

The Home HANDYMAN

March/April 2020 • Vol 30 No 03



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ORIGINAL
DIY
MAGAZINE



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SHELVES



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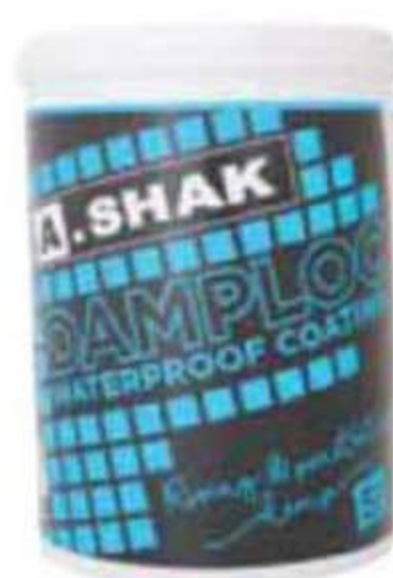
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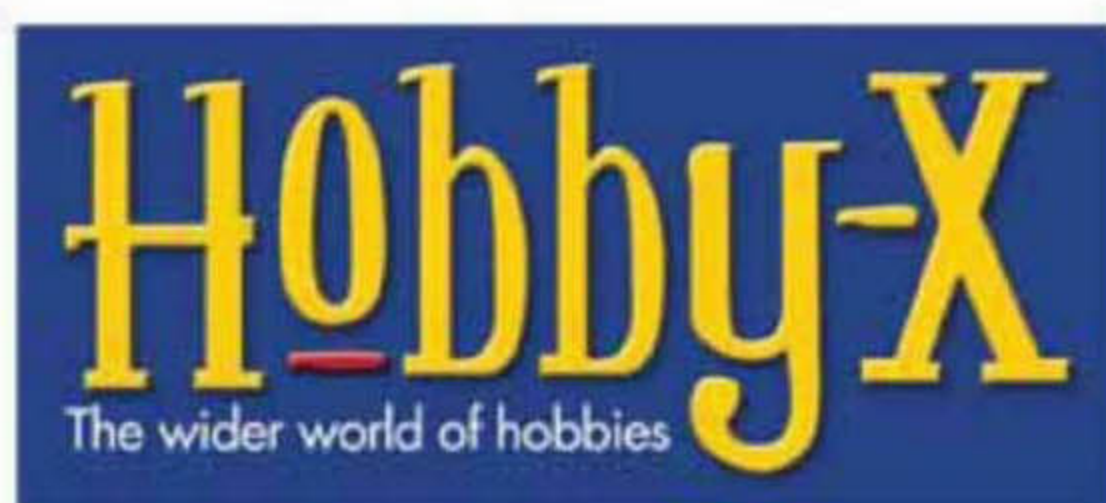
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The Home Handyman magazine is a specialized D.I.Y. publication and caters for a well-defined niche market since November 1993. The magazine equips its ever-growing readership with relevant D.I.Y. information, knowledge and skills.

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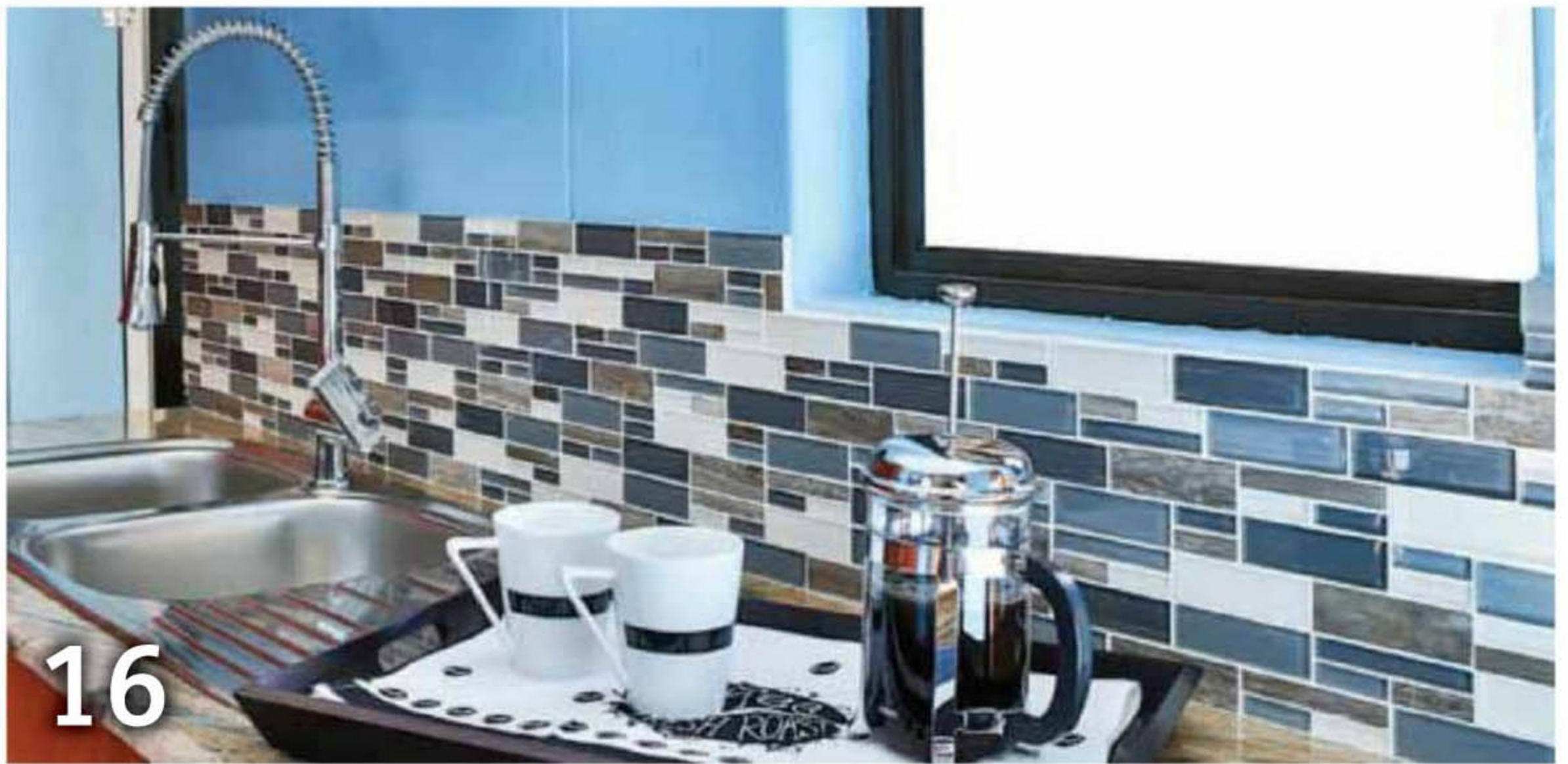
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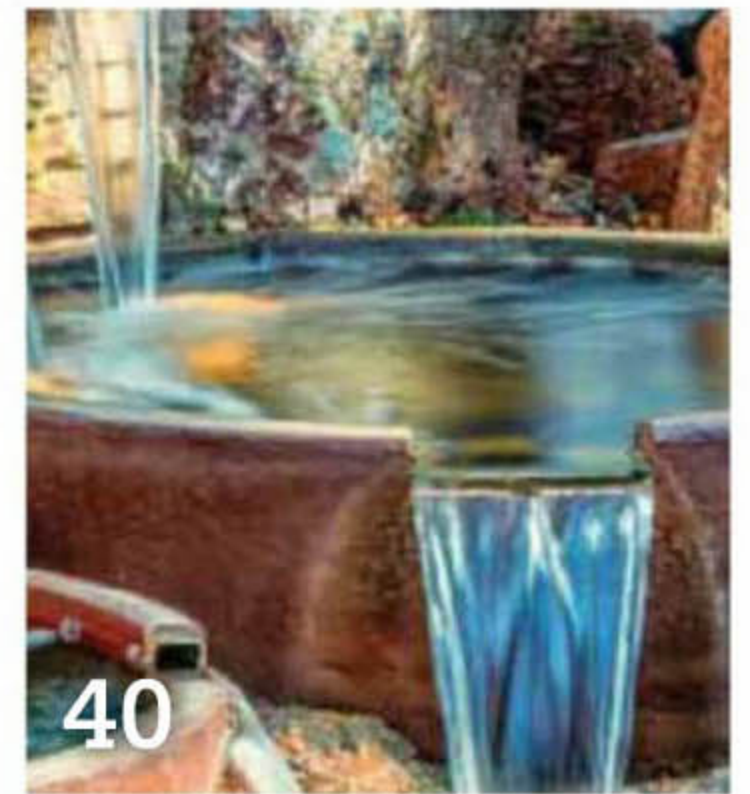
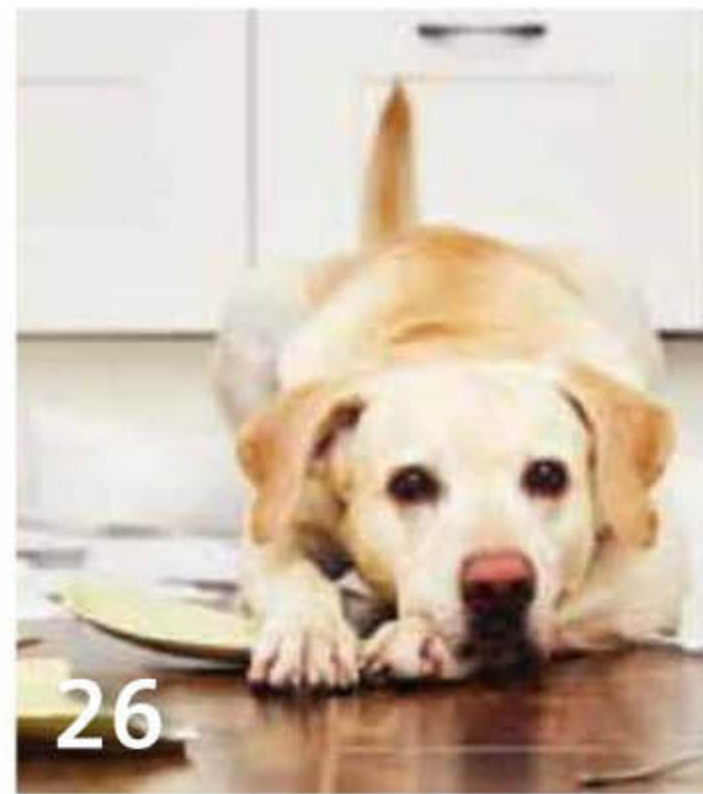
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The Home HANDYMAN

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FROM THE WORKBENCH

When DIYing, always stay aware

Over the recent December and January break, I spent some time with the family at one of my favourite places, the Timbavati. While it was great to spend quality time with the family and witness the beauty of the bushveld (and see the Big 5 in the process), I did learn a valuable lesson as well...



One evening while having a sundowner, making the braai and listening to the sounds of the wild as the birds settled in for the night and the hyenas began their evening calls, I went inside to wash my hands. The lights inside were switched off – to limit the use of the solar power as well as not attract the bugs – so I didn't see that the wire mesh sliding door, another barrier against the mozzies, was closed. I hit it headfirst and it was like walking into a cheese grater.

Slightly dazed, I opened the door and fumbled around for the lights. As my wife and mother came to my rescue, my two brothers fell about laughing – I have to admit that I probably would have done the same if the shoe was on the other foot – that's just the way brothers are... Anyway, blood was streaming from cuts on my forehead, nose and lip, but after cleaning up and patching up I re-joined my giggling brothers and the rest of the family for a lovely night (the bonus was that I got out of braaing that night).

But what stuck with me from the incident was how unaware we can become of familiar surroundings. I knew that mesh door was there and had opened and closed it hundreds of times, but at that moment I wasn't 'aware' enough. And I see this when doing DIY projects around the home too. How often do we have near misses which we simply brush off? Climb a ladder in slops? Use the wrong tool for the job because it is too much effort to get the correct one? Or forget that the glue gun or soldering iron is still hot and almost burn our fingers?

Sometimes, in either the rush to complete a project or simply not paying the required amount of attention, we put ourselves, and others at risk. I have seen far too many people with missing fingers to count, and this doesn't just include woodworkers who come a cropper while doing their hobby, but also professionals who, through working with machinery day-in-day-out, become a bit lax and 'unaware'.

So this year, just take a bit more care and be more aware of what you are doing, whether in the workshop, the car, or on holiday in the bush!

Gregg

MARTLET

Light Industrial Machinery

MM69BDS

Belt & Disc Sander (152 x 230mm)



Motor:	550W	Disc Diameter:	298.9mm
Voltage:	230V-50HZ	Working Table Size:	296 x 152mm
Speed of Belt:	1240 r/min	Working Table Tilt:	45°
Speed of Disc:	1700 r/min	Adjustable Belt Arm:	
Abrasive Belt Size:	1219 x 152mm	Power Cord:	1.83m

MM150BGS

Bench Grinder / Sander Combo



Motor:	350W	Belt Size:	50 x 686mm
Voltage:	230V - 50HZ	No Load Speed:	2950 r/min
Wheel Diameter:	150 x 12.7mm	Power Cord:	1.65m

MM150BG25

Bench Grinder - 150mm



Motor:	250W	Arbor Hole:	12.7mm (1/2") wheel
Voltage:	230V-50HZ	Grit:	Med & Coarse
No Load Speed:	2950 r/min	Power Cord:	1.65m
Wheel Size:	150 x 20mm		

MM200BG

Bench Grinder - 200mm



Motor:	400W	Arbor Hole:	16.0mm (5/8")
Voltage:	230V-50HZ	Grit:	Med & Coarse
No Load Speed:	2950 r/min	Power Cord:	1.65m
Wheel Size:	200 x 20mm		

OFF THE SHELF

Your guide to the latest products in the world of DIY

Impact drill designed to produce maximum thrust

The Makita MT range of Standard Duty Industrial Power Tools provide you with the quality you expect from Makita at an affordable price

The Makita MT M8100B 13mm Impact Drill has a powerful 710W motor and features a variable speed trigger that provides the user with maximum control over the drill speed via the trigger with forward and reverse change. The handy lock-on-button locks the trigger-switch into place for ease-of-use in continuous drilling applications.

The M8100B has a capacity of 16mm in concrete, 13mm in steel and 30mm in wood, delivering up to 48 000 impacts per minute. This impact drill has a no load speed for 0-3 200 rpm/min, measures 296mm in length and weighs 2.1kg.

The impact drill has an extra-rigid cylindrical housing and comes standard with a chuck key, side grip, depth gauge and a 2m power supply cord.

For more information, call 011-878-2600 or visit www.makita.co.za



Road-trip survival kit

With the Easter holidays around the corner, many families are planning their long-awaited family vacations. Pratley has compiled a recommended road-trip survival kit for those unforeseen breakdown emergencies when travelling

The kit consists of the following Pratley products:

Pratley SP001 is ideal for repairing lead acid battery casings, coating metal battery housings to prevent corrosion. It is exceptionally resistant to water, diesel, oil, battery acid, and paraffin, and is also tolerant to prolonged immersion in water once cured.

Pratley Rubber Tape is ideal for fixing low-pressure leaking pipes and making handle grips. Other uses include: sealing cables and insulating wires, sealing coolant pipes, and insulating spark plug leads. This self-fusing rubber tape will not unwrap or come loose.

Pratley Putty Standard Setting can be used on radiators (non-plastic) and cracked oil sumps. This hand-mouldable adhesive sets very hard.

Pratley Steel Quickset is a fast-setting adhesive metal filler and mender that sets very hard and matches the colour of most ferrous metals.

Pratley Wondafix Car is a strong, tough, flexible and shock-resistant adhesive for a multitude of problematic car repairs. It is well-suited for repairing scuffed hoses, rubber car bumpers, cracked car dashboards and windshield seals, and electrical lead insulation.

Pratley Powda-Bond is a highly versatile adhesive and powder filler repair kit. It adheres well to most plastics, and is ideal for repairing car bumpers, damaged wheel caps, motorcycle side fairings, and radiator overflows.

Pratley Gasket Maker is a tough, elastic, high-quality flange sealant and gasket maker. It is grey in colour, and is able to tolerate temperatures from -50°C to 300°C. It is resistant to chemicals such as petrol, diesel, paraffin, water, oil, and anti-freeze. It is ideal for engine sumps, gearboxes, and pipe flanges.

For more information, call 011-955-2190 or visit www.pratley.com



The eco-friendly option

South Africa is a water scarce country and homeowners need to rethink how they use this precious resource

Maintaining a thirsty lush green lawn that requires constant watering and mowing may no longer be an option, according to Dr Mehran Zarrebini, head of Easigrass, which is distributed by Van Dyck in South Africa. "Watering gardens is usually the first thing that's curtailed when water restrictions are introduced during droughts. But using too much water is just one of the reasons why large grassed areas are not necessarily environmentally friendly. Apart from needing large quantities of water, lawns also require the use of weed killers, pesticides and fertilizers which seep into and contaminate precious ground water," he points out.



Dr Zarrebini says that more and more gardeners are realising that substituting real grass with artificial turf is not restricted to large sports fields. Since leading artificial turf brand, Easigrass, arrived in South Africa in 2012, more and more South Africans have installed artificial grass on terraces and in small town house gardens. It has also worked well on roof gardens and in shady spots in larger gardens where natural grass is extremely difficult to grow.

An added bonus is a huge saving on water bills. As water infrastructure ages in South Africa, replacement and increased maintenance will make it more and more expensive every time you open your tap. Dr Zarrebini estimates that approximately 25mm is used to maintain each square metre of grass per week. This equates to 1 000 litres per week on a 40m² lawn (the amount of water needed is influenced by the climate, season, soil type and type of vegetation).

For more information, call 031-913-3800 or visit www.easigrass.co.za

Kiddies build-it-yourself range of toy sets

Construct amazing toys with TorkCraft's Create and Learn DIY Kids Toy collection

Now there is something special for the kids; TorkCraft have just launched its Create and Learn DIY Kids Toy collection, six complete build-it-yourself kids' projects. "These new DIY toy sets are certainly a far more practical and exciting gift for kids because, as most fathers know, kids love tools, working with wood and love to build their own creations," says Ryan Hunt, Sales and Marketing Director at TorkCraft and Vermont Sales.



These wooden building kits let the kids explore the world of engineering by piecing together wooden toys that can actually move and work, working with real tools. As kids assemble their toys, they'll develop an understanding of science, technology, engineering, arts and maths.

The first TorkCraft toy collection, recommended for children over the age of 5, includes a birdhouse, picture frame, sportscar, aeroplane, train, and pirate ship, and each DIY kit includes a full list of what's included in the kit, instructions, all the wood material, nails and a sticker set.

For more information, call 011-314-7711 or visit www.vermontsales.co.za

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Send us your views, ideas and opinions and you could win a Makita MT M8100B Impact Drill courtesy of Makita.



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Please include your name, physical address and contact number (office hours)



Rudolph Smit

wins a subscription to
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Thanks for bringing the magazine back

You are like a long-lost friend, so welcome back! Since your return I have seen several 'continuing' changes and have high hopes that these changes will continue for the better. Living in the 'platteland' has its advantages and disadvantages and the only way we DIY'ers can learn, is from publications such as yourselves, and it for this reason I am writing.

One of the disadvantages living in the 'platteland', is the fact that we have no 'speciality' shops and trying to find information, equipment and materials is a major problem. Yes, one has the Internet and YouTube, but I cannot take YouTube to my workshop, and I do not even know if the machinery they use is available or affordable for the DIY'er in South Africa. Certainly the Build It's, BUCO's etc. do not know what one refers to when talking to them, so I would like to put a challenge to the importers and speciality shops such as Strand Hardware, Hardware Centre, BPM Toolcraft, and others, to not only tell us about what machinery is available in South Africa (and do not forget prices), and to share your knowledge in 'How to's', but also advertise in this publication, as I am sure it will not only benefit this magazine but also your sales. Maybe we can even compete with some of the overseas mags which are now unaffordable expensive. Remember the 'platteland' is a lot larger than the city areas, and indirectly could have more buying power.

Who knows, there may even be other 'speciality' shops closer to where

one resides that one could visit, but understandably living in Kimberley to travel to a Cape Town, PE, or Joburg is just too expensive.

Regarding your magazine, besides the articles by Denis Lock, please provide more detail. The article on spray painting was great, it really went into the nitty-gritty and I cannot wait for the next one. I am referring to articles such as "Let the sparks fly" and "Gluing Tips and Tricks". I know absolutely nothing about welding but would have liked more information such as what type/size of welder and equipment. Unlike wood, steel is readily available in the 'platteland'. With regard to glues, what glue works with what, and here I refer to product names as well. For example, I have recently, after almost 50 years, discovered Balcotan, which I now buy when on holiday, as it is not available locally.

If the car magazines can comment on the good points and bad points of cars why can your magazine not do likewise when it comes to info on products, and to include prices?

Finally, Annalien's article was wonderful, a real motivator, thanks for publishing it.

Rudolph Smit, Kimberley

Ed replies: Wonderful to hear from you Rudolph, and thanks also for your time in giving us your feedback – it is always nice to know what readers want and we will endeavour to make sure that we keep improving and evolving the magazine.

Mozzie screens and projects for the magazine

It is so good to see the magazine on the shelves again. Congratulations, even if I am a few months behind. I found the latest issue very good with many good tips and interesting features. However, I have a few questions.

The mozzie screens. How do I attach them to the metal window-frame? Have I missed something somewhere? I believe they need to be secured otherwise the wind could blow them off the window-sill.

I have used Abranet sanding discs for a number of years and find them to be excellent. I made a project about six years ago using 'Tambotie', and great was my frustration and cost in terms of the fine sanding. Ordinary sandpaper was blocked and useless within minutes due to the high oil content of the wood. Then Abranet came to my rescue and they performed admirably. However, the sanding pads are too big for the ordinary woodworking orbital sanders and they have to be trimmed to fit most of the commercially available orbital sanders (150mm diameter has to be trimmed to fit 120mm pad diameter machines). This is a waste and the sanding pads, if they are made smaller, would be considerably cheaper. I have in the past brought it to the attention of Buffalo Abrasives (the importers, I think) but to no avail. Maybe we would achieve more success via *The Home Handyman*.

The new articles on welding and spray painting are good and informative. More please. A couple of articles on woodturning and the use of the different chisels would also be welcomed by numerous readers.

Could you also place an article on circular saw blades please? I have to replace my blade shortly, but on

visiting a local hardware shop, I was eventually totally confused as to what I should buy. I never realised there was such a variety of blade types, each with its own tungsten tip geometry and a huge difference in the price, anything from R150 to nearly a R1000. What is recommended for the ordinary woodworking hobbyist?

Lastly may I suggest a change? A prize attached to the 'Woodworkers Showcase' rather than letters to the editor seeking 'Brownie points'. After all, the proof of the pudding is in the eating and such pictures could inspire people to greater achievements through your magazine.

Malvin O'Donovan, by email

Ed replies: Thanks Malvin for getting in touch and for the fantastic ideas and suggestions – we will see how many of them we can implement over the coming issues. Regarding your first question, here is the explanation from the author, Kim Roberts: "My mozzie screens are not attached to the window frame at all – to facilitate daily removal to close my windows. The snug fit with the cross bar burglar guard notches and the end of the burglar guards hold the frame in place perfectly. The thickness of wood lends a weight that is not easily budged at all by quite strong winds (a lighter/thinner wood frame will easily blow off). The snug fit of the notches is very important... that actually anchors the screen well. It works on my windows very well. The problem is that not all windows have the same burglar guard system, and so anchoring is not as easily obtainable. A fixed frame onto which the mozzie frame can clip (to keep screens removable for cleaning and opening/closing of windows) would be an answer for different burglar guards."

Reader's projects



The Home HANDYMAN

www.homehandyman.co.za

Willing to share your latest project with our readers? Send a step-by-step write up of how to make the project, along with step-by-step photographs (at least 300kb) and a picture of the finished product.

Email projects and photographs to:

editorial@homehandyman.co.za



Our competitions – the fine print

Prizes may not be exchanged for cash. The closing date is stipulated by the competition box. If not stipulated, it closes on the last day of the issue. For example: Jan/Feb 2019. All competitions close on 28 February 2019. To enter simply e-mail your answer to: editorial@homehandyman.co.za and include your name, surname, address and a day time contact telephone number with your entry. Unless otherwise stipulated, competitions are lucky draws and the correct entry drawn on the closing date will be the winner. The prize may differ from the picture shown. By entering this competition you agree to all rules and accept that the decision of the publisher is final and that no correspondence thereto will be entertained. This competition is open to all readers of *The Home Handyman* except employees of THH, BB Print and employees who work for the company that sponsors the prizes and their immediate families. Prizes not claimed within 60 days will be forfeited.

The mother of all décor shows comes to Cape Town!

Following hotly on the heels of Decorex Durban, the Cape Town leg of Decorex Africa is set to captivate the Mother City from 30 April to 3 May 2020 when it takes place at the Cape Town International Convention Centre (CTICC). The theme for Decorex Africa 2020 is 'Lifestyle by Design', an embracing approach that allows you to design your life the way you want it to be. Lifestyle by Design is about freedom, reclaiming your time and doing things you like.

Visitors to Decorex Cape Town will find this year's theme amply illustrated by a wide range of fabulous all-new feature installations that talk to the latest trends and are set to inject the show with a crisp sense of newness. These new features include:

- Insta-Interiors – a brand-new feature showcasing the latest décor trends to hit the African shores, including New Nordic, Contemporary Organic, Afro/Tribal meets European Mix, Modern Chinoiserie and the Neon trend. Stripe Interiors, headed by rising young interior designer Shandé van Rooyen is just one of the participating designers who will bring these trends to life.
- 2020 Trends Installation – another brand-new feature showcasing Decorex Creative Director Anita Bloom's Top 10 trends for the year.
- Instudio Trend Theatre (a free-flow forum where leading design influencers, manufacturers and décor professionals share their insights).
- Fabric Trend Bar (the latest in decorative fabrics and trimmings for the corporate, hospitality and residential décor market).

On the home front, both trade and residential visitors will be intrigued by:

- The Apartment Project (a collaboration with one of South Africa's top furniture and décor suppliers along with two interior designers styling two apartments).

