

The Home HANDYMAN

September/October 2019 • Vol 29 No 9



**HOW TO MAKE AN
INVISIBLE WINE RACK**



MAKE A BAR STOOL



Makeover on a budget

Build your own carport

Carport designs

Chose the right materials

Building regulations and municipal by-laws



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- Upcycle glass containers
- Protect outdoor wood
- For the kids: make a weather vane and a rain gauge



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The Home Handyman is published bi-monthly (6 issues per annum) by WJ Lindeque cc t/a BB Print (CK99/23366/23)

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Printing House of Print | 011 474 8750

Distribution Republican News Agency | 011 248 3536

About *The Home Handyman* magazine:

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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Subscription Fees:

South Africa	Printed	Digital
Back Copy	R35.50	R27.95
6 issues	R209.00	R169.00

Neighbouring countries: R528.00 for 6 issues

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FROM THE WORKBENCH

Get in touch, get involved

One of the things with publishing that you never get used to is the long lead times when working on a magazine. You are always looking and thinking ahead to the future, firmly focused on the next issue and the next deadline.



While I write this we are in the midst of winter – I have my heater on, my thermals on, and am wearing two pairs of socks. Despite being a winter baby and much of my heritage coming from Europe, I just cannot stand the cold. I wear layer upon layer of clothing to keep warm and despise the cold, dark, early mornings which we experience in Johannesburg. While you read this, however, we'll be at the start of spring and the onset of warmer weather.

The challenge comes when writing certain articles, such as the one in this issue on 'Cooling your home'. I am doing everything possible to stay warm, yet need to change my perspective to 'summer thinking'. The same scenario happens when we write articles on fireplaces or heating your home, often in the middle of a heatwave, for publication in the cooler months. My only consolation is the fact that the way these years are seemingly flying by, the warm weather will have returned before I know it and I will be back to being barefoot and wearing a T-shirt and shorts at 6am, which seems implausible right now...

Now onto this issue of *The Home Handyman*. We have some great articles lined up for you, including a number of woodworking projects, our usual metalworking project, some crafts and our Young DIY'er project to tackle with the kids. There's also an article on a makeover for a child's bedroom (my seven-year-old son's room). We've been working through the house a room at a time, and after his two older sisters had their rooms done, it was now time for his. Armed with a camera, we set a weekend aside to tackle the project, and he is over the moon with the finished project. As mentioned in a previous issue, we still have lots to do in and around the house, which will not only provide content for the magazine, but force me to get stuck in tackling the projects as well!

Once again we encourage readers to get involved and send us their projects. You don't have to be an amazing writer – that's where we can help – so even bullet points of your step-by-step process can be turned into an article. Photographs of the process are also very helpful. Again, you don't have to have the most expensive camera or have done a photographic course, and even photos taken on a smartphone at a high resolution and with decent lighting can be used in the magazine. So there's no excuse! Please feel free to get in touch with me by email (editorial@homehandyman.co.za) if you have any questions on sending through an article or you would like to propose a certain project. Looking forward to hearing from you!

Gregg

Makita

Sanding Solutions!

M9400B Belt Sander



This sander is well-balanced with a low centre of gravity for better control and easy operation. This is the tool of choice for a variety of uses such as sanding wide wooden panels, flattening glued up panels or even stripping layers of old paint.

M9203B Finishing Sander



This compact, lightweight, 1/3 sheet finishing sander is easy to handle and your perfect partner for all those hard to reach corners.

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M9200B Finishing Sander



An extremely versatile 1/4 sheet sander.



One of the most useful tools that a contractor, small business entrepreneur or DIY expert could have in their tool arsenal. This sander is ideal for stripping paint off furniture, preparing new moulding or cleaning up between finish coats. Even metal and composite materials such as solid surface counter tops can be smoothed and cleaned.

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OFF THE SHELF

Your guide to the latest products in the world of DIY

Clean with a single wipe

Vacuum and wipe with the FC 5 – floor cleaning at its fastest

In many households, weekend plans often include cleaning. Floor cleaning is one of the most time-consuming household tasks of all: first of all it requires vacuuming, then mopping, waiting for the floor to dry, and finally cleaning the mop. With the new Hard Floor Cleaner FC 5, floor cleaning is now much faster as it combines vacuuming and mopping in a single step. From spilt coffee to muddy footprints and hairs – everything is cleared up with a single wipe.

The characteristic feature of this hard floor cleaner is the two quickly rotating microfibre rollers, which are moistened continuously with a detergent solution. They loosen the dirt and wipe it up off the floor and dirt and moisture are continuously vacuumed by the rollers. Compared to the classic mop, the FC 5 always cleans the floor with clean rollers and fresh water. A further advantage is that the dirty vacuumed liquid is drawn into a separate tank, which can simply be emptied after cleaning.

With its unique system operation, the FC 5 not only saves time, but water too, compared to a conventional wiping mop. With just one tank filling of 400ml, all hard floors, from stone to wooden floors, with a surface area of up to 60m² can be cleaned quickly and easily. This reduces the environmental impact – and patience required – as the device's resource-saving operation means that the floor is dry in under two minutes. And with the FC 5 there is no unpleasant rinsing and wringing out of the wiping mop by hand. The tank is very easy to empty without coming into direct contact with the dirty water. The hard floor cleaner is then placed back in the parking and cleaning station provided, filled with fresh water and the self-rinsing function is started.

For more information, visit www.karcher.co.za or call 011-657-7300



Quality crack filler

A new and handy sized 300ml PUR Foam canister

Den Braven's 300ml PUR Foam canister is an addition to the highly regarded range of strong, dense cell (foams vary in density and strength) structured foam fillers for filling large cracks between walls, ceilings and floors, gaps around pipes, windows and doors, loose tiles and boards and much more. Ideal for use in partition walls, on concrete, brick, stone, plaster, wood, metals and many plastics. It is water resistant, a good sound insulator, and 100% CFC free.

Method of application:

- Shake the canister approximately 20 times before use
- Screw the adaptor firmly onto the valve
- Turn the canister upside down and tilt the adaptor.
- Press the adaptor to extrude the foam – holding the canister upside down – with nozzle in gap.
- Fill approximately half of the cavity.
- If the gap is wide the foam can be applied in layers – wait for between 15-30 minutes between layer applications.
- Spray with a fine water mist to assist with curing.
- The PU Foam will start to expand. Once fully cured (24 hours), cut off excess foam and seal or paint the join or gap.

Keep PU Foam upright when transporting or storing, and handle with care. Den Braven PU Foam is supplied with free gloves (under the cap of the nozzle) and an apron should also be used to protect clothing. PU Foam Cleaner dissolves uncured PU Foam.

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



High grip adhesive

A quality tiling application system

Mapei, has developed an easy-to-use, high grip-strength cementitious adhesives system for the tiling of walls, floors and ceilings, ideal for the homeowner/DIY market.

Kerabond T-R (C1T) and Kerabond TR Express (C1FT) are cementitious adhesives with no vertical slip and composed of fine grade resins and materials that lend extraordinary strength bonds and making them suitable for ceramic, porcelain, natural stone tiles and mosaics. Kerabond T-R Express also offers the added benefit of a fast curing time of just six hours. Another plus of these adhesives are that they can be used in either internal or external applications on walls or floors.

"What makes these adhesives unique is their anti-slip and high grip strength on almost any surface, albeit concrete, synthetic, wood, gypsum or almost any other surface. This makes it a must-have for contractors working on multiple surface types or where instant adhesion is required without the risk of slippage," says Ntobela Zamaswazi, product manager ceramics Mapei South Africa.

For more information, visit www.mapei.co.za or call 011-552-8476



Metal cutting made easy

Cuts straight, shapes and angles in sheet metal, stainless steel, copper, aluminium, plastic and plywood

Tork Craft's new Pro Series metal cutter cuts all types of metal, plastic and even wood. The tool attaches to an electric or cordless drill, delivering 3000 rpm, and offers an accurate cutting speed of 2m per minute, producing clean, professional cuts with no burrs at the cutting edge. It can be adjusted 360° to meet any cutting angle, allowing you to cut straight or any shape or pattern.

Once fitted to your power drill it offers a secure and comfortable handle, making cutting a walk in the park. Metal bit cooling oil is recommended for long cuts.

The tool comes with very clear operating instructions which are simple to follow. When cutting plate, mount the plate to be cut about 15cm from the cutting platform or bench; the drill and cutter must be vertical to the plate you are cutting.

The Tork Craft Pro Series metal cutter has turned metal cutting on its head, making sheet metal and all other metal cutting a quick, easy and simple task. It is the perfect tool for industry, metal workers, workshops and the DIYer. The kit comes with a tool change spanner and a spare cutting shaft, while a full range of replacement parts and spares are also available from the agents.

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



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VOICE YOUR VIEWS

Do you have any thoughts or comments on DIY issues?



Share your opinion

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Send us your views, ideas and opinions and you could win a Makita M9203B Finishing Sander



Send your queries to:
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Please include your name, physical address and contact number (office hours)



Alec Rasmann

wins a Makita
M5802B circular saw

Prizes are not exchangeable

A great resource

I just wanted to say thank you for providing my wife and I with an abundance of DIY and décor ideas for our home. We were never particularly 'handy' but since retirement have been looking for things to keep ourselves busy with, and the daily upkeep of

our home has certainly done that. We spend hours looking on the internet for ideas, but have also found *The Home Handyman* to be a great resource for projects, tips and ideas. Looking forward to many, many more issues.

Randal Fraser, Umhlanga

South African specific plumbing plans

Where can I get full DIY instructions for installing and plumbing a bathtub in a South African household? All the information I have found on the internet is for American households.

Paul Baatjes, by email

Ed replies: Thanks for the query Paul. We would suggest getting in contact with IOPSA, the Institute of Plumbing South Africa, who will be able to lead you in the right direction. Their telephone number is 011-454-0025, or you can visit their website at www.iopsa.org. Good luck!



Wood for a guitar

I will be attempting the ambitious woodworking project of making my son an electric guitar for his 18th birthday early next year. It's daunting but I know that I will learn so much while doing it, and it will be a present straight from the heart (and the hands). I have dug up an old copy of *The Home Handyman* which shows you how to do it step-by-step, yet while not a guitar player myself, I have seen in my research that the kind of wood used can have an impact on the sound of the guitar – is this true?

Alec Rasmann, Rivonia

Ed replies: What a fantastic gift that will be! The wood that goes into making a guitar, whether it's an acoustic or electric, is a very important thing to consider. The major features of guitars that are made from wood are the body, which is the largest part of the guitar, where the sound emanates from, and the neck and fingerboard, where the frets are located. The types of woods that are used in these parts of the guitar affect sound, weight, tone, and the overall look of the guitar, making it a very significant part of the guitar-making (and playing) process.

These are the types of wood typically used for the body of a guitar:

• **Alder:** This is a commonly used, lightweight wood that gives off a full sound and clean tone and is used to make Fender Stratocasters. Its light tan colour along with minimal distinct grain lines make it a good wood for solid colour finishes, as opposed to a clear finish.

• **Ash:** This wood comes in a harder, Northern variety and a softer, Southern variety. The harder Northern ash brings a bright tone and long sustain to the guitar, while the softer Southern ash has a warmer, brighter sound that's quite balanced.

• **Maple:** Both the hard and soft varieties of maple are used for guitar bodies. Maple provides a bright tone, along with good sustain, in addition to being easy to finish and very durable.

• **Rosewood:** A very heavy wood, rosewood, like alder, is used for Stratocaster bodies and provides a warm sound, with a smooth high end.

• **Korina:** Korina has a very warm, resonant, and balanced sound, with great clarity, definition, and sustain. This lighter hardwood is used by Gibson and Hamer, and has a fine grain that looks great when finished.

For the neck and fingerboard, the most commonly used woods are maple, bubinga and ebony due to their hardness.



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.

A place to meet, collaborate, inspire, learn, plan, build and play

Johannesburg has a brand new and exciting design district workspace with the launch of The Design Assemblage. While Kramerville is now recognised as the city's residential design district, this Illovo based space (at Oxford Manor, 196 Oxford Road) will focus on commercial, corporate and office design.

Attending the recently held launch was acclaimed German industrial designer and architect Stefan Brodbeck, Steelcase global account manager Mickael Locoh from the US and award-winning South African architect and urban designer Pierre Swanepoel.

According to curator Nikki Wilsworth, The Design Assemblage is a place where the creators of the workspace of the future can convene, meet, collaborate, inspire, learn, plan, build and play. Says Wilsworth: "It's a space that we hope will inspire creativity and encourage conversation; a space for knowledge share, business, intellectual expansion and meetings for enthusiasts and trailblazers and those immersed in the field of design."

The beautifully appointed TDA venue at 196 Oxford Road is set to host a programme of inspirational, transformational, topical events and activities for the design community, made up of expert lectures, workshops and masterclasses. These will take place on a weekly basis and will be free of charge.

In addition, Wilsworth sees the space as being used for other, more convivial and informal creative purposes, such as wine tastings, exhibitions and installations, book and product launches and regular coffee mornings.

For more information, visit www.thedesiginassemblage.com



Balwin-sponsored bricklayers complete training course

The recent Quarterly Labour Force Survey published by Stats SA indicated a spike in unemployment with some 27.1% of the country's employable population actively seeking work. This is most notable in the construction industry where a severe skills' shortage is resulting in even fewer people finding meaningful work.

Through its ongoing bricklayer training courses run at three training centres in Avoca (KwaZulu-Natal), Lansdowne (Cape Town) and Lawley (Gauteng), Corobrik continues to tackle this unemployment crisis by empowering unemployed individuals with usable skills in the construction industry. This was the case for 18 residents of the KwaDukuza area who completed the nine-week bricklayer training course at Corobrik's Avoca training centre, with the graduation ceremony held in July.

"I'd like to congratulate every candidate on the successful completion of this course, as well as The Balwin Foundation who sponsored all 18 individuals," said Berkley Petty, Human Resources Development Manager at Corobrik. "This is a really comprehensive bricklaying course, and the dedication and commitment were well worth it. The skills learned will undoubtedly contribute towards the future of these now skilled bricklayers."

The course consists of 14 modules which covers common and face brick construction. During the course, participants were required to build a three-room home up to roof height with gables, all the while learning skills related to laying clay bricks, concrete blocks and paving.

Derrick Dimba, Corobrik's Building Training Co-ordinator, said

the graduates would now be able to construct houses, garden walls and perform alterations, all completed to a high-standard of workmanship. "It is good to be training people in bricklaying skills so that they can find valuable employment," commented Dimba.

This is the second group of candidates sponsored by The Balwin Foundation, a company which is busy with construction of a Ballito-based development. Cindy Mkhize, Foundation Assistant at The Balwin Foundation, said they invited local community members to apply for the training programme.

The Corobrik bricklaying course continues to meet the growing demand of quality bricklayers in the construction industry. Its Avoca Training Centre has been running for 27 years, during which time Corobrik has successfully trained more than 1 000 bricklayers.

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



Fundamentals of hand-held routing course

The router is, without doubt, the most flexible power tool you could own. Its use, however, is not intuitive and new owners need to be started off on the right foot if they are to realise the potential of this machine. Existing users need to learn what they are missing. Our contributor, Denis Lock, offers such a course designed to meet this need. It is currently scheduled for the Saturday's of August 24, September 28, October 26 and November 23. Additional weekday courses can be arranged for one-on-one/one-on-two training.

For more information, contact Denis on 082-267-5948 or denis.lock@worldonline.co.za



Pratley drives products for the automotive sector

Pratley's products for the automotive sector range from Pratley Steel Putty to Pratley RTV Silicone Gasket Maker. Both of these products have found wide acceptance in the automotive sector, Pratley National Sales & Marketing Manager Mark Bell highlights.

Pratley Steel Putty is ideal for applications such as sealing metal water tanks, and repairing cracked sumps, metal castings, radiators, and petrol tanks, among others. It can also be used to fill blowholes, and can be used on engine castings. A major advantage of the putty is that it can be extensively machined after curing, meaning it can be easily cut, drilled, and sanded down as required.

Another benefit is the product will not corrode, which makes it ideal for humid environments where corrosion is an issue. There is also no additional strengthening requirement once the putty has hardened, which can be spray-painted for aesthetic purposes.

Pratley's RTV Silicone Gasket Maker is a new flange sealant and gasket maker in the form of a tough and elastic silicone rubber for superior sealing. It can tolerate extreme temperatures of -50°C to +300°C for short periods, and is chemical-resistant to petrol, diesel, paraffin, water, oil, and anti-freeze. The product has no negative effect on electrical components such as vehicle sensors. In addition, it's non-corrosive, and is ideal for engine sumps, gearboxes, pipe flanges and water pumps, to name but a few applications.



Some of Pratley's other products which are ideal for the automotive industry include Pratley Wondafix Car, Pratley Pratlok anaerobic thread lockers, Pratley 1-2-3, Pratley Ezeebond, Pratley Powda Bond, Pratley Rubber Tape and Pratley Safety Cleaner.

For more information, visit www.pratley.com



September highlights on the Home Channel: Big House Little House

On Big House, Little House, interior designer Aidan Keane helps owners create amazing new spaces in their homes. In each episode, we see him lending his expertise to two families with two very different homes; one big and one small. The homeowners are also working with completely different budgets, but all have very similar renovation projects in mind.

Aidan reckons that by following his clever tips and tricks, these renovators should be looking to add to the value of their homes by a lot more than they spend. Using his years of experience, he helps these homeowners budget wisely – but will they listen?

Both big and small, we'll track the different projects all the way through to completion and see which design decisions add value to a home, and which do not.

Carports offer a form of shelter and protection from the natural elements such as sunlight, rain and hail

Shading it

We guide you on the best approach to building your own carport to protect your assets

Carports and related shadeports offer a form of shelter and protection from the natural elements such as sunlight, rain and hail. They are often erected to protect motor vehicles, caravans, trailers or boats, but can also offer protection to stacked timber, machinery or other items. However, before you can haphazardly throw a structure together, there are several important considerations.

The law

Yes, there are rules and regulations that

infiltrate our everyday lives and carports are not exempt. We can argue the point of municipal incompetence, corruption, other building structures going up without plans or permits and the lack of enforcement, but where do you stand legally should an inspector visit you shortly after you've constructed your magnificent R50 000 carport?

Let us look at the regulations and where exactly carports fit in. The first port of call is SANS 10400 – the application of the National Building Regulations. An open-sided carport which does

>> Warren Schmidt not exceed 40 square metres in size is considered as a 'Minor Building Work'. Minor building works include structures such as braais, gazebos, pergolas and tool sheds. These structures, including carports, generally do not require formal building plans. However, most municipalities will still require a formal application to be lodged and filed in terms of building or erecting a carport. Each municipality may have a different set of requirements, so first check with your local council as to what they need from you. A sketch showing the design and materials to be used may need to

accompany your application form and a fee may be payable to the council.

When enquiring and submitting any forms, always keep copies and record the date, time and person consulted, so that should any issues arise later, you have all the facts and documents on hand.

If you reside within a community scheme, such as a housing development, townhouse complex or security estate, you will also require permission from the body corporate or trustees before you can go ahead and build a carport. The design and materials may need to be in accordance with prescribed standards or designs approved by the trustees.

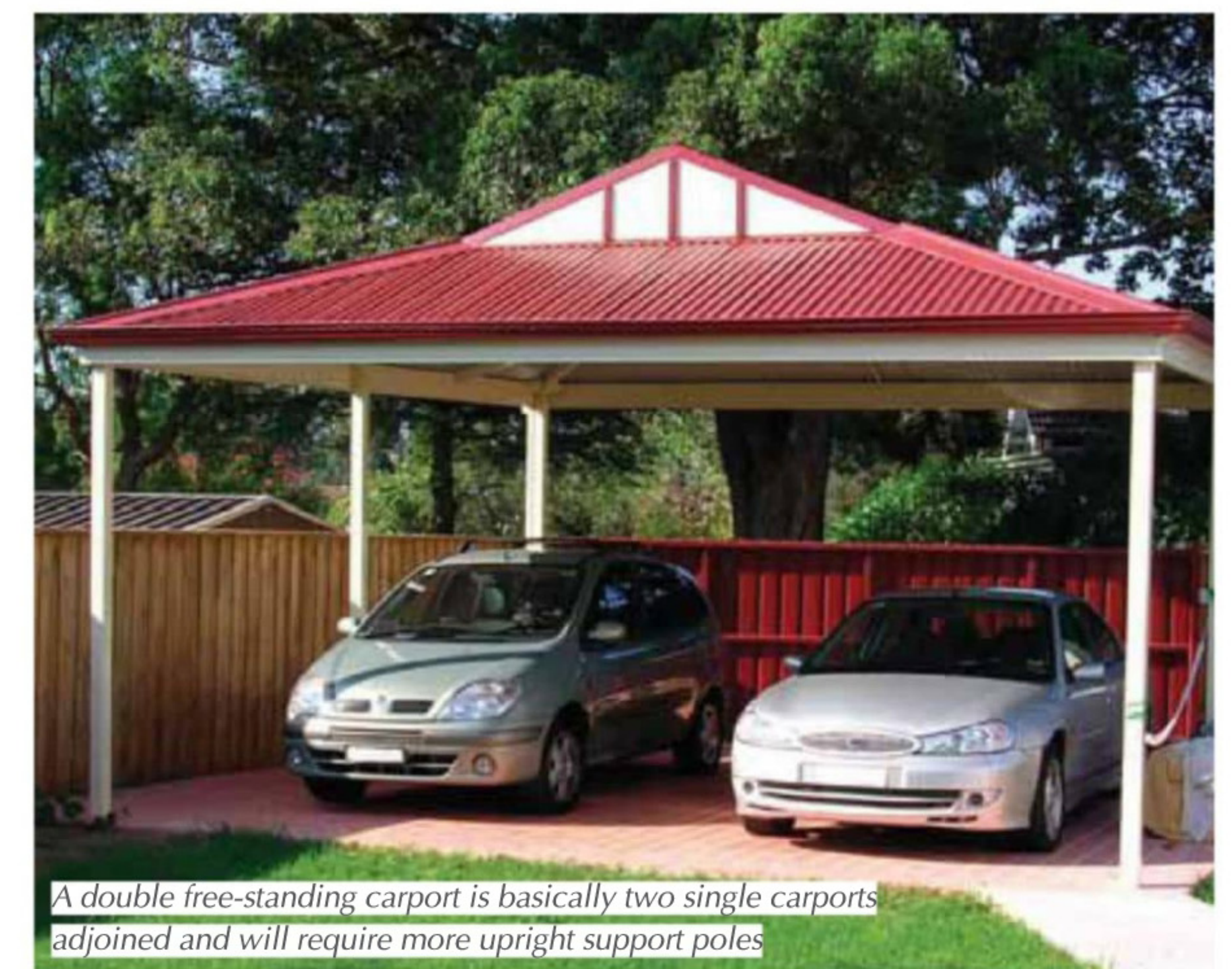
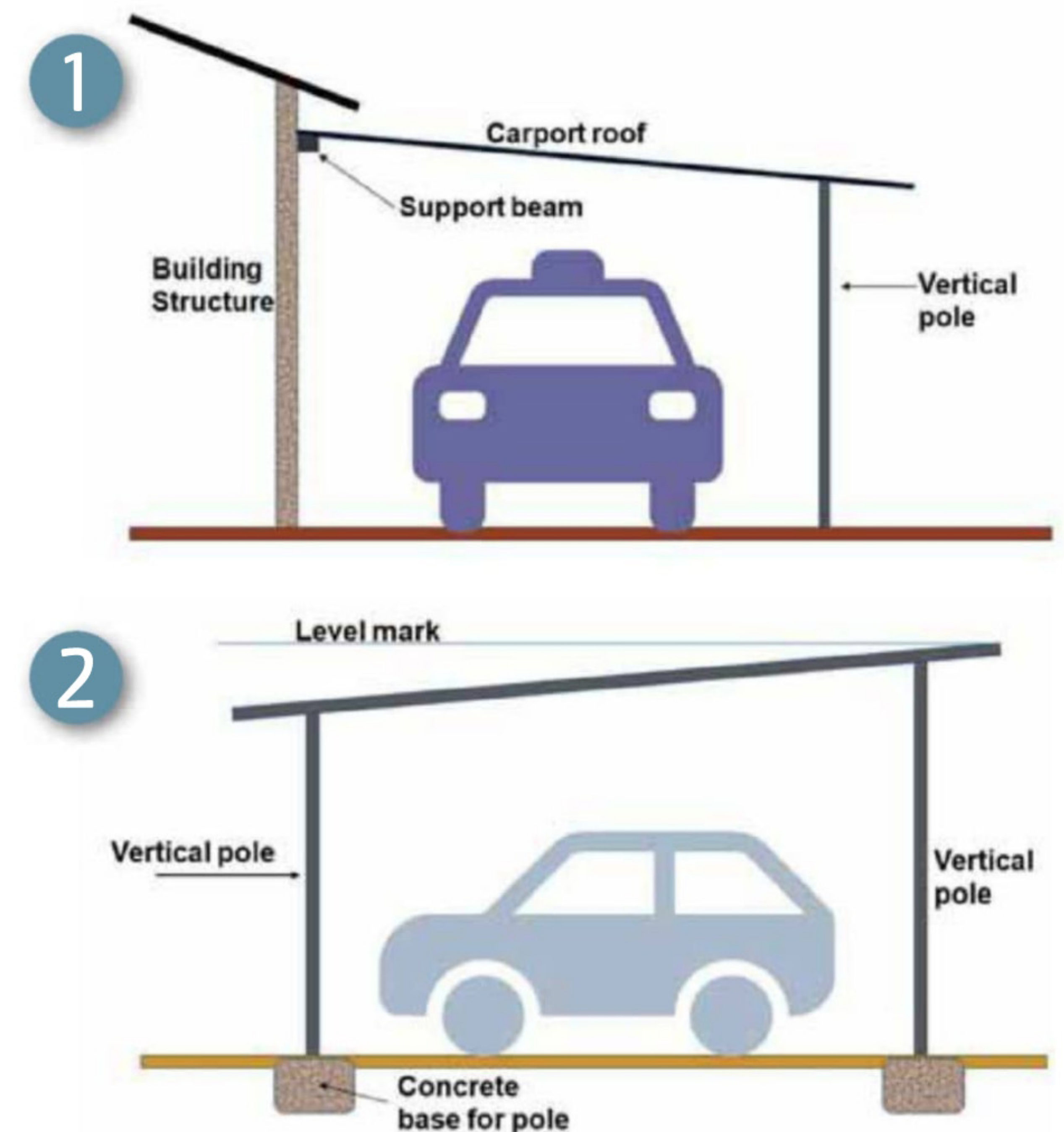
Be cautious when dealing with contractors as sometimes they may not give you the correct advice and once the structure is up and they have their money, the onus will be on you to defend any litigation that may arise.

