

The Home HANDYMAN

March/April 2023 • Vol 33 No 03



SA'S
ORIGINAL
DIY
MAGAZINE



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- Make modern interlocking shelves
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FROM THE WORKBENCH

Finding inspiration

A simple question to start this issue (which just so happens to be the first issue I started working on in 2023): where do you find inspiration?

Now this can be broken down into many sub-questions, but my original idea when sitting down to write this, was where do you find inspiration for your projects? DIY around the home, arts & crafts, woodworking, metalworking... they all start with an initial spark, the first sprouts of inspiration. Even with putting this magazine together every second month, the team needs inspiration.

We are fortunate (if you are inclined to think that way) to live in an era where millions of inspirational starting points can be found in that little device we take with us everywhere we go. In years gone by, if you were looking for decorating ideas, interesting table designs or simply just some motivation to get you started on that chunk of wood sitting in your workshop, you would have to get in your car and go to the shops. Once there, you would have to locate the newsagents or the CNA and browse through the books or magazines on their shelves. If you were lucky enough to find something which inspired you, you would have to buy the magazine/book or simply try and commit it to memory to implement when you got back home!

Nowadays, however, apps like Pinterest allow you to collate all the inspirations you find in easy-to-manage folders. See a fascinating bowl? Add it to your Woodturning Board. Looking at renovating your bedroom? Collect all the images you like in your Bedroom Board. Then inspiration is never far from your fingertips and you can update your boards at any time. If you prefer video format, YouTube is the place to be – simply type in what you are looking for and you'll find days (or even months) worth of content to keep you busy. As a simple test, I typed in 'metalworking projects' and there were pages and pages of videos.

We are in an age now where ideas and stimulus can be found everywhere. Yet maybe we are spoiled for choice? I see it with myself when I can't find anything to watch in the evenings. And that's with DStv, Netflix, Disney+, Showmax and the aforementioned YouTube...

Ultimately though, it takes a combination of imagination, creativity and elbow grease to be a DIY master. Flexing your creative skills by creating something from nothing is the name of the DIY game. So, whether you are a well-seasoned DIY'er or new to the scene, you need that initial inspiration from somewhere. My advice is to seek out your usual starting point; where do you usually start when tackling a new project? For some it is boredom – the longing to be working with their hands – while for others it is a need – your daughter and son-in-law need a cot or crib for the impending arrival of their child. Whatever it is that drives you to DIY, start there and use the available resources to find inspiration for your project.

Gregg



The Home HANDYMAN

www.homehandyman.co.za

2023

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OFF THE SHELF

Your guide to the latest products in the world of DIY

The new 2-in-1 cordless inflator

WORX's best seller is faster and more efficient than most inflators

WORX continue to launch exciting new products, their latest being the WX092.9 20V 2-in-1 Cordless Inflator. You can inflate all the tyres on the car and then some more with the Worx 20V Power Share Portable Inflator. It fills up 4.5 tyres on one charge. And it goes from 0-2.5 Bar (0-36) psi in about four minutes per tyre, faster and more efficient than inflators from other brands. And you do not have to plug it into your car's DC port and then park some place that is convenient to use it.

With the powerful 20V battery (the same one used on all WORX power and garden tools), you just bring the inflator wherever it needs to go. Take it to the pool, the dock, even pack it for a long bike ride, it is the ultimate in portability and convenience. The LED lamp outputs 100-200 Lumens and can be used as a work light so you can see what you are doing, a flashlight if you need to take a walk or work on your car in the dark also great for a load shedding back up light, even an emergency beacon to alert other motorists that you need assistance.

The flexible 0.9m hose lets you reach nozzles and stems that are hard to get at, and it comes with three adaptors: 1 sports ball needle, 1 Presta and bike valve adaptor, 1 tapered adaptor for small inflatables like pool toys. Plus, a soft-grip handle that is comfortable to hold and use for long stretches. Keep the Worx 20V Power Share Portable Inflator in your trunk and gain the peace of mind you get from being prepared.

The Powershare 20V battery is interchangeable with other WORX tools, the only cordless tool platform that uses the same battery to power their 20V and 40V tools.

For more information, call 010 824 4420 or visit www.worxsa.co.za



Professional sanding results

Designed for superior and well-balanced sanding

Thankfully, high-pressure laminates (HPL) and melamine-faced boards (MFB) have come a long way since they were first popularised in the 1950s and the 1960s. Today's offerings are far more durable and the designs more realistic and luxurious than the products available previously.

The Bosch Professional GEX 185-LI is perfectly designed to ensure well-balanced, stable sanding and reduced arm fatigue. The highly efficient brushless motor has a run time of up to 40 minutes and a consistent removal rate almost equivalent to that of a corded sander. It is compatible with all Bosch 18V batteries. Compact and lightweight, the ergonomic design and low vibration make this versatile sander easy and comfortable to use with one hand.

The GEX 185-LI is ideal for sanding wood and wood materials, removing old paint and putty, and sanding off new putty and plaster. It gives a superior, smooth finish without marks or scratches.

Features include:

- Ideally positioned 18V battery for well-balanced sanding and no more arm fatigue.
- Efficient brushless motor with consistent removal rate and a max run time 40 mins with GBA 4Ah battery.
- Ergonomic design with low vibration up to 2.2 m/s² for comfortable sanding.
- Ideal for sanding wood, wood materials, or plaster and removing paint.

For more information, visit www.bosch-professional.com



PG Bison launches trendy new range of colours

PG Bison, the proudly South African company that aims to inspire and enable beautiful living spaces with its range of locally manufactured decorative wood-based panel products, is touring South Africa to launch the latest additions to its range

PG Bison will spend the first four months of the year visiting cities across South Africa to introduce the new designs and colours to customers, partners and media. After that, the tour will move into the SADC regions.

Jason Wells, Brand & Marketing Manager at PG Bison explains the product launch, titled Gallery 4, revolves around the concept of "Expressions", with the tagline "Beautiful spaces speak". "They speak to us; they speak about us; they tell the story of the people who live in those spaces," he says. "Really, they are expressions of us."

This reflects the brand's journey, moving from a focus on its manufacturing capabilities to that of inspiring and enabling beautiful spaces. "Beautiful living spaces are where people make lasting memories," says Wells. "That's our full purpose at PG Bison – to help people to create those spaces."

"The designs and colours we choose for ourselves in our living spaces are driven by macro trends. The selection of our new designs for the range does not happen in isolation but is informed by these trends. To understand the macro trends that influence the range, we use themes or chapters to tell each story," says Wells.

The first trend, 'chasing adrenaline' speaks to the convergence of the physical and digital world. Always online and connected, lines have blurred between living and working spaces, especially since COVID-19, influencing the way people think about and design spaces.

The second trend, 'a love of change' revolves around hybridization. "It's about the sharing of everything – shared spaces, repurposing of spaces, hybrid working models and multi-use furniture," says Wells.

'In search of balance' is the third Expressions trend, referencing a global embracing of wellness, healthy living, balance, mindfulness and organic products that acts as a counterpoint to the "always connected" lifestyle.

The final trend under Expressions is 'handle with care', which relates to sustainability and the global movement towards being more environmentally friendly and more conscious consumerism. This also taps into the idea of "nesting", spending more time at home and nurturing one's own spaces.



For more information, visit www.pgbison.co.za/gallery-4-roadshow

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VOICE YOUR VIEWS

Do you have any thoughts or comments on DIY issues?



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opinion

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**Theunis
van Aarde**

Makita MT M1901B Planer



Prizes are not exchangeable

Reasoning with resin

WINNER

Can you perhaps give me some
information on pouring resin for
countertops or tables?

My biggest concern is the types of
resin, topcoat resin, staining, finishes
(polishing), scratch

Theunis van Aarde, by email

Ed replies: Resin is technically short
for epoxy resin which is a two-
component system consisting of resin
and hardener. By mixing the two
components, a chemical reaction takes
place so that the liquid resin gradually
hardens to a solid plastic.

Once the two components (or parts)
combine the end result is a super
durable high-gloss, clear surface. It has
been used for many, many years for
things such as floors, tables, industrial
purposes, boat building... and art.

Mixing resin can be a little intimidating
but once you get the process down
it's the same steps over and over: mix
resin, pour, pop bubbles, layer resin,
let cure...

Regardless of the number of layers you
put in your resin piece the basics are
the same which makes it pretty easy to
learn.

Once you get started working with
resin you'll find that there are endless
possibilities... you'll want multiple
moulds, plenty of fun things to put
inside your projects, pigments and inks
to add colour. But those are definitely
a bit more conditional to specifically
what project you're working on. So,
let's stick to the basics.

To make a clear resin project with no
bells and whistles here are the things
you'll need.

- Clear cast resin
- Respirator/mask
- Gloves
- Small mixing cups
- Silicone measuring cup/larger mixing cups
- Popsicle sticks
- Toothpicks
- Plastic spoons

When it comes to resin there are
two options: clear or not clear. But
that brings up the question of how to
colour resin in a way that works. There
are plenty of options but we've heard
that alcohol ink or acrylic paint can be
the two easiest solutions. Alcohol ink
is a more transparent kind of colour
but acrylic craft paint doesn't bond
perfectly to every kind of resin so
you'll have to experiment to see what
works. Of course, another option is
resin pigment; these powders give you
a truly opaque look.

If you have a look online, there are
plenty of resources such as this one
which details the steps to make a
resin and wood table: <https://www.diyhappy.com/how-to-make-a-resin-and-wood-coffee-table/>

I am, however, in touch with our
contributors to feature a step-by-step
project.



Bath vanity project

I recently tackled a renovation of a bathroom vanity. All the drawer fronts and doors were completely replaced. The outside edge of each door and drawer front has a bead detail of moulding applied proud of the surfaces. The inside edges of the rails and stiles (closest to the panel) have a routed bead detail. Stiles and rails are jack mitred together with loose mortise and tenons. The door panels are floating. Each panel has bookmatched crotch grain (front and back) veneered to plywood. The pull out drawers behind the doors are melamine with custom walnut edges with full extension slides.

I made a rookie mistake when planing down the drawer fronts. If you look at the pics, some of the drawers show a perfectly bookmatched grain pattern before planing. I didn't plane each bookmatch equally, resulting in a less than desirable bookmatch. Not a big deal, but I am my harshest critic!

Next time I will just remove the face frames and build new ones. This process was very labour intensive. I removed the varnish on the existing face frames with a card scraper, block plane and sandpaper, and glued and clamped each veneered piece separately. The gluing and clamping took forever.

The 'new' face frames, drawer fronts, door rails/stiles received five coats of

satin applied stain with a rag and wet sanded flat before the last coat. The door panels received five coats of gloss stain applied with a rag and wet sanded before the final coat.

Tom Hoffman, by email

Ed replies: Great job Tom, and thank you for sharing your experiences with us – I am sure our readers will appreciate the information.



To paint or not to paint

I've read recently (not too sure if it was in *The Home Handyman* or online) where people were debating about whether it is a good idea to paint wood. I restored a toy chest that belonged to my wife when she was little. It was given to her used, and she has years of fond memories about it. The original builder had

used rough-cut pine boards of varying widths to piece together the chest for his son. It had a couple of layers of mint green paint (probably lead-based) on it already. Structurally, it was not great, both in design and heavy play. I have corrected the structural integrity without sacrificing the original look, repainted it after (safely) stripping

away the old paint and lined it with cedar. It now holds a special spot in our home, surrounded by natural wood projects. It even really stands out in the midst of them. Not my style, but then it isn't really about me in this case. Sorry, I did try get a good photograph of it, but no luck.

Kyle R. Young, Muizenberg



Extension cord safety tips

Extension cords are a handy addition to any household, office or commercial space but proper care and precautions need to be taken to ensure their safety as they can be a safety hazard. An overheated extension cord can result in a fire. If placed haphazardly in a high-traffic area, people can trip. And if used near water, there's the risk of electrical shock.

When shopping for an extension cord:

- For outdoor use, only purchase cords made for outdoor projects.
- If your cord comes with instructions on the packaging, always read and follow them, especially regarding how much power it requires.
- Choose a cord that can handle the wattage of the devices you'll use.
- Think about the length you'll need and keep in mind that longer cords can't handle as much current as shorter cords of the same gauge.

When using an extension cord:

- Try to avoid plugging multiple appliances into one cord.
- Don't use indoor extension cords outdoors.

- Never plug multiple cords together.
- Don't run extension cords under furniture and rugs, as this prevents any heat generated from escaping, producing a fire hazard.
- It is not advisable to tape, staple or nail extension cords to the floor or walls.
- Don't bend an extension cord when in use.
- If the extension cord feels hot to the touch, stop using it.

To care for an extension cord:

- Always store indoors.
- Unplug when not in use.
- Dispose of damaged cords.
- To disconnect from the plug point, pull the plug and not the cord.

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



Will solar power increase the value of your home?

Loadshedding is now firmly in effect, many South Africans are without power for up to 12 hours each day, and the threat of Stage 8 blackouts loom large on the horizon. It's no wonder then that many households are turning to 'off-grid' power sources to keep the lights on and return to some semblance of normality.

"Solar power has emerged as the most popular alternative energy option due to its relatively quick installation, soundless efficiency (unlike a noisy generator), its environmental benefits and the prospect of lower future energy bills," explains Grant Smee, property entrepreneur and Managing Director of the Only Realty Property Group. "However, the upfront costs associated with solar installation may be prohibitive for the average middle-class homeowner, with options ranging between R59 000 to R289 000 according to pricing from solar provider Solana Energy. Luckily, the increased popularity of solar power has given rise to a variety of innovative financing options to make solar more accessible and more affordable."

These include:

- 1) **Outright purchase:** Buying the system outright using one's own funds.
- 2) **Financing the system through a home loan provider:** "Some of the major banks now offer the ability to 'add the cost of solar installation to one's home loan.'"
- 3) **Rent-to-own:** "Various solar financing companies have popped up in recent years, offering consumers the option to

pay a monthly fee for solar, with the understanding that you will own the equipment after a certain period of time - usually five to seven years."

- 4) **A subscription service:** "Solar providers such as GoSolr offer a fixed-monthly subscription to solar power using their equipment. Prices generally start at R1 580 per month."

Smee also cites the importance of justifying the significant initial financial investment by considering the value it will add to your home in the long-term.

According to South African home loan experts, ooba Home Loans, solar panels can increase the value of a property by around 3 to 4%. "Taking into account the current electricity crisis in South Africa and with no long-term solution in sight, I believe that this estimate is actually rather conservative," says Smee.

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



How to maximise your power tool's battery life

For the average South African, battery-powered equipment is like alcohol-free beer; weak and expensive. But according to Johan Kruger, National Sales Manager for Husqvarna South Africa, nothing could be further from the truth. "Battery power is transforming the way people work and tools that employs this technology such as chainsaws, brush cutters, hedge trimmers and power blowers are fast becoming the equipment of choice not only for homeowners but groundsman, forestry workers, farmers and landscapers."

"It's the same with any new technology," says Kruger, "first we baulk at it, then we're weary of it, finally – we wonder how we ever lived without it! The reality is that the convenience and cost efficiencies of battery-powered equipment have transcended the gardeners' electrical products into the everyday working life of professionals using outdoor power tools, and early adopters are already reaping the benefits and singing its praises."

Kruger explains that without the correct battery care however, the cost efficiencies users have come to enjoy will be lost, making it essential that special care is employed in order to ensure a battery's longevity.

He offers the following tips to maximise your power tools' battery life:

- Avoid keeping your batteries charging for long periods. Remove the batteries from the charger soon after reaching 100% as they will hold their charge.
- Use a battery bag or battery box to keep your batteries safe when storing or transporting them.
- Avoid leaving batteries in tools when storing them away during the winter months or when you're not planning to use them for several weeks.
- For maximum service life, you should store your batteries at 50% charged. If the level is lower, charge it to 50% before storage.
- Batteries should be stored at temperatures of 5-25°C.

For more information, visit www.husqvarna.com



A winning partnership at Dakar Rally

Ingco has joined forces with the Toyota Gazoo Racing team to ensure they always have access to reliable tools and equipment. In an incredible start to the year, the team recently won the Dakar Rally for the second time – a proud moment for the company.

Toyota Gazoo, the racing arm of Toyota, boasts a formidable team that's been very successful, including winning the Dakar Rally two years in a row and the 2022 World Rally Raid. With the slogan 'Pushing the Limits for Better', the team consists of the reigning masters, Nasser Al-Attiyah and co-driver Mathieu Baumel; South African Rally-Raid champion Giniel de Villiers and co-driver Dennis Murphy and the team of Henk Lategan and Brett Cummings.

Now, Ingco will be at the side of this incredible team to provide reliable, trusted tools and equipment to ensure they can operate safely and efficiently – and continue their winning ways.

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

The advertisement features a black and white image of a Toyota Gazoo Racing car on the left, with 'victron energy' written on its side. On the right, a vertical strip displays five Victron Energy products: an Orion TR Smart DC-DC charger, a SmartSolar MPPT 100/15, an IP-65 Charger, a Phoenix inverter 12V 500VA VE.Direct, and another SmartSolar MPPT 100/15. Below these images, the text reads 'THE ULTIMATE OFF-ROAD SOLUTION'. Further down, detailed descriptions are provided for each product, highlighting their features and compatibility with the VictronConnect App via Bluetooth. At the bottom, the Victron Energy logo and social media handles for @victronenergysa and Victron Energy Southern Africa are listed, along with the website www.victronenergy.com.

Orion TR Smart DC-DC charger

SmartSolar MPPT 100/15

IP-65 Charger

Phoenix inverter 12V 500VA VE.Direct

SmartSolar MPPT 100/15

Bluetooth SMART

THE ULTIMATE OFF-ROAD SOLUTION

Orion TR Smart DC to DC charger this ingenious device, allows for charging of one battery type to another in a safe and simple manner. Battery types can also be programed using the VictronConnect App through the integrating Bluetooth in the Orion TR Smart DC to DC charger.

The Blue Smart IP65 Charger can be used on devices in your workshop and on motor vehicles, such as (classic) cars; motorbikes; boats and camper vans.

SmartSolar MPPT 100/15 - Maximum power point tracking efficiency up to 99% also integrated with the Bluetooth functionality with the VictronConnect Bluetooth App.

SmartSolar maximises this energy harvest, driving it intelligently to achieve full charge in the shortest possible time.

Phoenix inverter allow you to power domestic equipment - requiring 230V - using 'leisure' or 'automotive' batteries rated at 12V, 24V or 48V DC.

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Upgrade your bathroom
this weekend.

TRANSFORMING YOUR BATHROOM NEEDN'T COST THE EARTH

Whether you don't want to invest in an entire bathroom remodel, are currently renting or just have a spare weekend ready for refreshing your home,

a makeover for your powder room can be pocket-friendly and super simple. Here are five affordable ways to give your bathroom a fresh, new look.

Deep clean

Since you're moving everything out of your bathroom, now is the perfect time to give it a nice deep clean. Get rid of all your old beauty products and things you don't want or need. Then go in and deep clean with your favourite bathroom cleaner and magic erasers. Sometimes, just a deep clean can give you the same feeling as a full-on bathroom renovation.

Don't replace – reseal!

Replacing sealant is a small solution that'll make your bathroom feel brand new. Plus, it's cheap to do. All you'll need is a cartridge gun with new sealant and a Stanley knife. Use a Stanley knife to remove the old sealant,

slicing through the top and bottom edges at one end before gently pulling it from the wall.

Fill your bath so that the gap between it and the tile are at their widest and use the cartridge gun in one consistent motion to reseal. Leave to dry overnight.



If you want to get really creative, try using a coloured silicone other than white or grey.

Hang bathroom wallpaper

Breathe new life into a powder room with bold floral wallpaper. This is a great way to create an upscale look at an affordable price tag. Opt for a temporary peel-and-stick wallpaper

to save even more on your bathroom update. Finish the glamorous look with gold fixtures, hardware, and accessories.

Tile a bathroom backsplash

A statement wall in a small bathroom is easy to create with a dynamic tile installation. For even more impact, add playful patterned tile to the floor. For a more budget-friendly option, use inexpensive subway tiles. You can run them in a traditional running bond pattern or create your herringbone pattern.

Accessorise with colour

There's no need to lift a hammer to get a new look. Refresh any bath in a day

by updating soft surfaces. New window treatments, rugs, towels, and shower curtains will brighten a neutral bath. If you're feeling crafty, back a storage unit with colourful adhesive paper and wrap storage bins with wide ribbons for an added dose of colour.

Hang a bathroom mirror

Add some glam to your powder room with affordable new features, such as a dramatic round mirror and bold patterned wallpaper. There's no faster way to update a small space than with a DIY weekend wallpaper project. Finish the look with a gilded mirror, which adds a bit of sparkle to the utilitarian space.

Change out hardware

Changing out hardware is a quick, easy, and inexpensive fix, and it can really go a long way to change up the look and feel of the piece. The vanity in our townhouse master bathroom actually went through a couple transformations before I got it right, but we got there eventually!

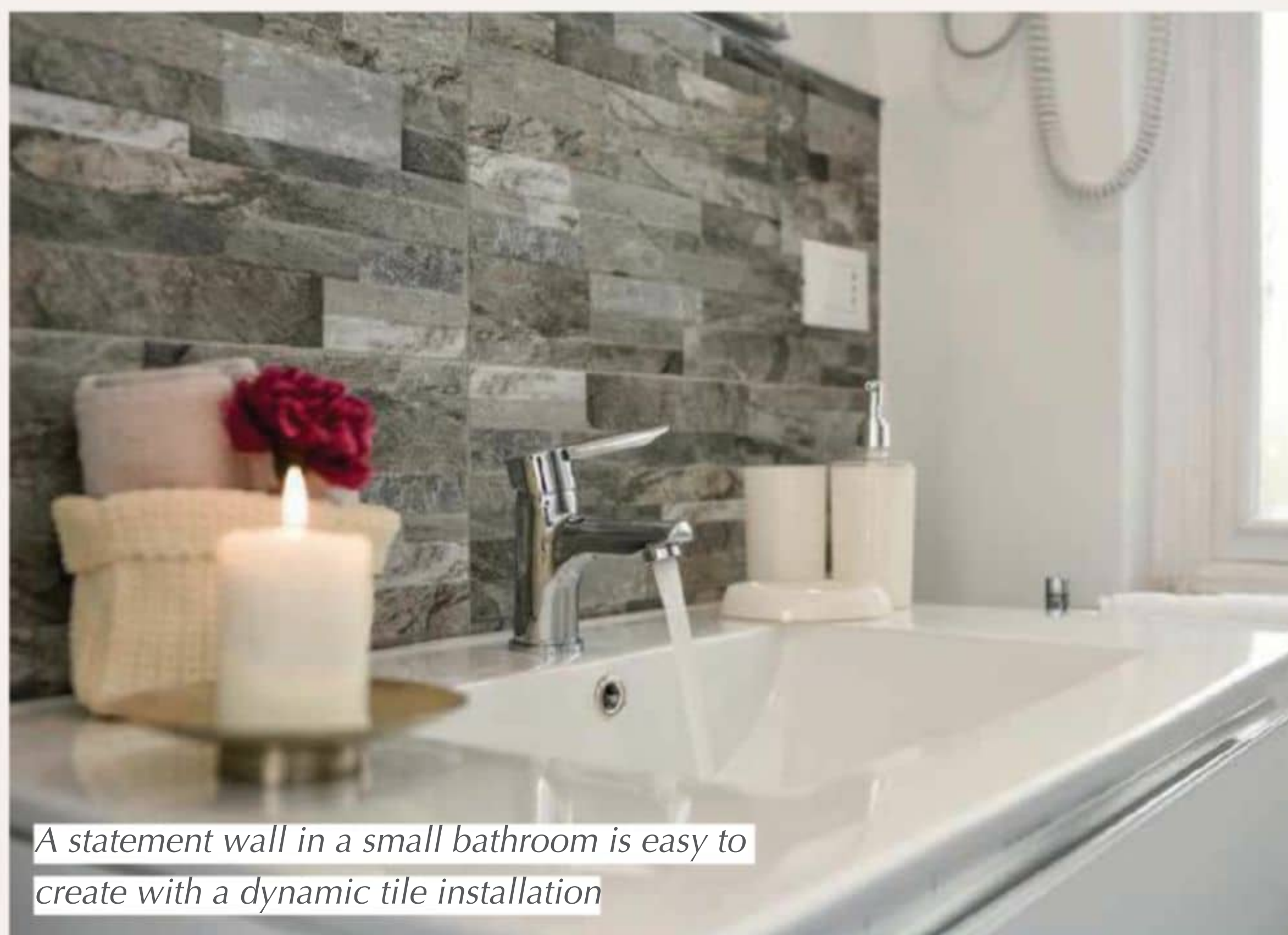
DIY vanity update

When your existing vanity cabinet offers good storage, nice lines, and sturdy construction, renew the look with a fresh coat of paint or stain. For a previously stained cabinet, sand off the old finish and apply updated stain colour. You should also sand the gloss off a previously painted cabinet, smooth out any damage with filler, and then apply a coat of primer. Finally, finish with a top coat of colour.

Replace light fixtures

Spice up your bathroom by changing out a dated light fixture for something new and dramatic. Glass accents give this bathroom light fixture alluring sparkle. For a more romantic look, consider hanging a chandelier in the bathroom.

If new light fixtures aren't in the budget, consider making some tweaks to the current ones! In our townhouse half bath, we spent a few dollars on



A statement wall in a small bathroom is easy to create with a dynamic tile installation

new globes for the light fixture and got an updated look without having to spend a lot of money or rewire anything.

Focus on one wall

Instead of trying to renovate the entire space, focus on improving one wall in such a way that it steals focus from the rest of the room. You can do this simply and cheaply with wallpaper. This is a great solution for a quick revamp if you don't want to paint the whole room or don't have a lot of money to make big changes.

You can cover one small wall for less than a few hundred rand. For a striking bathroom wallpaper idea – think dramatic florals – this will create a focus point for the eye, taking attention away from the rest of the space.



You can get special bathroom wallpaper – designed to be stickier and stronger – perfect if you're concerned about damp and steam.

Paint bathroom cabinets

Paint or refinish cabinet doors for a quick and easy bathroom update.



Quick bathroom update: replace your taps



A new shower curtain can quickly transform a bathroom

Other inexpensive ways to update a bathroom include installing a new toilet seat or adding a few accessories such as towel bars and a toilet paper holder. Switch out your shower controls and other hardware to create a unified suite look in just a few hours.

Bring the outdoors in

Bathroom plant ideas are an easy way to make a bathroom feel instantly fresher. Plants add a rustic, natural quality to any space, and can go a long way to softening the harsh light and angles found in many bathrooms.

You can get plenty of small plants for under a few hundred rand. The more plants, the better. Plants that thrive in humid, damp conditions, like bamboo and aloe vera, are a good place to start. Air plants – which take moisture from the air – are a no-brainer in bathrooms too.



If your bathroom has low levels of light, you'll need to find plants which do well in the dark. Think evergreens or dracaena.

Swap out shower fixtures

Taking a bath and maintaining the tub is more convenient with a handheld sprayer. It makes rinsing hair and cleaning the tub much more manageable. Swap out your showerhead for an updated model – you'll have a budget-friendly bathroom update in minutes.

Incorporate convenient storage

A medicine cabinet can fit neatly above the bathroom sink, adding storage and style right where you need it. Add a mirror to the back of the cabinet to brighten the interior and make belongings easier to spot. Use vintage glassware to corral items like cotton swabs and makeup brushes.

Hang a new shower curtain

Replacing a shower curtain is a winning budget bathroom idea. The shower curtain is a dominant feature in any bathroom, so it's surprising how many people treat it as an afterthought. Getting rid of mouldy, old or tatty shower curtains and replacing them with something fresh and new is a quick, cheap way to spruce your space for an instant bathroom revamp.

New shower curtains can be found online, and a bold shower curtain is a great way to make a statement.

Alternatively, remove your dated shower doors and install a fresh new curtain instead. The space will open up, and you'll no longer spend time scrubbing soap scum off of plastic or glass.



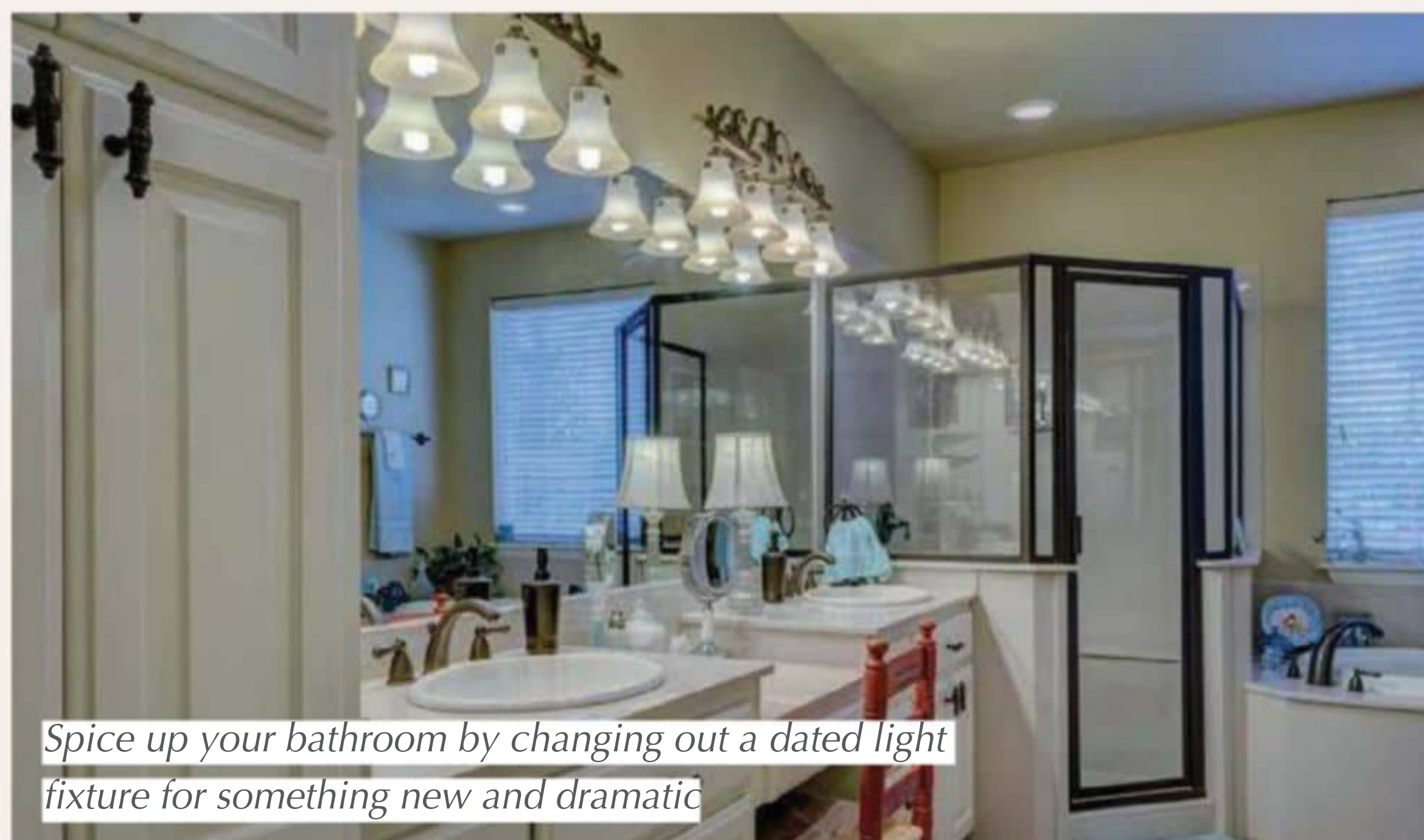
Shower curtains are so cheap that they allow designers to go wild with little to no consequences. Pick something out there – if you don't like it you can easily change it in future.