- Lighting by Design (a collaboration with one of South Africa's top lighting suppliers).
- Bathroom by Design (introducing trends from some of Cape Town's top bathroom suppliers).
- #withlovefromDecorex featuring Mobelli Furniture + Living (a selection of gorgeous contemporary furniture chosen by the Decorex team).
- Mobelli Furniture + Living Trend House – Urban Living by Design (including a home space that reflects the Cape Town lifestyle).
- Appliance feature by Tafelberg (the finest appliances and home technology).

Don't miss out on the ultimate Lifestyle by Design experience – book your tickets for Decorex Cape Town 2020 now! Tickets are available at the ticketing desk located at the entrance to the show at the CTICC.

For more information, visit www.decorex.co.za



Corobrik sponsors 33rd Architectural Student of the Year Competition

Eight finalists from Universities around South Africa have already won the regional competitions and will meet at The Wanderers Club in Johannesburg between 4-6 May for the 33rd Corobrik Architectural Student of the Year Awards evening.

The annual Corobrik Architectural Student of the Year Award is the country's premier event to highlight the creative and technical talent of the cream of South Africa's architectural students and to drive the advancement of design excellence nationally.

Participating universities include: University of the Free State, University of Cape Town, Nelson Mandela University, Tshwane University of Technology, University of Johannesburg, University of KwaZulu-Natal, University of Pretoria and University of Witwatersrand.

Participants' thesis models are available to view at the Wanderers Club between 8.30am and midday on 6 May 2020.

For more information, visit www.corobrik.co.za



Riaan Huiskens from the Nelson Mandela University was the 32nd winner of the Corobrik Architectural Student Award

Gardening trends – garden tools go cordless

Gardening enthusiasts take note – the latest, and growing trend, is cordless, battery operated garden tools that make working in the garden so much easier! Going battery powered means getting rid of the hassle of plugs and long extension cords. It also means you no longer need to worry about using petrol and other hazardous fuels – and this in turn makes these tools more environmentally friendly.

Orlando Luis, CEO of family owned hardware stores, Brights Hardware, says that going cordless will improve your gardening, save you money and give you a better user experience than before. “Most garden power tools work off the same 18V battery platform that conventional cordless power tools do and are interchangeable. Some larger machines, like lawnmowers and chainsaws use 2x18v Lithium-ion batteries as they required (the additional power of) 36V.”

The range of cordless garden tools available also includes hedge trimmers, garden blowers, brush cutters, vacuum and mulching machines, line trimmers, and reciprocating saws. According to Luis, the Japanese brand Makita has the most comprehensive range so far in the business and Ryobi is next to follow with very cost-effective solutions in these difficult financial times.

The top 6 benefits of cordless garden tools:

1. They can cover large gardens

“Today’s models are more often equipped with longer-lasting, faster charging lithium-ion batteries that make it possible for you to cover a large garden in one charge. In addition, many have eco and full-power modes which mean that you can have full control over how long they last.”

2. They are lighter and easier to use

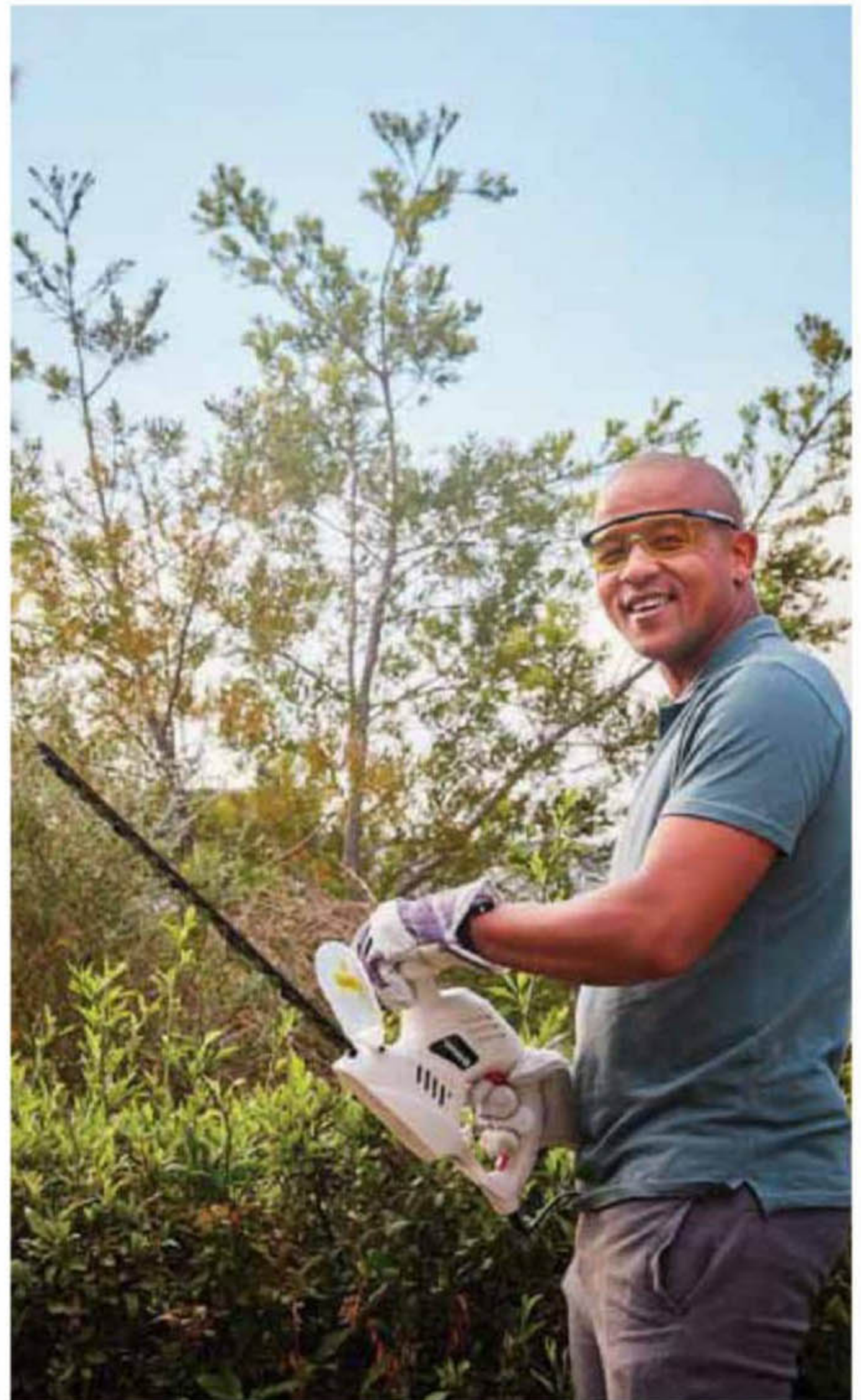
“Cordless trimmers, lawnmowers, leaf blowers and other gardening equipment are smaller and lighter than their petrol counterparts and aren’t restrained and limited by a cord,” says Luis. “The fact that they weigh a lot less than a typical petrol garden tool, and are very easy to start makes them suitable for everyone to use. This is especially useful for elderly people who can find it hard to lift a heavy hedge trimmer to reach the tops of hedges. It’s also a much safer way to get the gardening done.”

3. Reduce your carbon footprint

Luis cautions that when it comes to gardening tools, petrol-powered versions are the most environmentally damaging. “Using a petrol lawnmower for an hour pollutes the air as much as driving 150km in your car. Cordless gardening tools are better for the environment because no fumes are created from their use.”

4. Almost no maintenance required

Petrol lawnmowers, leaf blowers and other equipment require regular maintenance, as well as refueling. “Cordless models on the other hand, require little to no maintenance. The only maintenance that might be required when it comes to the



cordless models is cleaning, oiling and sharpening the blades, as well as making sure you keep your tools clean and stored properly. It is a good idea to also pay attention to the battery in order to prolong its life.”

5. Battery-powered equipment can cut it

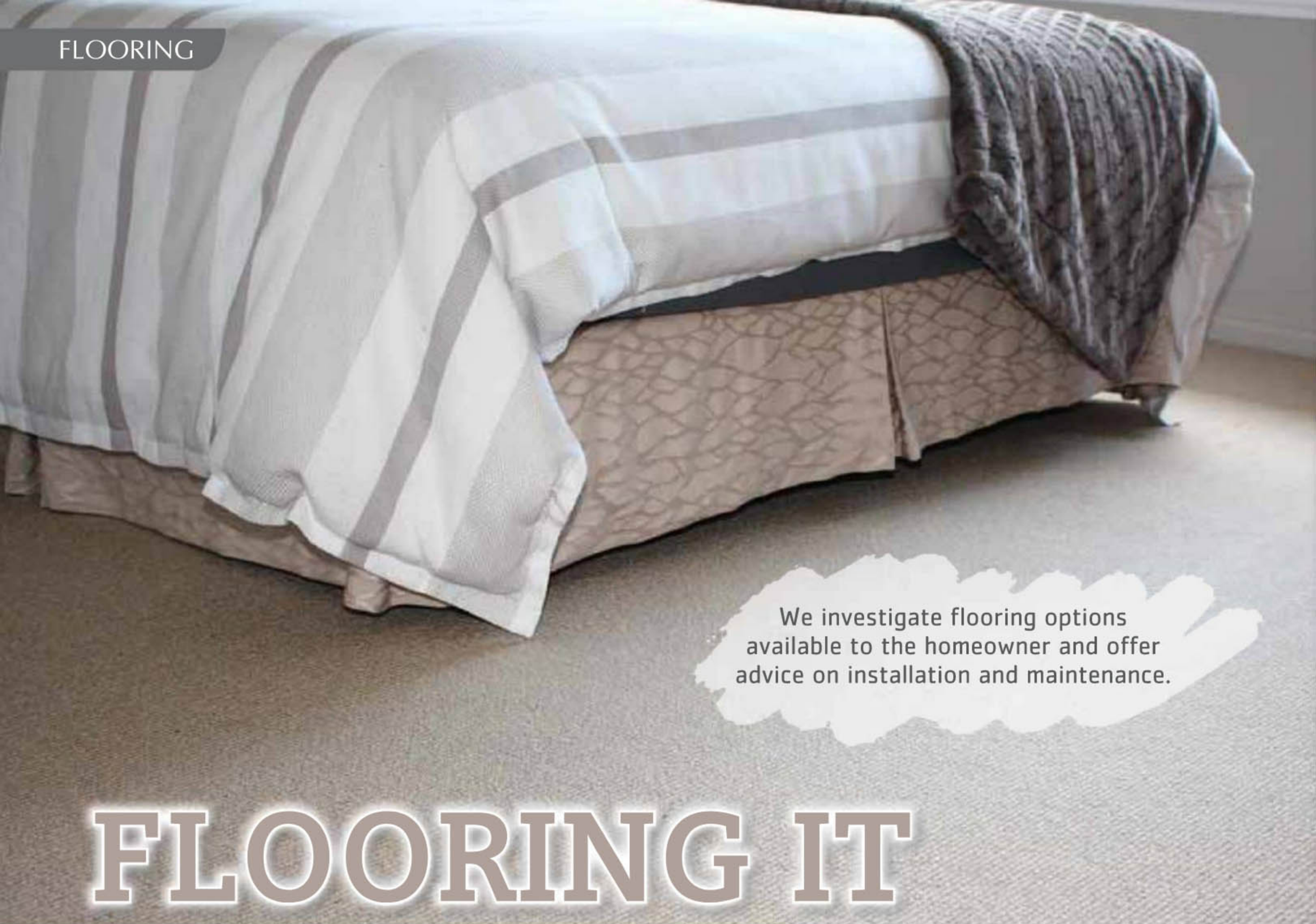
Battery-powered gardening tools are equally up to the task as their petrol or electrical counterparts and can provide the same results.

6. Enjoy fresh air while gardening

With battery-powered models you don’t have to worry about dangerous gas emissions and fumes that are not pleasant and in the long run will be not good for your health.

Over all, battery-powered gardening tools are quieter, easier to start, easier to use and the best solution for your garden and the environment.

For more information, visit www.brights.co.za



We investigate flooring options available to the homeowner and offer advice on installation and maintenance.

FLOORING IT

Carpets are still a popular choice for bedrooms

Flooring is well within technical reach of any competent DIYer and the range of products available is immense. For renovations or simply updating the appearance of a room, floors can make a substantial impact and add value to the home. With so many options on the market, where do you begin and how do you select the correct flooring material for the appropriate living space? We take you through the range of flooring options available and offer guidelines on their suitability in different living spaces of the home.

Making the right choice

As with almost any renovation or DIY project, your budget will determine the type and extent of flooring desired as costs can vary substantially. The extent of the project will also be an important factor such as whether you are installing

flooring for a completely new home, or perhaps replacing the flooring throughout, to simply redecorating a room or upgrading the kitchen. Working out your budget and measuring the floor space is a simple and straightforward procedure. Flooring materials are usually sold per square metre so make sure you purchase the correct quantity of materials. It is normal to have offcuts and extras at the end of a project. Don't cut corners so to speak and order insufficient materials, especially if the actual project only commences several weeks later as you might find that the supplier runs out of stock. Many materials are imported, and some stock might not be available, especially with a volatile market where demand might be low, therefore limiting importations. Also, shop around and don't be too hasty. See what options are available and speak to the sales consultants. They

>> Warren Schmidt

often undergo product training and may be able to offer sound advice. At the same time, don't delay too much as prices can rise overnight much to the dismay of many tradesman who don't factor this into their quotations!

Flooring types and materials

As already stated, the variety of flooring options are immense. Wooden floors have been the traditional material of choice for centuries and have made use of softwoods like pine or hardwoods like oak, chestnut and other varieties. Hardwoods and quality timbers have been selected to withstand moisture ingress and to prevent splitting and warping. Today, quality timber floors can be expensive, but durable laminated floorboards have become very popular and usually much more affordable than traditional hardwoods.



TYPE	EASE OF INSTALLATION	MAINTENANCE
SOLID WOOD TIMBER FLOORS Solid timber floors are sourced from raw timber and planed to the desired lengths and thicknesses. Pine is a popular choice due to its price, but pine is generally a soft wood and susceptible to indentations from furniture. Other woods such as gum tree (<i>Eucalyptus sp.</i>) is sometimes used but gives a more rustic appearance. Oak is a popular timber for hard durable flooring and provides a beautiful finish. Other timbers include maple, panga panga and boire. Parquet flooring was once very popular in many 1960s and 1970s homes after which the carpet invasion took hold. However, parquet floors are re-emerging in many homes although the blocks are substantially larger and can be set down to create eye-catching patterns such as herring-bone designs. The installation of solid timber floors is relatively straightforward. In some instances, a tongue-and-groove profile is machined into the timber so that these simply slot in together. A base frame or underlying sheet is usually placed down underneath the timber floor boards. It is essential to ensure that the concrete base is level and dry. The base frame consists of a series of timber struts onto which the timber flooring is nailed or glued onto. Laminate flooring on the other hand is usually just set above a dampproof membrane.	Moderate	A suitable sealant will be needed to protect the wood. After years of use they can be sanded and resealed. Timber floors can be prone to staining from certain liquids and chemicals.
LAMINATE FLOORING Laminate flooring replicates timber flooring and is an affordable option with a massive variety of designs available. The installation process can easily be undertaken by a competent DIYer with the right tools. Laminate flooring boards are composed of several layers to make them solid and durable. An impregnated stabilising paper forms the base layer followed by HDF board which is sealed on the outer edges to protect against moisture. There are usually three layers of MDF with a patterned layer of melamine paper. This layer gives the floorboards its distinctive pattern, colour and tone... most of them designed to resemble natural wood. On top of the patterned melamine another layer consisting of a tough skin (melamine impregnated overlay) makes up the top-most layer. This layer provides protection and durability. It is important that you source your laminated flooring from a reputable dealer as boards must meet stringent manufacturing processes and standards to prevent lifting or failure after installation. Installing laminate floors is usually straightforward. The underlying surface must be perfectly level and free from projecting stones, unfinished concrete and other inconsistencies. A dampproof membrane is then set down over the concrete. This will prevent any form of moisture seeping up into the laminate and provides some cushioning and dampens sound. The laminate flooring is then installed above this layer. Start from one side and corner of the room and work your way across. The maintenance of laminate floors is usually simple but always follow manufacturer's guidelines when using cleaning compounds. A warm damp cloth is all that is needed to clean laminate floors. Laminate floorboards cannot be sanded or varnished as this will damage the laminate protection layer.	Easy	Due to the protective laminate layer these floors are generally stain resistant and easy to clean. A damp mop or cloth is used. Check the manufacturer's specifications when using any commercial cleaners so that they don't damage the laminate.



Laminate flooring that gives the appearance of a natural timber finish

NOTE! The beauty with laminate floors is that they can be installed in any room in the house, including the kitchen and even in bathrooms.

TYPE	EASE OF INSTALLATION	MAINTENANCE
BAMBOO		
Bamboo flooring is fast becoming an eco-friendly flooring alternative. Bamboo is a form of grass which grows extremely fast. The fibres used in flooring are also resistant to humidity and contraction. The design principles are very similar to laminate flooring and are machined to size for easy installation.	Similar to laminate floors.	Similar to laminate flooring.
LINOLEUM		
Linoleum floorboards are made from wood flour, linseed oil and rosins and are also considered as an environmentally friendly option. The look and finish are identical to standard laminate flooring.	Similar to laminate floors.	Similar to laminate flooring.
TILES		
Tiles have become one of the most popular choices for flooring in homes, offices and shopping malls. More than all other flooring options, the consumer is spoilt for choice and variety. The cost will vary greatly on the type of tile selected for your floors. For example, tiles cut from natural stone such as marble and granite will be much more expensive of clay-fired ceramic tiles. Palatial marble and granite are not necessarily the most sought-after tiles for one’s home, as there are numerous other natural stone varieties available. Many ceramic tiles are made to look like natural stone. Terracotta and travertine tiles are both suitable for indoor areas like the living room, dining room and outdoor areas such as the patio. The installation of tiles can be physically demanding, and the right tools will be required but can be undertaken by any competent DIYer. The greatest challenge revolved around the cutting of floor tiles where an electrical tile cutter using the drip-water system may be required to cut certain tiles. Although an angle grinder fitted with a tile-cutting disc can work, getting a perfectly clean and strain cut can be a challenge.	Moderate with the right tools but may be labour intensive.	Most ceramic tiles are easy to clean and maintain. A variety of tile cleaners are available on the market but check that the right application is used for a specific type of tile.



Tiles are still one of the most popular flooring materials



These bathroom tiles are used both on the floor and the bath and shower surrounds

TYPE	EASE OF INSTALLATION	MAINTENANCE
CARPETS		
Carpets have fallen out of favour by many homeowners opting for laminate floors or tiles. Carpets are often viewed as being difficult to clean and prone to stains from spilt drinks or food. Depending on the type of material or fibres used, they can also trap a substantial amount of dust and animal hair which can be problematic for those prone to allergies. However, the positive attributes of carpets are their thermal and comfort qualities. In colder temperate regions many homeowners prefer carpets in the bedrooms, but modern laminate flooring also achieves a level of comfort in this regard.	Moderate, but some specialised equipment may be needed.	Carpets should be regularly vacuumed to remove dust and dirt particles. They can also be washed and shampooed periodically to keep them clean and hygienic.
CONCRETE		
Raw concrete finishes are becoming increasingly popular in some homes, especially in outdoor living areas, garages, dining rooms and kitchens. With the advancements of colourants, aggregates and powerful polishing machinery, concrete floors can be finished off in a range of unique design profiles. However, to get a professional finish you might need to call in a professional company for this job as it is more technical than many other flooring options. Industrial concrete polishers are used to create a smooth, glossy surface that usually undergoes three stages – grinding, polishing and honing. Special diamond grinding discs and polishers are used during the subsequent stages. As the hiring of an industrial polisher can be expensive and the technical nature of the smoothing process somewhat specialised, concrete flooring techniques are best left to the professionals with a sound portfolio of previous work. Professionally done, a concrete floor can look exquisite, but a haphazard job may leave you woefully disappointed in the end job.	Technically difficult and best left to professionals.	Once installed and polished, concrete is durable and very low maintenance.
VINYL		
Vinyl flooring is probably one of the quickest and easiest of flooring options. They can be purchased in square blocks or as a rolled sheet. Although they fell out of style over the past few decades, the range of modern and classic designs available today has made them popular again as a quick and cost-effective solution to bathroom and kitchen flooring. Vinyl flooring is usually durable and scratch resistant and many designs are made to look like tiles or laminate flooring.	Easy, can be undertaken by the average DIYer.	Very easy to clean and maintain.



Vinyl flooring used in a kitchen which gives the appearance of tiles

Underfloor heating

An important consideration when deciding on what type of flooring you want is that of underfloor heating. Underfloor heating is especially common when tiles are installed but can also be used under laminate floors and carpets. Consult an expert on what type of underfloor heating is best suited for your type of application. The electrical installation may need to be connected by a qualified electrician.

FURTHER READING AND SOURCES

South African Wood and Laminate Flooring Association: www.sawlf.co.za



Scan this QR-code and see how to install a mosaic splashback.

Splashback to the future

Installing a splashback in your kitchen is a cost-effective and stylish upgrade

Installing a splashback in your kitchen is a cost-effective way to transform the look and feel of your kitchen space. It's usually a small area that needs tiling, making this a great DIY project. Popular tile choices for kitchen splashbacks include glass, stone, and of course, mosaic tiles. These are a beautiful way to enhance the look of any room, because they can be installed over both large and small areas, or as feature panels between other tiles.

Step-by-step guide

Step 1: Installation of this glass mosaic splashback in your kitchen starts with preparing the surface. Depending on the type of surface you're going to be tiling on, consider whether you need a priming system or not. If the wall surface was previously painted, use a chipping hammer to remove roughly 80% of the paint, then apply slurry primer coat to ensure a solid background for the tile adhesive to bond onto.

Step 2: Once the surface is prepared,

start measuring and planning the layout, this is vital to ensure the splashback is installed successfully, so take your time with this step. Tiling usually starts from the middle of the installation area, however this may have to be adjusted to minimise cutting of mosaic sheets. You may need to cut the individual mosaic tesserae to fit around fixtures like taps, windows or electrical points.

Step 3: When tiling in a wet area, such as the bathroom or kitchen, modify the tile adhesive and grout with a latex additive. This will ensure increased water resistance, bond strength and flexibility, for a more durable splashback installation.

Mix the tile adhesive until a creamy lump-free consistency develops. Let the mixture stand for 3 to 5 minutes before stirring again.

Next apply the adhesive over a small area using the notched side of a wall trowel to create a solid bed of 4mm to 6mm. Once the adhesive is applied, you must install the mosaic sheets immediately, pressing them firmly into the wet adhesive. Never apply more adhesive than you can tile in 10-15 minutes, which is usually about a square meter.

Mosaic tiles are installed in a single operation, where the adhesive also forms the grout. This is achieved by using a wooden beating block or grout float to embed the mosaic into the adhesive, allowing the adhesive to squeeze through the joints between the mosaics.

This ensures a good bond between the adhesive and the mosaics and forms the grout.

If the area you are tiling is longer and/or wider than 2m, you need to install tile panel movement joints. As glass mosaics are rigid and therefore brittle, the movement joints should be installed at maximum 2m centres in both directions and wherever the glass meets another finish i.e. other tiles, metal trims etc.





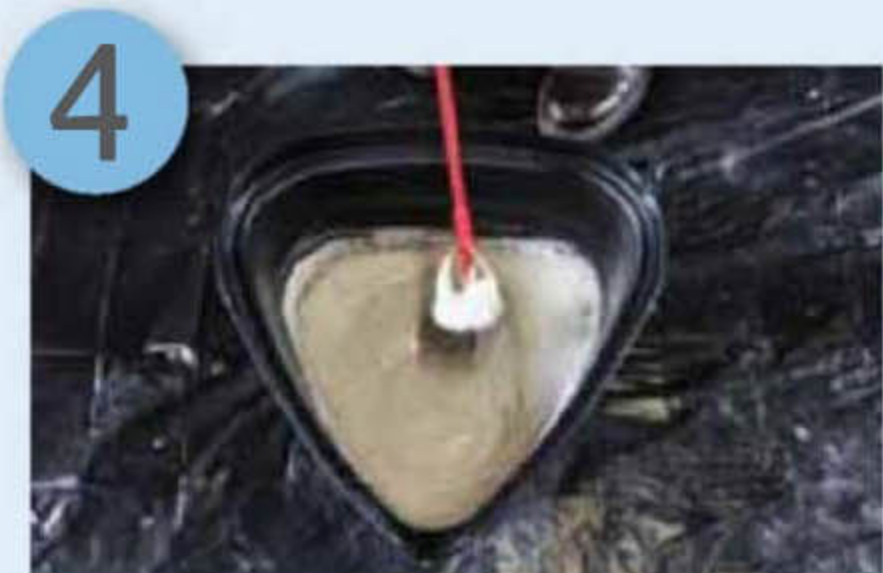
Preparation and priming



Planning your layout



Cutting individual tesserae



Mix tile adhesive to a creamy, lump-free consistency



Apply adhesive with a wall trowel



Use a grout float to embed mosaics into adhesive



Allow adhesive to squeeze through to form the grout



Where necessary, fill in any low areas in the grout joints with extra adhesive



Remove excess adhesive with a damp grout sponge



Once fully set, gently polish the face of the mosaics with a dry cloth



Seal the installation with a silicone sealant in the perimeter joint between the mosaics and countertop, and in any corners

Tip!: Place a tile spacer between the countertop and mosaic, as well as between the mosaic sheets, to keep them evenly spaced.

Wait for about 20 minutes for the adhesive to start setting, then where necessary, fill in any low areas in the grout joints with extra adhesive. This helps to prevent the mosaic sheets from moving while you're filling in the grout joints. Work carefully to avoid scratching the tile surface, especially when installing metallic mosaics.

For more information, call 0860-000-825 or visit www.tal.co.za

Step 4: Once you've filled the grout joints sufficiently, gently wipe over the face of the mosaic splashback with a lightly dampened grout sponge, cleaning away any excess adhesive before it hardens. This is especially important when you've used an additive in the adhesive mix. Leave the installation to dry for 12 hours, making sure not to expose the new mosaics to water or cleaning agents during this time.

Once fully set, gently polish the face of the mosaics with a dry cloth to remove any grout haze from the tiles. Finish the project by applying a silicone sealant into the perimeter joint between the mosaics and countertop, and in any corners.