Structure and materials

Now that you have municipal approval, you can begin building your carport. Because carports have become popular in recent decades, several companies and steel manufacturers custom make the frames and materials needed for DIY carports. It's worth checking some of these companies out as it may save you time and effort in the long run. DIY kit forms usually have all the bolt holes and braces built in so that you simply need to fit it all together. Steel manufacturers have also designed specific structural beams and roofing sheets that can be easily incorporated into the carport design.

Timber

Timber is seldom used in carport design today, although structures can be built using treated poles for the support and cross beams and some form of roofing material. It is important that the timber beams are bound together in such a way as to provide structural integrity. For example, heavy beams or poles should never be nailed together as the



A double free-standing carport is basically two single carports adjoined and will require more upright support poles

nails could work loose causing the pole to fall onto your vehicle or cause injury to someone walking underneath. Threaded rod with appropriate washers and bolts should be used to fasten the poles together. All timber exposed to the elements must be treated to avoid decay or insect damage which could weaken the structure over time.

Metal

Steel round tubing, square bar or channelled steel beams are all used in carport design. An important consideration is the weight and structural strength of the carport. Some steel beams are restrictively heavy and designed for heavy engineering structures and should not be used in carports. At the opposite extreme, you want to avoid using a flimsy steel beam that could buckle or bend under pressure. As previously mentioned, many steel manufacturers make custom beams or steel poles for carports, so investigate your options with a steel merchant or building supplier.

Channelled beams are structurally strong but also reasonably lightweight and these are popular in carports. However, the design sometimes allows water to pool within the channel causing it to rust, so take this into consideration. You may need to drill drainage holes at the bottom to drain pooled water.

Roofing materials

Steel sheet metal is the most common type of roofing material used in carport

design. There are usually around four main types – IBR, widespan, corrugated and Safloc or cliplock sheets. They average around 700mm in width (with some variation) and these sheets are designed to fit over the ridge or lip of the adjacent sheet giving the roof a water-tight profile. However, in carport design, it is important that the roof slopes slightly at an angle to allow for water runoff so that no water pools or accumulates on top of the roof. This is an important design consideration as the direction of runoff must channel water away from the vehicles or house and not cause subsequent flooding during heavy rainfall. A gutter system may be necessary in certain circumstances to direct water in a suitable direction for drainage.

Plastic or PVC roofing options are optional, and many are available in the same design profiles as metal sheets. There are also moulded options that resemble roofing tiles. However, the plastic or PVC variants are not as structurally sound as steel and don't have the same load-bearing strengths. Again, do your homework and determine the UV resistance profile over time as well as its resistance against hail damage.

Where waterproofing is not required but protection from the sun desired, then shade-cloth is another option. In this case these structures are often referred to as shadeports. Although a cheaper alternative, the lifespan of shade-cloth or similar synthetic materials may not last as long as PVC or metal roofing sheets.

Where waterproofing is not required but protection from the sun desired, then shade-cloth is another option.

Design options

Single carport

A single free-standing carport is one which usually has four upright support poles and four cross-struts to support the roof. The roof span is very important as one or two additional cross-struts may be required to adequately support the roofing material. The size may vary depending on the item the carport is protecting. For example, a caravan will require a larger design than a car. The vertical support poles may need to be embedded into a concrete base or foundation to prevent movement, and a spirit level used to ensure that they are precisely upright. Before commencing with the cross-struts and roof, the concrete should be allowed to set. (See diagram 1).

Double carport

A double free-standing carport is basically two single carports adjoined and will require more (at least six) upright support poles. However, in some cases a triple carport may be desired and in the case of commercial buildings or office parks, a long array of carports will be required.

Lean-to

The lean-to design is a carport which is adjoined to an existing structure such as a house or other building. In this case, only two upright poles will be required and the opposite side a horizontal bracing bar can be bolted onto the wall. This bracing bar will support the cross-struts. (See diagram 2).

Useful resources

DIY Carports: www.diycarports.co.za
Ecospan: www.ecospan.co.za

Protecting your car

What if you currently don't have the budget to build a carport, or your car is parked outside all day, for instance, at work? We all know that sun exposure can harm our skin, but did you know the sun's rays can also damage your car? When you leave your car in the sun for extended periods of time, the temperature inside can reach as high as 60 degrees, while the surface of the car's exterior can reach much higher – up to 90°!

Your car is not immune to negative effects caused by such heat, not to mention potential damage from South Africa's notorious thunderstorms. Here are 10 simple ways to protect your car in summer:

Regularly check your fluid levels:

When it's hot outside, the fluids in your car can get used up more quickly than under normal circumstances. If you happen to be low on coolant, transmission fluid, or oil anyway, then that suboptimal condition coupled with high temperatures increases the chance of damage to your car.

Have your battery tested once or twice each summer: When it's hot outside, there is often a higher load placed on your car's battery from running systems like the air conditioning. Periodic testing of your battery and charging system in general prevents you from unpleasant surprises.

Get the air filters checked: There is typically more dust and debris circulating in the air during the warmer months, particularly in arid climates, and this can clog the air filters in your car. If this happens, your mileage may suffer, and it could even damage your mass air flow sensor, which helps regulate the air and fuel levels in your engine.

Use reflectorised sun panels on your front and rear dashes: While it may seem like a hassle to whip these

fold-out panels out every time you go to the shops, it pays off in the long run. These panels greatly reduce the overall temperature inside your car, which you'll appreciate when you return, and you'll need to use less air conditioning to cool the car. These panels also help to prevent the bleaching effect the sun has on your interior surfaces and upholstery, which can lower the value of your car should you wish to sell it.

Perform tyre pressure checks

monthly: Extreme heat, trapped air, and rubber can be a volatile combination, and it's one on which your entire vehicle rests in the summer months. Underinflated tyres are more likely to blow out in high temperatures, so prevent accidents (and poor mileage) by checking your tyre pressure at least once a month.

Park smart: If you have the choice between parking your car in the middle of a blazing parking lot or under a broad tree, opt for the shade. This doesn't require any fancy props and will keep your car's interior as cool as possible.

Regularly clean your car's interior:

The pairing of dust and hot sun can wreak havoc on your interior,

essentially caking grime onto your dash and other surfaces. With periodic cleaning, however, this becomes a non-issue; just be sure to use cleaners intended for automobile use to avoid stains and unnecessarily drying out materials at risk of cracking.

Wash and hand-dry your car often:

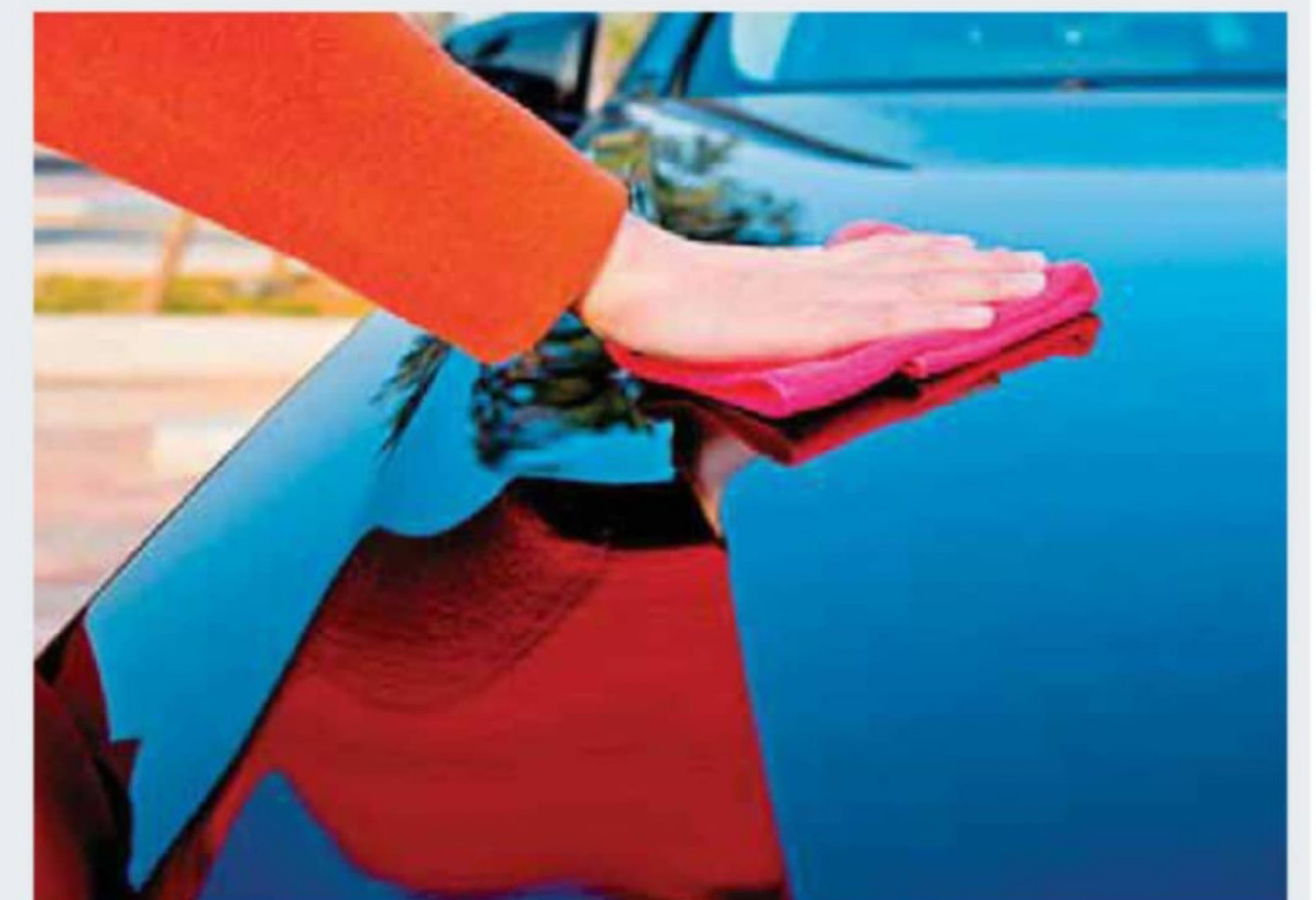
Just as dust and debris can cake onto your interior surfaces when exposed to high temperatures, your exterior paint can suffer in the summer sun and rain. Frequently wash your vehicle to keep the surface clean, and dry it thoroughly by hand with a soft cloth, so bits of minerals and grime don't stick to the residual moisture after a rinse.

Use a protective wax: It's not enough just to clean your car from time to time; you should wax it at least twice a year to lock in the natural oils in the exterior paint and provide a layer of protection not just from grimy bits that can scratch the surface, but also from the sun's rays.

Consider paint protection film: If you truly want to be vigilant against potential sun damage to your car, you may want to invest in a paint protection film kit. Some kits only cover the acrylic headlights, but some kits are available that cover your entire vehicle.



The lean-to design is a carport which is adjoined to an existing structure such as a house or other building



Tips for outdoor WOOD CARE

Wood remains a popular material for outdoor furniture and structures because of its natural good looks, ready availability, durability and affordability. It's versatile, easy to work with, and homeowners know what to expect from its performance.

To take full advantage of wood's many qualities requires proper protection and maintenance. When wood is exposed to sunlight, the ultraviolet rays can damage the wood fibres over time, causing the surface to turn grey. The most direct way to renew the appearance is to sand or pressure-wash the surface. However, sanding can be very difficult and time-consuming for large areas, and pressure-washing must be approached with caution. The problem with pressure-washing is that too much pressure can damage the wood surface, removing the grey but causing the surface to fuzz or splinter. This can not only affect the wood's appearance, but can pose a 'touch' hazard for areas such as deck surfaces where people may walk barefoot. When using a power-washer, limit your pressure to no more than 1 000 or 1 200 PSI and work carefully in the direction of the grain, never against it.

TOP TIP!

For both horizontal and vertical structures, brushing is the best method for stain/sealer application because the bristles push the product evenly into the woodgrain to increase absorption. Using a sprayer or roller can apply the stain more quickly, but both of these methods leave much of the stain on the surface without adequate penetration into the pores.

When wood is exposed to sunlight, the ultraviolet rays can damage the wood fibres over time

Tips for decks with old stain

In general it's best to remove old stain before applying new stain, especially if changing products or colours. Old stain will usually show through the new stain, leaving blotchy spots in the finish. Film-forming stains, which create a smooth, glossy texture on the wood surface, must be completely removed before applying a penetrating stain. The more common penetrating variety is formulated to seep into the grain and leaves the wood's natural texture exposed. However, if you plan to stick with the same colour and type of stain, and your deck is in decent condition, then you can probably get by with a thorough

cleaning and a fresh maintenance coat. As always, refer to the manufacturer's recommendations for best practices.

If there is a build-up of old stains on the deck, then you may need to remove it with something stronger. Stain strippers are caustic and can remove most weathered stains in a single application. Small, stubborn spots of stain can then be removed by sanding once the deck has dried. After using any chemical treatment to clean and prepare the deck, use plenty of water to completely remove all traces of the products, and then allow the wood to dry prior to stain or sealer application.

Deck maintenance schedule

Annual deck cleaning and maintenance will forestall repairs and protect your investment. Because decks are exposed to the elements all year round, it's a good idea to establish a routine of upkeep that'll protect your deck and prevent expensive repairs.

Spring: Wash the deck

An unwashed deck is an invitation to mould and mildew, which can cause rot. Here's how to wash your deck:

1. Remove debris from between deck boards using a putty knife. Pay special attention to the areas where deck boards cross the joists – the structural members underneath the decking.
2. Protect all shrubs and plantings. Wet them and cover them with plastic sheeting.
3. Thoroughly sweep the deck.
4. Choose an appropriate cleanser.
5. Clean the deck. Choose a cloudy day when the decking is cool and the sun won't evaporate the cleaner. Use a paint roller, a garden sprayer, or a stiff-bristled brush broom to apply the cleaner. Don't let it pool. Don't let the deck dry until you've scrubbed it clean. Then let it soak according to the manufacturer's instructions (usually about 10 minutes). Rinse thoroughly with clean water.
6. Let the deck dry. Wait two days before sealing.

TOP TIP!

To clean wood railings: Working from the bottom up, apply the cleaner, scrub, and then rinse. Working from the top down splatters the cleaning solution onto dry wood where it can double-bleach the surface, leaving marks that don't go away when the lower area is washed.

Summer: Seal the deck

Your finish options include:

- Clear sealer that lets the wood's natural grain and colour show through.
- Toner that adds a bit of colour but fully reveals the grain and provides some protection against sunlight (ultraviolet or UV light).
- Semi-transparent stain that tints the wood, but lets some grain show.
- Solid stain and opaque colour that seal weathering damage and completely cover the grain.

Expect to reapply clear sealers and toners annually. Reapply stain finishes as needed (every other year is a good routine) using the same or a slightly darker colour. Be sure to wear gloves, a safety mask, and eye protection when applying stain and sealers.

1. Choose a two-day period when you'll have clear skies and moderate temperatures.
2. Lightly sand the deck. Use a pole sander equipped with 80 grit paper to remove any furriness caused by washing.
3. Replace any missing or popped nails and screws. Replace protruding nails with deck screws slightly longer than the nail.

TOP TIP!

When pulling out the nail with a hammer or pry bar, use a scrap of wood as a fulcrum for greater leverage and to avoid damaging the deck.

4. Apply the sealer or stain. Use a roller to apply the sealer to the decking, covering three or four boards at a time. Use brushes and small rollers for railings, planters, and benches.

Don't let the sealant dry or puddle. Two thin coats is better than one thick one.

Midsummer: Inspect and repair your deck

When the weather is warm and dry, it's a good time to give your deck's structure a close inspection. Pay particular attention to any areas close to the ground or close to sources of water, such as gutters and planters.

Look for signs of rot. Probe structural members with a flat-blade screwdriver. Begin by checking stairs and each perimeter post. If you can push the screwdriver 5mm or more into a suspect area, you probably have rot. Check for cracks or rotten decking boards. Not all cracks are a structural threat, but they'll get worse with time. If you find damage, replace the piece. Also check the railing; give it a good shake to be sure posts are not loose or damaged – loose connections can be remedied by drilling pilot holes and adding galvanised lag screws.

Autumn: Preventive measures

Autumn is a good time to wash and seal your deck if you didn't get a chance to in the spring. The point is to do it when temperatures are mild. To keep your deck in good shape:

- Trim nearby bushes and trees. They need to be at least 30cm from the deck to slow mould, moss, and rot.
- Don't let leaves and other debris pile up in corners.
- Move planters, chairs, and tables occasionally to avoid discolouring the decking. Keep nearby gutters and downspouts in good repair.



The amount and strength of daily sun exposure that your garage door gets can cause the colour to fade and the top coat to degrade and thin

Refinishing garage doors

Natural wood garage doors give any house a striking appearance. From rustic to elegant, wood projects value. However, the amount and strength of daily sun exposure that your garage door gets can cause the colour to fade, the top coat to degrade and thin over time, and the garage door materials to expand and contract, creating cracks, splits, and bows. If you have a northward or eastward facing garage, it will be exposed to the strongest sunlight, and deterioration caused by sun exposure will be accelerated. Routine inspections can help catch normal deterioration issues before they significantly impact the look of your door.

The amount of sun exposure is also a critical factor to consider when choosing the colour of a new garage door. The stronger the sun, the longer it heats your door every day, sometimes raising the temperature of the door to over 60°C. When you select dark paint or dark stain colours, the heat from the sun will be absorbed, driving temperatures up even more. This can lead to a greater risk of a faded finish or split and cracked wooden doors.

The sun isn't the only weather factor that affects your garage doors. Wind can drive dirt, debris and rain onto the finished surface of your door, wearing down the protective layers. Without a protective layer, any dings, dents, and scratches will allow water and

dirt to get under the surface finish and cause significant deterioration. Other environmental conditions will also accelerate degradation in a garage door's finish. For example, in coastal locations, salt can be extremely corrosive to a garage door's paint or stain.

To keep your wood garage doors looking good, it is important to stain and seal them. Staining and sealing protects your wood garage doors from the elements and brings out their beauty. As with any project, it is best to follow a few simple steps.

1. Begin with cleaning

You always want to start with cleaning the wood garage door. Use a good quality wood-cleaning product. Dust and other dirt, mildew and moss are common on wood that's exposed to the elements. You don't want these things ruining the look of the door. But more importantly these things are bad for the wood.

If you are working on a new door, cleaning, then sanding the door, will remove "mill glaze". Mill glaze is a name professionals use for the crushed pores milling leaves behind. This compaction of the wood's surface prevents stain from penetrating to the wood garage door properly. A water pressure washer can be used on many wood doors but low water pressure,

1000-1500 psi or less, must be used. This when combined with a wood cleaner will remove most stains and all types of grime. Take care not to cause any damage to the doors surface while using this powerful tool.

2. Allow drying time

Once you have cleaned the wood garage door, it must dry thoroughly. The rule of thumb is to 24-hours or longer. Oil-based stains will bead on moist wood. Water-based stains will apply unevenly on wet wood.

3. Apply quality stain

As always, make sure to choose a high-quality stain so you're newly stained wood garage door will last longer and look professional. A penetrating oil-based wood stain is usually the best. You can use a brush, roller or air-sprayer. One coat usually does the job. Use a technique called back brushing, even if you spray or roll the stain on. This encourages the stain to penetrate into the wood's surface as deeply as possible. Just be sure to do this within fifteen minutes. Any longer, and the stain will be too viscous.