Upgrade to reusable containers

Reusable soap, shampoo and conditioner pumps elevate the look and feel of your bathroom. Instead of leaving products like cotton swabs and hygiene items in their store-bought packaging, put them in reusable containers. This way you can recycle plastic and cardboard packaging at one time.

Try a rain-style showerhead

Pamper yourself and give your shower a luxury spa feel by switching out the old showerhead for a large rain-style showerhead. Many affordable models are readily available at home centres and thread easily onto existing plumbing. Give your existing showerhead a thorough cleaning for a quick bathroom update that costs next to nothing.



Spice up your bathroom by changing out a dated light fixture for something new and dramatic

Paint your ceiling

Set on keeping your tiles and wall light? You can still introduce a bold colour to your bathroom by painting your ceiling. This splash of colour on the top can still make a real statement, without overwhelming the room. Common colours to add to bathrooms, be it the wall or the ceiling, include shades of blue, both light and dark, as well as greys.

Accessorise

If it's hard to make any major changes with your limited budget, then a quick and inexpensive solution is often to accessorise. Raid supermarkets for small, cheap additions you can pad out your space with.

So, think soap dispensers, cute ornamental features, air fresheners,

mini-makeup mirrors, toothbrush holders, a selection of the best candles and brushes. This is a great way to add quirky personality to your bathroom without spending a lot of money.



Raid the homeware section of big supermarket chains for cheap bathroom accessories.

Install a green low-flow toilet

It might be the most expensive project on this list thanks to the hardware required (that is, a whole new toilet), but this one will definitely pay off. If you bought your home many years ago, local regulations might require the toilets in the home to be low-flow before you can close a sale. So do the repair now and enjoy the savings on your water bill while you're still living there.



Bathroom update vs. remodel

A bathroom update is a quick and affordable set of DIY projects that enhance your bathroom's existing features. An update includes projects like painting, changing fixtures and hardware, and hanging a new shower curtain. Bathroom updates are perfect for homeowners who want to keep the existing layout and functionality of their bathroom.

A bathroom remodel might have a larger budget and longer timeline. The scope may include projects that take several days or weeks to complete. Professionals are often required to safely finish remodelling projects according to local building codes. This may include:

- Refinishing or replacing the shower or bath
- Adding a standalone bathtub
- Installing seamless glass panelling
- Adding an extra sink or showerhead
- Installing new ventilation systems
- Relocating plumbing or electrical features
- Tiling the shower, walls and backsplash



Paint or refinish cabinet doors for a quick and easy bathroom update

Learn how to make a hexagon side table with a drawer.

NOT YOUR NORMAL SIDE TABLE



Supplies

- Maple: for the main box
- Brown oak: for the legs and drawer front
- Plywood: for parts of the drawer
- Oak: for the drawer
- Drawer runners

I had an idea of making a hexagon side table, which would double up as a drawer to use in my front room. As far as ideas go this one wasn't very much thought through before starting, so the design of the legs and drawer front changed throughout the project. All the thoughts I did initially have for the legs and drawer elements weren't in the final design and I'm sure I wouldn't have come up with some of the final design if I had everything planned out from the start. So, I do think sometimes it's good to just build on a whim and see where it takes you!

Step-by-step guide

Step 1: The design

As I have said I hadn't planned this table very much but I have drawn it in CAD as I used this for working out some dimensions. I also attempted to draw it in Fusion 360 as well but my 3D modelling skills aren't as good as they could be.

Step 2: Main hexagon box

I started by planing and thicknessing the maple board to around 22mm thick and cut the board in to six lengths of 450mm. If you don't have all the necessary equipment to do this, order your wood to be cut to the necessary dimensions.

The internal angles of a hexagon are 120 degrees so set my table saw blade to 60 degrees ($120/2$) with a digital angle gauge and cut the long edges of

each board. As a hexagon is inherently unstable I decided to use three biscuits on each joint to add a bit more stability. I marked the position of each biscuit and cut the slot with a biscuit joiner.

At this point, after dry fitting the box and sanding the internal faces, I started gluing up, but once I had it all clamped together I noticed that I hadn't cut the slot at the back for the rear floating panel. Some of the joints weren't as tight as I wanted and the box seemed a lot bigger than I thought it was going to be, so took it back apart.

I then recut my edges, re-biscuited and then cut a slot on the rear of each panel. I then drew round the internal hexagon when it was dry fitted, on to a piece of hardboard, and cut it 5mm wider so it would fit in to the rear slots.

I then glued up each joint using PU glue as this would expand in to any gaps that might be present. I then clamped it up using cargo straps and a band clamp. After a few hours drying I unclamped it and was pleasantly surprised at how strong the box felt.

Step 3: Legs

I then went on to thinking about the type of legs I was going to make. I had had a few ideas about what I wanted to do but having got the box in front of me I had a different idea so sketched it on a piece of ply and decided to go with that design.

I started by cutting a few pieces of 20mm x 30mm oak and made the cut to the top of the legs by marking the angle from the sketch on to the leg. By turning my mitre saw I determined the angle as close enough to 50 degrees to make it exactly 50 degrees and cut the top of each four legs. I then set the mitre saw to 10 degrees and cut the other end of the legs so they would sit flat on the floor.

The horizontal pieces were cut to an angle of 60 degrees and then I made a lap joint on the mitre saw to attach the horizontal to the vertical(ish) leg pieces.

Once they were dry I made a cross piece which I fixed to the legs with pocket holes (to the top so they wouldn't be seen in the final box).

Step 4: Drawer

I had a board of 15mm thick oak from a previous project which seemed like a good size for a drawer. I started by determining the width of the boards by drawing the as-built box with drawer runners and drawer on CAD and measured the required width of the drawer pieces.

I cut three boards to size with the 60 degree angles to the edges and then came up with a plan to fix it all together, as I wouldn't be able to use clamps as the main box. Before fixing I

sanded the internal faces of the drawer up to 180 grit as this would be fairly difficult to sand later.

I started by making the ends of the drawers out of plywood (to fit internally). I screwed a board to my cross cut sled to 60 degrees so I could easily make the cuts and made a couple of half hexagons. I started making them slightly oversized and kept testing the fit and adjusting until they were just the right size. I also made the top slightly lower than the rest of the drawer so I could add a strip of oak above the plywood edge.

I then added tape to the outside edges in lieu of the clamps, glued up the edges and secured the drawer sides to the rear plywood with screws and just glue to the front sides. This would ensure that the screws wouldn't be seen in the final piece.

Step 5: Drawer front

I started by drawing a hexagon on a piece of brown oak by using the compass method. This work well and is very easy as the radius of a circle is the same distance between corners of the hexagon. Start off by drawing a circle, keeping the same radius move the compass point anywhere on the circle and draw another circle. Where the two circles intersect these are the edges of the hexagon. The remaining edges are determined by finding the other intersection points around the first circle. I then cut out the hexagon on the crosscut sled.

To add a little more interest to the front I made a pattern with a V router bit and cut a bevel to the outside of the hexagon.

Step 6: Add drawer front and fit drawer and legs

Next, I fixed the drawer runners to the internal edges of the box using an offcut, with a 60 degree cut to one edge, as a spacer clamping at the front to stop any movement during screwing.

Fitting the drawer was simpler than expected as it just dropped down on to the runners in the right place, so I just needed to screw them in to place. I then got the drawer hexagon in to place using wooden spacers (taped in place) around the edges and used double sided tape on the drawer front to temporarily hold it in to place before screwing it into its final place.

I then got the legs and screwed them to the underside of the drawer.

Step 7: Opening system

My total non-planning of this side table now came to a head as I couldn't think of a good solution for a handle. After a night of thinking and looking on the internet I did have a couple of ideas. The one I was going to go with was a triangular handle to the top of the drawer front, so went to make it.

Having got to the table I cut a rough triangular piece and knew it wasn't right and I couldn't think of anything else that would work on the front that I'd be happy with.

I then I came up with my final solution - a cut out on the rear of the table with a triangular piece fixed to the rear of the drawer which, when pushed, would move the drawer out enough to be able to pull it out the rest of the way.

The drawer runners are ones that lock into the closed position so the drawer can only be opened by using this method so it's almost like a puzzle drawer!

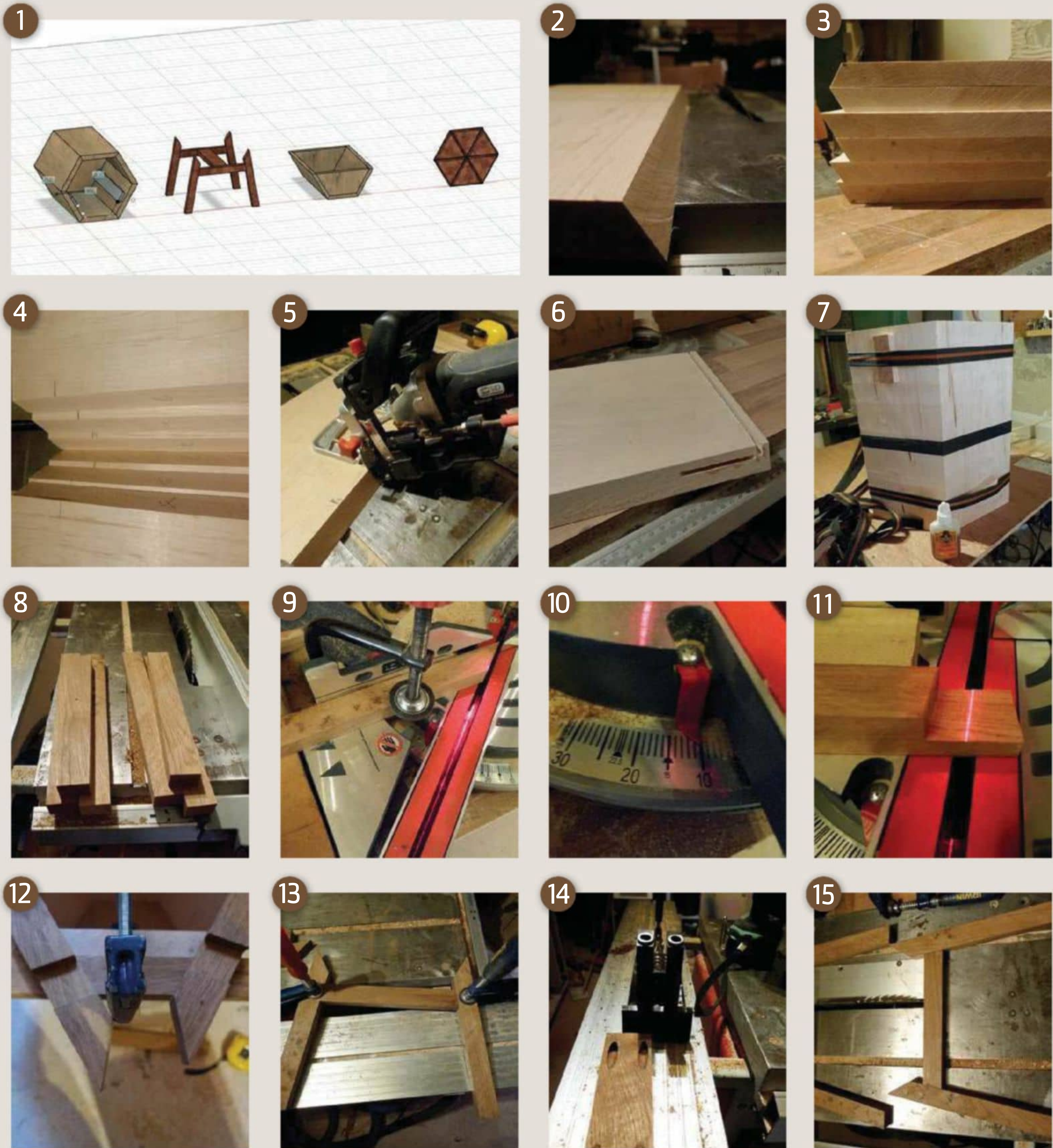
I started by cutting a triangle in to the rear panel for the button. To add a bit more interest to the rest of the back I cut some thin triangles to make up a hexagon shape with gaps between them, mirroring the pattern to the front. I also sprayed the back black before gluing the triangles with a glue gun to add a bit of contrast. Finally, I cut three lengths from a triangle to go around the push button to finish the look.

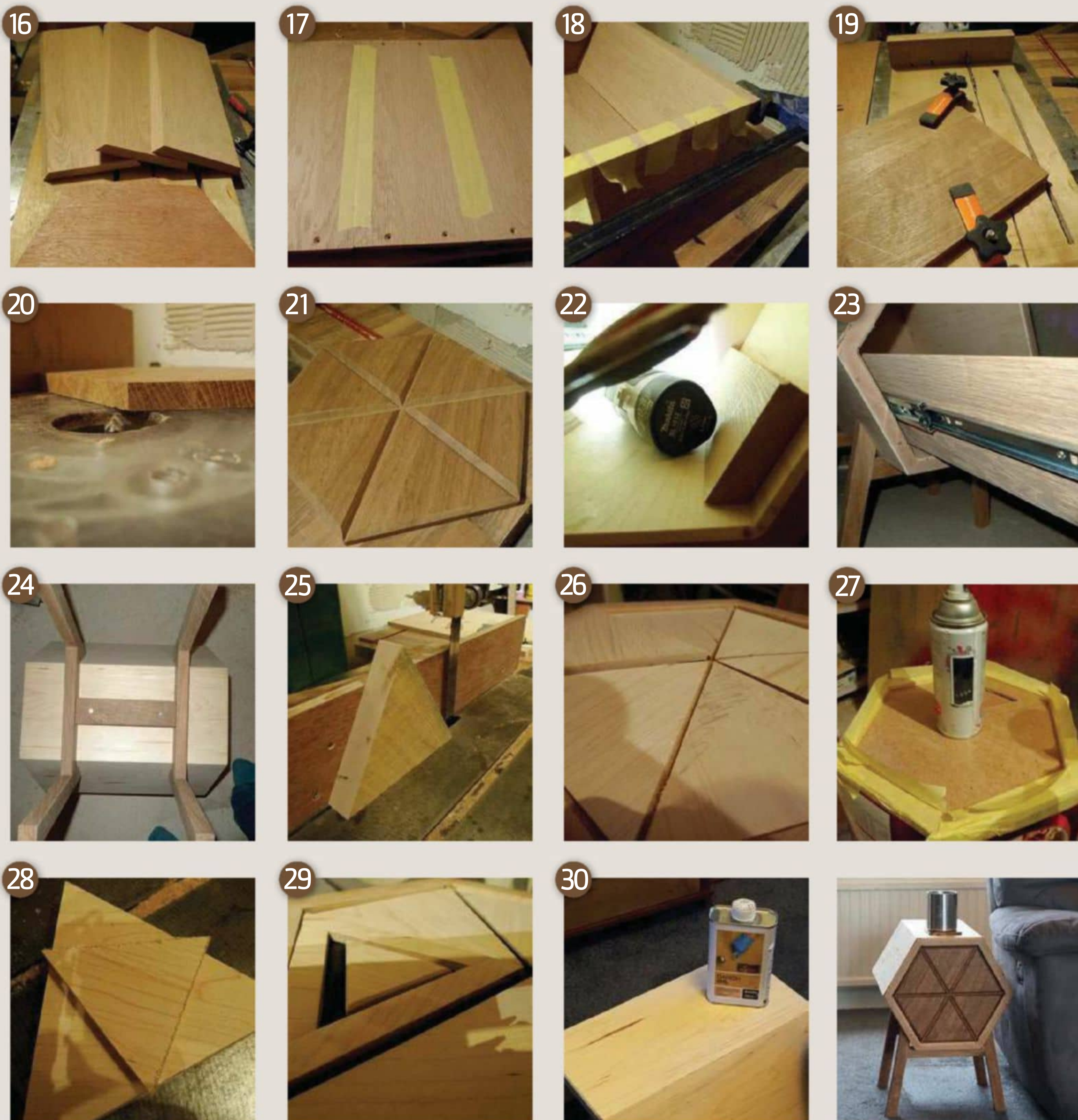
Step 8: Oiling and finishing

I finished off by sanding all the parts not already sanded up to 180 grit, fit everything together and applied three coats of Danish oil to all surfaces.

I am very pleased with the final table and think it looks like a little wooden pet which will go perfectly to the side of my sofa for drinks etc.

The main thing I would do differently if I were to make one again would be to make the rear panel out of hardwood fixed into the rear of the table. I would keep the opening mechanism the same, so it would involve cutting a triangle shape into the rear panel but I'm sure I could have used a router and a template.



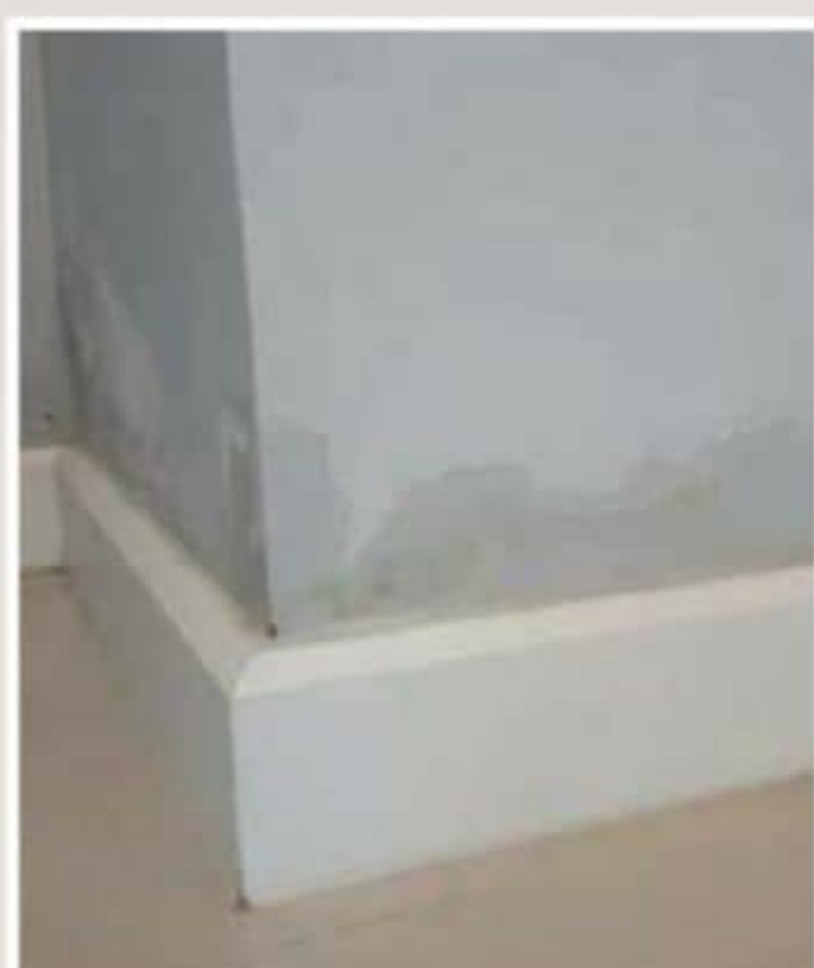


1. The original design 2. The internal angles of a hexagon are 120 degrees so set my table saw blade to 60 degrees 3. All boards cut 4. Then I dry fitted and sanded the internal faces 5. I marked the position of each biscuit and cut the slot with a biscuit jointer 6. As a hexagon is inherently unstable I decided to use three biscuits on each joint 7. I then glued up each joint using PU glue as this would expand in to any gaps 8. For the legs I started by cutting a few pieces of 20mm x 30mm oak 9. These would be for the legs 10. By turning my mitre saw I determined the angle as close enough to 50 degrees 11. I then set the mitre saw to 10 degrees and cut the other end of the legs so they would sit flat on the floor. 12. The horizontal pieces were cut to an angle of 60 degrees and then I made a lap joint on the mitre saw 13. The lap joint was to attach the horizontal to the legs 14. Once they were dry I made a cross piece which I fixed to the legs 15. I used pocket holes (to the top so they wouldn't be seen in the final box) 16. Cut three boards to size with the 60 degree angles to the edges for the drawer 17. I came up with a plan to fix it all together, as I wouldn't be able to use clamps as the main box 18. I added tape to the outside, glued up the edges and secured the drawer sides to the rear plywood 19. I started by drawing a hexagon on a piece of brown oak by using the compass method 20. To add a little more interest to the front I made a pattern with a V router bit 21. Cut a bevel to the outside of the hexagon. 22. Next I fixed the drawer runners to the internal edges of the box using an offcut 23. Install the drawer runners 24. I then got the legs and screwed them to the underside of the drawer 25. Cut a rough triangular piece 26. To add a bit more interest to the rest of the back I cut some thin triangles to make up a hexagon shape 27. I sprayed the back black before gluing the triangles with a glue gun to add a bit of contrast 28. Finally I cut three lengths from a triangle to go around the push button to finish the look. 29. Almost complete 30. Apply three coats of Danish oil to all surfaces

You've noticed the unsightly bubbling, flaking and peeling of your house walls. You've painted, repainted and painted some more - but it just keeps on coming back! What could the problem be? You, happy DIYer, are a victim of rising damp.

DIY SOLUTION: RISING DAMP

Some tell-tale visual signs of rising damp



The good news is that it's quite a common problem for homeowners and can be fixed with a bit of preparation and some elbow-grease.



What is rising damp, and what causes it?

Rising damp is a form of damp that affects the walls of a building when moisture from the ground (or a leaky pipe) travels up through the wall. In a nutshell, your home's walls basically suck up water like a thirsty builder on a summer's day.

What causes it?

The main cause of rising damp is a faulty Damp Proof Course (DPC), which allows moisture to penetrate your home's walls.

Other causes include:

- **Inadequate sub-floor ventilation:** This causes a build-up of humidity and means that only the minimal evaporation from the soil and base walls occurs.
- **Sub-floor obstructions:** Any debris in the sub-floor that obstructs the flow of ventilation and may help contribute to dampness by bridging the DPC.

- **Poor drainage and/or damaged guttering and pipes:** Water may be directed underneath your house if you have poor drainage.

What are the signs of rising damp?

Commonly the first thing you'd find is a patch of wall with a band of dampness starting from the floor upwards – this

often causes the paint to flake or the wallpaper to peel. Other unsightly and smelly signs include:

- Damp smells and a musty odour
- A reduced temperature at lower portions of your wall
- Rotting of embedded floor timbers
- Crumbling / blistered plaster due to salt crystallisation

Getting down to fixing it

Each case of rising damp varies from another, it's best to visit your nearest hardware store with photos of your problem so our consultants can help you with the perfect solution. To give you an idea how to fix the simplest case – bubbling paint – without needing to chisel any plaster away.

Luckily with just a few items, all available at your nearest hardware store, you will be able to treat rising damp yourself.

Shopping list:

- Scraper
- 1L Plaster primer
- Paint brush
- 1L paint matched to your wall's colour
- 1L Damp Seal

Let's fix it!

Step 1: Start by scraping the peeling / bubbling paint off using your scraper. Make sure to remove every piece of paint from the affected area.

Step 2: Apply a generous coat of Damp Seal and leave to dry for 24 hours. You can apply a second coat if required, again leave to dry.

Step 3: Grab your Plaster Primer and paint over the treated area – make sure all cracks and joints are well sealed.

Step 4: Repaint your wall with your colour-matched paint.

After all is primed and painted, this should be a very simple solve for your damp problem, however, we recommend you get professional advice and materials to help you if your Rising Damp problem is more severe.

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BUILDING TRUST



Reasons your home smells damp

There are many culprits that add to the issue of excess moisture that cause damage to our homes and our health. Below are some of the major culprits South Africans should be looking out for, especially this season.

Heavy rains, flooding and leaks

If your house has been affected by the heavy rains, or flooding, you could be dealing with damage to the roof and window frames. Structurally this is dangerous, and you'll need to get rid of, and prevent water getting in as soon as possible. Health wise, wet furniture causes mould, and mould spreads quickly to create spores which can enter the lungs, causing respiratory discomfort and sometimes more serious conditions, such as asthma.

Poor ventilation

Holiday homes have their own moisture issues such as slippery floor tiles and sticky surfaces from all the humidity – but when you combine that with poor ventilation, you are asking for mould, rust and that awful damp smell, which tends to worsen while your holiday home remains locked up in the off season. This is also true for our permanent homes during the winter season when we tend to forget to ventilate.

Indoor laundry

During the rainy season, or in holiday apartments, we're forced to dry our laundry indoors. With the rain, also comes the cold. We close our windows to retain heat, not realizing we're trapping moisture from multiple sources, including our laundry inside our homes to wreak havoc on our furniture and our health.

Small, dark spaces

Garages for example are a prime breeding ground for mould and rust as they typically don't get enough air or light. In coastal homes, boats, wetsuits and jet skis add to an already damp and humid environment and it's often really difficult to keep these spaces fresh and free from mould.

It's clear that even without the constant rain, moisture can and will penetrate your home.



Rising damp solutions

Rising damp is a common and very annoying problem for many homeowners in SA. Luckily though, it can be fixed with a little know-how, a bit of preparation and a lot of elbow grease.

Here are Buco's tips for spotting rising damp and the best ways to tackle rising damp repairs.

What is the cause of rising damp?

Rising damp happens when water seeps into the foundation of a brick home and rises up the walling. It can cause damage to both the walling and if left untreated can turn to mould, which is a serious health risk for people living in the home.

In good news though, rising damp solutions are easy to find. If you can spot the damp before it rises too far up the wall, then you're in luck.

How to spot rising damp

There are a few tell-tale signs that damp has set into your walls that make it easy to spot. The most common signs to look out for are:

- Mould or mildew on the walls – it can be white, grey, green, or any shade in between.
- A mouldy, musty smell coming from a room or wall

- Peeling or lifting plaster and paint
- In extensive cases, you may even notice constant condensation on windows

How to treat rising damp, DIY style?

If you're going to tackle the damp issues DIY-style, here are the first few steps to get the ball rolling in your rising damp treatment process.

Step 1: Start at the base of the wall first.

Step 2: Chip off all the plaster and paint from the base of the wall so that the brick and plaster is exposed.

Step 3: Using a hammer drill, drill small holes into the plaster about 7-8cm apart or 3-4 holes per brick.

Step 4: Using specialised caulk, squeeze rising damp caulk or DPC cream into the holes. Allow to dry overnight and do it again.

Step 5: Cover the holes with waterproof plaster or mortar. Keep the area exposed for a few weeks and even months to be able to check in on the damp and make sure it's not returning.

If you're not completely satisfied that you've managed to stop the damp, we advise calling in a building specialist to assess the situation and give you some advice and help.

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

Important tips on screwdriving, drilling, percussion, and hammer drilling.



A GUIDE TO DRILLING

Drills are one of the most commonly used tools in a workshop, so knowing how to safely operate one is necessary when it comes to prototyping and working on projects.

Step 1: Select a drill bit

Prior to selecting a drill bit, it is very important to determine the size and depth of the hole you are drilling. When doing work with screws, pilot holes are very important to prevent the wood from splitting. The diameter of the drill bit for the pilot hole should be the same as the diameter of your screw without the threads.

If you plan on tapping the hole that you are drilling, that is, threading it so that you can screw a bolt in, look up the proper pilot hole sizes for the bolt you plan on threading.

Screwdriver bits are useful when using a hand drill to drive screws; they do not drill holes of any kind. Twist drill bits are the most frequently used and are generally used for cutting smaller, more standard holes into the material, including wood and metal. When you are planning on drilling a large hole with a twist drill bit, make sure to start with a smaller drill bit and widen the hole in stages; starting with a large bit can create a sloppy hole, make the bit more easily

walk, and it might take very long to get through the material. This is important to consider once you start using drill bits greater than or equal to 6mm.

Forstner bits are capable of drilling large holes in wood and can go either partially or completely through the material. Forstner bits can also be used to drill angled holes into the material. Spade bits can more easily bore large holes into wood than a twist drill bit, and the holes can either go through the material partially or completely.

Hole saw bits are capable of drilling larger holes than spade bits, but cannot make partial cuts. Depending on what



Common bits: Hole saw, Forstner, spade bit, twist drill bits and screwdriver bits

kind of saw the bit is made of, hole saw bits can be used on wood or metal.

Step 2: Put the chosen bit into the drill

Loosen the chuck (the black circular section on the front of the drill) by twisting it counter clockwise to widen the diameter of the jaws that clamp onto the drill bit.

Insert the shank (smooth part) of the drill bit into the jaws, and re-tighten the chuck until the drill bit is secured. Make sure the bit is centred and that the jaws clamp onto the flat sides of the shank. Also, make sure that you don't secure the jaws around the flutes of the bit; that will increase the risk of breaking the bit you are using, especially for smaller bits.

To tighten the drill chuck more quickly and securely, you can carefully grab the chuck, being cautious to avoid holding the drill bit itself, and slowly run the drill in a clockwise direction. Similarly, grabbing the chuck and running the drill counter clockwise will loosen the chuck.

Step 3: Check all other settings

Make sure the drill has a charged battery in it. Using a battery that isn't charged enough can lead to slower, ineffective drilling.

Check the speed settings on the drill -- the big switch on the top. Setting 1 is low speed and high torque, which is ideal for uses such as driving screws into the material. Setting 2 is high speed and low torque, which is good for drilling holes. You will likely be using the faster setting for most tasks, and the slower setting if you are drilling large/deep holes in wood with a twist bit.

Make sure you're drilling in the right direction. If the drill bit is facing away from you, clockwise is for cutting/screwing into material, and counter clockwise is for removing the bit/unscrewing. If this is hard to visualize, run the drill slowly and pay attention to the direction the flutes of the bit are moving in, and what direction they need to be moving in to cut material. The reverse direction should only be used for unscrewing fasteners/screws. Change direction using the buttons on either side of the handle, just above the trigger.

