

The Home HANDYMAN

January/February 2020 • Vol 30 No 01



SA'S
ORIGINAL
DIY
MAGAZINE



REVITALISE YOUR
HOME'S ENTRANCE



PALLET WOOD WALL
MAKEOVER

The A-Z of kitchen renovations



- DIY appliance repairs
- Learn how to spray paint
- Make your own mosquito screens
- Adhesive tips and tricks
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M5802B Circular Saw



1050W

The Makita MT M5802B circular saw combines portability and power, making it useful for a wide variety of tasks. Featuring a 190/185mm blade diameter, the saw will accurately rip, crosscut or bevel into both hard and soft wood. The maximum cutting depth at 0 degrees is 68mm and 46mm at 45 degrees

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450W

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1010W

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The Home HANDYMAN



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FROM THE WORKBENCH

A new era of positivity?

The last few months have been a bit of a rollercoaster for South Africans... Load-shedding re-emerged, public sector wage strikes seem to be a weekly occurrence, and don't even get me started on the state of the economy!



But almost out of nowhere, a new sense of positivity has seemed to grip the nation. The catalyst was a new Facebook group, #ImStaying, which launched at the beginning of September. #ImStaying is dedicated to the South African women and men of all races, cultures, religions and creeds that choose to grow and improve South Africa. The group is a platform to honour all those who still believe that we as a nation can turn things around.

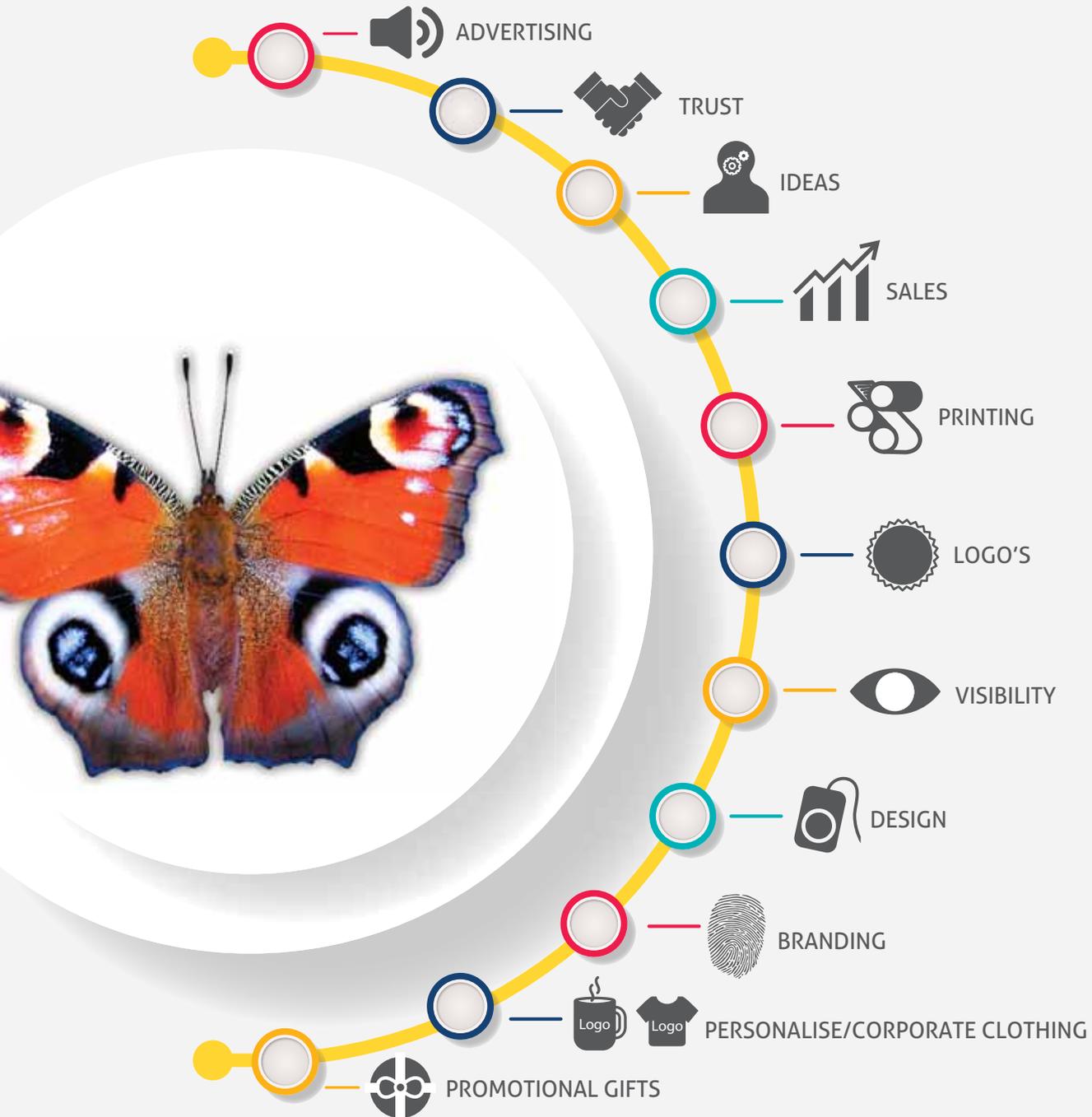
It is pretty much a place to share positive, heart-warming stories from around the country, and the group has gone viral in the best possible sense, having racked up close to 900 000 members at the time of writing. The inspirational stories from all walks of life are a joy to read, and the page has been credited with changing the way people live, from stopping to help someone in need on the side of the road or returning a wallet left in a bathroom – with all its contents – to its rightful owner.

And then, on November 2nd, 2019, a group of 23 men, led by an inspirational 28-year-old with an impoverished past, lifted the Rugby World Cup trophy and brought the nation together once again. Our victory didn't paper over the poor economical forecasts, the climbing unemployment or any of the other problems we face as a country, but it did go some way to proving that, as a nation, we seem to have an inherent aptitude to not give up, or live up to the saying, "when the going gets tough, the tough get going."

So, while there is a long road ahead, the end of 2019 at least gave us something to smile about, and we are hopeful that 2020 will offer more of the same! If DIY projects and woodworking make you smile, then you have come to the right place – enjoy the read of this, the first Home Handyman issue of the year, and feel free to share your projects and ideas with us through the usual channels. If there are any particular projects or features which you would like to see in the magazine, please also send them to us and we will endeavour to assist in a future publication.

Gregg

Call for your corporate needs



OFF THE SHELF

Your guide to the latest products in the world of DIY

All-in-one adhesive and grout

The latest innovation from Saint-Gobain Weber simplifies and streamlines the tile application process

Traditionally, tile application meant having to find suitable adhesives and grout which can be time-consuming and as most products are cementitious, they are susceptible to dirt, grime and to discolouration over time. The brand-new product, weber. epox easy adhesive and grout is a resin-based adhesive and grout all in one to streamline the process and ensure an excellent outcome. It has been specially formulated to provide very high bond strength and resilience.

As the name suggests, weber. epox easy is a pleasure to use. It mixes easily into a single paste or solution and is exceptionally durable in its performance. Unless it has hardened it can be cleaned with water while still workable, without any epoxy remover.

Manufactured under BSI Quality Assurance Scheme ISO 9001, it is highly suitable for equally well-suited across interior and exterior applications. This makes it ideal for areas such as bathrooms and pools in and around the home. As it offers less bacterial permeability, it is particularly ideal for industrial application areas such as in hospitals, laboratories, laundries, kitchens, dairies, abattoirs, breweries, distilleries, refrigerated rooms and car wash bays.

Over and above its in-built strength, impermeability and flexibility, other benefits to working with the two-part, chemical resistant epoxy resin adhesive and grout are less working time, easy to use formulation and chemical resistance. weber.epox easy is supplied in 2.5kg and 5kg plastic buckets and is available in a wide range of colours.

For more information, call 0860-272-829 or visit www.za.weber



New range of granular fertilisers

Pokon, Holland's plant care leaders, have released eight new specialist granular fertilisers in easy to manage 1kg boxes

Adding to their already extensive range of plant care products, each recipe has been scientifically formulated to ensure that your plants get all the nutrients that they need in the quantities they need.

Safe for humans and pets, each formulation slowly releases nutrients for up to 120 days, which means that you only have to feed your plants every four months. Because the granules are made up of enriched organic fertilisers, you will see the results in very short space of time. Not only will your plants look in top shape, with more flowers, juicer fruit and more vibrant foliage, healthy plants are less susceptible to diseases and attack from insects.

Pokon has been providing gardeners with quality products since 1929 with its very first plant food formulation P2O5K2ON2. Using only 100% natural, raw materials, their new organic fertilisers deliver all the essential nutrients, macro and micro elements your plants need.

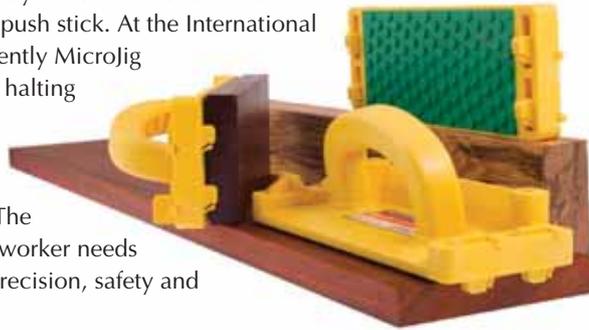
For more information, call 010-140-1300 or visit www.hadeco.co.za



Every conceivable jig you could need

American MicroJig the leading range of technically advanced woodworking jigs – now available in South Africa

Every nine minutes, someone is injured by a table saw because of a finger too close to the blade or a faulty push stick. At the International Woodworking Fair (IWF) in Atlanta recently MicroJig launched a complete solution aimed at halting table saw injuries, from kickback to finger amputation. MicroJig, the leader in table saw accessories, unveiled the GRR-RIPPER and all its new products. The GRR-RIPPER kit has everything a woodworker needs to create projects with top-of-the-line precision, safety and control.



“MicroJig is a huge new brand for our retailers and the woodworking market, adding a comprehensive range of accessories to our woodworking and accessory business, offering our customers new technically advanced products,” says Dale Englebrecht, Director at Vermont Sales.

MicroJig has been introducing innovative solutions to the woodworking industry for more than 15 years. The company aims to make it safer and more intuitive for people to succeed at their passions and build their dreams.

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

High power low vibration

The new DHR400ZK Twin Battery Rotary Hammer has a two-mode operation with an SDS-Max shank – rotary drilling with hammer action and hammer action only

Measuring 473mm in length, the DHR400ZK has a 40mm capacity in concrete with a TCT bit and a 105mm with a core bit. It features a no load speed of 250 – 500 r/min and the brushless motor delivers 1,450 – 2,900 blows per minute. It is equipped with XPT (extreme protection technology) that provides added protection against dust and moisture.



This model also has the Soft Start Feature for smooth acceleration of the motor and reduction the sudden torque load on start-up in drilling mode. The No Load feature automatically cuts the motor speed during idling to further reduce vibration.

Operator comfort and more control during operation have not been overlooked as the DHR400ZK features Anti-Vibration Technology (AVT) for extra comfort and an unrivalled low level of vibration as well as both a D-shaped and straight side handle

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

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VOICE YOUR VIEWS

Do you have any thoughts or comments on DIY issues?



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The Home HANDYMAN

www.homehandyman.co.za

Send us your views, ideas and opinions and you could win a subscription to *The Home Handyman* magazine FREE for a year.



Send your queries to: editorial@homehandyman.co.za or P.O. Box 24938, Gezina, 003 1

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



Elrick van Heerden

wins a Makita M5802 Circular Saw

Prizes are not exchangeable

Rainwater harvesting can be a vital resource

South Africa is a water-scarce country and one of the driest in the whole world, which simply means that we need to use every drop of available water in a wise and beneficial way. The situation has been made worse by climate change, meaning less water available for the country.

Climate change, population growth and pollution are some of the key issues contributing to a worldwide water crisis, which calls for the wise use of available water to ensure water security for all.

Currently, most parts of the country are receiving much sought after rainfall. It is crucial that we all make good use of the rainwater as it falls. It is important that we practice rainwater harvesting and use the rainwater to relieve the pressure on our water supply schemes and systems.

Rainwater harvesting reduces the stress on our water resources and estuaries due to less extraction from rivers and dams during the rainy season and, at the same time, makes storing more water for use during the dry season possible, ensuring reliable water supply for all throughout the year. This prevents the wastage of rainwater through run-off, and the rainwater can then be productively used around the household and garden. Rainwater can be fruitfully utilised for irrigation, flushing toilets, laundry and washing cars and other items.

Rainwater harvesting can play a major role in relieving the stress on our

overstretched resources. We can use the water in our water harvesting tanks for our everyday chores and thereby reduce the utilisation of the water from the municipal system, relieving the pressure on the water resources.

Harvesting rainwater has many benefits for people and the environment. It reduces over-reliance on the municipal systems, reducing the water bill. It reduces the consumption of potable water, promoting water conservation. It also ensures environmental benefits in that the water resources are not depleted and the environment is spared from degradation.

Let us embrace rainwater harvesting to secure a future with enough water. Let us harvest rainwater and save.

Elrick van Heerden, Kimberley



Fumbling to failure

This letter is aimed at readers in their 50s and 60s who may have spent their spare time doing one DIY project after another and who are now thinking of adding clock repairing (or making) to their list of accomplishments. Think again!

I have spent a lot of my time since taking early retirement trying to make clocks with ever clumsier hands and fast failing eyesight and it's been a complete folly. My advice is to think of more enjoyable and constructive ways to spend the many hours and the small fortune you might spend on clockmaking. Here are some suggestions.

Antique clocks remain a real bargain and if you had ever tried to make a clock you would realise how true that is. The reason for this is that we don't pay enough for them or for the skills and experience of those desperadoes in the clockmaking trade who restore them.

While our fathers and grandfathers would not have dreamed of doing another man's job we have tended to become DIY fanatics and the once-proud clockmaking trade is just one example of a trend which has seen us become a nation of bodgers and cheapskates – to nobody's advantage.

So why not buy a nice antique clock from a professional restorer and go to a rugby match and drink beer. You will be much nicer to live with and you will be contributing to a beleaguered industry that needs your help.

You may have been unmoved by my advice so far but at least consider these additional points. If you want to repair or make clocks there is an endless supply of written advice and instruction but you will search high and low to find local tuition from an expert because they are too busy trying to squeeze a living from their craft and

have not got the time to advise you.

Many of the books are excellent but you will not know a good book from a bad one until you have invested a lot of time finding out. Neither are the authors of these books beginners like yourself.

As to setting up a suitable workshop, let me assure you it will take years and cost a very substantial amount of money. And there are the domestic implications of it all too!

Frankly, it's all rather daft. During the last few years I've met a lot of older men engaged in making machines to make clock wheels or clock movements themselves and it's my guess that very few will ever reach completion – but then few clockmakers made clocks all by themselves anyway.

So if you want to 'make' a clock to leave to your descendants, here's a much better idea. Buy a movement from a person who makes them for a living and then find yourself a young graduate in art and design or furniture making and get them to design and make a modern case which will show off the movement rather than obscure it and then get an engraver to put your name on the dial.

You will be a famous clockmaker and you will be contributing to the future of clockmaking rather than a bodging codger fumbling his way to failure in a back bedroom.

Jim Evans, by email



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.

3 tips to refresh your home's outdoor haven

Getting your home ready for summer? Although you probably don't need to do a complete makeover, there are several improvements you could consider to transform your home's outside spaces into an entertaining-ready summer haven.

The first step is to decide what you would like to achieve: are you looking to bring in an element of fun; do you prefer more functional solutions; or do you want your outdoor spaces to be an attention-grabbing feature?

Now that you've decided on what you want to achieve, the team at WOMAG – South Africa's most reputable supplier of natural stone and porcelain tiles – want to save you hours of searching for inspiration by offering the following top tips to creating a refreshed outdoor look:

1. Fun

If your main objective is to create a fun and relaxed environment while getting your home entertaining-ready, think brighter, lighter and bolder. Options could include outdoor kitchens with unique backsplash designs, a colourful wall feature for the kids' area in the garden, or carpet-look tile flooring for the patio.

2. Functional

During summer your outdoor spaces become your hosting spaces. Choose tiles that are both practical and beautiful, like the In/Out Technology Homestone Pearl porcelain tile. Since they become non-slip when wet, In/Out Technology Tiles allow you to fully enjoy your indoor, patio and pool areas without having to worry about slips and falls. In/Out Technology Tiles

– which WOMAG recently introduced to the South African market – are the ultimate functional solution if you're seeking a seamless look from your interior to exterior spaces.

3. Feature

If you enjoy making a statement throughout your home about your love for all things creative, then consider products that resemble pieces of natural looking 'art' to complete your summer haven. A beautiful outdoor kitchen countertop or eye-catching pool feature will do just that. Make these features stand nature's test of time and invest in durable materials like natural stone or porcelain.

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



January highlights on The Home Channel

On *Sarah Off the Grid*, expert designer Sarah Richardson takes on her most ambitious project yet - building and designing an off-the-grid family home in the countryside.

Offering an unvarnished look at Sarah's life, the six-part series dives deep into Sarah's day-to-day as she juggles being a mother, a business owner, and now, the unique challenges of sharing the role of general contractor with her husband, Alex. She'll also be sharing the role of designer with her two young daughters, Fiona and Robin. Together, they marry off-the-grid living with Sarah's signature style, resulting in a sustainable dream home filled with the greatest design hits from her 25-plus year career.