The darker a stain you choose, the longer you can expect your stain to last.

The ultraviolet protection in the stain you choose comes from the pigment in the stain. Stain does fade over time. You can refresh the colour by washing the wood garage door down with wood cleaner and recoating.

Once the oil-based stain has dried, you have the option of going over it with an exterior varnish or polyurethane, giving the door a glossy finish. However, keep in mind that unlike a penetrating oil stain, varnish and polyurethane will eventually peel, requiring a refinishing job down the road.

Garage door staining tips

Use an oil base semi-transparent or semi-solid exterior wood stain. A second coat can be applied after the first has dried for several hours.

- To stain the edges either lift open the garage door in stages, exposing the raw unstained wood edge under the rubber weather stripping, and stain it as the door is slowly opened or open the door all the way and stain the raw edges from inside the garage.
- The back of the door doesn't require staining as this is protected by the garage. Finishing this side is optional.

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Five cool power tool trends

Did you know that the first ever power tool is said to be a hand powered lathe that was created by the ancient Egyptians? Then in 1859 the modern power tool was created when an electric motor was combined with a manual drill – and revolutionised the industry.



Over the years power tools have continued to evolve and advance, and we are seeing several trends emerging. Orlando Luis of Brights Hardware offers insights into five current power tool trends:

1. Smart tools have arrived

There really is an app for everything – tools included!

“Dewalt and Metabo have developed Bluetooth batteries and power tools that can be tracked and monitored remotely through an app. This app allows you to see how often the machine is working in a day and lets you activate and deactivate

the tool – such as in the case of theft.” Luis says that the market in South Africa has been slow so far in the uptake of these new developments, however, Brights predicts that they will grow in popularity as they offer great benefits for contractors for example, who can monitor the number of man hours being put in by their workforce.

2. User-friendly tools

“In response to a growing trend towards DIY home maintenance and repairs, tool manufacturers are making power tools more and more user-friendly so that they are accessible for the average person to operate.”

“In South Africa we are definitely seeing consumers embrace DIY,” says Luis. “Tougher economic times mean that people can often not afford a contractor to do home repairs or maintenance – this has definitely stimulated growth in the ‘do it yourself’ market and user-friendliness will remain a key focus in the development of power tools going forward.” Examples of user-friendly tools include any power tool that is cordless, those that can operate for longer because of extended battery life, and power tools that require less maintenance because they do not have carbon brushes. Also any power tool with additional operator safety features would be considered user-friendly.

3. Going wireless: Cordless power tools

Just about everything is available in a wireless format and power tools are a part of that list.

“Globally, corded tools are still selling well, but there has been a substantial shift to the cordless market. Cordless tools are used for cutting, welding, sanding, metalworking, and more. Other advancements in the market mean that modern cordless tools are able to last much longer than they used to as well.”

“In South Africa our power tool purchase trends currently show 40% cordless versus 60% corded; compared to 75% cordless/25% corded in the USA or Europe,” says Luis. “However we expect to see these numbers change in South Africa as more cordless power tools are developed.” Examples of power tools available in a cordless format includes battery powered circular saws, band saws, drills, hammer drills, impact drivers, screw drivers, and more. “There is even a cordless heated jacket that has been developed which keeps the wearer warm in extreme climates.”

4. Battery life gets a charge

According to Luis, battery manufacturers are constantly dealing with the challenge of making batteries that last longer and produce more power. The advancement of lithium-ion batteries means that manufacturers have new ways to increase battery life and power.

“A big trend we have seen in SA is the adoption of a single battery system or platform that fits all tools (with the most popular battery voltage system being the 18V/36V brands). So if you are buying cordless tools opt for 18V systems in lithium-ion technology – then as you grow your range of machines your battery systems will fit in all the different power tools – this will allow you to rotate batteries to ensure no down time while waiting for the other one to charge.”

“Also choose a brand that has intelligent chargers that can charge a battery in under 30 minutes.”

Makita has the most comprehensive range of longer-lasting 18V batteries, with over 80 different machines that can operate off one battery platform. Metabo, Bosch, Dewalt, Ryobi, Festool, Ingco, Hitachi and Black & Decker all also have 18V battery options.

5. Time to tool up: Innovative new power tools

As well as sales increasing for current power tools and batteries, exciting new products are being developed all the time and research and development departments are working hard to not only boost tool strength and life-span but to also offer new, innovative power tools.

“For example,” says Luis, “German tool manufacturer Metabo recently released a new collection of flat head grinders that are made to work within small spaces and narrow angles. It makes metalworking at a tight angle safer than the previous generation of flat head grinder models.”

“Although not power tools per-se, a new range of LPG gas driven garden tools, compressors, pumps, generators and engines have been developed which replace petrol powered units, and which are more eco-friendly, require less maintenance and are more cost effective to run.”

“Robotic power tools are also coming. You will be able to enter a command and there will be no operator needed – you will just sit back and watch to see the finished product,” says Luis. The modern tool market is all about going cordless, increasing battery life, and becoming smarter and more user-friendly. Brights recommends that in the face of all these developments, consumers stick with reputable brands that offer back up spares and repair services. “The next few years will see many no name brands disappear, but brands like Makita, Bosch, Ryobi, Metabo, Dewalt, Festool, Hitachi and Ingco are here to stay.”

Resource

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



Get a firm grip

>> Warren Schmidt

Every toolbox carries within its compartments an assortment of screwdrivers, other hand tools and, of course, at least one plier. These tools are well-known and essential

components of the handyman and women's toolbox are used to carry out everyday repairs. In this review, we look at the diversity and uses of these tools.

The long and short of screwdrivers

Screwdrivers made their appearance during the middle-ages (around the 1400s) but diversified rapidly in the last two centuries. There is now a large combination of types.

Slotted or flat-head

This was one of the first screwdriver types with a flat head which fits into the slotted screw-head. A disadvantage to these screwdrivers is the tendency of it to slip out of the slotted head, especially when tightening the screw. This led to the invention of the star or 'Phillips' slotted profile.

Cross-slot or Phillips

In this version, the head profile is made as a cross which fits

snugly into the cross-shaped recess on the screw-head. This gives a firmer anchorage point and prevents the screwdriver slipping out sideways.

Pozidriv

The pozidriv differs slightly to the Phillips head in that it has four extra recess slots forming a star-like formation. The advantage of the pozidriv is that it anchors more firmly inside the screwhead when a high torque is applied. In the Phillips, the high torque sometimes pushes the screwdriver out of the screwhead.

ISO standards indicate which type is used by inscribing the abbreviation PH for Phillips and PZ for pozidriv.

Torx

The torx screw has a six-point star-shaped pattern and is commonly found in specialised electronics and automobile components. Some variants are also used in security products to minimise tampering or dismantling of the product.

Security-T

These are specialised screws used by the security industry to minimise tampering or dismantling of cameras and other security devices. A special Security-T screwdriver is required to fasten or undo the screws.

Hexagonal

Hexagonal screwdrivers are used in a similar fashion to allen keys. These type of screws with hexagonal heads are found in certain types of machinery and in automotive components.



Slotted Cross/Slot/Phillips Pozidriv Torx

What is a 'Yankee' screwdriver?

The Yankee screwdriver is a spiral ratchet screwdriver that preceded today's modern electrical screwdrivers. The design and spiral ratchet system works on the basis of pushing and pulling thereby turning the head automatically and driving a screw into the material. These screwdrivers probably took out a few eyes and caused some nasty injuries as they had a spring-coiled release mechanism which shot out the shaft and screwdriver tip! The name "Yankee" was coined by the North Brothers Manufacturing Company which was a trade name for these ratchet screwdrivers.

GET TO GRIPS WITH PLIERS

In reference to hand-tools, pliers cover a vast array of hand-held tools used to crimp, clamp, cut, grip or bend various items and materials. They can be used to cut or twist wire, crimp ferules or extract nails from timber or board. The common feature of all is an adjacent set of handles or grips and a specialised profiled head attached by a fulcrum. There are upward of 30 or more different types of pliers available on the market. Some serve very specialised tasks and others can be used for a combination of DIY tasks. Here is a rundown on the various types and their uses:

Lineman's pliers or combination pliers

These pliers generally have a similar design. Some are covered with a special insulated material over the handles and used in electrical work, hence the name lineman's pliers. They also have many general uses and are the most common plier type in the standard toolbox. They usually have a combination of ridged jaws for gripping, a cutting blade for cutting wire and a recessed ridged portion for gripping pipes.

Locking pliers or vice grip plier

These pliers have an adjustable screw and lever mechanism so that the jaws can be adjusted to different sizes. They are used in plumbing, electrical and the automotive industries to securely grip and hold materials, especially steel pipes.

Round-nose plier

Another variant of the long-nose pliers, these pliers have a rounded nose and used in jewellery work and sometimes in electrical applications.



Screws come in a variety of designs as well as head profiles



Standard combination pliers



Side-cutters



Long-nose pliers



Tongue and groove pliers



Wire-stripper



BNC crimping pliers



Ferrul crimping pliers



A BNC crimping pliers is used when crimping BNC connectors used in audio-visual equipment and security camera installations



A side-cutter is useful for cutting strands of wire



A wire-stripper is used to remove the outer insulation without damaging the copper



Long-nose pliers are useful when working in tight spots for extracting or holding items in place



The combination pliers can be used to cut, grip and extract items and is an essential pliers to have in the toolbox



Needle-nose or long-nose plier

These usually have a pointed or narrow

Wire-stripping plier

Although technically may not be considered as a proper pliers, wire-strippers are used to clamp one side of electrical wire tightly while the opposing side cuts into and strips away the insulating material. Most wire-strippers have feeding holes of different diameters to cater for different wire sizes. The advantage over side-cutters is that it makes stripping the wire much easier and won't damage the copper conductor inside (providing of course that the correct diameter hole is selected).

Side-cutter or diagonal plier

Side-cutters have two cutting sides and used in carpentry and electrical work, but also in many other fields. The cutters are primarily used for cutting through wire. It is essential to purchase high quality to ensure the cutting surface is not damaged when cutting. Larger versions can be used to cut through thick wire.

Hose-clamp pliers

Used to compress hose and spring clamps. They have a peg-like angle on the jaws used to grip and pinch the clamp.

Slip joint plier

This plier has an adjustable fulcrum which can alter the width of the jaws. They are mostly used in the plumbing trade and have similarities to a wrench.

Tongue and groove plier

These are adjustable pliers that can be adjusted to a range of different sizes in order to fit around different sized nuts, bolts and pipes. When compressed they usually grip tightly on the material.

Bent-nose plier

The bent-nose pliers is a modified version of the long or needle-nosed pliers that simple has a 45 or 90 degree bend at the tips. They are used to grip items positioned at awkward angles, usually encountered when working on machinery or motor vehicle engines.

Crimping pliers

There are many different types and designs for crimping pliers. The most common type is used for crimping metal ferrules to wire. They clamp down tightly and crush the ferrule making a very tight joint. There are also many specialised crimping pliers such as the BNC crimper used to crimp BNC connectors in audio-visual and security camera installations, as well as the RJ45 crimper used to crimp RJ45 connectors in computer (or data) cabling installations.

Snap-ring pliers or circlip pliers

These look similar to a long-nose pliers but have small needle-like points. They are used for fitting circlips into position.



When purchasing pliers invest in quality. Also select the right pliers for their correct application. Although side-cutters and combination pliers can be used to extract nails, you do get proper nail-puller pliers which are designed for such tasks. Only use properly insulated pliers or side-cutters when working on high-voltage electrical circuits that may be live, bearing in mind that only qualified electricians should be undertaking such work.



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Boys and their toys

When a young boy's bedroom becomes overcrowded with toys, some clever storage solutions are called for when redecorating the room.

You know that it is time to rethink a child's bedroom when you have to step over a gamut of toys just to close the curtains in the evening. Our son loves his toys – the bigger the better – and as soon as it is pocket money day, he is desperate to add to his collection. Yet he is as bad at keeping his room clean as he is at saving money... something had to be done.

A range of shelves and cabinets were packed to the brim with toys, and the problem was exacerbated by beautiful looking racing car bed, which though comfortable and a really nice addition to a young boy's room, was too big for the space.

Our first step was to take everything out (a mammoth task) and separate the 'essential' toys from the ones which could be donated to the local children's home. The furniture was all removed and the room given a good sweep. Next we got onto the preparation, which though time-consuming, is a

critical step. Old nails and screws were removed, cracks and holes chipped away and Polyfilla applied.

While we waited for the filler to dry, a paintable sealant was applied between the skirting and the wall and the skirting and the floor to prevent the ingress of ants; a particular problem in our area. We also used this opportunity to apply masking tape to the areas we didn't want any paint to accidentally be applied, such as on the skirting and door and window frames. Finally, we painted the ceiling and cornices with a crisp new white ceiling paint, as it is pointless having a brand new look in a room with a dirty ceiling.

Once the Polyfilla was dry it was sanded smooth and we could begin painting. We chose a light navy blue for the one 'feature' wall and a light grey for the rest of the room which complements the blue, but at the same time goes with a range of other colours. The light grey also ensured that the darker blue didn't make the room too dark.

Simple shelving solutions

For the shelving for the room we required a simple, inexpensive solution. What we did, was purchase a 21mm x 1220mm x 2440mm piece of shutter ply which we had cut into the following sizes:

- For the desk: 500mm x 900mm
- For the three shelves above the desk: 200mm x 900mm
- For the shelf above the curtain rail: 200mm x 2440mm
- For the shelf above the door: 200mm x 900mm

With simple white brackets, we were able to create ample storage space. The shelf above the curtain rail, in particular, caters for the larger toys which aren't played with that often, while the shelf above the door is a

handy space to store other odds and ends.

The desk height was measured to fit the correct height while my son was seated, and three shelves were mounted above the desk for a TV (be sure to measure the TV height first) as well as books and toys.

Before fitting, each shelf was sanded smooth by hand and then white washed with a white enamel paint. Shutter ply may not be to everyone's taste, but we liked the look of the knots in the wood as well as the horizontal lines on the edges created by the laminates, so decided to accentuate rather than hide these with the white wash. Our son even got in on the act and helped 'rub in' the white paint with a clean cloth during the white washing process.

Car shelf

After having the shutter ply cut, there was quite a large off-cut that I was worried wouldn't fit into the car, so I asked the hardware store to cut it into as many 1120mm x 100mm pieces as possible. I had an idea for a shelf to keep all my son's toy cars on, but didn't know if it would work. When I got home, I lined up all the off-cuts and was pleasantly surprised to see that with the addition of four other off-cuts which were left over, I could quickly fashion an additional shelf.

Admittedly, two solid pieces for the sides would have better, but it was what we had. So I sanded down the shutter

ply and used wood glue and wood screws to assemble the 'car shelf'. After consulting with my son and wife we decided to keep the shelf raw as they liked its character, including printed text on one of the pieces from the hardware store.

The smaller, bottom piece wasn't ideal (it is 1120mm x 50mm), but it fitted the sides perfectly, and in the end works out well as a dedicated space for the smaller cars in my son's collection. The finished shelf is 400mm high and 1160mm wide, and being quite heavy, it was secured to the wall with a number of strong screws.

Finishing touches

To complete the room we bought a new curtain rail and new grey curtains (to complement the lighter grey walls), a mirror was hung on the wall at the bottom of the bed along with a wire rack for deodorant, hair brush etc, and a blue carpet and tepee tent with its own comfortable pillows were purchased to give a comfortable, secluded space to read and play. As he is an avid artists, an easel, which he had been wanting for ages was bought as a surprise. My son's smaller bed was moved >>



Chip away any holes/cracks



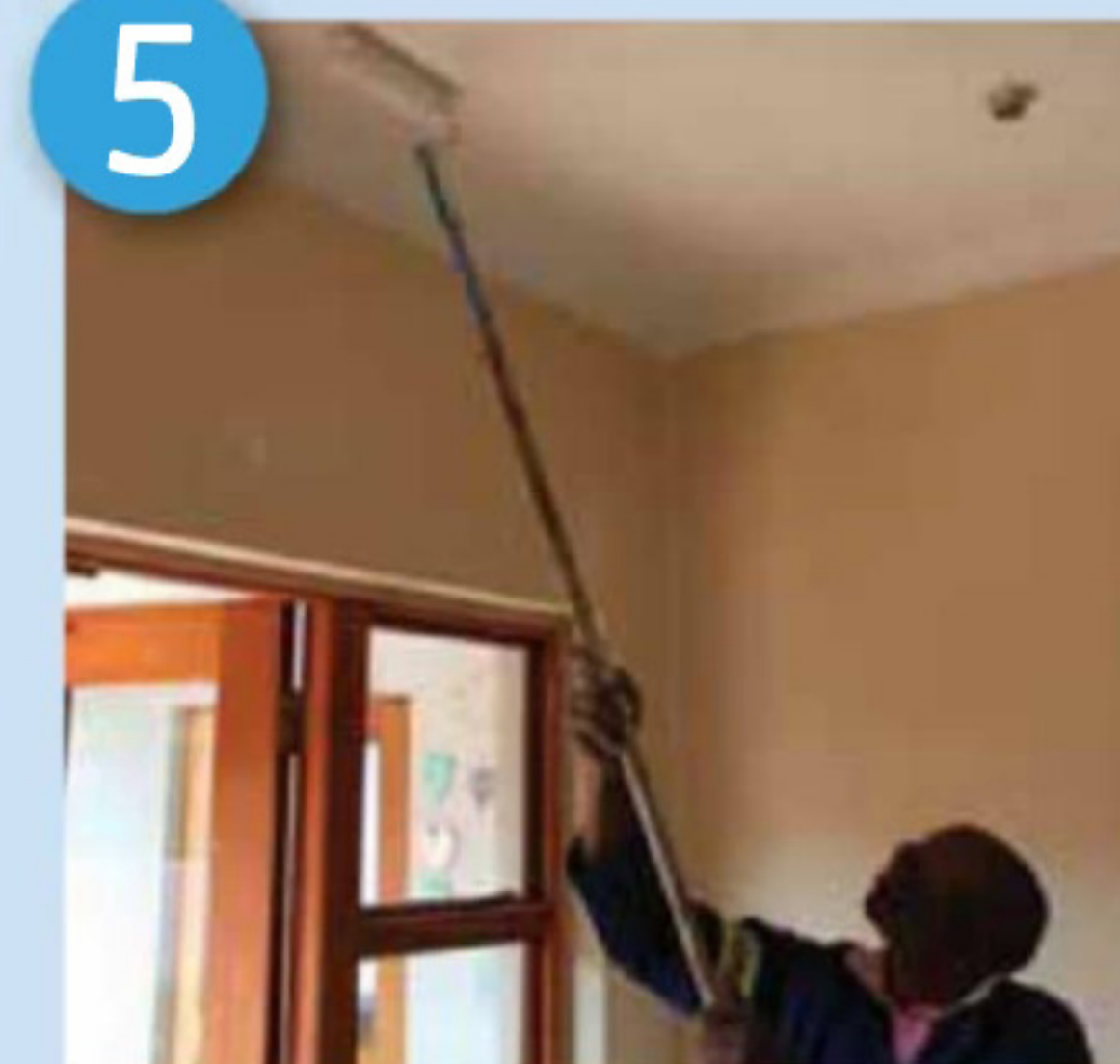
Apply Polyfilla and allow to dry before sanding



Use masking tape to prepare for painting



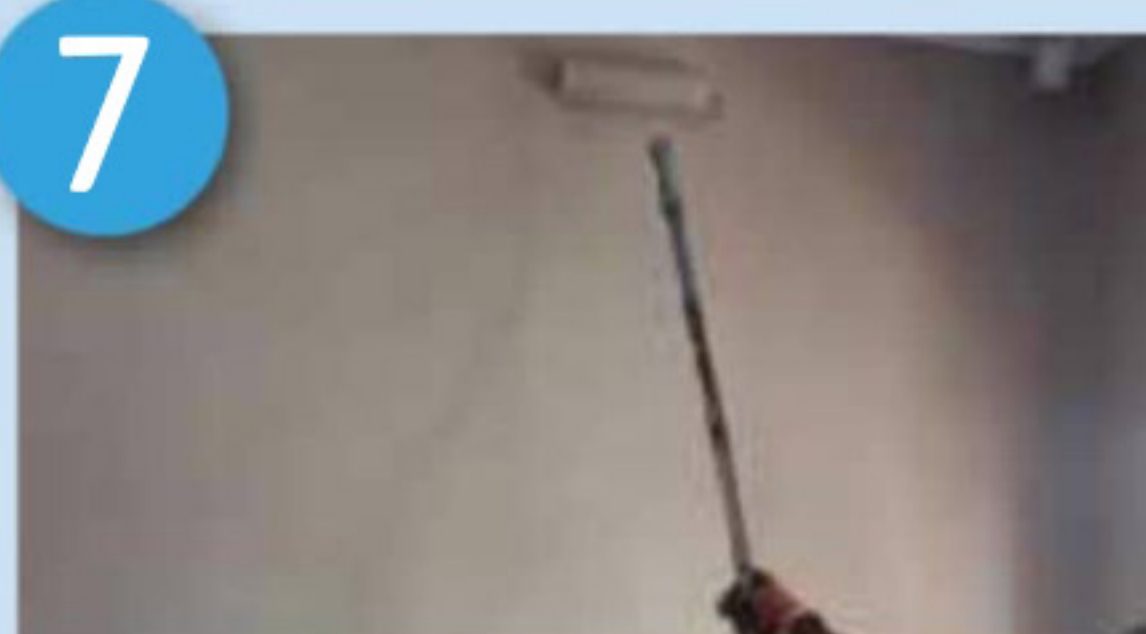
Seal the skirting with a paintable sealant



Give the ceiling a fresh coat of paint



We chose blue for the 'feature' wall



The rest of the walls were painted a light grey



Fit the brackets for the desk



Sand down the shelves



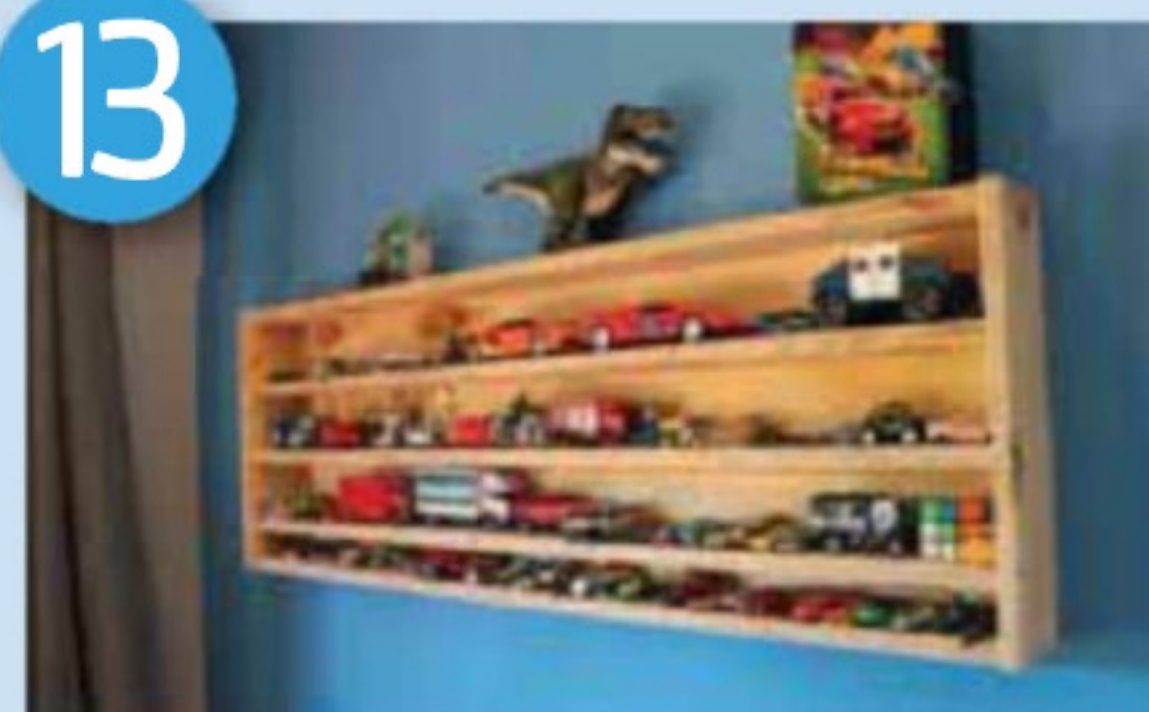
Applying a white wash finish



The off-cuts which we had...



