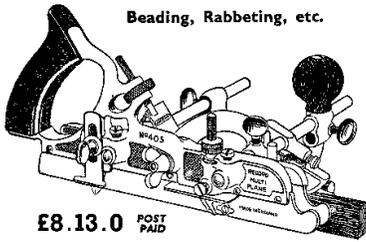


RECORD Multi-Plane

with 23 Cutters for Plowing, Dadoing,
Beading, Rabbeting, etc.



July 2006

Crosscut

Newsletter of the Witwatersrand Woodworkers' Association

PO Box 129, Parklands 2121

Ad from the 1950s

Secretary: Kenneth Jackson (kenneth.jackson@tsohle.co.za 083 256 1823)

Editor: Trevor Pope (tpope@iafrica.com). All written content and opinions are those of the editor, unless otherwise attributed. © Copyright reserved.
Go to <http://mysite.mweb.co.za/residents/tpope/homepage.html> for back issues of Crosscut.

Next General Club meeting is on **Tuesday, the 11th July** at 18h00 at Pirates Bowling Club. A talk by Dennis Lock (from the East Rand Woodworkers) on lessons learned in building a kitchen.

Next Turner's monthly meeting is on **Monday, the 3rd July** at 18h00 at Hardware Centre. Bowl-saver demo by Chris O'Connell. (A bowl-saver is tool that fits onto a lathe to cut out concentric bowls from a single blank, minimising waste.)

News

June General Club Meeting. Alistair Brande was presented with his certificate of life membership in recognition of his contributions to the club.

Jan Ferreira from Bosch demonstrated their latest line of battery operated power tools. These use Lithium Ion batteries that provide more power and endurance with lighter batteries. He showed a range of products from the smallest battery screwdriver that sells for less than R200- up a 36V drill that sells for more R5000-. He gave some advice on rechargeable batteries in portable tools – how to care for them and make them last. He says that good quality battery packs should last the life of the tool – 1000's of charge cycles, and when the battery pack expires, you need to decide whether it is worth replacing as the tool may be worn out. Often, the battery pack may cost 75% of the cost of the tool.

[For those people who have defective battery packs, and are put off by the high cost of genuine replacement packs, the cells inside can be replaced. Try:

- Carter Agencies, Unit 4, Hitech Park, Cambridge Commercial park, 22 Witkoppen Rd, Paulshof. (011) 807-5282 – Mark Meltzer.
- Battery Centre, 27 Eighth Ave, Edenvale. (011) 453-2293]

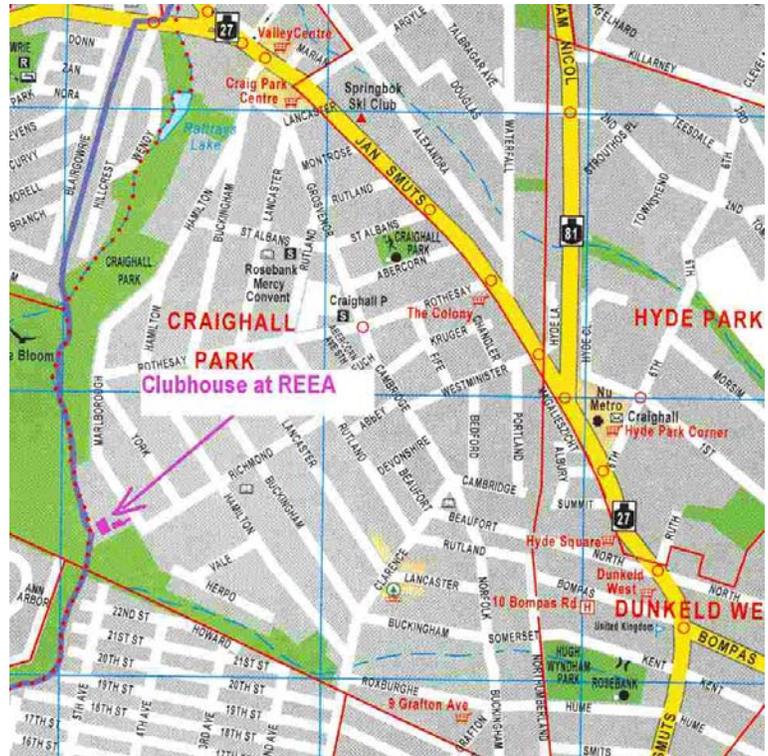
June Turners' Meeting. Butch Smuts discussed his turning career and his progress in making big bowls. Butch started turning seriously in 1998 and when he achieved some success, he retired three years early to make a new career. Butch's particular interest is in large bowls made from indigenous hardwoods, with additional decorations that he does on the lathe. He continues to experiment in new techniques, to make pieces that people notice. He has built up a substantial portfolio of work and is becoming known amongst the local cognoscenti. He gave some advice on the approach to follow for people who wish to be known as Wood Artists and make a living from it.