Taking the lead on designing each room, Sarah enlists her co-conspirator and long-time collaborator, Tommy Smythe, for support as she takes on this year-long project. Mike Holmes, Mike Holmes Jr., and Colin Hunter also make guest appearances throughout the series providing Sarah and the

family with much needed advice to finish their forever home.

Building a home off the main power grid which can service the needs of an entire family requires clever design decisions and innovative materials. With a bigger build, higher stakes and unprecedented access, *Sarah Off the Grid* allows viewers to discover a new side to Sarah Richardson





FREQUENTLY ASKED QUESTIONS WHEN BUYING A CEILING FAN

A ceiling fan adds decorative detail to a room and keeps the air circulating so that the space is breezy, fresh, and comfortable to operate in. With warmer weather upon us, many South Africans are looking to upgrade their original fixtures or install fans for the first time in an attempt to beat the heat. Investing in a new ceiling fan may seem simple enough, but with so many factors to take into consideration, it can become a daunting task. The Radiant team is always more than happy to answer any questions or concerns regarding the purchase of a new ceiling fan. The following are some of the most frequently asked questions by their customers.

Q: I'm hearing a lot about DC motor fans. What are they and what are their benefits?

DC motors transform electrical energy into mechanical energy as they rotate. This means they consume 70% less electricity than typical ceiling fans while generating additional torque. Their price point is generally higher upfront because they require a more expensive electronic speed controller, but their long-term benefits are worth forking out the extra cash. DC motors are smaller in comparison to typical ceiling fan motors which allows the fan to be smaller and lighter in weight. They're also energy-efficient with a long life span and higher torque which results in a faster start-up speed. And what's great is that DC motor fans operate in virtual silence.

Q: Does the number of blades make a difference in how the fan functions?

In the past, the number of blades was directly related to the efficiency of the fan. For example, a fan with five or six blades would offer better airflow than a fan with three or four blades. However, due to advancements in technology, this is no longer the case and the number of blades is more related to aesthetics. Fans with four or more blades lend themselves to a more classic look, while fans with two or three blades are sleeker and more contemporary in style.

Q: I have a sloped ceiling. Can I still install a fan?

Yes. Many fans have canopies that can accommodate a ceiling slope of up to 30 degrees.

Q: How do I mount my fan to the ceiling?

You need to mount your fan to a junction box marked "For Use With Ceiling Fans". Ceiling fans are heavy (some weigh almost 25kg) and are in motion when switched on, so they need sufficient support. The box needs to be anchored to a ceiling joist and should always be installed by a qualified electrician.

Q: I would love to install a ceiling fan on my patio. Can I use a ceiling fan outdoors?

Yes, but it needs to be damp or wet location approved. If your patio area is well covered and the fan won't come into direct contact with the elements then a damp location fan is suitable. However, if your fan may come into contact with rain then a wet location fan is recommended because it has water-resistant motor housings and blades.

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

Most people begin a kitchen remodelling project with a simple 'wish list' – everything you need and want in your dream kitchen. To help start your wish list, here is a handy A-to-Z list of features you'll want to consider as you plan and budget for your project.

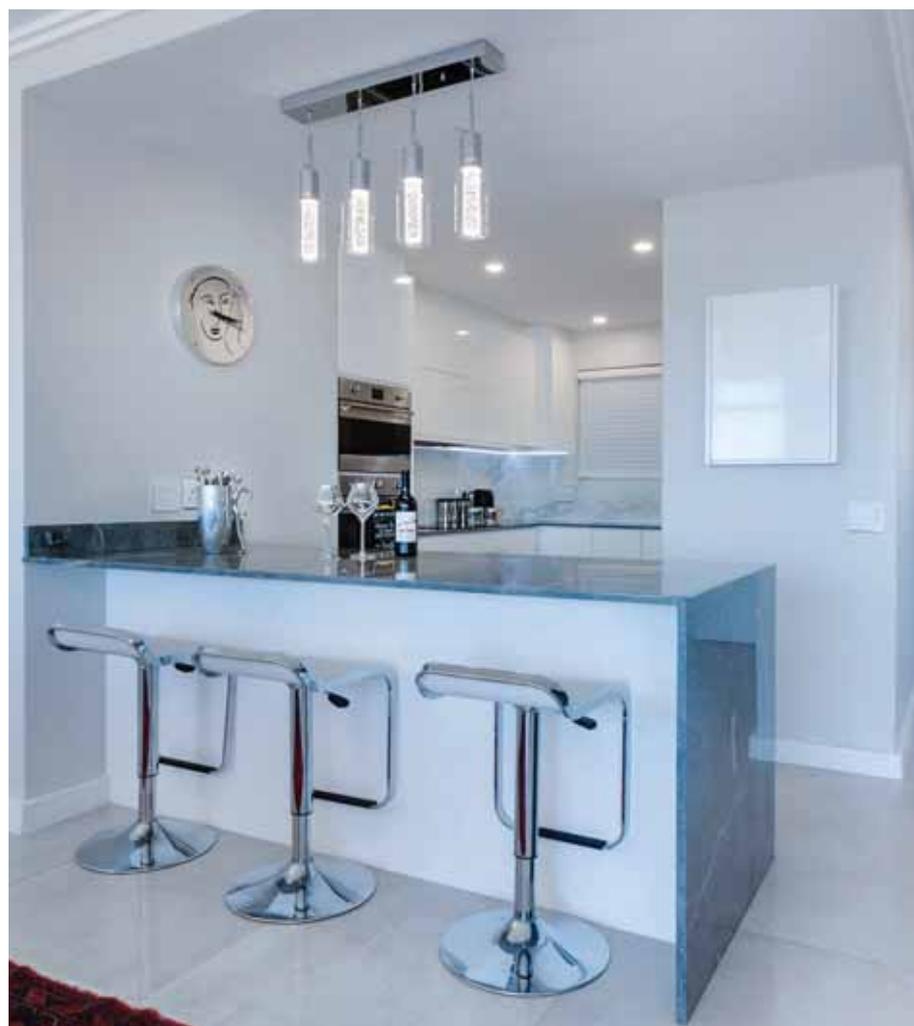
The A-Z of kitchen renovations

Don't know where to start when it comes to remodelling your kitchen?
Then go back to your ABC's...

Spend time and extra budget choosing relevant taps

A	APPLIANCES	If it is in your plan and your budget allows, do your homework and research kitchen appliances before you buy – and before you start planning your new kitchen. Your choices will impact the design of your kitchen; consider the size of the appliance, including height, width and depth, door swings, placement and installation requirements. Modern appliances are also available in a variety of colours to suit your chosen colour scheme.
B	BUILT-INS	Make a list of items you would want built into the design of your kitchen. Most appliances are now made in counter depth sizes that will fit into standard cabinetry. Other types of built-ins to consider are banquettes for breakfast areas and appliance 'garages' to house microwave ovens, coffee makers and mixers. Hidden appliances are ideal for sleek, contemporary kitchen designs.
C	CABINETS AND COUNTERTOPS	Visit showrooms to identify the type of cabinets and countertops you want to use in your project. Note the manufacturer, door style, material, colour and finish for cabinets and type of material, edging and colours for countertops. With the right tools, installing and cutting cabinets and countertops to size is a part of the project the DIYer can tackle themselves.
D	DEEP STORAGE DRAWERS	Large pull-out drawers are great for under-the-counter storage. Pots, pans, lids, bowls, dishes and cookware can fit well into deep drawers. Check out storage drawer sizes, glide options and accessories that help to keep items organised when you visit kitchen showrooms or browse through catalogues.
E	ELECTRONICS	These days, laptops, tablets, cell phones, flat screen televisions, audio systems and security systems have found a home in the kitchen. Technology is changing rapidly – there are even flat screen televisions made to fit under a cabinet and fold up when not in use. Decide early on in the process what forms of technology you would like your kitchen to include.
F	FLOORING	Popular kitchen flooring materials include ceramic tile, vinyl, laminate and concrete. Kitchen flooring should not only be attractive but easy to maintain and practical as the kitchen is possibly the most high traffic area in a home. Be sure to consider thresholds and transitions to other rooms when selecting flooring.

G	GALLEY OR GATHERING SPACE	An efficient galley kitchen is a great asset for a serious cook as well as a good space for informal meals and family gatherings. It is important to households with children and for those who like to entertain. To achieve extra space, however, you may have to extend the kitchen by adding an addition or reconfiguring an underused dining or living room in your plans.
H	HARDWARE	Select hardware for your kitchen cabinets and drawers that is attractive, easy to clean and fits within your budget. If you're planning to live in your home for a long time, consider easy to use products like cup-shaped pulls on drawers and lever handles on doors where appropriate.
I	ISLANDS	A kitchen island is a good way to add storage, an extra work top and character to your kitchen. Islands are the workstations of a kitchen. Generally they are designed for food prep, informal dining and storage. They can also be designed to accommodate a sink or appliances such as a cooktop, microwave oven or beverage refrigerator. Making your own kitchen island is a great project for the competent DIYer and there are numerous plans available online.
J	JEWELS OF THE KITCHEN	'Jewels' of a kitchen are items you add for aesthetics such as pendant lighting, glass cabinets, custom tiles on backsplashes and areas for display of collections.



'Jewels' of a kitchen are items you add for aesthetics such as pendant lighting

Cheap ways to improve your kitchen

When contemplating a kitchen makeover, homeowners often think it will be a hugely expensive exercise, and it may well become one, depending on the nature of the renovations. However, there are cheaper alternatives that one can consider to fit the budget and still have an enormous visual impact:

Paint

For some reason, many people are still resistant to painting old wooden kitchen cupboards. This is a much cheaper alternative to replacing all the doors or even replacing the cupboards entirely. Solid wooden cupboards can be sanded down and various painting techniques used to give them a brand-new look. The exposed wall areas in a kitchen also lend themselves perfectly for feature colours.

Fittings

You will be surprised at the difference new cupboard handles make in your kitchen. They are not expensive and generally easy to install.

Splash-backs

There are many creative and cheaper ways to decorate the splash-backs (the areas between the countertops and higher cupboards) other than the traditional tile or mosaic. Consider a stainless steel plate, Perspex sheeting, faux stone cladding or merely a coat of paint.

Extra lighting

Use downlights or strip lights underneath the top cupboards or in bulkheads to light splashbacks and countertops for a warm and welcoming atmosphere in kitchens. These lights are relatively cheap, and strip lights especially are easy to install. You can also replace your existing light fittings with new ones.

Tops

If your countertops are old and tired you do not need to replace them with granite or other expensive materials. These days, there are Formica (veneered wooden chipboard) tops available that are a fraction of the price of granite but look almost as good.

K	KITCHEN TRIANGLE	<p>The kitchen triangle considers the placement of the stove, refrigerator and sink/dishwasher area in the design of a kitchen so that a cook can work efficiently. It is defined by the National Kitchen and Bath Association (NKBA) as an imaginary straight line drawn from the centre of the sink, to the centre of the stove, to the centre of the refrigerator and finally back to the sink. It is suggested that the following guidelines are used for determining a work triangle:</p> <ul style="list-style-type: none"> - The sum of the work triangle's three sides should not exceed 8m and each leg should measure between 1.2m and 2.8m - The work triangle should not cut through an island or peninsula by more than 30cm. - If the kitchen has only one sink, it should be placed between or across from the cooking surface, preparation area or refrigerator. <p>As kitchens have grown in size and with more appliances, the regular work triangle may not be practical for all. Most modern kitchens have a microwave oven, coffee maker and dishwasher (a luxury item in 1950s). Other appliances may include double ovens, wall ovens, range hoods or down drafts, wine coolers and even TVs and computers.</p>
L	LIGHTING	<p>Lighting is essential to the function of a kitchen. In your plans, address both natural light and electric illumination. If your kitchen needs more sunlight, consider skylights and sun tunnels. Your plans should also take into account lighting over work and dining areas and under cabinets. Popular light fixtures for a kitchen include pendant lights, under cabinet units and recessed lights.</p>
M	MOULDINGS	<p>Mouldings add architectural interest to a kitchen but also finish off cabinetry, doors and flooring. Pay attention to ornamental mouldings and moulding profiles when you look at photos of kitchens. Crown moulding can be used to create an illusion of height in a room by its profile and placement on a ceiling.</p>
N	NOOKS	<p>Nooks or alcoves are recessed areas of a room that can be used for dining, storage or displays. They add interest to a kitchen but also provide functional space.</p>
O	OUTLETS	<p>Add extra outlets to your wish list. If you don't, you'll wish you had! Consider the height and placement of outlets as well as the number you need to operate small appliances and gadgets in your kitchen.</p>



A kitchen island is a good way to add storage, an extra work top and character to your kitchen

P	PANTRY/PULL-OUT STORAGE	Cabinets can become cluttered. There is nothing more frustrating than reaching into the back of cabinets to find food, pots and pans and dishware. Look for drawers and cabinets with pull-out shelves that provide easy access to these items.
Q	QUICK ACCESS	Consider adding carousels (Lazy Susans) to corner cabinets for spice and food storage. Under-cabinet rubbish bins and recycling pull-outs should also be included in your plan.
R	RECIPES AND COOKBOOKS	Include storage and shelving for your cookbooks. Computerise your recipe files or keep an iPad on hand in the kitchen to research a recipe.
S	SINKS	Sinks are one of the most important fixtures in a kitchen, so choose them wisely. If you are trying to save money on your renovation, however, do not move the sink and fittings from their original location. A popular trend is adding a second sink in a kitchen to serve as a bar sink or prep sink. Consider depth, tap styles, utility and ease of cleaning.
T	TILE	Floor and backsplash tiles can add decorative detail and a focal point to a kitchen. If you are using tile on the floor, consider non-skid products. When you're choosing tiles, don't forget to select the grout colour as well.
U	UNDER COUNTER APPLIANCES AND STORAGE	If you need additional refrigerator space consider installing a beverage refrigerator under a counter. Microwave ovens and drawer dishwashers can also be installed under counters and on islands. A mixer can be stored in a base cabinet with a pop-up shelf to free counter space.
V	VENTILATION	Ventilation hoods come in a range of sizes and styles but should be compatible with your stove or cooktop and fuel source. Some cooktops use downdraft ventilation. Your hood choice should be factored into your kitchen design since it will impact placement of cabinets and may influence the installation of electrical wiring and venting to the outside.
W	WET BARS AND WINE STORAGE	A space dedicated to beverage storage and glassware is always a plus in a kitchen.
X	XTRA IDEAS	A kitchen remodelling project is a big investment. Take the time to read consumer reviews especially about appliances and products you plan to use in your project. Read what others are saying.
Y	YOUR PERSONAL TOUCHES	Choose colours, fabrics, wall decorations, kitchen collectibles and other items that reflect your likes, interests and lifestyle.
Z	ZONES	When you put together the plan for your kitchen think about the way you want to use your space and plan around 'zones' for food prep, clean up, dining, storage, baking, beverages, paperwork, etc.

Take your time when planning a kitchen remodelling project to address all the details. If the list seems overwhelming, a specialised kitchen contractor can help walk you through it and recommend some of the products you will need for your project.



Lighting is essential to the function of a kitchen

When experiencing trouble with a home appliance, it always pays to check for all the basic problems before you look for more serious ones

DIY appliance repair

For most of us, the idea of fixing an appliance ourselves conjures up feelings of fear and inadequacy. Understanding what your problem is will help you, even if you decide to call someone to come and fix it. Using our 'Troubleshooting' guide will save you from having unnecessary items sold to you during the repair. This alone can save you some serious money.

Have you heard of the 50% rule? The 50% rule states: If the appliance is more than 50% through its expected lifespan (you can usually find life-span estimates in the manual or online), and the expected cost of repairs and replacements is more than 50% of buying a new appliance, you should probably replace the appliance entirely. This is helpful when comparing the costs of home appliance repair, professional services, DIY work and replacement.

When experiencing trouble with home appliance, it always pays to check for all the basic problems before you look for more serious ones, and that includes checking power settings, making sure the appliance is plugged in and turned on, checking to see that the outlet is getting power, etc. Some appliances may refuse to work if they are placed on an uneven

surface, or if their filters become clogged and they start to overheat. Cover these simple checks first before you dive down deeper.

Moving parts of appliances are by far the most likely to fail due to wear or malfunction. When repairing appliances, start by taking a look at the moving parts. And for most appliances, this means checking the fans and motors to make sure they are functioning correctly. Your best hint for home appliance repair is typically noise. Fans, motors and similar components tend to make a lot of noise when they are failing. Fans and fan belts are relatively easy to replace, while motors are expensive and more difficult to repair or replace.

How do you know if a problem is in the appliances' wiring? You test it! And for that, you need the right tool.

Purchase a multimeter that allows you to measure voltage and other important signals that show you which wires or electrical components aren't working. If you want to become a master of home appliance repair, you need a multimeter and always be sure to take proper safety precautions.

It also pays to know where your hoses are. Your dishwasher, washing machine and many other appliances depend on hoses to move water around. And

if a leak or kink occurs, you need to check these hoses and surrounding valves to locate the part that needs to be replaced and re-sealed. Hoses tend to wear out before other components, so pay attention to the condition of these hoses when doing home appliance repair. Similarly, seals and gaskets are found on oven and refrigerator doors and other places behind the scenes. Get used to checking these components for damage or cracks and replacing them if necessary.

TROUBLESHOOTING APPLIANCE PROBLEMS

Don't automatically take your malfunctioning appliance in for an appliance repair or head to the store to buy a new one. Research how-to articles online and talk to customer service representatives in parts stores. You may be able to save yourself serious cash with a quick and easy DIY repair. Below we have descriptions of the various troubleshooting problem for appliances. Even if you are going to 'call someone', it is a good idea to review the information and try to determine your problem.