And how they were used to create a car shelf



The car shelf



Handy storage above the door



The shelf above the curtain for the larger toys

back into the room to add more space and the racing car bed was donated to a very happy young friend of the family.

For not too much expenditure we were able to create a new, welcoming room with numerous space saving solutions and storage options, which is (so far) much easier for my son to keep tidy, and allows him to both play and do his homework in his own room. The entire project took a weekend – mostly due to the fact that Sergio, who helped us, is an absolute perfectionist and takes the old adage to heart in all his work, 'if you fail to prepare, prepare to fail.' The added time spent making sure that the walls, especially, were prepared for painting, however, is well worth it, and the end result speaks for itself.



The desk and shelves fitted



One happy little guy in his new room

TIP!

Very often paint does not adhere to a sealed joint and the colour of the sealant may be nowhere near the aesthetic colour finish you require. What do you do? Den Braven has a range of paintable sealants and adhesives suitable for specific applications. Remember that it is important to select the correct product for the job on hand:

- **Acryl W** for filling internal small cracks and joints – such as walls and ceiling cornices, where a moderate amount of movement can occur.

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



- **Hybriflex-540** is a specific sealant for expansion joints in concrete and natural stone, wood, enameled surfaces, steel and aluminium.
- **Woodflex** for floors and woodwork. Woodflex does not discolour when painted with clear varnish. Available in six different wood colours.
- **PU Foam expansion foam** with high strength gap filling capabilities between walls floors and around pipes, windows and door frames. It can be directly painted over – or may be plastered over and then painted.

YES... You can paint over sealants and joints



Use Den Braven's paintable sealants and adhesives to repair joins and cracks in preparation for painting to ensure the perfect finish.



- **Acryl-W:** for cornices and small cracks
- **All Round :** for damp surfaces – fungal resistant
- **Hybriflex-540:** for expansions joints – internal and external
- **Polyflex-452:** for joints on enameled surfaces, steel and aluminium
- **PU Foam:** for gap filling and sealing cavities



Den Braven Sealants

Do it right the first time

Available from hardware stores
www.denbraven.co.za
or call us on 011 792 3830

Please contact us for further product, technical information and technical assistance



How to make a CHUCK BOX

Being outdoors at least once a month, we needed a mobile kitchen of some sort.



>> Hannes Lindeque

Materials

- Plywood
- Panel pins
- Screws
- Glue
- 12 x Butt hinges
- Dowel rods
- Masking tape
- Sandpaper

Tools

- Measure tape
- Square
- Pencil
- Awl
- Screwdriver
- Drill
- Corner clamps

I once stumbled across something the Americans call a 'chuck box'. I went onto the internet and came across many designs and ideas. I couldn't find a 'one fits all' design, as creating a chuck box is all about fulfilling personal needs limited only by your own DIY skills, creativity and equipment at hand.

I liked the idea of having a top that opened for extra room, side panels to keep the wind out and side cabinets that swing out. The biggest challenge was to make the unit practical, but at the same time, keeping it as small as possible and reducing the weight without weakening the structure.

I started off by collecting used shipping crates in good condition and drew my plans according to the material on hand. The amount of time you need to build a chuck box depends on your design.

Step-by-step guide

Step 1: Design

This is the most important step and it took me a couple of weeks. The best place to start is to take all the camping equipment you intend to use and measure everything and come up with dimensions for your own box.

Note: A chuck box is not a pantry, so it only includes kitchen utensils. Keep your consumables in a separate crate that you refill after each trip.

I drew a few rough sketches and pondered over it before I drew my final plans from which I determined my cutting list. (Keep the thickness of the plywood you use in mind when you do your calculations).

With the panels according to scale I played around to see how I would get the maximum number of panels out of the material I had. Eventually I got impatient and bought a plywood sheet (2400mm x 1200mm).

Note: There are different types of plywood: marine plywood is more durable, heavier and more expensive. Pine is lighter but not as strong and I would not advise you to use it – especially for the outer box.

Step 2: Cut the material

I started off by drawing all the cutting lines onto the plywood sheets and marked every panel with masking tape, stating which panel it was and its size. From previous experience I learned that a lot of unmarked panels, mixed with off-cuts, can become very confusing. Always double check your measurements before you start cutting. Once I was sure, I divided the plywood sheet into smaller, manageable sizes.

Note: Cutting plywood and preventing it from splintering is a topic of its own. When both faces of the plywood will be visible then there are several factors you need to consider, for example the type of blade you use.

Step 3: The main box

The main box consists of eight compartments of various sizes which are 325mm deep. I used an awl and marked the spots where I would drill pilot holes before I nailed and glued the panels together. Something I found very useful, when working alone, was the use of corner clamps. It helped keeping the panels in place and square with each other.

I started with the shelves, then the base, the side panels and lastly the backboard. There are dedicated areas for cutlery, extra long utensils, a frying pan, coffee and sugar, a single burner canister stove, a bushveld vegetable microwave cooker (an empty 5 litre paint can) and empty ice cream tubs.

Step 4: The side cabinets

The two side cabinets are each half the width of the main box and their lay-out differs because each has a different purpose. One is for having the paper towel, spices and cooking oil at hand while the other one is for larger items such as a flask, tin foil and cling-wrap. At the top of each cabinet is a storage compartment for small loose items like matches, etc.

To cut down on weight I used dowel rods for the fronts of the bottom shelf. It also makes it easier to clean the inside of the cabinets (I placed a piece of cardboard under the cooking oil bottle). The tricky part was to determine the height of the cabinets so that the side flaps could act as extra working space on top of the cabinets.

Step 5: Lids and finishing

The working area's flap keeps the contents of the main box from sliding out when in transit. When closed, the lid of the main box prevents the side cabinets from swinging open, and when the lid is lifted, it protects the stove against wind and the area against splashing cooking oil. All the screw tips were ground off.

In hindsight

Instead of using 9mm plywood I should have rather used 6mm; it would have cut down on the overall weight and cost.



Proper planning is essential for this project



Our material of choice: plywood



Mark every panel with masking tape, stating which panel it is and its size



Cutting plywood can be tricky



Use an awl and mark the spots to drill pilot holes before nailing and gluing the panels



Drill the pilot holes



To cut down on weight, dowel rods were used for the fronts of the bottom shelf

Project guide

Difficulty: Difficult

Estimated cost: R1000

Estimated time: Two days to complete
(All three factors depends on your design)

The initial building plans of this project are available in PDF and can be downloaded on our website, www.homehandyman.co.za

HOW TO MAKE AN INVISIBLE WINE RACK

A wine rack allows you to store and easily access your collection of wines. Clifford Roberts and woodworker Andries Eyegelaar demonstrate how to make one yourself.

Project guide

Difficulty: Moderate
Estimated cost: Less than R500
Estimated time: 5 hours

Materials

- Drill and Forstner bits
- Drill stand (optional)
- Tape measure, pencil
- Table saw or equivalent
- Wood stain (optional)
- Sandpaper
- Callipers
- Wood (dowels and timber)
- Cold wood glue
- Bobbin sander (optional)

Measurements

- Eight lengths of timber planks (20mm x 45mm x 952mm)
- Five lengths of SA Pine timber planks (20mm x 45mm x 450mm)
- 36 lengths of dowels (20mm x 240mm)
- 32 chipboard screws (72mm)

There are many kinds of wine racks available, but we wanted an invisible one – a rack that would replace the boxes we usually just stacked into the bottom of a cupboard. While screwcap wines can be stored standing straight up, wines with corks should ideally be on their sides to ensure the cork remains moist and airtight. This wine rack is an ideal solution.

The rack we built for the lower section of a cupboard can hold 52 bottles of wine, at 13 bottles per row.

The construction comprises pine dowels and timber cut to specification

and assembled in a frame using a combination of cold wood glue and chipboard screws. The entire unit can easily be shifted in and out of the bottom of the cupboard, although you don't want to try this with a full load of wine.

The design of the wine rack will differ depending on the dimensions required. Important to keep in mind during the project is that bottle sizes differ, even if all your wines are 750ml. In the end, the fit might not be perfect for every bottle, but it will do the trick for the bulk of your stock.

If you have any small dessert wines, magnums or the like, you'll have to take that into consideration in your design too. Be aware of weight – the cumulative mass of bottles can become substantial so you might need to build in additional support for the rows.

Also remember that the best way to store wine is in a consistently cool, ventilated and dark environment. If like us, a cupboard is all you have, make sure it doesn't stand against an exterior, sun-facing wall.

Step-by-step guide

Step 1:

Start with a sketch. Measure the space you need the rack to fill. Divide the space by the amount of horizontal racks that will carry wine. Then, ascertain the thickest bottle you'll need to keep in the rack. To make life easier, you might want to keep all your thicker bottles on one level.

In our case, the distance between the rack levels measures 80mm.

Step 2:

For the wine rack, we used eight lengths of SA Pine timber (20mm x 45mm x 952mm) and 36 lengths of dowels (20mm x 240mm). We also used four lengths of timber (20mm x 45mm x 952mm) to stand perpendicular, two on either side of the rack, to hold the rows. The lowest rack was flush with the base of the cupboard and uprights.

Step 3:

Using your pencil and a combination of the callipers, tape measure and your specific bottle size requirements, identify the location where each dowel will be fixed to the timber. You'll want to line them up all closer to the bottom end of each rack, rather than the middle so that when you place the bottle, it's neck and body fit relatively snugly.

Ideally, the location of the dowels should be equidistant along one shelf. Ours are about 75mm apart.

Step 4:

Use the appropriately sized Forstner bit to create a cavity that will take each dowel end. Using a drill stand isn't essential but will ensure the cavities are square and make it easier to insert the dowels.

Cut all the cavities and then your dowels. To make assembly a little easier, round-off the edges of the dowel where it is to be inserted in the cavity.

To cut the half-rounds in the top edge that will take the bottlenecks pair up the timber racks. Square them and clamp

together, with each rack's upper edge against the other. Where they meet, midway between the dowel location, use a 40mm Forstner bit to cut a hole straight through. Again, the drill stand comes in handy here.

Unclamp the timber and you'll have a line of half-rounds in the top side of each plank. Use a drill-mounted bobbin sander to smooth the edges.

Step 5:

Smooth the sharp edges of the various elements with sandpaper. It's a good idea at this point to assemble the construction before fixing everything into place permanently, to make sure it fits your design. Carefully slide the wine rack in place in the cupboard along with the frame perpendiculars to get an idea of how it will look.

Put a few bottles into place and close the doors of your cupboard to make sure it functions as you need it to.

At this stage, it's easy to adjust the construction, if required. Now dismantle it all. It's now that we applied a dark wood stain using a sponge and left it to dry.

Once done, fix the construction in its final assembly. Glue the dowels in place. Drill a small recess to take the head of the screws that will fix the perpendiculars to the racks. You can use a smidgen of wood glue here too if you want, then screw in place.

We added a support at the back of the rack – a timber plank the same dimensions as the upright.

Step 6:

All that's left is to slip the rack into the cupboard, stock it with your wines and invite your mates to see what you've accomplished. If you want to be even more nifty, make a few tags that hang from the bottle necks, so you don't have to keep pulling bottles out to see what you have ferreted away.



A drill stand facilitates square drilling



Clamp your wood together and use a Forstner bit to cut half-rounds for the bottle necks



Place your dowels closer to the base of each shelf



We used a dark wood stain to resemble the imbuia cupboard where the rack would be inserted



An additional support must be considered if your wine rack gets too heavy. We inserted one at the back of the rack

ONE BARSTOOL, TWO STYLES

Learn how to make a barstool which can be easily adapted into two different styles.



This is an exciting project for a man cave or an early Christmas present for the Mrs for her kitchen island.

>> André Gous

It is a chair which, with some adaptations, can have more than one look. This barstool might test your bending skills a bit, but I trust you will enjoy this project thoroughly.

Project guide

Difficulty: Intermediate

Estimated cost: R150

Estimated time: Half a day

Tools

- Tape measure
- Grinder and safety glasses
- Welder
- Pipe bender
- Square
- Chalk
- Clamps

Materials

- 1 x 6m of 19mm round tubing
- 2m of 8mm round bar
- 3m of 25mm x 3mm flat bar

Cutting list

- 2 x 1,7m of the 19mm round tubing
- 2 x 730mm of the 19mm round tubing
- 2 x 380mm of the 19mm round tubing
- 1 x 1,8m of the 8mm round bar
- 6 x 395mm of the 25mm x 3mm flat bar

Step-by-step guide

Step 1: Measure 150mm from one end of the 1,7m round tubing and make a mark. Measure the second length as well and bend both 90°. **Keep the following in mind:** In order to make the 90° bend you will need extra length to clamp the pipe in the vice of the bender. In other words 150mm will create excess material that needs to be cut off again afterwards.

Step 2: Measure 350mm from the first bend (the inside dimension) and make a mark with chalk. Bend a 110° bend for the back rest – a 90° bend will be too restrictive and uncomfortable. Measure 350mm from the second bend once again and bend a 90° bend (this will form the front part of the bar chair).

Step 3: Cut 80mm of each end of the 150mm measurement off and join the two ends in the middle via welding. This will form the width of the back rest of the barstool.

Step 4: Measure 360mm (inside dimension) from the front leg and weld the back legs in place on a 110° angle. Use a square to determine the degrees.

Step 5: Weld the two 380mm cross bars in place, 40mm from the front bend. Do the same for the back legs.

Step 6: To form the foot rest, measure 450mm on the 8mm round bar and bend a 90° bend. Measure 450mm again and bend another 90° bend. Repeat the measurements and bending another two times.

Step 7: Measure 200mm from the bottom of the legs upwards and weld the 8mm foot rest in place.

Step 8: Weld six 25 x 3mm flat bar in place to form the back rest and seat of the chair. Grind all the welding joints smooth before painting – I have sent mine in to be sandblasted before power coating.



Measure 150mm of the round tubing



Start bending from the 150mm mark



Bending the first 90° bend



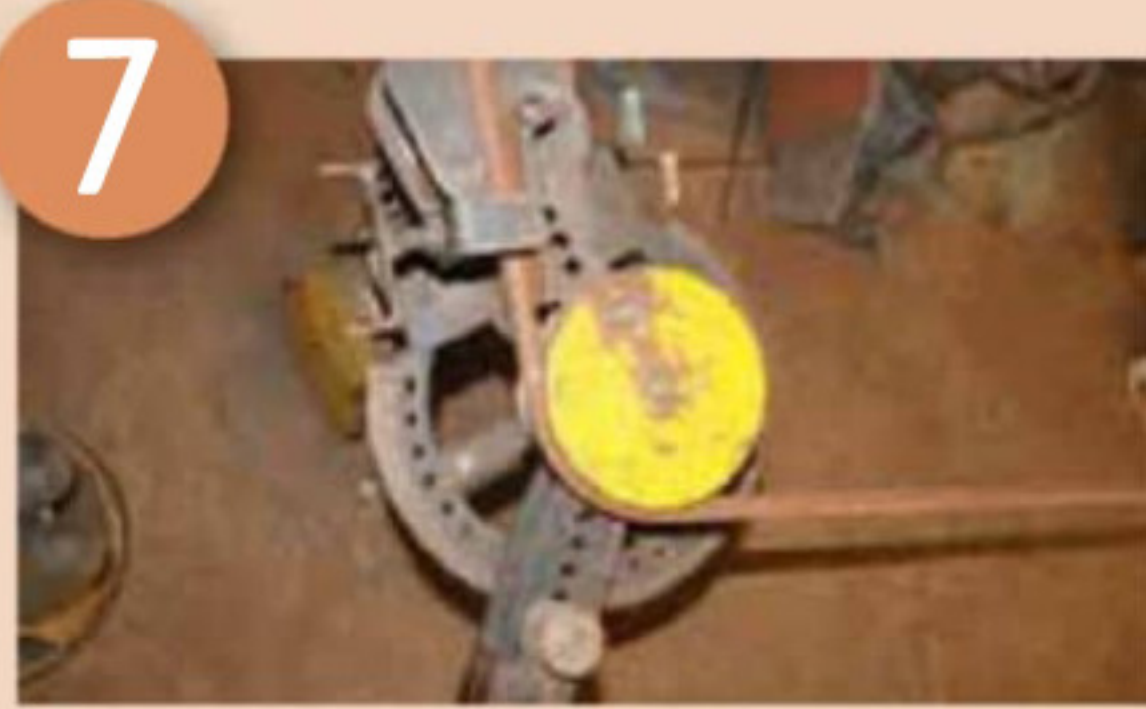
Keep in mind that the bend will add to the width of the chair



Measure 350mm for the second bend



Bending 110°



7 A 110° bend for the back rest will provide a more comfortable sitting position



8 Measure 350mm from the second bend



9 Bend 90°



10 The end result of the 1,7m round tubing



11 150mm was measured to make sure there is enough body for the pipe to fit into the vice of the pipe bender



12 Cut off 80mm of the original 150mm measurement



13 Weld the two pieces together after cutting off the 80mm on each side



14 Measure 360mm (inside dimension)



15 Weld the back leg in place



16 Measure 450mm on 8mm round bar



17 The 90° bend on the 8mm round bar



18 This will form the foot rest



19 Bend all four corners



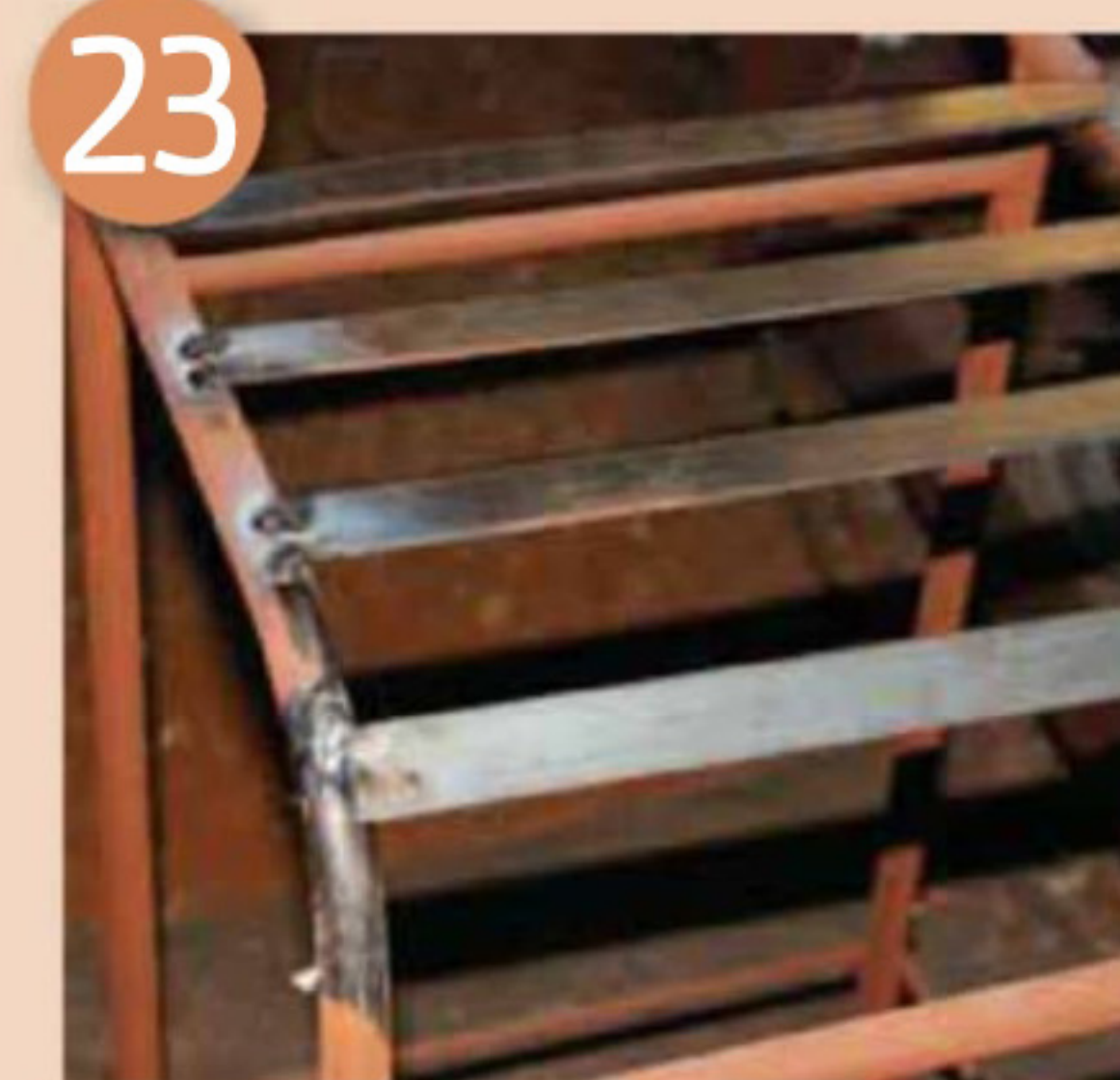
20 Weld the foot rest 200mm from the bottom