By choosing a kitchen splashback, not only have you managed to successfully upgrade your kitchen into a beautifully modern space, you've also ensured that your wall is protected against moisture and food stains.

Custom build a safety gate specifically to your security need.

WELD YOUR OWN SLIDING SAFETY GATE

>> Kim Roberts

Stepping up security at home can be costly, but if you have welding experience, you can save on expenses; and also have the freedom to tailor make a security gate for your home. We focus on a sliding security gate, but you can choose to make a hinged gate rather; fitting and crafting a sliding bolt; rather than a sliding rail and slam lock.

Shop around for the best quality materials for the best prices, and do not skimp on your rust protection. Galvanising is an alternative for rust protection; the galvaniser will expect a clean gate, with no other products painted on the steel.

Decide beforehand if your security gate must fit into the doorway/opening/alcove, or if it must rest on the outside of the area chosen. Your measurements will be made accordingly.

Project guide

Difficulty: Moderate

Estimated cost: ± R2500 for sliding gate 2200mm height and 1560mm width (Steel prices vary - dependent on supplier chosen, and different brand name material prices also vary).

Estimated time: 2/3 days

Materials

- Steel – square tubing 25x25 (2mm)
- Rawl bolts – M10
- Lugs – M10
- Slam lock 15X15 (2mm)
- Wheels
- Track
- Red oxide paint
- Quick dry black paint
- Thinners

Tools

- Welding machine
- Boiler making chalk
- Tape measure
- Combination square
- Set square
- Chipping hammer
- Drill
- Grinder
- Metal cutting discs
- Grinding discs – metal
- Flapper/sanding discs
- Welding rods – (Vitamax) 2.5mm (5kg)
- Spray gun
- Welding angle magnet
- Compressor
- Drill bits
- Concave drill bit
- Spirit level
- Paint brush
- Rags/cloth

Safety gear

- Welding helmet
- Goggles
- Gloves
- Ear plugs
- Overalls – to protect clothing
- Closed shoes

Step-by-step guide

Step 1: Take measurements in your chosen area; height – wall to wall, and length – wall to wall (Note: Decide on the width of the sliding gap, and try to prevent any tight angles of entry that the security gate might create. Avoid a gap which is too small that would then create a furniture moving nightmare). Also remember the clearance within the frame for movement of the gate.

Step 2: Mark measurements on all steel, using chalk and a combination square. Bear in mind the thickness of your cutting disc you will use, and compensate accordingly to keep your required measurements for the finished product.

Step 3: Cut lengths, then cut 45° using a combination square. On rotation around the square tubing, mark one side 45° - next flat, next 45°, next flat. Note that the 45° angles must be in same direction. Both end angles must also match.

Step 4: On a level surface, place all 45° lengths into the final frame shape. Make sure that all the faces of your 45° are smooth. Use a set square and tack weld corners – the exterior of each corner. Weld 'diagonally across' points, one after the other. Stop and measure diagonally with a tape measure to confirm that the size still matches your measurements. Shift the frame until the size is perfect. Tack weld the interior of the corners then re-measure to confirm it is still the correct size.

Step 5: Measure from the inside point to the inside point of the completed frame. Mark the size of the gate opening on the frame. (Remember to make the height of your sliding gate smaller by the height/size of your wheels). Tack in and measure to confirm that all is square. Insert a brace in the centre to split the frame. Flip tack weld all corners and the centre piece. Weld all corners lightly on the diagonal ends.

Step 6: Decide and measure gap for the bars and cut the bars and tack weld into place. Weld at the top and the bottom.

Step 7: Weld the track onto the frame.

Step 8: Cut the size of door 45° ends, the same as you did for the frame. (Make the width of the door a bit wider to prevent push through movement by thieves). Cut a centre piece and repeat the measuring and tack welding procedure.

Step 9: Cut a slot for the slam lock mechanism. (Note: Smooth finishes help for that flush fit). Be careful to make sure that the slam and lock side are at the identical level. Weld the slam lock into position.

Step 10: Measure and make a 'hand hole' to enable locking and unlocking manoeuvring space.

Step 11: Drill holes to attach the sliding wheels, then attach the wheels.

Step 12: Put the gate onto the track and set it – prefit using a jacking belt on the wheels for the slam lock. Attach the other side of the lock to the frame.

Step 13: Weld/make stoppers on the bottom (I-shape) to prevent the door from being pushed too far.

Step 14: Put lug mountings where needed – this will be dependent on your design.

Step 15: Dress all welding. Grind first, then flapper disc, then clean up and smooth everything off. Chip off all welding flux with a chipping hammer. Aim for a smooth finish.

Step 16: Wipe all surfaces clean with thinners and allow to dry.

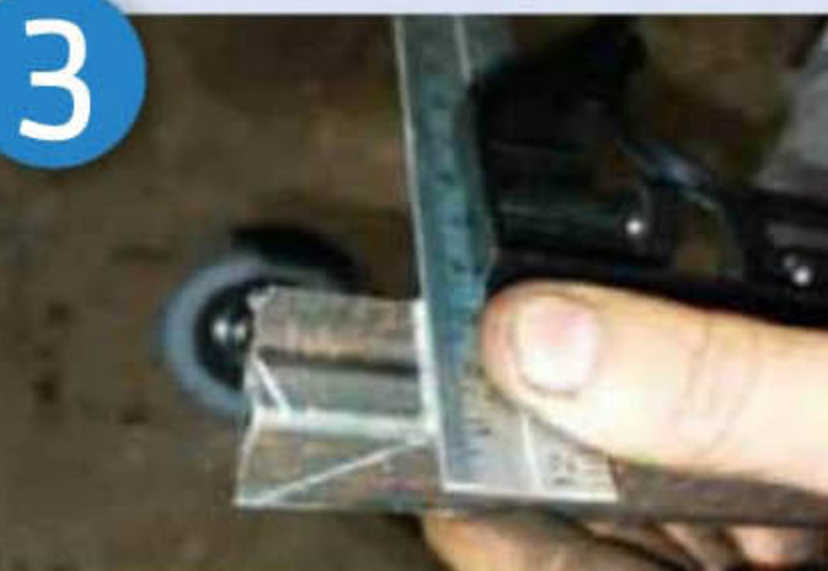
Step 17: Take for galvanising or paint with red oxide, and then coat with quick drying black paint.



Mark with chalk



Cut to size



Straight, angled corners



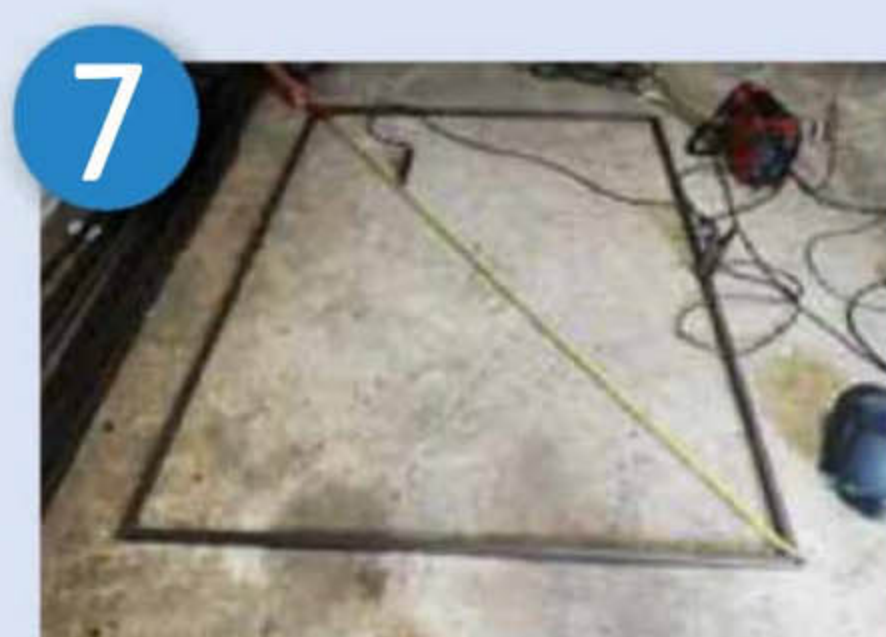
Cut to length, angled ends



Fit corners flush



Use a welder's magnet to keep points together



Measure corner to corner



Blob on corner



Put frame together



Weld bars in



Fit slam lock mechanism



Lock mechanism at same height



Finished gate in position



The finished gate in position



All bars in



Coat with red oxide



Paint with quick drying black paint



- To accommodate for building error when measuring up for the security gate, measure at the top, in the centre and at the bottom of your opening.
- Be sure to aim for a width that will accommodate easy furniture movement into and out of the home.
- Chalk markings must be made around the whole tube – every face must be marked.

- Check/measure all the time, at the completion of each step to avoid mistakes.
- Weld on diagonal opposites at all times to prevent the frame from pulling out of shape.
- Do not weld on a spot for too long, this will prevent holes and pulling the steel out of shape.
- Only use slam locks for sliding gates.

How to fix a cracked Marbelite pool

With the way time passes by so quickly these days, and with spring only a few months away, the last thing any outdoors-loving family needs is a cracked Marbelite swimming pool.

Do not be concerned about any slight discolouration of the water after applying the putty

Adhesive manufacturer Pratley has the ideal solution for repairing cracks without emptying your pool water, thus saving time, money and precious water. Apart from a mask, snorkel and a clear zip-seal bag, all you need is enough Pratley Putty (Standard Setting) for the size of the crack or chip. Usually one pack is enough for most repairs. Remember to get the 'Standard Setting' version of Pratley Putty, as this product cures whilst underwater. Firstly, ensure that the crack itself and the surrounding area are free from any dirt, algae, and loose Marbelite. A handheld plastic bristled scrubbing brush will come in handy.

Mix the putty according to the instruction leaflet in the pack. The product is perfectly mixed once it has achieved a uniform cream colour. Place the mixed putty in the zip-seal bag and ensure that it is closed tightly.

Enter the water with your mask and snorkel securely in place. Open the bag whilst underwater and take out a piece of the Pratley Putty and knead it onto the surface of the crack. The correct technique is to apply some pressure, as the resins contained within the putty must bond with the Marbelite substrate.

This technique allows optimal adhesion to the surface and ensures a long-lasting bond. Build it up with extra layers as necessary. Once all the putty has been applied into and over the crack, the surface and edges can be smoothed down easily with an index finger or thumb.

Do not be concerned about any slight discolouration of the water after applying the putty, as this will dissipate a few

minutes after application. Avoid swimming in the pool for 24 hours while the putty is curing.

For more information, call 011-955-2190 or visit www.pratley.com



Ensure that the crack itself and the surrounding area are free from any dirt, algae and loose Marbelite

Bring out your inner artist and discover this versatile functional art, while creating something useful to keep or give away.

HAND PAINT YOUR OWN CANVAS MAT

Project guide

Time: A weekend

Cost: Approximately R200-R400

Difficulty: Intermediate

Skills: Patience! You need to wait for layers to dry completely.

Materials

- Black bin bags
- Apron/old shirt
- Rag, tissues, or paper towel for drips
- Tracing paper: A4 for printing
- Pencil
- Eraser
- Transfer spray
- Masking tape
- Primed canvas roll at least 12oz by weight or heavier cotton duck (sailcloth), available per metre from an art supplier.

Use 50 x 50cm canvas in white or black. I suggest you start off

using 50 x 50cm and then size up for future projects... it's addictive!

- Water-based PVA paint in background colour – use indoor wall paint as it is cheaper than art acrylic
- Iris Fine Acrylic artist paints in Green Light and Sap Green – great coverage and intense colour, dilutes beautifully with water
- Paint brush size 10 – use squirrel hair, it won't deposit hair on the canvas and it loads and flows smoothly
- Small foam roller – to get a thin uniform surface
- Small glass/plastic jars with lids for mixing paint
- Bottle containing water to clean brush
- Water-based acrylic PVA sealer – dries transparent and flexible, available in matt or gloss (don't use wood sealer as it yellows with application, and cracks surface).

The latest trend for concrete floors is to paint a mat, lay it on the concrete and seal with resin, so that you have a permanent art carpet. This is how you make it.

Step-by-step guide

Step 1: Lay your canvas on a flat surface that is large enough to fully support the whole canvas. A table is perfect, as you can move, stand or sit around the table to paint. If you're a bit messy, you may want to place bin bags onto the table and floor to catch any paint splatters and wear an apron to protect your clothing.

Step 2: It's easier to transfer a pattern onto a white surface, and then paint the coloured background in later. If you want a background other than the colour of the canvas, use the PVA wall paint and foam roller to apply a thin, even layer onto the canvas. Wait to dry for around two hours, making sure there is adequate ventilation. Rinse out your roller immediately so that you can reuse it for the sealant.

Step 3: Decide on a pattern to draw or trace onto mat, or just freehand. If you would like a border around the pattern, rather paint it in at the end, over the pattern, as it looks more professional. If you would like to copy the pattern in the photo; save it and resize it for the tracing paper, then print using tracing paper. I have used 6 x A4 pages held together with masking tape, which gives a pattern that is approximately 50 x 50cm. Spray transfer spray according to instructions, onto the back of tracing paper and wait five minutes for it to dry in well ventilated space (don't place wet tracing paper onto canvas, it will cause a huge carbon mess that will need to be repainted, and create a non-uniform surface).

Step 4: Trace the pattern onto the canvas with pencil, making sure that the canvas is kept clean. Use an eraser if necessary, to get rid of smudges and unnecessary lines before you paint.

Step 5: Mix the paint with a little water to the right consistency; it must flow easily, not stick. Test it by applying a little to the canvas. The canvas is very absorbent. Apply the Green Light paint to all the leaves and wait to dry. Then apply the Sap Green for contrast or

shading. Adjust colours until satisfied and wait to dry.

Different effects can be created depending on the thickness and wetness of the paints used. Experimentation is required as its basically a chemical reaction, and all materials have different properties and react differently. I have used the contrasting Sap Green on the Green Light paint whilst it's still wet to create a blending, mottled look. If you are satisfied with this look, it's time to seal it. To make it look like mosaic, I used a stencil for the background, painted with the Sap Green, and then painted it over with the white PVC wall paint.

Step 6: Apply the sealant with the foam roller and let it dry for at least six hours. Wash the roller immediately with water in between coats. Apply two more coats of sealant (let it dry completely in between coats). Once dry, your mat is ready! It is water and fade resistant, and while not for use outside in rain, it can be places on a covered outdoor patio.

Step 7: Lay your mat on a flat surface, and it will stay there. Double sided adhesive strips can also be used if required. When not in use, roll up. Keep clean with a damp cloth and no detergents; it will last for years.



The equipment needed for a painted canvas mat



The leaf pattern



Painting in Green Light



Applying the white background with a roller



Applying background to give more depth



Repainting in Green Light



Adding Sap Green to leaves to give a mottled effect



Gloss sealant applied



Stencil background, painted green then white

ABOUT DEBORAH:

Deborah Meltzer runs monthly DIY classes in St Helena Bay, and sells her custom-made hand painted floor cloths, carpets, tablecloths and ottomans globally. For more information, call 082-318-8332 or visit Art to Step On at www.arttostepon.com

Repairing lightning damage

When you think of lightning damage, we're sure a leaking water pipe generally doesn't come to mind.

Materials

- White chalk
- Copper pipe
- Two straight couplings
- Flux
- Lead free solder

It was the end of the year and one of the things that most of us look forward to is the annual summer thundershowers. With them, the winter grey turns into lavish greens and it announces that families will soon be getting together to celebrate the festive season.

My wife and I took the necessary precautions and installed two lightning conductors when we built our house. Both conductors were struck on various occasions but something we quickly realised was to never underestimate the power of lightning. Although it can be spectacular, it is dangerous.

Wilma and I were in the house when suddenly one lightning conductor was struck by a devastating bolt. The electricity discharge spread into the steel frames in our house's foundations, floors and even the bricks. The main

Tools

- Tork Craft's digital metal detector
- Hammer and concrete chisel
- Pipe cutter
- Wire brush
- Air compressor
- Hacksaw blade
- Angler grinder and masonry blade
- Pipe wrench
- Butane mini soldering torch
- Lead free solder
- Cloth

Tricks when it comes to soldering

- The existing pipe and fittings must be absolutely dry.
- You have to use a lot of flux.

electricity supply wires melted off at the distribution board, while the main switch, isolator and switch-over switch exploded.

When we rewired the DB board, inspected the lightning conductors and thought everything was back to normal, we quickly discovered a water spring in

>> Hannes Lindeque

the middle of our house. What happened was that the discharge had burned a hole through our hot water supply pipe! The challenge was to find the origin of this new 'fountain', and then to fix it.

Step 1: Luckily Tork Craft (distributed by Vermont Sales) has a new digital metal detector (which is a must have for all DIY'ers). Using the digital metal detector I could pinpoint the course of the copper pipe and it showed that the pipe was 5cm below the surface.

Step 2: After opening the water supply for a quick moment we narrowed it down to where the leak might be and carefully opened up the area around the pipe.

Step 3: As Murphy would have it, the leak was on the opposite side of the pipe which had to be cut off. Due to the limited space I had to use a hack saw blade. (Make sure the water supply is turned off).

Step 4: We used a pipe cutter to cut a new piece of pipe matching the same length of that which was removed. We also needed two straight copper couplings which were able to slide over the new pipe.

Step 5: I used compressed air and a cloth to dry the existing water pipe.

Step 6:

- Apply soldering flux to the inside of the couplings and rotate it to transfer some flux to the pipe ends.
- Slide the couplings inwards so that the new piece of pipe can fit in between the two existing ends.
- Once the new pipe is in place, slide the couplers over the existing pipe ends.

Step 7: A butane mini soldering torch was used to heat the areas I was about to solder. The pliers were used to carefully rotate the pipe so that the heat could be evenly distributed. Note: Do not overheat the copper pipe as it will become soft and useless.

You are ready to apply the lead-free solder when you touch the pipe with it and it starts running down the pipe. Do not apply direct heat on the solder, but keep on rotating the pipe so that the solder flows in between the couplings and the pipe.

Step 8: The pipe cooled down and we opened up the water supply to see if there were any leaks. I used soft tissue paper to wipe the connections just to make completely sure; any water drops would have been clearly noticeable on the paper. I left the area open for another two days just to be absolutely convinced that the leak was fixed.

Finally, a word of advice: If you have lightning conductors, make sure that they are inspected annually and are well earthed.

Tork Craft's Digital Metal Detector

This Digital Metal Detector is ideal for all DIYers, tradesmen, industry and homeowners, practically anyone who drills into walls. It does away with costly errors and possible injury and should be an essential part of your toolbox.

Drilling into existing walls cannot only be costly as you can drill into electrical cables or waterpipes (then have the hassle of having to call in electricians and plumbers with their associated costs), but then you also have to deal with the mess and the problem of being without power or water.

The Tork Craft Digital Metal will scan up to a depth of 80mm (according the experts, much deeper than most metal detectors) and it will detect materials such as ferrous and non-ferrous metals, copper, cables, and wood.

The operation is simple and quick; hold the unit to the wall and over the position you want to drill. If there is a problem the detector will pick it up immediately and will indicate the specific location of the detected material, giving off a sound and light alarm. By moving the unit up or down, left or right it will give you the all clear to drill safely.

For more information, call 011-314-7711 or visit www.vermontsales.co.za/
www.torkcraft.co.za



What is lightning?

It is an electrical discharge caused by imbalances between storm clouds and the ground, or within the clouds themselves. Thankfully most lightning occurs within the clouds. Although we have all seen cloud-to-ground lightning bolts only few know that there are positive and negatively charged lightning bolts. Each bolt can contain up to one billion volts of electricity. The positive lightning bolts originate in the positively charged tops of storm clouds and are far stronger and more destructive.

Source: www.nationalgeographic.com



The metal detector indicated the depth of the water pipe at 5cm



Once detected we opened up the area around the pipe



Due to the limited space we had to use a hack saw blade to cut the pipe



The tip of the screwdriver indicates the damage caused



The materials and area must be clean and dry



Apply soldering flux to the inside of the couplings and rotate it to transfer some flux to the pipe ends. Wipe the connections with soft tissue paper to check for water

Your pet lives with you in the house, so have you ever wondered if their environment is safe?



IS YOUR HOME PET-PROOF?

Ensure a happy environment for both you and your pet by pet-proofing your house

Even if there haven't been any major accidents involving your pet at home, pet-proofing your house will ensure that it will keep it that way in the future. For pets, your house is a big maze they want to keep exploring, and during one of their quests, they may encounter chemicals that are dangerous

for them. They may encounter what they think is a fun toy, but it is actually electrical cable or something equally dangerous. As for yourself, as the homeowner, there are also areas you don't want your pet set loose in – such as a baby room or pantry.

PET-PROOFING YOUR LIVING ROOM

CLEAN FLOOR	We often overlook the floor because it's far from our eye-level, but this isn't the case for pets. They'll likely see small things scattered under the table that we don't, and without us knowing anything they may eat them. This can be dangerous since the things they find under the table can range from bugs to dropped (and forgotten) drawing pins to dirty food crumbs. So, if you have pets, make sure to clean your floor every day.
LOCK CABINETS	Small things like pins, balls, matches, buttons, and such can choke your little buddy if swallowed. It will be painful both for you and for him, so the best preventive action is to keep them locked away in a cabinet. Don't forget to lock it, since some pets are clever enough to open unlocked cabinet.
PUT ON FURNITURE COVERS	This is more for your benefit than your pets. Cats especially like to scratch, both on vertical or horizontal surfaces. If you don't want to find the surface of your couch shredded by their sharp nails, invest in a furniture cover. If you have dogs which shed, it's much easier and cheaper to wash a furniture cover than your entire couch.
COVER ELECTRICAL CORDS AND PHONE CHARGERS	Curious pets may put their little paw on the electrical socket or even bite and chew electrical cords. To prevent electrocution, cover the electrical socket and put electrical cords away when not in use.
PUT A FENCE AROUND THE FIREPLACE	If you have a fireplace in your house, it's necessary to have a fence/fire grill so your pet won't charge ahead if they are interested in the fire. Older pets are usually wise enough not to approach fire, but the younger ones usually don't know better. On the topic of fire, candles – especially when lit – can appear fun to play with to a dog. Don't overlook the fact that your dog's tail could easily brush past the flame of a candle and set your dog... and your entire home on fire.
PUT AWAY CORDS FOR DRAPERY AND BLINDS	Cords are always an interesting toy for pet, including drapery or blind cords. Apart from having your curtains or blinds ripped to the floor, these cords may constrict and choke your pets. Keep the extra length of cords out of reach.

PET-PROOFING YOUR KITCHEN

PUT AWAY HUMAN FOOD	Human food is tasty, even for pets, although some human foods are not suitable for pets. Some – like chocolate – can even be outright dangerous. Meanwhile, you don't want to eat food that has been sniffed or licked by your pets, do you? Who knows where those little snouts just came from... So, keep your food in the refrigerator or in a closed cabinet.
INVEST IN A DUSTBIN WITH STEP-ON LID	Some pets like to go through dustbins and would happily jump inside and rummage the contents for hours. Some others prefer to knock the bin over, let the content spill on the floor, and play with it. Not only is it dirty, the items your pet finds and eats from the trash can be harmful to them as well. To avoid this mess, get a dustbin that your dog can't open, such as one with a step-on lid.
HIDE THE CAT LITTER	If you own both cats and dogs, you have to hide the cat litter away from your dog's eyes. Somehow, some dogs find cat's poop tasty and will try to eat it. This is dangerous because cat's faeces contain bacteria which could make them sick.
KEEP IT CLOSED	Washing machines and tumble driers should also be securely closed as pets love to climb into the warm cosy spaces.

PET-PROOFING YOUR BATHROOM

PUT AWAY CLEANING SUPPLIES AND MEDICATION	Don't think there are dangerous chemical in your house? Are you sure? Check again in the bathroom. Most cleaning supplies are harmful for your pet – because they tend to lick everything. So, when you're cleaning the bathroom, keep your pet away from that area. After cleaning, put away the supplies immediately in a place which is out of reach from your pet. The same applies to medication. Don't let pills lay around on a bathroom counter even if you've already put them in their plastic box. A very determined dog can still chew through that.
CLOSE THE TOILET LID OR DON'T USE DISINFECTANT	Some pets like to drink from the toilet bowl, which is not a problem in itself because generally toilet water is clean as long as you flush it regularly after use. The problem is more about pets slipping into the bowl. While this isn't a problem for bigger pets, smaller pets may slip from the edge of the toilet into the bowl. A simple solution is to close the toilet door. Another problem may arise if you use disinfectant in your toilet bowl – if your pet drinks it from the toilet bowl, they could get sick.
AVOID FULL SINKS OR BATHTUBS	This is the same case with the toilet bowl; if you keep the sink or bathtub full, your pet may slip from the edge of either the sink or bathtub and risk drowning. The solution is not to keep water in them, or you can simply close the bathroom door.

PET-PROOFING YOUR GARDEN

PUT FENCES	Fences and walls are a must, especially if you live near a busy road. Fences keep not only your pets from running away from home, but also keep people who may have dubious intent toward your dogs or your belongings, out. The fences should be high enough so your pet can't jump over it (of course, fences are pretty useless against cats since they can climb).
KEEP DANGEROUS PLANTS AWAY	Some plants can be dangerous for pets, especially dogs. Potato, morning glory, foxglove, daffodils, lily of the valley, and oak buds and acorns are dangerous, so either don't plant them in your garden or put them away behind a fence. In the end, pet-proofing your house is beneficial both for yourself and your pet. After all, your pets spend most (if not all) of their time at home. With pet-proofed house, you don't even have to worry when you want to leave your pet alone.

PET-PROOFING YOUR BEDROOM

USE YOUR CUPBOARDS	A well-loved pet is attracted to things that smell like you – and nowhere smells more like you than your bedroom! Make sure that any shoes or clothes are kept in cupboards and that your pet can only get into your bedroom when you want them to by keeping the door shut and windows closed as cats, in particular, can make a beeline for them.
ITEMS ON WINDOWSILLS	Avoid leaving anything in the way of windows so your dog/cat can look out and see what's going on. Be sure to move them before they move them <i>for</i> you!
HAIR DRYERS AND CURLING IRONS	If you leave them resting on a counter or dressing table, a dog's paws or tail could get tangled in the cords resulting in a burn or strangulation.