From the committee:

Club Premises. We have taken possession of our new premises at REEA and alterations have commenced. A map showing the location appears below.

As part of our alterations, the area was cleared. Wire mesh, poles and some brickwork were removed. John Allen with assistance from members has erected dry walling to close off the area. Rick will weld up a new cage to surround our area for security. Part of the floor will be levelled out with a screed. New wiring and lighting will be installed. A list of tasks was identified at the meeting and people assigned to assist.

Help from members, donation of material, paint and labour will be most welcome. We aim to move in at the end of June. Our financial reserves will be insufficient to cover the costs of the alterations, and the committee has decided on a voluntary building levy R200- per member to help cover the costs of materials. Please pay Glen Lopich at the next meeting. Please volunteer your time to assist.



The 1st July is when we will move our equipment from storage. Frans Joubert is in charge of the move. They will meet at 9h00 on Saturday 1st, outside GD Equipment Supplies, 272 Granville Road, Robertville to start loading. As per the previous move, we will need many hands (including your horticultural assistants, if available), and bakkies. Contact Frans on (011) 704-2846 (h) 084 574 3500 to volunteer your help.

August Meeting. We would like to move the main club meeting back to the second Wednesday, as it was before we moved. The August meeting may then be on the 9th, which is a public holiday. We would also like to have a celebratory opening meeting, on that day. This will be discussed at the next main club meeting on 11th July, and the final arrangements given in the next newsletter.

Committee Members and Contact details – following the AGMs, here are the contact details for your committee members.

Main club:

Chairperson	Jenny Tomlinson	082 885 5090	(011) 613-8341	jenny@regency.co.za
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Treasurer	Glenn Lopich	082 442 7792		glenn_laura@iafrica.com
Editor	Trevor Pope	(011) 374-6494 (w) 083 388 2214	(011) 622-7018 (h) – if Telkom ever gets it working again!	tpope@iafrica.com
Member	Costa Carastavrakis	072 244 3220		costacaras@telkomsa.net
Member	Dave Fincham	083 679 8411		Dave.fincham@za.didata.com
Turner’s Rep.	Steve Barrett	083 556 2690	(011) 408-8910 (w)	Steven.barrett@liberty.co.za

Turners:

Chairperson	Steve Barrett	083 556 2690	(011) 408-8910 (w)	Steven.barrett@liberty.co.za
Secretary	Rick Florence	(011) 788-9922 (h)	(011) 886-9922 (w)	flocat@mweb.co.za
Treasurer	Shorty Oberholzer	(011) 888-4414 (h)		
Member	George Simpson	(011) 662-2052	072 7833702	gfsimpson@sentechna.com
Member	Grant Mansell-James	(011) 475-9940 (h) 083 312 2551	(011) 402 3365 (w)	manselljames@hotmail.com

Beginning Turners Classes. Once we are settled in the clubhouse, we plan to offer a beginner's class again. Please contact Steven to register your interest.

Hardware Centre – 50 year celebration. Hardware Centre has been under that same ownership since the start, and proudly invites you to join them to celebrate 50 years of woodworking. Venue: Hardware Centre, Cnr Hans Strijdom and CR Swart, Randburg on 1st and 2nd of July 2006. (Times are 8h30 to 14h00 on the Saturday, and 8h30 to 16h30 on the Sunday.)

The WWA has had a long and happy association with Hardware Centre and wishes them well for the future.

Wood for Turning: CJ Minne has some freshly cut tree trunks including weeping willow, loquat, and avocado Contact him on (011) 697-4786 (w) 082497-6741 for more info.