Tumble dryer troubleshooting

Does your dryer take too long to dry clothes or stopped working altogether? Your thermostat may be at fault. Your dryer is controlled by a complex system to control the heat and prevent fire. Unfortunately, they're also often the first piece of equipment to break. Even something as simple as a clogged vent or an overfull filter can blow the thermostat.

Luckily, you can probably purchase a new dryer thermostat and the installation is fairly simple. First, turn off the electricity going to the dryer. Disconnect the dryer vent from the hose attached to the wall. Then remove screws along the dryer's back panel and gently remove the panel. Though the removal will vary by model, you will generally need to unscrew a few screws and disconnect a wire that connects the thermostat to the dryer housing. Then install the new thermostat and replace the back panel.

Washing machine troubleshooting

Washing machines can have several issues. Since they use water, both hot and cold, leaks are an obvious malady. There is also a drive motor for the drum that can be direct or belt driven. Other issues are clogged filters, pumps and of course the controls. As with any appliance, the more features it has the more opportunity you have for issues.

Gas stove troubleshooting

For a stove to work, it has to have the gas burning. Newer stoves use electronic ignition systems while older stoves may still rely on a pilot light. The flow of gas is controlled by the knobs on the appliance. There usually are not any thermocouple devices associated with the burners, so if they don't light, it can be dangerous. The oven will likely have some safety features that won't allow the gas to continue to run without it igniting. Parts burning out and ignition issues are some of the common problems with this type of stove.

Electric stove troubleshooting

Electric stoves, like gas stoves, are meant for cooking. Instead of a flame you have an electric element that gets red hot and provides the heat. The debate rages on among discriminating cooks worldwide as to whether or not electric gives you the ability to adjust the heat acceptably. Of course the heating elements are the big issue with electric stoves. Next would be the controls. Since it involves electricity, shorts are possible and at times people do get shocked from an electric stove. Calling an expert for an electric stove is generally the best course of action.





Dishwasher troubleshooting

Dishwashers use water and of course water has its own set of problems, not least of which are leaks. The other issue with water is that it needs to be drained away. A dishwasher that does not drain properly will not clean the dishes effectively. There are pumps that help the dishwasher to drain.

Some dishwashers have heating elements for both the water and to dry the dishes. Add to that some filters and you have a potential for several problems. If your dishwasher doesn't drain or overfills, you may have a clogged drain. The drainage system in a dishwasher is pretty complex to avoid such problems, however, sometimes a piece of food gets through the initial filter and gets stuck in the drain hose. Luckily, the repair costs absolutely nothing and can be completed with relatively little DIY knowledge.

First, remove the lower panel below the door by remove the screws holding it in place. You'll typically find the drain hose near the pump below the lower spray arm. Disconnect the hose by removing the clamp holding it in place and check for any obstruction. If you can't get the obstruction loose, trying using some water to help clear the debris. Reconnect the hose and replace the panel.

Sometimes, a drain hose becomes faulty after extended use. If it has a crack or shows other signs of disrepair, you'll need to replace it. Remove the hose from the pump and reconnect the new hose using the clamps.

Refrigerator troubleshooting

The main moving part in a refrigerator is the compressor. The good news is that they are fairly reliable and have been known to last for decades. The bad news is that if they go bad, they are expensive to replace. There are other issues that are less dire; water supply lines, temperature controls and seals to name a few.

Freezer troubleshooting

Uh oh, all the food in your freezer has turned to mush. Does it mean you need a new freezer? Not so fast. First, check the freezer fan. Freezer fans circulate the air in the freezer to make sure that all the food stays frozen evenly. If your fan is making a loud noise or isn't spinning freely, it needs to be replaced.

Though the fan could be quite costly, the repair only takes about ten minutes of your time. First, empty out your freezer and remove the back cover. You should be able to see the fan. Is it moving? Is it making a loud clicking noise? In either situation, you'll need to replace it. If not, you'll have to keep on troubleshooting until you find the source of the problem. If it is the fan, unplug the unit and remove the screws that hold the fan to the back wall. Remove the fan from the mounting bracket and replace with a new one. Then, screw the mounting bracket back onto the wall of the freezer and replace the back cover.



Overloading your washing machine can shorten its lifespan

Tips to extend the life of home appliances

Keep your fridge and freezer clean

In general, appliances operate best when spick-and-span. Besides regularly cleaning up leftovers in the fridge, keep condenser coils clean; do so by using a condenser coil brush.

To clean the freezer, unplug it, remove all food, wipe it down with a baking-soda solution, use water to rinse it, and then dry the freezer with a towel before plugging it back in.

Defrost your freezer

Many freezers today are frost-free. However, if you have a manual defrost freezer, plan to defrost it at least once every year before frost gets too thick. Use a plastic or wooden scrape – no knives or other sharp instruments – to remove the frost layer.

Scrub your oven

Clean inside your oven often and

never let food debris stick around on burners, even if it requires a bit of elbow grease to remove. Don't spray cleaning fluid directly on control panels though, which could cause them to short circuit. Instead, apply a little onto a rag to clean that surface.

Don't foil your oven

Experts debate whether you should use the self-cleaning feature if your oven comes with one, but they agree you shouldn't use aluminium foil under the baking element.

Don't use dish soap in the dishwasher

This can hamper the machine's performance with gunky build-up. Use only dishwasher detergent.

Scrape off plates

Food debris can clog dishwasher pumps. In the case of emptying the water out, it's possibly

going to make the pump fail prematurely.

Don't overload your clothes washing machine

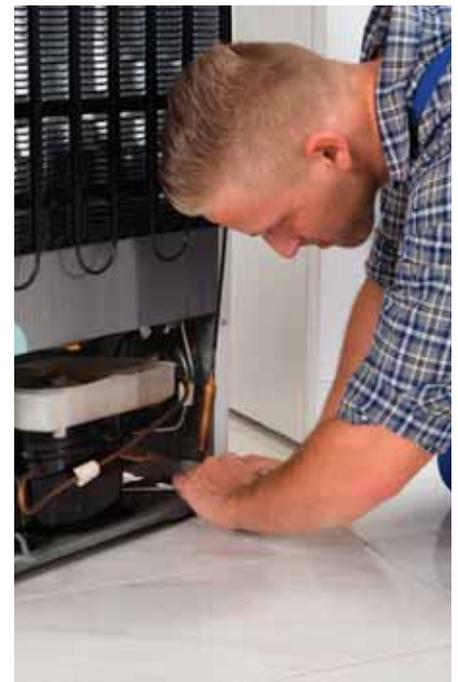
Doing so adds strain on the motor, tub bearings and other parts, besides not getting your clothes clean if water and detergent can't swish between them. You shorten the life of the machine. Instead, follow the instructions on how much to load. Hint: If your machine is banging around under the weight of all of your laundry, you've gone overboard.

Improve your dryer's circulation

Often forgotten, the lint screen of your tumble dryer needs to be cleaned regularly. Failing to do or allowing your dryer vent to become clogged will force your dryer to work overtime (read: retire sooner) and can present a serious fire hazard.



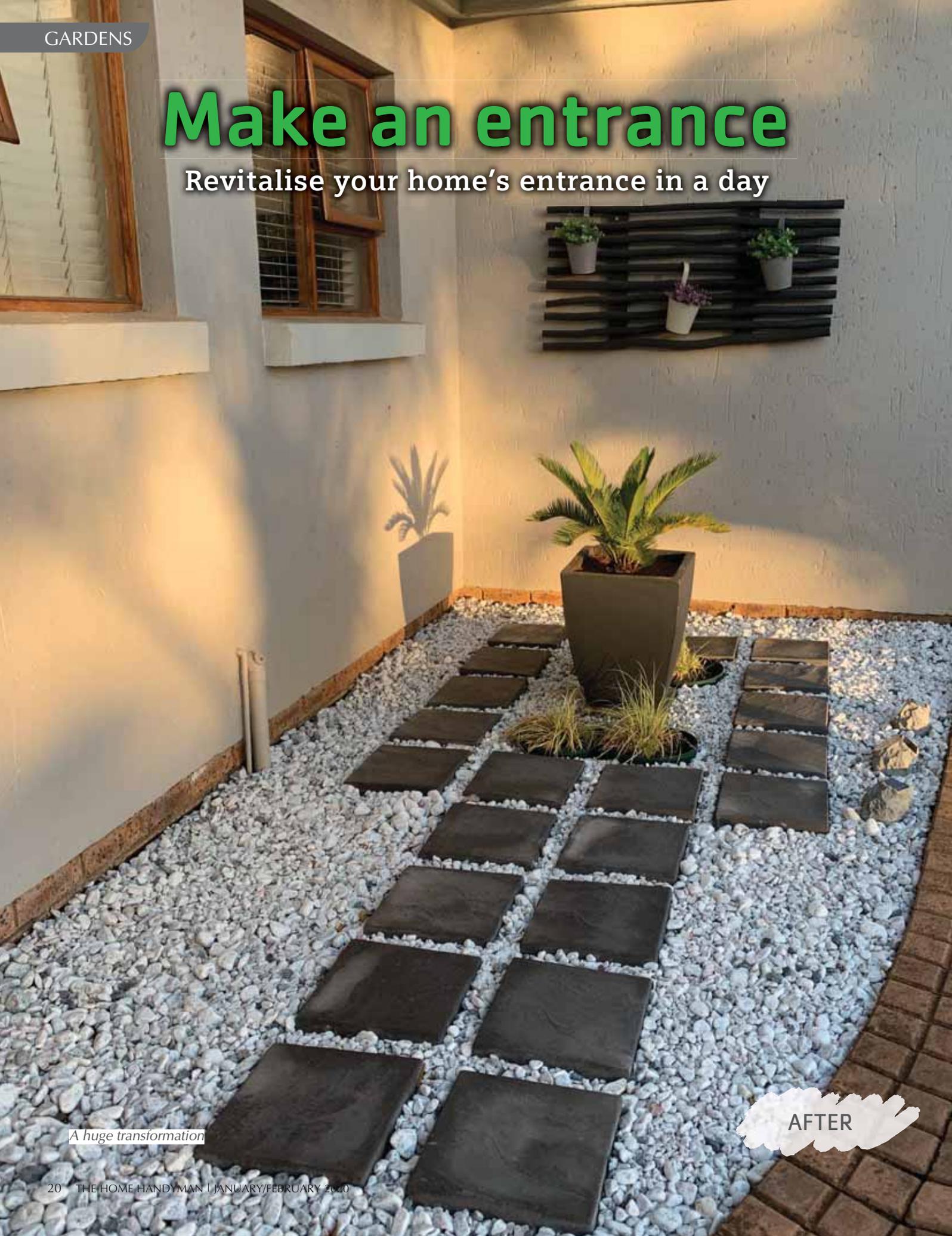
Moving parts of appliances are by far the most likely to fail due to wear or malfunction



Fans, motors and similar components tend to make a lot of noise when they are failing

Make an entrance

Revitalise your home's entrance in a day



A huge transformation

AFTER

The entrance to your home is like the trailer to a movie, a brief snippet of what's to come, a forerunner for what you can expect when you enter the house. Our entrance was overgrown, and messy, and it needed a change.

While the plants were lovely, because of the roof design of the house, water would pool in the bed near the entrance after rain, making half of the bed unusable for planting. What we needed was a less maintenance intensive solution, and one which incorporated more hard landscaping elements.

The first step was to remove the shrubs and bushes from the area and level the soil. Due to the collecting of rainwater in the area, dampproof lining was then placed against the brick work/walls of the house, and river sand was used to fill the bed up to the level of the pavers.

Due to the fact that weeds grow freely wherever they are left alone – even when stones are used as barriers – a layer of Weed Guard was then placed.

Landscaping fabrics and barriers available at your local home-improvement store have evolved over the past decade to include high-tech woven materials that allow water and oxygen to penetrate, while preventing weed growth. It was the perfect solution for this low maintenance area. After some more river sand, we were good to go.

We decided on a simple, modern design using dark grey pavers, a grey pot with a hardy plant, four small potted grasses sunk into the ground, all supplemented and tied together with white pebbles. Begin by placing the pavers, ensuring that they are level and the gaps between them are the same, and then spread the pebbles evenly.

The entrance was finished off with a few solar lights which highlight the pot plant at night, as well as a homemade latte wall decoration which was stained to match the pavers and attached to the wall.

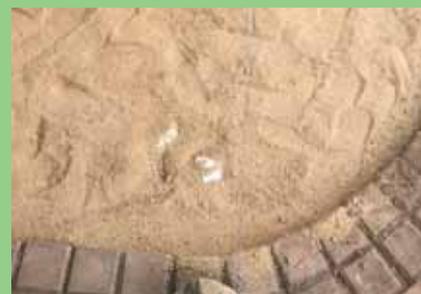
The result is a huge transformation; it is modern, practically maintenance free, and was completed in a day.



The plants removed



Once the dampproof lining has been laid, fill the area with river sand and compact



Almost completely filled



The pavers chosen for the project



Once the pavers are in, start adding the pebbles



The entrance before – while the plants were great, the maintenance was not

GLUING TIPS AND TRICKS

Adhesives form an essential part of many woodworking and DIY projects, but they can be tricky to work with – yet these handy tips will help you get the best out of your glue.

Why you should lubricate your glue caps and lids

Caps on certain adhesives/glues, such as rubber cement and super glue, have a habit of getting stuck or glued on no matter how hard you try and keep them clean. This can be prevented by simply smearing a little coating of petroleum jelly onto the threads of the tube or lid. You just need a small dab of the petroleum jelly to prevent even more of a mess. Be sure to smear a little bit on before putting the cap back on the glue and it should prevent the cap from cementing on over time. So the next time you go to use your super glue, you'll be able to open it with ease and get right to work!

Portable hot glue hack

DIYers like to be ready for anything, including making a quick repair with hot glue. But there's not always a handy outlet to plug in a glue gun. So keep a lighter and a glue stick in your toolbox. You will usually only need a little dab to fix something. Melt the tip of the glue stick with the lighter and dab the melted glue on your repair. Keep a lighter and a hot glue stick in your tool bag for your on-the-go, impromptu gluing needs.



Easy-open nozzle

Sometimes it's hard to pull open the nozzle on a bottle of wood glue, so cut a small piece of wood with a hole in the middle and install it between the nozzle and the bottle. The wooden handle is much easier to grab and pull open.

Use a straw

When glue squeezes out on an inside corner like in a drawer

or the inside a woodworking project, using a chisel has the potential to cause more harm than good. This is because the sharp blade can easily mark-up and scratch the adjacent surface. The solution is a simple drinking straw. Try use paper straws because they can be recycled unlike plastic ones. The straw will conform to the shape of the corner and the excess glue will be collected inside the straw so it can't get re-deposited anywhere else.



Disposable glue dispensers

Here's a nifty tip – with a nifty tip: Fill snap-capped sports water bottles with glue and stick them upside down in a piece of wood. Now you don't have to wait for the glue to run into the neck of the bottle, and the cap will control glue flow (and never get lost!). To holster the glue dispensers, cut holes in the base with a spade bit that's a little larger than the cap's diameter. Be sure to snap the lid closed before returning the bottle to the base otherwise the whole bottleful of glue will run out. The snap-cap makes an airtight seal and controls bead size when you squeeze.

Vertical gluing

When doing vertical repairs, it can sometimes be difficult to apply adhesive and prevent running. A nice way to get around this is by applying a small square of gauze over the repair area that has been pre-soaked with adhesive. The tiny cells in the gauze will keep the adhesive from running.

Mustard bottle for glue

Tired of messy glue dispensers? Instead use old mustard bottles; they don't clog and they easily reseal between uses.

Quick, even application

Here's a smooth tip for spreading carpenter's glue; slide a piece of pipe insulation onto a paint roller frame and use it to evenly roll on the glue. When the job's done, just throw away the insulation. No more wasting store-bought rollers on a one-time job.



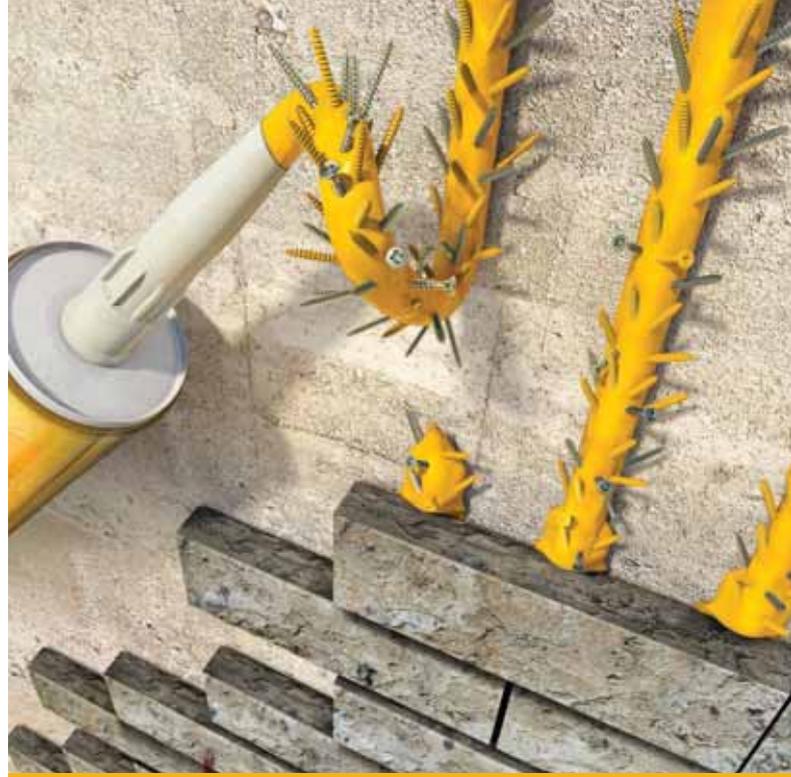
Caulk gun clamp

Did you know that you can use a caulk gun as a clamp? It's perfect for gluing up small projects such as a cutting board. Just place a couple of pieces of scrap wood or cardboard at the ends of the caulk gun and then squeeze the trigger to apply pressure.