Also pay attention to the dial around the chuck of the drill; the numbers indicate torque settings, and are useful when driving screws. If the number is set too low, the drill will stop spinning and make a clicking noise under a lower amount of pressure. If the torque setting is too high, the screw bit might slip against the top of the screw and you risk rounding off the screw head. When drilling, make sure

the dial is always turned to the drill bit symbol (or the highest number, if there is no symbol).

Step 4: Set up your material

Make sure the material you are drilling into is secured to a sturdy surface, either with clamps or a vice. Usually, clamping a scrap piece of wood under the material is a good idea because it allows for a cleaner edge where the drill exits.

Make sure you have enough clearance to avoid drilling into a table or a vice. Precisely mark the holes you will be drilling into the material using proper marking techniques.

Step 5: Drill the hole

Make sure the tip of the drill bit is touching the material before you start drilling, and that the drill bit is held at a reasonable angle. In most cases, when going straight through the material, this means that the drill bit will be perpendicular to the material.

Pull the trigger and start drilling slowly. Once the bit cuts slightly into the material, you can speed up and apply constant pressure until you have cut all the way into the material.

Once you are through, make sure the drill is spinning in the same direction and pull the bit out. This helps clean the hole that you just drilled.

Step 6: Examine the hole

If the hole you have drilled was for a fastener, make sure that fastener fits in the hole relatively easily (bolts, screws, rivets). If it doesn't, either go through the hole again with a slightly larger drill bit, or use the same drill bit and ream out the edges by twisting the drill slightly in a circular direction while drilling.

Step 7: Clean up

When all of your holes are drilled, make sure to remove the drill bit and put it back in its appropriate place. Put the drill away and the battery in a charging dock, and then vacuum any chips or dust on your work surface or the ground.

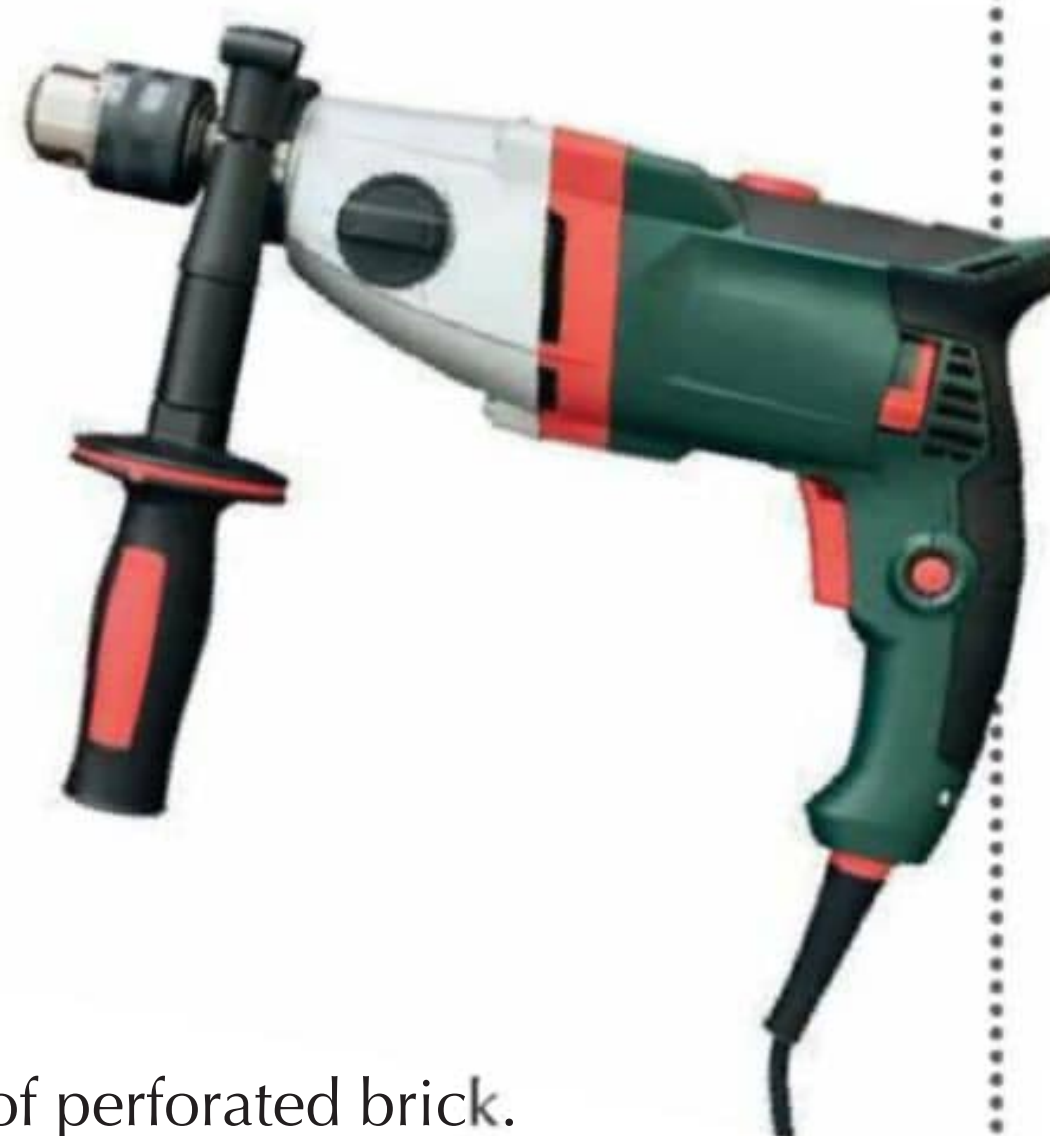
Use and function of the hammer drill

Hammer drills have a pneumatic hammer mechanism, which generates powerful impact energy that works in the axial direction. The resultant rotational movement guides the drilling dust backwards. A hammer drill works at a lower stroke rate, but with significantly greater impact energy than a percussion drill. This enables work to be completed more quickly. Hammer drilling in concrete requires less force than percussion drilling.



Use and function of a percussion drill

The hammer action works in the axial direction for percussion drills, too. Here, however, the function is generated by two tooth and notch discs, which come into contact with each other and “slide” on each other. This process transfers hammer actions to the tool chucks, which acts on the material via the drill bit. During percussion drilling, many small hammer actions act in the axial direction of the drill bit. Thanks to the notch discs, a higher stroke rate is generated than with a hammer drill, but the impact energy is lower. To optimize drilling progress, the user can press the cordless percussion drill tightly against the drilling point. But for softer materials/panel materials, use the hammer action – such as with fibre cement panels, plasterboard, gypsum fibreboard, stone with porous joints (aerated concrete, pumice concrete) and masonry made of perforated brick.



Tips for identifying the construction material

Construction materials are not easy to identify in a shell construction. As soon as the wall is plastered or covered, the exact construction material is harder to identify. Conducting a test drill with a small drilling diameter is the way to remedy this situation, making it easy to determine whatever is hidden under the surface:

- **Concrete:** Exceptionally fine, white to grey drilling dust
- **Solid brick:** Red drilling dust
- **Aerated concrete:** Light grey, coarse-grained drilling dust
- **Perforated brick:** Hollow spaces can be felt when drilling, light red drilling dust
- **Plasterboard:** Hollow space behind the boards, fine white drilling dust
- **Sand-lime-brick:** Fine-grained, sandy white drilling dust



Ensure your drill is set to the correct setting before starting



Discover how to make modern interlocking shelves.



HANGING AROUND

>> Tim Dekker



What you will need

These are the following materials and tools that I used for creating the shelf:

Materials:

- Wood (1500 x 200 x 12mm)
- Wood glue
- Wood dust

Tools:

- Ruler
- Plainer
- Saw
- Sander
- Sandpaper
- Wax
- Brackets

I am what you in Swedish would call a “prylkille”. If one would directly translate the word it would be stuff guy, meaning that I like collecting lots of different things. To display some of my stuff, my mom and I made a big Massironi shelf a while back. However, this one is now full, which is why I decided to make another shelf.

I wanted the shelf to stand out and be able

to store different things, which is why I designed the shelf in this particular way. Since I like symmetry, the shelf consists of two parts, out of which the second part of the shelf is shifted by 25 percentage.

In this article, I will walk you through my process of making this particular shelf, as well as providing you with the necessary information tools to redesign and make your own shelf.

Step-by-step guide

Step 1: My design

You will see the drawings for the design that I created. If you want to use this design, either print it or use the template to draw these onto the planks.

Step 2: Your design?

Do you want a bigger shelf? Maybe you want to shift it more than 25% as I did? If that is the case get your paper and pen or a CAD software and get designing.

One more thing to consider is if you want the two 'compartments' of the shelf to be separable as this will affect the bindings in the centre of the piece. Since the shelf I created only is 60 x 40cm, I decided to design it in such a way so that it cannot be taken apart. If one makes a larger shelf, it might be smart to design it in such a way that one can take it apart for transportation.

Lastly, the block bindings are not a necessity. However, I think it adds to the design and makes the shelf more exciting.

Step 3: Tips & tricks

Before we get started, I just want to share a few tips and tricks.

Firstly, if you like me are using glued together planks, avoid making the block bindings close to where the wood is glued since this might result in the wood cracking.

Secondly, I would recommend you save the wood dust since this can be reused (as explained in step 12) to create nicer block bindings.

Step 4: Rough cut the plank

First off, if you do not have all the tools and machinery I used in this article, simply order pre-cut sizes from your local hardware store or wood supplier. If you do have the tools, start by cutting the planks into pieces of workable size. Initially, the plank I started with had the dimensions 2000 x 300 x 16mm, I cut it into a plank of 1500 x 300 x 16mm plank.

Sawing the plank will create some very fine wood dust, save this so that you can use it further on for filling up the socket bindings.

Step 5: Fine-tune the plank

If the plank does not match the thickness and width that you need for the shelf, plane it and cut it in order to achieve the wanted width. My plank was 16mm which is why I had to plane it down to 12mm.

Step 6: Planks for the shelf

Lastly, cut up the plank into smaller planks. If you are using my dimensions you should create four planks of the dimensions 260 x

90mm and four planks of the dimensions 450 x 90mm. Be sure to get nice 90 degree cuts on the side of the planks.

Step 7: Preparation manual finger joints

This step is optional, it will add to the complexity and effort required to make the shelf but also add to the looks and likeability of the shelf. I do not have a rig for creating the finger joints, and will, therefore, show you how they can be created manually.

I wanted six joints, resulting in a width of $90/6 = 15\text{mm}$ for each joint. If you want wider/more narrow joints or if you are making the shelf with a different width, divide the width of the shelf with the number of joints you want in order to get the width of the sockets.

Once again, bring out your pencil, ruler and square. Mark the joints, and remember to mark which joint should be cut out and that on the attaching plank you should remove the neighbouring sockets.

Use a scroll saw, band saw or a regular saw to make a groove of 12mm (or the thickness of your planks).

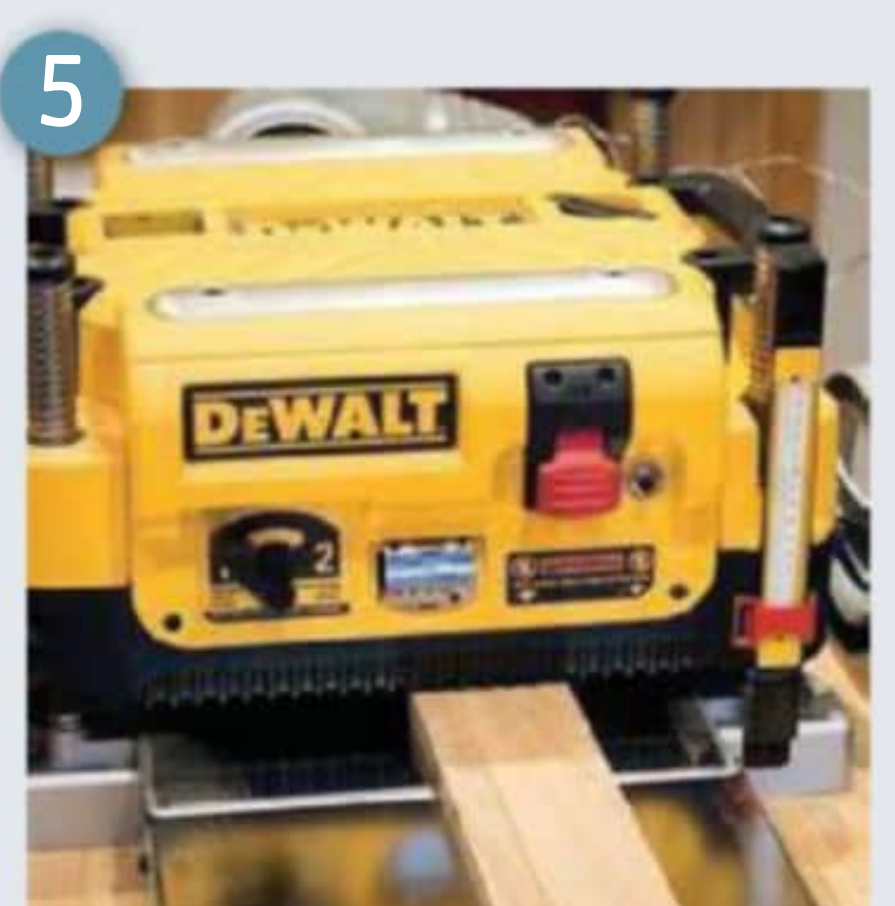
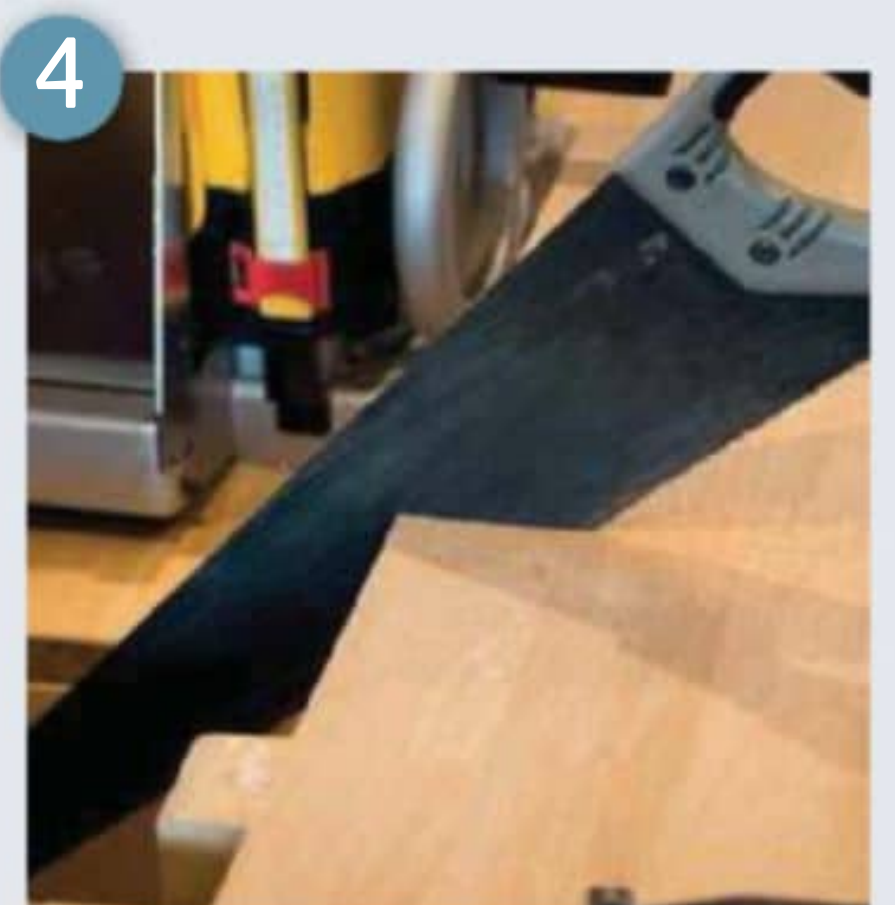
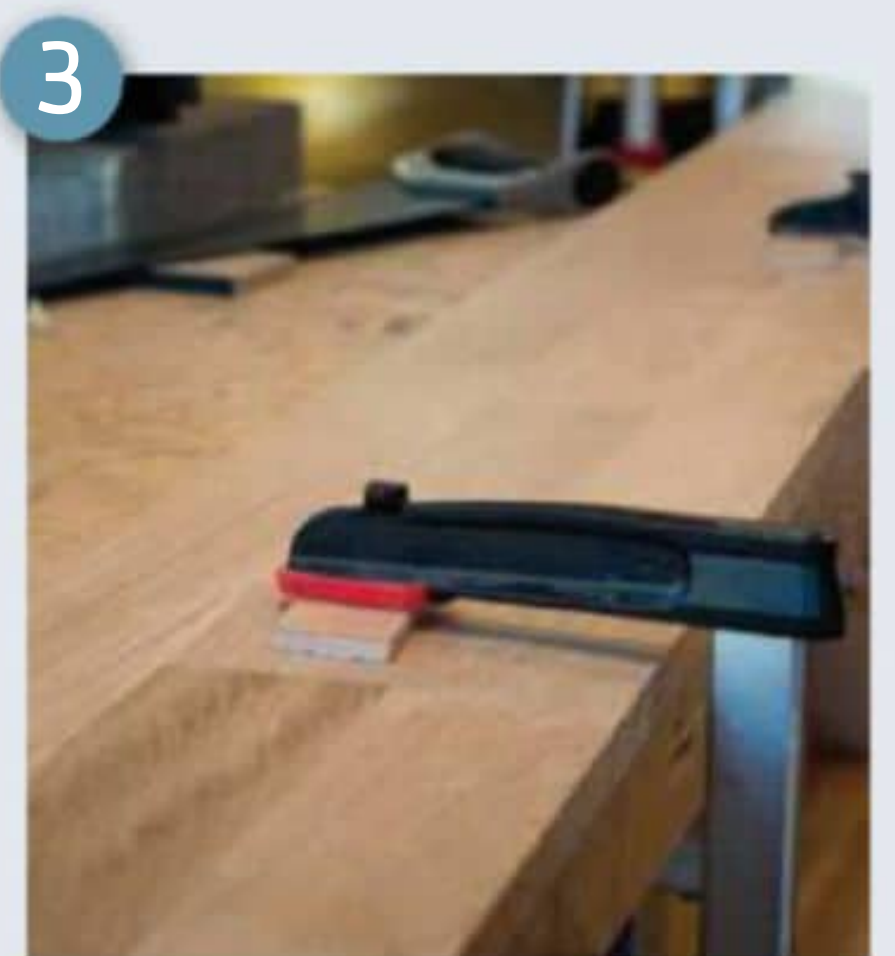
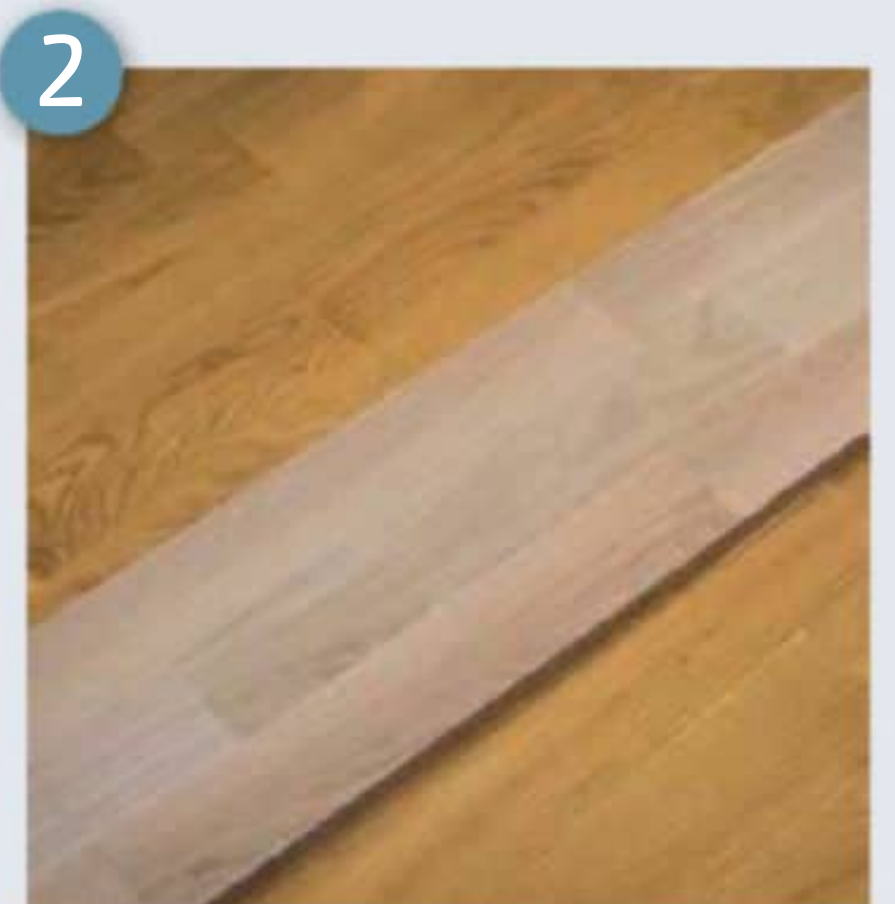
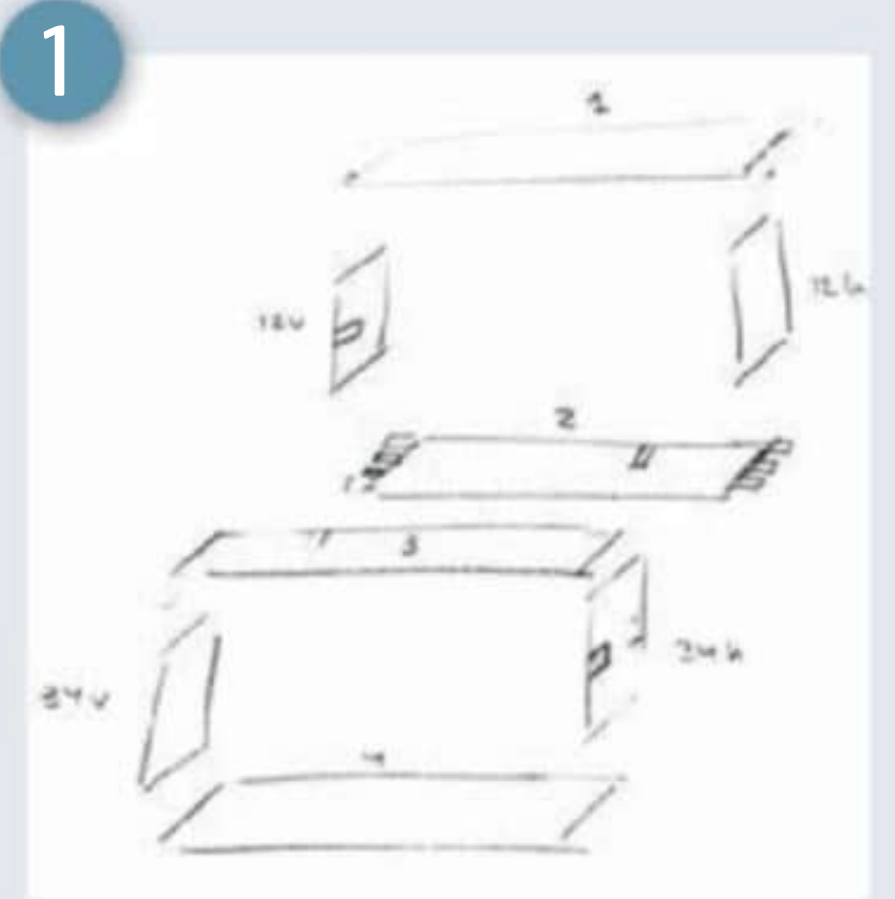
Step 8: Finishing manual finger joints

After having cut the grooves, it is time to remove the wood in between the grooves. One way to do so is by using a chisel and a hammer. Avoid trying to beat out the wood at once, instead do it in layers of 1-2mm each time. For the first layer, have the chisel angled perpendicular to the wood, then angle it slightly outwards, since this will remove slightly more material inwards to the joint, making it easier to attach the planks.

When you have worked your way half-way through the plank, turn it around and redo the same procedure until you have your gap.

Step 9: Continuously check your progress

As you move on, be sure to test your planks and see that you have marked the joints



correctly on all planks to avoid having to redo a plank.

Step 10: Adjust joints

When all the joints are done, test fit the two parts. Do not worry if the planks do not fit, this can be adjusted by filing and sanding the joints until they fit.

Step 11: Assemble the shelf

When you are sure all the finger joints fit properly, it is time to create the joints that will keep the two parts of the shelf together. The procedure of this is the same as for creating the finger joints keeping the planks together, i.e., saw two grooves, and then use a chisel and hammer to remove the wood in between.

Having finished all joints, mount the shelf and adjust and finalize the joints if needed.