For Sale:

HEGNER Multi-cut-25 universal fretsaw Price R 5,100--. Like new - hardly used. Contact Gracy 011 792 2271. (Randpark Ridge)

Oils and Varnishes for Finishing Wood

Trevor Pope

Like me, you have probably tried lots of different finishes on your projects, hoping to find something better and easier. Unfortunately, our product labelling regulations do not demand much information, so the manufacturers provide as little as possible. To understand what is in all these different products, I did some reading.

The chemistry of finishes is a complex subject, involving a lot organic chemistry and the understanding of polymers and catalysts. Underlying it all are some fairly simple concepts that I will attempt to explain. Having grasped these, I hope you will have a better understanding of how oils and varnishes work.

Oils. If you look around you will see that there are a large number of different oils. From a wood finishing point of view, oils can be grouped into non-drying and drying oils.

Non-drying oils remain unchanged after finishing. They coat and are absorbed into the wood surface, but they do not harden or bond to the wood. The application of non-drying oils is mostly reversible - a solvent such as mineral turpentine or thinners can be used to remove them. Non-drying oils have their uses – they can carry pigments to colour and protect the wood. When exposed to the weather, they remain flexible and can accommodate wood movement. However, they can wash off and may not prevent water from penetrating the wood. Most oils are non-drying oils - examples are motor oil, mineral oil, linseed oil, and most vegetable oils.

Drying oils undergo a chemical process after application that makes them become more viscous and bond to the wood. The drying process is explained by polymer chemistry. Polymers are long chain organic molecules. Heat or the right catalyst can cause the short molecules in the oil to form long chain molecules that cross-link. They effectively bond together to form a more viscous (stiffer) fluid or a solid film. Once the oil has dried, the change is not usually reversible. It will withstand some solvents such as water, turpentine, lacquer thinners, and some oils. The coating cannot be removed without chemical destruction of the film by a strong solvent or paint remover.

A good example is linseed oil, which is pressed from flax seed. Flax is used to make linen cloth. Linseed oil has been in use for many years. Raw linseed oil does not harden, or if it does, it takes many months, and remains sticky, attracting dirt. Before the action of catalysts was understood, to make linseed oil dry, it was boiled, which also had the disadvantage of making the oil rather dark. Nowadays, boiled linseed oil isn't boiled – it has a drier added, which performs the function of a catalyst. When boiled linseed oil is applied to wood, it is exposed to oxygen in the atmosphere, whereupon the catalyst causes the short chain molecules to link together into longer chain molecules and the oil stiffens up and forms a film, eventually hardening. This reaction is exothermic – it emits heat, which is not noticeable in a thin film. However, when rags are soaked in boiled linseed oil, the temperature rise can be significant, and even lead to a fire. Leave rags soaked in oil outside to dry or keep them in a fireproof metal container to avoid the risk of fire.

The key to the drying process is the drier or catalyst. (A catalyst is substance that accelerates the rate of a chemical reaction without being changed or consumed in the reaction.) The catalyst is carefully selected to affect the speed of drying and nature of the end product. Traditionally, organic lead salts were used, but these have been replaced with other substances based on cobalt, zirconium, zinc, calcium or iron. Cobalt and iron make blue and red pigments so are not used in clear finishes. When the varnish dries, the catalyst is bound up in the film in very small quantities so the varnish is chemically inert. Safety for furniture is not usually an issue. However for contact with food and for toys, no concentration of lead is acceptable, so you should assure yourself that the product is lead-free. The other metals listed are relatively safe, particularly in the small quantities used in the varnishes.

Boiled linseed oil remains flexible, and rather soft even when fully dry. There are other drying oils such as tung oil, walnut oil and so-called Danish oils which are better than linseed. Danish oils are usually blends of other oils, such as tung oil, sometimes diluted with mineral turpentine for ease of application and better penetration into the wood surface. Tung oil is good but expensive, so the amount of tung varies in different products and influences the price. Walnut oil can be purchased from health shops and is completely food safe (unless you have a nut allergy). It dries slowly, and forms a matt film – it also has a pleasant, nutty aroma.

There are many blends of oils on the market, and in times past, the compositions were closely guarded trade-secrets. A visit to a modern analytical laboratory will reveal product ingredients, so there is less secrecy now. Product differentiation is through price and marketing.

Continued next month.

(Sources: Wikipedia, Fine Woodworking articles, American Woodworker article, and Practical Woodworking article.)