Precise gluing tool

Oral syringes, like the ones used to give young children medicine, are perfect for injecting wood glue into narrow crevices for furniture repairs. Hot water cleans the syringe in a flash.



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- Bonding stone facing to pillars
- Bonding cupboards to wall
- Bonding mirrors

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BUILDING TRUST



Create useful mozzie screens from your scrap wood.

MAKE A REMOVABLE MOZZIE SCREEN

>> Kim Roberts

Project guide

Difficulty: Moderate

Estimated cost: R36 per two screen handles, and Mozzie mesh: R19.90 per metre 1.2m wide, or R18.90 per metre for 900mm wide (incl. VAT).

The rest of the material should be in your workshop.

Estimated time: Labour time about 30-40 minutes per screen, and if painted and sanded another 30-40 minutes per frame.

Materials

- Leftover scrap wood – imported pine if possible (does not crack as easily)
- Wood glue
- Sandpaper
- Star point chipboard screws (great thread)
- Staples
- Mosquito mesh
- Optional – Linseed oil to treat wood, or paint

Tools

- Jigsaw
- Bench circular saw
- Cordless drill with screwdriver bit (or electric drill and screwdriver)
- Bench Clamp
- Mitre saw (or hand saw)
- Rubber or wooden hammer
- Staple gun
- Ruler/Tape measure
- Pencil
- 25mm wood chisel
- Scissors
- Optional: Paint brush

Note: This project can be achieved without any electric tools. Buy pre-cut wood strips (usually not as thick though) and hand saw to lengths required; or ask your timber dealer to cut a piece to specific sizes for you, and then assemble at home.

Along with the long summer days come the annoying mosquito droves that disrupt your sleep. For good revitalising sleep, a well ventilated room is an essential.

Using mosquito screens can also save on your electricity bills. The night breezes will cool your room down very well, and even in the hottest places, can reduce the need to use an aircon. Bedrooms with an en-suite shower/bathroom tend to build up mildew in hot humid areas, and so a mozzie screen allows ventilation that slows and sometimes can prevent this growth. Asthmatics can benefit by simply using this ventilation method – a reduced need of night time medication can possibly be enjoyed.

A flush fit of the mosquito screen is needed, with no sliver of an opening through which tiny mosquitos can move. The idea of removable screens allows for regular, easy cleaning and maintenance of mesh.

Use a sturdy wood thickness of about 3,5-4cm to prevent the screens being blown out of position if the wind picks up. This thickness will also help to prevent any warping that thinner cuts often do with time.

Burglar guards differ, so adaptation will need to be made accordingly. In our example project, square tubing guards are fixed into the wall on the one side and create a challenge to accomplish that flush fit.

Step-by-step guide

Step 1: Measure the window area that you wish to cover with a screen - height and width desired. (Note: on the same window the left and right side are not going to be identical - measure each separately - make custom screens for each window).

Step 2: Cut larger pieces of wood to correct frame width strips (3,5-4cm) with a table circular saw.

Step 3: Double check on each window for the length and width measurements and cut accordingly. Two long and two short per window. (Remember to meet the final measurement when placing the ends together to join).

Step 4: Take cut lengths back to the window and mark off with a pencil the exact notch positions for the burglar guards on the one side where connected to the wall. (The other side the frame is set to enclose the free ends of the burglar bar).

Step 5: Using a jigsaw, cut the burglar guard notches out, and then use a wood chisel and hammer to remove the small section cleanly and accurately.

Step 6: Put a long length of frame into the bench clamp and put a blob of glue onto the end. Drill a pilot hole in wood that will be joined on top. Place pieces together and screw together.

Step 7: Complete the frame with other long and short pieces.

Step 8: Refit to window to ensure the guard notches/holes are aligned properly. Mark off any discrepancies that prevent a snug fit, and chisel out the last bits.

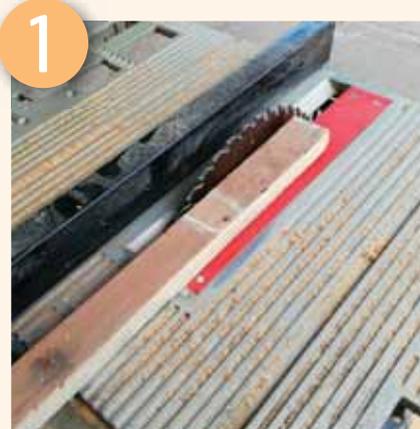
Step 9: Sand rough edges, wipe clean of dust and allow to dry.

Step 10: Paint or feed wood with Linseed oil.

Step 11: Lay mosquito mesh flat and place frame on top of it. Make an allowance of 2cm extra for overlap to attach the mesh. Cut the net to size for the frame, keeping that 'seam allowance' all around.

Step 12: Preferably lay the frame on top of the net on a table and then staple the net onto the outer side using a staple gun, stapling every 8cm or so apart. Take care to pull the net firmly across the frame for a taut finish. Be careful to staple onto the correct 'face' of the frame.

Step 13: To help prevent mesh damage when moving screens, and for convenience, attach handles. Use screws to do this onto the correct side of the frame so that the frames can easily be removed from the window for opening and closing and cleaning of the window or for screen cleaning and maintenance.



Cut wood to the correct width



Cut the correct lengths required



Cut notches with a jigsaw



Chisel out notches for burglar guards



Drill pilot hole before joining with glue and screw



Mark discrepancies to chisel out



7 Place in clamp and glue pieces together



8 Use pilot hole to guide screw in



9 Cut mosquito mesh to the size required



10 Staple mesh to the frame



11 Attach the handles



12 The completed screen in use

Tips

- Drill a pilot hole using a drill bit a tad thinner than the screws to be used before putting the screw in, this helps prevent the wood splitting. Rather notch out too little wood for burglar guard holes at first, then gradually more if needed, until correct.
- Screw length should be just under double the wood thickness.
- A square measurement works well for ends of wood pieces, or a 45° can be used.
- Pegs, dismantled, can be used as a wedge to ensure a flush fit if the builders have not acquired a straight finish on the window itself.
- Remember to mark Left and Right if you do more than one mozzie frame for the same window frame.

"Every moment I shape my destiny with a chisel - I am the carpenter of my own soul." - Rumi

WONDERWALL

Matty McNeill shows you how you can transform a room with a wooden pallet wall.

The wooden pallet feature wall which took a single weekend to complete

I wanted to share my first house where I have installed a wooded pallet wall in my living room; from start to finish it only took one weekend.

After I had sourced enough pallet wood for the project and it was sanded and finished, I first built a 50 x 75 mm frame onto which the pallet planks were nailed. The frame not only makes attaching the wooden pallets that much easier, it also provided

a space to hide all the wiring. There are removable planks on ball catches where the plugs are and the television is mounted to 22mm plywood which is 1m squared and removable.

As a finishing touch, I added a USB powered LED colour change strip behind the TV. I liked the look of just the sanded wood, so I waited until it climatized and gave it a wax to protect it.



The finishing touch to the project was an LED colour changing strip behind the TV



The step-by-step process showing the frame



Installing the wooden panels to the frame



SHARE YOUR PROJECT!

Working on something in and around the home that you would like us to publish? Send your good quality photographs and a description of the project to editorial@homehandyman.co.za

It's neither hard nor expensive to renew your car's interior

RENEW YOUR CAR'S INTERIOR

Want to get the best price when you sell your car? Or simply looking restore your vehicle's interior to its former glory?

According to the latest Inrix Global Traffic Scorecard, South Africans spend between 119 hours and 162 hours in traffic each year. That's almost an entire week per year spent sitting in your car. If your car is almost like your second home, you do need to keep the interior clean (and safe) for your travels.

So whether you're planning to sell your vehicle or just want to freshen up your daily drive, we'll show you how to slap the shabby off your vehicle's interior. It's neither hard nor expensive, and you'll be amazed at just how new your car's interior will look.

Protecting and cleaning the interior of your car will improve resale as well as improve your overall enjoyment of your vehicle. With these easy to follow steps, you'll have the interior of your vehicle in tip-top shape.

Clean out all the rubbish

First things first. Clean out the obvious litter – from petrol slips to take-away packets and empty coffee cups, there's no need for your car to look, and feel like a portable dustbin. Once you've thrown all of this away, there will be a very obvious improvement.

Vacuum

Remove your floor mats and using a high-powered vacuum, clean your carpet with a vigorous back and forth motion to loosen dirt or small stones that have become lodged in your carpet.

Move your seats forward and backwards to get underneath the seats as well. You'll be surprised what treasures might be found.

Clean the carpet

Do you own a carpet cleaner? If not, they you can rent one at most home improvement stores. Using a carpet cleaning solution, wet your interior and vacuum up dirt that is stuck in your carpet's interior. If you have kids, perhaps you'll even be able to get out those cheesy snack stains! If you live in a wet environment, consider some all-weather floor mats to protect your carpet from moisture and mould growth.

Wipe down and protect your seats

If you have a cloth interior, use your carpet cleaner on them; it works great.



Try not use polishes on your steering wheel – it will make it sticky

If you have a leather or vinyl interior, use a specialised leather conditioner. Be sure to rotate your clean cloth multiple times to ensure you remove the grime instead of rubbing it further into your leather.

Clean your dash

Your vehicle's dashboard is subject to more abuse than you think. During the summer, it bakes in the sun and dirt and dust that accumulates on the surface dries it out. Use one of the many products available to protect and clean

your dashboard's surface as well as other surfaces of your vehicle. Be careful to avoid using it on a steering wheel as it can make it slick.

Clean your windows

Your windshield will develop a thin film on it from condensation causing a glare during night time driving. It is important to keep your windshield clean and clear. Using a glass cleaner, clean and wipe down the windshield. If you haven't done this in a while, you might need to do it a couple of times.



Remove your floor mats and using a high-powered vacuum, clean your carpet with a vigorous back and forth motion



Certain smells, like smoke, can get into everything in a car, and sprinkling baking soda on the floor mats and cloth seats (avoiding electronic parts, screens and glass areas) will help draw out and neutralise some of the odours that are in the seats and carpets. Don't forget the floor under the mats and the space between the back seats and the rear window (where fitted). Be sure the floor, mats and upholstery are completely dry before you sprinkle on the baking soda. Let the baking soda sit for three to four hours before wiping clean and vacuuming.

Know your leather seats

Leather seats are a luxurious option and often change the feel of a car entirely. However, they require more care than any other type of seats and can easily degrade. As most leather car seats on the market are still with a natural origin there are a few features to them that people need to be aware of:

- They will develop stretchmarks over time just as with any other skin
- Leather is harder to clean when dealing with spillages and coloured stains
- Can be sweaty and hot in warm and humid conditions
- Leather is expensive compared to synthetic leather
- It can lose its original coating or colouring over time, especially when exposed to sun

When cleaning your leather interior, you should keep all these things in mind. Maintaining it by keeping it clean and wiping it from time to time will let you avoid those long cleaning and refreshing sessions, or at least make them further apart from each other. In other words, the key to having a good leather interior is maintenance, not cleaning it well when the time comes.

Welding is an essential skill for any metalworking project, and we investigate the most appropriate techniques and equipment for the DIYer.



LET THE SPARKS FLY

Welding can be traced back almost 2000 years in the form of very rudimentary metalwork where two pieces of molten metal were hammered together under heat. This forged the metal pieces together and was a task undertaken by blacksmiths. It was in the 1800 that the first form of electrode welding came into existence, coinciding with the development of electricity. In 1800 Sir Humphrey Davy, a Cornish chemist and inventor, discovered how to create an arc between two carbon electrodes using a battery. Interestingly,

the same person is also credited with experimenting with nitrous oxide, better known as laughing gas!

Modern electric arc welding however is credited to a Russian student named Nikolai Bernardos who patented a method of arc welding using carbon rods and electricity around 1881, not all that different to Sir Humphrey Davy's earlier experiments. The general principle remains the same today – using an electrode causing an arc to melt metal at high temperatures. In other words,

>> Warren Schmidt

joining two similar pieces of metal together by heating them up to molten point and creating a strong weld bead between them with the aid of flux and solder.

Welding takes a lot of practice at first and equally as important is to make sure you are using the correct device and welding rod or flux and solder in order to achieve the objective. Welding joints fail because either the wrong solder/flux/rod was used for the type of metal, or the incorrect method was used.

MODERN WELDING METHODS

There are several popular welding methods used in industry today, but only a handful will be applicable to DIYers.

<p>SHIELDED METAL ARC WELDING (SMAW)</p>	<p>This form of welding is the method most commonly used by metalworkers and DIYers. It is also referred to as manual metal arc welding (MMA or MMAW) or stick welding. An electrical current is used to form an arc between the electrode and the metal to be joined. The consumable electrode melts when it makes contact with the metal. A flux in the electrode produces vapours that form a shielding gas and creates a layer of slag which protects the joint from atmospheric contamination, which would otherwise weaken the join.</p> <p>Arc welders have two electrical leads. One is clamped onto the metal piece that needs to be joined (the negative or ground). The other end holds the flux covered rod or welding rod in position (the positive). The clamp usually has angled slots so that the rod can be inserted in at different angles. As soon as the rod makes contact with the metal, an electrical current is generated that sparks the rod feeding the flux and metal between the two pieces of metal being joined.</p> <p>It is very important to make sure that you are using the correct stick electrode for the type of metal you are welding. These are clearly indicated on the box and imprinted on each stick electrode using a numbered sequence. Read the box label carefully so that you select the correct electrode for the type of metal you intend to weld.</p>
<p>SUBMERGED ARC WELDING (SAW)</p>	<p>Submerged arc welding is used in large-scale production and involved the formation of an arc between a continually fed electrode and the metal piece. A blanket of powdered flux generates a protective gas shield and a slag.</p>
<p>TUNGSTEN INERT GAS WELDING (TIG)</p>	<p>This process uses an inert shielding gas and filler metal to create the weld.</p>
<p>METAL INERT GAS WELDING (MIG)</p>	<p>This form of welding is one of the most commonly used welding processes. MIG welding uses flux-core wire which is constantly fed to the tip as the welding electrode. It uses inert gasses like carbon dioxide and argon to shield the weld puddle from atmospheric gasses which tend to weaken the weld join.</p>
<p>OXYACETYLENE GAS WELDING</p>	<p>Oxyacetylene uses two gases under pressure – acetylene and oxygen. When combined and ignited through a specialised nozzle, it creates a very hot flame. Regulators allow you to adjust the mixture and output so that you can create a flame of different intensities. Oxyacetylene welders make use of a filler rod to make the weld bead. The principle behind this welding method is that the metal components that need to be joined heat up and bind with the filler rod material being fed into the flame. It takes practice to get the perfect blend of heat and a strong weld bead. Often the flame is too hot, and it cuts the metal. This is why oxyacetylene is often used to cut metal sheets etc.</p>

Preparation is key

An important aspect to welding is to prepare everything properly beforehand. This includes having the right working space to ensure safety, as well as the correct clamps and accessory tools to carry out the job. The surface of the metal should also be free of solvents, grease, oils and rust, as these can all influence the strength of the weld. Safety is of paramount importance.



Spot welding is used when attaching sheet metal or angle iron or square tubing



Welding delicate metal



Welding thin round bar



Round bar after the weld bead



Welding



The numbers on the welding rod follow an international standard which indicates what type of metal these rods are suitable for



An example of a suitable welding machine for DIYers – lightweight, compact and easy to use



Welding accessory – a chipping hammer to knock off loose bits at the welding joint



Example of a welding mask



The welding rod in position clamped into the positive cable

Braze welding

Braze welding is used to join dissimilar metals together, such as copper to stainless steel or mild steel to cast iron. This is generally a rare occurrence in DIY projects but usually more common in certain ornamental welding. The principle is to avoid melting the two metals but rather to use a filler to create the join between the two metals. This is often achieved using a brass filler rod.

Can you get electrocuted whilst welding?

Keep in mind that when you are welding you are using electricity at a high amperage. The nature of electricity is to follow the path of least resistance and when welding, this path runs from the electrode through the metal and back through the ground cable. If you touch the metal with your bare hands when an arc is formed, you're unlikely to get shocked. However, it is very important to ensure that all cables on your welding machine are properly insulated and that the welder is in good condition, for example, no broken or damaged electrical components or cable.

Welding must always be undertaken on a dry surface, either a workbench or dry concrete floor. Never weld on a wet floor or in the rain. Water holds less resistance to electricity. Likewise, never weld when dressed in wet or damp clothing or with damp welding gloves. A high amperage is not always needed to cause a fatal shock. As little as 50 milliamps can be fatal. Alternating current causes muscles to contract making it difficult to let go of something. Welding is safe providing all safety aspects have been covered.

Welding safety

When welding, never compromise on safety gear. You are working with molten or red-hot metal which can cause serious burns. In addition, you are working with electricity (see box above).

- Wear the appropriate welding mask to shield the eyes from the bright arc.
- Wear sturdy protective welding gloves.
- Wear a fire-resistant overall. Ideally this should be of a fabric type that can repel hot bits of metal.
- Wear strong rubber safety boots.
- Always be mindful of the hot metal before picking up any pieces.