Step 12: Perfect joints

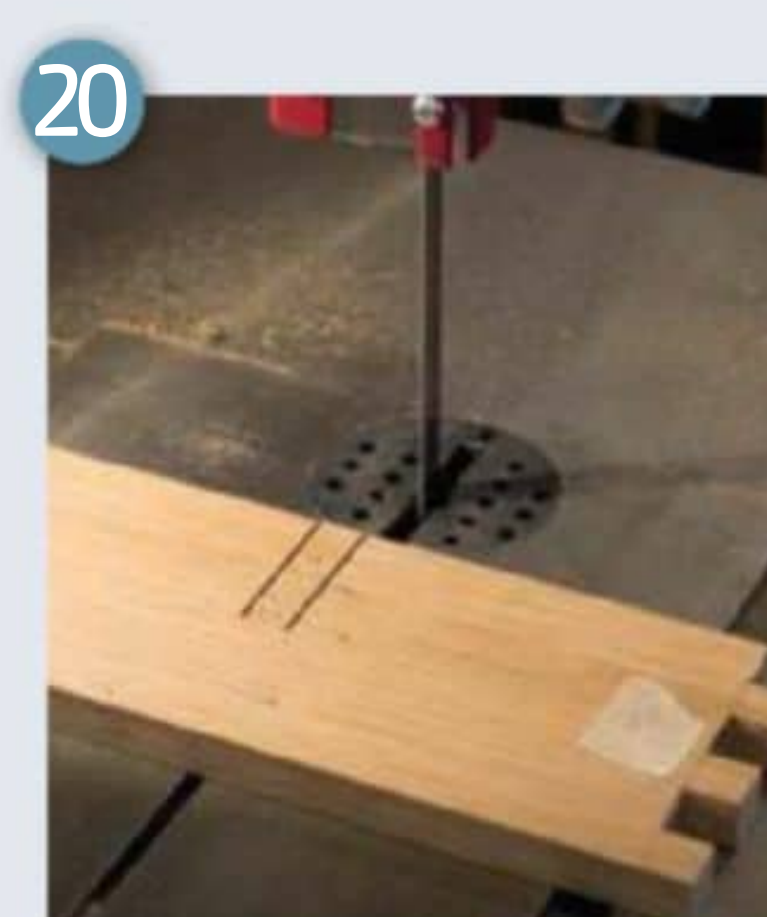
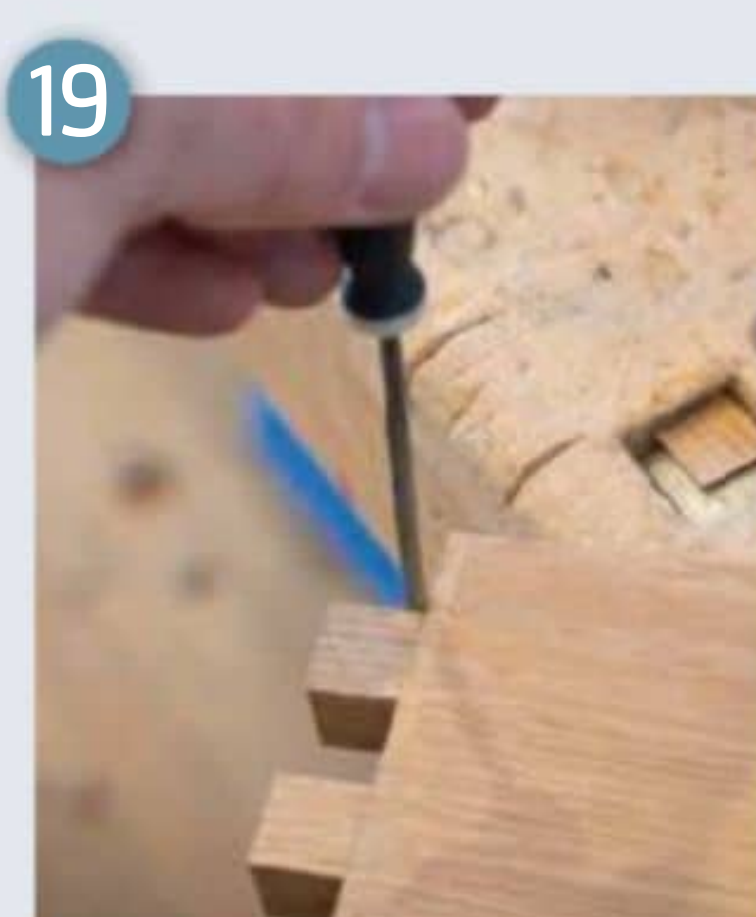
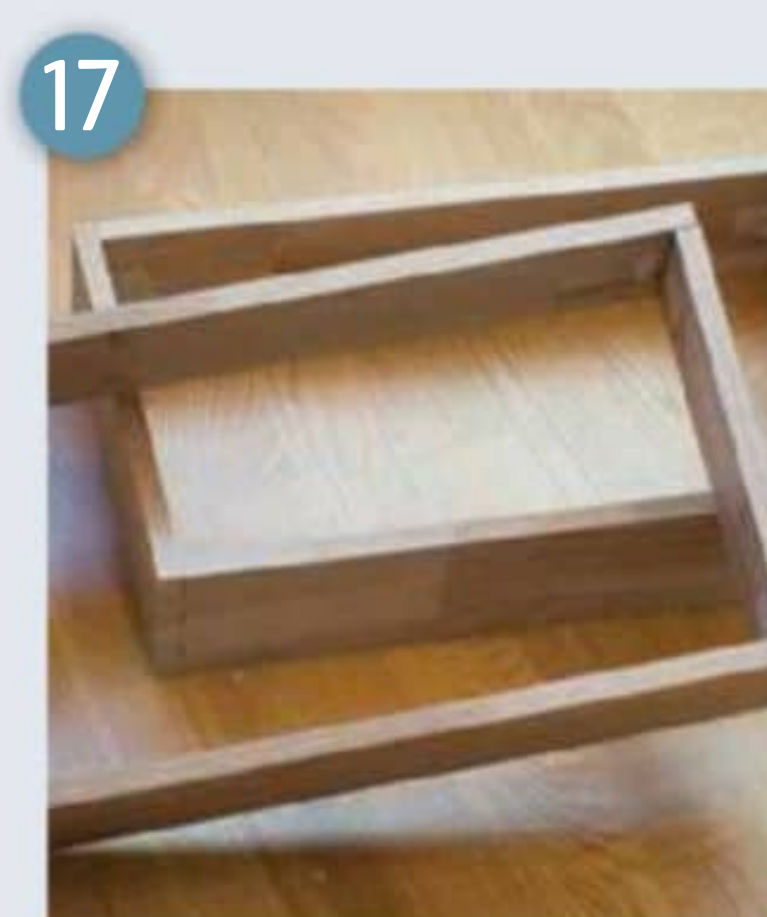
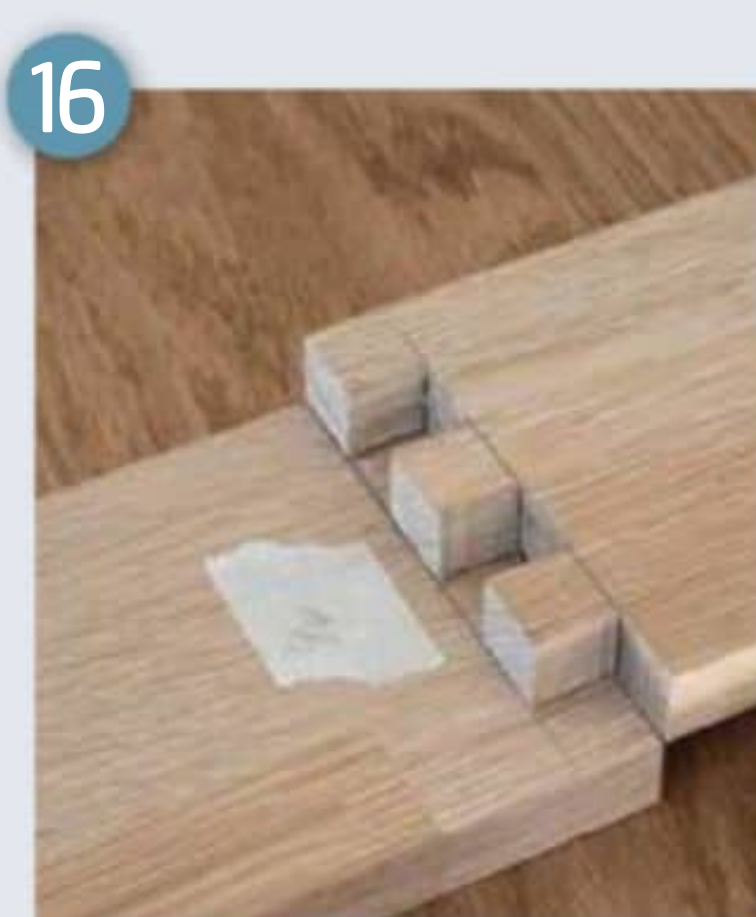
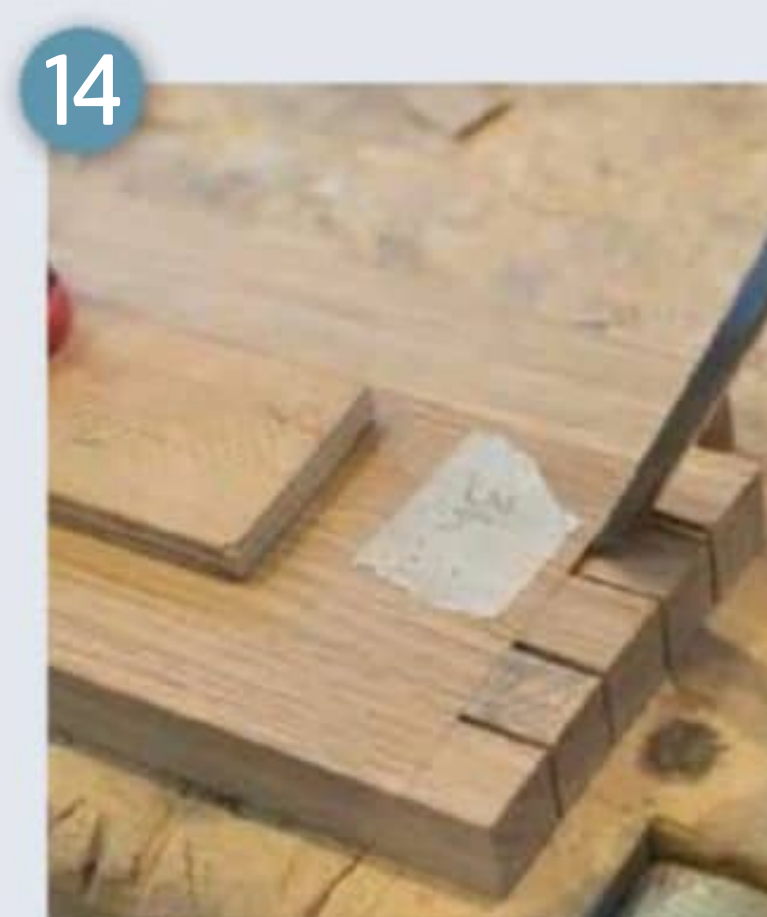
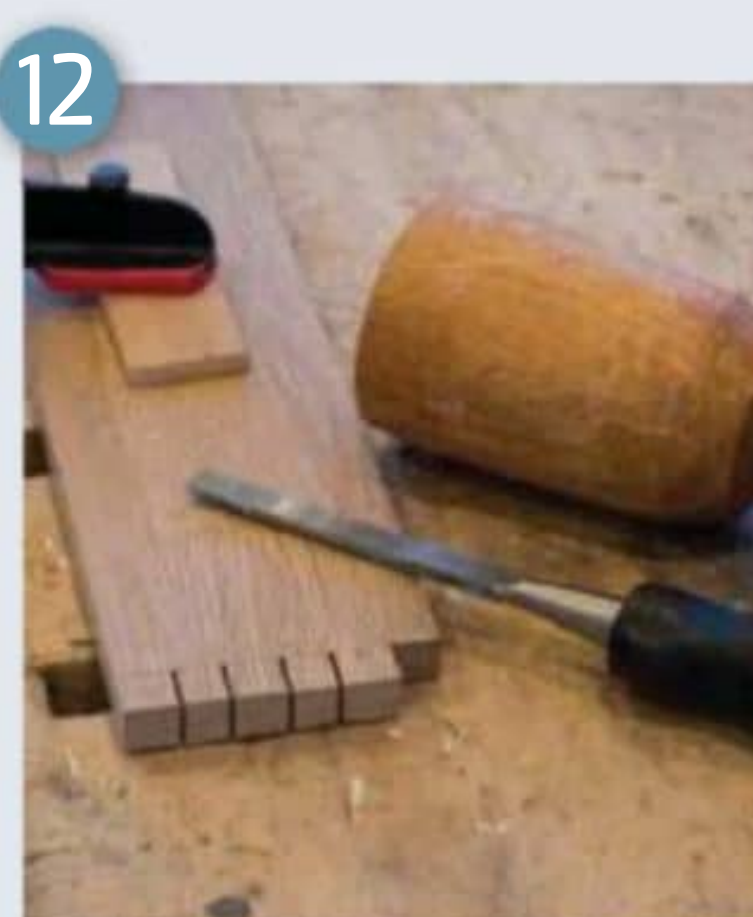
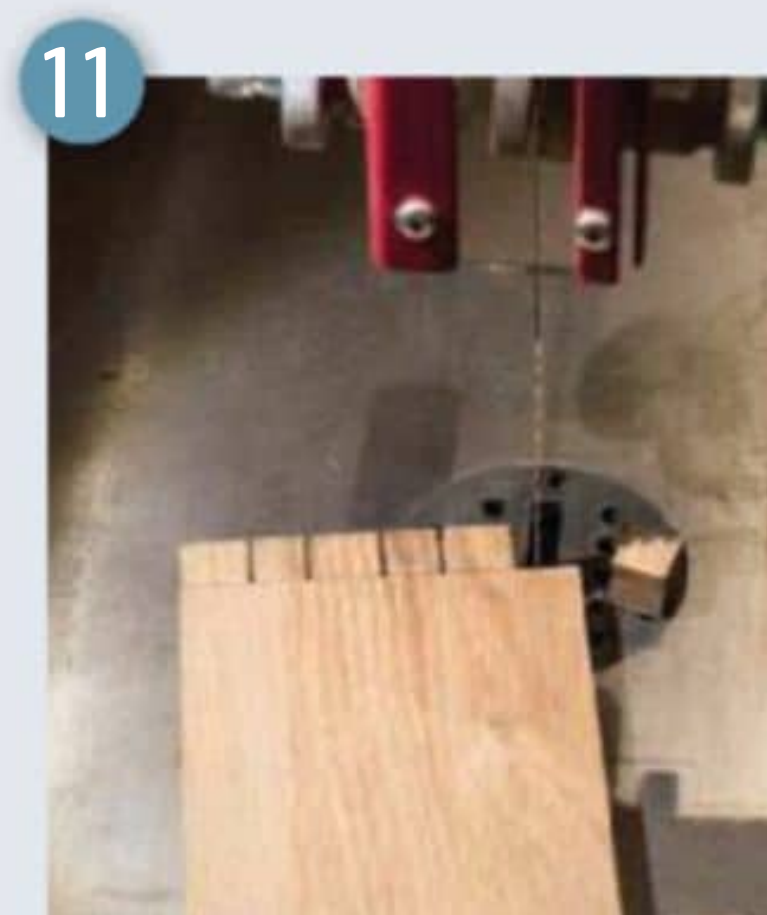
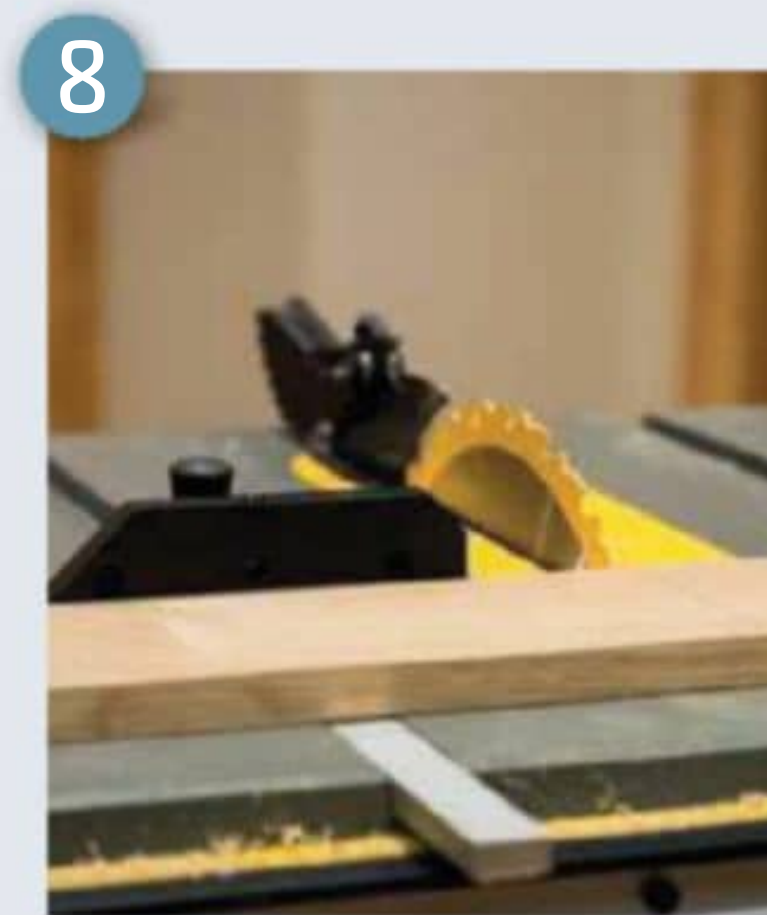
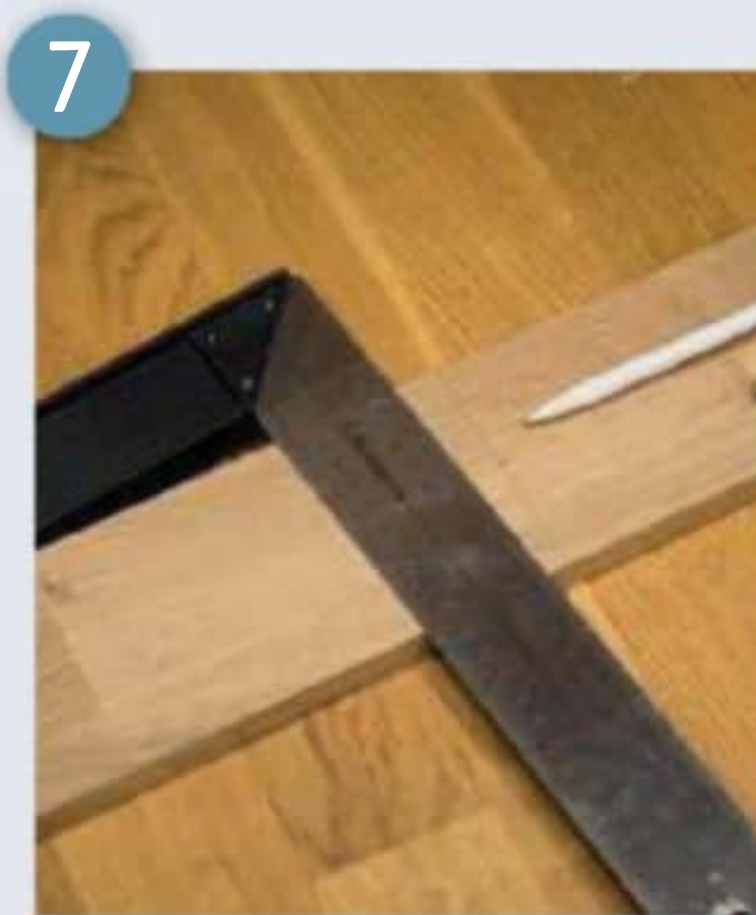
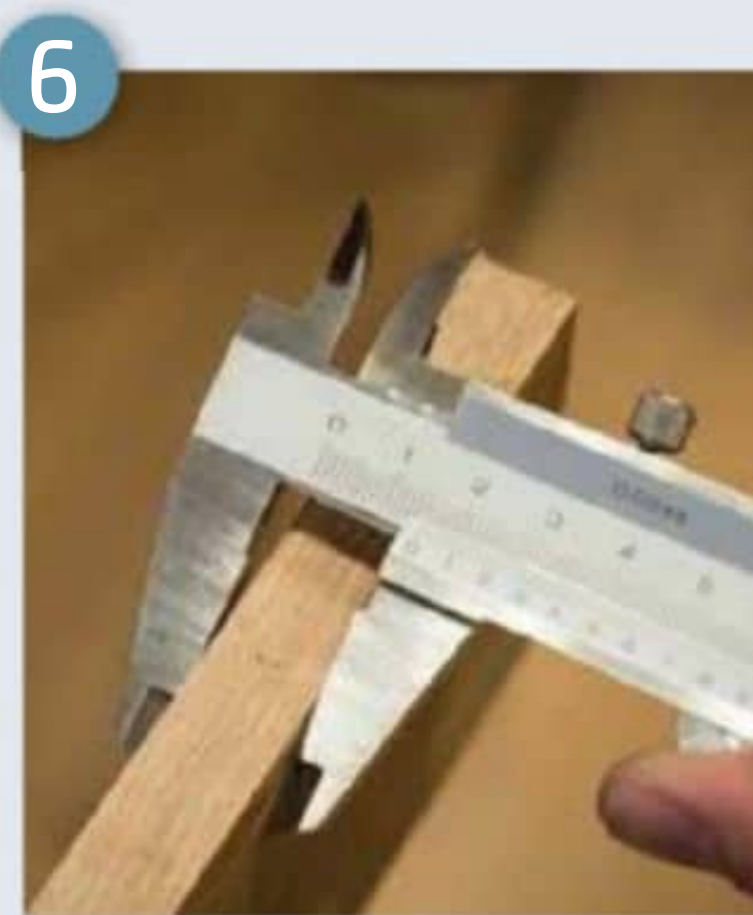
After having fitted all the planks, there might be some crevices between the joints. Mix some glue and the wood dust you previously saved and push it into the crevices and cover the joint with it. After having let it dry, use a sander to remove the excess glue and wood dust.

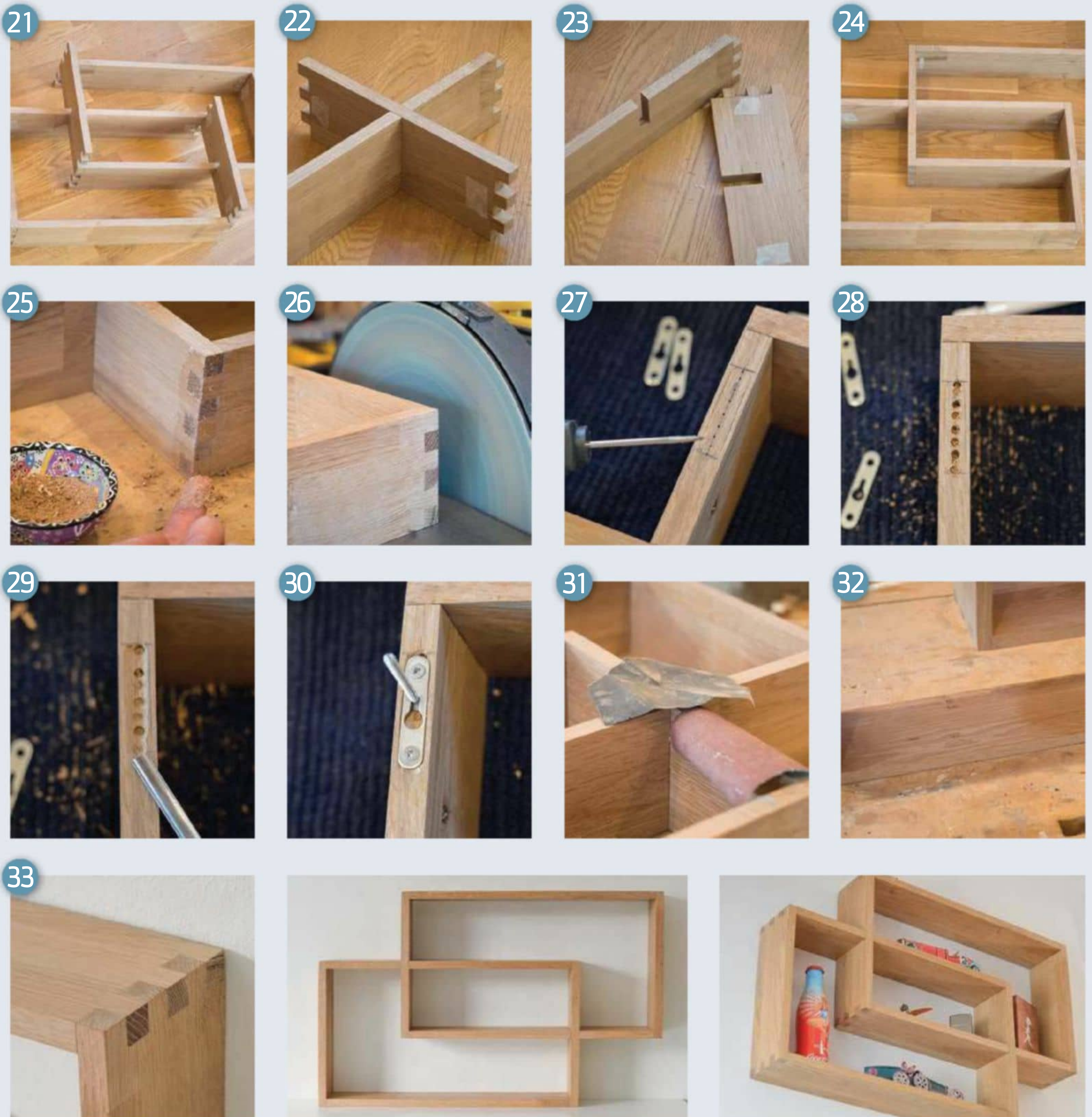
Step 13: Fixing the mounting brackets

To mount the shelf I used keyhole brackets since these will not be visible from the front. Unfortunately, the ones I had at home were quite small, which is why I made the hole a bit bigger. To have the shelf hanging flat against the wall, immerse the hangers by drilling a few holes and then carve out a hole in the size of the hangers. Attach them with two screws. In total, I attached two keyhole hangers.

Step 14: Surface finish

And at last, sand the shelf with some fine sandpaper, I used 400 grit and 600 grit. To get a surface that is easy to maintain, I decided to wax it. Personally, I like it when the oak looks a bit darker which is why I went with an orange type bee wax. One could also use a neutral type wax, or just paint or oil the surface.





1. The drawings for the design 2. Start by cutting the planks into pieces of workable size 3. Initially, the plank I started with had the dimensions 2000 x 300 x 16mm 4. Cut to size 5. If the plank does not match the thickness and width that you need for the shelf, plane it and cut it 6. My plank was 16mm which is why I had to plane it down to 12mm 7. Lastly, cut up the plank into smaller planks 8. I cut four planks with the dimensions 450 x 90mm 9. Be sure to get nice 90 degree cuts on the side of the planks 10. This step is optional as it will add to the complexity and effort required to make the shelf 11. Mark the joints, and use a scroll saw, band saw or a regular saw to make a groove of 12mm 12. After having cut the grooves, it is time to remove the wood in between the grooves 13. For the first layer, have the chisel angled perpendicular to the wood 14. Then angle it slightly outwards 15. When you have worked your way half-way through the plank, turn it around and redo the same procedure 16. As you move on, be sure to test your planks and see that you have marked the joints correctly 17. When all the joints are done, test fit the two parts 18. Do not worry if the planks do not fit 19. This can be adjusted by filing and sanding the joints until they fit 20. Now it is time to create the joints that will keep the two parts of the shelf together 21. Test between cuts 22. A good fit – time to proceed 23. The procedure of this is the same as for creating the finger joints keeping the planks together 24. Having finished all joints, mount the shelf and adjust and finalize the joints if needed 25. Mix some glue and the wood dust you previously saved and push it into the crevices and cover the joint with it 26. After having let it dry, use a sander to remove the excess glue and wood dust 27. To mount the shelf I used keyhole brackets 28. To have the shelf hanging flat against the wall, immerse the hangers by drilling a few holes 29. Then carve out a hole in the size of the hangers 30. Attach them with two screws 31. Sand the shelf with some fine sandpaper 32. I finished the project with wax 33. Close-up of the corners

Have you ever had a burning desire to build your own wooden deck? Follow this advice to get it done correctly.

Building A TIMBER DECK

>> Anthony Casamento

Timber decking has become a widespread alternative to traditional hard terraces and patios. One of the strongest themes in contemporary landscaping is that of the 'new garden'; whereby the exterior is to be treated as an 'outside room'. In this context, timber decking is an excellent way of extending the living space of a building – outdoors.

Timber decking is highly flexible – and provides extra social space that's ideal for children playing, dining, entertaining, or just simply relaxing. Whatever the reasons for creating a deck, it's one of the most attractive additions that can be made to a home.

Timber decking harnesses the potential of sloping, undulating or uneven garden terrain. And additionally, elevated or split-level decks can be created on level ground to create new dimensions to your garden, giving it a unique look.

The benefits of timber decking for landscaping structures compared to other traditional hard terraces, or patios are that it:

- Provides a comfortable surface for walking, sitting and even lying on
- Gives a high aesthetic appeal in harmony with your garden and nature
- Creates warmth and ambience for late summer evenings
- Conceals unsightly necessities such as inspection covers and drains
- Is easily modified or extended
- Reduces excavation and ground work preparation

To start this project, choose the desired location for your new timber deck. In this case, concrete footings were poured to support the deck.

Step-by-step guide

Step 1: Work out where the finished height of the deck will be. In this case the decking is going to finish underneath the sliding door.

Subtract the thickness of the decking (20mm) then the height of the joist (140mm) and that is the height of the plate on which the deck will be secured.

Step 2: Fasten the plate to the brick work. If the bricks that you are fastening to are hollow then use nylon plugs (make sure there is a minimum of 70mm fastening into the brick work) and make sure you drill the hole in the centre of a brick.

Secure and drill holes 450-600mm apart making sure to alternate the holes at the top and bottom of the plate.

Step 3: Set up the end joist by nailing or screwing it to the plate. Using a level, make sure you level the joist and use an offcut of timber to support the other end. Remember that the support on the end is only temporary. Now make sure that your joist is perpendicular to the plate – there are two methods you can use. The first method is to use a builder's square. Hold it on the internal corner of the plate and joist. Using a piece of timber, nail one side to the plate and the other to the bottom of the joist.

The second method to use is what we call the 3,4,5 method e.g., measuring from the internal corner where the joist meets the plate. Measure 3m across the plate and put a mark. Then from the same internal corner this time measure 4m along the joist and put a mark.

Now you need to hold the tape measure on the 3m mark. Measure diagonally to the 4m mark when your tape measure reads 5m exactly, then that will give you a 90 degree right angle.

Step 4: Repeat step 3 on the opposite side of the deck. Using a string line, run it along the top of the joist from one end to another and set up a few more joists in the middle; this will help you set up for your bearers.

Step 5: The size of your deck and the size of your wood this will determine the distance between your bearers. In this case I am using 140x45 Treated Pine (TP) joists and 190x45 TP bearers. The deck is 3.6 wide so I will need two rows of bearers at 1,2m apart.

Nail or screw the bearers to the underside of the joist. If you are finding it hard to hold the bearer up you could nail a block to the side of the joist and the side of the bearer to help; remember that its only temporary. Remember, do not place your temporary props too close to where your posts are going to go.

Step 6: By this stage you should have all your bearers in and ready for your posts. Half notch the posts so that it will support the full thickness of your bearer. In my case, my bearers are 45mm thick and my post is 90mm thick.

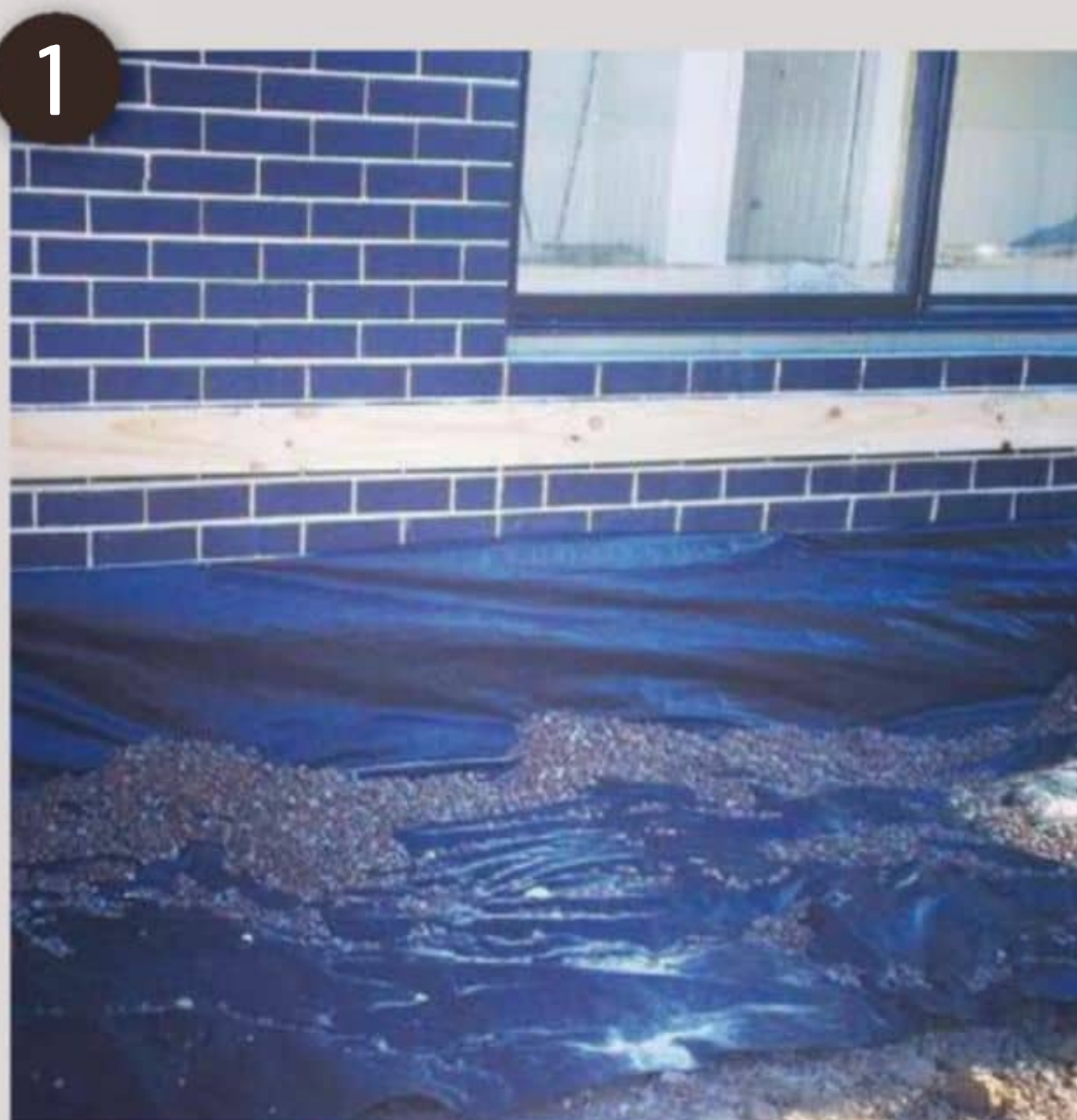
If your posts are sitting in the ground, then dig a hole approximately 300mm x 300mm x 300-400mm deep. Make sure you use timber that is suitable to go into the ground e.g. H4 treated pine. If your posts are sitting on concrete or concrete piers, then a shoe will be necessary to secure and support the bottom.

To get the exact height of the posts, place the shoe in its location and measure from the top of the shoe to the bottom of the bearer (that will be the measurement to the notch – then add the depth of the bearer. Bolt the shoe to the concrete and screw the post to the bearer.

Step 7: Put all your joists in at the required spacing which, in most cases, the required spacing is 450mm apart. When you are putting the joist in, keep the bow of the timber (if it has one) facing upwards so that it will straighten with the weight.

Step 8: Start installing your first decking boards against the house and work your way to the outside. Use a string line or a chalk line to make sure that the first board is straight.