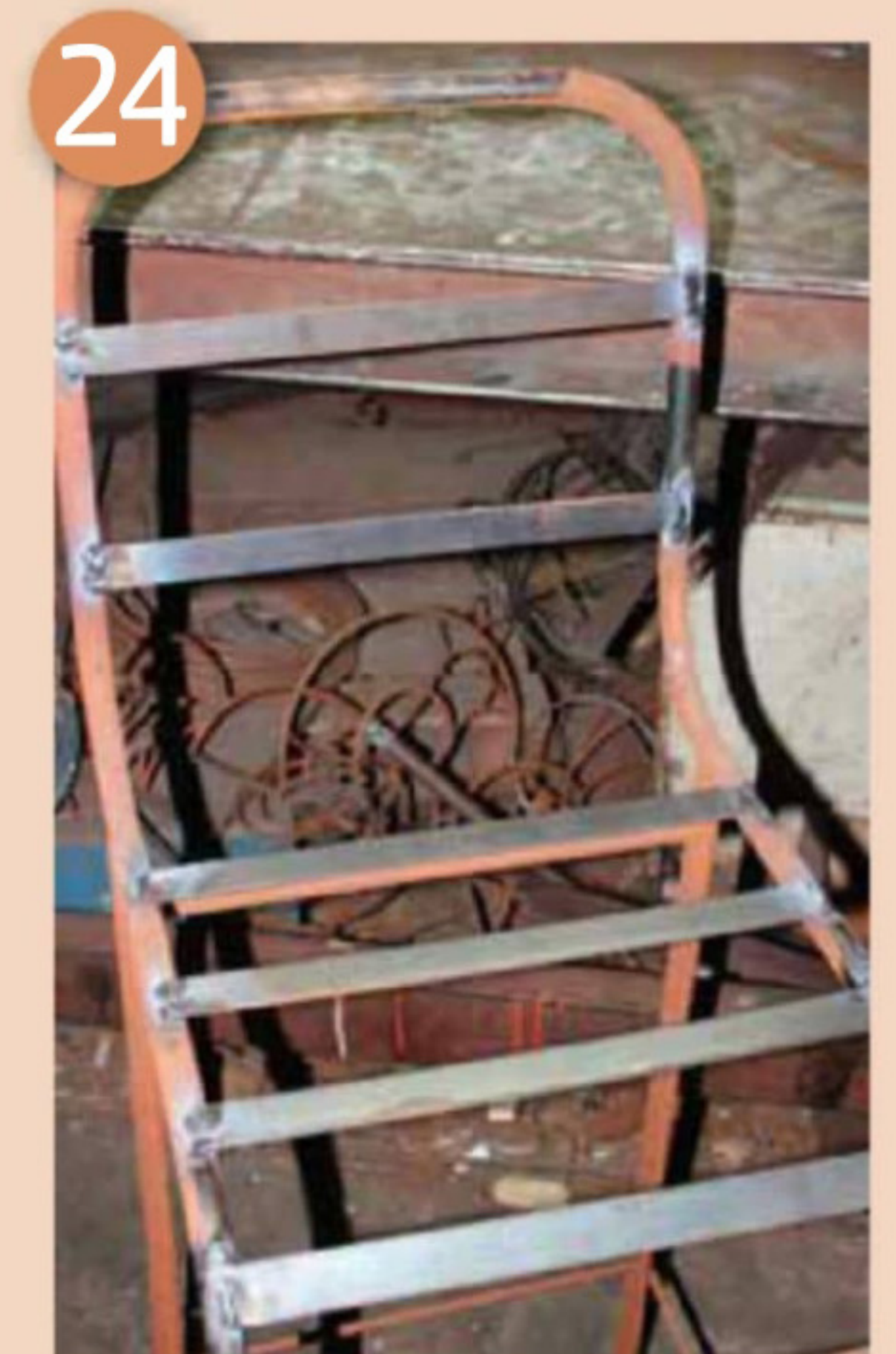
21 Weld the flat bar in place for the seat and back rest



22 Make sure each is 60mm apart



23 The flat bar in place for the seat



24 The completed back rest

ABOUT ANDRÉ:



After a period of unemployment, André turned his 20 year hobby into a business. He later suffered a setback when his tools were stolen but the tide turned when he won *The Home Handyman's* wine rack competition and became a regular contributor.

Jimmy Diresta's top 5 metalworking tools

Jimmy Diresta is one of the most skilled and riveting DIY'ers around with projects on his popular YouTube channel that range from a steel and wood bench seat to an aluminium axe.

Diresta is an expert working with any type of material, but it's his metalworking prowess that's the most compelling. He makes cutting, carving, and welding look so easy. Here are his five must-have metalworking tools to get started.

Bandsaw

First and foremost, you'll want to invest in a proper bandsaw for cutting metal. It's much more effective and safer than a cut off wheel or any handheld saw. It doesn't matter if it's new, used, cheap, or expensive, just always remember to use oil.

Die Grinder

When it comes to grinding, Diresta recommends a 1/4-inch die grinder and selection of burs. Solid carbide will make any weld look beautiful if grounded properly. Choose an electric or air die grinder; either works well.

Metal Nibbler

Nibblers' have got a goofy name, but that doesn't make them any less valuable in the metalworking trade. Nibblers are effective at cutting shapes in steel and can be used as a standalone tool, a drill attachment, or an air nibbler.

Flux Core Welder

At the heart of metalworking is welding. Diresta recommends starting with a flux core welder which is simple and easy to

understand. No gas is required and the flux core in the middle of the wire acts as the 'shielding'.

Press Brake

Last but not least, a press brake is an effective tool for when you want to bend sheet metal. You'll need some room in your workshop to keep one, however, but there's no better way to shape metal as you see fit.

For more information, visit www.jimmydiresta.com



"You are a welder if you have sun burn in the winter"

UPCYCLE YOUR OLD GLASS JARS

Before you get rid of those old glass jars which seem to gather in your home, consider upcycling them.

>> Cathy Reimers

One thing I can't stand is throwing things away. I was recently handed a box of empty jars and since my décor at home is pretty sad, I thought I could give some sparkle to my empty shelves. After some research and finding many ideas, I settled on a few to share with you. How exciting – so many options to recycle, re-use and reduce waste!

Succulent terrarium



For the small terrarium you will need:

- Large glass bottle
- Stony sand
- Potting soil
- Selection of succulents
- Extra pebbles

Make sure your jar is clean and free from any oil. It also helps if you can fit your hand through the top of the jar! Now add your stony sand (your local nursery can also make suggestions). Next, add the potting soil. Moisten the soil and prepare for planting. Carefully insert your small succulents and press down gently. Now take your stones and cover the open areas of soil. Place in a sunny spot.



Painted light bottles



I think this was a rather ambitious project, especially with the use of homemade products! Trial and error I suppose... I followed all the recipes and instructions I could find and it still wasn't the greatest success. That is exactly why I wanted to share this idea with you. Now the choice is yours to follow through or not.

Start off with very clean jars! Mix the Modge Podge with food colouring and pour a few blobs into the bottle. Swirl the mixture to cover the entire surface area of the inside of the glass jar. Turn the jar upside down and drain the excess liquid; allow to settle for about half an hour.

Turn your oven to about 120°C. Insert the bottles mouth side down on a baking tray with wax paper underneath and bake for 20 minutes. Turn the bottles mouth side up and bake for a further 30 minutes.

Once the bottles are removed, allow them to cool. As you can see, mine didn't stain so it created a slightly translucent coating, with no waterproofing qualities. So the next plan was to paint the bottles and insert string lights. The most frustrating thing is that once the lights are in and glowing they reveal all imperfections! For solid blocks of colour/designs I used metallic powders mixed with acrylic varnish and for the solid areas I used at least three coats of chalk paint. I then added detail with the metallic paint. The battery operated string lights are best for the jars as you don't have lots of wires hanging around.



Painted bottles to use as containers



The best jars for this are probably the good old 'Balls' jars or a jar with a raised pattern. Clean the jar very well and make sure that there is absolutely no oil on the surface. Just to be sure, lightly rub down with a fine sandpaper to create a key (I always do this no matter what the paint tin says, or the hardware assistant's advice).

Now, using the chalk paint colour of your choice, base coat the jar. Make sure it is well coated, allowing it to dry well between coats. Take a contrasting chalk paint colour and wash over the dry basecoat. Leave to dry and seal. Using steel wool, rub down the wash coat to reveal a distressed colour beneath. Polish with Cobra polish or the appropriate chalk paint wax.





Make a wooden WIND SPINNER

Wood spinners are fun, fanciful decorations that are a blast to watch on a windy day. Reader, Peter Williamson, shares his project.

Project guide

Cost: + R200 (if you don't have any of the hardware)
Skill level: Easy
Time: One day

Tools

- Planer/Thicknesser
- Table saw
- Drill press
- 10mm spanner
- Paint brush
- Mitre saw (optional)
- Jig saw or Band saw (optional)
- Hacksaw
- 6mm wood drill bit

NOTE: Certain images show the table saw without the blade overhead guard. This is for illustrative purposes only.

Materials

- 1 x Plank 94mm x 1 800mm x 22mm PAR pine (or any timber of your choice) cut into 65 strips of 180mm x 20mm x 6mm
- 1 x 500mm M6 threaded rod
- 1 x M6 eyebolt with nut
- 1 x M6 dome nut
- 2 x M6 washers
- 1 x M6 coupling nut
- 1 x Large fishing swivel
- 1m Nylon coated stainless steel fishing trace wire (recommended) or nylon cord or string
- Exterior varnish or paint

Wind spinners are fun to watch and make great additions to your garden. When the wind blows they turn in a fascinating, spiralling motion, first in one direction, momentarily stop, then reverse direction as the string 'unwinds'. They make for an

easy and fun weekend project and wind spinners make great presents too. I have made a number of them using either one type of wood or a mixture of light and dark woods. Due to the small size of the pieces it is the ideal project to use offcuts.

Step-by-step guide

Step 1: Plane the wood to 20mm thickness and rip the plank into 6mm strips. Cut the strips to 180mm length. I changed my table saw to crosscut mode and clamped a stop block to the fence so that I could cut a number of strips at a time.

Step 2: Drill a 6mm hole in the middle of all 65 pieces of wood. Make sure the holes are drilled in the centre of the strips. This will help ensure the spinner is balanced and will spiral properly. I made up a jig to be able to drill more than one piece at a time and also help ensure all the holes go through the centre.

Step 3: Screw the dome nut and a washer on one end of the threaded rod. Ensure the nut is very tight. Thread all 65 wood strips on the rod and finish off with a washer and hex nut. When mixing wood types I thread 14 dark, 11 light, 15 dark, 11 light, 14 dark. Tighten the nut enough to be able to turn the strips but not too tight. Cut off the excess rod leaving enough to screw into the coupling nut just under half way.

Step 4: Mark the top and bottom strips 60mm from each side. Draw a line from the top of the centre strip to the mark on each side of the top strip. Do the same for the bottom. Cut along these lines to get the taper profile of

the spinner. I used my table saw with the sliding protractor to cut the first two sides and then the fence to cut the last two. A band saw or jigsaw could also be used.

Step 5: Screw the coupling nut loosely on the threaded rod and clamp the spinner by the coupling nut in a vice. Rotate or 'fan out' the strips of wood. Work from the bottom up by holding the lower strip and turn the strip above it until the corners just touch. Tighten the hex nut firmly when finished so the strips stay in place. Then tighten the coupling nut.

Step 6: Cut the eye bolt thread so that when it is screwed into the coupling nut there is very little or no thread visible. Open up the eye bolt slightly so that the swivel can be fitted. The easiest way is to put a screwdriver in the gap and give it a sharp knock with a hammer.

Take about a metre of fishing line or trace and make a loop at each end. Attach one end to the swivel and attach the swivel to the eye bolt. The swivel is there to stop the line getting tangled but still allows the line to wind up and then unwind. The spinner can now be varnished or painted. I varnished mine with a rosewood stain and then a clear low gloss. Finally, hang your completed spinner from a tree branch or on your patio where it will catch the breeze.



Materials for the spinner



Plane the wood to 20mm thickness



Rip the plank into 6mm strips



I changed my table saw to crosscut mode and clamped a stop block to the fence to cut a number of strips at a time



Cut the strips to 180mm length



Drill a 6mm hole in the middle of all 65 pieces of wood



Cut along the lines to get the taper profile of the spinner



Assembling the strips on the threaded rod



Cut the profile of the wind spinner



All 65 pieces cut



Rotate the strips to create the spiral



Before varnishing mine with a rosewood stain and then a clear low gloss

DO YOUR BIT

Six tips to save on electricity costs and reduce energy consumption at home.

In the first quarter of the year, Eskom and the Government committed to developing a workable strategy to stabilise the national grid as capacity is ramped up and maintenance is scheduled. Following a briefing by deputy president David Mabuza on events at the national utility and electricity constraints, a Technical Review Panel appointed by the Eskom board and Public Enterprises Minister Pravin Gordhan promised a plan by April. However, with the National Elections and subsequent inauguration of President Cyril Ramaphosa taking centre stage, the strategy was postponed.

While Eskom resumes the process, South Africans can take matters into their hands by managing their consumption, to prevent further load shedding during the rest the year. Apart from self-generation systems which are often reactive and expensive solutions, here are six ways you can save on energy at home and contribute to national grid stability:

1. **Schedule an energy audit:** An energy audit will help you find smart ways to reduce your home and business energy bills and, in the process, lower your carbon footprint. Most power companies like Eaton offer energy audits which give detailed analysis of your existing installations including information on where the most energy is being used and prescribe specific methods or appliances for improved power efficiency.
2. **Energy efficient lighting systems:** Efficient lighting can reduce energy consumption by up to 80%, as regular light bulbs create a lot of heat and use up more energy. Light emitting diode bulbs (LEDs) for instance have been identified as a higher efficacy light source, using about 75% less energy than regular incandescent light bulbs. They last longer, reduce overall lighting power consumption, and offer comparable or better light quality than other types of lighting. Installing lighting control devices like dimmers, timers and sensors can also reduce energy costs.
3. **Power off and unplug equipment not in use:** This should be one of the easiest things to do but a lot of people consider it an unnecessary challenge. Lights and appliances like the home cooling and heating systems, televisions and other equipment should be turned off and unplugged when not in use. It is important to note that turning appliances off but leaving them plugged in to an energy source contributes to 'phantom load' and consumes a lot of energy that could otherwise be saved and put to better use.
4. **Install motion sensors:** A significant amount of energy can be saved by replacing your regular home switches with occupancy and vacancy sensors which automatically turn off and on when the presence of a person is detected. Power companies now offer lighting solutions which maximise performance, efficiency and save costs. Solutions like Eaton's Intelligent Lighting Solution (ILS) monitor and reacts to occupancy. These systems also have absence functionality incorporated to maximise energy savings.
5. **Interchange air conditioning units with fans and radiators:** Increased usage of stationary, ceiling and whole-house fans to cool your home can reduce the need for air conditioning units thus saving energy and costs. In winter, use an oiled filled radiator instead.
6. **Upgrade home appliances frequently:** Upgrading appliances being used at home or purchasing new ones occasionally can also reduce energy and save costs. This is because newer appliances are increasingly being built with considerations for reducing the load to power systems and reducing energy consumption.

Following these simple steps will go a long way in improving energy efficiency and support the Government efforts to reduce energy costs and wastage, while conserving available energy for utilisation in homes and buildings.

Resource: www.eaton.co.za

Spiked garden solar lights are simple to install and offer a great effect

LIGHT UP YOUR GARDEN WITH SOLAR LIGHTS

Solar lighting is a cost effective way to light up your garden at night.

Create a restful atmosphere in your garden and increase night time visibility in one go. There is no wiring required to install solar lighting, so this makes it an easy project to complete, while solar lighting also reduces your carbon footprint. A variety of types of solar lights are available: Lanterns, spike garden lights, fairy lights, stairway lights, motion sensor lights, in-ground lights and even LED candle lights. It is important to buy the lights from a reputable dealer, so that the life span of your lights is worth the money spent. There are usually a number of designs to choose from.

Solar lighting can either be used as ambient lighting – enhancing the

atmosphere, or as critical lighting – to provide strong, direct light on an object.

Spike garden lights can be used to illuminate special plants in your garden, giving a picturesque result. These lights fitted to a spike can simply be pressed into the ground in the chosen spot. A garden pathway or driveway can be practically lit up using these, but with such special effect.

Lantern lights, available in many colours, can also create a stunning effect. Solar lights are easy to move; so one can create different effects every now and then to keep your garden night time views continually refreshed.

>> Kim Roberts

In-ground garden lights can be placed level with the ground's surface or fixed onto a wall. There are even lights set into 'rocks' that will also create a charming natural effect.

To create a cosy corner, or a special braai area, fairy lights or LED candle lights can be used. With candle lights you enjoy a long lasting candle effect without worrying about the wind blowing them out, or the light dying down as the candle burns out.

The biggest advantage of solar lights is that they are an inexpensive method of lighting your garden, as there will be no extra electricity cost added to your bill.

What to look for when choosing your solar lights

- **Solar battery quality** – Better quality solar batteries have a longer life span and will keep solar lights operating longer, even when weather conditions have not been favourable. Gel rechargeable batteries are a better choice than lead acid batteries that are cheaper. Gel batteries are also the green choice as they do not release toxins when disposed of.
- **LED brightness** – Check the diameter of light cast by the LEDs, and how many LEDs there are. Depending on the effect you wish to create, choose the appropriate fitting to give you the brightness required.
- **Solar panel quality** – Effective output can vary between 40mA to 80mA.
- **Quality of light fitting** – Choosing a cheaply made fitting will be expensive in the end as it will have to be replaced soon. The lifespan of a good quality light will be worth the extra money spent initially. Keep your warranty slip just in case it may be needed.

Plan your lighting

Choose the garden spots you wish to illuminate: your driveway, a pathway or a specific flower bed, water feature, patio or even a special tree. Decide on whether you wish to shed bright light or create an amazing atmosphere. The closer you set your solar lights to your desired focal point, the better it will be illuminated in the evening. On average solar lights are placed about 2-2.5m apart to be effective. Closer spacing can be used to create a special effect though. Ultimately the choice is yours.

Remember that plants need about eight hours of darkness per day for respiration to take place. Most vegetables and flowering plants need 12 to 16 hours of light for photosynthesis to take place. Flowering plants need closer to the 16 hours. Plants must be able to continue with natural processes to ensure that they stay strong and healthy.

Tips to install solar lighting in your garden

- Clean the solar panels to assure easier charging.
- Charge each fitting in 12 to 14 hours of direct full sunlight (over two days) to fill the batteries.
- Install the fittings with the maximum amount of direct sunlight for the most hours possible. Avoid shade created by buildings, larger plants and trees.
- Choose high visibility spots that safeguard your fitting during daylight hours, avoiding accidental damage or destruction by garden maintenance equipment or vehicles. Be sure that they are also not a tripping hazard for people enjoying the garden.
- In the case of a fitting needing a larger solar panel that attaches by cable, be sure to bury the cable in a plastic pvc pipe or bury it deep enough (about 15cm) to be protected from moisture and rainfall.
- Wet and soften soil in the chosen spots before installing solar lights so that you do not damage the stake fittings (by pushing them into hard soil), and to make installation easier.

How does a solar light work?

During the day the solar cells absorb solar light energy and then store it in a battery that the solar panel/cell is connected to. A diode prevents the stored energy in the battery from flowing back to the solar cell during the day. At night, a photo resistor turns on an LED light, and the solar cells stop producing more power. A single solar cell produces low voltage lighting. The more lighting you want, the more solar lights you will need to install.

With our abundance of sunny days in South Africa year around, it is an ideal way to harness this free power. Generally, eight hours of sunlight can supply 15 hours of solar light. Cloudy or stormy weather does not create as much charge, but you will still have light in the garden that particular night, just for a shorter period.



A variety of types of solar lights are available, even LED candle lights

With winter and its cold mornings behind us, attention now turns to how you can keep your home cool during a hot African summer.

How to cool down your house this SUMMER

We love to complain; winter is too cold, summer is too hot... and although as the temperatures start to climb you may be tempted to splash out on an air conditioner, there are a number of simple things you can do to cool down your home.

Keep your blinds closed

As simple as this tip may seem, up to 30 percent of unwanted heat comes from your windows, and using blinds, curtains and the like can save you up to seven percent on bills and lower indoor temperatures by up to six degrees. We all know how relaxing it is to get away from the glare of a hot summer sun and into a cool space, under the shade. To achieve this, buy cotton curtains in the darkest colour possible. Ensure that the curtains have a thick lining, so that the sunlight doesn't fade them. Dark green or brown are easy choices. Keep the curtains drawn shut, right from morning. If your room stays shielded from sunlight all day, it is bound to remain relatively cooler.

Add some permanent shade

If your home has no protection from the sun, then it will continue to beat directly down on top of it, but you can fix this by adding awnings to your windows or covered patios which

will help provide some shade. The less the sun can directly hit your windows, the better off you will be, and the cooler you'll stay. Leafy plants, too, can work wonders. If you have some large decorative or potted plants around, move them closer to your windows. They will absorb most of the heat and create a cooling effect around them. This takes some time to establish and a little bit of planning but will provide you win-win results. A tree in full bloom can block over 70% of solar radiation from entering your home. Sun-loving, shade providing plants, trees and shrubs in front of windows that receive the afternoon sun to cool down your house and add beautiful landscaping to your yard. Trees and foliage also lower surface and air temperatures by providing shade. They also breathe in CO2 and breathe out oxygen and water vapour (called evapotranspiration). Trees and foliage can reduce the temperature by 11-25°C than the highest temper for un-shaded surfaces, such as paving. The difference will be less in your home but even a few degrees drop will make a big difference. Keep any trees/plants in pots that need to be moved/brought in during winter months or that have an aggressive root system.]

Insulate, insulate, insulate

In general for cooling or heating spaces, the areas around windows, doors, cornices and floors have to be insulated – i.e.

sealed. Perimeter sealing, both internally and externally is the sensible way to do it. You can use a combination of products, such as Den Braven PUR Foam (that has a dense cellular structure) as gap filler and insulator; Den Braven Hybriflex 540 for larger joints requiring more movement around dissimilar substrates (around aircons, floors); Den Braven Acryl-W around cornices as this acrylic has good adhesion, movement and filling performance (also paintable and fast drying); Den Braven NO silicone for exterior use where UV might be a concern; and Den Braven Hybriflex 540 which can also be used externally should there be a need to overpaint the area. The products are all low in VOC, contributing to responsible sustainability.

Ditch the incandescent lights

If you ever needed motivation to make the switch to LEDs, incandescent bulbs waste about 90% of their energy in the heat they emit, so tossing them to the curb will make a small difference in cooling your home while lowering your electric bill.

Start braaing

South Africans do not need an excuse to braai, but it is obvious, so we will say it anyway: Using your oven or stove in the summer will make your house hotter. If it already feels hot in your home, the last thing you want to do is turn on a 180° oven.

Do chores at night

As discussed previously, windows are one of the biggest sources of unwanted heat in the home. The other biggest violator: appliances. The obvious is the oven, but all appliances throw off a lot of heat when running. Laundry machines expel a lot of heat, a washing machine generally uses hot water, and driers are obviously using heated air which inevitably escapes and radiates out from the machine. Now, you can't get away with not doing laundry, but you can ensure it's not heating your home during the hottest parts of the day. Do your laundry loads at night to keep things cooler. Your dishwasher also emits a lot of heat. Like with laundry, run it at night to minimise the heating effect. If you have a quiet model, start it before you go to bed and you'll wake up with clean dishes.



