

West Suffolk Woodturning Club

AUGUST NEWSLETTER

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Last Meeting: August Holiday Break

Article on Pyrography

Pat Yates



The idea for this article, was inspired by one of Tic's entries on the exhibits table, the Dragon on Board, at the July meeting. She has told me that it was completed on a Silver Birch board and that it was a commission for a lady for which the inspirational content was a tattoo. I know there is mixed feeling about pyrography, for some, any kind of decoration, which they consider might obscure the beauty of the wood is an issue but ...

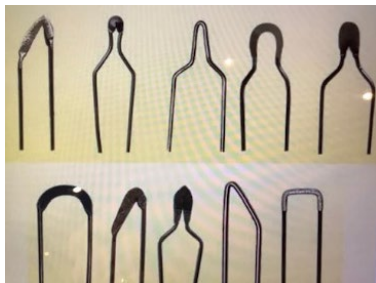
Just a slight digression whilst I argue with the grammar checker about commas before conjunctions! I was always taught that you did not use commas with conjunctions although I did have the argument with our Financial Director, some years ago, a modern languages scholar, when I accused him of the misuse of commas – so I guess we can say for emphasis? I do not like double blue underlining words in my text. This editorial job is really interesting just from an English grammar point of view bearing in mind it is probably American!

Anyway, to get back to the article! And I have got blue lines again! Under anyway and the lights just went out!!! What next?! And I will put a comma after anyway – that is correct.

... pyrography can be used to enhance the beauty of the wood. The photograph of Tic's work does not do this piece justice. As with all Tic's pieces it is exquisitely made. Her skills are enviable but sadly not all of us are so well endowed! However, practice makes perfect although there is a dispute even over that statement in that it is no good practising something that is not good but I think we know what the original intentions of the statement were!

Pyrography is another aspect of woodworking and one I would like to pursue and further to that point and as you will see later there are cheapy sets and very expensive sets, I have decided to go for a cheapy point set at £22.99 and for the wire nib burner at slightly more at £78.96. It seems to me that both have good points and bad points (sorry about the puns) and to have both is probably the best remedy. I have read the reviews and people seem pleased with their results and bear in mind I am only a beginner, although I have a pyrography machine in my garage somewhere from years ago – I am not sure I could find it and I wonder how it might have fared whilst languishing in my garage for so long with its seasonal visitors? Also perhaps bear in mind that this is a September magazine issue, actually being written in November, so I have only just ordered these pieces of equipment.

The one criticism, common to most of the reviews, of the, what I imagine is a cheap wire nib set, is that it needs a bigger range of wire nibs, but as the ones that they desire to have are the ones they call spades which are a much broader, a heavier duty type of nib, made presumably to avoid the burn of a much narrower point and to spread the effect more widely – has to be easier than trying to create a soft area with a sharper point - I suspect you need the power of a more expensive unit to run them. None of the comparable sets that I looked at had any of these wider wire nibs. Something to look into and ask John Woods maybe!



To my article. I have a number of books, but at this level I need basics and I do have exactly that book, 'Pyrography Basics – Techniques and Exercises for Beginners' £6.99. I would say it is fairly ambitious in a few short pages. If you have not done this before and you accomplish their projects I think you would be justly proud. And do read Tic's Airbrushing advice in her editorial in the October magazine. You will see so many similarities!

There is any amount of information online of course, but for the purpose of this article which is to set down the basics I chose Wikipedia which I think satisfies my requirement at this early point in my education into the art of Pyrography. I also acquired some brief notes from Tic on technique.

The one point that cannot be mentioned too often, is the emphasis on safety, which is described below. Do not treat it casually.

Burning surfaces can release toxic chemicals into the air that you breathe. The point, well made later, is that you might not be aware of its potential damage now, but the damage done may revisit you in years to come. So, take care. Do your research.