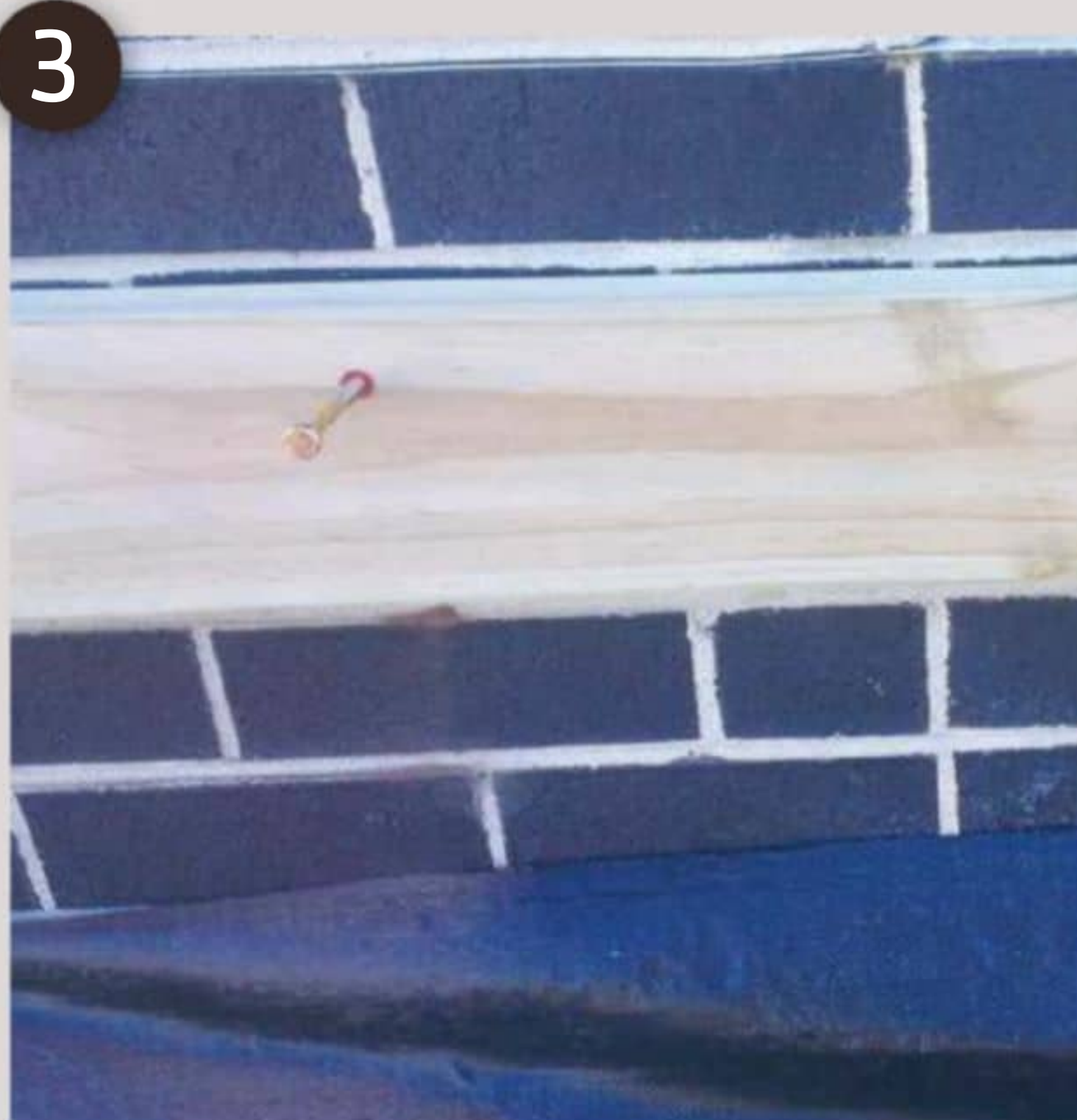
Lay your decking boards down and place about 10 rows, making sure that you alternate where each joint is and always make sure that each end is supported by at least a minimum of half the thickness of your joist.



Select where you want to install the deck



As ours was against the house we installed a plate



Secure to the wall every 500mm or so

Step 9: Timber decking needs to have a 3-4mm gap to allow it to expand. I used nails as my spacers but you can use something else.

Setting up the tenth boards is the same as step 8, except put your packers in between each board before screwing or nailing anything down. Repeat this step until you reach the end of your deck.

Step 10: Your deck is now practically complete. Cut and neaten off any rough ends, sand and apply a suitable, weatherproof finish. Finally, enjoy your new deck!

4



Set up the end joist, by nailing or screwing it to the plate

6



Make sure that your joist is perpendicular to the plate

5



Using a level make sure you level the joist and use an offcut of timber to support the other end

7



Use a string to run along the top of the joist from one end to another

8



The size of your deck and the size of your wood will determine the distance between your bearers

9



Nail or screw the bearers to the underside of the joist

10



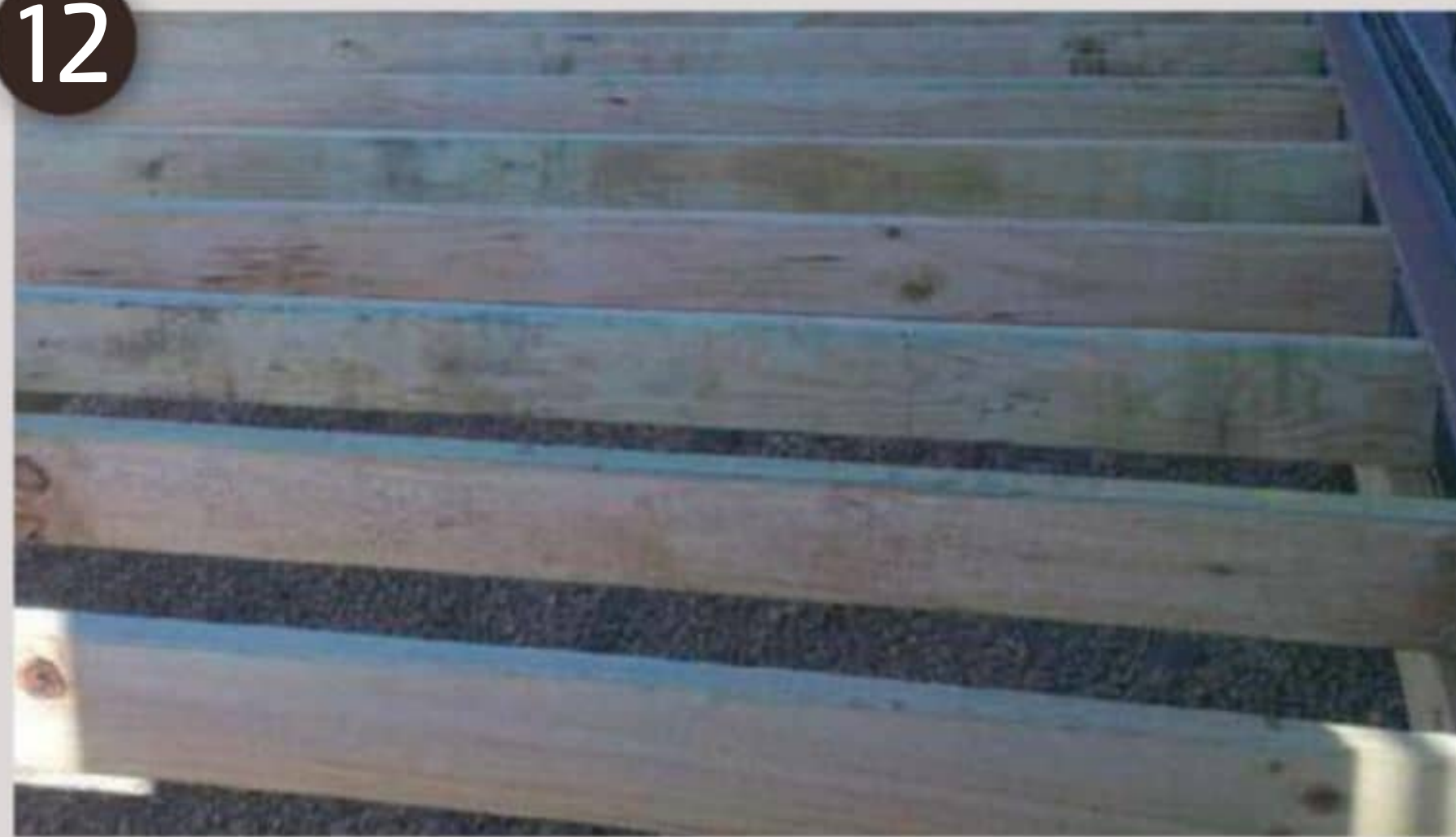
If your posts are sitting on concrete then a shoe will be necessary to secure and support the bottom

11



Install all your joists at the required spacing

12



We used 50mm spacing

13



Trim your wood to fit where necessary

14



Start installing your decking boards against the house

15



Timber decking needs to have a 3-4mm gap to allow it the expand

16



I used nails as my spacers

17



Neaten up, sand and finish

18



The deck all done

Installing a luxury vinyl tile floor – how to do-it-yourself.

Get more from YOUR FLOOR



What you will need

Materials:

- LVT flooring
- Grout
- Pressure sensitive adhesive

Tools:

- Demolition tools (hammer, pry bar, scraper, etc)
- Trowel or paint roller
- Grout float/sponges/bucket
- Utility knife
- Snips
- Tape measure

In this article, we'll be going over the steps to install a new luxury vinyl tile (LVT) floor.

I really like this product because it looks like ceramic tile, but it's not. It's not fragile or prone to cracking, it's not cold underfoot, it's not hard if you were to fall on it, it's not nearly as slippery when wet. At the same time, it retains much of the durability and all of the style of ceramic tile. It also doesn't require

special tools to cut and it has very short dry times compared to ceramic tile. Most people will think you have a traditional tile floor until they touch it, then they'll be amazed!

LVT flooring is a popular choice for foyers, kitchens and bathrooms. It is durable, easy to install and maintain. I've installed quite a few of these floors and I've been very pleased with the process and outcomes.

Step-by-step guide

Step 1: Prep floor

First, we'll need to ensure that the subfloor is suitable for the installation. Ideally, you'll have a flat and smooth surface for installing your LVT.

This foyer had natural slate tiles that were glued to a subfloor. The tiles popped off cleanly and easily. They were improperly installed and had very poor adhesion, hence the need for a new floor. After the tile and grout were removed, we were

left with a relatively smooth wooden subfloor; perfect for installing LVT.

Other rooms will likely have different flooring installed and require different prep. If there is a linoleum/vinyl sheet installed, you can go right over it (provided the sheet is not bubbling, peeling, loose, etc). Other floors that leave a rougher surface after demolition will require the installation of 5mm underlayment.

Step 2: Dry fit your layout

I always start by figuring out my pattern and layout. I place the tiles on the floor and make sure the pattern aligns well along the walls/corners. Ending on whole pieces typically looks the best along transitional areas.

I decided to install this floor with a diagonal pattern. I started along an edge with another floor and used my speed square to place tiles at a 45 degree angle. Using plastic spacers between tiles, I placed a few whole tiles and got a feel for my layout.

Once I was happy with how the layout was looking, I traced around the tiles with a pencil and snapped a few chalk lines to provide reference points.

Step 3: Spread the glue

LVT uses pressure sensitive adhesive to adhere the tiles to the subfloor. The adhesive can be trowelled on with a very fine notch trowel, or it can be rolled on with a paint roller. I generally prefer to use a paint roller, but didn't have one handy for this project, so I used my trowel.

Read the instructions on the specific glue you purchase, but typically you'll want to allow a time for the glue to sit and off-gas before applying the tiles. Many of the glues will change colour or opacity when they're ready to set. This glue turned from a bright opaque blue to a translucent lighter blue.

Step 4: Cut and set your tiles

Once the glue is set up, you can start setting your tiles. I like to set as many full tiles as possible before moving onto the cut tiles. Start by placing the tiles on the lines you drew/snapped on the floor. Using the plastic spacers to keep your grout lines even, keep placing full tiles everywhere they fit.

You can walk on the tiles as soon as they're down, so don't worry about that. In fact, it's a pressure sensitive adhesive, so applying pressure is a good thing. Once I'm sure the tile is properly positioned, I like to stomp on all the corners and really set it.



Tip for measuring diagonals: Measure straight out from corners and use your speed square to mark lines perpendicular to that. It takes a little getting used to, but once you can wrap your head around measuring things at a 45 degree angle, it's really not much different from laying a square pattern.

Step 5: Pull spacers and roll out

Once everything is set in place, pull the spacers and use your roller to apply even pressure all over the floor.

A roller is the proper tool to use, but some people feel the need to steal that heavy piece of metal out of the back of my truck on more than one occasion... so I've been using a more compact roller that requires elbow grease to get the same results. If you have a small work area, you could probably get away by just stomping all over in a tight crosshatch pattern.



The original flooring



Gather your tools and remove the existing flooring

Step 6: Grout the lines

Grouting LVT is very similar to grouting ceramic tile. The process is the same – you apply grout to the joints, dress the lines with a damp sponge, then do a final clean-up with the sponge. The only difference is you need to use a grout that is flexible/compatible with LVT flooring.

I like to use a minimum of two people for grouting. One person spreads the grout and the other cleans. The spreader should keep the float at a 45 degree angle and try to pick up any excess grout. Work the grout with the long edge of the float. Try to fill as much as each line with a stroke as possible. The cleaner should keep the sponge moist but not sopping. First cleaning

swipes are to make the lines look uniform and even. Secondary swipes should be one smooth motion, flip the sponge to a clean spot, one smooth motion, wash/ring the sponge. Keeping the sponge clean every other swipe and frequent water changes are the key to easy clean up. If the spreader gets too far ahead of the cleaner, they should grab a sponge and help with cleaning up. Don't work too far ahead or the excess will dry on the surface, and it'll be a whole lot more work.

Step 7: You're done!

Once everything is all dry, you might have a slight haze to wipe off with a dry microfibre towel. Other than that, you're done! Enjoy your beautiful, durable new floor!

3



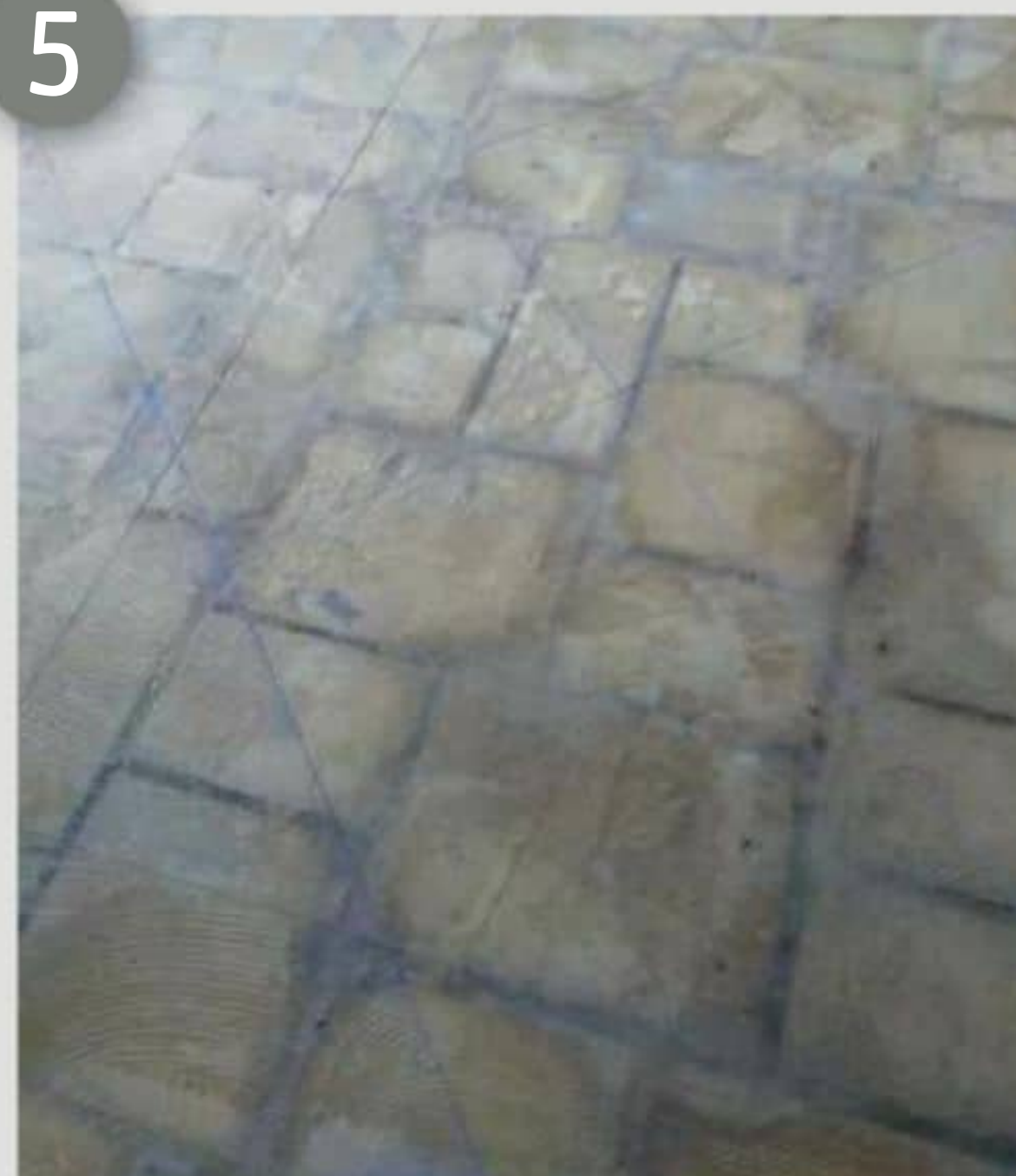
Dry fit your layout

4



I decided to install this floor with a diagonal pattern

5



Once I was happy with how the layout was looking, I traced around the tiles with a pencil

6



Trowel on the adhesive with a very fine notch trowel

7



Once the glue is set up, you can start setting your tiles

8



You will need to cut the vinyl tiles in certain places



Measure, mark and cut the tiles



This was where the tile needed to go



And this is how it fits



Measure and cut tiles to fit in the corners



Use the plastic spacers to keep your grout lines even



Once everything is set in place, pull the spacers and use your roller to apply even pressure all over the floor



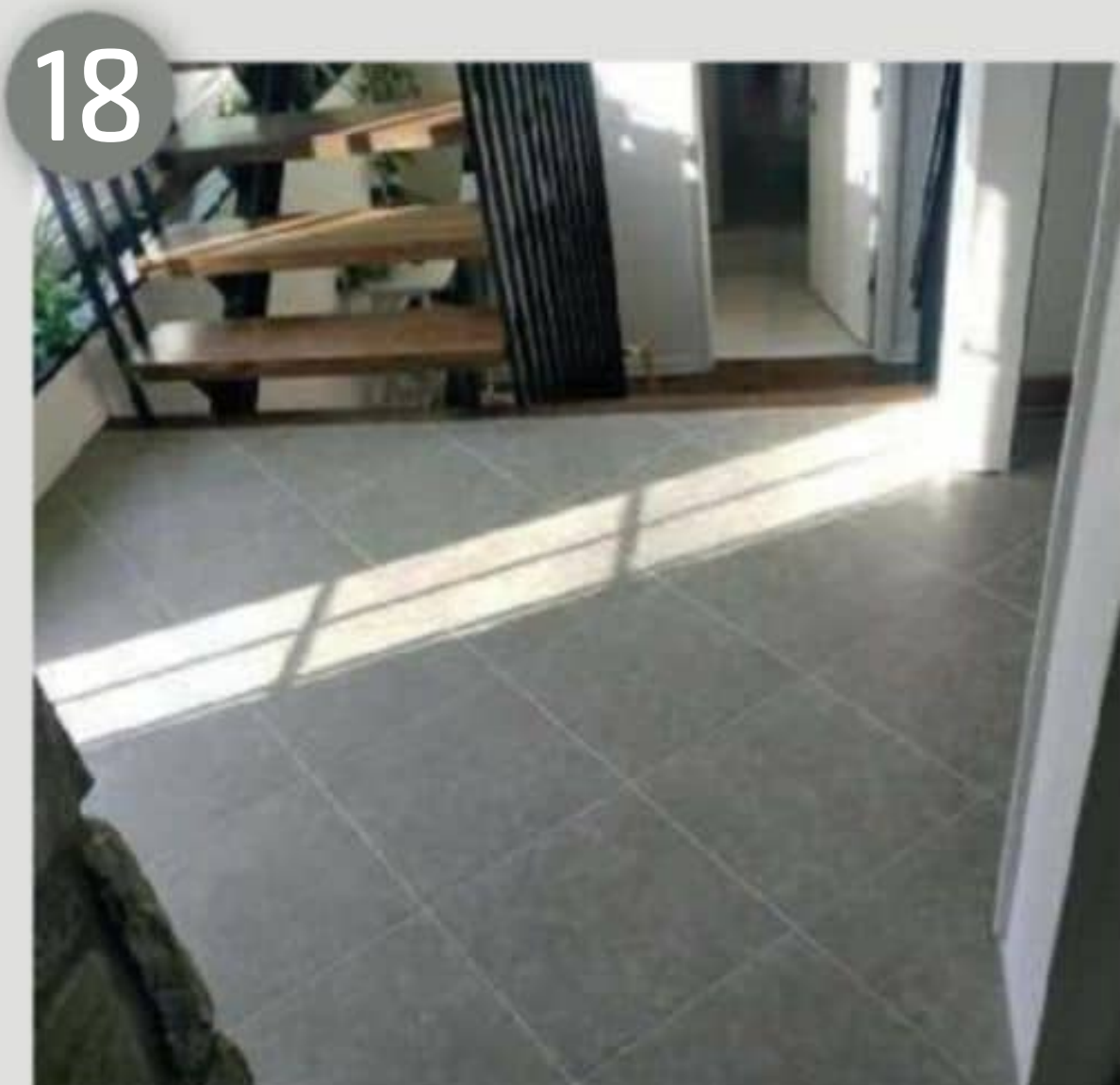
Grouting LVT is very similar to grouting ceramic tile



Apply grout to the joints, dress the lines with a damp sponge, then do a final clean-up with the sponge



Keeping the sponge clean every other swipe and frequent water changes are the key to easy clean up



All done!



Enjoy your beautiful, durable new floor!

Anything you hang from a wall – whether it's a simple family picture or large wall shelf unit – will require that the item is attached directly and firmly, with the weight safely distributed. The fastener you use will vary according to the weight of the object and the type of wall construction.



HOW TO USE ANCHORS TO FASTEN OBJECTS TO A WALL

Our guide looks at what masonry anchors are, what they are used for, and the different types available.

What is masonry?

Before we explain what masonry anchors are, we must first define masonry itself. In its simplest form, masonry can be described as anything that a mason puts down. In other words, if it is laid by a stonemason or a bricklayer, then it is masonry. This can include building materials such as stone and brick, as well as block walls.

Blockwork walls are made from blocks that are commonly known as breeze block, Thermalite block, concrete blocks, or cinder block. Blocks are typically much quicker to lay than brick, so they are often used for the interior walls of modern houses. The walls are then covered with plaster or plasterboard to provide a smooth finish.

What are masonry anchors?

So, considering that, anchors for masonry are simply fixings used to fasten or attach an item to masonry. Strong and durable, they are designed for reliability and to provide a secure hold.

Traditionally, screws are used to fix items to masonry, but this method has its limitations with certain materials. It is not possible to screw directly into brick, stone, or block walls – hence the need for specialist masonry anchors.

Plastic wall plugs and masonry anchors can help to achieve a secure fitting when fixing items to walls. They work by expanding against the hole you have drilled in the masonry, as the screw is screwed into the wall. This creates a highly secure and tight-fitting hold on the screw – providing that the wall is made from solid masonry or concrete.



Sleeve anchors

What are masonry anchors used for?

Masonry fixings are anchors used to fasten or attach an item to masonry. They can be used with various kinds of masonry including brick and blocks, as well as concrete.

Using masonry plugs on different building materials is explored in further detail below:

Brick and masonry: Masonry anchors designed for use with brick and similar materials are some of the most widely used types available. These fasteners are designed to attach items to bricks or mortar joints in walls, providing a secure anchoring solution. As brick contains hollow areas, masonry anchors for brick are specially designed to provide a secure hold in both the solid and hollow parts of the brick wall.

Concrete: Although concrete is not a form of masonry, similar fixings are typically used with concrete, brick, stone, and masonry. As concrete is a tough material to drill into, specialist concrete fixings and screws are recommended to achieve a good result with relative ease. Concrete fixings can be used for light and medium-duty applications - some heavy-duty concrete anchor types are available but are less common – and for a variety of purposes ranging from connecting structural elements to attaching wall hangings.

How do masonry anchors work?

Anchors for masonry work in a fairly simple way. Their purpose is to provide a secure, reliable fixing between the masonry and the item being attached. In essence, they work similarly to many other common types of wall fastening.

The steps below outline the basics of how a masonry anchor works:

- A hole must be drilled to the size recommended by the masonry anchor manufacturer.
- Next, the anchor is tapped into the hole using a hammer.
- The screw or bolt is tightened.
- This will expand the anchor, gripping and wedging to the side of the hole to provide a solid hold.

How do concrete anchor bolts work?

Although the basic principles are similar, working with concrete anchors requires a slightly different process, as detailed below:

- Drill a hole in the concrete.
- Insert the anchor into the hole.
- Expand the anchor with the use of a screw, nail, or setting tool.

The precise method needed for expanding will depend on the type of concrete fastener being used:

- **Wedge anchors:** Once the threads are inserted into the hole and are below the surface, the nut and washer must be placed on them and tightened. Use a wrench to turn the nut, pulling the anchor up and wedging it for a secure hold.
- **Sleeve anchors:** Insert the sleeve anchor into the concrete then turn the nut to pull the stud upwards and through the expander sleeve, securing the anchor in place.

Of course, many additional types of concrete anchors are available, so always make sure to refer to the specific guidelines for the type of fastener you have before use.



A masonry fixing kit is a useful addition to your home

ASK FOR IT BY NAME

Wall mounting or securing bolts for your next project?
Use no other than the trusted Sika AnchorFix®-S for an exceptional hold

Sika AnchorFix®-S is a two-part polyester anchoring adhesive for mechanical, electrical and plumbing works.

Chemical anchoring is much more effective than mechanical anchors due to:

- No expansion – no cracking of substrates
- Outstanding load bearing capacity
- Corrosion prevention

Sika AnchorFix®-S can be utilized for fixing of sanitary equipment and the installation of kitchen fittings, aerials and satellite dishes. Among the common applications in metalwork are

general supports, window and doorframes, window protection cages, blinds, sunshades, TV brackets, shelves and handrails. Used extensively for rebars/ reinforcing steel, threaded rods, bolts and special fastening systems.

Sika AnchorFix®-S is suitable for use in concrete, hollow and solid blockworks and bricks as well as in hard natural stone and solid rock. Both outdoor and indoor applications are possible.

Sika AnchorFix®-S is the strongest way to ensure anything you fix to the wall stays there. Get strong results quick! Don't settle for anything less!



TYPES OF MASONRY ANCHORS

Different types of anchors for masonry are available, each with its own strengths, weaknesses, and best-suited applications and materials.

Some of the most common masonry anchor types include:

Anchor bolts

These are all-purpose anchors designed to be used in medium-weight applications with materials including brick, block, and hard masonry. Some variations can also be used with concrete. Anchor bolts are typically made from zinc-plated steel for strength and longevity.

Anchor bolts can be used to fix both structural and non-structural components, making them highly adaptable and versatile fasteners. These fixings also come in a wide range of different sizes for ease of use in multiple applications.



Wall plugs

Commonly used for attaching light and medium-weight items to solid and cavity walls, floors, and ceilings, wall plugs are a popular choice. Wall plugs are typically used for applications including fixing shelves and attaching cabinets to walls. Their versatility means that they are suitable for use with a wide range of materials, such as plywood, brick, plasterboard, block, stone, and concrete.

Wall plugs are designed to expand into the wall immediately, providing a secure grip in a range of materials. They also can't be over-tightened, and they feature anti-rotation fins to prevent the plug from spinning in the hole. However, perhaps the biggest advantage of wall plugs is that they are universal. This universal application is highly beneficial as it avoids the need to invest in separate plugs for different materials and wall types.

Concrete screws

Concrete screws are specially designed for working with concrete. These screws are manufactured to enable the thread of the screw to tap into harder materials, making them ideally suited to tougher masonry applications. The thread of a concrete screw is hardened during the manufacturing process, but crucially without making the body of the screw too brittle. Otherwise, this could result in breakage or the screw shearing off.

These screws typically feature a corrosion-resistant coating to protect the concrete screw. The thread has been designed and optimised for lower installation torque, making installation much more straightforward. Concrete screws are ideal for use on light and medium-duty applications. Aside from concrete, they can also be used with materials including chipboard, gypsum block, wood, and gypsum board.

Masonry wall plug sizes

Wall plugs come in an extensive range of sizes, ranging from small plugs for precise, light-duty applications, to much larger, heavy-duty models. It is also important to match the wall plug, screw size, and masonry drill bit in order to ensure each component is the correct size and the installation process goes smoothly.

Masonry fixing kits are also available. These make a great investment if you are unsure of the specific type or size you need for a particular project. They are also ideal for masons and professionals who regularly use masonry anchors in day-to-day applications through the course of their work.

These kits typically contain a wide variety of essentials such as wall plugs, screw plugs, drill bits, and wood screws. They also feature products in a range of different sizes, making it easy to select the best product for the task at hand.