Last issue we looked at the basics of spray painting, and now we look at how to attempt your first spray.

SPRAY PAINTING

for the amateur

Part 2

Do not make the mistake of spray painting in the sun or painting objects warmed by the sun

After the trial runs mentioned in the previous issue, the gun can now be adjusted for a real practice run. Mix about 250ml of lacquer with the appropriate amount of catalyst (4% or 10ml in this case). Check the viscosity with a viscosity cup and thin until it takes 15 to 16 seconds to run empty. This may be achieved by closing the opening with a finger and filling the cup to the brim. *Open and time the number of seconds for it to empty.* One may experiment with higher viscosities

during actual painting, but remember that the higher the viscosity, the thicker the layer of paint. This can lead to a "toffee apple" appearance.

Before filling with the gun, it must of course, be perfectly clean. The air hose is not connected yet. To check the flow, pour the prepared paint in the cup (always use a strainer). Observe the flow from the nozzle by opening the needle at least 1½ turns from closed position and pulling the trigger. The stream must

>> Willie Marneweck

be perfect, not twist nor come out skew. Open the needle adjuster a bit more. At the point where opening any more does not increase the flow, it is set at maximum flow. If satisfied, close the cap.

Connect the hose. What was learned about the adjustments with the "thinners" practice, must now be repeated with real paint. That is, the air flow and fan adjustments must be 'fine-tuned'.

Test run on a piece of wooden board

To do the 'real' job test run, set a board (approximately 500mm x 500mm) horizontally on a convenient stand. Hold the gun almost vertically downwards. Start spraying by pulling the trigger with

the gun 'outside' of the board but near the front edge, either to the left or right side of the board. Bring the spray to the front edge, the nozzle pointing almost straight down and some 150-200mm

above the board. Try to spray with the fan spraying about half its width over the front edge, i.e. half the paint missing the board, and move to the other side. A wet strip of some 50mm or so should



Hold the gun almost vertically downwards

be seen down the near edge. Without releasing the trigger, repeat, going in the opposite direction and the fan now more or less just inside the board. This half overlap should now be a wet stripe of some 100mm wide. Complete the board moving to-and-fro, with half overlaps until the back edge is done.

Some painters like to repeat crosswise, but this is not necessary, provided the first coat was done properly. How do we know if the paint was applied to thick or thin? Plascon (Kansai) recommends for their Plascolac (reaction lacquer) that a layer of paint should be from 100 to 120gr per m².

Observe the following when painting:

- Do not paint in full sun.
- Do not paint objects that are heated by the sun.
- Do not paint when it is very warm (> 35°C) or very cold (< 5°C), or very humid (e.g. raining) or strong breezes.
- The gun must not move too fast or too slow.
- The aim is a nice wet appearance.
- The gun must not 'sway' from side to side during spraying.
- The almost vertical position of the gun nozzle must be maintained.
- Ensure good lighting over the surface.
- Slow down or speed up the movement of the gun as required.
- Overlap stripes according to appearance (say, half lap).
- Move the gun at a constant speed, maintaining the same distance between the gun and the object.
- Do not place painted items in the sun to speed up drying.

TOP TIP!



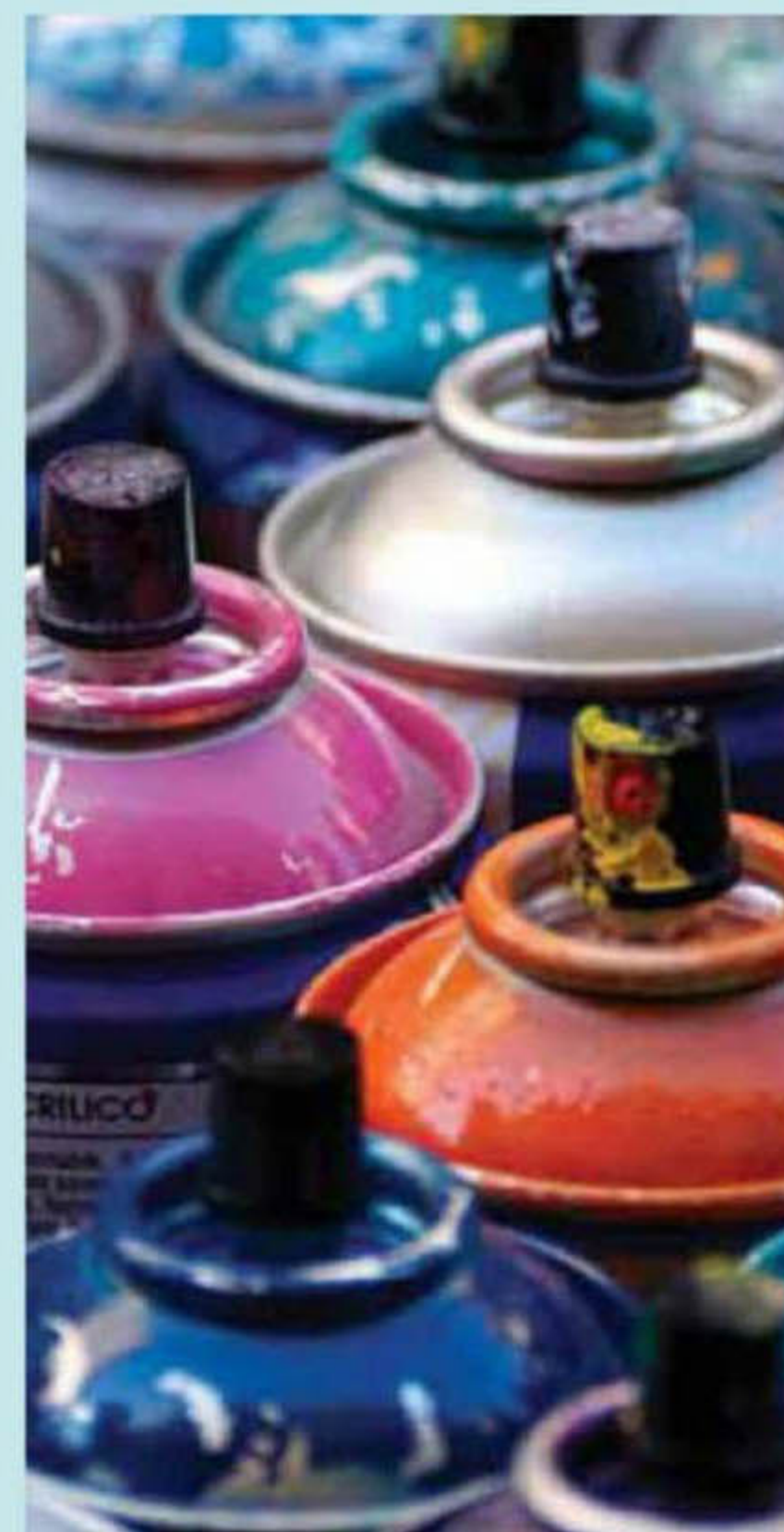
To do a check, which, by the way, is seldom done by painters; take a piece of 3mm MDF 500 x 500mm. Weigh on an accurate kitchen scale and apply a layer of paint in the normal way. Let fully dry and re-weigh. Do the calculation: The weight increase is divided by 0.25m² (in this example). The result is the thickness of the layer in gram/m².

Painting vertical flat surfaces

The spray gun movements are much the same as on horizontal surfaces, but the likelihood of paint runs, is now a reality. Good lighting is very beneficial. Usually one would start at the top spraying to-and-fro, working your way downwards. It takes an amount of practice to get the knack, but it is easily mastered with little practice.

Painting inside semi-closed items

Overspray is the issue here. To minimize this, adjust the fluid flow drastically along with the airflow. It will result in a very mild spray with the minimum of overspray. Small 'boxes' such as wine bottle rack openings just cannot be reached inside and must be painted before assembly.



TOP TIP!



Paint items such as drawers and cabinet insides with the bottoms/backs removed, and paint these separately.

Final coat

Two coats are sufficient for almost any paint job, however, surfaces that will be subjected to heavy wear and tear e.g. table and bar tops, may require a third coat. Sanding sealer is not required as a prime coating. Both layers can be done with the finishing coat.

When the first coat is thoroughly hardened, it must be 'flattened' with sanding paper before going on to the second coat. On flat surfaces of at least a good measure bigger than your random orbital sander, this machine can be used to do the flattening. Use paper with a fine grit of 220 or 320. This speeds up the job considerably when large, flat surfaces are painted. Hand sanding can also be done with 220 to 320 grit paper. Use a sanding block on flat surfaces. The purpose is to remove all paint runs, blemishes etc. and to break the shine of the first coat.

This is also a good chance to do following repairs:

- Sometime glue spots only present themselves after the first coat. Remove and repaint these spots.
- Hairline cracks should be repaired.
- Paint runs and other paint defects must be removed.
- If the article has been stained before painting, spray light spots and sanded-through spots with the original penetrating stain (perhaps thinned down a bit).
- Overlooked spots or areas where the first coat was inadequate. Respray and flatten thoroughly, blowing and wiping away the dust. The final coat can be applied using the same technique as the first. When proficiency has been achieved with test pieces of board, the real project can be done. It is no secret amongst spray painters that on difficult objects, the first coat almost serves as a trial run, whereupon the approach can be corrected on the final coat.

Preparing an article for painting

People often ask how fine a wooden object must be sanded in preparation for spray painting. Here are some rules of thumb:

- The coarser the grain of the wood, the coarser the grit of sand paper one can use. Oak may be finished with 150 grit, while maple may require 180 grit. MDF may even ask for 220 grit on the flat faces.
- Lacquer spray is very forgiving. It is sometimes surprising with what one may 'get away with'.
- Normal orbital sanders leave little rings on the wood. Random orbitals are better but not entirely trustworthy.
- Wherever there is the slightest opening, such as a slight crack, or two components not closing

completely, the paint will, due to capillary action, not close the gap.

- Similarly, all other defects in the wood must be attended to.
- Any signs of glue will show up as white spots after the first coat. This is most prevalent with projects involving cherry wood or MDF. Should this come to light during the first coat, such spots can be scraped away with a sharp chisel before the paint hardens too much. These spots can then promptly be touched up.
- Edges of MDF absorb a lot of paint before it will become smooth. Fine sanding will help to an extent.
- The object must be dusted well with compressed air. Never attempt to use any liquids. A rag without fluff, along with the air, is the way to do it.

Spray painting an actual item

There are obviously many different shapes and sizes when it comes to items to be painted. Each kind of object needs a different approach. We will deal with a couple of general shapes. It is considerably easier to spray on a horizontal surface than vertical. There are two ways to achieve a horizontal surface for painting.

The first is to manufacture the item in such a way that painting is done before assembly. In some cases, it is impossible to get inside small cubicles such as wine racks etc. to spray inside, so that pre-painting is mandatory. It is a matter of careful planning but, definitely not as difficult as one may imagine.

Some people finish the components of items such as chairs before assembly. Chairs are, by the way, somewhat daunting to spray paint, even for the experienced spray painter. A case in point is when making chairs that are assembled mostly with long dowels. The components can be pre-painted, then dowel holes drilled and finally assembled as a finished product. So called "director's chairs" are a good

example. To spray paint such an article after assembly is almost impossible due to the folding-up ability of these.

If a panel has some 'biscuit' slots or perhaps mortises, or any other places where glue must be applied during assembly, simply mask these with masking tape.

The second method is to present the assembled object, so that the face to be painted, is horizontal. The challenge is to paint the following faces without messing up the already painted face. The way around this, is to mask the places where overspray is likely. While it seems to be cumbersome it is not that laborious and good results can be achieved.

To start a spray painting venture, think of selecting a suitable project:

- **Painting a cabinet door or flat panel.** Start by setting it down on the outside face. Go around the edge all the way. Then do the rear face. When sufficiently dry, turn over, spray again around the edge, and then the face. After flattening, repeat the procedure for the final coat, but skip doing the

edge on the first round, doing the edge first after turning over then the front face.

- **Painting a drawer.** Remove the bottom if possible. Put the drawer in the normal orientation. A painting turn table is useful. Paint around the outside first all round, then proceed around the inside. There is a better chance of overspray in the inside if the outside is done last. If the drawer sides are high, spraying will most probably have to be done by going back and forth on each drawer side, two or three times, working from top to bottom. Repeat after flattening.
- **Painting a large table.** Remove the tabletop and paint this separately if possible. Put the table frame upside down. If it is a large table, say about 1m x 1m, start at the top of a leg sealing the foot pad, then proceed up and down each leg going all round each leg. In the case of some turned legs, it may be difficult to get 'under' some turnings. Do these areas once the

table is in the upright position. Then paint the skirts all round. Usually the insides of the skirts are not painted.

- **Painting a small table or chair.** If the table is small, say 500mm x 500mm, overspray is going to occur if the previous process is followed. A painting turn table, will help a lot. Go about it as follows: Put the object upside down, paint the foot pads. Next, work in four directions. Paint all the 'faces' in the direction in front of you, starting on the 'components' (i.e. leg and skirts) nearest to you and then spray the those furthest. Remember not to try and paint 'around' legs, etc. Turn the object by 90 degrees or else go around the object yourself to the next side. Repeat again to paint only the 'faces' directly in front. Do so for all four 'faces'. In the case of a chair this process must include the back rest.

In the case of turned legs with larger and smaller diameter regions along the length, the gun must be pointed up and down during painting, in order to reach

'hidden' aspects which may be missed, should it be held perpendicular with the leg. It is recommended that the first coat be done with the object upside down and the final coat in the upright position.

Next issue we will look at maintenance of your equipment.



Make use of the first coat application to improve paintwork on the final coat. One may even change your paint 'strategy' when applying the second coat to correct errors made during the first coat. While this may sound like a story, even experienced painters follow this tip.

ABOUT WILLIE:

Willie is a retired electrical engineer by profession. Woodworking became his hobby as a primary school pupil and continued all his life. After early retirement he started a woodworking concern which he ran for 15 years, manufacturing items on order. He is a founder member of the Woodworking Association of Pretoria.

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Completed, and now a much quieter garden

When an outdoor gate provided a unique problem, a unique solution was needed to solve it.

When we moved into our home around six years ago, we were thrilled that the back garden bordered on a 'green belt'. With two young kids, we were even more happy the following year when a small park was installed and the kids could play outside on the swing, jungle gym and trampoline with their friends.

Fast forward a few years and the children have been joined by two dogs. A problem, however, came about when the kids who frequented the park would tease the dogs and play hide & seek with them. This had resulted in both dogs sprinting to the gate and barking at whoever was there, whenever someone happened to visit the park, which became quite annoying for us, for the park goers, and I would imagine, the surrounding neighbours too.

We had to come up with a solution, and short of having a new gate built, wanted something which would a) block the dog's view, b) not be too expensive, and c) look relatively nice as well. We had just had our wooden doors sanded down and stained, so had a good amount of Plascon Woodcare Exterior Varnish left over, so we decided to carry the wood theme through to the garden and try and find a way to incorporate wood into the gate.

The first step was to measure the 'gaps' between the metal bars for the wood – as I had expected, they varied quite substantially so I put together a simple diagram on the computer to make a simplified cutting list.

For price reasons, we chose to use plywood for the project as it can easily be replaced in a few years if required. When plywood is manufactured for

THE STATE OF THE GATE

exterior use, waterproof glue is used; even though the plywood will hold up to almost any weather conditions, it's recommended that some type of paint or finish be used on exterior plywood if it is exposed directly to sun or water. After a good sanding, the varnish which we used is ideal for use on most wooden surfaces such as garage doors, shutters, window frames, doors, garden furniture, skirting and gates. A bonus is that it is water-based so was easy to apply and quick drying.

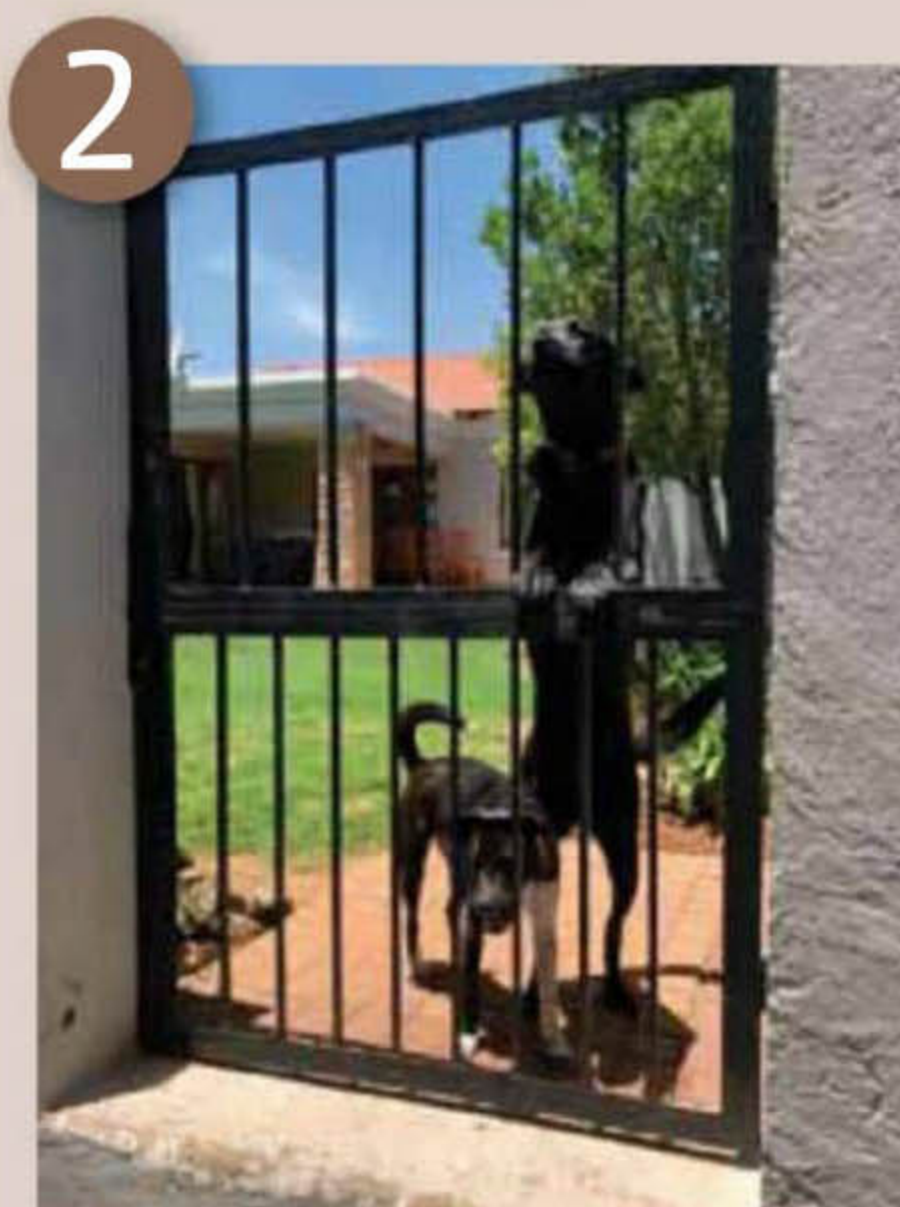
Once the varnish had dried, we used our diagram to determine where each piece needed to go (we had marked the underneath of each after they had been cut so that we wouldn't get confused). While it was a tight fit for some of the pieces, a gentle nudge into place with a rubber mallet ensured that they were all straight and level.

We had had six 'brace' pieces cut as well so that the vertical slats could be secured horizontally as well, so these were attached with wood screws, one piece on the top and one on the bottom on the house-side and two braces on the top and two on the bottom on the park-side. Once all pieces were secured, we gave everything another coat of varnish, paying special attention to the edges of the plywood and areas where moisture could sit or exposure to the sun would be prevalent. What we hadn't counted on was the fact that the new wood would make the metal gate look so drab! So it is on our to-do-list to repaint the gate with a suitable exterior metal paint soon.

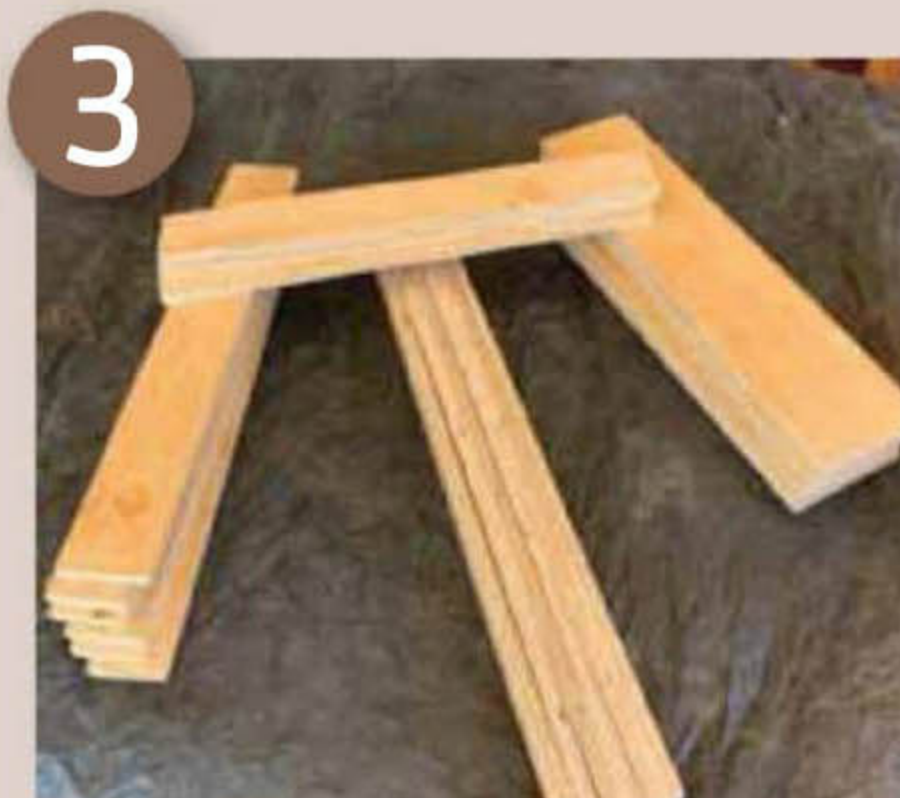
The change in our dog's behaviour was almost instant – while they can still hear people at the park, not being able to see them has cut down on the barking drastically. The poor things still occasionally sprint to the gate to have a look outside but turn back to us with confused faces when they can't see anything. And I'm sure our neighbours are happier as well.



The planning diagram with the measurements of the slats



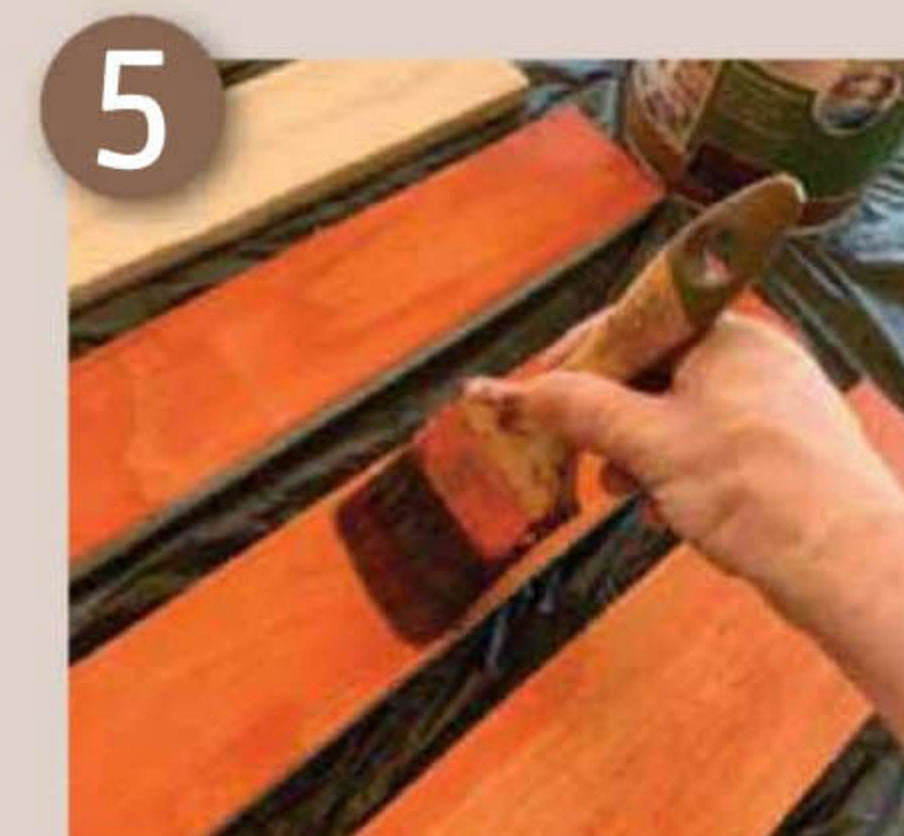
The two culprits – our barking dogs at the gate in question



The wood cut to size



Sand down all the pieces of wood



Stain the wood then set aside to dry. Apply a second coat



Attaching the vertical braces



Halfway there and looking good



Ten essential maintenance tips for your home and garden before the winter chill sets in.

Ten things to do before the winter chill

>> Warren Schmidt

With the winter chill peeking its frosty head around the corner, here is a list of essential home maintenance must-dos before winter sets in. Of course, we are experiencing climate change, so winter patterns are becoming increasingly difficult to predict. As a Johannesburg resident, I don't recall when last we experienced a prolonged icy winter chill lasting for several weeks like those we experienced back in the 80s. Perhaps it was because I cycled to school in the early mornings and by the time my hands had defrosted the home-time bell had rung! Of course, we also need to consider that many Capetonians and others that reside in the Western Cape will generally experience winter rainfall, whereas those of us living along the East Coast and interior generally have a summer rainfall period. This is important as your essential maintenance list will vary according to where you reside.

#1 – The fireplace

Heading into winter, this would be the obvious starting point for those homes endowed with a fireplace. A good clean and maintenance check will be in order. Make sure that the chimney flue and cap are free of bird nests or other obstructions that may have come about during summer. Also check that the damper is in good working order, as well as the other mechanical and moving parts. Ensure that the safety grill or front is still sound to prevent sparks or coals from falling out.