If you do decide to go the air conditioning route, ensure it's a high efficiency model.



Closing curtains and blinds is a simple trick to stop unwanted heat from entering your home.



Add awnings to your windows to help provide some shade.

What to look for when buying an air conditioner

If you are set on buying an air conditioning unit, or have an older air conditioner, consider buying a modern, high-efficiency unit and make sure that it is properly matched to the indoor unit. GMC Aircon offer some tips to help get you started:

Measure the space that needs to be cooled

While portable air conditioners are a cheaper alternative compared to a central air system, they also have limits on how far the air will reach. If you have a large home with several rooms, or are trying to cool an office space, it's possible more than one air conditioner will need to be used to adequately cover every room effectively. Conversely, having an air conditioner that's too large for the space will leave everyone frigid and clammy, simply because the space cools too quickly for heat to disperse evenly. Once you have the measurements of the space, start researching air conditioner units for sale in your area. An aircon's cooling rate is measured in BTU's, which means the higher the BTU the bigger the space it's able to cool. Take note of the maximum cooling recommendation for each one and compare it to your exact specifications to see if it will be too much or too little.

Determine the noise level

As advanced as air conditioners are, and as far as they've grown technologically, no cooling unit will be 100% quiet. Some are labelled as 'whisper quiet,' which means as little noise as possible, while others still blow the air around with bluster. The best way to find out what noise the aircon unit makes is to simply test it out in person, but if you're unable

to do so, ask the manufacturer. Aim for a unit that operates at 60 decibels or below so the noise your aircon makes doesn't interfere with your normal everyday life.

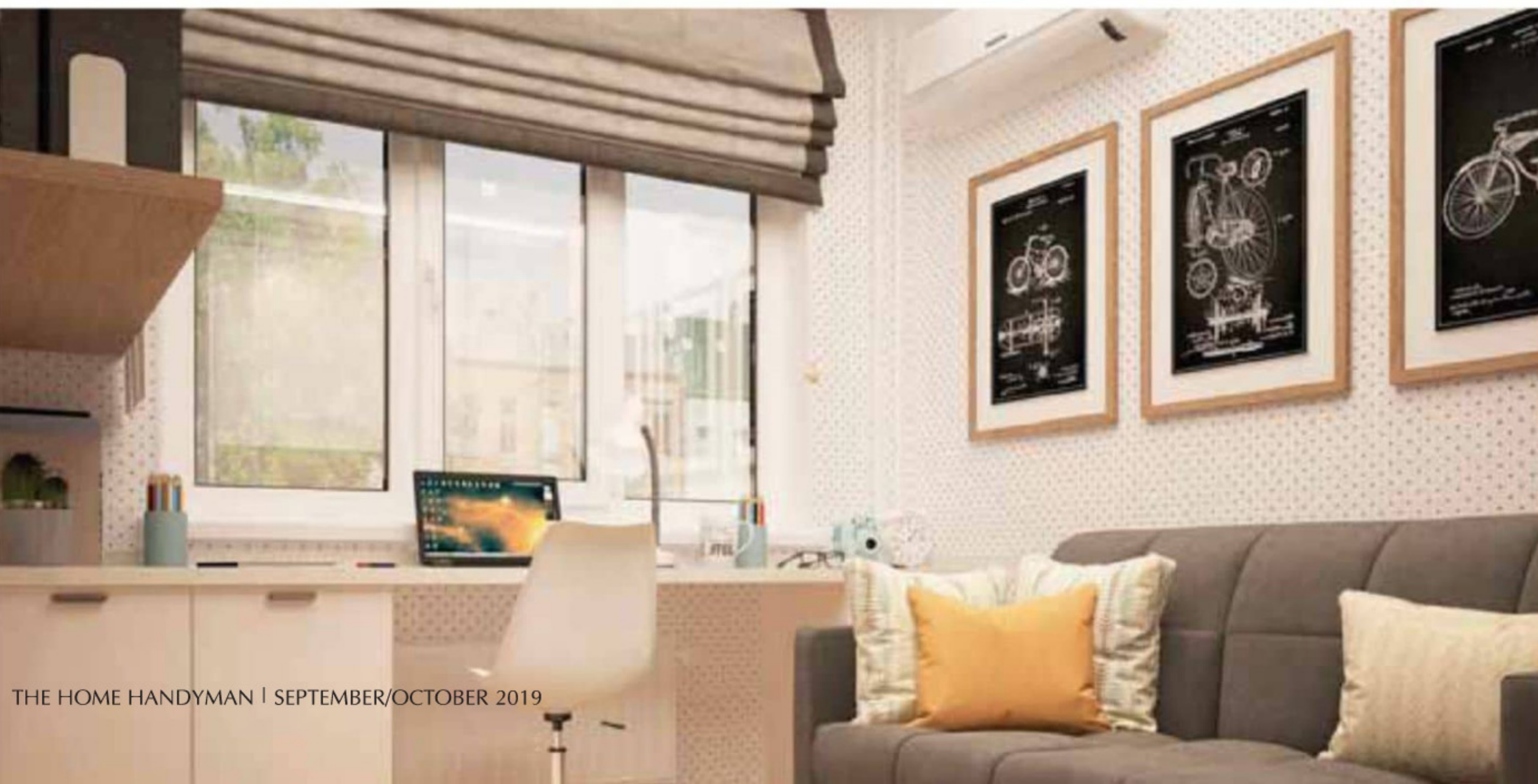
Do you need your air conditioner to have any special features?

In today's market, there's really no such thing as an air conditioner with a simple on/off switch, simply because people love having the choice of adjusting the aircons to their own unique specifications. But do you need a touch screen systems panel? Would it be easier for you if the air conditioner came with a remote control? Most units have a timer now, too, so if that's something you require make sure you look for aircon units where that's a noted feature.

Ultimately, the air conditioner you choose depends on not only where it's going in your home or office but the size of the space, the noise level that will be appropriate for the area, and what features are needed to make the most of your investment. Price is certainly a concern when looking to purchase a mobile aircon unit, with some units being more expensive than others but include the same specifics. It's important to note that although choosing a portable air conditioner is a less pricey option due to its smaller nature and spot cooling abilities, it might not always be what you need for the space you're trying to cool. Larger buildings, like warehouses, and bigger homes will probably benefit more from having a central air conditioning unit installed; although the initial upfront cost can be expensive, you'll save on cooling costs down the road. This type of unit also provides consistent cooling any time you need it, in every room.

Resource

For more information, visit www.portable-airconditioner.co.za



BRIGHT IDEAS

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



Homemade drum sander



Since I saw an advertisement for a drum sander, I thought it would be nice to have one. But I didn't have the money to buy one or enough space in my workshop to store one. "What about building one with what I already have," I asked myself.

My mind started working and I came up with a plan to use the lathe. I didn't have a drawn plan, so I just started and improvised as the project developed. In the end it works quite well.

I started with the drum. I used two blocks (65mm x 65mm x 30mm) for the ends and glued strips to form the drum. Before I glued and clamped it I secured the bolt and nut that would fit in the lathe's chuck. All glued up, I turned the drum (100mm x 350mm). I used a strip of newsprint, cut to size, to see how the abrasive strip would fit. At the ends of



the drum I chiselled away a bit so that the screws attaching the abrasive would be just below the surface of the drum.

Under the board that would be the base (400mm x 350mm), I fixed two strips to fit tightly over one bar of the lathe to form a sort of hinge. Then I made, by trial and error, the mechanism to adjust the height of the board.

I glued the nut in a piece of wood as a handle to make it easy to turn it up or down by hand. The hinge allows for the angle that changes as the board moves up or down. For dust collection I used a plastic pipe, drilled holes in it and connected it to the vacuum cleaner. It works, not 100%, but gets rid of most of the dust.

The downside of a combination machine is that you have to change



your devices for every application. It doesn't bother me much, because it's a hobby and I have enough time on my hands.

Chris Erasmus, De Doorns



WIN!

A Tork Craft Aluminium case set to store fragile valuables

This quality set of lightweight durable aluminium cases consisting of a large 455mm x 330mm x 152mm, medium 425mm x 285mm x 120mm and small 395mm x 240mm x 90mm. They are lined inside with foam. For storage for sensitive or fragile valuables. Ideal for delicate laboratory equipment, measuring instruments, tools or camera equipment. Two tough latches keep the lid closed during transport. For more information, contact Vermont Sales on 011-314-7711 or visit www.vermontsales.co.za

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.

Tork Craft™



valued at R1552

Congratulations to Chris Erasmus who wins a Tork Craft 900W biscuit joiner.



Measure the **WEATHER**

Learn how to make
functioning weather
gauges for the garden

The vast amount of school projects which children are presented with these days – as well as the breadth of topics – provides kids who have a knack for arts and crafts (and their parents by default) many opportunities to get creative.

When our daughter came home with a twofold project to make a rain gauge

and a weather vane for school, we immediately headed for the garage to see what could be used for the projects.

Weather/wind vane

One of the first things we found in the garage that we thought would be useful was a decorative table leg which provided the starting point for the

project. We gathered up some dowel sticks and did our measurements. First we drilled a hole down through the bottom of the leg slightly bigger than the dowel to ensure that it could turn without friction. The actual wind vane was cut out of correx (corrugated plastic sheet) and spray painted.



Next we drilled holes through the legs to create the directional markers. We cut the one dowel to size, inserted it through the hole and then glued it in place, the second dowel was cut in half – after careful measuring to ensure that all four directional markers would be the same length – and then glued in place along with wooden N, S, E and W letters to show the direction of the wind.

We used spray paint to 'beautify' the leg, a base and the directional markers, and finished off by screwing the leg onto the base to ensure that it could stand by itself.

Rain gauge

This part of the project was quite easy, but the end result is a simple, functional rain gauge. We found a two part plastic cup with an inner cup which can be easily removed for emptying and cleaning. This was attached to a thick dowel with a clamp, which was then in turn screwed to a wooden base.

We cut some spare astro turf to size and glued this to the base, and glued a measuring tape (the one primarily used for dressmaking) to the side of the cup to measure the rainfall. Finally, a removable funnel was placed in the measuring cup for more accurate rain data collection.

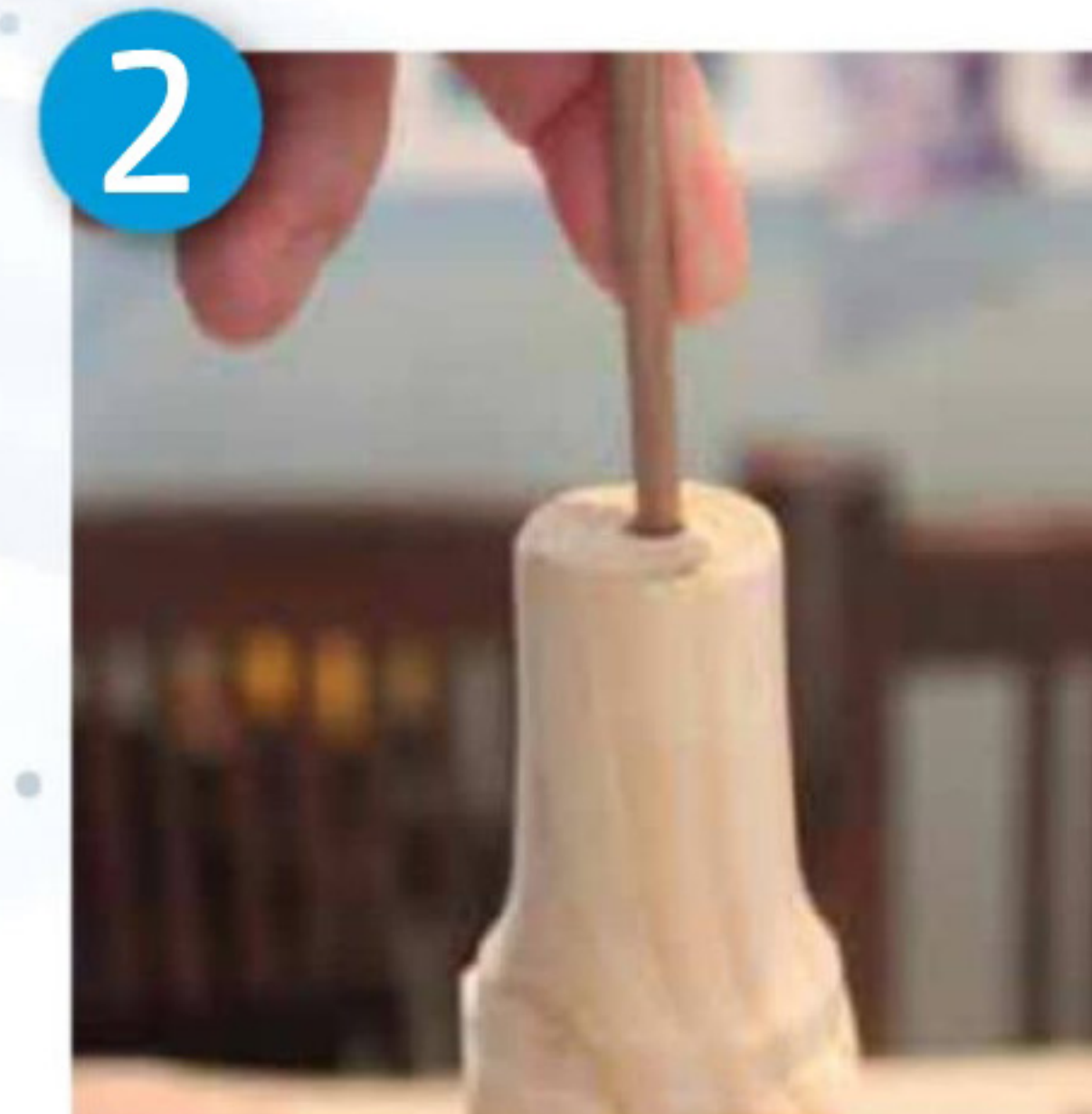
The finished projects are simple, functional and easy to carry as they had to be taken to class. Apart from the drilling, much of the projects can be done by the kids themselves without too much interference from the parents! Let them have fun and get creative!



School projects needn't cost an arm and a leg. Most homes have a collection of bits and pieces which can be repurposed, while consumables such as glue and paint, if stored correctly, can last for years.



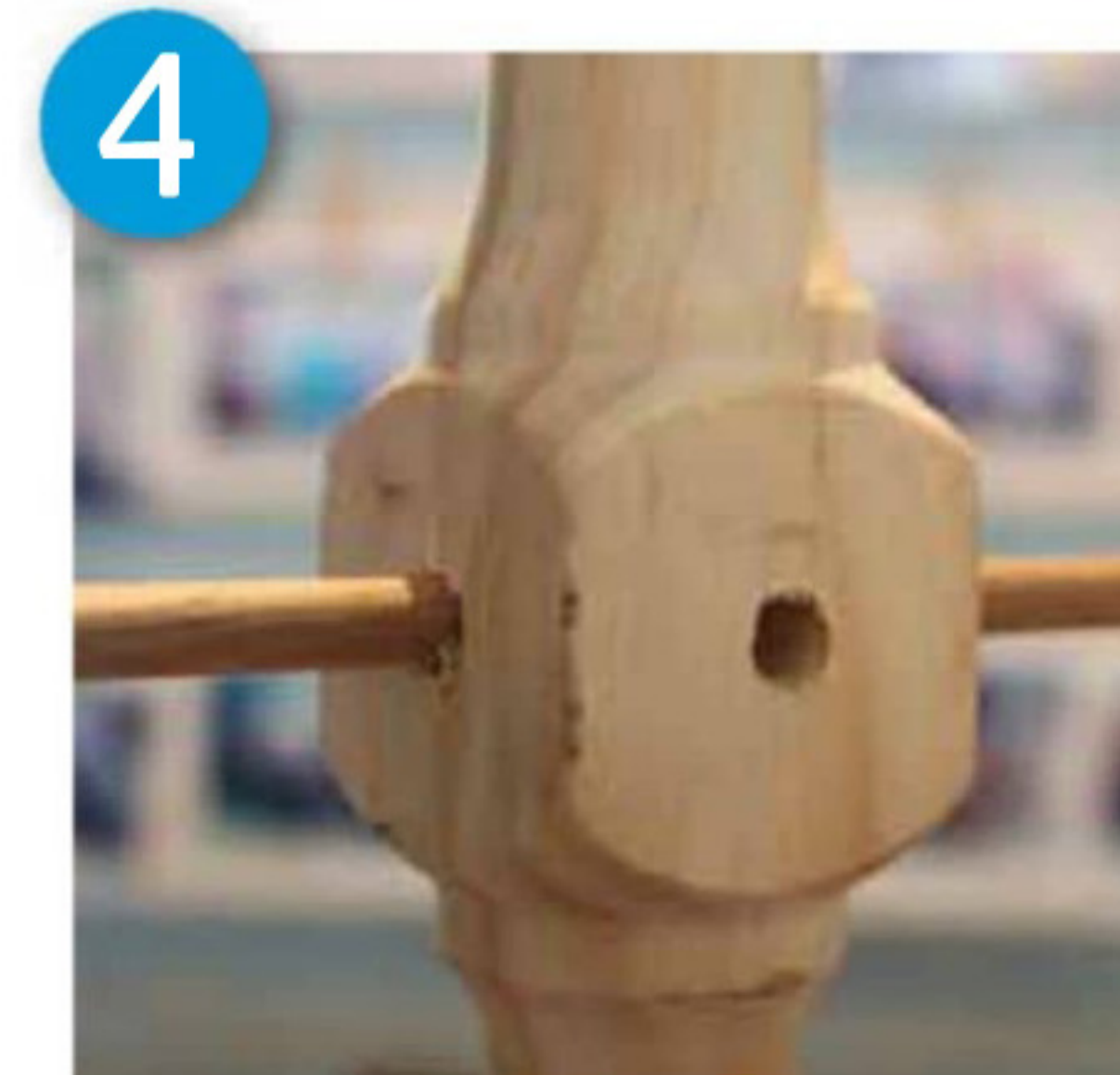
Drill straight down into the base of the leg



Ensure there is enough 'wiggle room' for the dowel



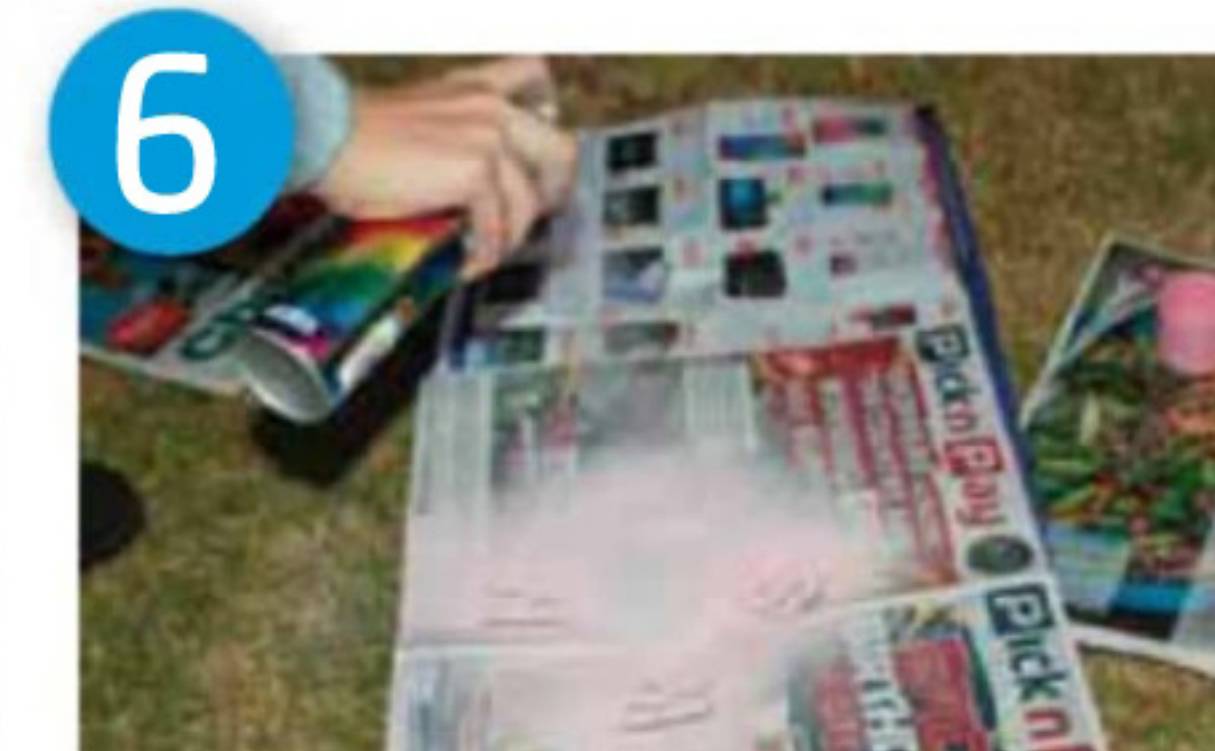
Carefully mark where to drill for the dowel



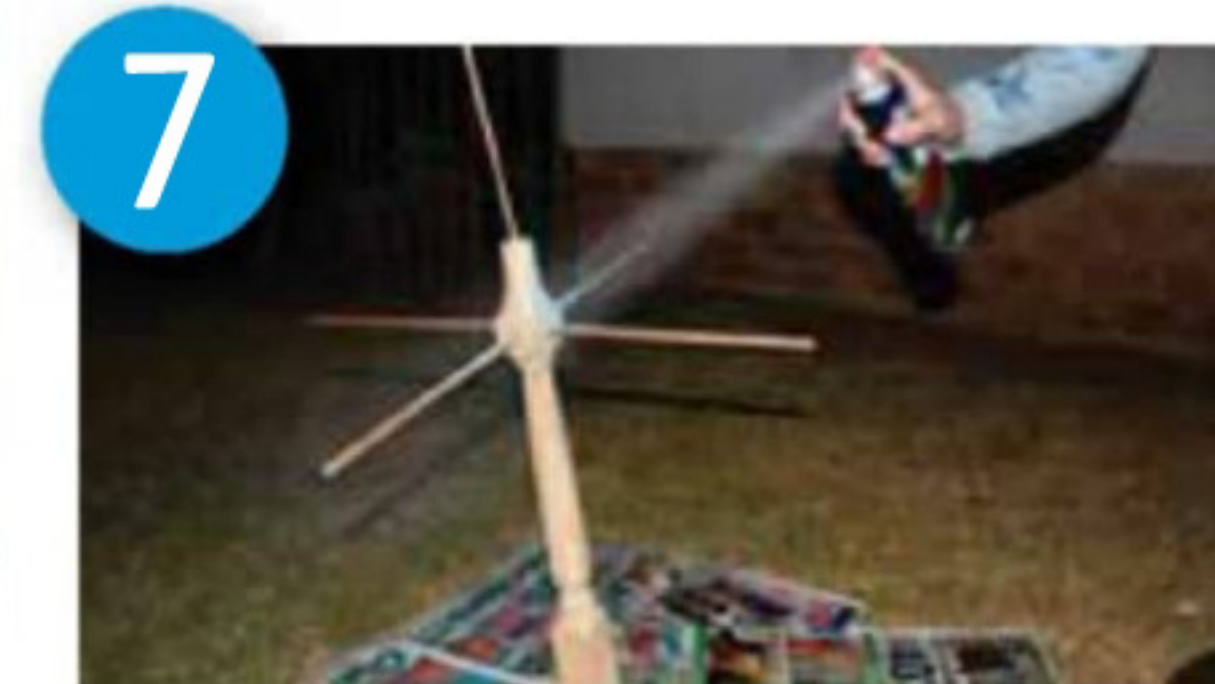
The first directional dowel in place



Insert all dowels and glue in place



Spray paint the N, S, E and W letters



Paint the leg and the dowels



Use a glue gun on the base of the rain gauge



Astro turf gives a more 'natural' base

ASK OUR EXPERTS

Our panel of experts answer your questions on DIY problems

Cleaning grout in your shower

WINNER

I would like to refurbish my shower stall as the tiles and grout have been ingrained with soap scum etc. I believe it is possible to clean the tiles and apply some special paint to seal and renew the looks.