The future of abrasives

Abrasives are an important part of any woodworker's arsenal.

>> Lou Coetzer

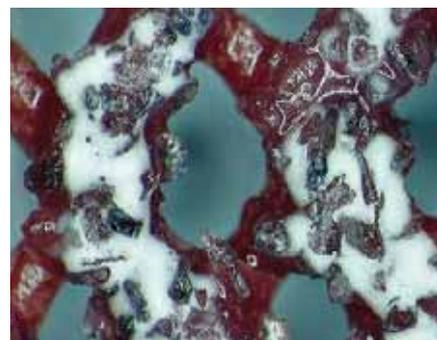
The best known type of abrasive is sandpaper, which consists of aluminium oxide particles or silicon carbide crystals, or grit (stone gravel), pasted with several types of adhesives on a backing paper or woven fabric. Where woven material is used as a backing, it is referred to as 'emery cloth'. The paper and materials are usually rated based on weight (mass), while the sandpaper itself is rated in numbers that indicate the granular size. The higher the number, the finer the pellets/crystals. The grades consist of extra coarse (30-40), rough (50-60), medium (80-100), fine (120-150), very fine (160-240), extra fine (280-320), super fine (360-400) and ultrafine (above 400). Other types of abrasives include steel wool, which are also available in different grades namely extra rough (4), fine (0) and super fine (0000), as well as sandpowders (usually in a paste), such as pumice powder and Tripoli powder ('rottenstone').

Most sandpaper has a dense layer of grit ('closed coat') that covers the entire backing area, but they tend to clog up quickly. Therefore, a type has been developed with a 70% grain coating (so-called open coat paper) specifically recommended for soft and oily woods. From experience, the woodturners know that such sandpaper is also easily clogged and that the best solution is to use it with a lubricant such as teak oil in the sanding process.

New types of sanding screens are being developed. They resemble braided mesh in a diamond pattern with openings through which the sanding dust can escape to avoid blockage. One such type is Abranet and has apparently been known in the panelbeating industry for some time. Woodworkers have now discovered it and there is much interest. The pictures give a close look at the composition of this modern piece of sandpaper/sanding mat.



A close-up of a small part of the upper side of a sanding screen. On the diamond pattern of the mesh, white glue appears in zig-zag streaks in which the silicon carbide crystals are embedded ($\pm 20X$ magnified).



A closer look; the black abrasive grains are clearly visible where they protrude from the white adhesive. Those parts of the diamond weave without adhesive, outline the openings in the weave, which apparently contribute to the sanding dust exiting without blocking the openings ($\pm 40X$ magnified).



This shows the underside of a sanding screen with the nylon loops clearly visible. Their purpose is to attach the sanding screen to a sanding disc or other sanding device by means of the 'Velcro' hooks. The nylon loops are woven into the main frame of the mesh and will not be undone easily. Note some of the abrasive crystals visible through the openings in the mesh ($\pm 30X$ magnified).

20 GREAT STORAGE IDEAS

There's no such thing as too much storage space. But not all of us are blessed with a surplus of massive cupboards and strategic built-in cabinets.

There are, luckily, many creative ways to store all your essentials. Proof? We came up with 20 easy storage ideas, from DIY solutions to easily shoppable tricks. If your house is overwhelmed with clutter, it's time to bust out your tool set to sort out the situation once and for all.

Organise your fridge with a six-pack

Do all of your small bottles in the refrigerator door like to tip over after opening or closing the door? Fortunately, the answer to tidying those wayward bottles is just a recycling bin away. To keep all of your condiments under control, use an empty six-pack holder to hold and organise the condiments in your refrigerator door.



Store items under the bed

The space under the bed is an ideal storage area that you don't want to waste. You could use cubbies, baskets, or bags to stash bed linens and other non-essentials, but drawers are perhaps the quickest and easiest way to access this space and keep it tidy. Some beds come with built-in storage, or you could make your own from repurposed dresser drawers.

Functional décor

If you happen to have inherited your grandma's rolling pins, knotty wooden utensils, and/or well-worn cutting boards, you have a design opportunity waiting. Consider storing these beloved kitchen wares out in the open as authentic décor elements by hanging them on available wall space. Just make sure you mount them in such a way that you can easily take them down for use.



Maximise wall space

High-up bookshelves are perfect for storing beloved past reads and other items you don't need easy access to. Wall cubbies are a modern way to display decorative items.

Invest in storage ottomans

These are beautiful and practical pieces of furniture, a great way to stash those bedroom extras – like the extra pair of slippers you always leave lying around.

Wine stash

What, no wine rack? No wine cellar either? No problem! You can just as easily store your wine collection in a deep kitchen drawer, if there's one that's vacant. Just be sure to alternate the direction of the bottles so that they nest well together. If you're feeling ambitious, you could try making your own roll-out drawers to house your wine supply within a more spacious cupboard instead.



Tension rod storage hack

It can be difficult to keep spray bottles and other cleaning supplies from falling over and making a mess under your kitchen sink. To keep your cleaning supplies upright, hang them from a short tension rod inside your cabinet. Another clever idea is to slide a paper towel roll through the tension rod for easy access. This tension rod organisation hack is also a great place to hang dish-drying towels and rubber cleaning gloves.



Make a PVC shoe rack

This PVC shoe rack is genius: Find pipes that are just the right size for your shoe collection (around 10-15cm in diameter), cut them down to shoe-length, and stack together using pipe glue.



Mount your bikes as decor

When you have a stylish, minimalist wall mount, even bikes can double as décor, especially if you paint a statement wall or accent nook in a corresponding colour. It also gives you an easily accessible, out of the way place to keep your bicycle.



Hang garden tools in the garage

With so many rakes, spades, brooms and the like to store in the garage, why not try some DIY solutions? PVC piping, magnetic strips or even guitar hangars are perfect to store your gardening equipment upright, off the floor and against the wall.



Sort out the garage

Don't have enough space in the garage? A simple solution like this one – with homemade shelves – offers a neat, relatively quick to build storage area for a tight space. What's more, everything is easily at hand and you won't spend ages looking for your tools or a particular shade of paint.



Store using a magazine rack

Looking for a simple solution to keep all your cleaning liquids and detergents in one easily accessible place? Then simply repurpose an old magazine rack which is the perfect shape and size to keep everything neat and tidy under the sink.



Label dry cooking ingredients

Keep all your spices and dry cooking ingredients like pasta, rice, and flour somewhere easy to reach while you're working without having to keep labels and packaging out in the open by transferring them to prettier containers. This way, you can also stay organised with labels.

Get drawer organisers

Use drawer organisers to keep each item in its place so you know exactly where to find it each time you need it.

Put shelves over the door

Don't even have enough wall space for classic floating shelves? Opt for one that sits above the doorframe. You can keep stuff up there you don't use frequently but don't want to stash in a more permanent storage location.

Store in the ceiling

In South Africa we don't generally have attics, but we do tend to have large ceiling spaces. Carefully climb a ladder, open your trapdoor and check to see if you can store items in your roof, such as suitcases, Christmas decorations or fans which are only used seasonally. Ensure that you place anything in the ceiling across a board or planks which is supported by the roof supports (do not place anything on the ceiling itself!) Stuff will get dusty up there so be careful what you choose to store.

Install a sliding pantry

The skinny space between your fridge and the wall is prime real estate for organising canned goods. Use your woodworking skills to create a wheel-mounted solution ideal for your kitchen.

Stack mason jars

Hot glue together a couple of mason jars. Once dry tip on their side and use them for spacious little cubbies for pens, pencils, staples, and other small items.

Pegboard is always the answer

Pegboards make organising a cinch. It works in garages of all sizes, too, allowing you to efficiently use every bit of square footage. A variety of hooks and baskets hold paint supplies and tools for effortless organisation.

Hack it

Plastic window planters make the perfect storage containers. Mount them to the garage wall, and fill with spray paint cans, tools and other materials.



Get ready for Decorex Durban

All you need to know

Ticket prices:

Adults – R95 | Students/Pensioners – R85
Kids U12 – R20 | Trade/Exhibitor – R85

Times:

Fri: 10am-8pm
Thu, Sat and Sun: 10am-6pm

Diarise all three Decorex Africa shows:

- Decorex Durban from 19-22 March 2020 at Durban Exhibition Centre
- Decorex Cape Town from 30 April to 3 May 2020 at Cape Town International Convention Centre (CTICC)
- Decorex Joburg from 6-10 August 2020 at Gallagher Convention Centre

It's almost time for Africa's biggest décor, design and lifestyle exhibition to kick off, with the first instalment, Decorex Durban, taking place at the Durban Exhibition Centre from 19-22 March 2020. This prestigious showcase of the latest products and trends from top designers, décor professionals and industry experts is always hotly anticipated – and the 2020 instalment will be even bigger and better than before!

The overarching theme for Decorex Africa 2020 is 'Lifestyle by Design', an embracing approach that allows you to design your life the way you want it to be. Lifestyle by Design is about freedom, reclaiming your time and doing things you like. This is essentially illustrated through design and looking to future trends when curating your own personal space.

Visitors will find this year's theme illustrated by a wide range of fabulous installations that talk to the latest trends. These include:

- Insta-Interiors – a brand-new feature showcasing the latest décor trends to hit the African shores, including New Nordic, Contemporary Organic, Afro/Tribal meets European Mix, Modern Chinoiserie and the Neon trend
- 2020 Trends Installation – another brand-new feature showcasing Decorex Creative Director Anita Bloom's top ten trends for the year in situ
- Instudio Trend Theatre (a free-flow forum where leading design influencers, manufacturers and décor professionals share their insights)
- Kitchen Design Project (local kitchen designers create themed kitchens)
- Trend Kitchen by Cosentino (where living areas melt into the working areas of the kitchen)
- Mobelli Furniture + Living Trend House – Urban Living by

Design (including a home space that reflects the Durban lifestyle)

- Bathroom by Design (introducing trends from some of Durban's top bathroom suppliers)
- Fabric Trend Bar (the latest in decorative fabrics and trimmings for the corporate, hospitality and residential décor market)
- Outdoor Living Collab (the latest in garden equipment, technology and landscaping)
- Appliance feature by Tafelberg (the finest appliances and home technology from Tafelberg)
- Apartment project (a collaboration with one of South Africa's top furniture and décor suppliers along with two interior designers styling two apartments)
- Lighting by Design (a collaboration with one of South Africa's top lighting suppliers)

"The Decorex Durban programme presents a range of new, exciting installations that engage with global trends within an African context," explains Sian Cullingworth, portfolio director at Reed Exhibitions. "Top designers, manufacturers and suppliers will share their take on current trends, interpreting what Lifestyle by Design is all about."

As ever, Decorex Durban will provide a powerhouse of inspiration for the interior design, décor and architectural industries and is hosting a special trade-focused day on Friday, 20 March 2020. Members of the profession will receive complimentary trade access to the show if they register online ahead of the event. Trade professionals who do not pre-register online will be able to purchase trade access tickets at the gate at a reduced rate.

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

Split wood damage on the door

>> Kim Roberts

Project guide

Difficulty: Moderate

Estimated cost: R320, Enamel paint being the most expensive at about R195 for 1 litre

Estimated time: Labour time about 30-40 minutes, spread through steps.

Drying time: A few minutes for glue, 24 hours for wood filler – first covering and another 24 hours if any extra filling and perfecting is needed. A few hours for enamel paint coat one and two.

Materials

- Wood filler – white or to match door colour
- Enamel paint
- Mineral turps
- Sandpaper
- Quick dry wood glue or Ponal glue
- Sugar soap
- Soft cleaning cloth

Tools

- G clamps
- Paint brush
- Screwdriver
- Ruler/Tape measure
- Pencil
- Paint scraper
- 25mm chisel
- Rubber mallet

Repair cupboard damage

Save the day, repair a cupboard door frame and avoid replacing it.



Isn't it amazing how a cupboard door always gets closed with extra enthusiasm when someone is angry? Depending on the impact, the wood can split, or the hinge can tear out of the door frame; and then the door cannot be opened and closed anymore without further damaging it. Allowing a door

to drag along the floor for an extended amount of time before fixing it can also damage the flooring, depending on the type of flooring. It is best to repair this damage as soon as possible to prevent further repairs being necessary, and of course, to avoid the whole project costing you more in the end.

Step-by-step guide

Step 1: Remove the door from the cupboard door frame by undoing the screws – keep undamaged hinges attached on the door frame side and keep removed screws unless you wish to replace them.

Step 2: Remove hinges from the door frame that need to be repositioned due to a damaged seat area.

Step 3: Clean the door and door frame with sugar soap and a soft cloth. Allow to dry completely.

Step 4: Insert sufficient glue into wood split/damaged sections using the glue nozzle.

Step 5: Secure G clamps in place and wait for glue to dry (as per glue label) – make sure that the wood is as neatly as possible aligned when you position the clamps. Remove clamps when the glue is dry.

Step 6: Using a paint scraper, fill in any indentation or grooves with wood filler (use matching colour for the door frame where possible). Allow to dry, sand and smooth. Check your finish, top up to with more wood filler

if necessary to make the surface level and neat. Let it dry and sand smooth again.

Step 7: Measure up with a tape measure or ruler the new position for the hinge on the frame and door. (Move slightly outward towards the outer edge – this will lengthen the area between the top and bottom hinge, but should still work well). Carefully mark up the area that has to be chiselled (and the depth) out to allow hinge to be flush with wood surfaces on both door and frame. Chisel out the 'resting' spots for the new hinge sites.

Step 8: Fill old hinge site on the door in with wood filler, allow to dry and then sand and smooth.

Step 9: Re-attach the hinge to the door with screws and then attach the door back onto the door frame with the other side of the hinge; screw in both sides firmly.

Step 10: Paint over wood filler repairs with enamel paint. Two to three coats should do it, depending on the colour of wood filler used. Allow to dry.



1 *Fill crevices with wood filler*



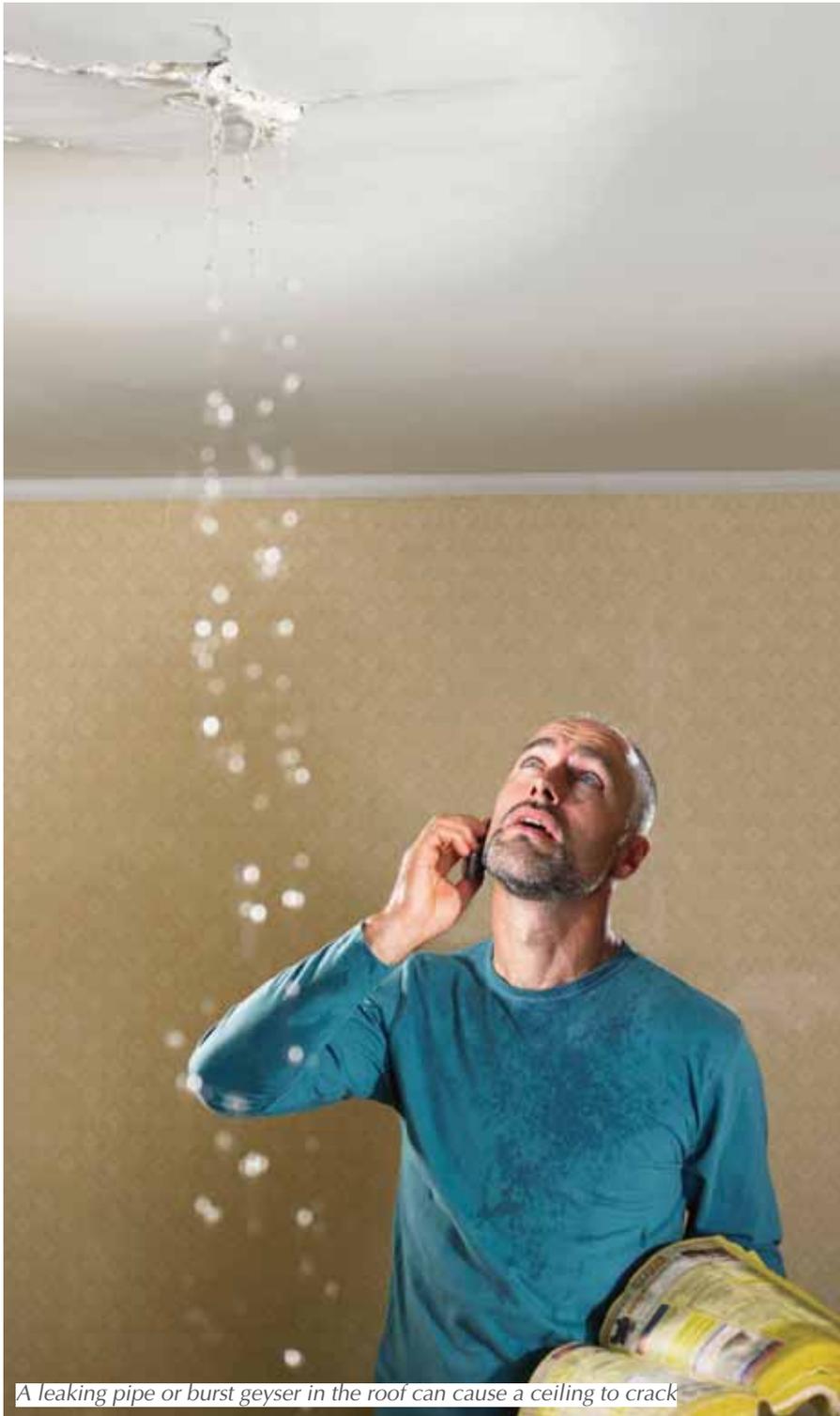
2 *Put the door back onto the frame*



3 *Completed and like new*

HOW TO FIX A HOLE IN THE CEILING

So you missed the rafter and stepped through the ceiling... find out how to repair the hole in this article.