#2 – The geyser

Your geyser will generally work harder over the winter months with increased electricity consumption. You can reduce this by fitting a thermal blanket over the geyser and fitting thermal pipe insulation around exposed water pipes. Modern geysers are designed in such a way so as to maximise heat retention, so some experts question the additional use of a thermal blanket over the geyser. However, it is common for geysers to burst during winter, so make sure that the geyser has an appropriate

drip-tray fitted below it, and importantly, that there is an overflow pipe which will drain the water to the outside of the building. The thermostat on many geysers is often set extremely high, sometimes at the maximum, during summer which is completely unnecessary. Even in winter the thermostat rarely needs to be set so high. Consider turning down the heat as this will save on energy costs.

#3 – Gas heaters and appliances

Any home using gas heaters or appliances should be checked thoroughly. The seals and pipes on all gas heaters and appliances must be checked for any damage. If your house is connected to a larger gas installation, such as for hot water and the stove, it is best to call out a certified gas installer to check that everything is in working order and safe to use. Old gas appliances should rather be discarded if there is a risk of product failure. In homes where gas is a fixture, it is important to have gas and carbon monoxide detectors installed and make sure they have been tested. With higher electricity bills and load-shedding, the use of gas is becoming increasingly popular in many South African homes.

#4 – Seal doors, windows and other openings from draughts

When a room is heated, any cold air from outside is sucked in through cracks and gaps under doors and through windows. If the door does not seat well into the frame and allows excessive air flow, you can fit a foam or rubber strip seal. There are several products on the market, some with a self-adhesive strip that caters for easy installation.



Seal gaps around cornices with Den Braven Acryl-W (paintable with good movement capabilities). Weather seal the windows with Den Braven NO silicone (excellent weatherability and available in seven colours).

#5 – Ceiling insulation

A common attribute of physics is that hot air rises and cold air sinks. The ceiling is traditionally where we lose a lot of heat and where cold penetrates through from the roof. Most DIY retailers and hardware stores sell a range of thermal insulating products that can be installed inside the roof cavity above the ceiling. Make sure you purchase a product that is fire resistant. Be cautious inside the roof as electrical wiring and water pipes commonly run through the roof, and of course the risk of misplacing your step and plummeting through the ceiling is always a possibility.

#6 – Energy efficiency and load-shedding

Many municipalities raise electricity tariffs over the winter period. Make use of a thermostatically controlled heating system and keep doors closed and curtains drawn to maximise heat retention. Check all your lights and globes and install low-energy (or low wattage) types. The range of lamps and bulbs on the market is staggering and there are many options in the LED ranges. Use the appropriate lighting for the right environment.

#7 – Water pipes, taps and plumbing

Insulate outside water pipes which are exposed to the elements as sub-zero temperatures could cause the water to freeze. The contraction and expansion of fittings can also lead to leaking or dripping taps. Also inspect the toilet cistern for running water.

#8 – Gutters and roof

Checking the roof and gutter might seem like a pre-summer job, but for those living in the winter rainfall regions, this should form part of your pre-winter checklist. It is even worthwhile doing this in the summer rainfall regions as a bi-annual task. Make sure the gutters are free from accumulated leaves and trapped dirt. Some intrepid homeowners have installed a mesh over the gutters to prevent leaves from falling in but still allowing adequate water flow.

#9 – The swimming pool

Very few swimming pools are used over the winter period and may be redundant for longer than six months. To save on cleaning and topping up, consider installing a sealed pool cover over the top. This will prevent evaporation and prevent dust and debris from falling into the swimming pool.

#10 – The garden

Winter can be a harsh season for many garden plants. If you're in a region prone to winter frost, make sure small trees and shrubs susceptible to frost are covered over and protected. Place mulch in the form of wood chips, bark or other suitable materials in garden beds. This will prevent water loss during dry spells and prevent soil from freezing. Watering, if permitted, can be undertaken at mid-morning and not in the evening when freezing weather will cause ice crystals to form over the plants causing potential damage.



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A recent trend is including a sink and a mixer in a free-standing kitchen island

Choosing kitchen sinks and taps

Sinks and taps work together and that is why it is crucial that you make the right choice.

The kitchen sink is the centre of activity in the busiest room of the house; the place where food is prepared, the washing up is done, home economy is discussed and domestic arguments are settled (most of the time).

With the advent of popular cooking shows, the kitchen and its sink are more popular than they've ever been. If you're serious about working in the kitchen, it's crucial that your sinks, taps and drainboards are properly suited to the work you want to do with them.

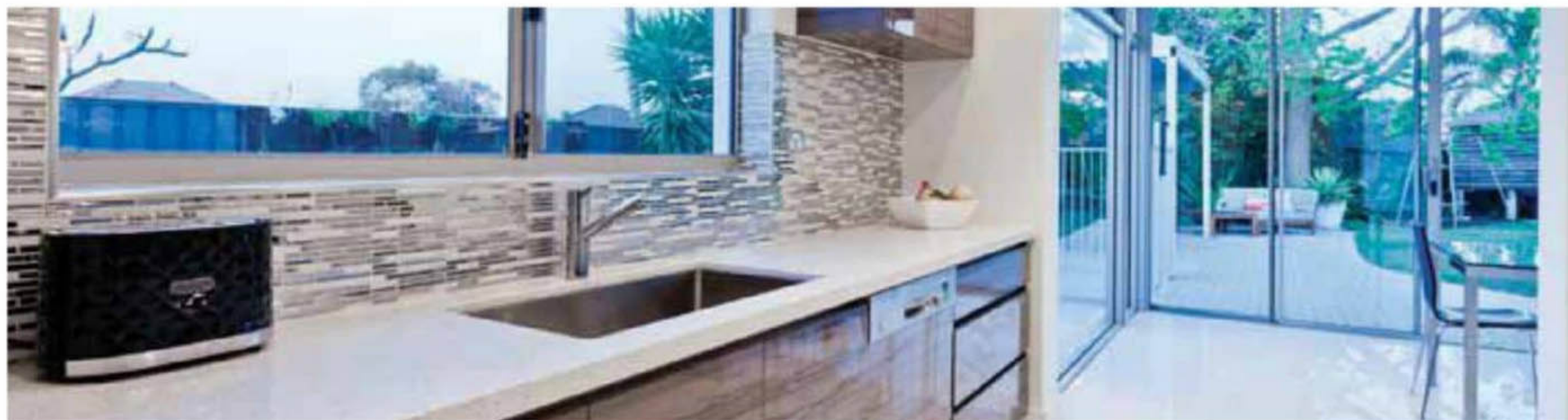
There are many sinks to choose from but what options are available to you?

Ceramic

Ceramic sinks have been around for a long time and are still extremely popular, and for a number of good reasons too. Surprisingly robust, a ceramic sink can take everyday use without suffering a scratch, although you should be careful with those heavier pots and cutlery, which can chip just about any sink if carelessly handled.

It's also resistant to extreme temperatures, such as hot pots and pans and frozen foods, as well as common household chemicals. It won't take on the flavours or smells of foods it comes into contact with either, while even stubborn stains can usually be relatively easily removed. In fact, ceramic is easily cleaned and very hygienic.

Ceramic sinks can either be set into the worktop or, in the case of a Belfast sink, have the front of the rectangular bowl exposed. Belfast sinks are ideal for country cottages or more traditional properties and are large enough to easily house a large pan or casserole dish.



Stainless steel

Although remarkably durable and practical, stainless steel sinks are not only cheaper to buy, but they're also usually much cheaper to install too. Whereas heavier sinks require extra under-mount support, a lighter stainless sink only requires an easily installed top-mount support.

They're resistant to most cleaning products, heat, peeling, cracking and chipping, if a little prone to scratching and water spotting. However, a sink with a satin finish can provide additional protection from scratches and rusting.

Thanks to their clean, neutral look, and the variety of finishes, styles and designs available, stainless steel sinks can complement or match your appliances, fixtures and fittings.

Granite

Incredibly beautiful yet extremely functional, granite gives you superior heat, scratch, chip and stain resistance while seamlessly blending into your granite worktops. It's a far more natural look than you'll achieve with any other kind of sink, giving you a blend of tradition and modernity. There are also far more colours to choose from than you might expect.

How big should the sink be?

In short, your basins need to be large enough to immerse the biggest pot you have. Sinks typically come in single bowl, double bowl, or single with a smaller bowl for rinsing (called an 'end bowl').

Unless you're guided very heavily by aesthetics, space is normally the biggest issue when you're choosing how many bowls you'll need and how big they are. A single bowl may be enough if you're short on space, have a small family or you're not particularly social, but generous sizes and a second bowl are very sensible choices otherwise.

Keep in mind that L-shaped configurations are also available for corner installations, as are simple, single round bowls that can be installed for cooking, as a supplement to your main kitchen sink. Sinks that allow attachments may also give you the option of attaching a separate, smaller basin inside the sink, converting part of the sink to a drying rack or even covering the sink altogether when it's not needed.

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Application Tip:

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What should a kitchen sink have?

Because it's so easy to clean, affordable and durable, in most cases the logical choice for sink material is stainless steel - but that doesn't mean other options are any less viable. To some extent, the choice you make here will be guided by what 'style' of kitchen you're hoping to build. If you're building a more traditional style kitchen, for example, it may be fitting to install a cast iron or porcelain sink, along with some tapware to complement it. Most materials are available in many different shapes, sizes and configurations.

It's a good idea to plan your configuration before you decide on what sort of bench you're after. Some benches (like Corian) will even allow you to have your sink directly moulded into the benchtop. The good thing is that you have a number of options when it comes to choosing a sink. You may opt to have a single bowl and drainer or even a double bowl while a double with a central half bowl may work better for you. A kitchen sink will be heavily used but you need it to make life easier for you.



Ceramic sinks can either be set into the worktop or, in the case of a Belfast sink, have the front of the rectangular bowl exposed



A sink with a drain in the corner of the basin (rather than in the middle) will give you more cupboard space under the sink.

Choosing a tap and what you should consider

Taps are bought separately from sinks. When you're choosing taps, the first thing you need to do is find some that match your sink. Generic sinks and taps are normally perfectly compatible, but as you move up in price and design, you'll find that compatibility changes. Some sinks and taps just won't match at all, and some are designed with an unusual diameter, exclusively to fit a single style of sink.

Beyond basic compatibility, you also need to consider the configuration of the tap in relation to the sink. If you have a single lever mixer, will it be installed in the centre, the right or the left? Will you have a tap in the centre and a soap dispenser on the right or left? Or if you're planning on installing a pull-out tap, where's the best spot to put it? Will you need a single tap, double tap or a tap for each sink for any particular reason? Are you choosing a style of tap that needs some clearance behind it – and have you accounted for that? This problem, in particular, often only becomes apparent when you're ready to install everything.

Fitting taps

Most people are so used to seeing taps directly mounted onto a sink or bath that they forget to consider an option that creates an enviably modern feel: fixing the taps behind the fixtures. This gives you an amazingly clean, uncluttered look. But remember that fitting taps is a job for an experienced plumber.

To make your taps sparkle, clean them using a soft cloth and warm soapy water, then give them a rinse before wiping them dry with a clean cloth. You shouldn't use abrasive compounds, pads, cloths or creams, as they can damage the tap's surfaces.

There are a number of options to choose from:

Brass

If you want to add an element of class, then brass taps can really make a difference. They can transform even the plainest of sinks.

Mixer Tap

A mixer tap will give you control over the flow of water and the temperature as hot and cold water is mixed together. It does, however, require a high-water pressure.

Dual Flow

If you want a mixer tap but your hot water and cold-water flows at different pressures then a dual flow tap is the right choice for you. It keeps the flow of water separated within the tap before delivering a single stream of water.

Brushed, Matt and Satin

These are an alternative to chrome and offer an element of freshness as well as a modern look.

Water Filter Taps

Filter taps filter the water so that it reduces the amount of chlorine and lead in the water. These taps can be purchased in a number of designs and styles.

Pull-Out Spray Mixer

This will enable you to rinse dishes and wash food as it includes an extendable hose that provides control over the flow of water.

Pop-up Waste

If you are fed up of emptying your sink by pulling the chain and plug then a pop-up waste tap will allow you to do this by using the mechanism that is located on the tap.

Monobloc

This is a neat looking tap with a clever design that provides one lever that allows the control of both hot and cold water.



Although remarkably durable and practical, stainless steel sinks are not only cheaper to buy, but they're also usually much cheaper to install too



If you're a bit on the short side, you may want to consider a shallower sink to save you having to climb the cabinets in order to reach the dishes. Likewise, taller people might want to consider slightly higher benches in general.

As the saying goes, prevention is better than cure, and the best preventative measure one can implement in the care of a roof structure is to conduct regular inspections to help identify and remedy problems as and when they occur.



Maintaining your roof: The importance of inspections

A roof withstands more from the elements than any other component of a building and the frequency of roof inspections and maintenance is dependent on the geographical location of the given building; if the structure is close to the sea or in similarly harsh conditions, it will need greater care than a structure inland, for example.

Roof exterior

When it comes to the roof's exterior, be sure to check for any cracked roof tiles, loose sheeting and loose roof screws. These may cause leaks, which have the potential to cause damage to the interior timber of the roof structure and prompt or accelerate wood rot. At the same time, look for open areas around newly installed antenna shafts and chimneys; while waterproofing should be installed to prevent any leaks, the condition of the waterproofing membranes must also be inspected regularly.

Crumbling chimney mortar could also signal moisture penetration and will need to be reapplied.

Timber roof overhangs are most susceptible to the elements and should be maintained regularly to prevent fungal attack or rot from moisture. Loose fascia boards and leaking gutters are the most common cause of leaks onto roofing timber. On this note, be alert to any creeper plants growing onto the overhanging roof timbers. Keep all gutters free from debris and make sure the downpipes are draining properly by water testing them.

Check all flashings, making sure they are not deteriorated and be sure to secure or replace any loose shingles. Trim back any overhanging tree branches and check any metal on the roof for signs of rust. Pay attention to all caulking and sealants, and scrape and remove any caulking that is weathered, cracked or damaged, and reapply. If the roof has gravel surfacing, be alert to any bare spots, otherwise, check for blisters in the roofing material.

Salt or dirt build-up can encourage rust on steel roofs, and moss and lichen growth on tiled roofs. Some manufacturers' warranties advise regular

washing, particularly in areas that don't receive frequent rain. Frequent washing and inspection are advised to prevent salt and dirt build-up. Exposed timber trusses must be treated for exposure to the elements.

Roof interior

Cracked timber components in the roof structure are the first warning signs that something within the roof structure is deteriorating. Inspect all the components of the roof structure after new services, like plumbing, electrical and/or a fireplace are installed. Check the interior of the roof for any leaks; these may be indicative of a leaking roof membrane.

If timber is beginning to show signs of rot, painting it will only worsen the situation. In this case, it is advisable to replace the affected timber. Painting and repainting should only be done on healthy timber surfaces. Be sure to adhere to the paint or treatment specifications concerning the application.

For more information, visit www.itc-sa.org

Whether you have a large ecosystem pond or a small pondless waterfall, it requires some special care to preserve and protect it through the cold winter months.

Winter WATER FEATURE CARE

Water features add beauty to any landscape and can be a delight all year long

With a little bit of know-how and some preparation, you can not only keep your water features and any fish and critters that are living in them safe, but you can even enjoy them all winter long!

Preparing your pond

Small or large, koi or goldfish, professionally installed or DIY, your pond or water feature is probably the jewel of your landscape. To protect that gem, you'll need to give it a little TLC during autumn and winter to ensure that plants are ready for bloom again in spring, and fish and other critters are safely tucked away until the temperatures rise.

Different plants require different care: trim marginals to just above the water line, cut back lilies and lotuses to just above the base of the plant and remove tropical floaters since these won't be able to endure the winter.

As for anything free-floating, like leaves or other debris, remove it with a net, and make sure you also grab anything that has sunk to the bottom of the pond. Decaying organic matter left over the winter can pose the greatest threat to the health of your pond and fish.

Preparing pond fish and critters

Your koi don't like winter – but they can survive, providing that you take the time to set them up in a protective winter

environment. Fish metabolism slows during winter so they should not be fed as much as in summer. But while they may not need food, they do need oxygen. Be sure to keep an aerator or bubbler running near the top of the pond, but try not to disturb the warmer water below where your fish will be nestled waiting for spring.

These steps will also protect snails and frogs, who will find sandy and muddy spots where they can burrow and rock crevices to nestle into. The same rules apply – keep the oxygen flowing and don't let the pond freeze over.

Preparing your waterfall

Have a waterfall, either as part of your pond or as a freestanding pondless waterfall? Then it's decision making time! You can choose to shut it off, in which case you can simply turn off and remove the pump until spring. Never leave your pump in the pond if it's not running or you risk costly or irreversible damage to the equipment. Be sure to store the pump in a bucket of water in a garage or shed where it won't freeze; this will help to preserve it and extend the life of the seals.

But having a functioning waterfall can be one of winter's greatest joys. It does require a bit of extra maintenance, but you'll be rewarded with beautiful water formations that can add motion, texture and visual interest to an otherwise still winterscape. If you're up for the challenge, you'll need to periodically check to be sure that your waterfall doesn't form ice dams, which can divert water and drain it – and the pond it's part of. You'll also need to periodically replenish water lost due to evaporation.

Preparing your water fountain

Unlike your water feature or pondless waterfall, fountains are too shallow to keep running without inevitably freezing over (if you live in a cold part of the country). Outdoor water fountains are designed to withstand the elements, but if water freezes it can cause them to crack and can ruin the pump. If you can, drain your fountain and store it dry, in a garage or shed.

If yours is too large or heavy, then draining it is the most important thing you can do. Remove and clean the pump (if you can) and clean it out so it will be free of dirt and algae and ready for spring. Store the pump in your garage or shed.

Water features add beauty to any landscape and can be a delight all year long. Whether you have a small pondless waterfall or a vast ecosystem pond, these steps will help keep your investment safe and extend its longevity so you can continue to enjoy it throughout the years.



How to repair a crack in a concrete pond

If you notice that your concrete pond is losing water, the concrete might have a crack in it. Concrete is susceptible to weather conditions and can form cracks due to frost and thawing in winter or when the ground settles beneath your pond. You can repair cracks yourself:

Step-by-step guide

Step 1: Remove flora and fauna

If you can, try to remove the fish and plants from your pond and store them in a large watertight container while you repair the concrete.

Step 2: Drain the pond

Drain all the water from your pond using an electric pump. If you don't have a pump, siphon the water through a garden hose. Remove any remaining plants and fish. Note that it can sometimes be easier to remove them as the pond is draining.

Step 3: Visual inspection

Once your pond is completely drained, inspect it thoroughly. Large cracks are easy to spot, so look out for smaller or hairline cracks. If your crack is very big and deep, you might need to consider replacing your pond.

Step 4: Prepare the crack

If the crack you spotted is a hairline crack, you will need to widen it. This will ensure that the sealant can penetrate to an acceptable depth in order to provide a longer lasting concrete repair to your garden pond.

To widen the crack, use a hammer and chisel, but do not apply too much pressure as you don't want to make the crack too big.

Step 5: Clean and dry

Use a stiff wire brush to clean the crack and the surrounding area, making sure that any plant debris is thoroughly removed. When clean, dry the crack and the surrounding area.

Step 6: Repair materials

The best material for repairing your concrete pond is more concrete, though you can purchase specialist pond sealants from garden centres. The one you need will depend on the size and depth of your crack. If you use concrete, use a trowel to fill the crack. Try to make sure that you don't leave any gaps.

Step 7: Finishing touches

When the concrete has dried, sand the area to smooth the surface. Use multiple sandpaper grits to get a smoother and smoother finish. For added protection, you can coat your garden pond with a layer or two of pond paint.



Whether simple or elaborate, like this pondless waterfall, water features add something special to any home

Brush the polyester or epoxy resin under the fibreglass cloth or mat and put it on the spot of the project that you are working on

Working with FIBREGLASS

In many ways fibreglass is an ideal hobbyist material. With a bit of patience it is fairly easy to use with most of your effort going into preparation if not the actual creation of the item, plus, no special tools are required.

Fibre bonded with plastic resin has a long history. As with many manufacturing techniques, fibre reinforced plastic came into wide use in the military. Part of the reason for this is the ease with which objects can be created by combining these two materials. It is also quite strong when compared with an equal weight of steel; fibre reinforced plastics can be as much as six times stronger than steel at an equal weight.

But the real attraction here is that objects made with this material require no high temperatures, a modest collection of tools, and best of all, very little prior experience. In fact, if you've made a sandwich and painted with a brush, you

know most of what you need to know about fibre-glassing.

Fibreglass, as a term, is really a misnomer. Glass fibre is one of the many materials that can be used along with resin (plastic) to create a strong and light composite structure. Those materials include glass-fibre (of course), cloth (cotton or man-made), carbon-fibre, non-woven glass or carbon mat, coir (a coconut fibre), modal (beech tree fibre), bamboo, and even hemp fibre.

In truth what most people call fibreglass is properly referred to as Fibre Reinforced Plastic (FRP). It is a composite material, much like Carbon Fibre Reinforced Plastic (CFRP), but FRP predates carbon fibre by at least seventy years.



Holes and cracks in fibreglass, such as on a kayak or boat, are relatively easy to repair

HERE ARE SOME THINGS THAT YOU MUST KEEP IN MIND WHEN WORKING WITH FIBREGLASS:

- Check the surface of the project that you will work on. Inspect and measure the spot. Doing this will help you analyse the amount of materials that you will need in repairing.
- Get the tools needed. It is important to have the appropriate materials for the job. You will need the following: gel coat, a solvent for clean-up, a fibreglass mat or cloth, epoxy resin or polyester, paint and a mask. You might also need a body filler, a sander and rags on hand.
- Observe safety when working with fibreglass. Always protect yourself and wear appropriate clothing. You should wear old pants and long-sleeved shirts that can be discarded after use. Do not forget to wear a dust mask, gloves and goggles.

HERE ARE SOME THINGS THAT YOU MUST KEEP IN MIND WHEN WORKING WITH FIBREGLASS:

- Before you start working, you have to prepare your working area. You have to be sure that the surface that you will be working on is dry and free from debris. Remove any crushed or cracked spots for a better result.
- Cover the spot of the project that you are working on with either fibreglass cloth or a fibreglass mat. You can use a fibreglass cloth if you want to ensure the strength of the material or just use a fibreglass mat if your budget is tight because it is not as expensive as the cloth and it can be used for irregular and rough surfaces. You should cut the mat or the fibreglass cloth and trace it in the spot's shape. If you have to build the spot up, you can add layers of smaller patches of fibreglass cloth or mat.
- Put the appropriate amount of polyester or epoxy resin in a shallow container. Then, mix it up.
- Brush the polyester or epoxy resin under the fibreglass cloth or mat and put it on the spot of the project that you are working on. Put some resin or polyester above the first layer of the mat or cloth then add the smaller patches for the next layer. Do this process until you're done. You should work fast because polyester and epoxy resin dry up quickly. Make sure that you are done before they dry up.
- Lay the patches smoothly and gently to keep bubbles from forming and prevent the cloth or mat in having wrinkles.
- You should immediately clean your tools after working for preventing the resin or polyester to dry up. Use solvent like acetone in cleaning them.
- Smooth the surface with sandpaper when it dries. Wipe the dust off and fill in small holes using filler, such as Bondo. Scour it off again when it dries and apply a clear gel coat.
- One notable feature of fibreglass is that the resins used are subject to contraction during the curing process. For polyester this contraction is often 5-6%; for epoxy, about 2%. Because the fibres do not contract, this differential can create changes in the shape of the part during curing. Distortions can appear hours, days or weeks after the resin has set. While this distortion can be minimised by symmetric use of the fibres in the design, a certain amount of internal stress is created; and if it becomes too great, cracks form.

Is fibreglass safe?

There have been many tests on the health side effects of fibreglass by government agencies and private labs, with varying results that don't contribute to a general consensus about possible dangers fibreglass may pose.

But is fibreglass dangerous? The only generally agreed upon fact is that fibreglass is an irritant, a fact immediately apparent when handling the pink insulation common in houses. Contact with insulation wool fibreglass can cause skin irritation such as redness and itchiness, as well as difficulty seeing and breathing. Generally, these irritations will subside once contact

with fibreglass ceases. However, concerns persist that fibreglass may cause other, more serious problems; certain groups worry that fibreglass particles may behave in the same manner as asbestos and that they might prove to be carcinogenic to humans, however, definitive research in this area has not been conducted.

When installing fibreglass or coming into contact with it while making home repairs, you should wear proper safety equipment to avoid fibreglass inhalation or irritation from skin contact. Gloves, long-sleeved shirts, pants, masks, and goggles should all be worn.

Interesting things you might not know are made of fibreglass

- DIY bows/youth recurve; longbows
- Pole vaulting poles
- Equipment handles (hammers, axes, etc.)
- Traffic lights
- Ship hulls
- Rowing shells and oars
- Waterpipes
- Helicopter rotor blades
- Surfboards, tent poles
- Gliders, kit cars, microcars, karts, bodyshells, kayaks, flat roofs, lorries
- Pods, domes and architectural features where a light weight is necessary
- Auto body parts
- Antenna covers and structures, such as radomes, UHF broadcasting antennas, and pipes used in hex beam antennas for amateur radio communications
- Most commercial velomobiles
- Most printed circuit boards consist of alternating layers of copper and fibreglass FR-4
- Large commercial wind turbine blades
- Helmets and other protective gear used in various sports
- Orthopaedic casts
- Fibreglass grating is used for walkways on ships and oil rigs, and in factories
- Fibre-reinforced composite columns
- Water slides
- Sculpture making
- Fishponds or lining cinder block fish ponds

8 beautifully easy

DIY SHELVES



In need of extra shelving? The Home Handyman has compiled a list of our favourite DIY shelving solutions for you to attempt.

A functional DIY project with a great impact in terms of decor is the building of a simple, small shelf. It can be as simple as you desire, and a saw, nails and a hammer might be all you need to create something practical, functional, and in some cases, funky. A shelf can be a visual stimulus as well as a practical solution for extra storage and the crafting process offers you freedom of choice as you can mix and match materials into easy DIY shelves in a matter of minutes.

1. Decorative mountain shelf

Shelves can be pure art and they can shape memories for the little ones and present an extraordinary fairy-tale land. This is an ideal shelving solution for a child's room, adding a little bit of fantasy to what would otherwise purely be a functional item.