I have a friend whose husband worked in a flour mill for 39 years. He took voluntary redundancy did another kind of work for a while and then? And now? 12 years on, suffering with emphysema they live day to day not knowing whether he will survive the day. Another example? I am contemplating organising a Mad Hatter's Tea Party, no not for us, at my church. I started to read Alice in Wonderland and Alice Through the Looking Glass again, but I was intrigued by the statement Mad Hatter. The book says that many have tried to attribute aspects of the character that Lewis Carroll describes namely the Mad Hatter to the disease, but the belief is that this character was based on an eccentric furniture dealer called Theophilus Carter! Maybe he was high on glue? And no connection can be traced to what is effectively a disease caused by the manufacturing process of felt hats which of course were all the fashion for the Victorian dandies or flaneurs of the 19th century. Sure enough my research showed that disease was rife amongst the workers who produced these hats. It was across the Western world. The process was known as carroting. It was an orange substance used as a smoothing agent and it was involved in the process of separating the fur from the skin of pelts from rabbits, hares or beavers which was then matted and smoothed made into cones boiled and dried. The damaging ingredient was mercuric nitrate. In America, Danbury, in Connecticut, believed itself to be the hatmakers centre of the world – they called it the Danbury Shakes. The disease affects the central nervous system, results in loss of teeth, hair, skin diseases, apathy, malaise. They say that to say as Mad as a Hatter was proverbial in the Victorian world. So whether Mr. Carter had been a hatter at some point in his life or not I suspect that Lewis Carroll was only too familiar with this dreadful situation that so many poor people found themselves in and could not give up their job for fear of the workhouse. In Europe, France in particular, legislation caused the process to be replaced, we were tardy but by the turn of the 20th Century it had more or less disappeared. Bear in mind the first case was recorded in 1829 in St. Petersburg, Russia! In America? In spite of the Danbury union getting recognition of this killer disease in 1913 nothing was done at a government level until 1937 when a study was carried out and proved that the symptoms that the workers were suffering from were not induced by alcoholism and smoking which is what the manufacturers' bosses had got away with for more than a hundred years! And it was only in 1941 when America came into the war that they needed heavy metals for the manufacture of detonators that the process ceased. And as far as I know munitions factories were staffed by women, the men were all away at war, who in the making of these detonators also suffered the side effects of these heavy metals – if they didn't blow themselves up!! Inspection before you went into work – no hairpins all that! Any Trump/Boris supporters – Deregulation – think on! Another slight deviation. But in both these cases, Flour Mills and Hatters and munitions come to that, this was done unto them you will be doing it unto yourself. So take care! Weirdly only today in Indonesia I read of the effects of mercury on gold miners.



Amazing don't you think where planning a party can take you???

Pyrography or pyrogravure is the free-handed art of decorating wood or other materials with burn marks resulting from the controlled application of a heated object such as a poker.

The term means "writing with fire" from Greek pur (fire) and graphos (writing).

It can be practised using specialised modern pyrography tools or using a metal implement heated by the fire – a poker for example – or even sunlight concentrated with a magnifying lens.

A large range of tones can be achieved.

Varying the type of tip, temperature or the way the iron is applied all create different effects.

Light coloured hard woods such as sycamore, beech and birch have fine grain which does not obtrude but maple, pine or oak are also used.

Leather lends itself to bold designs and allows very subtle shading to be achieved.

Specialist vegetable tanned leather must be used, as modern tanning methods leave chemicals in the leather which are toxic when burned.

Gourds are another material.

This process has been practised since the dawn of time by a number of cultures including the Egyptians and some African peoples though why Egyptians are separated from Africans when they are

all from the same continent who knows?

It was known in China from the time of the Han Dynasty (206 BC – 220 AD). This dynasty was responsible for the Silk Road (Belt and Road History repeating itself?) all the way to the then Mediterranean world. Under the Han Dynasty this process was known as "Fire Needle Embroidery".

The Victorians invented the pyrography machine and it was this that replaced the previously widely used name of Pokerwork.

There are three main categories:

Solid Point Burners similar to a soldering iron. They have a solid brass tip which is heated by an electrical element and operate at a fixed temperature. Most kits come with a wide range of points.

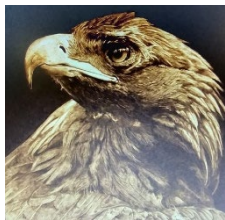


Wire nib burners – have variable temperature controls. The writing nib is heated by an electric current passing directly through it. Some models have interchangeable nibs to allow different effects and again most kits come with a selection of different shaped wire nibs.



Laser cutters can be set to scorch the material instead of cutting all the way through. Many laser cutters provide software facilities to import image files and transfer them onto a sheet of wood. Some laser systems are sufficiently sensitive to perform pyrography on thin card or even paper.

So why did I immediately feel a little cheated when I read about the laser technology. Immediately I supposed that this beautiful horse and indeed the eagle images which had me gobsmacked now seem more likely to be the result of software imported images. I don't know that. But and there is always a but, isn't it that technology is just another tool in the artist's toolbox and perhaps takes us back to a time before the schism when artists were scientists too?