A leaking pipe or burst geyser in the roof can cause a ceiling to crack

All you will need to get the ceiling back into good shape after an accidental step on the ceiling or a burst geyser is a sheet of drywall and a few tools found at the local hardware store or home centre.

Tools and materials

- Cordless drill
- Long drill bit
- Drywall knife
- Tape measure
- Drywall sheet
- Drywall screws
- Drywall joint compound
- Drywall taping knife
- Mesh drywall tape
- Fine-grit sanding block
- Clean cloths
- Can of spray ceiling texture
- Primer
- Paint pan
- Paint roller
- Ceiling paint
- Putty knife
- Scissors
- Plastic mesh patching material
- Spray primer
- Paintbrush

Larger than 30cm wide

- Go into the roof (if you can) and inspect the area around the hole for electrical wiring. Move wires away from the hole, or call a professional, but don't cut into the ceiling if wires could be disturbed in the process.
- Locate two joist beams nearest the hole, one on each side. Use a cordless drill with a long bit to make two small holes through the ceiling, marking the location of the two beams.
- Go back down and use a drywall knife to cut and remove the damaged piece of drywall from the ceiling. Cut a square beginning at one mark

and extending to the opposite mark. Remove the piece of drywall from the ceiling, exposing the beams.

- Measure the piece of drywall that you removed from the ceiling. Cut a replacement piece, slightly smaller than the hole, from a new sheet of drywall.
- Place the replacement piece of drywall into the hole. Position the screws about 2-3cm from the edge of the drywall to avoid crumbling. Secure the drywall to the joist beams, using the drill.
- Apply a thin layer of drywall joint compound (often called 'mud' by professional installers) to the seam around the perimeter of the replacement piece, using a drywall taping knife. Cut mesh drywall tape to fit the length of the seams and press the tape into the wet compound. Apply a thin layer of compound over the tape, embedding it into the seam, and allow to dry completely.

- Sand the patched seams smooth to the ceiling, using a fine-grit sanding block. Apply more compound to recessed seams, allow to dry, and sand the seams again. Remove the sanding dust with a clean cloth.

- Apply primer to the patched area with a paint roller. Allow the primer to dry completely and apply two coats of ceiling paint.

Less than 30cm wide

- Apply drywall compound around the hole with a putty knife. Use scissors to cut a piece of plastic mesh patching material to fit over the hole, sizing the patch to extend a few centimetres beyond the hole. Place the patch over the hole and press the edges firmly into the wet compound. Use the putty knife to apply a thin layer of compound over the entire patch. Allow the patch to dry completely.
- Sand the patched area smooth to the surface, using a fine-grit sanding block. Apply an additional layer of

compound to any recessed patches, allow to dry, and sand the area again. Wipe sanding dust with a clean cloth.

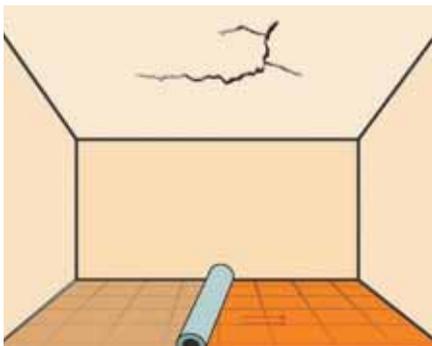
- Apply primer to the patched area, using a spray can. Allow the primer to dry completely and apply two coats of ceiling paint.

Small holes

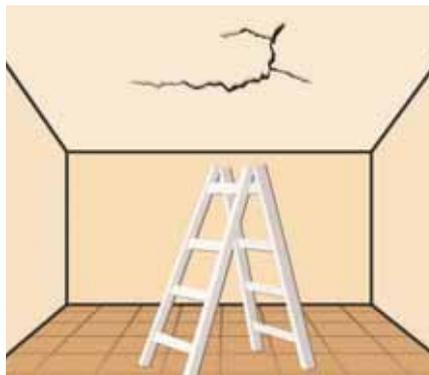
- Fill the hole with vinyl spackling, using a putty knife. Wipe excess spackling with a clean cloth. Allow the spackling to dry completely.
- Sand the patched hole smooth to the surface of the ceiling with a fine-grit sanding block. Wipe the sanding dust with a clean cloth.
- Apply ceiling paint to the patched hole with a small paintbrush.



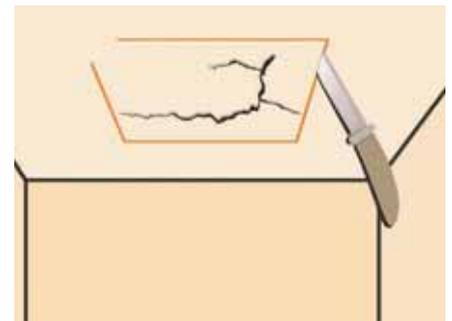
You can also secure a support board to the support joist beams and attach the drywall to the board.



Cover the floor below the ceiling with a drop sheet



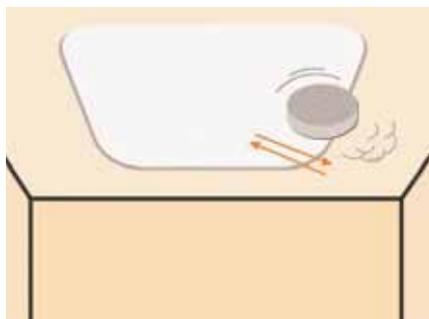
Use a ladder to safely reach the ceiling



Use a drywall knife to cut and remove the damaged piece of drywall from the ceiling



Apply a thin layer of drywall joint compound



Sand the patched seams smooth to the ceiling, using a fine-grit sanding block



Paint the ceiling



Opening up on DOORS

Doors are an important fixture of every home and we investigate the latest trends in interior and exterior doors

>> Warren Schmidt

Tools

- Electric drill or powerful battery drill-driver with Phillips head.
- Flat and Phillips screwdrivers.
- Flat pieces of wood, carboard or Masonite to be used as spacers under the door.
- Electric planer for shaving two sides the door if it is too long or wide.
- Auger drill bits for drilling into the wood to hollow out for the locking mechanism. (Tork Craft sell a useful 3-piece lock installation kit)
- Sharp flat chisel and hammer for creating the recess for the hinges.

Doors are an important aspect to any home. They provide security and privacy. The fitting of most doors is well within the capability of most DIYers. You will need some basic tools, one or two specialised drill bits and some competency in general carpentry. Aluminium door frames and sliding doors are slightly more technical but can easily be fitted by a competent DIYer.

Selecting the right door

Door selection is a straightforward process and can either be for a newly built home, a renovation or simple replacement of an existing door. The first consideration is selecting either an exterior or interior door, as more than often, there is a big difference in material and construction design. Exterior doors are designed to be sturdy and durable in order to provide security as well as standing up to the elements such as rain, sun and expansion caused by temperature. They are usually of a solid construction such as a solid hardwood. Interior doors are usually hollow inside

and consist of a pine frame with a Masonite hardboard glued each side to the frame.

The standard door size in South Africa for internal and external doors is 813mm (width) and 2032mm (height). However, there is some variation on this, particularly with exterior doors and depends largely on the design. Most modern homes have much larger exterior front doors which allow ease of furniture transportation (until your furniture gets stuck in the interior door of course!). Most exterior doors are constructed from a solid hardwood and many have elaborate decorations added to give the door character and flair.

Many exterior doors can be used as interior doors, but this will certainly drive up the cost. Hollow Masonite interior doors are usually cheap, ranging between R200 to R300. Whereas some of exterior hardwood doors may be priced at several thousand Rand. Security will be a big consideration when selecting exterior doors, so the materials and construction must be of a very high standard and be able to withstand a forced entry and battering. The extra locking mechanisms added to the door will also play an important part of security.

Generally, most houses and townhouses have three types of doors on the exterior – the main entrance or front door, the back door, as well as a sliding door which opens to a patio or entertainment area. Steel framed sliding doors have largely been replaced with aluminium frames as aluminium is resistant to rust. On the downside, aluminium frames are not as strong as metal frames and therefore an additional security barrier such as a metal trellis door is fitted in front of the sliding door. Again, quality and SABS approved trellis doors should only be fitted.

The back door is usually located at the kitchen. Traditionally, the stable door was used whereby the top and bottom half could be opened independently. However, these appear to be falling out of fashion and being replaced with a solid meranti or other hardwood option.

Basic door design

The standard single door design consists of the frame. This is constructed from either metal (steel-frame) or timber. Meranti is the timber of choice as it is a durable wood that stands up well to swelling etc. However, it should still be treated with an appropriate oil or varnish. Pine should never be used as it is very susceptible to warping and



Locking mechanism for an aluminium sliding door





Making the recess for the lock plate



An auger bit is used to make the recess space for the locking mechanism



A hole-saw or auger bit can be used to make the circular holes for the key slot and spindle



Fitting the locking mechanism



The locking mechanism must fit flush into the cavity with minimal movement

swelling and therefore after time your door will get stuck. With a new home or renovation, it is critically important that the door frame is fitted perfectly straight and square. New door frames often have struts in place to prevent shifting during installation but sometimes these are knocked out. Always use a proper square and spirit level and keep checking that the frame is perfectly aligned. This will have important ramifications later when you fit the door. If the frame is not perfectly square or pushed slightly out on one side, try what you may, you will not get the door to fit properly!

Aluminium framework is usually the standard when fitting sliding doors. As above, the initial fitting of the frame is critical. Shoddy workmanship often results in the entire frame having to be knocked out and replaced when the sliding doors are inserted and found to be off kilter due to an uneven frame.

Replacing an interior door

Replacing a damaged interior door is straightforward. Once you have purchased the new door, you can remove the old door off its hinges.



Front door – modern doors are now built much wider than the older traditional front door

Step-by-step guide

Step 1: Remove the old door or measure the frame width and height for the new door.

Step 2: Check the new door as to which way it must fit. The enlarged wooden section where the locking mechanism will fit is often marked as “lock”. Make sure you have the door correctly positioned. In all probability the door will be slightly larger than the frame. Depending on the width or height, one side, or perhaps two sides, will need to be trimmed down using the planer. Always shave off small sections at a time until the door fits comfortably into the frame.

Step 3: Using the spacers under the door to get the correct height, mark the position of the hinges using a pencil. When you are certain you have the correct position, use the hinge and mark the outline. Using a sharp chisel for wood, gently remove enough wood so that the hinge fits snugly into the recess. The door can now be screwed firmly onto the hinges.

Step 4: The handle and locking mechanism can now be fitted. One the door swivels easily open and closed without jamming, you can determine

the position of the lock in relation to the strike plate and lock indentation in the frame.

Step 5: This is the most challenging aspect to fitting the door. You will need to mark the exact position for the locking mechanism (using the lock as a guide). Two circular holes can be made using the hole saw. One will be for the key and lock and the second will be for the handle and spindle.

Step 6: The auger bit width must equal the width of the locking mechanism. Measure the depth of the locking mechanism and mark the auger bit so that you don't drill too deeply into the wood. Ideally, the locking mechanism casing must fit snugly into the recess in the door panel without moving about.



Be aware of flooring requirements in a new home or building renovation. Ideally, the door should be fitted after the flooring is complete. But sometimes a door is fitted before tiling or laminate flooring is done, and not enough space is provisioned for under the door.



Fitting the spindle for the door handles



The locking mechanism and spindle firmly screwed into position



Lastly, the handles are screwed into place

Door décor

Whilst entrance doors may come in a range of sizes, designs and styles, it is also the door furnishings that stand out to make a door unique, such as having bold hinges, or a giant knocker, or perhaps a different type of door handle. Homeowners have an endless variety of hinges, handles and locks to choose from.



Any liquid of suitable viscosity can probably be sprayed



SPRAY PAINTING

for the amateur

>> Willie Marneweck

There are several reasons why furniture, cabinetry or other items may be spray painted as a preferred finish vis-a-vis hand finishing. There are also several reasons why hand finishing has its place in furniture finishing.

As the woodworker becomes more proficient in his hobby or is earning money on a part time basis, he may start taking an interest in the advantages of spray paint finishing for his projects. The purpose of this article is to provide

a basis for instruction in the practice of spray painting, be the person be a hobbyist, DIYer or making items for sale. It will attempt to demystify the process and show that it is not as difficult as one imagines. One thing, however, cannot be circumvented, and that is that the required equipment must be obtained. The primary equipment will be a suitable air compressor and a spray gun. Spray painting under these circumstances should be done in the open air or well-ventilated covered area.

Which paints can be spray applied?

Any liquid of suitable viscosity can probably be sprayed, even water. However, we are only concerned with paints that are useful for woodwork finishing. This said, the principles are much the same even if the article is a metal object, e.g. a steel box.

Equipment

Compressor

The size of the 'tank' or air receiver is not important. I believe that the smaller the tank, the less room it takes in your workshop. A tank of 25 litre is sufficient. Try to find a system with at least 2-2 ½ HP or 1.5-2 KW motor. It must be capable of 8 to 10 Bar pressure. Direct drive or belt drive are both good, the former being noisier.

The 'free air flow' capability is directly related to the size of the motor; manufacturers will not fit under or oversized motors to a compressor. A 2 ½ HP outfit will be able to supply sufficient air that any spray gun will require.

Although it is almost mandatory, make sure it is fitted with a pressure gauge for tank pressure, pressure regulator and also with pressure gauge for the regulated air pressure, safety valve and shut off cock on the outlet. It is important that a metal plate stating that the pressure vessel is certified with the required particulars is present.

Spray gun

Any reasonably priced gun (say less than R2000) will suffice, even some 'cheapies'. The gravity feed type seems more popular than the suction cup types. A gun with three adjustments i.e. air flow, fan and paint feed, is preferred. Most guns have cups with about 0.6 litre volume. The nozzle size most often is 1.4 mm diameter. The so-called 'Low Pressure Low Volume' (LVLP) guns are not recommended. Rather obtain a 'High Pressure Low Volume' (HPLV) gun.

Other items

- Air hose of at least 6.5mm (1/4")

inside diameter (ID), or larger, with quick release couplings. Hose length about 6m or longer

- Moisture separator (at compressor or at spray gun)
- Suitable mask with cartridges intended for the purpose
- Two trestles and a plank or two
- A stand for the spray gun
- Air duster (indispensable)
- Viscosity measuring cup (Ford cup)
- Cleaning brushes (plastic kitchen brush and tiny bottle brush)
- Spanner for spray nozzle removal (normally supplied with gun)
- A couple of plastic measuring "spoons" of say 10, 20, 50, or 100ml. This is necessary to measure catalyst when small amounts of reaction lacquer must be prepared
- Some toothpicks, paint strainers, container with lacquer thinners (for washing the gun, etc.), cloths for general cleaning and other for workpiece dusting

Safety aspects

While the process of spray painting is not considered as dangerous, some safety aspects must be understood by the user.

- The compressor. Very few people are aware of the laws pertaining to 'pressure vessels' i.e. the air tank. According to the law in South Africa there are several aspects about pressure vessels which should be adhered to. The nameplate on the vessel must state who the manufacturer is, what the maximum pressure is, and have a serial number. So long as one knows that these vessels are dangerous under pressure and must never be tampered with, e.g. welding on the vessel, tampering with the safety valve, one should be safe.
- The Paint and Thinners. Lacquer paint and lacquer thinners are flammable. Care must be taken not to bring this in contact with open flames. Besides this, the fluids can be toxic to the lungs and skin. An appropriate mask should be used, especially in circumstances where air circulation is poor. When spray painting outside, this danger is very low. Suitable clothes, resistant to lacquer thinner are hard to find, and consequently when handling thinners, hands should be washed promptly. As far as can be ascertained, lung diseases, and dermatitis are not at all prevalent amongst persons that practice spray painting for a living.
- Compressed air from a duster. This high-pressure air coming from the nozzle of a duster can injure ear drums, eyes, etc.

ABOUT WILLIE:

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



Spray painting offers many advantages for the woodworker

Adjusting the gun

Attach the air hose to the compressor and adjust the regulator to full pressure. Start by filling the cup with a small amount of thinners and close the cap. Before connecting the hose to the gun, close all the adjusters fully. Make sure the fluid needle is fully shut, by pulling the trigger. Now attach the hose to the gun, and do the following:

TIP: Use this procedure with coloured thinners (a bit of stain added) to make the process much more visible

When pulling the trigger, nothing should happen. No fluid should flow, neither should air blow out. Open the fluid flow adjustment a bit, say half a turn, and pull the trigger, a small stream of fluid will spout out of the nozzle, but no air will come out. Open another half a turn, and repeat it, and by judging the distance that the fluid spouts out, one will quickly see that opening it anymore, does not increase the flow. Keep in mind that because thinners is much less viscous than paint, it will spout out much further. Close the valve again.

Open the air flow adjuster slowly while pulling the trigger. Air will flow more and more vigorously from the air cap, but no fluid will be coming out (the needle is closed completely). Close valve again, and now open fluid needle half-a-turn. Very slightly open the air valve and pull trigger. Atomized fluid will blow out. Spray (pull trigger all the way) on a piece of cardboard or board of wood and watch what happens. If the air valve is slightly opened, tiny droplets will appear on the board with each shot. By closing, more spatter will result (under-atomizing). Opening beyond a certain point will clearly show a point where more air is not improving the spray. Beyond this point over-atomizing will occur. Play around with the needle opened another half-a-turn, and so on. See whether you can to observe when a lot of mist is created (when the air is too much). Create a corner by having a piece of board flat and another piece vertical on top of it. Spray in the corner and try to make as little overspray as possible.

