sanding Drum Attachment

When interviewed by Judith Blackwell for this newsletter last year, ***Marc Soubeyran*** *mentioned a timesaving thicknessing attachment which he built for his lathe. Here, he describes it's operation and basic construction.*

The attachment, as shown, fits onto a woodworking lathe and is used to reduce, to an even thickness, ribs, purfling and viola da gamba backs. The individual strips which constitute purfling can be easily sanded to a thickness of .3mm. Such accuracy renders this tool extremely useful to the instrument maker and the simplicity of construction make it easy to set-up and operate.

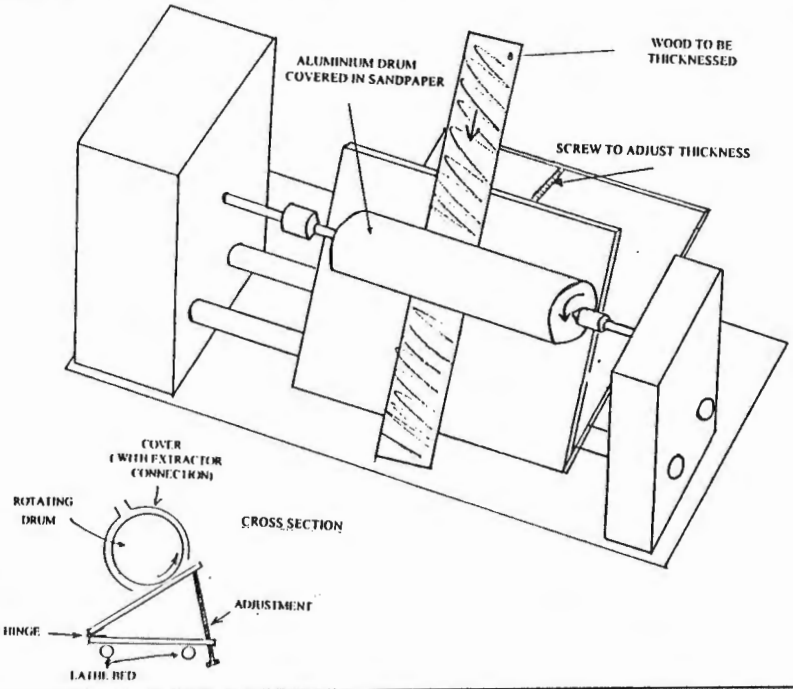
The main section of the thicknesser, the rotating drum, is made of solid aluminium. It is approximately 70mm in diameter and 225mm long. At the chuck end it is fitted with a 1/2" driving shaft and at the tailstock end there is a drilled conical hole into which the live centre is fitted.

The drum is coated with hard sandpaper (100 or 120 grit) which is applied using contact adhesive. It is important that the sandpaper joint is angled to avoid catching or jumping on each revolution.

The thickness is controlled by adjustment of the hinged platform underneath the rotating drum. The rise and fall of this platform is governed by a threaded rod, the other end of which is fixed to the base ..

The wood is fed into the rotating drum (i.e. from above and against the direction of rotation) between it and the platform. It is vital to keep a tight hold of the piece of wood at all times otherwise it will be thrown by the force of the rotating drum. Reduce the gap between drum and platform and repeat the procedure until the required thickness is achieved.

A protective cover can be fitted (as I have done) to avoid accidental contact with the sanding drum. The cover is fitted with an attachment to which an extractor can be connected to reduce dust.



Food for Thought

J.P. Dondelinger *is a relative newcomer to the world of violin making, having been trained in Paris as an engraver and die-sinker. He has spent the bulk of his working life in Britain and has taught at the Sir John Cass School of Art in East London (now part of the London Guildhall University). As an engraver/diesinker he has been surrounded by a variety of machines, so it was quite natural for him to fall back upon these when he encountered problems or wanted to speed up certain aspects of violin construction. Only one machine, he found, would become a useful 'tool'....the Pantograph. Effectively a 3D engraving machine but with the combined advantages of a hand and overhead router. In the following article, he argues the case for the machine in violin construction.*

The burning question is not so much if the machine produces a better instrument or not, but can it assist the craftsman with his daily tasks. I cannot help but ask the question; had the makers of the past had our technology, would they have used it? By using machines we can overcome some problems e.g. speed, accuracy, quality and certainty of craftsmanship. But we have also created a dislike for uniformity and in doing so run the risk of alienating the craftsman from artistic creation.

"The machine made violin" is a contradiction in terms. It does not exist. If it did, that would suggest that the instrument was made entirely by machine for all the the woodworking processes, which is not the case. In the final analysis, whether traditional tools or power tools are used, there remains an element of skill and understanding in the final product. In order to assess the use and correctness of one, the other or both, the aspiring maker will have to come to terms with the technologies at his disposal to achieve the perfect control over his work and at the same time derive some personal satisfaction from his handicraft.

With the constant demand for new instruments and the ever-changing technology of power tools, I believe there is a case to be made in favour of the machine and in particular, the router, as an aid to violin making. The only area on which the differences of opinion in our broad church of thinking differs, is to what extent does the use of the router affect the structure of the wood! Mr. Neil McMillan of Trend suggests that "any pressure from the cutting tool can only affect the wood's structure but not change it".('Trend' are a british company who specialise in the manufacture of router cutters).