As a beginner it is wise to avoid using very fine or intricate designs on uneven, coarse, textured wood. Softwoods are more apt to be fine or moderately coarse-textured with some textures it may mean you will have to compensate when burning it – going slower on the harder summer wood and a lighter touch on the softer Spring wood to create an even burn overall. Now perhaps you can understand why these pyrographers commenting on my cheapy nibs were

anxious for a wider selection including these very broad tips known as spades!



With regard to adding colour, woodburning is mainly used to enhance the natural beauty of the wood and the figuring, grain, lustre, and even natural colour will shine through - but this is obviously a subjective issue and the decision of the person creating the work.



On safety all the common-sense rules apply. Fine wood dust, pitch/sap emits harmful fumes when burning.

Wear a quality mask to protect yourself and use a dust collection system to protect yourself from respiratory problems and potential lifetime injury to your lungs.

Do not burn on pressure treated or indeed any type of treated wood, MDF, manmade boards and plywood should never really be burned. Be careful here. If you go on the Amazon website to view or buy from these various sets you will see running along the bottom all the other things they want you to buy including what in some cases they describe as 'wood' blanks. If you look at some of them, though they describe them as wood in the title when you actually look at the detail they are plywood. And you will see suitably sized MDF boards as well. The advice is – DO NOT BURN MDF!

Never burn through a 'finish' and never burn through anything that has been 'superglued'. Tic says puff of white smoke and your eyes sting for ages afterwards!? All of these bonded products have been treated. It is the chemicals used in the process that you do not want to release. Tic says she uses plywood but is careful not to burn through the layer but Mike made the point that it still gets hot? Burning will release toxins which may be carcinogenic. The effects may not be immediate but may affect you later in life.

For your guidance, Tic uses real wood, she loves wood with interesting grain. The best woods for pyrography she says are tight grained woods such as sycamore, the fruit woods, yew, box, beech, lime, walnut and her favourite is field maple. She works on ash because she has lots of it and oak but they are harder to get a good result on. She says the only wood she has never had any luck with was zebrano, but this appears to have been as much about the nature of the commission as the wood. She also works on leather, cork, gourds, paper which she says is surprisingly hard. Not sure about the paper – another question perhaps but the answer seems to be anything natural – un-interfered with!

Make sure your environment is well ventilated with a running fan to encourage the circulation of fresh oxygen and to remove lingering smoke.

So, there is a plethora of kits available on line. The points are far cheaper than the wires. Although they are slammed for being slower because they take a long time to heat up it is also true that they hold their temperature longer. The wires can burn very hot and cool very quickly and skill is needed to control the action. They mention a fan. I am not sure how effective this is. But, the advice is – do not have the fan blowing across the work. The picture I have seen of this kind of deflection is to have the fan pointing away from you so that it is taking into it what you are creating so taking it away from you directly and blowing it out – but?? Into your space? So good ventilation is a must!

There is also a plethora of blanks, cheap to practise on, described as wood which are in fact plywood. Just bear in mind the above-mentioned advice and as Tic says she uses plywood but does not burn through the top surface. Mike made the point that whilst you may not burn through the top layer the tool will be generating heat which may disturb the chemicals. Just be careful and perhaps make it a rule to use only solid wood!

Tic's advice:

*The tip should not be glowing as this is too hot to work with.

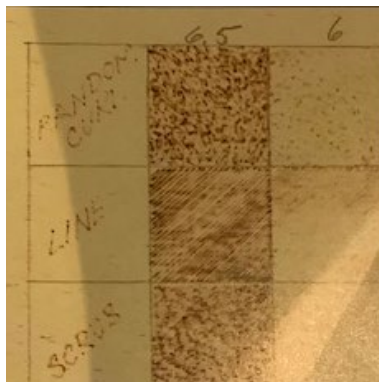
*You need to be moving before you hit the wood and you need to leave the wood the same way. You can practice this action to begin, with a pencil and a piece of paper. Just draw an object on the paper and then follow Tic's instruction so, as you meet the inside edge of your object, so the pencil makes contact and equally at the other side anticipate the line and lift off. It is not as difficult as it sounds but there is a hesitation to go back at the beginning because you may miss the line or the starting edge of the shape on the way in? Nope! This is where the practice comes in.

*Pyrography as with Airbrushing is all about controlling your speed. You need to have a constant and controlled speed to get a good line. Too fast it is too light. Too slow it is too heavy. And if you vary the speed the line will fade in and out and get thicker and thinner.