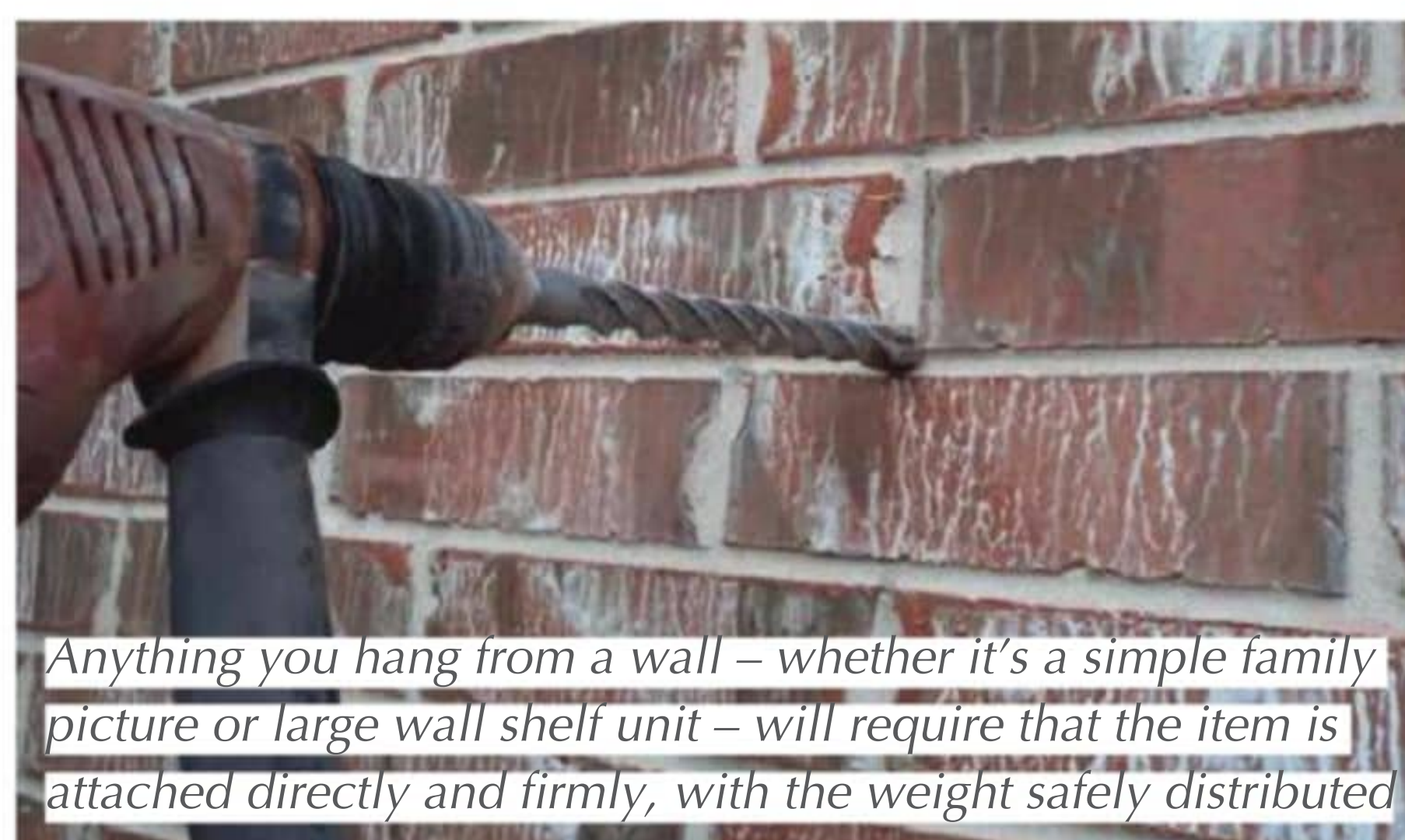
How to use masonry anchors

Masonry anchors are relatively straightforward to use, but it is still important to exercise caution and observe good practise to stay safe and ensure the job is completed to the highest possible standards.

The following steps should prove to be helpful guidance for using and installing wedge or sleeve masonry anchors:

- Firstly, position the material you want to anchor.
- Drill a hole in the masonry behind the bolt holes.
- Ensure the hole is the specified diameter – at least a 6mm deeper than the length of the anchor.
- Insert the anchor into the hole.

Once the anchor has been successfully inserted into the hole, the installation process is complete!



Anything you hang from a wall – whether it's a simple family picture or large wall shelf unit – will require that the item is attached directly and firmly, with the weight safely distributed

When they're functioning correctly, windows are a wonderful asset to any home. They provide natural light and allow us to enjoy outdoor views. They even allow us to enjoy a breeze when the weather outside is nice. However, windows can experience problems that make them less functional. Most of these problems are usually windows being stuck or broken in some way.

COMMON HOME WINDOW PROBLEMS AND HOW TO FIX THEM

We're going to look at eight common home window problems you may experience and the best solutions for these problems. In some cases, there are easy fixes, while in others, you may have to replace your faulty windows with new ones.

Painted shut

If you try to open your window and notice it's not budging, look to see if paint is the culprit. If you see paint in the crevices which should be left open for the sash to move, then you're dealing with a window that has been painted shut. The best way to avoid this problem is to paint windows carefully and make sure you open them while the paint is drying to break any potential seals that are forming.

However, if it's too late for prevention, you can fix the issue with a few simple tools. First, grab a tool you can use to break the seal of the paint around the window. You'll find tools at the hardware store that are made specifically for this task, but you can also use a putty knife if you already have one.

1. Run the putty knife or a similar tool all around the window sash to break the paint seal.
2. Now see if the sash will move or if it is still stuck. If it's mobile, you've fixed the problem. If the window is still stuck, you'll need to pry open the window stop from the side jamb. Use a hammer to pull out the nails.
3. After you've removed one stop, try again to lift the sash. If it's still stuck, remove the opposite stop as well.
4. With the stops removed, you can carefully remove the sash from the window frame.
5. Now you can sand off the paint that has been causing problems. Prime and paint the window the right way before putting the sash back in place.

Drafts

Windows should keep your home well-insulated, so if you're feeling a draft coming from one of your windows, there is a problem. There are a few ways you can attempt to fix the problem, including:

- **Sealing:** If your window isn't properly sealed, applying silicone may help. Make sure the window is clean before you start. Then, using an indoor latex silicone, silicone around the window trim, over metered joints and between the trim and frame. Look for any other gaps that may be causing the draft and be sure to silicone those as well.
- **Installing weatherstripping:** Weatherstripping is intended to create a solid seal around your window, so if your window doesn't currently have any weatherstripping or it is damaged, you should install new weatherstripping. You can find weatherstripping at your local hardware store and it is fairly easy to install.
- **Upgrading windows:** In some cases, when you're feeling a draft, the best course of action is to replace your old windows. New windows are made to be more energy-efficient. When your home is well-sealed, your heating and cooling systems won't have to work as hard, so you'll likely see a substantial difference in your energy bill.



Water leak

If a window in your home is leaking, it requires immediate attention. Water leaking into your home can cause mould to grow or the wood to rot in your walls.

- **Condensation:** If you see moisture in between the windowpanes, then the real problem is that your window has lost the insulating gas that forms a seal against the outside. If this is the case, you'll likely need to replace your windows. A window that has lost its seal will compromise your home's insulation, making it harder for your heating and cooling systems to do their jobs.
- **Improper flashing:** Flashing is a weather-resistant material that is installed around a window, underneath the siding on the outside of your house. If there is a problem with the flashing around your window, then water could get in around the window. You may be able to add silicone where the flashing is located to plug up the leak, but it's better to have a professional take a look and determine the best way to fix the issue.
- **Failed window sealant:** In addition to flashing, windows should be protected around the perimeter by silicone. If there are any places where the silicone has cracked or pulled away, it could let water in around the window. If this is the source of the leak, resealing should fix it. After you re-silicone, check the window closely to see if it still leaks after a rainstorm.

Condensation

Condensation was mentioned as a leakage problem above, but again, condensation between windowpanes is an entirely different issue. If your window looks foggy in between the panes of glass, then you have a condensation issue. This condensation can freeze in the winter, leaving an icy layer in the middle of your window. Most people notice condensation issues because of a foggy appearance on their windows, and you may be able to clean out the condensation through remedies like running a dehumidifier or fan.

However, this doesn't solve the real issue that condensation in a window reveals – the loss of insulating gas. Windows



with more than one pane contain a gas, like argon, to serve as a barrier against the outside air. When your window isn't properly sealed, it allows outdoor temperatures to have a greater effect on the inside of your home. This leads to higher heating and cooling costs. So, how can you fix the problem?

You either need to remove the window and have a professional clean it out and attempt to reseal it or, more simply, replace it. Opt for an especially energy-efficient window that will insulate your home more effectively than your previous window did, even before it lost its insulating gas. Even when you're not dealing with a faulty window, heat gain and heat loss through windows typically accounts for 25%-30% of home heating and cooling energy use.

Cracked, warped, or rotted wood

If you have wood windows, then you may experience issues with cracks, warping or rotting in your window frames. This is why many homeowners prefer windows made of more weather-resistant materials, like vinyl. One of the advantages of vinyl windows is that you will never have to deal with rot. Problems with wood windows typically come from moisture and sun exposure. Termites can also cause wood to deteriorate. So, how can you fix damaged wood windows?

One of the best solutions is to prevent the issue from occurring in the first place. Every few years, apply a new coat of paint to help protect the wood from the elements. You may need to sand off old paint in some cases to keep from having too much of a paint build-up. Protecting wood from the elements is your best defence against deterioration.

If you're already dealing with some damage, but it isn't severe, you can use epoxy wood filler to fill cracks and edges to protect them from further damage. If parts of your window are severely cracked, warped or rotted, however, you may need to replace the part. For example, you may need to install a new sill. In some cases, you may need to replace the whole window. Consult a window technician

for guidance on whether to repair or replace your damaged wood window.

Won't close

If your window isn't closing, it can compromise your home's comfort and security. This problem can arise for several reasons. One is the issue of paint discussed earlier in this article. Other reasons a window may be stuck open include dirty tracks, broken pulleys, a lack of lubrication, loose fasteners, humidity, and off-centre installation. Let's look at a few ways you can try to fix a window that won't close:

- **Clean the track:** If the window track is dirty, this may be the source of the problem. Try cleaning the track using a brush and a rag. A vacuum can also help you remove debris. Now try closing the window and see if you've fixed the problem.
- **Lubricate the track:** Another solution to try if your window is getting stuck in its track is to lubricate the track. You can use beeswax or candle wax to do this, or for composite windows, try silicone spray. Once you've lubricated the track, try closing the window.
- **Tighten the fasteners:** If a fastener on the window appears to be loose, try tightening it. If you're not having success, the problem may be a stripped fastening hole. You can fix this problem by using wood filler to fill the hole before replacing the fastener.
- **Straighten the window:** If the window is off-centre, try to re-position it by pushing down on the high side and pulling up on the low side. This may or may not fix the problem, depending on whether there is another underlying issue causing the window to hang crookedly.

Won't stay open

If you're trying to raise your windows to enjoy a breeze and the window keeps closing, then there's something wrong with the window. One common cause of this problem is that the balances, which are hidden components on single and double-hung windows, are disconnected from the sash. If this is the problem, the solution is to reconnect the balance to the sash.



Another possible issue is that the balances are connected to the sash, but they're not functioning as they should. If you're dealing with broken balances, you'll need to replace them to fix the issue. The right way to replace your window balances depends on whether you have spiral window balances or side-load channel balances.

If you have double-hung windows that won't stay open, the issue may be a broken or untied sash cord. The weight placed on this cord can compromise it over time. To get to the sash cord to fix the issue, you'll need to remove the lower sash on the window. For this reason, some homeowners opt for a simpler solution of installing composite track inserts on both sides of the sashes. Of course, another solution – especially if your windows are old or otherwise damaged – is to replace them.

Won't open at all

This isn't just a nuisance – it can be a safety hazard, as well. Even if it's too cold or hot outside for you to want your windows open, you should always have the option available in case of a fire or other emergency. One of the most common causes for a stuck window is being painted over, as mentioned earlier.

To loosen a window that doesn't want to open, run a utility knife around any joints around the sash. If there is any paint or debris causing one of these joints to stick, this should help to remedy the problem. Now gently try to open the window. If you still can't get the window to open, you may need to remove the upper and lower sashes. Look for any issues that may be prohibiting the window from opening and try to fix the issue before replacing the sashes.

Whatever the issue happens to be, once you've gotten the window to open, lubricate the track the sash travels along to make opening and closing it easier. You can use beeswax or candle wax as lubrication. Of course, if you can't get the window to open after trying DIY solutions, contact a professional to diagnose the problem and potentially replace the window if necessary.



Do you have some scrap or remnant hardwood flooring that it would be a crime to turn into firewood? Why not make a feature wall?

Feature wall from SALVAGED FLOORING



Tools and materials

- Hammer
- Chop saw
- Table saw
- Belt sander and belts
- Power brad nailer and nails
- Framing square
- Level
- Measuring tape
- Carpenter's pencil
- Good quality orbital sander and disks
- Folding aluminium saw horses
- Brushes
- High quality UV resistant clear varnish and paint thinner
- Respirator
- Sandpaper
- Cloth (for wiping off the dust)

Do you think hardwood floors are overrated, or unsuitable in a home with a big muddy dog? Here's a project that will use up those leftovers and turn heads when company comes for dinner.

I had some salvaged oak wall panelling that was full of nails and glue that nobody wanted to deal with, but you could just as easily use hardwood flooring. After a dozen years of shifting this wood from one storage spot to another, I decided to use it – one way or another.

Step-by-step guide

Step 1: Prepare your wood

I found a local cabinet maker who was not interested in buying the material, but would refinish it in his shop – provided I could guarantee I had pulled all the nails.

First, he fed it through his wide planer (two passes), then through his giant roller sander (two passes). By then the profile of the wood had changed to

the point it could have been used as flooring rather than wall panelling, but I didn't want to worry about the dog damaging a nice floor, etc. so we hit upon the idea of creating a feature wall.

Step 2: Install the panelling

Make sure that the wall is clean and free of any defects (like damp, etc) that you might want to fix someday – if so, now is the time to do it.

Organise the refinished panelling into similar lengths and sort out the nicest wood grains.

Mark a line for the first row with a good level. In our case we did not start at the floor because the finished wall is actually built out from the structural wall by about a few centimetres, to allow air to circulate between the two (because this area was designed to be a hydroponic greenhouse).

Start with a long piece (e.g. on the left), and finish the first row with a small one (if you want to use up the small pieces of salvaged material, as I did). Then install the next row starting on the opposite end (e.g., on the right), with long pieces, ending with a short piece on the left end of the second row.

Each piece has to be trimmed and then cut to length with a good chop saw (and the cut edge sanded), to ensure a nice, consistent, tight fit. Using salvaged

material was a little finicky because not all the tongues and grooves were of the same thickness and shape...

Continue to alternate directions, and from time to time choose pieces with particularly attractive grain.

If the ceiling is sloped, you will have some challenges cutting the planks on a table saw, but with care it can be done to good effect. Having a good pneumatic brad nailer is nice.

Step 3: Applying the finish

If you really want to highlight the natural beauty of the wood grain, as I did, be patient and apply as many coats of clear varnish as you can stand. I put on five, given there would be direct sun on this wall.

You need to sand between each coat, because otherwise when you run your hand over the surface you can really tell

that it's not quite as beautiful as it looks...

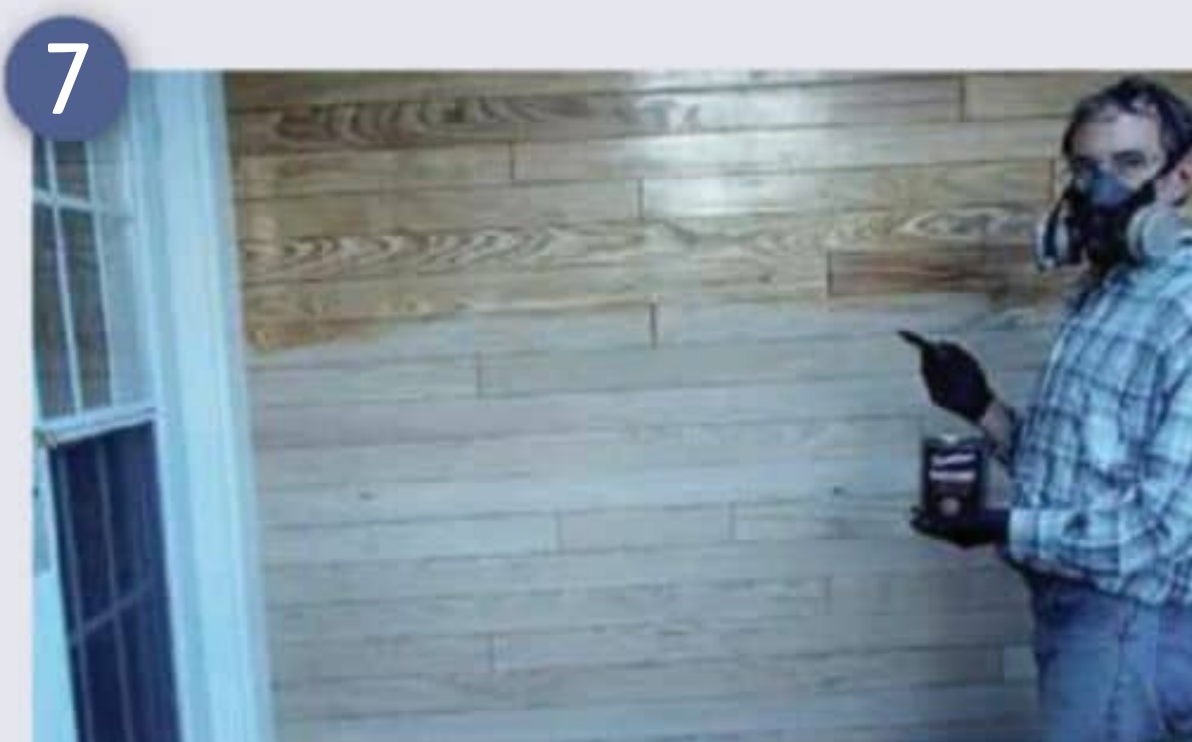
Step 4: Use up the leftovers!

It turned out that we had used less than half of the salvaged material we had planed and sanded... What to do, but feature another (larger) wall – in the master bedroom.

When working indoors, it was great to have access to the carpenter's professional grade orbital sander with its extraordinary integrated dust collection system.

Remember to allow (make cut outs) for electrical boxes. You can then install a metal box extender so that the electrical outlet (or light switch) is reinstalled flush with the new wall surface.

In this case I put on only three coats of varnish because there would be no UV exposure – don't forget to use a proper respirator when using oil-based paint indoors.



1. The pile of leftover hardwood flooring 2. The wood once it had been prepared 3. The wall in need of a feature 4. Start installing the panels from the bottom 5. Work your wall up the wall 6. All panels installed 7. Applying the finish 8. The wall once it had been varnished 9. If you have leftovers, find another wall to renovate

I recently made a plant stand to hold one of my many plants! Yes I have a plant addiction...



Tools and materials

What you need:

- 0.75" Dowels (4)
- 3/8" Dowels (3)
- Drill
- Adhesive
- Band saw
- Wood stain (optional)
- Zip-ties (optional)

What you don't need:

- A child that knocks down plants

EASY-TO-MAKE PLANT STAND

>> Anvitha Sharma

To get started, gather and cut your dowels to the desired size. For the large dowels, mark where you will drill your holes to insert the smaller dowels. On two of the dowels I drilled above the line and for the other two I drilled below. Make sure the holes are level.

Assemble the dowels together. I used hot glue to keep

everything together. To keep the plant balanced, use a third dowel (broken in half) and glue it on top of the lower dowel (refer to the images).

These next steps are optional. I used a water-based interior wood stain (colour: weathered grey satin). Finally, I added zip-ties for extra security.

1



Gather your dowels and cut to size

2



Mark and the drill your large dowel sticks

3



Assemble the dowels

4



Paint in a colour of your choice

Having the right tools to perform basic DIY auto repairs and maintenance can save you time and money.

THE TOOLS YOU NEED IN YOUR AUTO REPAIR TOOL KIT

>> Bob Lacivita

When planning on buying tools for vehicle repairs, first, set a realistic budget based on the type of repairs and maintenance you plan to do. Will you need metric or standard tools, or both? Do you plan to do light maintenance, changing fluids, engine tune-ups and the like?

However, are you considering rotating your tyres, replacing brake pads and rotors, and making cooling, suspension and electrical system repairs? If so, the cost can quickly increase. Most major national auto parts stores lend specialty automotive tools for free or a small fee.

Quality hand tools can last forever, but look for ones that come with a limited lifetime warranty. Read on to determine what you need, and what you may already have.

General tools

These are the tools every DIY'er should have in their home toolbox. They can also be used for auto repairs and maintenance:

- Screwdrivers are the No. 1 DIY tools. Consider a set with softer ergonomic handles. This design provides the greatest turning power with the least amount of effort. They are a good investment.
- Pliers are indispensable DIY tools. Get a set that includes the diagonal wire cutter, slip-joint, needle-nose and groove or arc-joint pliers.
- Wire strippers help speed up electrical repairs. Ergonomic handles are not necessary but a nice upgrade.
- A cordless drill and driver and a set of drill bits and impact nut drivers are essential to just about any home or auto repair project.
- Ball peen and dead blow hammers and a rubber mallet will come in handy when making auto repairs.
- Allen wrenches (AKA hex keys) are still used in cars and trucks. You'll need a set of these to remove and tighten cap screws securing trim and other components.

- LED lights or cordless work lights are indispensable for illuminating your work area. They can also help you avoid accidents or injury by mistaking the position or shape of an object.
- Magnetic trays help keep small parts organised. A magnetic pickup tool and inspection mirror set can help you find and retrieve that one screw that finds its way into some hidden corner of the engine bay.
- Zip ties are useful to neatly organise and secure wires and cables.

Before using any tools or equipment, be sure to read, follow and understand all manufacturer's instructions on their proper and safe use.

Tire pressure gauge, inflator and tread depth gauge

Performing regular tire maintenance involves using a tire pressure gauge to keep your tyres properly inflated and check tire tread depth. Keeping on top of these tasks extends the life of your tyres and helps you drive safely.

Socket and ratchet set

For auto repairs, a 10mm, 13mm, 17mm and 19mm drive ratchet and socket set are the most important tools to have in your toolbox. Look for a set that includes different size spark plug sockets, socket extensions and Torx and Allen head sockets.

Consider six-point sockets. They grip a nut or bolt better than a 12-point socket, reducing the likelihood of rounding off a rusted or overtightened bolt head.

Wrenches

Box wrenches and/or combination wrenches will speed up any repair. The open end of a combination wrench shouldn't be used for final tightening or removing tight bolts. The jaws are weaker and can spread open, rounding off a bolt head or slipping off causing an injury.

Nut drivers

Nut drivers, or an all-in-one nut driver that includes different size bits, are helpful when working around the dashboard.

Oil filter wrench and drain pan

Having an oil filter wrench and drain pan will make changing the engine oil and filter easier and less messy.

Door panel removal tools

Door panel removal tools are necessary for safely taking off door panels and trim without damaging the trim or the finish.

Torque wrench

Never underestimate the value of a torque wrench. A fastener that is not tight enough might fall off, causing all kinds of issues. Too tight, and the fastener, or the part being tightened,

might be damaged or become distorted. A 10mm drive torque wrench should be your go-to tool for tightening spark plugs and engine parts made of aluminium or composite plastics.

Impact gun

Today's lithium-ion battery-powered 13mm impact guns have the same torque output ratings and design configurations as their powerful pneumatic cousins. However, if you already have an air compressor, pneumatic power tools are your best choice.

If you remove your tyres, always choose a torque limiting socket when using an impact gun to tighten wheels, and always re-torque the lug nuts with a torque wrench when your vehicle is on the ground. Power tools may seem like an indulgence, but they're an excellent option to help auto repairs go smoother and easier.

Hydraulic floor jack, jack stands or ramps

If you're going to work under your car, a hydraulic floor jack and a pair of jack stands or drive on ramps make it easier and safer. Quality garage equipment provides years of service, making it a worthwhile investment.

Handheld vacuum/pressure tester

A handheld vacuum/pressure tester is a valuable tool to help diagnose why your car is running rough and can help with bleeding brakes and flushing fluids.

Circuit tester

An inexpensive automotive circuit tester can help track down common vehicle electrical circuit and circuit connection problems.

Digital volt ohm meter

A digital volt ohm meter (DVOM) is a great tool to help troubleshoot charging systems and sensitive car electronic systems.

Safety glasses, fire extinguisher and respirator

Safety glasses are not optional when working around a car. Neither is a fire extinguisher. Accidents can happen quickly and when you least expect them. Use a respirator with replaceable filters if you're using harsh chemicals, working on brakes or grinding metal or rust.

Mechanic's gloves, nitrile gloves and hand cleaner t tester

A pair of padded mechanic's gloves can help save you from breaking your knuckles and getting grease and grime under your fingernails – unless you want to flaunt it as a badge of honour. It's also a good idea to keep a box of disposable nitrile gloves handy, as well as hand cleaner/degreaser designed for mechanics.



Use your metalworking skills to make a newspaper holder.

HOLDING STRONG

>> Dan Smith



Tools and materials

Tools:

- Angle grinder
- Cutting discs, flap disc/grinding disc
- Ruler
- Square
- Tape measure
- Vice
- Hammer
- Safety glasses
- Gloves
- Welder

Materials:

- 20 x 20 x 1.6mm SHS steel (Square Hollow Section)
- 6mm round bar
- Mini corrugated iron
- 20 x 3mm flat mild steel

Step-by-step guide

Step 1: The design

I got out the paper and pencil and started drawing up some ideas. I also wanted to add my own little touch to the ends. I decided to make a tree out of round bar, and also wanted to put some mini corrugated iron on it somewhere too.

Step 2: Cutting and welding

Cut all the bits to make the frame for the holder. Then make the two ends as one piece first. Join them together with two bits which will make the bottom. Then add on the four short side sections (in the first few pictures the tree isn't actually welded in yet).

Step 3: Making the tree

Now the frame is almost done time to get started on making the tree. I got a few pieces of paper and made them the same size as the space it was going on the frame. Then free the tree on it to use as a template for bending the 6mm round bar.

To bend the round bar I put a little mark with a white marker and went to the vice and pull/pushed the round bar in the direction I needed. Keep doing that and after sometime you have a tree.

I tacked up the tree while it was still on the paper which wasn't the best idea because paper and hot molten balls of steel don't mix and I ended up burning the paper... but I managed to get both trees done.

Step 4: Last few bits to add

I added in the bits of 20 x 3mm FMS into the four short sides to hold the mini corrugated iron. They will get riveted in once it is powder coated. I also added three bits of 20 x 20 x 1.6mm SHS to the bottom to keep the newspaper in the frame.

I then put a short piece of 20 x 20 x 1.6mm SHS under each corner as feet to keep it slightly off the ground.

Step 5: The clean up

I used a flap disc on the grinder to grind back all the welds on the outside to make it look nicer when it's finished. And cleaned off all the weld spatter with a scraper, hammer and chisel.

Now it's all ready to be sent to the sandblaster and powder coaters.

Step 6: Cutting the mini orb

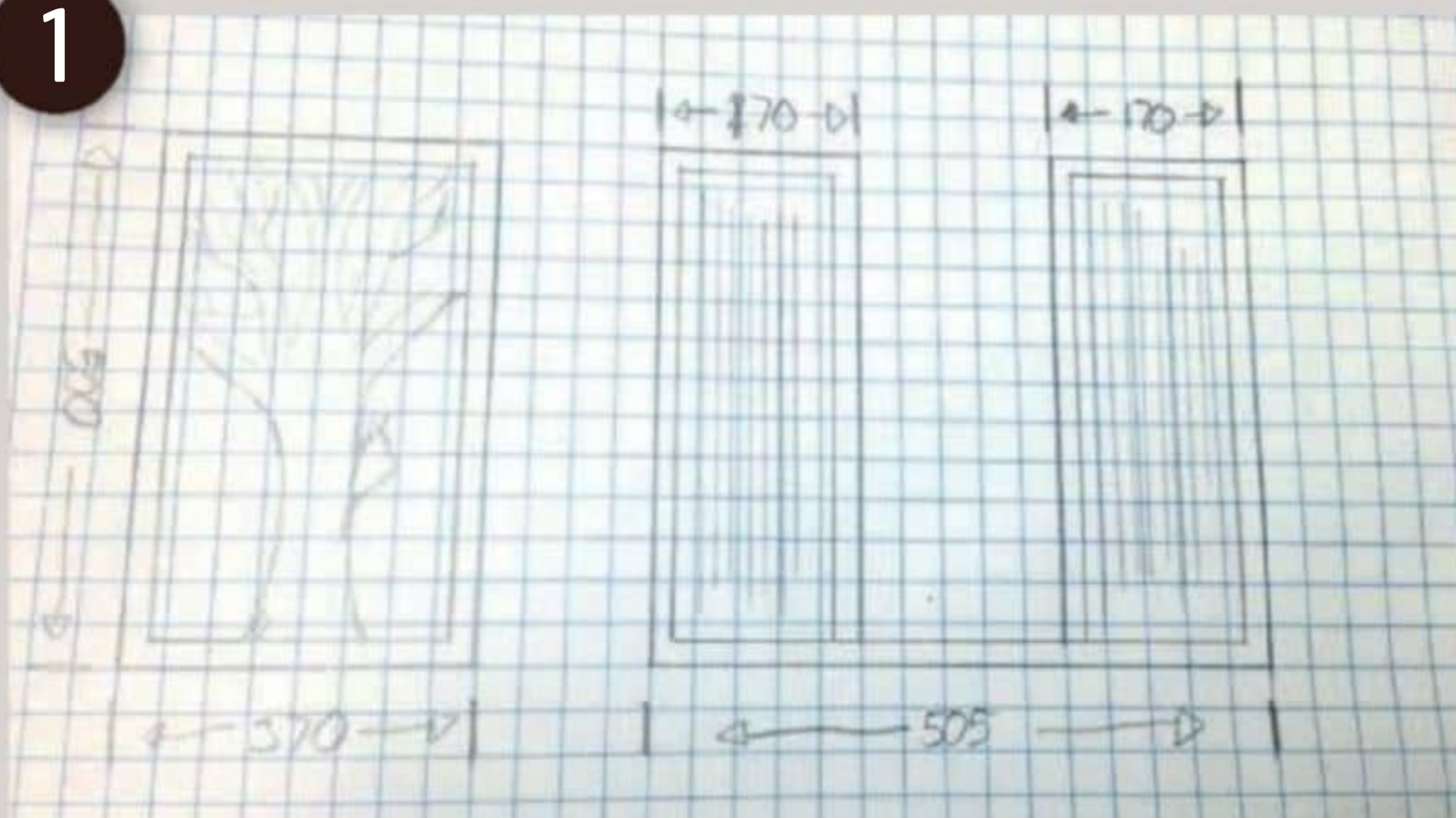
Before I sent the frame to the powder coaters, I cut out the pieces of mini orb (or mini corrugated iron) to go in the four small sides.

Once they were cut I had to notch out where the welds were so they could sit flat against the flat bar. I also predrilled the holes so that I wouldn't scratch the frame when it was powder coated.

Step 7: The finished product

All nice and shiny! It keeps the newspapers nice and neat and I don't have to worry about them falling all over the floor now!

1



The original design

2



Cut all the bits to make the frame for the holder

3



Join them together with two bits which will make the bottom

4



Then add on the four short side sections (the tree isn't actually welded in yet)

5



Free draw the tree onto paper

6



Use the drawing as a template for the 6mm round bar

7



To bend the round bar I put a little mark with a white marker and went to the vice

8



I added in the bits of 20 x 3mm FMS into the short sides to hold the mini corrugated iron

9



I put a short piece of 20 x 20 x 1.6mm SHS under each corner as feet

10



I used a flap disc on the grinder to grind back all the welds

11



Cut out the pieces corrugated iron

12



Once they were cut I had to notch out where the welds were so they could sit flat against the flat bar

13



I predrilled the holes so that I wouldn't scratch the frame when it was powder coated

Welding precautions and tips

Safety precautions in welding are action steps welders can do to prevent welding-related incidents or injuries such as burns, eye injuries, and other skin injuries and even deaths due to explosions, electrocutions, and asphyxiation. In order to eliminate or reduce the most common welding hazards, welders should practice the following safety precautions and tips accordingly:

- Provide adequate ventilation to keep fumes and gases from the breathing zone and the general area.
- Fire and electricity resistant clothing, hand shields, welding gloves, aprons, and boots can be worn to protect workers from heat, fires, electrocution, and burns. Take note that

flame retardant treatments become less effective with repeated laundering. Pant legs must not have cuffs and must cover the tops of the boots. Cuffs can collect sparks.