You, the reader, consider whether it is possible to ascertain whether power tools cause changes to the structure of wood. Some makers and most certainly manufacturers would generally opt to continue to use them because they reduce the time factor in the making process and they need to optimise their time in order to survive. The only aspect, in violin making terms, that cannot be considered is the acoustic changes caused by the action of machine on wood, because this is an area where there are few conclusions. If detrimental acoustic changes do take place, then the final goal to produce exclusively beautiful instruments in sound and quality would mean that machines would have no place in the workshop.

At what point does the hand-crafted, machine-assisted instrument become a machine made product? Some craftsmen will utilise power tools in order to assist the process ensuring that their use is kept to a minimum. In my case, I deliberately curtail the use of power tools within the making process and try to remain free from the need to use machine tools and the like when I feel it is unwarranted. In my very short experience of violin-making, certain areas of not-so-much the making process but the finishing are not compatible with the use of power tools. The craftsman must be totally committed to, on the one hand, the response of the tools he utilises during the finishing stage, and on the other to feel and be in total unison with the materials he is using. The use of the mechanised element at this point would be totally incompatible, as the machine is not able to think or distinguish between what is right and what is wrong.This suggests that it is the craftsman alone who can play this role and here I would like to suggest areas of contention. The training of a craftsman is unlike the requirements needed to train an engineer. One could argue the point that the old craftsmen could have reached a scientific understanding through a lifetime of plying his trade rather than from an academic understanding. In the craft world, what differentiates one dicipline from the next is the difference of materials and the application. In the case of the mechanical engineer or those involved in the use of machines, this is not the case. On the whole they are more aware of the performance of their machine and do not totally understand the way in which materials will behave under such conditions i.e. specialists wood-machinists will feed the wood onto the blade in the direction of the grain. Doing it any other way would create havoc. A craftsman who has little or no understanding of power tools would not know this and would find out at his own cost. What the two disciplines do seem to have in common however, is the basic principle by which they are able to solve their respective problems.

Out of the many people I have spoken to in the violin-making world, the great majority of them do not have a healthy understanding of the do's and dont's and certainly of the potential of such equipment. So the bad reputation, perpetrated through ignorance, does not allow the free flow of debate on whether certain power tools/machines may be regarded as useful and, as a consequence, acceptable in the making process of a violin

I believe slowly, too slowly maybe, that times are changing more and more. Up and coming violin makers think of the power tool as an asset to assist him in his craft, though many of them opt not to use them because of lack of understanding and the stigma attached to it.

The modern craftsman, just like his predecessors, is a free spirit and must be able to vibrate accordingly within his own field. Whether an instrument is machine made or beautifully hand-crafted, there is still one unresolved question. Neither match the sound quality of the 17th century instrument. The nearest that has come to that with time, are some of the instruments made by J.B. Vuillaume. He was quite an innovator in his own time. Using the technology of his day, he contrived some mechanical devices to reproduce faithfully a product that no one could tell apart. A similar act nowadays would be denigrated by the establishment. The irony in all this is that at auction, a J.B. Villaume can fetch a very healthy price and I wonder if 150 years makes all the difference when deciding if an instrument is machine assisted or hand-crafted. After all it is simply a question of individual perception and what the eye can't see, they heart won't grieve!

Letters

Ozone

Does anyone have information on possible ozone production from UV drying cabinets? When my drying cabinet is operating, there is a faint pungent smell near the cabinet, which does not seem to be organic. The cabinet (viola size) has two 40watt UV(A) sun ray lamps, and is lined with aluminium foil to reflect light and increase the UV intensity. There is an extract fan to change air, so the temperature rise is less than 10degC

I suspect the smell may be ozone, as this can be produced by high intensity UV light on a metal surface. Office photocopiers can give a health hazard from ozone for similar reasons. It seems likely that if I can smell ozone, it is well above the threshold limit value for continuous exposure.

Does anyone have experience of such problems, or can they give information on convenient ways of testing for or removing ozone in low concentrations? Also, can anyone give information on the best type of lamp and UV wavelength for drying oil varnishes?

Frank Roper London SW16

Apology

In the winter edition of the newsletter we gave the incorrect address for Mr. Anthony Perry following his letter on instrument selection, as Deganwy, N. Wales. Mr. Perry is of course from Wolverhampton, the other address belongs to Mr. L.A. Perry.

Lionel Tertis International Viola Competition and Workshop
Isle of Man, British Isles. August 23rd-30th 1997.

Masterclasses, recitals, lectures with: Yuri Bashmet, Man-Seng Chan, Katherine Collier, John Constable, Harry Danks, Helen Davies, Therese-Marie Gilissen, Shelley Katz, Leopold String Trio, Lubomir Maly, Michelle Mares, Jordi Maso, members of the Moscow Soloists, Mikhail Muntian, Martin Outran, Tully Potter, Sophia Rahman, Julian Rolton, Wilfred Saunders, Christoph Schiller, Yizhak Schotten, Paul Silverthorne, John White.

Further information from: Lionel Tertis Secretariat, Erin Arts Centre, Victoria Square, Port Erin, Isle of Man, IM9 6LD, British Isles. Tel: +44 (0) 1624 832662 Web page: http://www.enterprise.net/arts/tertis.htm

This Newsletter is printed and published by the British Violin Making Association. Correspondence and articles to go to the Editor, Shem Mackey, 15 Weaver House, Pedley Street, London E1 5ES. Tel/FaxNo. 0171 375 0273
Contributors to this Newsletter express their own opinion and are not necessarily those of the BVMA.
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