Find the tutorial on:

www.carnetsparisiens.com

2. Minimalist shelving

These modern shelves utilise plywood pieces which can be cut with a mitre-saw in minutes and assembled rapidly with glue, awaiting your books with gravity defying beauty. These shelves are particularly good for apartment living where every bit of space counts.

Find the tutorial on:

www.crowdyhouse.com

3. Build a simple, dedicated frame shelf

A shelf for memories is a great addition to the living room or dining room where family photos can be proudly displayed. This shelving solution, created by simply using three pieces of wood, is an ideal solution where shelves need to 'float' on the wall.

Find the tutorial on:

www.shanty-2-chic.com



4. Wall mounted display shelves

This shelving solution is a contemporary, modular and scalable solution which could spice up a lot of modern interior designs through colour, texture and practical storage. The design can work for bedrooms, hallways or living areas in the home where a combination of decorative items, as well as functional storage for keys, phones and the like can be found.

Find the tutorial on:
www.ispydiy.com

5. Use rope and plywood for a suspended shelf

Rope and one piece of wood or plywood brings airiness, providing storage without cluttering one's wall. This is a quick and simple shelf to make, requiring few materials and tools. It will be best suited to a cottage/farmhouse theme, but with some funky colours, could also provide storage in a kid's room.

Find the tutorial on:
www.burkatron.com

6. Industrial pipe shelves

The graphic values of industrial design can be created through simple means; pipe shelves and reclaimed wood make a great match and the colour washed wooden piece can be

customised to complement your current décor. This option is also highly practical as it occupies little space and it offers decent open shelving storage.

Find the tutorial on:
www.cherishedbliss.com

7. Boxed wooden composition of DIY shelves

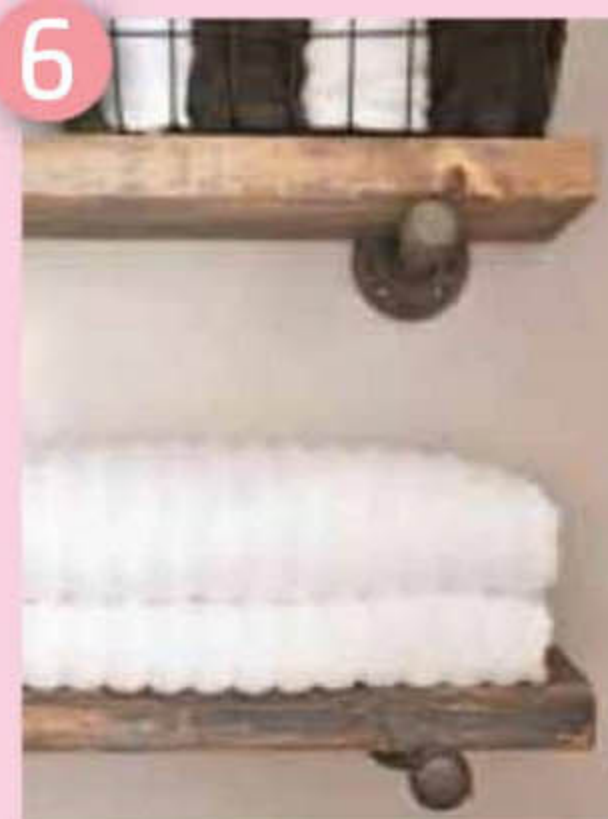
These wooden box shelves work brilliantly thanks to its modularity, meaning the size and number of shelves can be adapted to any wall space at multiple scales. Painting the exposed edges of the mounted shelves really makes them 'pop' and gives added interest to the wall.

Find the tutorial on:
www.buildsomething.com

8. Tree branch shelf

The materials required for this shelf are flexible as the way you use your wood can be realised through multiple ways. It all depends what shape and size your branches are, then the design can be taken from there. Whether you are going to place this in the hallway or the lounge make sure you match it with your existing colour pallet for truly great results. The naturalness of wood both processed and natural will create a focal point for any room.

Find the tutorial on:
www.blog.homedepot.com



Use Den Braven Woodflex to seal cracks, gaps and holes on the wood surfaces.

A guide to OUTDOOR LIGHTING

Find out from the experts the best way to light the exterior of your home.

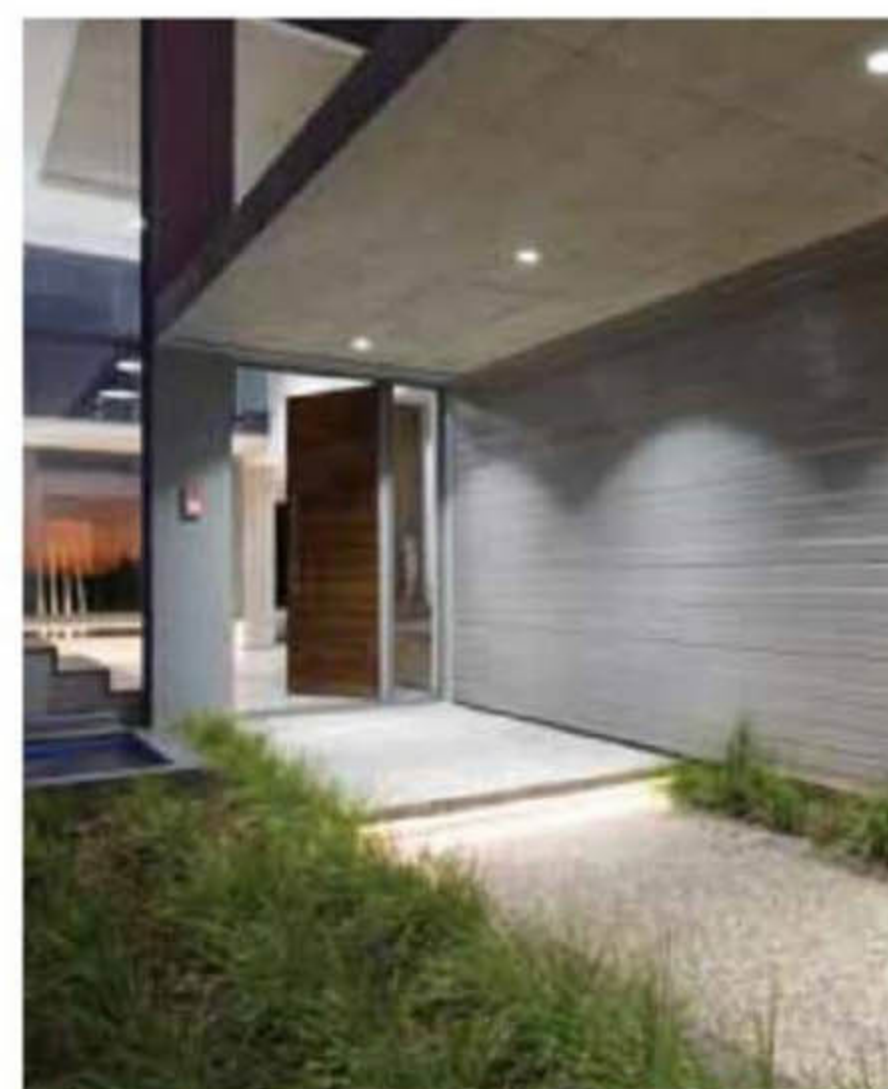
Landscape lights comprise low voltage wet-rated lights that are used to light up various feature elements within a garden landscape

Lighting up your outdoor spaces makes the area more attractive and liveable – making it safer to use and extending the enjoyment thereof well after the sun sets. Says Melissa Davidson from lighting supplier, The Lighting Warehouse: “Whether you are adding lighting to your outdoor spaces for practical, security, landscaping, or aesthetic reasons – lighting has a tendency to transform outdoor spaces in a very positive way – making them more attractive, useable, welcoming and practical spaces to be in.”

When deciding on outdoor lighting, it is imperative that you understand how lights can integrate and complement a building and its grounds, notes Davidson: “If you fully comprehend the play between light and dark, you can use

contrast and shadows to create really interesting and attractive outdoor spaces.”

So, where do you start? Davidson explains that the most important thing to establish is your primary design goal: “You need to decide how the space will be used, and then you will be able to define how lighting can be implemented to achieve that goal. Do you want to make the space more useable, more secure, more attractive, or do you just want to highlight features that are currently hidden in the dark? One you have decided how the space will be used, you can start versing yourself on the various types of outdoor lighting, and how they can be used to achieve your goal. Next, you will need to get a grasp on the different types of outdoor fixtures that are available to you.”



Task lighting is arguably the most important type of lighting, as it is all about functionality and aiding with specific tasks, such as guiding you to a front door

Types of outdoor lighting

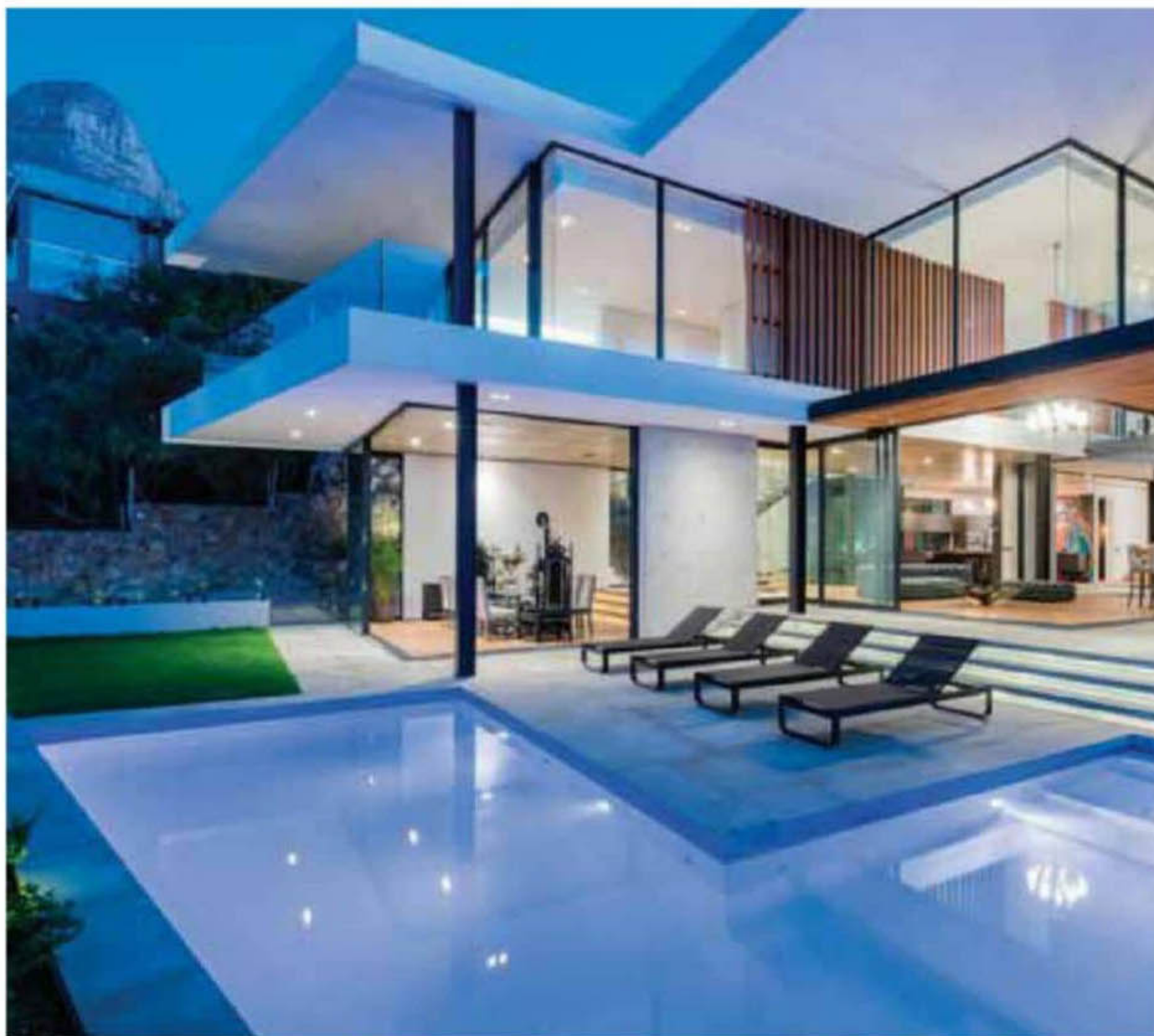
As with any successful lighting design, whether indoors or outdoors, the lighting should be installed in layers – comprising various layers that can be operated independently from one another, and that perform specific functions. Davidson explains that there are four main types of lighting, including:

- **Task lighting:** Task lighting is arguably the most important type of lighting, as it is all about functionality and aiding with specific tasks. With regards to outdoor lighting, task lighting includes the likes of pathway, deck and stair lighting for example.
- **Ambient lighting:** Also known as general lighting, ambient lighting offers illumination for an overall area. It should radiate at a comfortable level of brightness, without being too bright or too dull. Outdoor ambient lighting could comprise wall, post, pendant lights, and bollards for example.
- **Accent lighting:** This type of lighting is used to heighten drama and add visual appeal to a specific area by creating added interest. It is used to highlight specific feature areas or items, such as walkways, doorways, hardscaping and landscaping elements. It can be used to great effect for illuminating things such as trees, attractive plants, architectural features, sculptures, ponds and pools for example. Accent lighting comprises mainly spotlights.
- **Security lighting:** Adding lighting to your outdoor areas can go a long way to boosting the security of your home by warding off potential intruders or burglars. Security lighting comprises products such as LED motion-sensor lights, LED day/night sensor lights, and ultra-powerful LED floodlights including solar.

Ratings and energy efficiency

By law in South Africa, all outdoor lights need to be designed for installation in a damp location if partially covered, or in a wet location if exposed to the elements, says Davidson: “IP (ingress protection) rated fixtures are designed according to the level of potential moisture, damp or wetness. Water and electricity are obviously not a good combination and can be extremely dangerous. A low IP rating of 20 for example, would apply to a fitting such as a bedroom or lounge ceiling light. An IP rating of 44 would apply to a bathroom ceiling light. An IP rating of 65 would apply to a splashproof light fitting such as an outdoor wall light; whereas an IP rating of 67 would apply to a garden spike installed in the soil where there is rain and irrigation. A submersible light fitting, like a pool or pond light for example, would have to have an IP rating of 68. Always check the box or packaging for these ratings and choose accordingly.”

Davidson adds that with the high cost of electricity, it is always best to opt for the most energy efficient form of outdoor lighting available: “LEDs are the way to go – they offer unparalleled longevity, are available in a variety of wattages, shapes and sizes, and provide great illumination. They also require far less energy than any of their counterparts – making them a great eco-friendly energy-efficient choice that will save you lots of money on your utility bills during their lifetime.”



When deciding on outdoor lighting, it is imperative that you understand how lights can integrate and complement a building

DIFFERENT TYPES OF LIGHTING FIXTURES

Like their indoor counterparts, outdoor lighting fixtures are available in a wide variety of different shapes, forms and styles – ensuring that there is something out there to suit every conceivable decorating and design scheme. Davidson offers an overview on the main types of lighting fixtures on the market:

Ceiling and hanging lights

These lights are generally used to provide ambient lighting for covered patios. Since they are under cover, they only need to be suitable for damp areas and damp-rated. They are available in a wide range of styles, and most often, their design will also provide an aesthetically attractive focal feature.

Wall lights

Wall lights are a very practical and versatile option as they don't take up much space, and they can be mounted on virtually any vertical surface. They are also available in a wide variety of styles and are always waterproof, so they can be used in covered and exposed outdoor areas alike. They are great providers of ambient and task lighting and are especially useful for smaller patios and for narrow pathways for example.

Post lights and pedestals

These lights comprise fixtures mounted on top of a post, which can either be freestanding, or mounted on top of a wall. They provide far-reaching ambient light, and are commonly used for entrances, gates, fences, in gardens, or around a deck. Since most post lights are placed in open-air settings, they need to have an IP rating of 68 (waterproof) to withstand the elements.

Landscape lights

These comprise low voltage wet-rated lights that are used to light up various feature elements within a garden landscape. They comprise spotlights, spike spotlights, floodlights and bollards. They are great for highlighting outdoor elements such as trees, buildings, sculptural and architectural details, feature plants.

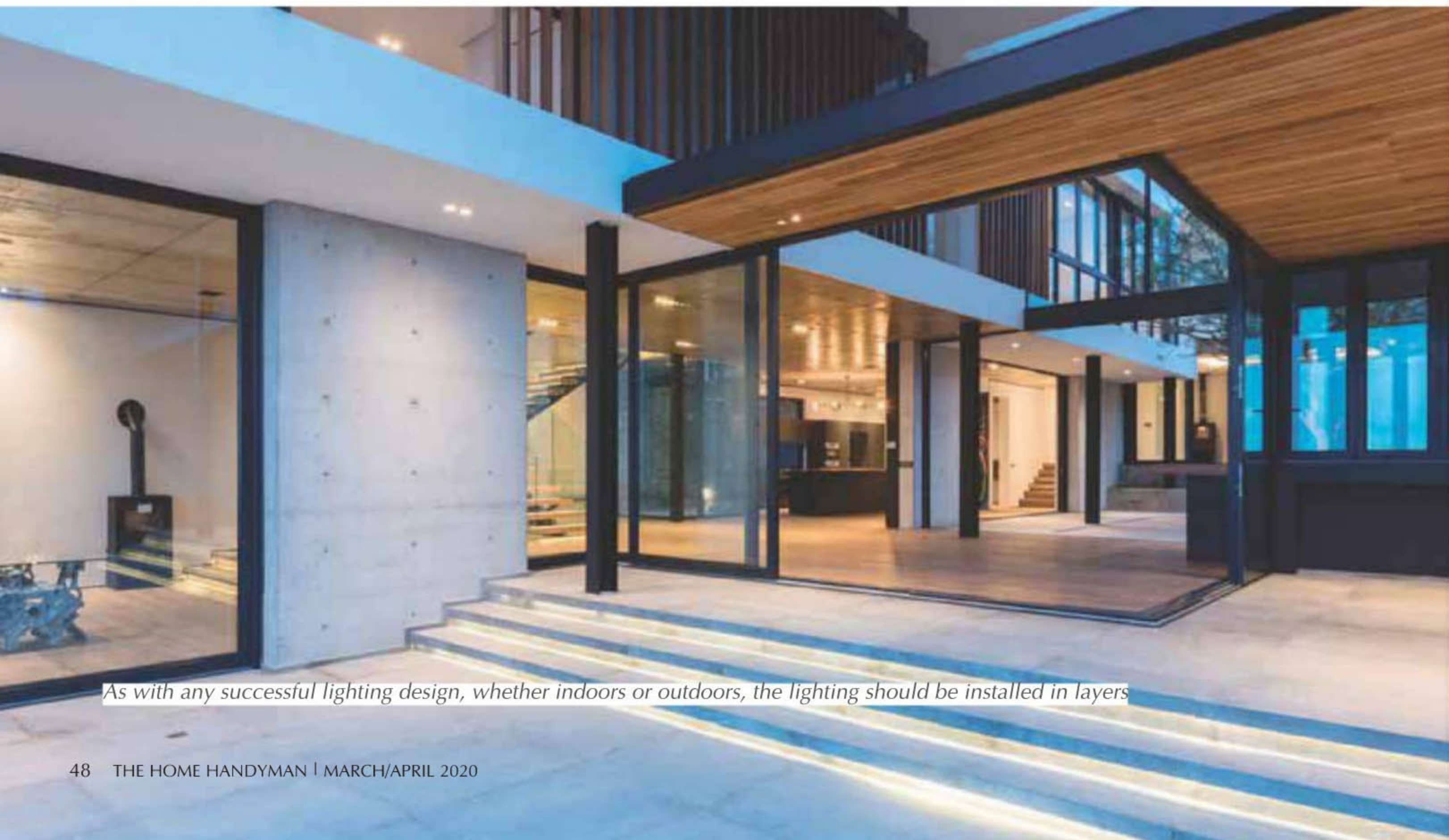
Deck and step lights

Deck lights are built into and lie flush with the hardscaping elements within the outdoor landscape, such as pathways and stairs for example. They are used to highlight these accents, as well as provide added safety to dark areas for easy navigation. Step lights can be recessed or surface-mounted, and they are an elegant way of lighting up stairways.

Sensor lights – motion and day/night

A great addition for added security in your home – sensor lights are either activated via motion, switching on when they detect movement, or via the lack of sunlight, switching on as the sun goes down – these are known as day night sensors.

For more information, visit www.lightingwarehouse.co.za



As with any successful lighting design, whether indoors or outdoors, the lighting should be installed in layers

BRIGHT IDEAS

Readers share their time-saving, space-saving or innovative ideas

WINNER

Tables from leftovers

Upcycled tables make one-of-a-kind conversation pieces, and these ones I made recently are great because they are super sturdy. I also don't have to worry about putting my feet up on them while watching TV; they cost little money to make and were very easy to put together.

I always scour second-hand shops and flea markets and came across some old chairs which had decent chair bases. You may have to buy the whole chair and remove the top, but for the price I paid for the pair it was worth it. For the wood, I had two rough cut, roughly 100mm thick pieces lying around which I had earmarked for a project.

I removed the bark from the wood with a chisel then sanded both sides up to 120 grit. I then coated the wood with a dark wax, determined the placement of the legs, fastened them to the top, and voila, new coffee tables!

Susan Teare, by email



Fixing stuck windows



Nothing is worse than a stuck window on a hot summer day. Unsticking a window requires just a little muscle and the right technique. Windows stick for a variety of reasons; it could be because paint got between the sash and the frame or the hinges might just need to be cleaned and lubricated. Because there are more than one reason a window can get stuck, there is also more than one method to get the window moving again.

Online methods that I tried included wrapping a cloth around a block of wood, placing it against the window frame at the bottom of one side, and tapping it gently with a hammer, and then sliding a stiff-bladed putty knife under the frame, both of which worked but took a little time and preparation.

What did work though was this solution: rub the wax of a candle at the areas where the window is stuck. It helps to lubricate the window and loosen it. You should then be able to open the window. Then, open and shut the window a few times to make sure it is functional. It also helps to rub the candle wax along the frame once you get the window open to stop it sticking in the future.

Coert Slabbert, Spings

Self-watering trick

I came across this idea online recently and it works very well for plants in pots. Rinse an empty wine bottle (or other glass bottle with a narrow neck) and fill with water. Standing next to your planter, quickly turn over the bottle and push the neck down into the soil near the centre of the planter. Make sure the neck is at least a couple of centimetres underground. The water in the bottle will seep into the soil over several days, keeping the soil evenly moist. It works!



Terrence Tassel, Lombardy East



WIN!

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of power tool accessories

Win a Tork Craft a combo sheet metal nibbler cutter and jig saw

This great new Tork Craft combo tool, which fits all power drills electric, pneumatic or cordless, can be switched from a nibbler cutter to a jig saw by swinging the unit around while still attached to your drill. Both the saw and nibbler cut all types of metal, sheet metal up to 1.8mm, stainless steel up to 1.2mm aluminium and plywood up to 2.0mm. For more information, contact Vermont Sales on 011-314-7711 or visit www.torkcraft.com



valued at R700

Send your bright ideas to:

editorial@homehandyman.co.za with 'Bright Ideas' in the subject line or PO Box 24938, Gezina, 0031

Please include your name, physical address and a contact number (office hours). You may also include a photograph (300kb) of your bright idea (where applicable).

Please note: Winners' prizes may take up to six weeks for delivery and are sent by the prize sponsor. Prizes are not exchangeable.

Congratulations to Susan Teare who wins a clever marking pen from Pica Germany for professional craftsman and DIYers.



Tie-dyeing is a great way for children to design and make their own unique pillowcase

Create your own PILLOWCASE

This is a fun, but potentially messy project. Be sure to wear a smock and work outside if possible. If not, be sure to use an old shower curtain or tablecloth to protect the work surface.

You can buy tie-dye kits at the craft supply store that come with everything you need, including rubber bands, dye and bottles, but we already had fabric paint so decided to use those. First, be sure to wash and dry the pillowcase, but do not use fabric softener. Lay the pillowcase on the work surface.

What you will need

- 1 pillowcase
- Different colours of fabric paint
- Rubber elastic bands
- Paper towels
- Scissors
- Gloves (so your hands don't stain)

Find the centre of the pillowcase, pinch it slightly, and wrap a rubber band around it. There should be a few centimetres of fabric sticking out at the top. Lift up the pillowcase by the tiny piece that was made by the rubber band in the beginning and continue wrapping rubber bands around the pillowcase with around a 5cm space in between them.

You will get to a point where the ends of the pillowcase split like rabbit ears, continue to wrap the rubber bands with 5cm spaces on the sections that split. Soak or dip the fabric into water (this is optional but the dye soaked up better being wet), then squeeze out excess water.

Put on your gloves (this is dye and it gets everywhere...) and shake your fabric paints. Apply the paint to one section at a time. We did one colour at a time, alternating so that we didn't have to

pick up new paints after every section. Make sure to flip the fabric around so that each section is fully soaked in with dye. Next add second, third and fourth colours - the colour may bleed a little and some of the colour will get into the other sections, but this is okay.

Let your pillowcase dry completely – overnight would be best. Once dry, lay it out on some newspaper or other cover to protect your work surface, and carefully cut the rubber bands off of the wrapped fabric. Do it gently, you do not want to cut the fabric. Shake out the pillowcase and put it into your washing machine; wash it on hot with a small amount of detergent.