John Watt, Alberton

Ed replies: Tile grouts are usually used in kitchens and showers, ironically, two places which get dirty easily. So, tile grouts in the kitchen and the shower need to be cleaned properly and often as over time dirt piles on making tile grouts dirtier and more unappealing.

Tile grouts in the shower get dirty very easily because we use our bathrooms every day sometimes even multiple times a day. There are a number of options to clean tile grouts, including store brought cleaners. To clean the

grout, spray the cleaner over the grout and wait ten minutes before rubbing with a wet sponge. Be careful because some cleaners use chemicals which can be harmful to children or pets.

You can, however, make your own cleaner at home. Mix warm water and liquid soap and use a sponge to clean your tile grout. Be sure to clean every nook and cranny of your shower. If your shower grout cannot be cleaned with just soap and water you need something stronger. Make a 50:50 water and vinegar mixture and spray on your tile grout. Wait a few minutes before cleaning with a sponge. If that still doesn't work, spread baking powder generously across the shower floor. Spray the vinegar and water mixture over the baking powder and rub with a sponge. An old toothbrush can also be used.



Ceiling paint for wood?

We have just finished painting our bathroom ceiling and I would like to know whether I could use the leftover paint on a wooden cabinet for the bathroom?

Ginna Maio, by email

Frikkie Greeff, managing director, Woodoc replies: You can use the leftover paint for the cabinet, however, you should apply a good quality paint primer first. This will ensure an even finish and prevent cracking of the paint. One should keep in mind that paint is formulated for use

on inert substrates, like plastered walls or ceilings and therefore not ideally suited for application to wooden surfaces.

For more information, call the toll-free helpline on 0800-411-200 (Monday to Friday, during office hours) or email information@woodoc.com.



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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 John Watt who wins a subscription to *The Home Handyman* Magazine for a year.



Mounting a basin

We've completed our bathroom renovation and it was a mammoth DIY task. In drilling to secure the basin, I hit a pipe in the wall (I did not want to buy a pipe detector, as I wouldn't use it again...) What product can be used to 'stick' the basin to the wall?

Natali Trepado, Pretoria North

Ed replies: For the most secure basin possible, consider using both metal brackets and adhesive. While you can't apply construction adhesive after securing the sink and pedestal via metal brackets, you can introduce a different kind of adhesive: caulk. It's necessary to caulk around the base of the pedestal and the area where the rear of the sink bowl meets the wall. This prevents moisture from getting trapped behind your sink and facilitating mould and mildew growth.



Paint stripping from metal door frames

We need to strip and repaint metal door frames inside. The paint is peeling off. The problem is I have a major skin and nasal problem. I cannot tolerate strong smells of any sort. Also paint does not come off with ordinary scraping – it splinters off (don't know how else to describe it) especially the red undercoat. Apart from removing completely and replacing with wood, which will be costly, I am at a loss and hoping you may be able to help in some way.

Shelly Lourens, by email

Ed replies: Paint removers are the best product for removal of finishes when you

don't want to damage the underlying material, yet there are inherent dangers in chemical paint removers. There are various paint removers marketed as being 'safe', but in my experience they don't work as quickly or as thoroughly as the more toxic types (specifically methylene chloride based removers).

As you mention, the strong smells are a problem for you, so possibly try heat. Portable torches are often used to burn and soften old paint making it easy to scrape away. The torch is a fire hazard, so have a fire extinguisher handy. Inhalation of fumes and vapours from the partially burned paint is a severe hazard in this process,

especially if the old paint contains lead. Heat guns or hot air guns can also be used to soften and raise paint.

An effective and fast way to remove paint from small metal hardware is to boil it in water and baking soda. Take a pot that you can dispose of and fill it halfway with water. Pour enough baking soda into the pot with to fully cover the bottom of the pot. Place your hardware in the pot and allow it to simmer in the water for half an hour. When you pull the metal out of the pot, you will see that peeling the paint off is effortless. If you don't want to expose yourself to possibly hazardous chemicals, removing paint with baking soda is a great method.

Denis Lock talks about safety this issue and advocates the use of clamps when working with hand-held tools

SECURING YOUR WORK

When working with hand-held tools (both electric and manual) the woodworker faces the challenge of securing the piece of wood that is being dealt with. Some tools can be used single-handed leaving the other hand free to hold the piece of wood. Ones which come to mind are: drill driver, glue gun, marking gauge, tenon saw, sanding block and a hammer. Most other tools require the use of both hands to ensure safe and accurate operation. When working alone in my workshop I often wish I had a second pair of hands or at least a prehensile tail like a monkey.

The traditional hand-tool woodworker understands this and uses a workbench that has a front vice and tail vice and a series of bench dogs. These do a good job of holding the work securely. As a power-tool woodworker I don't have a traditional workbench and I use clamps as my extra hands. I think clamps are better than an extra pair of human hands. They don't get tired and can hold a workpiece more securely than a pair of

hands belonging to a workshop assistant can do.

The clamps I use most often are C-clamps – also called C-cramps or G-clamps/cramps. The shape of the tool gives it its name. They range in size from 25mm to 200mm. The size is measured by the maximum jaw opening. Most of the time I use 75mm and 100mm C-clamps, but I do have 50mm and 150mm C-clamps as well. Over the years I have fine-tuned my use of C-clamps. Whenever possible, I use the clamp with the handle and thread pointing downwards or inwards. It hurts when you bang your knuckles against a clamp sticking up in the air. To facilitate this clamp orientation the top of my workbench extends beyond the substructure by 40mm around its entire periphery. This gives me 4 metres of flat and straight clamping surface (photo 1 – note the clamp handles are pointing downwards). This works well with pieces of wood up to about 80mm wide. Beyond this I needed another solution.

The one which I have adopted and use extensively is shown in the article heading photo. The idea is not original: it is based on a woodworking article I read many years ago. I call them clamping stands and I generally use them in pairs. Sometimes they are used singly and for some large jobs I use three or four. The construction technique is mine as are some of the uses I put them to. I used to clamp one stand to the end of a bench, but as their use is frequent I now bolt them to the edge of the bench (photo 2). Wing nuts allow for quick removal if necessary. The second stand can be clamped, parallel to the first, anywhere along the length of the bench. Effectively this gives me a variable-length bench resulting in very flexible clamping positions.

The stands are made from 16mm MDF. The ribs are let into shallow (3mm) grooves in the top and base (photo 3). Three filler pieces are glued between the ribs to stop any racking (photo 4). The bottom is held to the ribs with glue and 30mm x 4mm screws. The top is only

screwed on: you may want to replace it after years of use.

A few examples of use of the stands are shown in photos 5 through photo 7. Photo 5 shows a straightedge clamped to a piece of wood that is about to be trimmed dead straight and square by guiding the router base along that straightedge. Photo 6 shows a stool leg about to have its edges rounded over by using a router and a bearing-guided round over bit. Photo 7 shows a piece of wood having biscuit slots cut in it. In each case the workpieces are securely held. My hands are left free to safely guide the machine being used.

There are times when access to the full surface of a workpiece is needed. Clamps in the corners or along the edges would get in the way. The two examples that immediately come to mind are using an orbital sander and routing the face of a piece of work. The solution came to me when I realised that a workpiece only has to be stopped from moving in the horizontal plane.

The upward support of the workbench (or clamping stands) and the downward weight (gravity) of the machine being used solve the vertical problem. I call the solution *clamping brackets*. With a little bit of imagination they do look like brackets (with fat bodies). They are cut on my bandsaw (it would take a little longer with a jigsaw) from scraps of plywood, chipboard or MDF. Their use is seen in photo 8. This is an exercise (free-hand sign writing) from one of my routing courses. The router base can move unhindered (the clamps don't get in the way) over the firmly held workpiece. The workpiece is also firmly held for subsequent sanding with an orbital sander.

For larger pieces I use a variation of the above approach: four *clamping corners* as seen in photo 9. This is an example of face-pattern routing using a guide bush and again the router base can move unhindered. Close-up views of a *clamping bracket* or *clamping corner* are shown in photo 10. They are cut from scraps of 12mm or 16mm



Plenty of clamping edge



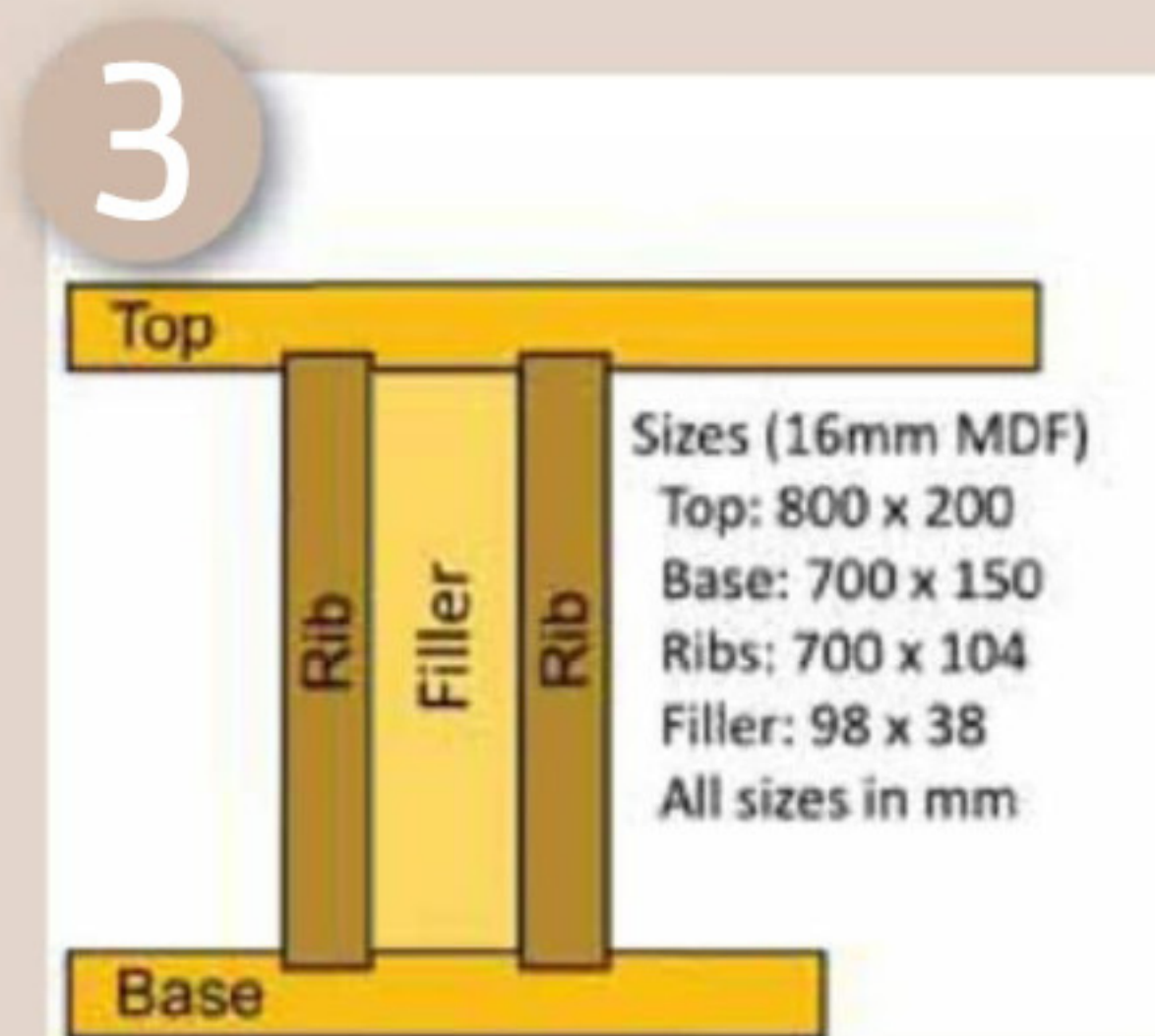
Using a straightedge



Quick to attach and remove



Rounding over the edges



Clamping stand construction



Cutting biscuit slots



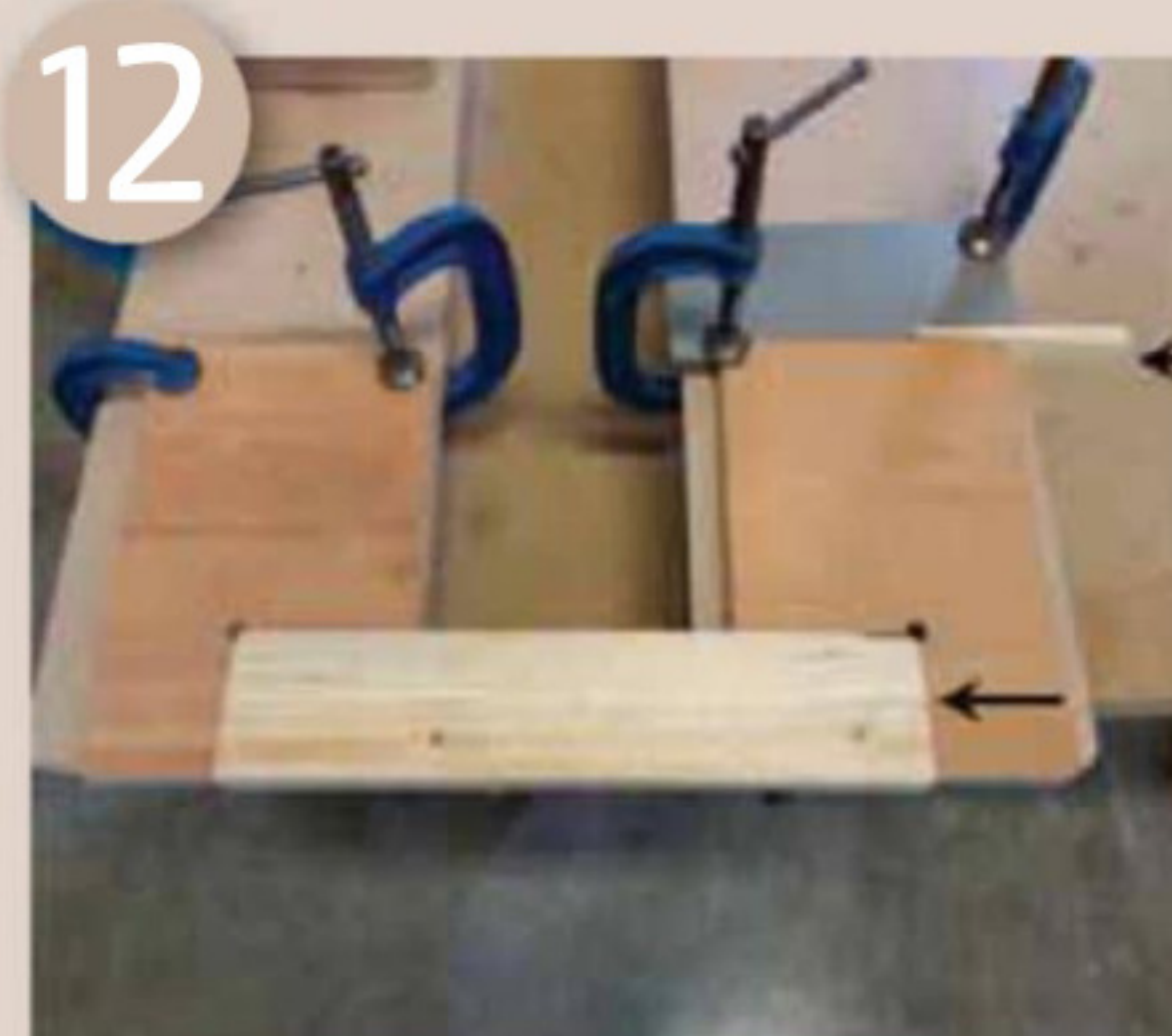
Three filler pieces



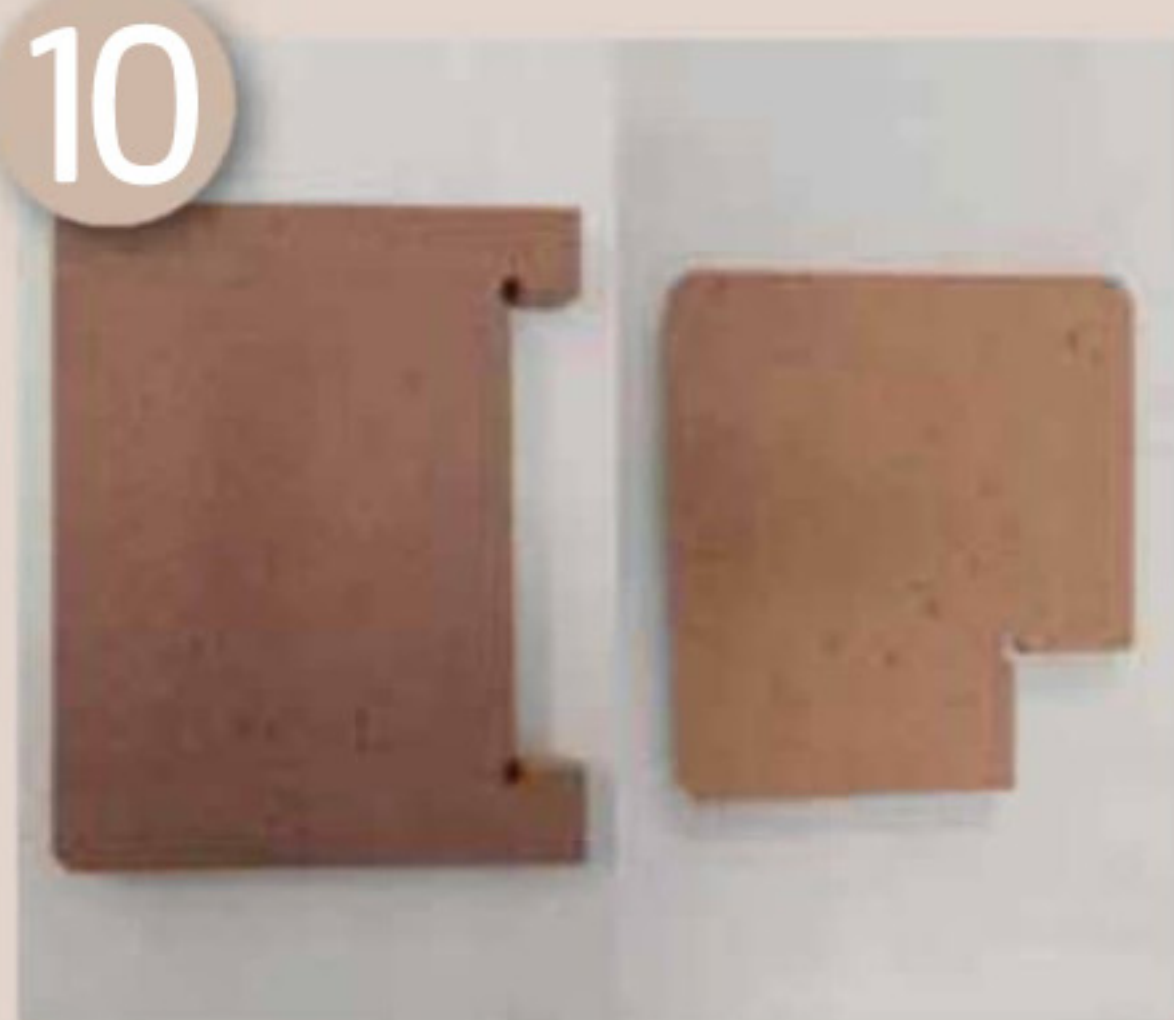
Clamping brackets



Clamping corners



Wedged clamping corner



Bracket and corner



Clamping stand in vertical position



Parallel rods in the way



Biscuit cutting a vertical board

MDF. Another situation where the clamps get in the way is shown in photo 11. A parallel fence is being used to guide a router to cut a groove in a drawer side. The parallel rods stick out far beyond the base of the router and preclude simple clamping. The *clamping bracket* or *clamping corner* won't work as not only must the router base move unhindered over the inside face of the drawer side the parallel fence must also move unhindered along the bottom edge of the drawer side. To solve this problem two larger *clamping corners* are used and one is wedged up tight against the end of the drawer side (photo 12). Tapping the wedge in applies pressure where shown by the lower arrow and grips the drawer side securely.

Most times I need to secure a workpiece in a horizontal position. Clamping stands, C-clamps and, from time to time, extras like clamping brackets and clamping corners do the trick. Most times two C-clamps are sufficient. Sometimes four are used and five are needed when using the parallel fence to cut grooves. If I use biscuits to hold the corner joint of a cabinet I will secure the top and bottom as shown in photo 7 when cutting the biscuit slots. The sides need to be secured vertically to cut the corresponding slots. My clamping stands are designed to stand at 90 degrees to the workbench when turned on their side. Photos 13 and 14 show this use: the result is safe and accurate use of a biscuit cutter.

Make yourself a pair of these clamping stands. I guarantee that you will find them indispensable for safely securing workpieces being worked with hand tools or portable machines.

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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Boskoors Adventure Camp

8-14 December 2019

We at BosKoors are inviting all avid young anglers between the ages of 7-16 years to join us for loads of fun and adventure.

Venue: Boskoors Farm, 30km North of Pretoria on the Moloto Road.

Bookings are essential!

We have limited spots available as we like to keep the number of campers at a minimum, to ensure that every child gets the necessary individual attention and guidance.

Please call Wilma on 065 849 3264 or 083 306 2718 to book your spot. For more information visit www.sabass.com or e-mail wilma@sabass.com



WOODWORKER'S CORNER

Sharing techniques, ideas and a love of wood

Woodworking associations

The Triton Woodworking Club started out in May 2007 as a group of Triton tool owners, and has since evolved to a club of woodworking enthusiasts meeting on the second Saturday of the month. Monthly meetings typically involve a guest speaker where new topics and products are covered, followed by members sharing details of their latest projects in a 'show-and-tell' section of the programme. New and exciting topics are always looked to be shared in the meetings, with subjects ranging from the use of composites, specialist adhesives, finishes, tool and woodworking craft demonstrations.