- Earmuffs and earplugs can also protect workers against noise.
- Keep a suitable fire extinguisher nearby while welding. Make sure the extinguisher gauge is full. If an extinguisher is not available, be sure to have access to fire hoses, sand buckets, or other equipment that houses a fire.
- If welding within 10 metres of flammable materials, put a piece of sheet metal or fire-resistant blanket over the flammable material and have someone nearby to keep track of sparks.

BRIGHT IDEAS

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

Playing cards as spacers

WINNER

This is a great way to evenly and accurately line up doors and drawer fronts. It's so simple.

For example, if I'm fitting drawer fronts in a face frame cabinet: I offer up the drawer front and push it tight to one side of the opening. Then I jam as many cards as will fit into the other side of the opening. Let's say I manage to get 10 cards in. Then I take the

cards out and put five on the left and five on the right. (I follow the same process to space it top and bottom also). Then I push the drawer front in and get it temporarily fixed with double sided foam tape. Then I screw through the back of the drawer box into the drawer front.

It gives me perfect results every time!

Allister Vivier, by email



Clothes peg to hold panel pins

I've got big, awkward fingers that really struggle with small pins when nailing by hand. I've been known to give my poor fingers a few blows of the hammer at times! A clothes peg kept in your tool bag solves this problem nicely.

Ockert Grobler, Amanzimtoti



Don't use clamps – use masking tape!

This trick works brilliantly for making mitred boxes. It's pretty difficult to clamp a mitred box anyway! Lay your four pieces out flat with the outside faces of the box facing up. Line them up correctly and tape them together.

Then flip the pieces over and glue inside your mitres. Fold them together and tape up the last remaining joint. This gives me perfectly aligned mitres!

Pieter du Toit, Zuurfontein



Sander pad sanding block

Eventually the hook-and-loop pad on a random-orbit sander will wear out. Instead of throwing the old pad away, I used its mounting holes to screw it to a palm-sized block of wood. Even with some of the hook-and-loop surface worn away, I've found there's still enough grip left on the pad to hold sanding discs for a convenient hand-sanding block.

Paul Guncheon, by email



WIN!

Tork Craft Saw Horse set

Portable Saw Horse, Load Capacity 500Kg per Saw Horse, Working Height 730mm
Material: Steel - Body, Brackets and Legs, Rubber - Foot Pad, Plastic - Handle.

Send your bright ideas to:

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

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

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

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Congratulations to Allister Vivier who wins a Tork Craft Saw Horse set.

Woodworking with children
how to: make a Fox and Sheep
playing board.



GAME ON!

Small speedy projects are perfect when you want to get started and practise your woodworking skills; they're also excellent if you're working with a very young carpenter. That's why we've chosen this fun game – it's quick and simple to make. No special carpentry skills are needed to make this playing board, but it does require careful measuring and a steady hand!

This woodworking tutorial is suitable for making with children, but please remember that working with tools and wood can be dangerous. Before using any tool with which you are unfamiliar, consult its operating instructions and, if necessary, seek instruction by a qualified person for appropriate safety techniques.

Step-by-step guide

Step 1: Cutting the playing board

Cut a playing board to the size of your choice. It must be a square and there has to be room for 33 holes, so preferably not smaller than 20 x 20cm. Mark out a grid pattern of 8 by 8 equal-sized squares. If you have a board that is 20 x 20cm, then each square will be 2.5 x 2.5cm. Use a mitre square to draw the lines to ensure they are completely straight.

Step 2: Drilling the holes

When you've drawn the grid, make

33 holes to form a symmetrical cross. Mark them with a bradawl or another sharp tool, and then drill the holes. You can work out the drilling depth by measuring the thickness of the board and subtracting half a centimetre. This will ensure you don't drill a hole right through the base!



TOP TIP! Why not try measuring a piece of masking tape to the length you need to drill, and using it to mark this on the drill tip? It will help you see when to stop.

Step 3: Making your playing pieces

The playing pieces consist of sawn lengths of dowel. The dowel must be of a size that fits into the holes you've just drilled, preferably as snugly as possible. Saw 32 pieces of the same size to play Fox and Sheep or Solitaire, but make sure to make a few extra pieces while you're at it as playing pieces have a tendency to disappear!

Step 4: Rules for playing Fox and Sheep

This game consists of 20 sheep, and 2 foxes which are painted red. The sheep have to move across the board to the opposite side (where the foxes start).

Toss a coin to find out who will be the foxes and who will be sheep. The foxes always start. They can move in any direction: forwards, backwards, diagonally or sideways. They capture a sheep by jumping over it into an empty hole and the sheep is then taken from the board. The fox can jump several times in one move, but can stop wherever it likes.

The sheep can move forwards and sideways, but never diagonally or backwards, and they can only ever move one step at a time. They can't capture the fox by jumping over it, but they can trap it in a corner so that it can't go anywhere. When that happens, the sheep have won! The fox wins when it has captured at least twelve sheep.

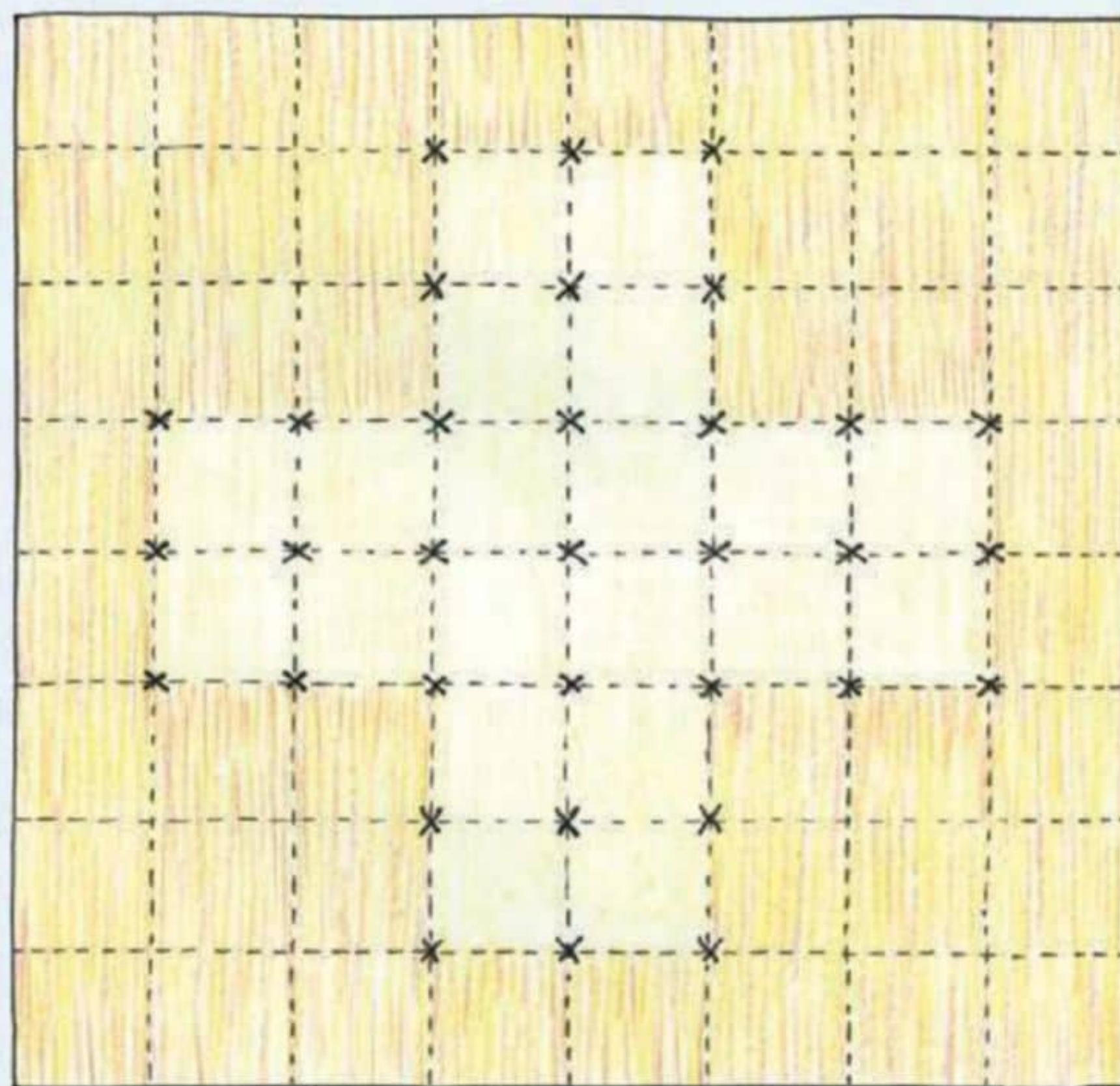
Step 5: Rules for playing Solitaire

In this game, just like Fox and Sheep, pieces have to be captured from the board. A single player must think strategically and play so that only one piece remains on the

board. It's all about planning your moves so that you jump over the pieces one by one, removing the pieces you have jumped over.

Start by filling 32 of the board's 33 holes, keeping the middle hole empty. This is the starting point of the game. The pieces can move forwards, backwards and sideways, but not diagonally.

The game is over when only one piece is left in the centre hole on the board. You will need to concentrate and think logically to finish this game!



The drilling template



This is a great project to get the kids involved with

ASK OUR EXPERTS

Our panel of experts answer your questions on DIY problems

Is cordless the way to go?

WINNER

Please help! I have just returned from my local hardware and the salesguy wasn't very helpful. I need a new drill but don't know whether to buy corded or cordless. Although I won't be using it daily, with all this loadshedding lately I was thinking cordless might be the best option, but how long do the batteries keep their charge for? General uses will be drilling into walls to hang picture frames, shelves etc. and drilling into plywood (I make custom designed plywood furniture for family and friends in my spare time). Any advice would be helpful.

Ockert Niemand, by email

Digby Wesson, Diggers DIY and Positec Group replies: Cordless; the versatility it offers and ease of use make this a simple

decision. The batteries are important in your decision as half the cost of the tool is in the battery and charger. Lithium-Ion is the industry standard at the moment and are great because they only slightly discharge over a long period. So you can charge them today and use them in 3-4 months or even longer and they will have held their charge. The size of the battery 2.0ah, 4.0ah, 6.0ah and 8.0ah refers to the Ampere Hours(ah) the battery can hold. More ah, more fuel stored in the tank. Make sure to invest in a good brand with a wide variety of tools that work from the same battery platform. With all the new technology good cordless drills can match most corded drills. Also, most brands offer a range of power packs and long lasting with quick chargers plus the new battery share system so one battery fits all power and garden tools. I am a big DIY'er, a

power drill addict and collector. There are not many brands I don't own and have tested.

Looking at your needs, you want the drill to do everything, including hammer action. My recommendation to you, look at the new WORX Slammer Drill; it will not disappoint. It's light, compact, very powerful and reliable, and is perfect for the DIY you have described.



No More Nails adhesive removal

After putting up some coving in the kitchen, my wife has noticed a few marks on our white kitchen cupboards which are smears of No More Nails

adhesive. Do you have any ideas how to remove, what to use etc., without damaging cupboards?

Jon Steinberg, by email

Ed replies: If you used the water-based version, try holding a cloth soaked in hot water on the adhesive to soften it, then try rubbing it off.



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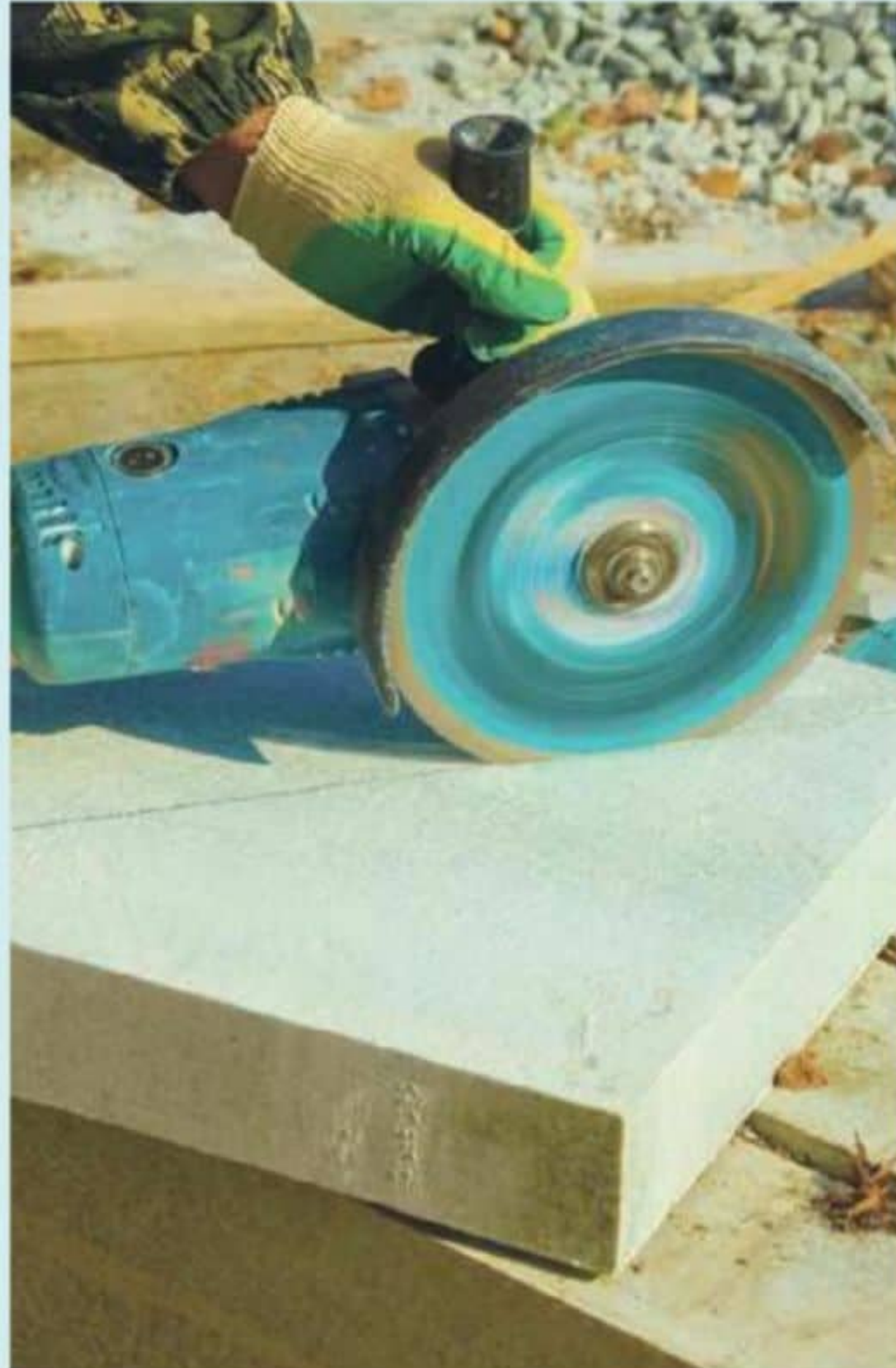
Our winning query comes from Ockert Niemand who wins a digital subscription to *The Home Handyman* magazine for a year.

What is the right tool for cutting paving slabs?

I am new to this, hence the question! I have seen how you can score a paving slab, then knock it over a stone to get a straightish split. I am hoping to buy a power tool second-hand to get the job done. My dad has a Bosch PKS 18 LI, although looking at this is only seems to be for woodwork. Would you be able to buy a blade that would score concrete paving slabs, or do I need to go for a different tool. And if so, which type? Thanks in advance!

Terence Winter, Klerksdorp

Ed replies: I would suggest you buy a 125mm angle grinder with a diamond blade – scoring and tidying wandering cuts solved. Mains powered version can be picked up pretty cheaply.



New house with horrible creaky floorboards

Novice here. We have moved into a new house with horrible creaks and squeaks on stairs, landing and in my daughter's room. Is there any easy way to reduce these. Would only have access from top by lifting carpet?

We have no DIY experience and are not the most practical. Would it require a professional? And would it be expensive? We are due to get better underlay and carpets.

Bill Norcross, by email

Ed replies: If your house is new get the builders back to correct these problems. If it's an established house, the stairs can be glued and wedged from underneath to reduce creaking – the floor will need to be exposed to establish what to do.

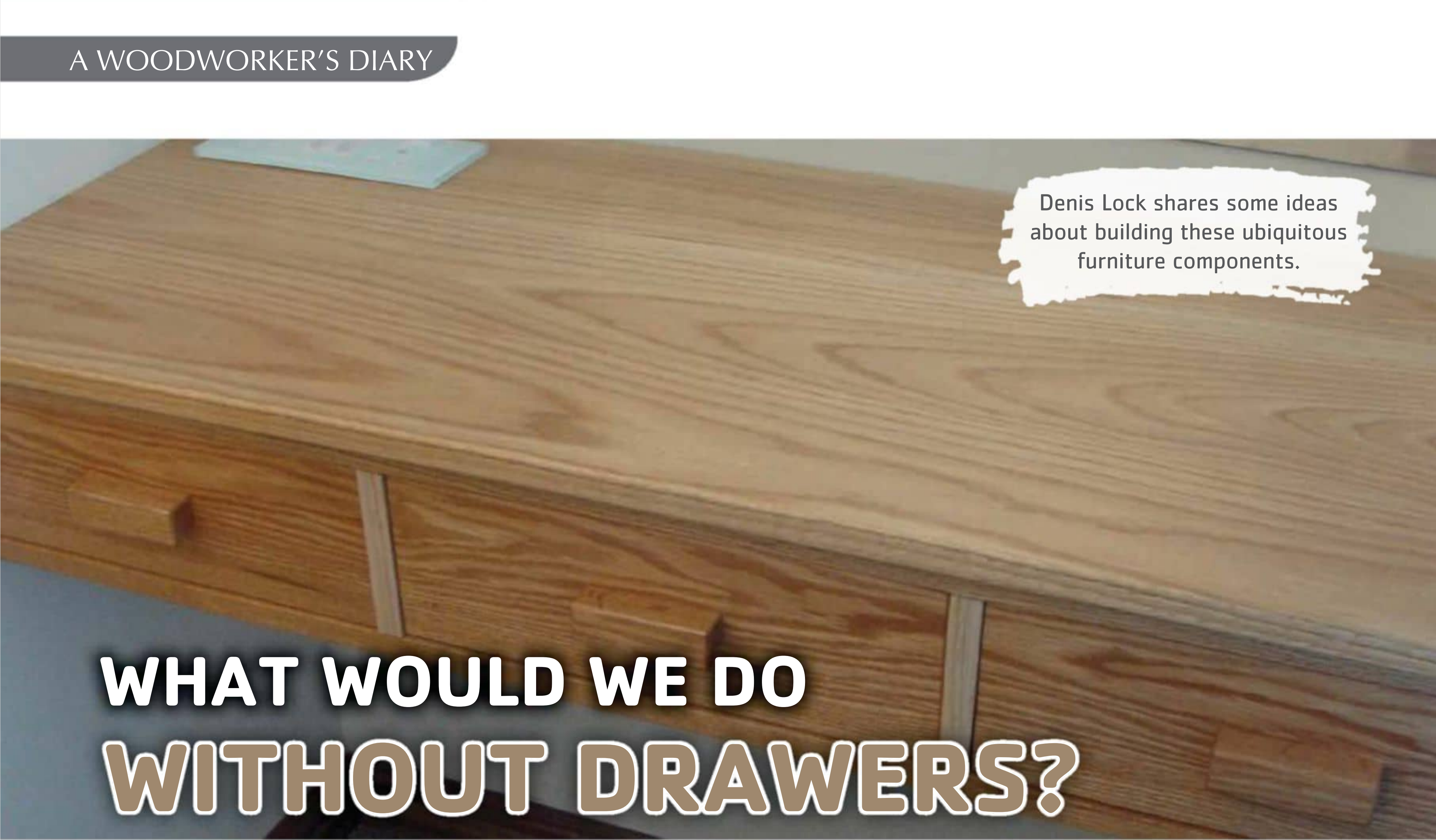
What to use to fill and fix gaps around windows

Looking for help on what to use, some of the corners of the window sill where the wall, window sill and window frame meet, are starting form small gaps in the wall, what could I use to fill the gap in the corner and should I use some sealant where the window sill meets the wall?

Markus Gordon, Gqeberha

Ed replies: Try using a silicone-based frame sealant; look for one that claims to be paintable.





Denis Lock shares some ideas about building these ubiquitous furniture components.

WHAT WOULD WE DO WITHOUT DRAWERS?

>> Denis Lock

When I write about the storage boxes we fit into furniture, the ditty below always comes to mind.

“Chase me Charlie, chase me Charlie
Lost the leg o’ me drawers
Chase me Charlie, chase me Charlie
Won’t you lend me yours”

Perhaps it is to remind me that the correct spelling is **drawers** and not **draws**.

What is a drawer? It is box (without a lid) that slides in and out of a cabinet or from under a work surface (Heading photo). I counted 53 drawers in our home. They are used to store, organise and secure a large variety of belongings. My partner claims that I also use them to hoard items that should have been thrown out ages ago.

Drawers do not exist in isolation. They are part of something else: a cabinet or console table. Drawers can be divided into two categories. An overlay drawer is one where the drawer front is larger than the drawer opening, and the drawer front sits proud of the face of the piece of furniture. An inset drawer is one where the drawer front is fractionally smaller than the drawer opening and the drawer front fits into the opening. Overlay drawers are easier to make and fit and are generally used in built-in cabinets (kitchen, bathroom and dressing room). Inset drawers are more likely to be found in free standing furniture. These are not hard and fast rules – time and skill (and thus cost) are the final decision criteria. In the case of built-in cabinets, the method of construction often determines the drawer type.

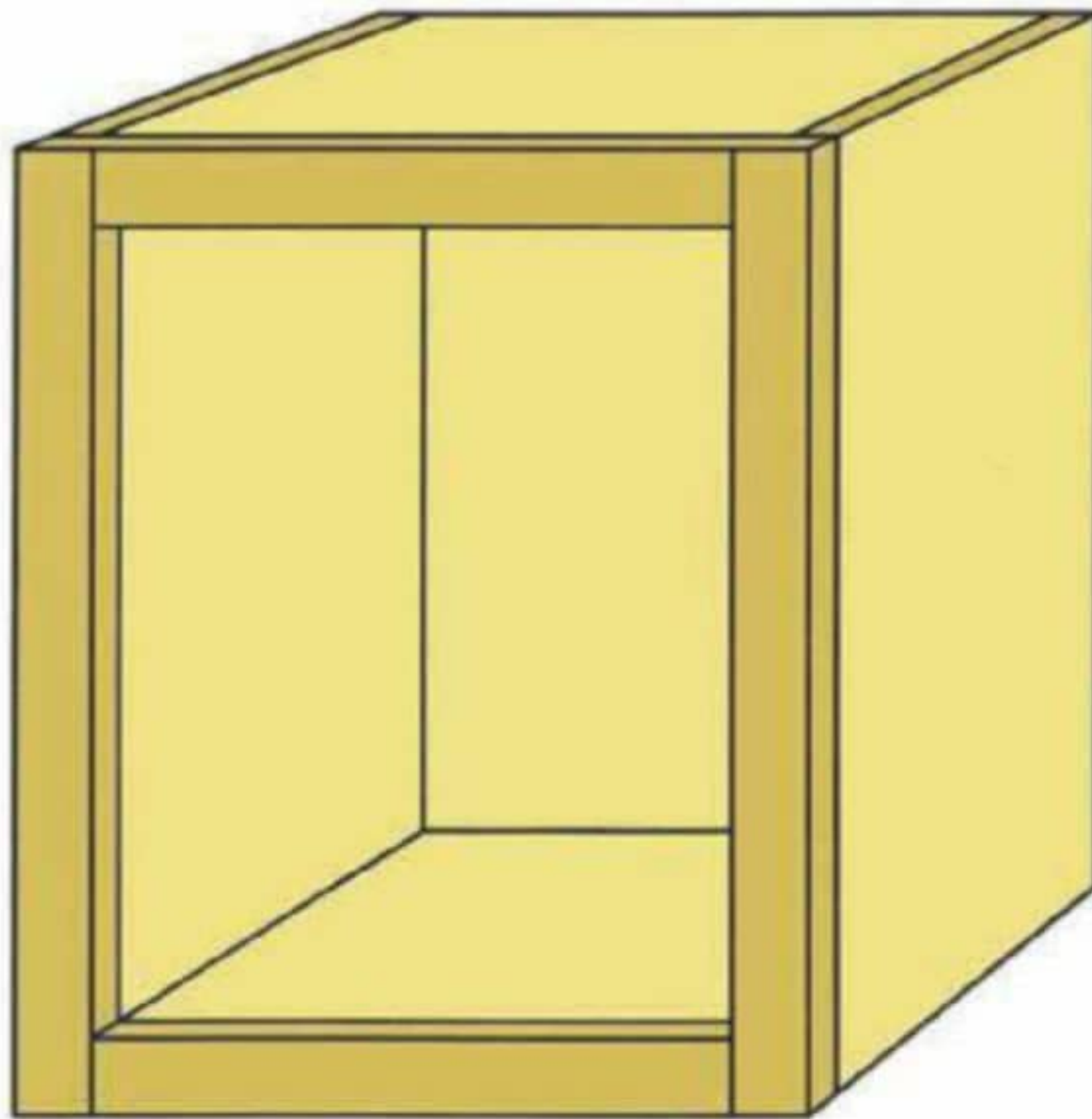
The traditional cabinet construction method is to use a face-frame. This solid-wood frame (Photo 1) hides the ugly edges of a plywood, veneered chipboard or veneered MDF carcass. It also helps square up the cabinet box and is often embellished with flutes, beads or rosettes. In the case of built-in cabinets, it overhangs the sides of the cabinet and is shaped (scribed) to fit snugly against the wall. This method continues to be used for high-class cabinets.

The increased use of man-made boards, the availability of computer-controlled panel saws and automatic edge-banding machines plus a cost-reduction drive led to the introduction of frameless cabinet construction (Photo 2). The front edges of the cabinet are finished with a plastic or wood veneer. I prefer something more substantial and use solid-wood (4mm to 6mm) edging. See my article **Applying edging to man-made boards** in the November/December 2022 issue of **The Home Handyman**. Frameless construction is widely used for kitchen, bathroom, dressing room and other built-in cabinets.

There are two types of drawers: overlay and inset (Photo 3). Overlay drawers can be either full-overlay or partial-overlay. Frameless cabinets are normally fitted with full-overlay drawers (Photo 4). These drawers are easy to make, however, they require careful fitting to ensure consistent gaps (reveals) between drawers and adjacent doors or drawer banks. The ‘standard’ size for this gap is between 2mm and 4mm and if accurately done results in a clean contemporary look. Full-overlay drawers often have a false front fitted to the drawer box and generally use metal runners.

1

Face frame
is made
from solid
wood and
attached to
face of
cabinet



Face-frame construction

Partial overlay drawers can also be used with face-frame construction (Photo 5). There is actually no real difference between full-overlay and partial-overlay drawers. A face-frame cabinet has 50mm or more material beyond the drawer opening whereas a frameless cabinet only has 16mm to 22mm of edge that can be overlaid. Like full-overlay drawers, partial-overlay drawers often also have a false front fitted to the drawer box and generally use metal runners. The vanity unit (Photo 5) has partial-overlay drawers.

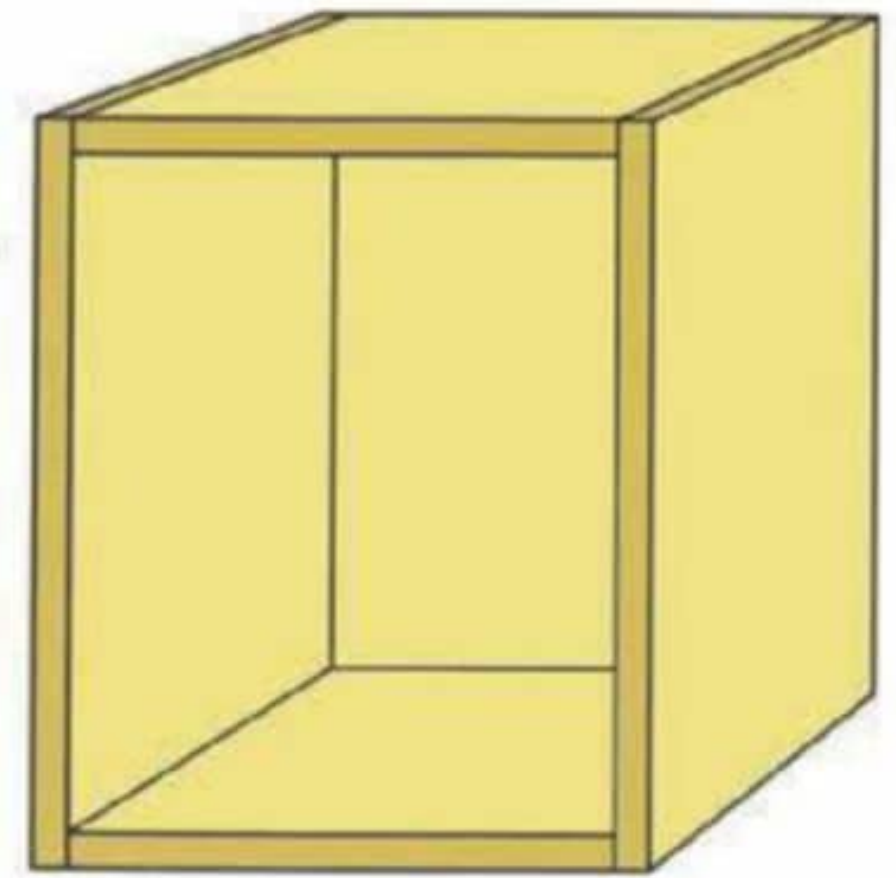
There are three variations of inset drawers (drawers where the face fits into the drawer opening). Two are shown in Photo 3. A flush drawer is the most challenging of drawers to fit. Any mismatch between the frame and the drawer face are noticed immediately. A recessed drawer is set back about 3mm from the surrounding frame. The inner edges of the frame are rounded slightly, and this creates a shadow line that disguises the small gaps that must be left to allow for wood movement. The wall-mounted office storage unit (photo 6) has recessed drawers. A proud inset drawer, not shown in (Photo 3) is set forward by about 3mm. The edges of the drawer face are rounded slightly and again this creates a shadow line that disguises the small gaps between the drawer front and surrounding frame. The chest of drawers in (Photo 7) has proud drawers. There is no difference in the construction of the three variants. The setting of the drawer stops will determine whether the drawer is proud, flush or recessed. Photos 6 and 7 were taken in the dry highveld winter. The solid-wood fronts will swell (height-wise) in summer and the gaps at the top of the drawers will close up.