By opening the fan adjustment gradually, one can see that the round spot gets progressively more oval. One will also see that the atomizing air through the nozzle, is getting weaker. This is because the fan air blowing through the side holes in the air cap, uses some of the air supposed to go to the nozzle.

If any of the adjustments do not function as described above, the fault must be found and rectified. This may involve dismantling the ill-functioning item and correcting the malfunction.

Next issue we will look at the process of spray painting.

Getting acquainted with the spray gun

This is undoubtedly the most important element of spray painting and worth spending some time getting well acquainted with it. It will save a lot of frustration and bad results to first do a fair amount of practice with it, before tackling a real project.

The gun consists of an aluminium body, equipped with a plastic or aluminium cup and a cap for the paint. The paint can flow under gravity down to the nozzle (usually with an orifice of 1.4mm diameter). The orifice of the nozzle is kept closed by a spring-loaded needle. The latter may be pulled back, opening the orifice, by means of a trigger.

There are three adjustments which function as follows:

- The needle adjustment regulates the speed of liquid flow when the trigger is pulled back. Of course, the viscosity of the liquid will affect the flow. By the way, do not try to adjust the flow by partly pulling the trigger, because it is impossible to feel how much to pull. After adjustment the trigger is always fully pulled back during painting.
- The air flow adjustment regulates the air flow/pressure of the compressed air at the air cap. The air cap is the item that covers the nozzle. Adjustments can also be achieved by regulating the pressure at the compressor (or both). When one has the gun in your hand, regulating air flow at the gun seems more convenient, or at very least to do final adjustments. The gun body is so designed that when the fan adjustment is closed, all the air will flow inside the nozzle which contains a ring of holes directly surrounding the orifice. This air is forced out of the cap between the hole in front of the cap and the orifice outer diameter. This gap is very small (about 0.1mm). The result is that the air speeds up, collecting the paint coming out of the orifice, and atomizing it.

So, what is the purpose of this adjustment? At the bottom of this question is the quality of atomizing of the paint. If the air flow is too much, for the flow of paint ensuing from the nozzle, it will result in a "over-atomized" spray, meaning that the paint particles at a distance from the nozzle will be dry. Dry powder will attach to the item to be painted surface.

Conversely, cutting the air flow too much, will result in a 'under-atomized' spray. The effect of this is that too much liquid will be sprayed on the surface, causing paint runs and droplets (if sprayed on horizontal surfaces). Only visual judgement and practice will result in the "correct" setting.

It must be remembered that atomization is related to the amount of fluid flow and the air flow. More fluid flow or more viscous fluid will require more air flow, and visa-versa.

- The fan adjustment regulates the pattern of the spray hitting the surface to be painted. With the valve closed, the pattern should be a round disc, i.e. the paint mist flows out in a cone and the size of the painted disc will depend on the distance between the gun and the surface (if no other adjustments are made). By opening the fan adjustment button (anti-clockwise) the pattern will become more and more oval.

A typical gravity feed spray gun with the important items highlighted



BRIGHT IDEAS

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



Marking your wood



When laying out wood pieces it's easy to get them mixed up, especially when you've got multiple cuts of a similar length. Numbering the pieces and where they join is fine, but an even easier way is to use a triangular shape. When the pieces are moved, you can quickly visualise their position relative to each other since there will only be one way that triangle shape can be made when together.

Scribe a triangle onto your wood when they are laying in the

correct position, ensuring some part of the triangle hits all the pieces you want to register with each other. Using a straight edge makes this a quick and easy method to keep even the most complex glue-ups properly references.

Whether you've got boards laminated together in a particular orientation, or just multiple pieces that need to be in a specific place, the triangle registration mark is a great tool to use.

Albie Hales, by email

Glue issues gone

After accidentally gluing my work to the bench for the second time, I needed a solution. Keeping a roll of wax or wax paper under your glue-up will not only keep your workbench clean by catching glue drips, but will also prevent your work from sticking to the bench while it's drying.

Rather than use the serrated edge on the roll, I find it easiest to unroll more wax paper than I think I'll need and trim it to the specific shape once it's under the work. A shop ruler works great for ripping a clean edge on the wax paper.

Wesley Allan, Krugersdorp



Dripping taps?

Ever had an annoying dripping tap that keeps you up all night? Cut a piece of dental floss and wrap one end around the dripping tap, then lay the rest into the drain. The drips will adhere to the floss and you'll be able to get some peace and quiet until a more permanent repair can be made. This helped me get a good night's sleep recently before we went to the hardware store and bought new washers.

Eileen Cooper, Hermanus



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Congratulations to Albie Hales who wins a Tork Craft 6 level storage rack.



This issue, find out how to make a wall hanger with old toys.



Upcycle old

TOYS



Done! A great way to upcycle unused toys

Divert the toys of your children to make a rack for hanging clothes, bags, hats and other toys. This coat rack with decorative hooks in the shape of multicoloured toys will be a great addition whether in their room or at the entrance to your home, and best of all, the kids can help you with this project.

It is a simple project, which, with a little creativity can not only encourage a love for DIY in children, but also encourage them to keep their room tidy!

Step-by-step guide

Step 1: Find a suitable piece of wood for the project (we used an off-cut piece of pallet wood) and get your child involved by asking them to select some unused toys for the 'hooks'. Dinosaurs, sharks, animals and army men are ideal for boys, but a version for girls with dolls, shark ducks etc can also be made. Just make

sure that they are happy with you sawing them in half! We chose toys which could be used to hang a variety of items – a horned dinosaur, a toy moose, an army toy with his arms up, and the Hulk!

Step 2: As we had a raw piece of pallet wood, we sanded it smooth with an electric sander – show your young DIY'er how its done and then guide them through the process as they give it a go themselves.

Step 3: Choose your finish and apply – we toyed between the idea of a solid colour or a stain and ended up choosing a wood polish for the finish. This is another step that your child can help with. Set aside and allow to dry.

Step 4: Take your selected toys and saw them in half (or at the best juncture so that they can be easily and securely attached to the wood). We used a hacksaw which made quick work of the toys, the majority of which are hollow.

Step 5: Before we attached the toys to the plank, we drilled a hole on either side so it could be mounted onto the wall.

Step 6: Find the middle of the plank and 'dry fit' the toys before you attach them to make sure that both you and your child are happy. At this point you may notice that you need an extra toy or two for the hanger.

Step 7: As our hanger will be used primarily for light items – caps, clothes, necklaces – glue was the perfect choice to attach the toys to the plank. We used a contact adhesive in a well-ventilated space and made sure that enough glue was used to bond the toys to the surface of the wood.

Step 8: Finally, find the ideal spot and mount the hanger onto the wall!



Our plank of pallet wood and our toys



Our Young DIYer sanding the wood – be sure to assist when using power tools



Sawing one of the toys in half – take care with the saw and mind your fingers



A moose, or a twoose?



Finish the plank – we used a wax stain



Get your mom or dad to drill mounting holes through the plank



Find the centre of the plank and dry-fit the toys



Apply glue liberally to the toys and affix in place



Glue all the toys in place



ASK OUR EXPERTS

Our panel of experts answer your questions on DIY problems

Outdoor lighting for coastal applications



We have just moved from Gauteng to the coast, and in the process of renovating our new home we have had to replace each and every outdoor light fitting due to corrosion and rust. Which replacement lighting would be the most suitable?

Claire Wahl, Umdloti

The experts from Eurolux reply: Effective exterior lighting is important regardless of where you live, so it's important that you select fixtures that can withstand long-term exposure to the elements.

However, coastal living comes with its own set of challenges because the salt content in the air leads to premature rusting and failure of outdoor lighting fixtures. Coastal salt is hygroscopic, meaning it attracts water and therefore creates a highly corrosive electrolyte solution that acts as a catalyst to oxidation and rust. This reaction worsens when temperatures and humidity levels increase in the summer months. Your home or business may be located a few kilometres inland from the coast but factors such as wind speed and direction still mean that your outdoor lighting is exposed to salt. Regardless of whether your property is directly on the seafront or further inland, investing in lighting made from a durable

material will save you money and time in the long run. Eurolux Lighting carries a range of outdoor lighting suitable for coastal applications. We highly recommend fixtures made from UV stabilised shockproof resin and die-cast aluminium.

Shockproof resin fixtures have proven to be a reliable choice for coastal lighting as they're maintenance-free, anti-rust and anti-corrosive. Fumagalli is the industry leader in manufacturing resin material outdoor lighting and their collection of fixtures is highly recommended. Their state-of-the-art production facility in Italy uses superior quality raw materials and components to create a specialised resin formulation. This is then self-coloured and UV stabilised, so even the brightest sunlight will not cause the fixtures to fade or discolour.

Die-cast aluminium fixtures offer better lighting and thermal properties in comparison to steel because the parts are easily modified to enable the lighting source to exude more light and heat. When aluminium is exposed to air it naturally generates a protective oxide coating making it resistant to corrosion. Lutec and SG offer a range of robust die-cast aluminium fixtures that are ideal for coastal installations. These superior-quality fixtures are also covered in a special powder coating for added protection

against the wear and tear that comes with exposure to a coastal environment.

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



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

How to repair a broken chair leg?

A friend has a set of nice maple dining room chairs. The leg broke off one of these in the process of moving, so he asked me to see if it could be fixed. The chairs originally cost around R1000 each, so they are definitely worth fixing.

Cameron Grant, by email

Ed replies: Turn the chair upside down on a worktable. If the leg has separated, place the separated part on the table. Scrape or cut off any loose splinters, chips or debris from the separated areas on the leg using a chisel. If the leg is not separated, insert a putty knife into any open cracks. Use it to clean out any splinters or debris that might prevent the crack or split from closing up tight.

Pry the crack open with the tip of the putty knife. Inject glue into the crack with the tip of a glue bottle, until the crack is saturated. If the two pieces are separate, apply glue to both contact areas on the two parts. Fit the broken part back onto the leg by hand. Wrap the area with masking tape to secure

the two parts together. Wrap the area with masking tape if the leg is cracked and not separated.

Shoot two pin nails through the leg from both sides of the joint where the leg was repaired. Place clamps on the leg to compress the glued area, placing the clamps at least a few centimetres apart.

Drill through the cracked area at a 15 degree downward angle to penetrate all the way through the leg and out the other side using a drill/driver. If the crack is longer

than 10cm, drill two holes, evenly spaced. Apply glue to the holes to saturate them. Tap dowels into the holes far enough to penetrate out both sides using a hammer. Allow the glue to dry overnight. Remove the clamps and tape.

Cut the protruding ends of the dowels off flush using a coping saw. Smooth the ends of the dowels using a small file. Colour the ends of the dowels using a matching stain marker. Fill the nail holes and hairline cracks with a putty crayon.



Buying a circular saw

I am in the market to buy my first circular saw – would your experts be able to guide me so I can buy something that's right for me?

Johan Louw, Centurion

The experts from Kreg reply: Although Kreg don't market circular saws, we certainly know our way around working with wood. When you're buying a circular saw, you might get overwhelmed by just how many different saws there are. There's no single answer for which circular saw is right for you, but there are a few things to know that will help you decide.

Lots of DIYers rely on cordless tools these days, so you may be surprised to know that corded circular saws still remain quite popular among DIYers and, especially, professionals. Both types have pros and cons to consider. Even though technology has moved both options way ahead of their time. "Today both

corded and cordless top brands offer the same features, power and torque and will do the job," says Greg De Villiers, Vermont Sales tool guru. "In South Africa as a regular user I might be tempted to go for a cordless option with load shedding and numerous power problems; you also never have to worry about working on site or anywhere outdoors. Top brands, such as Festool, come with two long lasting batteries."

If you're buying your first circular saw, however, a corded saw is probably the best way to go. In general, you'll get more cutting power and capacity for less money. A cordless circular saw may make sense if you can find a great deal on a multi-tool combo pack, or if you already own cordless tools from the same manufacturer.

Whatever type of circular saw you buy, and whether it's corded or cordless, the basic

features and controls will be essentially the same. They might look slightly different on your saw but will perform the same functions.

One of the biggest frustrations people have with a circular saw is getting rough cutting results. It's not the saw's fault, though, nor is it yours. It's usually the blade. Circular saws come with blades that are made for making fast cuts in framing lumber, and special blades for smooth cuts in project boards and plywood. You can fix this easily, though, by just swapping out the blade with a 'fine cut' blade. This type of blade has many more teeth with sharp carbide tips that will produce a smooth, clean cut.

Kreg is a major international brand from Vermont Sales and is available at leading outlets countrywide. For more information, call 011 314 7711 or visit www.vermontsales.co.za



Successful use of power tools

>> Denis Lock

I have been using power tools since the age of thirteen. I have just celebrated my 80th birthday. If my arithmetic is correct that is 67 years of power tool usage. And I still have all ten fingers. During this time I have done most of the woodwork for seven homes: my wife and myself, and three children. In addition I have completed hundreds of wooden items, ranging from simple toys through fine furniture and high-end joinery for relatives, friends and customers. For the last twelve years I have run a specialist woodworking school and have had the satisfaction of hosting nearly 600 students.

My first woodwork machine was an American combination machine: a ShopSmith model 10ER (photo 1). This was the original model and cost the princely sum of 125 pounds. It included an 8" table saw, a 12" disc sander, a lathe, a horizontal drill press, a vertical drill press and a scroll saw (or what the Americans called a jig saw). Today I have an additional six light industrial machines and double that number of portable power tools.

In this article, my first as an octogenarian, I would like to document my experiences of what contributes to the successful use of power tools.

Three cornerstones

Successful use of power tools builds on three cornerstones. These are safety, control and accuracy. The most important of these is safety. Nobody wants to get hurt. Nobody wants to incur unnecessary medical expenses or lose valuable workshop time. A worst-case scenario is an accident that results in a disability that reduces woodworking capability. The second cornerstone is control. Control and safety are highly interrelated. Most, if not all, control devices are safety devices in disguise. Many safety devices are control devices in disguise. The third cornerstone is accuracy. Control devices are a major contributor to woodworking accuracy. Photo 2 shows this schematically.

Safety

One of my favourite sayings is: "Safety

is no accident." I love the double meaning. I believe that safety is a skill that has to be practised and honed: the same as cutting dovetails. Safety can be discussed under three headings: electrical, operational and personal. I won't bore you by repeating safety rules like: "Don't operate an electrical tool while barefooted and standing in a puddle of water." These rules are all well documented in the safety instructions that come with the tool. Read them again.

I emphasise five electrical safety rules on my courses. The first is check the power cord for breaks before plugging it into the mains. The second is make sure the machine is switched off before plugging it in. Some machines have a simple toggle switch (photo 3) that can inadvertently be left on. The third is unplug the machine from the mains supply before changing bits or blades and making adjustments. The fourth is wrap the cord of a portable power tool around your arm as shown in photo 4. This keeps the cord away from the moving bit or blade. The fifth rule

1



My first woodworking machine

3



Don't forget to switch off

4



Wrap the cord around your arm

5



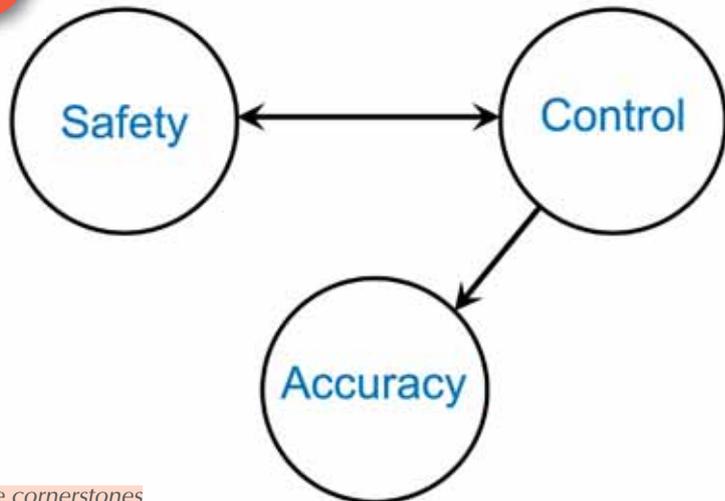
Strategically placed switch

6



Table saw safety components

2



Three cornerstones

concerns portable power tools fixed to a workstation like a router table. Add a second switch as shown in photo 5. I use a switch with a safety cover and a bump-off facility. One of the most dangerous things I have seen is a router table where the router was plugged directly into a wall outlet some two metres away. The only way to switch the router off was to grope blindly underneath the table for the machine's switch or leave the table, with the bit spinning against a jammed

workpiece, and walk three steps to the wall outlet.

Don't try and learn operational safety from the Internet. Many YouTube and other videos display a criminal disregard of safety. I often ask: "When are they going to post the follow-up video that shows the finger amputation." Operational safety results from a number of factors. The first is understanding the safety devices built into the machine at the time of manufacture. What are they called,

7



Blade guard and riving knife removed

8



Jury rigged blade guard

9



Ear protection

10



Lung protection



what is their function and how do you adjust them. A table saw (photo 6) has two such devices: a blade guard and riving knife. The former covers the blade and prevents accidental bodily contact. The latter prevents the kerf of the cut closing (due to internal pressures in the piece of wood), binding on the back of the saw blade, lifting the piece of wood being cut from the saw table and propelling it towards the operator at great speed. This is known as “kick back” and is the most common cause of table saw accidents. Some of these accidents are fatal.