*Another point to make about the points versus wire nibs is that the points are stronger so there is less chance of damage. And a larger handle suits some people better. I notice though that on the handle question the distance from the point and where you hold it is much further back than where you place your grip for the wire nib type – interesting – I will see when they arrive?! Looking at the picture I think my preference is for the wire nib position, but we will see?

*Tic suggests that the point sets are harder to get the hang of? And I wonder if that has to do with what seems a little bit of an unnatural position, that distance from the point, for holding a pen or pencil which is what it is really. I will revert?! And yes as she says the points sets are slower than the wire nibs but at the beginning? I suspect that is no bad thing. And you have the reassurance that Tic still uses hers. So, horses for courses.



If you are not already a pyrographer, of all the woodturning associated ancillary hobbies this is probably one of the cheapest at which to have a go. Bear in mind the need to practise and think about the point kits which indeed are slower but may be a good place to start whilst you become accustomed to the techniques and improve your mark-making skills.

When starting it is obviously necessary to learn how to control the burn on the wood. I don't know how many of you have seen Tic's "Sampler". This is a sheet of wood which she has drawn up into a grid and she has then filled the squares with any amount of mark making. Again, you can use Tic's exercises from her airbrushing editorial in the October newsletter. And, of course go online and

read books. There are loads of books on Pyrography. These grids can actually make quite attractive pieces. The suggestion is 1 ½" to 2" squares. In each square you can practise a different kind of mark or you can attempt to create a shading process, using crosshatching for example, starting with just a single layer of lines, the next square, go back over in another direction. Each time you do this it will darken and, you will improve getting your lines straight! Just drawing straight lines is a challenge as are Tic's Daggers. Start fat and get thin or vice versa?



Just as an addendum - during my research I read an exchange in the AWGB forum between Les Symonds, Bodrighy Wood, Mark Hancock, Andy Coates, John Taylor and Mark Sanger. This group seemed to favour the Burn Master which can apparently support two devices, so it is possible to have both point and wire nib, which is more than likely the best solution, but the Burn Master is not cheap. Andy Coates was in praise of all things Woodart and if you are interested, he would suggest that John Woods may be your man. He likes John's product. He likes the fact that it is local and English and apparently John can also "make adaptors".

I then did some mark making with a pencil on paper and it took ages, but it was effective and of course whether it is a pencil, a pyrography pen or an airbrush, control and accuracy are key!!

In the meantime, if you have equipment questions perhaps speak to John Woods who sells his High Current Pyrography kits @ £240.00 from his website Woodart Products online. I just checked it out. I am sure he will be happy to give you the benefit of his knowledge.

Perhaps I shouldn't be promoting the sales for one of our Committee Member's business, but I think that would be a bit silly when we have an expert in our midst then we should take advantage of his knowledge. Tic has always been the one to give the pyrography profile at the multi-turns. Maybe John could give a Tech-Talk sometime on what is obviously a very popular hobby.

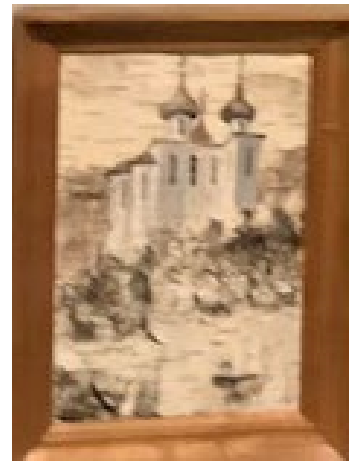


This morning I suddenly thought about three pictures that I bought in Moscow from the street artists. The Company wanted me to go to the Tretyakov Gallery to view the National treasures, but I had seen the street artists on my way in – so I went with my guide. I bought three paintings which had been done on Silver birch bark using the bark as part of the feature. So, the roof of the little house, the rocks on which the building stands. Today I checked because they are sepia, I suddenly realised that they might have been pyrographed but no they are painted. But it has given me an idea because I have a number of silver birch bark boards always provided they will not just go up in a puff of smoke!

I really hope some of you will give it a go? In the letter that is accompanying this newsletter update you will see I have discussed the idea of an Easter Challenge. You can read all about it in the letter, but I do hope that firstly we agree to hold it and secondly that you will have a go at that too! There is a range of things to attempt. Maybe we should offer a prize in an effort to encourage us? Like another piece of wood for the next challenge?!

On the grammar front? This programme does not allow the use of the word 'but' without a comma. It can be either side, so long as it has got one!?

They don't spell proper either!



Happy Pyrographing!!!
Pat Yates