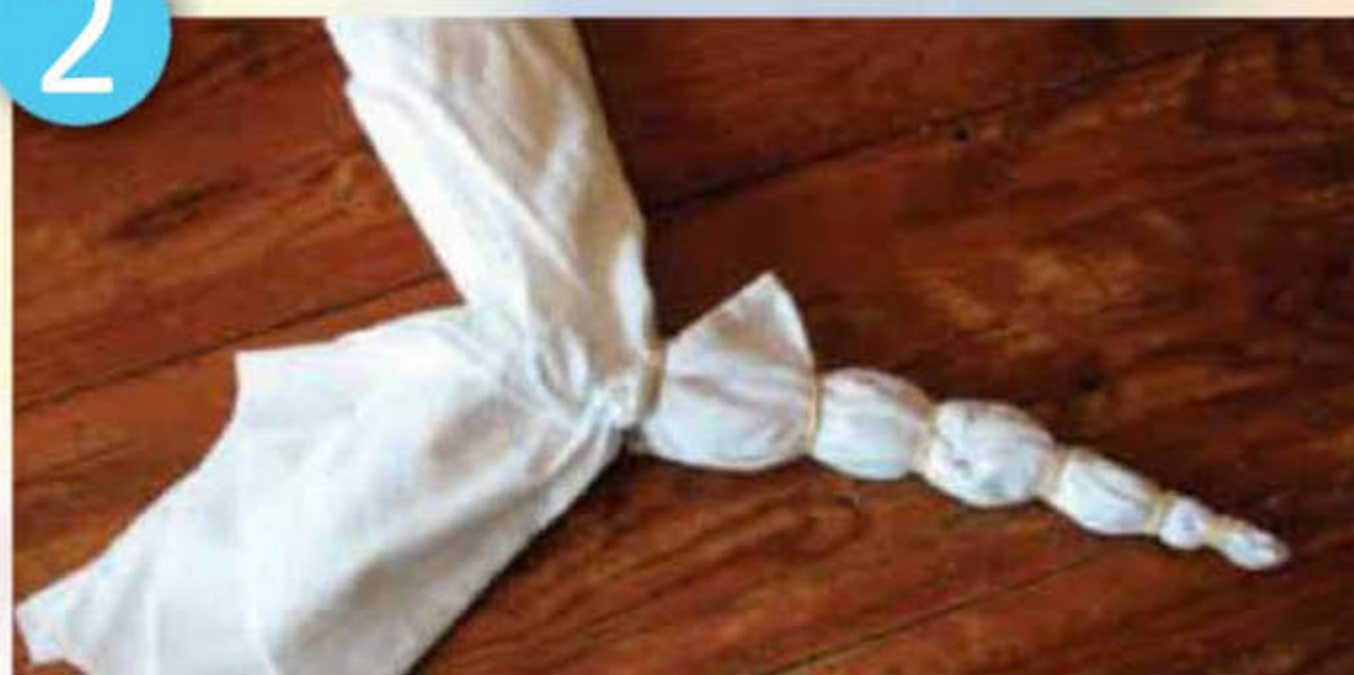
Once it's dry, place it over a pillow and think of all the other fabrics in your house which could be tie-dyed! Have a look online as there are various other techniques and designs you can use to create various patterns.

1



Find the centre of the pillowcase and pinch it slightly

2



Continue wrapping elastic bands around the pillowcase with around a 5cm space in between them

3



When the pillowcase splits like rabbit ears, continue to wrap bands on both sections

4



Soak or dip the fabric into water

5



Apply the paint to one section at a time

6



After the first colour, start with the second, third and fourth ones

7



Once dry, place over a pillow

8



Experiment with other colours and designs

ASK OUR EXPERTS

Our panel of experts answer your questions on DIY problems

Which jigsaw blade?

This seems like a simple question, but I struggled to get a comprehensive answer when I recently asked it on a visit to my local hardware store... How do I know which jigsaw blade to buy, and is there a blade I can buy for multiple materials/uses?

Shaun Fernandes, by email

The experts from Festool reply:

Regardless of whether the jigsaw is being used as a corded or cordless version, in addition to the correct saw settings, it is crucial to choose the right saw blade. This depends on what the main aim is: A high cutting quality and/or fast working progress. It is important to note the aspects that have to be considered when choosing the jigsaw blade.

A jigsaw can be used to perform various sawing tasks. This has led to a variety of jigsaw blades on the market, each of which is described by many characteristics. But what exactly do these characteristics refer to? And what do you have to know? The characteristics of a jigsaw blade indicate the sawing behaviour, angular accuracy, working progress and cutting quality it achieves. This is why it is worth noting certain important aspects.

Saw blades are designed for specific materials. For example, saw blades for metal

are not suitable for sawing wood, and vice versa. This is why it is advisable to change the saw blade for every new application, even if this may seem inconvenient at first. In the long term, it is certainly worth it – not only because of the working results but also for cost-efficiency reasons.

When choosing a saw blade, we therefore recommend noting the manufacturer's corresponding colour coding. What type of sawing work is to be performed? In straight lines or curved cuts?

Curved saw blades usually have cross-set teeth since these allow the sawing direction to be changed with ease at any time when making cuts. Whether cutting straight lines or curves, the aim is to achieve a consistent cutting angle along the entire cutting edge being worked on. The saw blade width plays a crucial role in achieving this objective. Wider saw blades are ideal for extremely accurate angles, while tighter corners are easier to saw with narrow saw blades.

The material thickness is tailored to the saw blade length and pitch, the saw blade length depends on the thickness of the material. In any case, we recommend using a saw blade that is ideally 2,5cm longer than the material thickness, obviously depending on the jigsaw blade stroke. In addition to the saw blade length, the pitch must also be

noted as this describes the distance between the teeth. The pitch chosen has an effect on the cutting quality and the working progress. For instance, a larger spacing of 4mm, for example, achieves faster working progress. By contrast, a pitch of 2.5 or 2.8mm usually results in a finer cut but with slower working progress. The pitch indicates the spacing between teeth.

The tooth geometry depends on the material being machined and is crucial for the cutting quality. This means that the outcome changes depending on how the teeth are arranged on the jigsaw blade and the way in which they are ground. A "free-cut" refers to the fact that the cut has to be wider than the saw blade, as this is the only way of preventing the saw blade from becoming stuck in the material. This free-cut can, for example, be cross-set, rippled or have a ground clearance angle. With a cross-set saw blade, the teeth slope to the right and left over the blade and therefore result in a rougher cut while making faster working progress – with excellent manoeuvrability for curved cuts.

This is advisable for quick cuts in hard and softwood, aluminium and plastics. This is recommended for cuts in non-ferrous metals, aluminium and stainless steel in particular. If the cutting quality needs to be precise, fine and clean, a free-cut with



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Please note: Queries will only be answered in the magazine. Winners' prizes may take up to six weeks for delivery and are sent by the prize sponsor. Prizes are not exchangeable.



Our winning query comes from Melissa Campbell who wins a subscription to *The Home Handyman* magazine for a year.

ground clearance angle is ideal. This means that the saw blade has a conically ground end, making it perfect for fine cuts in wood and plastic in particular. In general, ground saw blades can achieve a higher cutting quality but do not allow you to progress through your work as quickly.

We recommend selecting the tooth material on the basis of the material being machined. The tooth material should be harder than the material being machined. As a general rule, hard saw blades are often brittle and therefore liable to breaking, while flexible saw blades

usually become blunt quickly. This is why manufacturers often use flexible basic bodies with hard bimetal or carbide teeth. Although these jigsaw blades are usually more expensive but cut cleaner and last much longer.

Saw blade material

- HCS High-grade carbon tool steel – for use in softer materials such as wood, fibreboard and plastics.
- BiM Bimetal – high-temperature-resistant, wear-resistant HS bimetal – for use in hardwood, hard plastics and metals such as steel, non-ferrous metal and aluminium.

- HM Carbide – high-temperature-resistant, wear-resistant saw blades – for use in abrasive materials such as glass fibre-reinforced plastics, hardwoods, cement-bonded fibreboard and plasterboard.

For more information, visit www.festool.co.za



WINNER

PU Foam query

I recently used the Den Braven PU Foam on a project and had to cut a bit off that was sticking out, I noticed the 'inside' of the foam was then exposed, how can I reseal this without having to use the foam as it will still out?

Melissa Campbell, Northriding

Michael Berg from Den Braven replies:

After the cured PUR Foam has been cut it can be either painted, plastered or coated over with the Den Braven Acyl-W. Once the plaster or acrylic is dry it can be painted as well. Do not leave any cured PUR Foam uncoated as it is not UV stable and will eventually embrittle.

For more information, call 011-792-3830 or visit www.denbraven.co.za



Disc grinder safety

I have a query on disc grinder safety... when fitting a new cutting disc, must the metal collar side face the nut or face the gearbox/washer? What safety approval must appear on a disc? And is there an age limit on cutting/grinding discs?

Theo Pretorius, by email

Greg de Villiers from Vermont Sales

replies: The steel and masonry cutting discs have a reinforcing metal centre ring on one side as it is a flat surface. The metal centre ring is meant to prevent cracking of the blade and a greater surface area for the nut to grip. It's main function though is to ensure the blade is centred on the grinder. Blades that are not flat, like grinding discs, will also most often have a metal ring on both sides.

Cutting and grinding discs do have expiry dates. This is usually expressed as a month and year, such as 03/2018. These expiry dates are printed to comply with the manufacturing regulation, EN12413:2007+A1. This date is generally printed on the centre ring and is a maximum

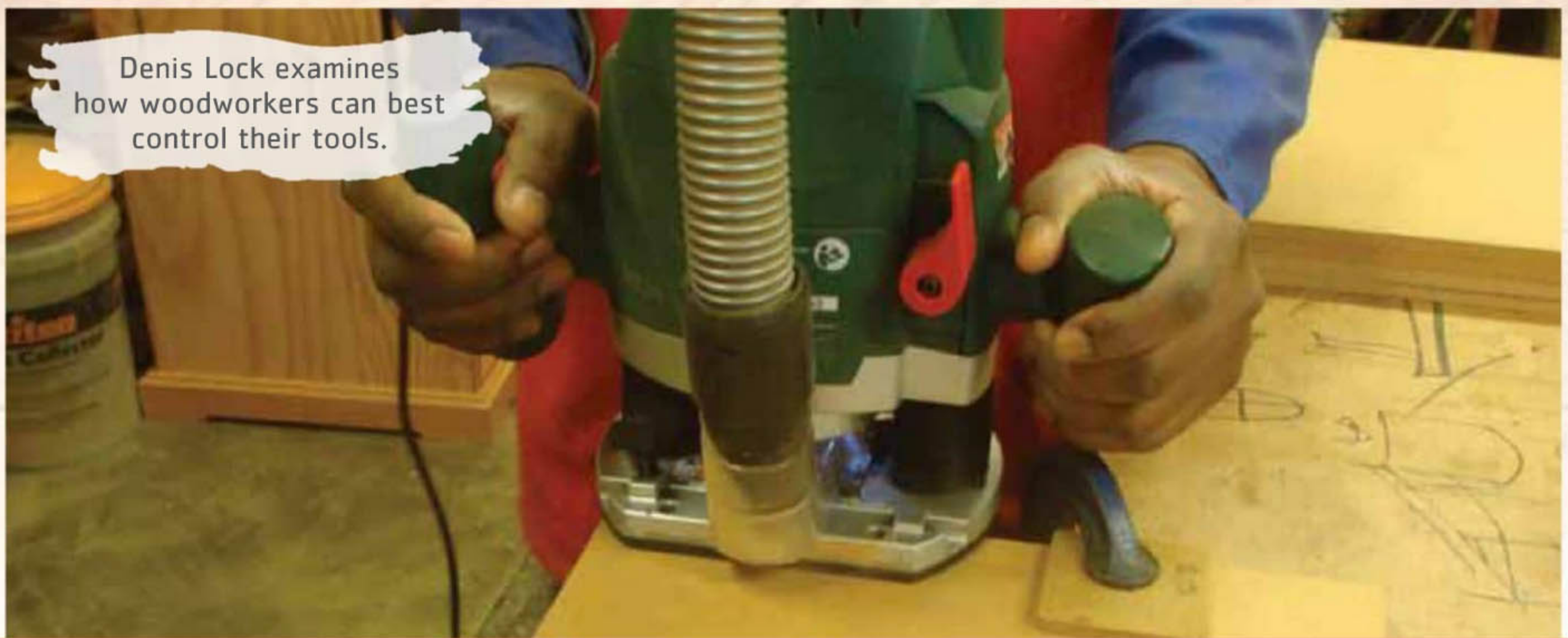
of three years from the manufacture of the disc. On smaller discs which lack a ring, this date may be printed on the label or even the disc itself.

The reason these discs have an expiry date is due to the resin used in the manufacturing process. The resin is used to bond the abrasive, and over time, this resin will absorb moisture, leading to deterioration in the cutting or grinding disc. Using a disc outside of its expiry date will lead to disc failure and a high probability of causing severe injury to the operator and anyone nearby. Retailers also have the responsibility not to sell discs that are out of date.

To avoid discs prematurely absorbing moisture, they should be kept in a cool and dry place. This will ensure a long-life disc and can be used up until its expiry date. Due to the resin bond in cutting and grinding discs, it is essential that they are stored properly.

For more information, call 011-314-7711 or visit www.vermontsales.co.za





Denis Lock examines how woodworkers can best control their tools.

Successful use of power tools part 2

In Part 1 of this series I stated that the successful use of power tools builds on three cornerstones. These cornerstones and the inter-relationship between them is shown in photo 1. In Part 1 the **safety** cornerstone was discussed. In Part 2 I will cover the **control** cornerstone.

Control: control of what? In the case of portable power tools it is control of the tool. In the case of floor-standing or bench-mounted machines it is control of the workpiece. In the first case we take the machine to the work piece. In the second case we take the work piece to the machine. Portable power tools generally have a pair of handles. Use both your hands if you want safe, controlled and accurate machining. You don't have any more hands to secure the work piece while machining. My article *Securing your work* published in the September/October 2019 issue of *The Home Handyman* will give you a lot of ideas. One of the illustrations from this article is reproduced (photo 2). Some portable machines can be used with one hand only. Two examples are a laminate trimmer (baby router) and a biscuit

cutter. Can the other hand be used to secure the work? You will get away with it nearly every time. And then suddenly the machine will kick (control is lost) and the hand holding the workpiece ends up uncomfortably close to the bit or cutter. A student of mine took a big chunk out of his one thumb while using a laminate trimmer with one hand and the other to hold the workpiece. Secure that workpiece.

Most of us wish we had larger workshops. In order to fit all the hardware in the available space we add casters, with a braking mechanism (photo 3), to our floor-standing machines. The machine is moved to the required space and the caster brakes engaged. I have yet to find braked casters that don't leave a residual wiggle. I find this disconcerting when using a machine, such as a router table, where I rely almost totally on tactile feedback for accurate work. My router table is mounted on four simple non-braked casters. They are behind the skirting and raise the machine a few millimetres above the floor (top half of photo 4) and allow it to be freely

>> Denis Lock
moved around. When the machine is in the desired place four wedges (bottom half of photo 4) and a few taps with a hammer raise the casters a millimetre or so above the floor and the machine is rock solid. This approach also neatly solves the problem of a floor that is not perfectly level. I also make sure that benchtop machines are well secured (photo 5).

Successful control while using a woodworking machine requires a knowledge of the forces that are present when the machine is operating and of the built-in control points in that machine. Three forces can be identified on a table saw (photo 6). The front of the blade pulls the workpiece down onto the table: this is good. The back of the blade pushes the workpiece up from the table: this is bad. The rotating blade can push the workpiece backwards towards the operator: this is bad but is preferable to pulling the workpiece (and the operator's hand) forwards into the blade. A bandsaw is a much safer machine. There is only one force: the blade pulls the work down on to the table (photo 7).

A router (photo 8) has a bit spinning at very high speeds: up to 30 000rpm. These bits range in diameter from 3mm to 90mm. When using small diameter bits, 6mm or less, the router can be controlled by hand alone. Beyond this size you do not have the strength, the reflexes nor the eye-hand co-ordination. Depending on direction the router is moved the forces involved will either pull the router into the work or kick it back. Some woodworkers say that a router is the fastest way to ruin a good piece of wood and the fastest way to lose a fingertip! A drill press also has a spinning bit. The speeds are lower than a router: perhaps up to 10 000rpm. The bit can grab the material being drilled and spin it in a clockwise direction.

The main control points on a portable machine are the handles (or handle) and the base plate (not all machines have one). Some machines (like a circular saw, jig saw and router) are shipped with a parallel fence that provides an extra point of control. The router needs further control points (photo 8), and most are shipped with a guide bush. Most are also shipped with a pin that can be attached to the parallel fence (or fence rod) and provide a trammel and pivot control facility. The bearings on router bits also provide a control point.

The control points on most floor standing machines are a table, fence and in some cases a mitre gauge. The table supports the work. The fence ensures that the workpiece moves in a controlled straight line parallel to the fence. A mitre gauge helps move the workpiece at a controlled angle (normally 90 or 45 degrees) to the machine's cutter.

Every time you take a machine to a piece of wood or a piece of wood to a machine you must ask yourself the following question: "Can I maintain control considering the forces at play and the degree of control provided by the built in control points?" Let us consider a table saw example: a simple rip cut. Is the piece of wood of a size so that I can push it past the blade and keep it riding along the fence without getting my hands dangerously close to the sawblade? Is the piece of wood large in comparison to the saw table will it be difficult to handle at the start and end of the cut? Is the piece of wood small and my hands will come too close to the blade? Case 1 (medium size) perhaps only needs extra control in the form of a push stick. Case 2 (large size) calls for extra control by way of an infeed roller and outfeed roller or an infeed roller and an outfeed extension to the table. The use of roller stands



Secure that workpiece



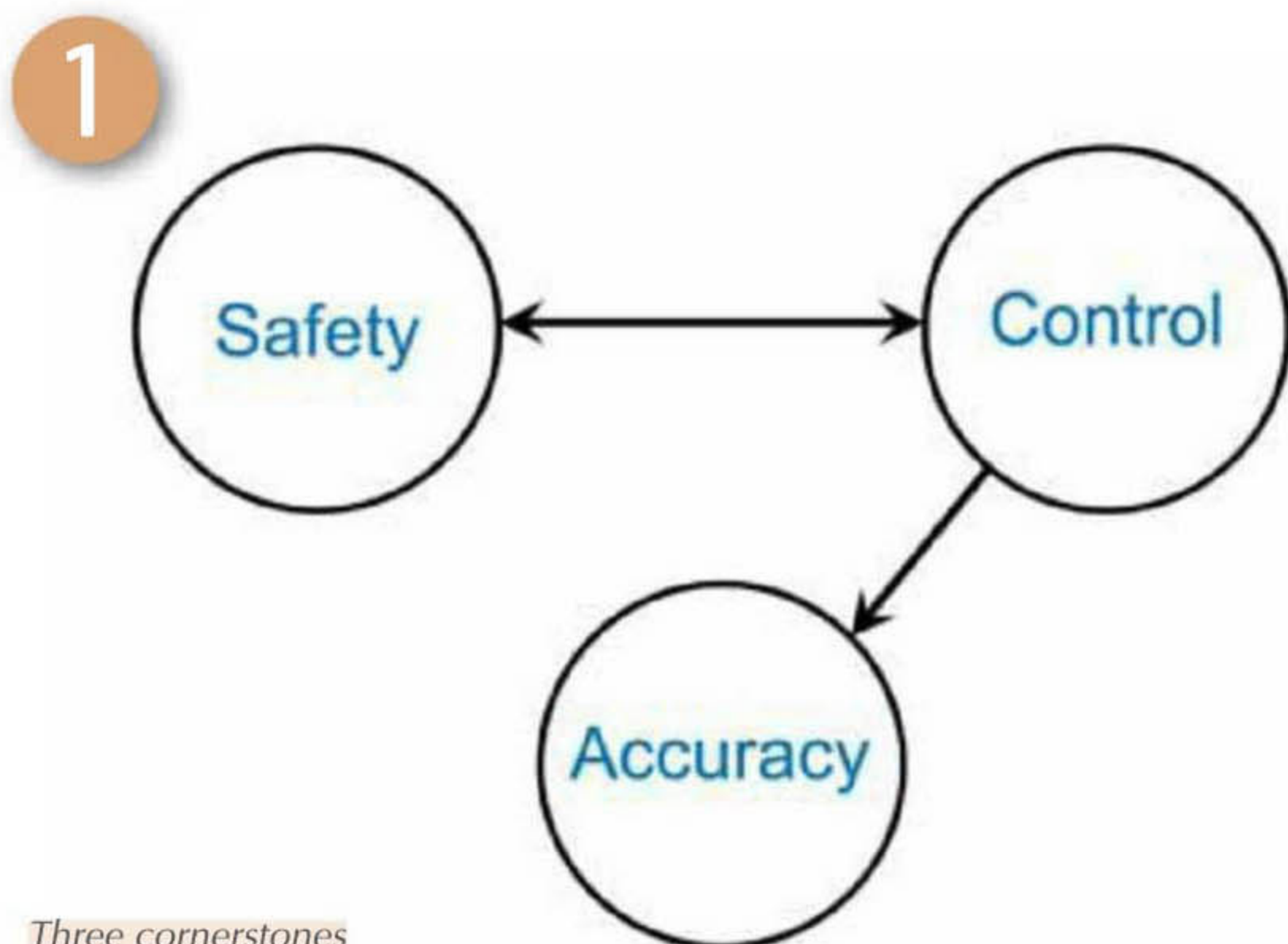
Caster with brake



Router table movement



Benchtop router secured



Three cornerstones

6



Table saw forces

7



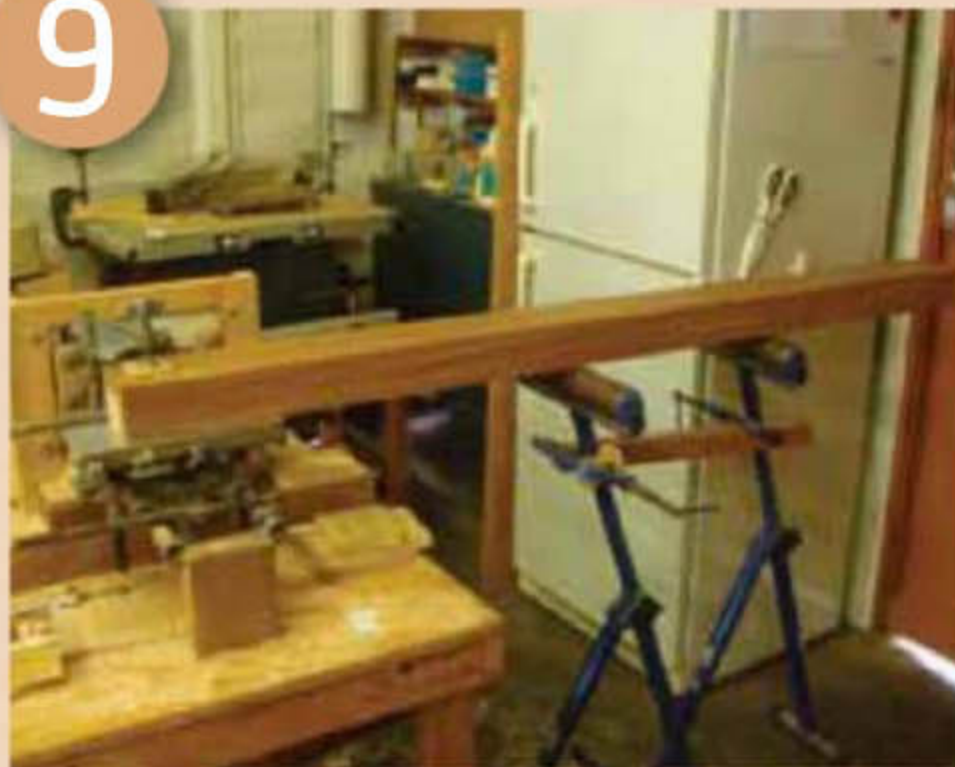
Bandsaw force

8



Router control points

9



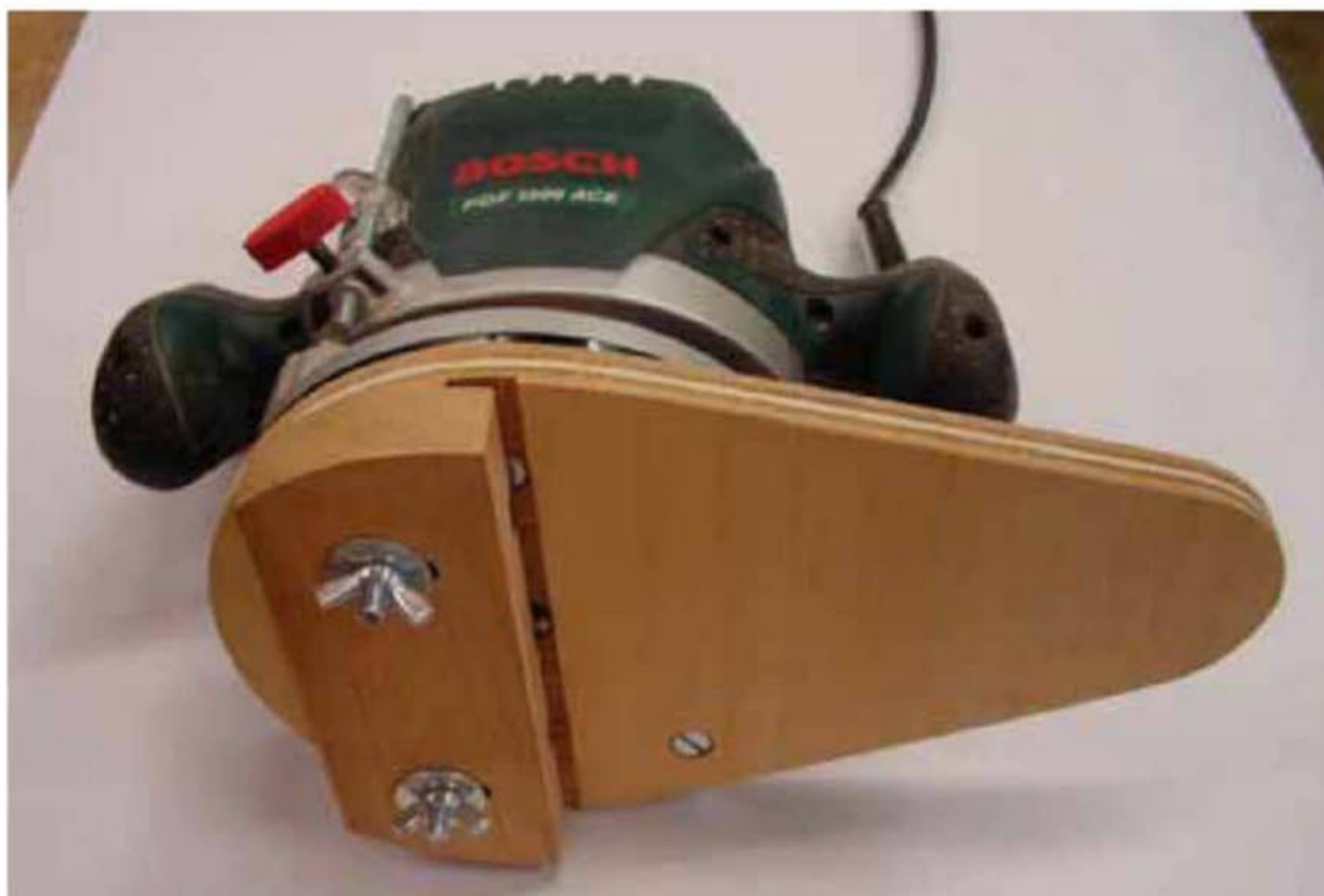
Roller stands



with a long piece of wood on a slot morticer are shown in photo 9. Is the outfeed extension table going to be a permanent fixture taking up floor space? Or is it going to be hinged and lifted when needed? I use my router table (with the fence and projecting bit retracted) as a temporary outfeed extension table. It is not as high as my table saw so I use some strips of wood to pack it up to height. Case 2 may call for a second pair of hands to provide extra control. My instruction to my assistant, Michael, is that he must not machine large sheets of MDF or plywood unless somebody else is present to help him by providing additional control (photo 10). Case 3 (small size) definitely needs a push

stick and some feather (finger) boards. If you are cutting a lot of small pieces a table saw sled with toggle clamps or other clamping aids is called for.