I visit too many workshops where the owner is gaily ripping wood on a table saw with both of the aforementioned safety devices removed. The arrogant response, when I comment on this unsafe practice, is generally along the lines: “I have been using a table saw for 40 years. The guards get in the way. Look I still have all ten fingers.” My reply to this is: “If you have been using a table saw for 40 years you are at an age where the probability of a mini stroke, a blackout, a giddy spell or loss of balance is a lot higher. If that happens you could fall forward onto an unguarded blade and there goes your hand or part of it.”

There are times when it is necessary to remove the table saw blade guard and riving knife. This is true when making blind cuts such as rebates, dados and grooves. When I face this situation I try and jury rig an alternative guard. Photo 7 shows the table saw setup to

make two cuts to remove the corner of a square of MDF. The blade guard and riving knife have to be removed for this operation. Photo 8 shows my replacement guard. Two C-clamps, a piece of Melamine and a couple of blocks: what could be simpler or cheaper. Five minutes setup time can avoid five hours on a hospital operating table.

I often draw an analogy between operating a power tool and flying an aircraft. Taking off and landing are the times that require the most concentration and skill. The same is true of starting and ending a cut in a piece of wood. I advise my students to take a second or so at the start of a cut and perform what an industrial safety officer would call a hazard evaluation. Are there some clamp handles in the way that would interfere with the tool movement? Is the power cord or vacuum hose free to move the full length of the cut? Is there something on the floor you might trip over? I also tell them to rehearse the cut: either physically (with the machine switched off) or mentally. Gymnastic students are told to do this by their instructor: imagine a perfect exercise.

Personal safety is about protecting your ears, respiratory system and eyes. I wish my Dad had made me wear ear protectors. I wouldn't have to wear hearing aids today. Invest in a good pair of ear protectors or custom moulded ear plugs (photo 9). Find a pair that are comfortable to wear and have a noise reduction ratio (NRR) of



around 20 decibels. Loss of hearing is not only a social problem. The loss of auditory stimulus to the brain can result in other problems.

Most dust masks are uncomfortable to use. Invest in ones that have a one-way valve (photo 10). The difference is significant. Don't rely only on a dust mask. Install some sort of dust extraction system for your floor standing machines (photo 11). An ordinary household vacuum cleaner is sufficient for portable machines like a router or orbital sander. I used to solve the problem of a trailing vacuum hose by using a bungee cord to hang it from a rafter in the roof of my old workshop (photo 12). My new workshop is double height, so I use the trick shown in photo 13. Be particularly careful (use a dust mask plus a dust extractor) when machining man-made boards. Plywood, chipboard, MDF (medium density fibre board) and OSB (oriented strand board) all use urea formaldehyde as the binding resin. Urea formaldehyde is a known carcinogenic.

Eye protection is of paramount importance. I know many woodworkers who manage fine after the loss of a finger or three. Woodworkers who have lost an eye

really battle. Studies have shown that adults who lose the sight in one eye have decreased ability to accurately track moving objects, to judge distances and to perceive depth. A non-negotiable rule in my workshop is that everybody wears eye protection: not just the machine operator (photo 14). Chips of wood or other small particles can fly out, at great speed, in any direction. I do not accept ordinary glasses as protection. Invest in safety glasses with high impact-resistance, wrap-around lenses. Wearers of prescription glasses often battle with safety glasses worn over their day-to-day glasses. Speak to your ophthalmologist about prescription ground safety glasses. Maybe your medical aid will pay for them.

In my next article I will discuss the control and accuracy cornerstones. In the meantime, work safely.

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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11



Dust collection

12



Tame that hose

13



Novel use of clamps

14



Eye protection

WOODWORKER'S CORNER

Sharing techniques, ideas and a love of wood



Spotlight on Panga-panga (*Millettia stuhlmannii*)

>> Stephanie Dyer

This remarkable timber (also called Jambire) is one of the most important export timbers of Mozambique. It is produced by a medium-sized to large tropical East African tree, *Millettia stuhlmannii*. The genus name is in honor of Dr Millett of Canton, China and the genus also includes the popular West African species, *M. laurentii*, traded as Wenge and *M. grandis*, known as Umzimbeet, which occurs mainly in KwaZulu-Natal. The tree is primarily found as specimen trees in botanical gardens in South Africa and also makes a beautiful ornamental in private gardens.

Woodworkers' opinions are divided when it comes to panga-panga, with some describing it as "too splintery and brittle" and others that love the "variable stripy grain and stability" of the wood. The heartwood is dark brown to black, with characteristic white striping throughout. In addition, yellow dots or striping, caused by gummy contents in the pores of the wood, are often visible. The Afrikaans name, "patryshout" (partridge wood) describes the appearance of the wood very well. The well-defined sapwood is white. Panga-panga has a fine and even texture and a straight to interlocked grain. The wood is hard-wearing, resistant to abrasion and has high strength properties. It is very stable in use, very durable wood and resistant to fungi and borer.

These excellent properties make panga-panga suitable for industrial and domestic flooring, furniture, cabinetry, joinery, interior trimming, veneer, railway sleepers and turnery. In the past it was widely used for furniture in South African government buildings. Panga-panga is especially attractive when a handsome and dark appearance is desired for flooring.

The wood is difficult to process and tungsten-tipped saw teeth are recommended. It has a moderate to severe blunting effect on tools as a result of the high silica content of the wood. However, the wood planes well to a lustrous, smooth finish, leaving minute needle-like splinters, which are easily sandpapered. It has good nailing properties, but pre-boring is recommended to prevent splitting. The wood glues well and takes all finishes well. Be careful when handling and processing the wood as the wood and sawdust may cause dermatitis, respiratory problems and sepsis. Protective gear is recommended.



Panga-panga and jacaranda kitchen table by Hugo Partridge



Panga-panga wood. Photo by Peter Upfold



Panga-panga Jacob's ladder chair by Gert Swart Photo by Peter Upfold



Panga-panga spoon by John LaForge

Sources:

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Woodworking associations

At the beginning of October, the Woodworking Association of Pretoria held its 30th Anniversary Wood Expo and Craft Festival. The event was held at the New Hope School which gained much-needed funds from the sale of refreshments and other revenue sources. As with all events of this nature there are months of planning and encouragement of members to complete their latest projects for exhibition. As from last year, the expansion of the expo to invite other crafts and hobbyists to join created a unique occasion with interests for the whole family. Of course, another key element is always the participation of suppliers who tempt visitors with the latest tools and gadgets; this year was no exception and thanks to all that participated. The exhibition from members was again excellent, with many items admired by visitors. In addition, members also provided demonstrations in all the associations activities of woodturning, cabinet making and wood carving, which proved to be as popular as ever.

This year, however, a new aspect was introduced which was an activity for the children. They had tables full of bits and pieces of wood, wheels, and of course glue, hammers and nails. The opportunity was for the children to create, to experiment and at the end to keep their creations. For many, one could see that even knocking a nail into wood was a new experience. This will certainly be a standard item in future expo's and the association hopes that it can be a start for children to escape their 'screens' and see the pleasure of making things.

Also on the agenda were presentations by members on various topics. The crafts displayed and demonstrated ranged from beautiful artwork to Origami lessons, gemstone polishing, magnificent steam engines from the Model Engineers,

quality box, pen and knife making, etc. All of these attracted much interest.

The attendance for the two days of the expo reached a record high and 18 people joined the association, after seeing the benefits they offer, bringing the membership to 185, the highest ever.



Willie Marneweck (left) received the trophy for the best furniture item as well as the best exhibit on show. Chairman Neville Comins handed over the trophies



Association member, Andrew Bourke, demonstrating the decoration of turned items



Deep concentration at the children's table

Toys for charity event

The Witwatersrand Woodworkers Association held its Annual toys for charity Fund Raising Braai at the Gereformeerde Kerk, Randburg on Saturday 23rd November. The main purpose of the fundraiser was for members who meet at the workshops throughout the year to make toys for donation to children's charities at Christmas. The members also make toys in their home workshops during the year and these toys were brought to the fundraiser and were included with the toys made by our Toymakers group for donation to the selected charities. This year a professional Magician Show was raffled of which was won by one of the charities for the enjoyment of the children.

For more information or to find out how you can get involved, visit www.wwa.org.za



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Showcase your woodwork projects

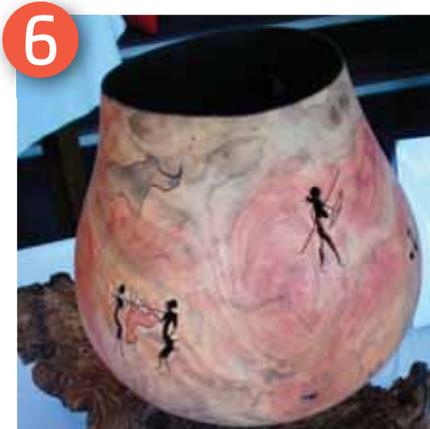
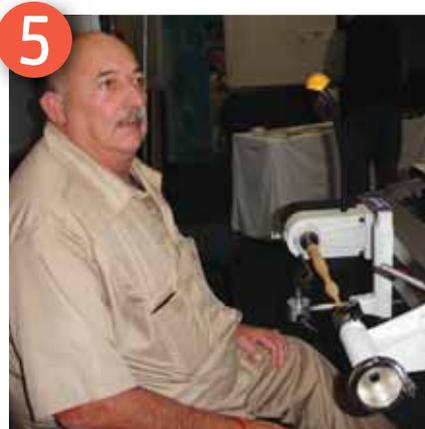
Woodturning Symposium 2019

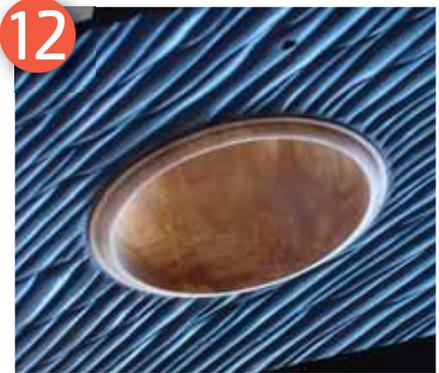
The Association of Woodturners of South Africa, an umbrella body representing woodturners in South Africa, organises an annual symposium. This year, they gathered at the Wilderness Hotel on the Garden Route for two-and-half-days of demonstrations and presentations on woodturning. The headline demonstrator was Nick Agar, who last visited 10 years ago in 2009. Nick, an accomplished woodturning artist who is a native of Devon in south England, recently moved to Georgia in the USA. Over five sessions, Nick shared many of his techniques, and made several pieces on the lathe.

Strand Hardware were the main sponsor, and the association also received support from a number of smaller businesses. This support, together with voluntary work from members helped to make the symposium a success. In 2020, the Association of Woodturners hope to stage the symposium in Pretoria, to give many of the up-country members the chance to attend.

The 2019 symposium occupied two large rooms at the Wilderness Hotel. One was filled with a shop selling tools and machinery from the main sponsor, Strand Hardware, and the gallery of member's items. There were also ongoing demonstrations in the sales area. The adjacent function room hosted the formal proceedings. About 80 delegates watched the demonstrations and presentations.

The headline demonstrator, Nick Agar last visited South Africa in 2009 when he toured the woodturning clubs and demonstrated at the AWSA congress at the Center of Visual Arts, UKZN at the Pietermaritzburg campus. In the first session, he showed how he makes his signature Viking bowl. It took him two hours to make the one shown in the photos. Those who attended his master classes had the opportunity to make one of their own.





1. The use of a Powermatic 3520B lathe loaned by Strand and a video camera gave closeup views of the action. Ashwin Ramhith of PE is showing a detail of a bowl during a demo
2. Nick Agar's signature Viking bowl
3. At the masterclass at Strand Hardware in Randburg, you can see the students proudly showing off their bowls.
4. In another session, Nick made a 'Wave' bowl using airbrushing to create a rounded edge illusion. The bush scene was created using stencils and masking
5. Johan Kramer showed off his lathe stand that allows the turner to work sitting down – this is specifically intended for people who are unable to stand and

6. Carel van der Merwe showed how to create natural stone illusions on turnings using milk paint
7. Nick Agar used rotary carving tools to create the illusion of a weathered stone surface
8. Another piece made in demos by Nick; he used a combination of inks and stencils create the paint effects that you can see
9. Ashwin Ramhith's pyrography is not so much shading as texturing. He likes to use a thick wire running at red heat for his work
10. This pyrographed platter was turned by John Wessels from a large piece of yellowwood and the pyrography was done by the local artist Xoliswa.

11. John Wessels (left) gave Nick one of his signature pewter inlaid bowls as a thank you for his visit
12. Platter by Andrew Stevens
13. This bowl was made by Mervin Walsh using the technique he demonstrated on the bandsaw for making the eccentric ring around the outside
14. Roy Gibbs received a special mention for this pyrographed platter
15. John Wessels combined wood, pewter inlays and beadwork to produce this masterpiece

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

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





Master the art of **BRAAING**

For some, this traditional South African cooking method takes years to perfect – but here are some quick-fire tips to get your skills up to scratch!

- Put old dried out teabags in a bottle and fill half the bottle with paraffin. The teabags soak up all the paraffin and make for epic firefighters when getting your fire going.
- Make sure you clean your braai grill after every use to prevent food from sticking to the bars. Wait until they have cooled and use warm soapy water along with a good stiff wire brush to scrub the grill clean. The brush will help remove any particularly resistant burnt-on food stains. Once dry, rub vegetable oil across the grill; this will prevent it from going rusty.
- If you have a gas braai with food caught in the burners, check your manufacturer's instructions to find out the best way to extract it. Some

recommend removing the food carefully using a pin. Whatever you try, be sure to turn off your braai entirely and wait for it to cool before attempting anything.

- Limit smoke by placing a fireproof container filled with water next to the coals. As the liquid boils, the steam helps to contain the smoke.
- For the tastiest, most tender braai, marinate your meat overnight. This will allow the meat to become infused with the rich flavour of the marinade. If you're unable to marinate overnight, allow the meat to soak in the mixture for as long as possible prior to braaing. Always store meat (marinated or not) in the fridge until you are ready to cook it.
- Here's an easy test to check whether the coals are ready for braaing: hold your hand above the embers for the count of 10. If you have to pull your hand away before you reach 10, the coals are still too hot. If you can comfortably hold your hand over the

coals for much longer than the count of 10, the embers are too cool. In this case, lower the grid, or add more coal or fire to create fresh, hotter embers.

- Buy the best quality meat you can find, and ensure that it is aged before being braaied. Ripen beef in your fridge for one week prior to braaing, and lamb for five days. Ageing your meat not only tenderises it, but also greatly enhances its flavour.
- Want perfectly succulent meat? Don't turn the meat too often whilst braaing. Seal the meat, then allow one side to become golden brown in colour before flipping it over to brown the other side.
- Cook the perfect chicken on a kettle braai; for juicy, tender chicken, microwave or boil the meat (preferably marinated) for 10 to 20 minutes prior to braaing. Once you place it on the fire, cover it with a lid and allow to simmer, turning occasionally so that the meat remains soft while the skin becomes crispy.

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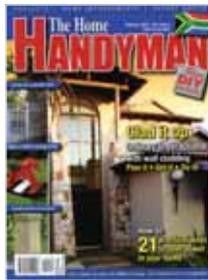
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A restoration tip for the new year

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.



A new year with new opportunities!

We are again in a brand new year filled with opportunities and new, exciting ideas. There are fresh promises and enthusiastic decisions to be made, i.e. changing bad habits, going to gym more often, eating healthy and, oh yes, the evergreen New Year's resolution, losing weight. Why do we feel the need to make these decisions every year? Is it a hope of living longer, to have a better quality of life or do we just want a new take on life, a second chance?

This always makes me think of restoring an old piece of furniture. I enjoy spending time going through secondhand shops in the Westdene area where you can find a whole street in which you can scratch between rubbish to find wonderful gems and haggle about prices. Here you often find that special piece that deserves a second chance, and often you can already see a masterpiece in your head before you leave the store.

Here is one of the most important tips when you plan to renovate... whether it is your life or a piece of furniture.

You have been given one life, so value it. Enjoy every moment of your life and be kind to yourself. Before you decide to make any changes do your research thoroughly. Although the internet has a lot of information, you have to be sure about the accuracy. Make sure you are following sound advice.

This is exactly the same when you are restoring an old piece of furniture because sometimes by renewing it you might devalue it. Do research to know the value of your project and what you

>> Annalien Grensemann should look out for. For instance, when there are certain marks or stains on the wood, you need to find out whether you should remove them or leave them as a sign character. Sometimes they are telling a story that should not be taken away. We also have imperfections in our lives that we should not try to remove or forget, because they are also telling a story about our lives. These formed our character and made us who we are today. Importantly though, it is how we deal and react to those experiences in our lives that make us more valuable.

Then there is the patina. Don't underestimate its value. Patina is the colour of the surface of the wood. Through the years the wood has oxidized and there is some wear on the surface. This is the evidence of its age and history. I once bought a sideboard and considered it to be dirty; it was actually the fashion of that period to stain the furniture that way and I could have dramatically decreased the value of that item. Consequently, wear your patina with pride, it gives you value and tells your story and it is the evidence that you have lived.

Sometimes the piece of furniture is not an antique, but an everyday table or cupboard that simply needs some new colour. Go for it and give it a bright lick of paint so that it brightens up that dark corner in the room. Sometimes we also shouldn't take ourselves too seriously. Go out there, do something completely out of character and surprise the people around you, just to let them know that you are still a force to be reckoned with.



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