Meetings are held in the fully equipped John Young Training Centre, allowing hands-on demonstrations to be an integral part of the sharing experience. The skill set of members is broad, and

novice woodworkers are welcomed and helped along their journey of creation. The most outstanding and valuable part of the club ethos relates to members sharing their experiences and expertise with one another. Amongst the accomplished pen, pepper mill and general turners, you will also find cabinet makers, toy makers, tool collectors, jig experts, picture framers and beehive manufacturers, to mention a few. Meetings typically have 35 members present in a relaxed atmosphere. The meeting programme is well supported with sharing between members during snacks in the breaks.

The club is also proud to be well represented by a female group of members. Meetings take place on the second Saturday of the month, from February to November of each year,

from 2-5pm at 80 Allan Road, Glen Austin, Midrand. Lifetime membership costs just R10, and a R60 contribution at each meeting covers the costs of the programme, venue and snacks. New members are always welcome, and if you are interested please feel free to contact Andre Cool at andrecool23@gmail.com or Geoff du Plessis at duplessis.geoff@gmail.com or visit their Facebook page at Triton Woodworking Club.



A table made by ERWA member Theo Pieterse

Undeniable woodworking truths

Do not rush

Do not mistake working quickly with rushing. The best artisans, after years of practice, seem to work very fast, but they do not rush. When you focus on getting the job done in less time, you rush. We all fight this impulse. Pros have deadlines. Hobbyists have limited shop time, because of work and family. Rushing causes more injuries than nearly all bad habits. It results in more mistakes. When you focus on the completion time, you are less thoughtful to the work in progress.

Learn to sharpen

Sharpening is a skill that you need to learn. Dull tools do not work well, and

some won't work at all. This makes woodworkers resort to clumsy and difficult ways. Knowing how to sharpen is a necessary skill. Better results come from sharp tools. Sharpening and honing are part of the tempo of fine work.

You get what you pay for

Most of us have limited woodworking budgets. We think a long time about over-paying for equipment or materials. However, quality machines and hand tools normally are expensive. Buying the low-end brand or lower-quality materials, is cutting corners. You set yourself up for disappointment. Be sure to invest in the essential tools required for any woodworker.

Woodworking is half the battle

When you finish the woodwork part, you are only halfway complete. We enjoy working wood. We do not look forward to finishing. We take pleasure in being precise with our project. Most of us loathe the sanding and the clean-up required for a perfect finish. However, when we cut corners, we get poor results. Glue squeeze-out shows up promptly when you apply finish. On the other hand, you find defects in surfaces that you believe flat. The irrefutable truth is that finishing is as important as woodworking. It may take almost as long.



Spotlight on jacaranda (*Jacaranda mimosifolia*)

>> Stephanie Dyer

We are all familiar with the beautiful jacaranda tree and its magnificent show of blue-purple flowers in early spring, creating spectacular displays in South Africa and many other countries. But, what does the wood of this tree look like? Well, it certainly does not disappoint in this department either, but more about the wood later.

The jacaranda was introduced into South Africa from Brazil, Bolivia and Argentina and has adapted very well to conditions in this country. It is a medium-sized tree with a rounded to spreading crown. The genus name, "Jacaranda", is the Latinised form of the Brazilian name for the tree, which means "joyous song".

In 1984, Pretoria was declared South Africa's Arbor City, due to the fairy tale colour change by the flowering jacarandas in many streets and gardens in the city. The first two jacaranda trees in Pretoria were planted in 1888 in the garden of Mr JD Celliers in Sunnyside. This is now the grounds of Sunnyside Primary School. Celliers contracted Mr Templemann, a Cape Town nurseryman, to do the layout of his garden. This included two jacaranda trees, bought at an exorbitant price, but once they flowered, Celliers was extremely happy with the investment. These two trees are still to be seen on the school grounds today. The origin of the seed of the trees is not clear, but it is very likely that Templemann obtained it from Baron von Ludwig, founder of Ludwig's-burg Garden in Tamboerskloof, Cape Town. Sadly, today only a fountain, a few trees

Sources:

Dyer, S, James, B and James, D. 2016. Guide to the properties and uses of Southern African wood. Briza Publications, Pretoria
Esterhuysen, N, Von Breitenbach, J, Söhnge, H and Van der Merwe, I. 2016. Remarkable trees of South Africa. Briza Publications, Pretoria
Glen, H and Van Wyk, B. 2016. Guide to trees introduced into Southern Africa. Struik Nature, Cape Town

and a double wall exist in this, once famous, botanical garden. Jacarandas were planted extensively throughout South Africa, but are now declared category 1B invaders in the Gauteng, KwaZulu-Natal, Limpopo, Mpumalanga and North West provinces.

The attractive creamy-beige to yellow wood has a fine texture and straight grain. The heartwood and sapwood are similar in colour. The wood is lightweight, stable, soft, has medium toughness and does not have high strength properties. The density of air-dried wood ranges from 480 to 580 kg/m³ with a mean density of 530 kg/m³. The wood is non-durable and requires treatment against fungi and borer. Recommended uses include furniture, cabinetry, decorative veneer, plywood, pulp and paper, boxes, crates, particle board, vats, bowls, toys, carving and turnery. It is widely used for the carving of curios. Woodturner Chris Morewood, has the following to say about jacaranda wood: "Very underrated. Doesn't distort or crack. Lovely to turn. Lends itself to special effects. Can turn fine detail."

The wood saws easily by hand or machine. It planes well to a smooth finish and peels easily for decorative veneer. Pre-boring is essential in nailing and screwing as the wood is likely to split when nailing. The wood glues, stains and polishes well. Skin allergies have been reported from working with the wood.

So, if the opportunity arises to obtain some jacaranda wood, it will be worth considering it!



Photo's by Peter Upfold



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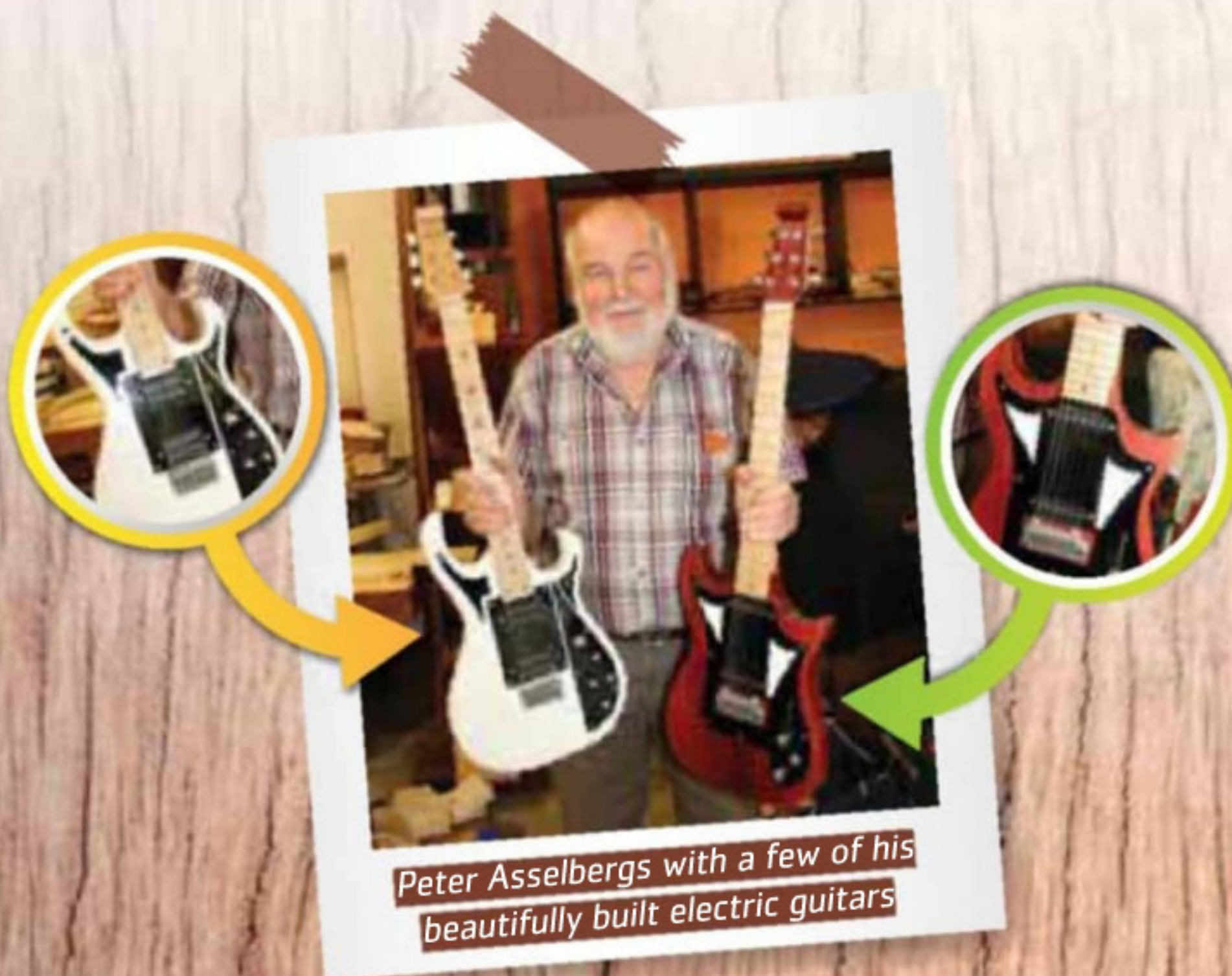
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WOODWORKER'S SHOWCASE

Showcase your woodwork projects

Members of the Triton Woodworking Club share their projects

The Triton Woodworking Club (see the profile on page 58), recently hosted a get-together where members brought in their projects to be featured in *The Home Handyman*. See their amazing work below:



Peter Asselbergs with a few of his beautifully built electric guitars



A salt and pepper grinder set by Jan Fourie



A beautiful nutcracker manufactured by Andre Oosthuizen



'ReallyWood' wood toy semi-truck – one of a hundred built by the shelter for women under the guidance of Margaret Schaffler



One of the club's bee hive men, Porky Scriven's bee hive with viewing ports as a teaching aid

Write to us

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



COFFEE CORNER

From our workshop to yours

Meet the team

Ruth Schultz is an advertising consultant for *The Home Handyman* magazine. She loves the outdoors, and having recently overseen the building of her home, has been bitten by the DIY bug.

Tell us a little about yourself and your career

I grew up in Centurion in Pretoria, where I also matriculated. After school I did a BA in Communication Studies at the North-West University, Potchefstroom campus, and in my fourth year I completed my honours degree in journalism at the same university.

After my graduation I started working as editor and project manager at Infoworks, an independent marketing and publishing company in Klerksdorp (North West). I relocated to Johannesburg in 2012, where I started working as a marketing specialist for Infoworks from home; building up a good client base in the City of Gold.

In 2017 an advertising company, Schmiltz Marketing (Pty) Ltd was

registered by myself and two shareholders, with myself being at the helm of the company. We saw the potential in particularly the agricultural market for selling advertising space for printing, digital and outdoor platforms. Besides *The Home Handyman*, I am also an advertising consultant for four agricultural magazines.

With this new venture which turned one this year, I am not looking back as I've always dreamt about running an advertising business.

What are your hobbies?

Nature and the outdoors are my happy place. If a friend asks if we can go to a restaurant together, I normally reply: "Yes, as long as it is outdoors."

I grew up going camping and hiking with my parents. Before the birth of our firstborn I finished the Cape Town Cycle tour three times as well as the 947 Cycle Challenge twice. I have recently started jogging, and must say, I have now been bitten by the running bug.



How do you find working on THH?

In 2018 the new publishers of *The Home Handyman* approached me to help with the marketing of the magazine. At that time my husband and I had just finished building our very first house, and since there were always a lot of DIY jobs to do in and around a new home, the timing was perfect!

Never in my life could I have imagined how broad this DIY market is. Slowly but surely I am building an archive of *The Home Handyman* magazines at home for all those DIY jobs that still need to be done!

Spring-cleaning hacks

Apply shaving foam to your mirror

Whether it's in the bathroom or in your bedroom, shaving foam is a great way to easily remove smears and smudges. Just squirt some shaving foam on your mirror and wipe clean with a cloth.

Clean your screens using coffee filters

Did you know that you can use a coffee filter to clean up your television and computer screens? They'll catch the dust and get rid of static cling, all without leaving behind any fibres (or scratches).

Clean your microwave in seconds

We've all had microwaves that had a ton of hard to clean spots from leftovers. But if you just heat a bowl of water in the microwave for 1-2 minutes (or until steam is rising), and leave for a minute, you can scrub off the spots in seconds!

Clean stainless steel

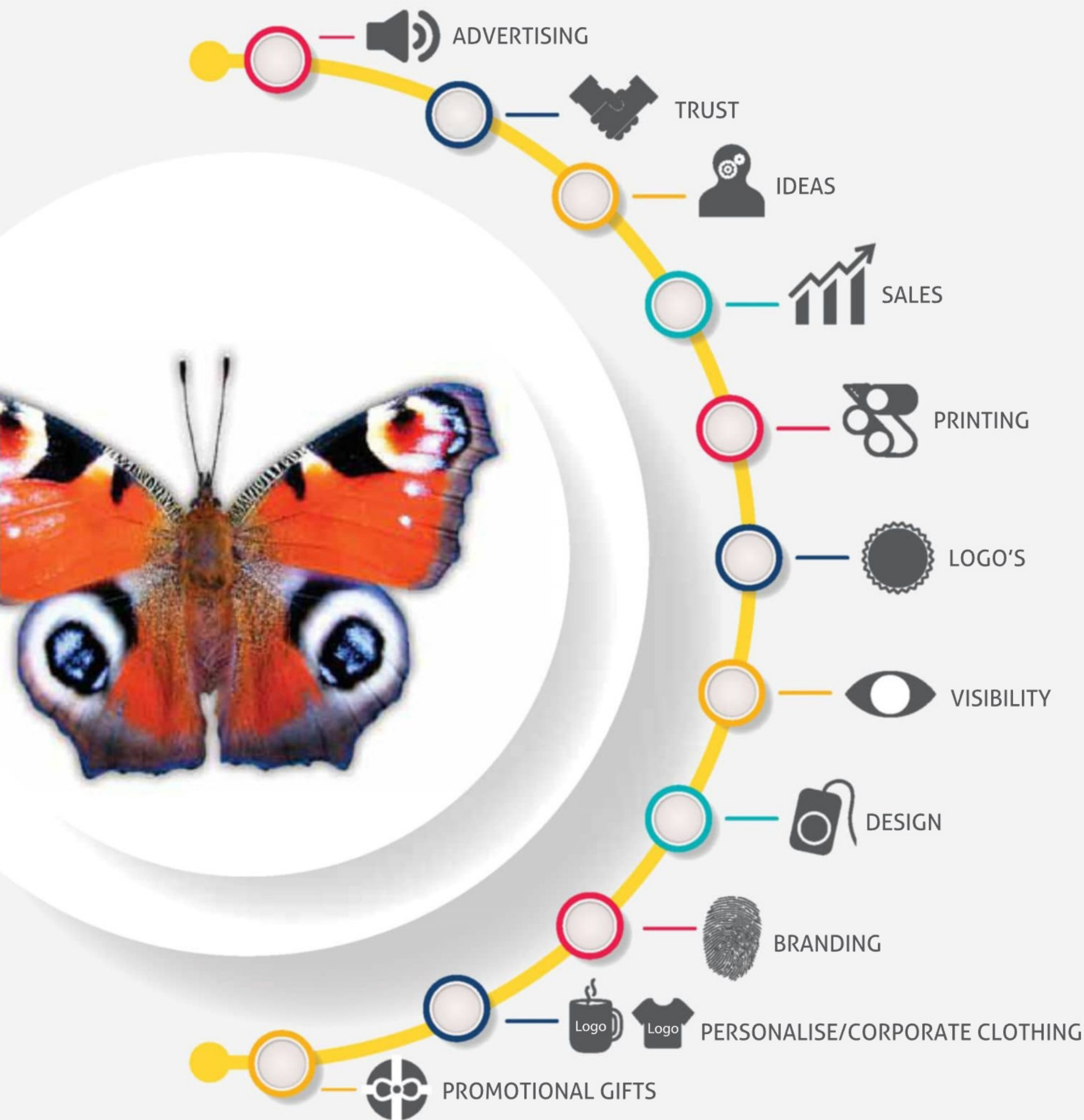
Olive oil is not just for cooking, it can also spruce up stainless steel surfaces. Use a small amount on a cloth and wipe over the kitchen surfaces. It will remove any stubborn smears and fingerprints and leaves a gleaming finish.

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Holiday memories

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 is part of the team on *The Home Channel's Get It Done!* series.

Going on family holidays always brings back the fondest, funniest and most loving memories of my life. I grew up during the time when going on the yearly holiday with the family to the coast was set in stone, like the law, and eating 'padkos' next to the road was an important ritual of this tradition. That steaming cup of coffee from the flask can still not be topped by the best of baristas...

My mom catered for the choices of each family member and, may I add, the rest of Africa. It was cheese and tomato sandwiches, some jam sandwiches for my dad who always needed 'something sweet', curried marinated chicken legs, the trusty boiled eggs and the coffee. When leaving the house in the dark and early hours of the morning to start our 'trek' to the beach, I was already looking forward to the breakfast and couldn't wait for my dad to find that perfect tree alongside the road where we could enjoy the delicious food. I can still smell

Nothing beats a beach holiday, yet sometimes the trip to the coast is as much of the experience as frolicking in the waves.



the various scents of the food and coffee, and feel the excitement in the pit of my stomach to be the first one to see the sea.

Yet finding that perfect place to stop to enjoy the padkos was the tricky bit. It always felt as if the best trees and shade were on the other side of the road! Eventually the complaints of hunger and desperation became so loud in the car that my father just pulled off the road at any fairly acceptable place and a 'hangry' family descended upon the food. Afterwards, with a satisfied stomach and the first photos taken to document the holiday, we set off again and my parents could, in peace, listen to Rina Hugo, Annelie van Rooyen and Elvis while we could sleep off the feast and plan our daily beach excursions.

Arriving at the beach house had its rituals as well. We all ran into the house for the bathroom and my dad would always complain that he was not going to unpack the car by himself. The next

>> Annalien Grensemann complaint from him – under his breath while struggling with heavy suitcases and boxes of food – was, without fail, "I am sure that we only left the fridge and stove at home!"

Walking on the beach was – and still is – like a hunting (or rather gathering) experience, to my husband's frustration. Whatever shells, washed up driftwood and pebbles I see on our walks have potential to become lovely pieces of art and need to be taken back to Gauteng. It doesn't matter whether there is space in the car or not! This is part of my holiday memories, just the same as photos. I can tell you exactly where and when I collected each piece. Over time, each collected piece finds a special place in our home, whether it features proudly by itself, or is incorporated in my woodwork.

Isn't it just fabulous to keep your holiday memories alive and close to you once you are back in the rat race of life?

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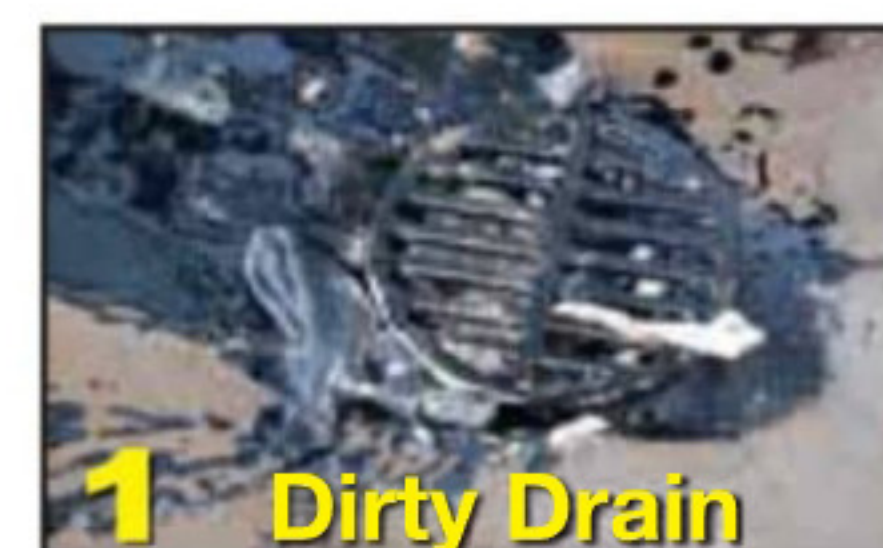
- LiquiDrain is a highly effective drain cleaner.
- However, use it with care!
- Do not lean over the drain or area to be cleaned - see pic. 2.
- Be careful as it reacts to water and splatters.



NB: Wear Safety Gear!



- Beware of the gas it creates. Work in ventilated space only.
- Wear Protective Clothing such as goggles, mask and gloves.
- Easy to use - but keep away from children and animals!



1 Dirty Drain



2 Correct Adding



3 Reaction



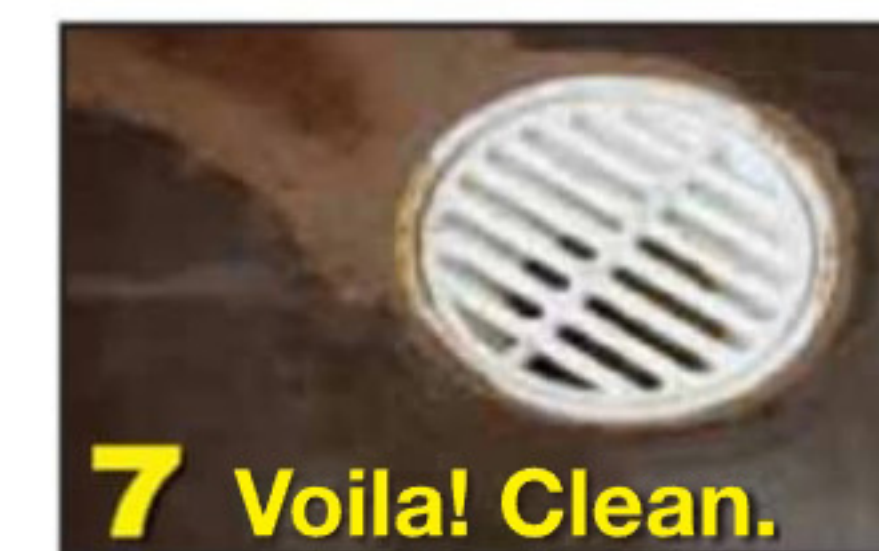
4 Grime Buster



5 Water Rinse



6 Detergent Wash



7 Voila! Clean.

Take extreme care not to spill onto porcelain or stainless steel. Rinse immediately to prevent staining. Run tap / water slowly until liquid has worked through the outlet or drain. Beware: running water activates the chemical.

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