I find that for a large percentage of machining operations I need extra control other than that that came in the box with the machine. Collectively I refer to these as 'JAGS'. **J** for jigs and jury rigged solutions. **A** for accessories and addons. **G** for guides and gizmos. **S** for stops and sleds. Some of my JAGS are my own invention. Many are copied from commercial products. Many are copied from other woodworker's ideas. I pride myself that none of my shop-built JAGS required a visit to





Where I stand

the local engineering works. T-nuts, wood inserts (often abbreviated to woodserts) and levelling knobs are indispensable components (photo 11) in a lot of my JAGS. For the rest it is offcuts of MDF, plywood and whatever hardwood offcuts are available. Add some glue, screws, bolts, wingnuts and toggle clamps if required. Your JAGS will cost you a fraction of the commercial counterparts and give you a lot of satisfaction. Photo 12 shows my morticing jig and photo 13 shows my finger joint jig. I sell both of these for well under a thousand Rand. Commercial morticing jigs and finger joint jigs run to many thousands of Rands. Mine are every bit as accurate.

There is another very important contributor to control. It is how you use your body. I tell my students to stand with their feet apart, not like a ballet dancer. I find that I am most comfortable, and have the best control, if I stand slightly to the left of a table saw blade (as seen in the above photo). In this position my right hand is optimally positioned to feed the wood and my left hand optimally placed to keep the workpiece flush against the fence. More importantly my head and chest are not in the

direct line of a kick back. On long workpieces move (glide) like a dancer doing a Viennese waltz. Don't shuffle like a drunken sailor. Every shuffle plays havoc with your control of the machine or workpiece. The best advice my late father gave me was: "Let the weight of the machine do the work." Most of my beginning students grip the machine as if their life depended on it. I can see the white knuckles and the arm tendons standing out like ropes. This does not lead to smooth control of the machine or workpiece. Use your shoulders, waist, hips and elbows. Don't jerk like a toy robot. Smooth body movements lead to good control.

In my next article I will discuss the accuracy cornerstone. In the meantime, take stock of the control aids that you have in your workshop. What do you need to make or buy?

ABOUT DENIS:



Denis Lock runs a woodworking school and shop in Midrand, Gauteng. He can be contacted at denis.lock@worldonline.co.za or 082-267-5948. Visit his website at www.routingwithdenis.co.za
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10



An extra pair of hands

11



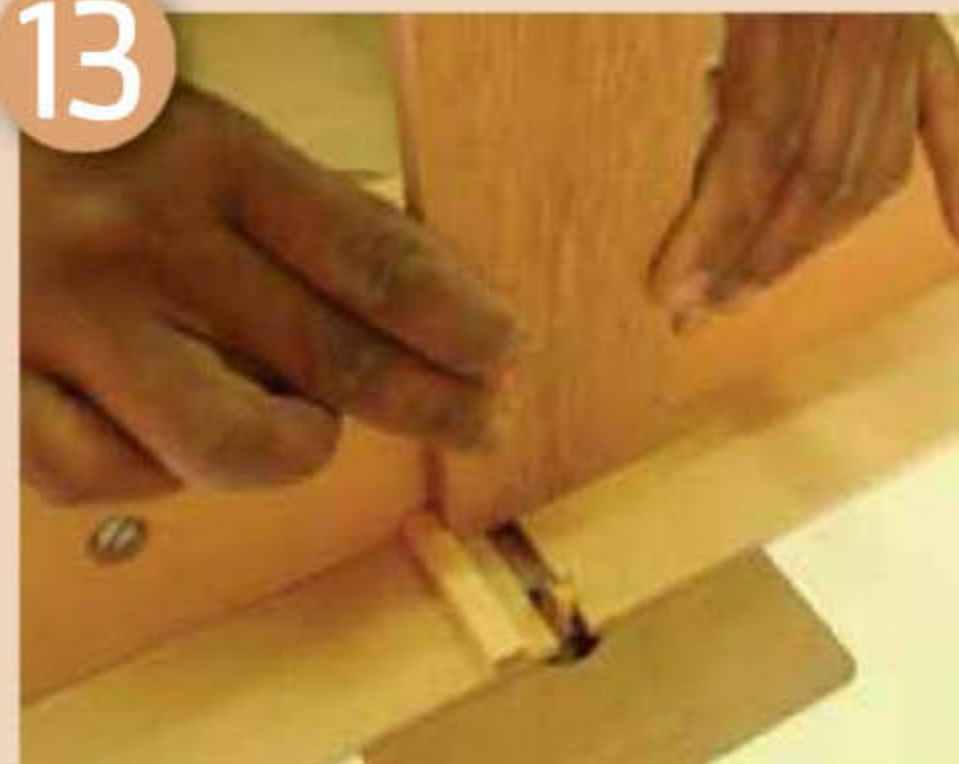
Hardware for JAGS

12



Mortice jig

13



Finger joint jig

WOODWORKER'S CORNER

Sharing techniques, ideas and a love of wood

Wits Woodworkers Toys for Charity event

The Witwatersrand Woodworkers Association held its 29th Toys for Charity Fundraiser at the Gereformeerde Kerk, Randburg at the end of 2019. The day included a spit braai, raffles, auctions and most importantly the handover of over 1600 toys to the three nominated charities; Baby Moses, Kids Haven and Little Eden.

In addition, the association raised R2,850.00 in auctions, sales and donations and this money will be used to purchase crayons and colouring books for the charities.

The Witwatersrand Woodworkers Association would like to thank the following companies for their generous support for its 29th Annual Toys for Charity Fundraiser:

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For more information, visit www.wwa.org.za



The legend of the Loretto Chapel staircase

Deep in the Southwestern United States is Santa Fe. It was here that in the 1800s seven nuns set up a school for girls, and when it was time, they built a chapel. This is where the legend of the Loretto Chapel staircase began, and ever since, visitors have been flocking to the church to get a peek at the subject of the Santa Fe miracle – the chapel stairs.

Constructed in the popular Gothic Revival style, the whole chapel was designed by renowned French architect Antoine Mouly. Unfortunately, Mouly never lived to see the work completed. The structure was sound and almost finished by 1878. The only thing lacking was a means to ascend to the choir loft. The chapel was not the largest sanctuary in the world, so a standard staircase was ruled to be too large to be practical. Other churches and chapels of the same period had ladders as opposed to stairs. However, the Sisters quickly dismissed this idea due to their attire.

Without a way to reach the loft, the chapel would not be able to function properly. While the likely proposals, suggestions, and ideas were being debated by members of the construction industry, the Sisters considered this to be nothing more than a test of their faith.

Sometime around 1880, the entire order began to pray to St. Joseph – the patron saint of carpenters – to help with a solution for the chapel stairs. On the 9th day of prayer, a visitor arrived at their door with his mule and some tools. The first thing the man revealed was that he was a carpenter by trade. He was invited in and discovered the dilemma left behind with the untimely passing of the original architect. The solo workman, unlike many tradesmen that had a look prior to him, said that it was possible to construct a useful staircase to the loft without becoming an eyesore in the available space. The only condition

he placed upon the Sisters was that he would have to work in private.

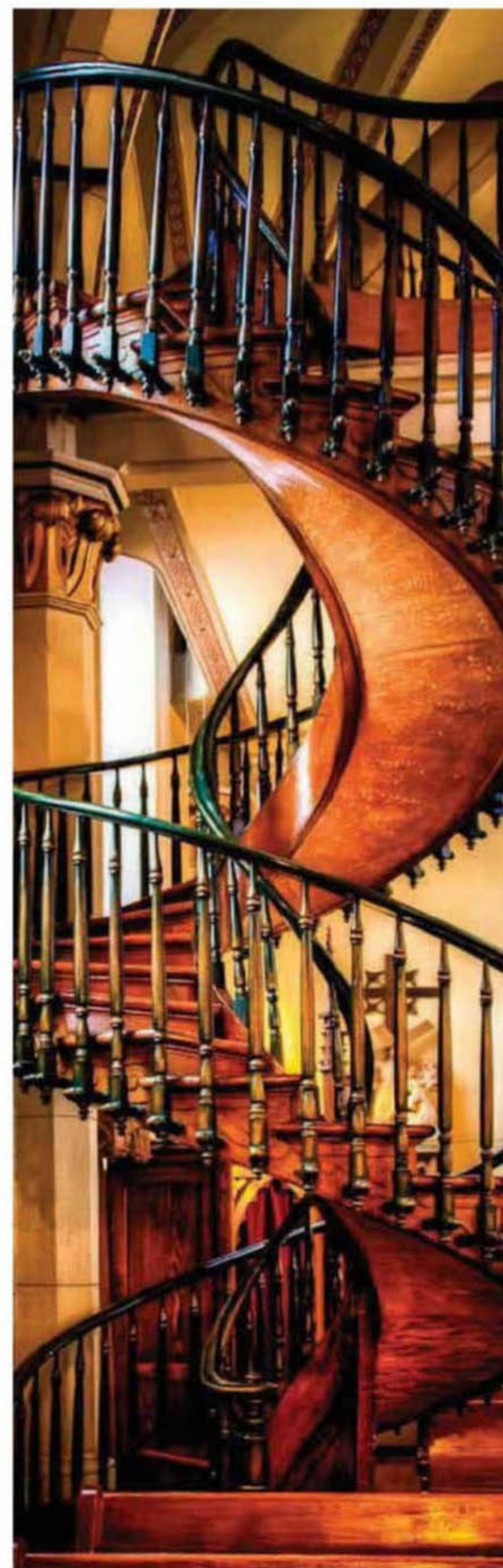
When the spiral staircase was finished, the Sisters were delighted with how it turned out. So much so, that they organised a banquet in honour of the carpenter. This was when he was discovered missing. At no time during his work did he identify himself. He never asked for, nor received, payment for his labour or even supplies. Exactly who this man was is just one of the many mysteries surrounding the Loretto Chapel staircase.

Another mystery is the construction of the Loretto staircase itself. There is no central column or support beams, and it appears that all the weight is self-supported at the base. The craftsman did not use nails or glue; he only used wooden pegs to secure the steps. Additionally, there were no railings. The legend says that some of the nuns were so afraid to descend the 22-foot drop that they would crawl down on their hands and knees. There are only 33 steps, however, the staircase wraps around 360 degrees twice. The number 33 is a significant number, being the age of Jesus at his crucifixion. The Sisters were adamant that it was Joseph himself that came to their rescue. Thus, people have given the stairs the nickname, St. Joseph's Staircase.

When local trade suppliers were contacted in an effort to track this craftsman down, none of them could help. No bill of sales could be retrieved and the wood that was used was discovered to be of an unknown type. Whatever the wood that was used, it was not indigenous to the Santa Fe area.

A modern analysis revealed the wood to be spruce, but a variety that nobody was familiar with. It was concluded that the closest possible locale for wood of this

type would have been somewhere like Alaska. Why would a Victorian carpenter transport scores of wood with nothing more than a mule, just on the off-chance that it might be needed to build a staircase thousands of miles away?



WOODWORKER'S SHOWCASE

Showcase your woodwork projects

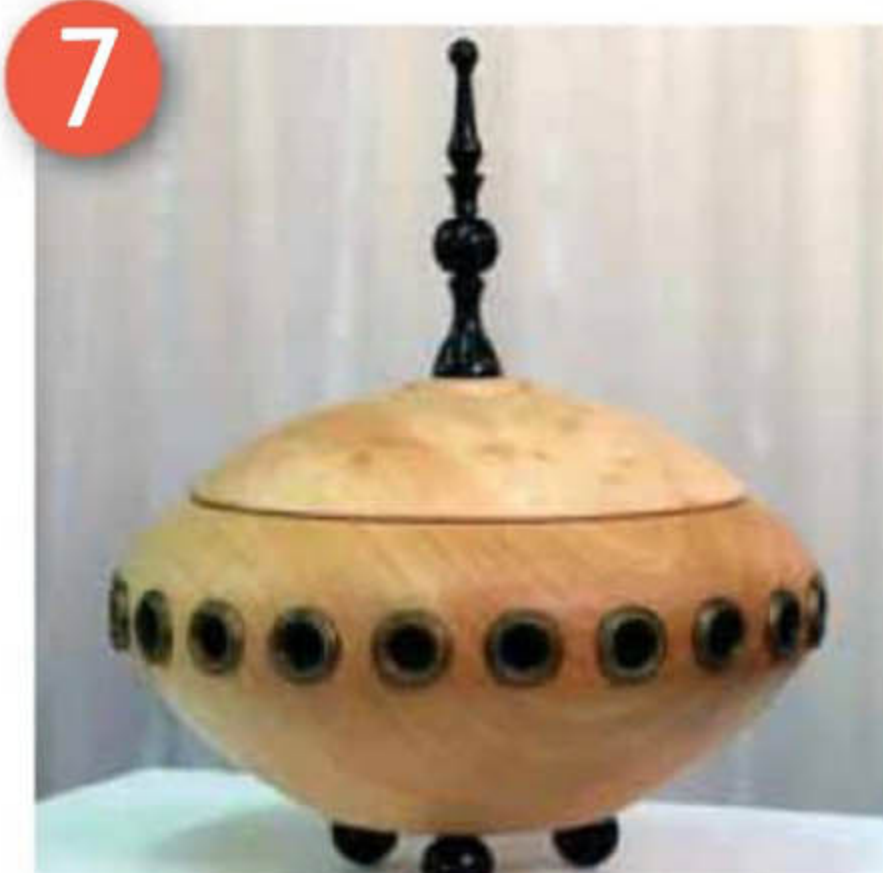
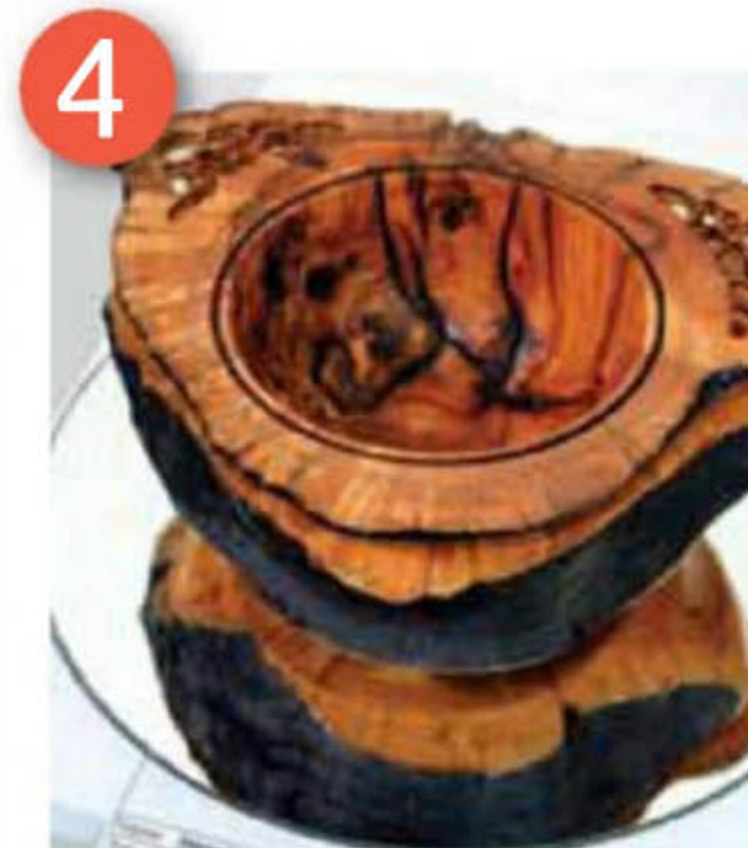
Artistic woodturning

During September 2019, Hennie Odendaal attended the Association of Woodturners of South Africa (AWSA) annual congress in Wilderness. During the congress, some of his artwork was on display in the gallery.

Hennie is an experienced boilermaker, welder, fitter & turner, music recording technician, musician and artist who enjoys the challenge that woodturning provides as it includes both a technical process and artistic element. "As I work I find that the resolution of a problem can often result in a wonderful shift into a new shape/creation, a small sketch is drawn as a reminder and then I jump

into creating the piece when the mood hits me. The new piece is actually a part of me shown to this world," he says.

"My focus on my woodturning is on precision and perfection. Each piece of wood is unique and the most enjoyable part of the process is to expose the inner beauty of the wood. If we could download the history of a tree's life it could tell a wonderful story of their life's experienced 'Sunshine and Storms'. I find that it is essential to look both inside and outside the field of woodturning for inspiration with an eye for art. Inspiration does not necessarily happen instantaneously. It often diffuses overtime."



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1. Hennie Odendaal: Out of Africa – Mahogany wood and warthog tusks. This was one of the prize-winning pieces during the AWSA 'Spirit of Africa' Competition.
2. The Send – Curly Maple and Driftwood.
3. Brick in Wall – Sleeperwood.
4. Build my Life – Wild Olive.

5. Connect Group – Yellowwood.
6. Ebenh (Build) – Wild Olive.
7. Fountain – Jacaranda wood.
8. Hand of God – Wild Olive wood.
9. Innermost Being – Londen Plane wood.
10. Innermost Chamber – Jacaranda wood.
11. Moving On – Australian Blackwood.

12. Oneness – Wild Olive wood.
13. Open Doors – Sleeperwood.
14. House of Glory – Sneezeewood.
15. Little Angel – Painted Jacaranda wood.
16. Dwelling Place – Laminated wood.
17. Presence Carriers – Sneezeewood.

For more information, visit <https://hennieod.wixsite.com/hennie-woodart>

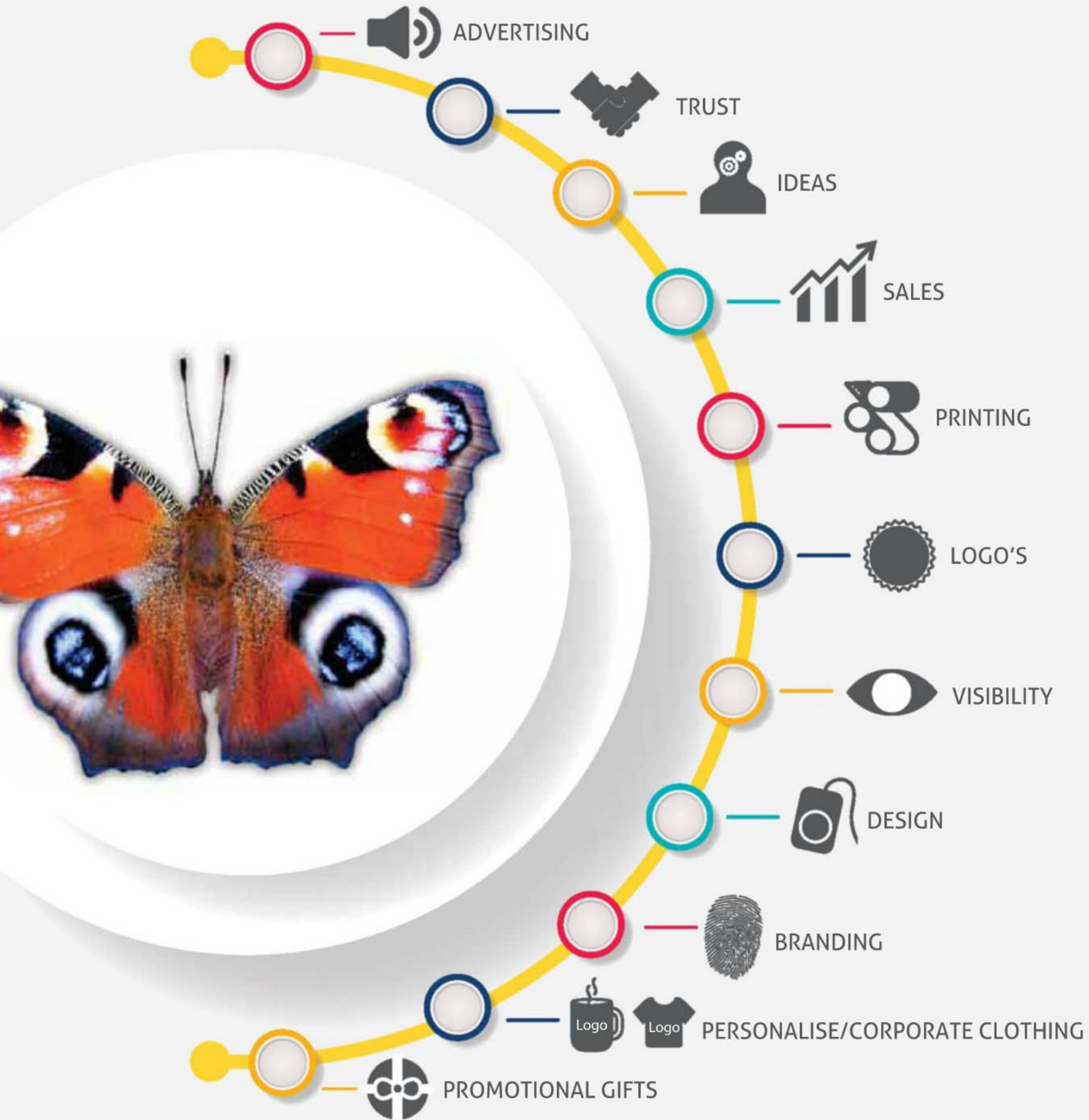
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Send us pictures of your project.

Write a caption with your name, surname, inspiration, type of wood, etc. and send to editorial@homehandyman.co.za



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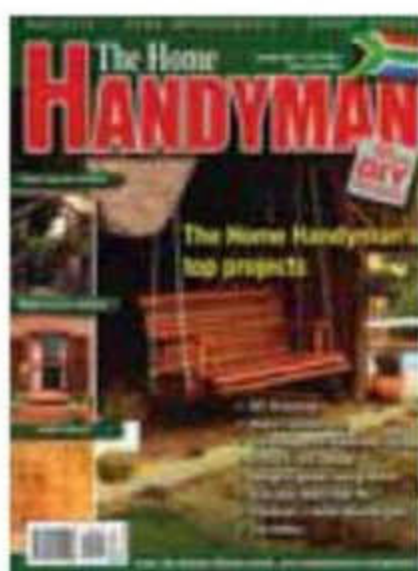


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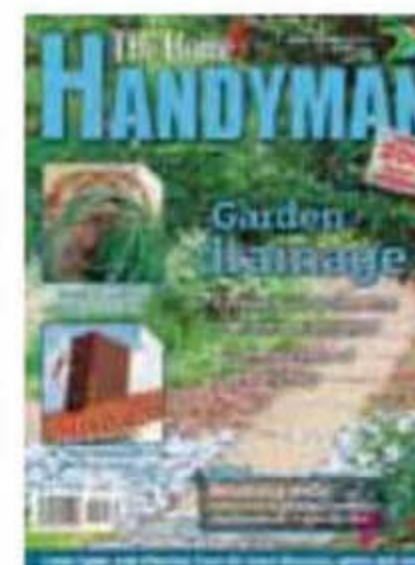
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Rules to live by

About Annalien:



Annalien started her career at the *SABC* on *50/50* before moving to Germany after she met her husband. Later, they returned to South Africa and she took on various freelance projects, eventually getting hooked on DIY. Annalien was part of the team on *The Home Channel's Get It Done!* series.



>> Annalien Grensemann

Some rules are universal and are applicable to many different areas in life. If you can stick to these basic rules you are going to be fine at whatever you tackle in life. Whether you are going to school, university or work for the first time, or you want to bake a cake or even make that coffee table you wanted for so long, you have to start off on the right foot.

Rule #1: Have the right tool for the job

Being a stay-at-home mother, my creative juices often start to flow in parallel with the impatience of waiting for my husband to get to that 'fix it' list. This is exactly when my relationship with the DIY world started. I decided to sand all the inner doors of the house as I had a vision to update the design of the house which was built in the 60s. And I wanted it done before parents-in-law arrived from overseas to meet their newest grandchild...

I found an orbital sander in our workshop and thinking, "a sander is a sander," I tackled the first door with enthusiasm. After working for quite some time and not getting anywhere trying to rid the door of the old paint, I decided to ask for some advice. A whole world opened up for me on sanders and sanding paper. Armed with a belt sander and enough sanding paper of different grits, the job was a breeze. I learnt the hard way that an orbital sander gives a soft finish to the wood before you paint or varnish, but don't expect it to take off a high amount of material i.e. old paint or rough wood.

You will be disappointed and very tired...

So, the moral of the story is, pick the right tool for the job.

Rule #2: Never compromise

I went through a phase, yes and it was only a phase, where I wanted to make my own clothes. I had these wonderful creations in my head and... a small plastic sewing machine. I was willing to spend a lot on the fabric, but decided that this small and very cheap sewing machine was going to do the job. What could go wrong?

Walking into the fabric store made my fingers tingle with anticipation and I was as nervous as a racehorse at the Durban July and I couldn't wait to get started. Arriving home I took the sewing machine out of its box and read the manual carefully. Everything was still going fine, until the first hiccup when the thread started to make bird nests and the needle broke for the third time. The struggle was real. My family avoided my workroom and tiptoed past the door, trying not to hear my desperate exclamations of frustration.

Well, that was how my sewing dream ended. I can't help but think if I hadn't compromised on the sewing machine, I might have become the next Marianne Fassler!

So, make sure you have the best tools to enjoy your craft or passion. Invest in yourself and have fun!



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