Building drawers

When I am building drawers for fine furniture, I generally use solid wood. The drawer front is normally made from the same wood as the surrounding carcass. Sometimes a contrasting wood is used. There is no need to use an expensive hardwood for the sides and back. I used to use meranti as my secondary wood. The price of meranti has skyrocketed and costs much the same as kiaat today. My choice of a secondary wood today would be saligna or pine. The drawer front is typically 22mm thick. This is too thick for the sides and back. I use 12mm-16mm material for these components.

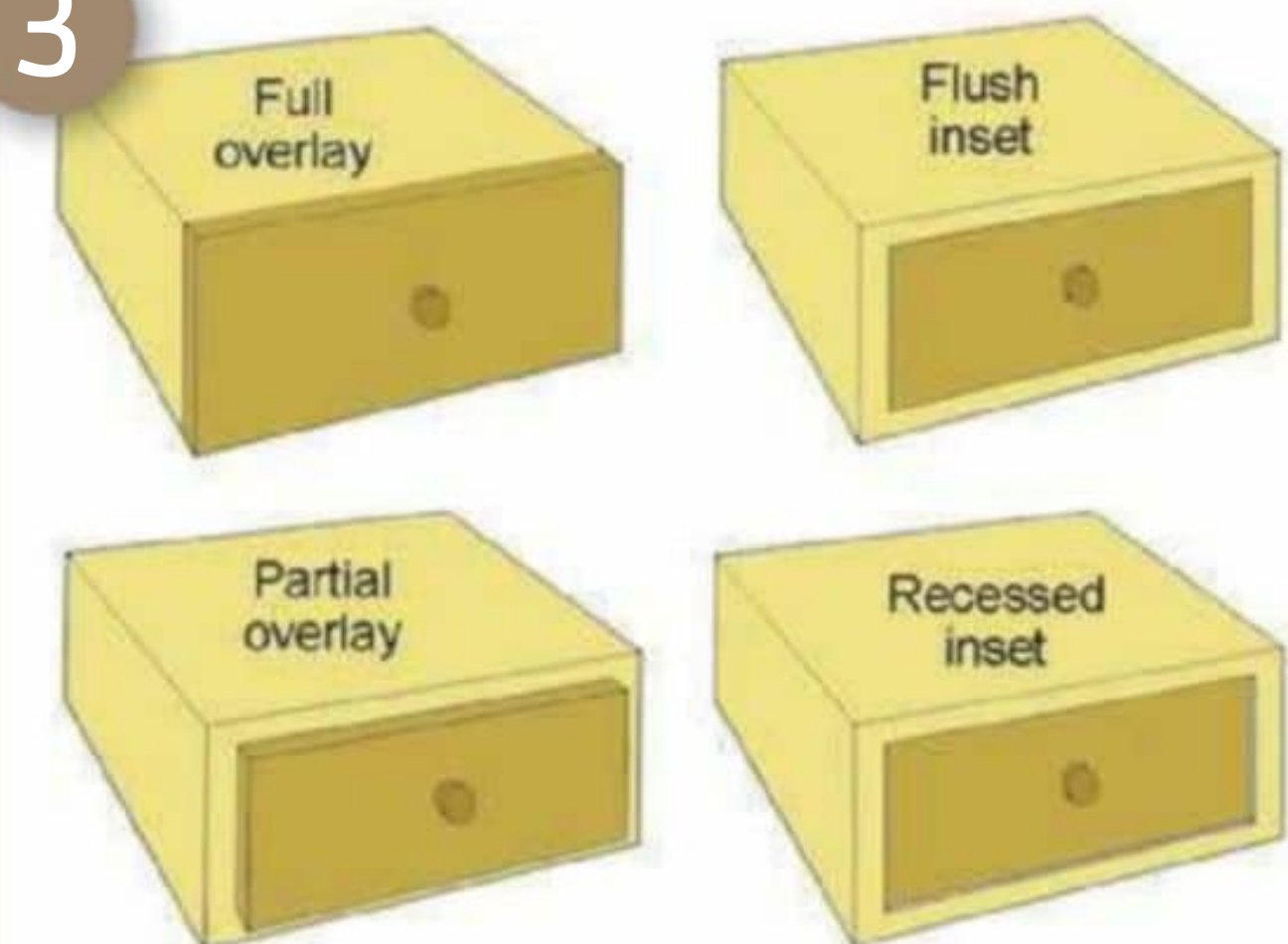
2

Front edges
of cabinet
are finished
with plastic
or wood
veneer



Frameless construction

3



Drawer types

4



Full overlay drawers (kitchen)

5



Partial overlay drawers (vanity)

6



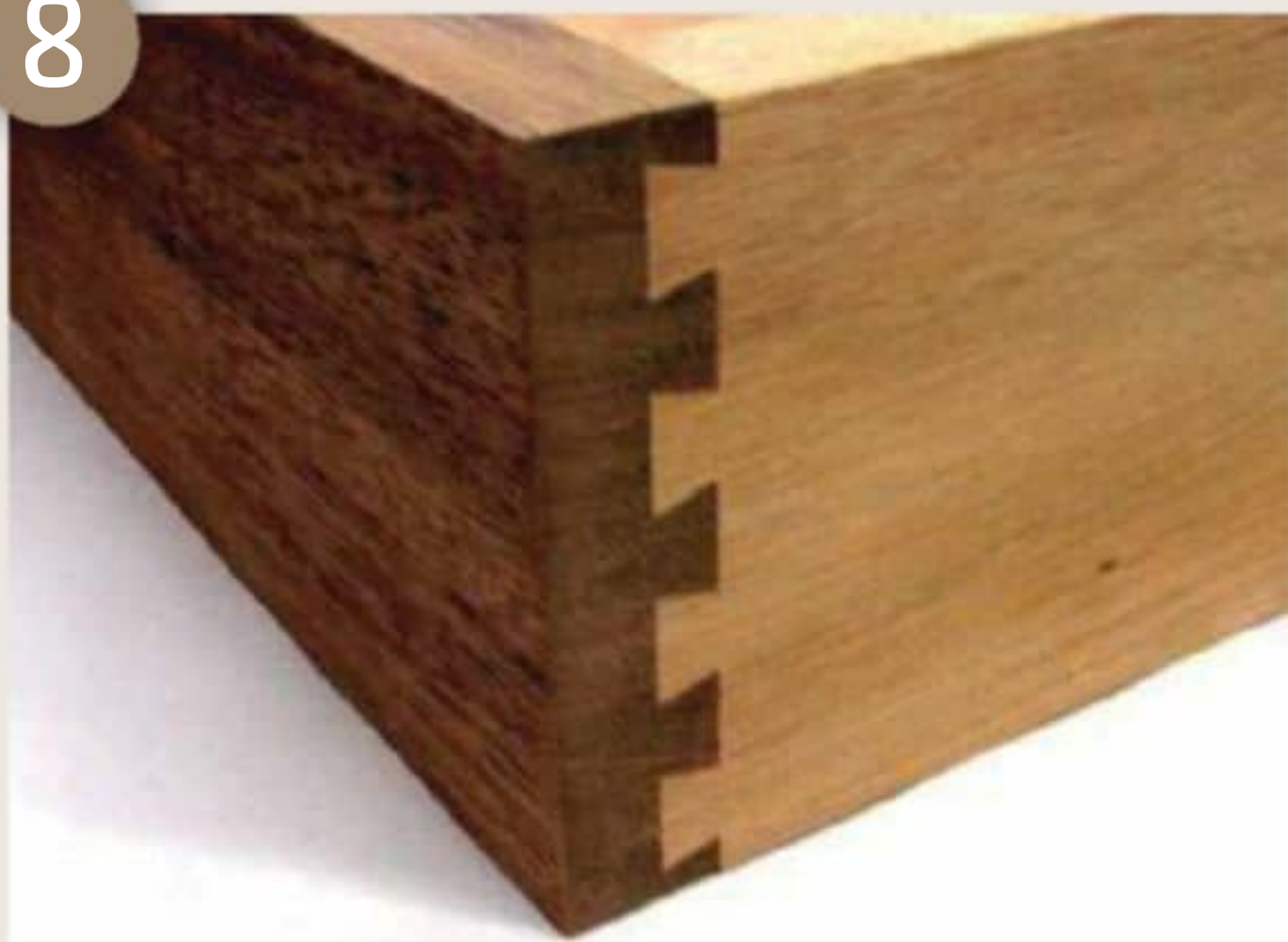
Recessed inset drawer (wall unit)

7



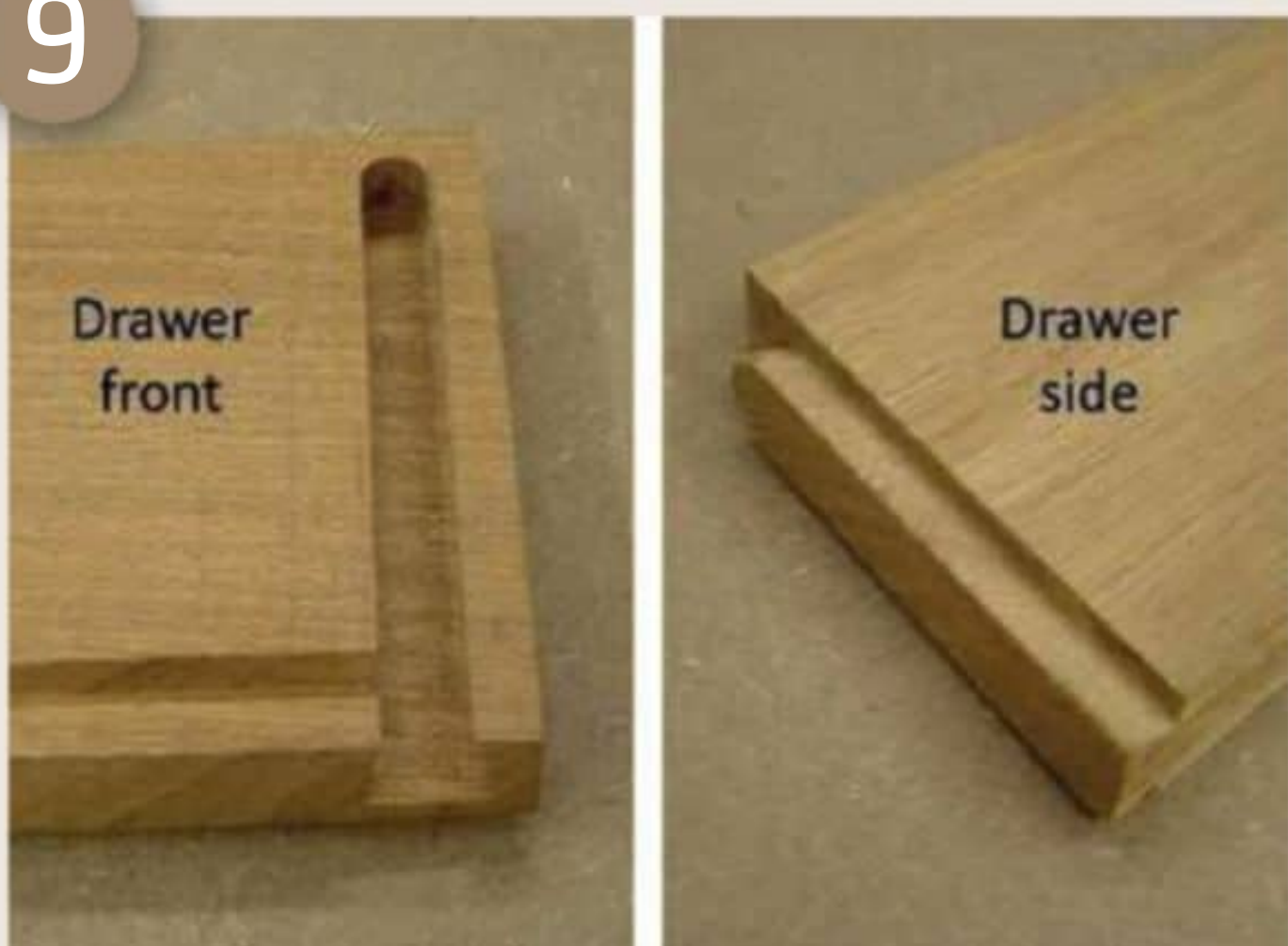
Proud inset drawer (chest of drawers)

8



Dovetail joint

9



Sliding dovetail joint

Drawers must be sturdily built. They are yanked open and slammed shut. Add to this abuse the inertia of heavy drawer contents. The joint between the drawer face and drawer sides must be strong. The traditional joint for this purpose is a half-blind dovetail (Photo 8). The joint shown has been machine cut using a router and dovetail jig. This joint (sometimes called an English dovetail) is very strong. It has a lot of mechanical interlock and a lot of face-to-face gluing area. It is also an attractive joint. Having said that I don't buy the need to build an attractive joint that is hidden 99% of the time.

My choice for solid-wood drawer joints is the tapered sliding dovetail (Photo 9). The drawer front has two dovetail-shaped dados cut in it: one for each side. The sides have dovetail-shaped stub tenons that slide into the dados (Photo 10). I add a 1:100 taper to the dados and tenons. Photo 11 shows the components for such a drawer and Photo 12 shows an assembled drawer. The sliding dovetail joint (sometimes called a French dovetail) is every bit as strong as an English dovetail. In fact, once the drawer base has been installed there is total mechanical interlock on the drawer face/back-sides joints. This joint needs a router, router table and some simple shop-made jigs to cut.

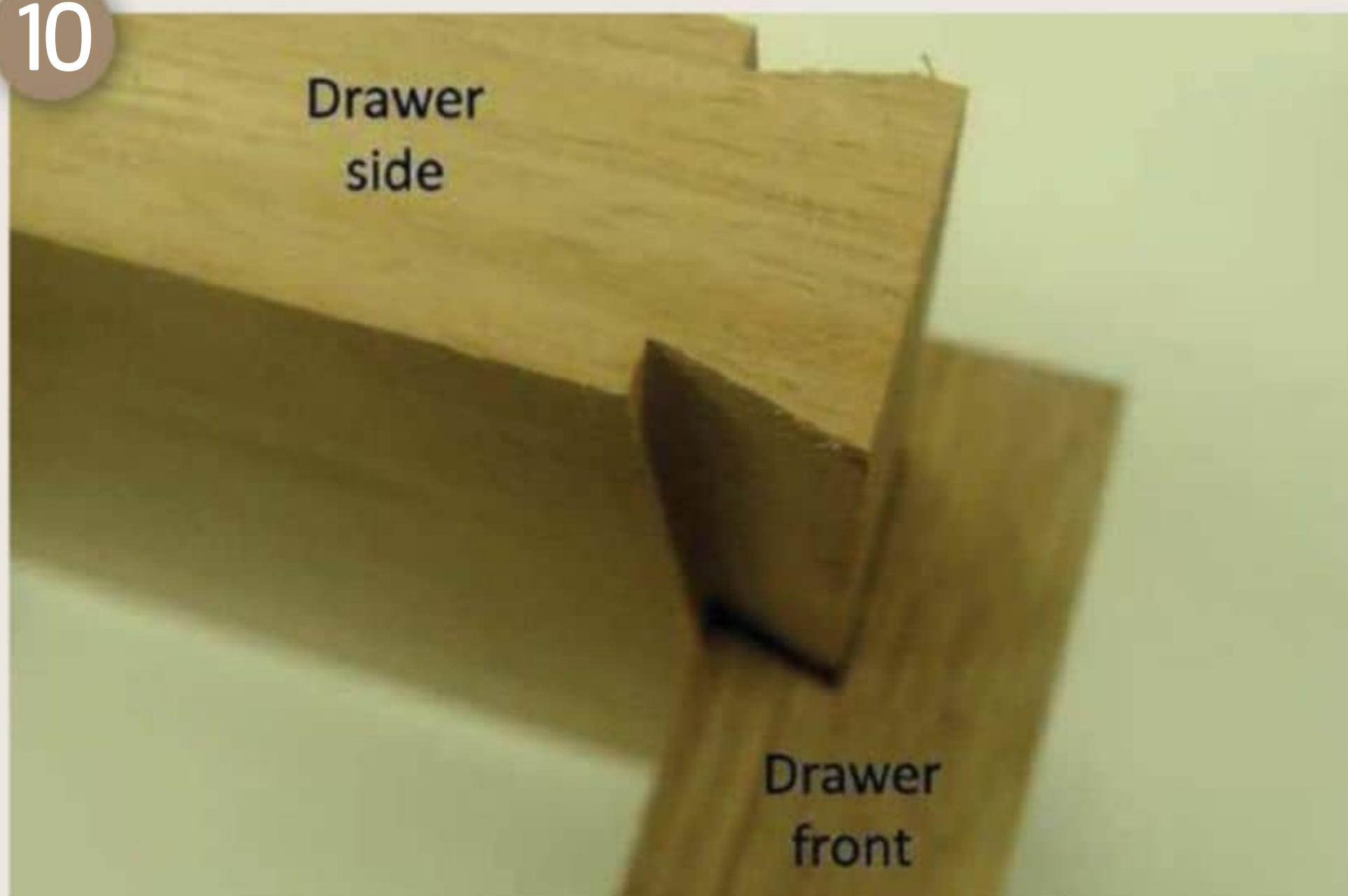
Another strong joint is made with a special router bit: a drawer-lock bit. This bit (Photo 13) is used in a router table. A single setup (bit height and fence position) is used to rout the front and back (pieces flat on the router table) and the sides (upright against the fence). As can be seen in Photo 13 it creates a strong interlocking joint ready for gluing and clamping. I would add two pins to each joint.

The three joints, just discussed, meet the need for strength in hard-working solid-wood drawers. We don't need to look to the drawer bottom to provide extra strength. I use two pieces of 3mm veneered plywood glued back-to-back or 6mm MDF. I have never used 3mm material. I have seen too many distorted bottoms: 3mm often can't take the weight of the drawer contents.

Photo 14 shows the painted drawer from a bedside pedestal. It is made from 16mm MDF. The top edge of the front, back and sides have been edged with 6mm solid wood (see the November/December 2022 article referenced earlier). The false front is edged right around using mitred joints at the corners. MDF and other man-made boards (chipboard, plywood and OSB) do not lend themselves to the type of joinery used for solid-wood drawers. Plain butt joints, see the ringed joint in Photo 14, strengthened with glue, chipboard screws and/or biscuits/Dominoes are used. These joints don't come close to the strength of the solid-wood joints. We need something more. The extra strength comes from using a 16mm man-made board base. The drawer is built around this strong base as shown in Photo 15. Note that the base sits inside the front/back/sides frame. The tops of the front/back/side pieces are edged. All other edges (except the back edges of the side pieces) are hidden by this construction. Note the orientation of the side pieces. They are 32mm longer than the depth of the base and screw into the front and back pieces. This is stronger than the other way round: and hides some raw edges.



10

*Slides into place*

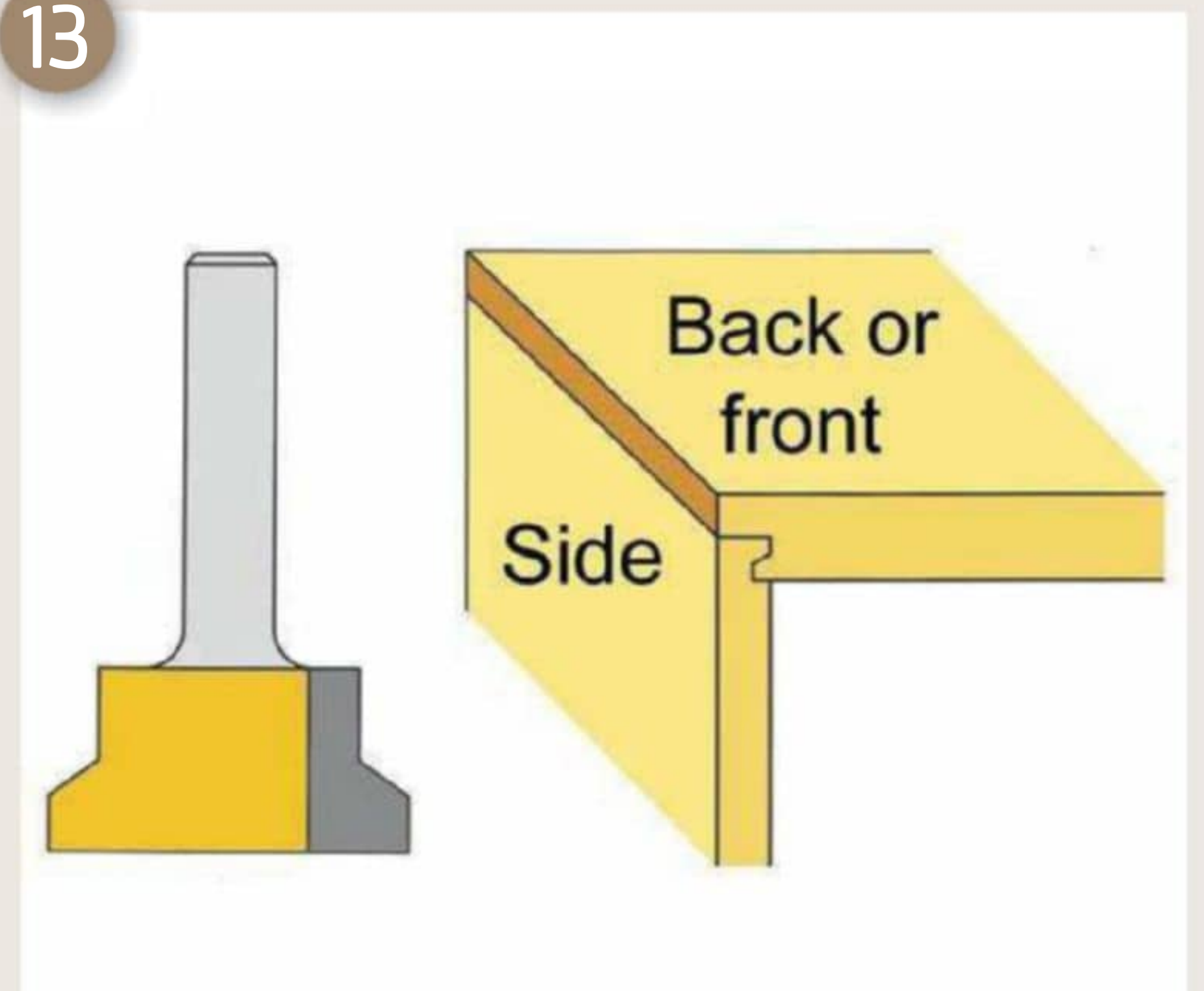
11

*Drawer components*

12

*Assembled drawer*

13

*Drawer-lock joint*

14

*Butt joint*

15

*Drawer components*

16

*Assembled drawer – awaiting false front***ABOUT DENIS:**

Denis Lock runs a woodworking school and shop. He can be contacted at denis@tacazze.co.za or 082-267-5948. Visit his website at www.routingwithdenis.co.za

WOODWORKER'S CORNER

Sharing techniques, ideas and a love of wood

About the Woodworking Association of Pretoria

The Woodworking Association of Pretoria was established during 1989 as a non-profit association with the purpose of bringing together woodworkers in all disciplines in the Pretoria area of South Africa. Its objectives are, amongst others, the dissemination of information on wood and woodwork, to create co-operation between members, to exchange ideas and knowledge, to organise regular meetings, workshops and competitions of members in the various disciplines of woodwork, to issue a regular newsletter to members and to liaise with other similar associations and clubs in South Africa. Membership is open to any person interested in woodwork who applies on the prescribed application form and pays the annual subscription. The association currently has more than hundred members.

The monthly meeting of the association takes place on the last Wednesday evening of every month. At these meetings we usually arrange for one or two people from outside the association to talk to us about woodworking-related products, equipment or techniques.

There are three interest groups in the association namely the Cabinet Makers, the Woodturners and the Woodcarvers Group.

Becoming a member of the Woodworking Association of Pretoria has many advantages to the woodworking enthusiast. Not only are you sharing a common interest, there is a lot to learn from each other. At the monthly meeting, we always have a speaker that will explain an aspect of woodworking.

Apart from that, there are the hands-on sessions at the separate meetings from our major interest groups. There you will learn a great deal and share loads of information with other people. Most of our members are experts in their fields with knowledge you cannot find in books.

Membership is encouraged. Feel free to download the membership form from the website, fill it in and start sharing the wonderful world of woodworking.

For more information, visit www.ptawoodworkers.com

The benchmark in woodworking tools

Tools4Wood was founded in 2013 as a specialist fine woodworking web store. Its aim is to provide its customers with quality woodworking tools, and equip them with the know-how to use those tools. As such, its web store includes an ever-growing range of tools, a selection of project plans ranging from novice to expert, woodworking tips, how-to videos and product reviews.

One of the highlights since the company started was being profiled on the John Robbie show during the 702/Nedbank Business Accelerator Program, both in 2013 and 2014. This

platform contributed to significant growth levels resulting in additional employees joining the team, a broader range of brands and better value for its customers.

Due to increasing demand for a walk-in store, the company moved its premises to Johannesburg in July 2019. Their customers now have access to 1600 square metres of showroom. Additionally, its fleet of delivery vehicles has increased to five. Tools4Wood carry a massive range of stock at its showroom, but still just a fraction of the tools they sell online.

For more information, visit www.tools4wood.co.za



Common types of woodworking joints

Woodworking projects often involve connecting two wooden workpieces together. While glue or adhesives may sometimes be used, most wooden workpieces are connected via a joint. A joint is a natural connection where the ends of two wooden workpieces meet. It's designed to hold the wooden workpieces together, thus eliminating the need for glue or adhesives. What are the most common types of woodworking joints?

Butt Joint: While relatively weak, the butt joint is a common type of woodworking joint. It consists of two wooden workpieces that are fitted at a right angle. One of the wooden workpieces is "butted" against the other wooden workpieces. The butt joint doesn't offer the same level of strength as other woodworking joints, but it's simple and easy to create.

Dowel Joint: Some woodworking joints require the use of dowels. Known as a dowel joint, it's often used in furniture. With a dowel joint, the ends of two wooden workpieces are constructed with one or more hollow tubes. These tubes are designed to support a dowel pin. Dowel joints are typically used in conjunction with a butt joint. The wooden workpieces are jointed at a right angle, after which they are reinforced with one or more dowel pins.

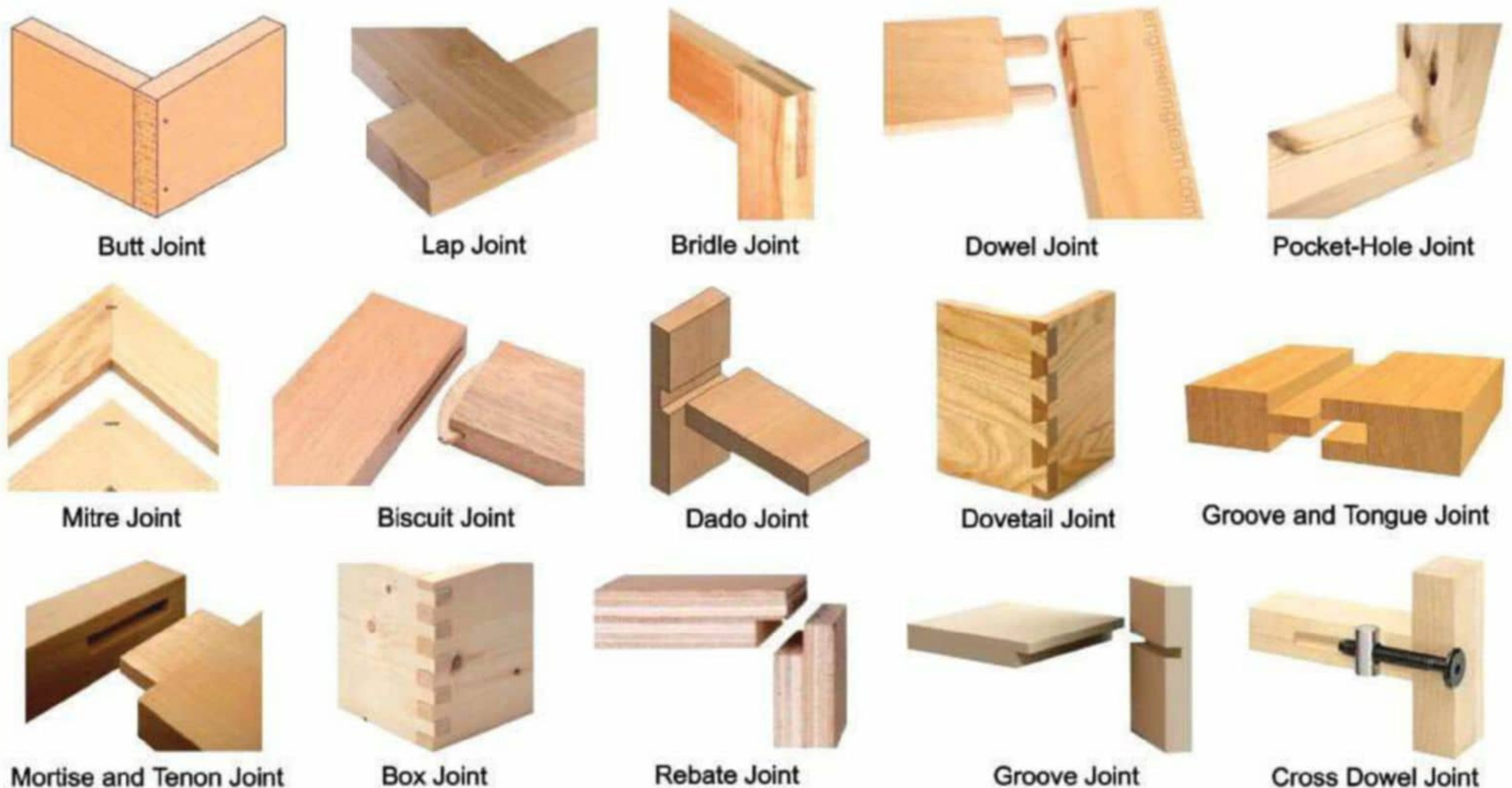
Box Joint: Another common type of woodworking joint is a box joint. Box joints are characterized by their interlocking

design. The ends of the wooden pieces are constructed with teeth that interlock together. Box joints are stronger than butt joints. With their interlocking teeth, they create a stronger connection between the joined workpieces.

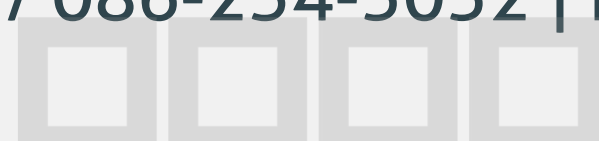
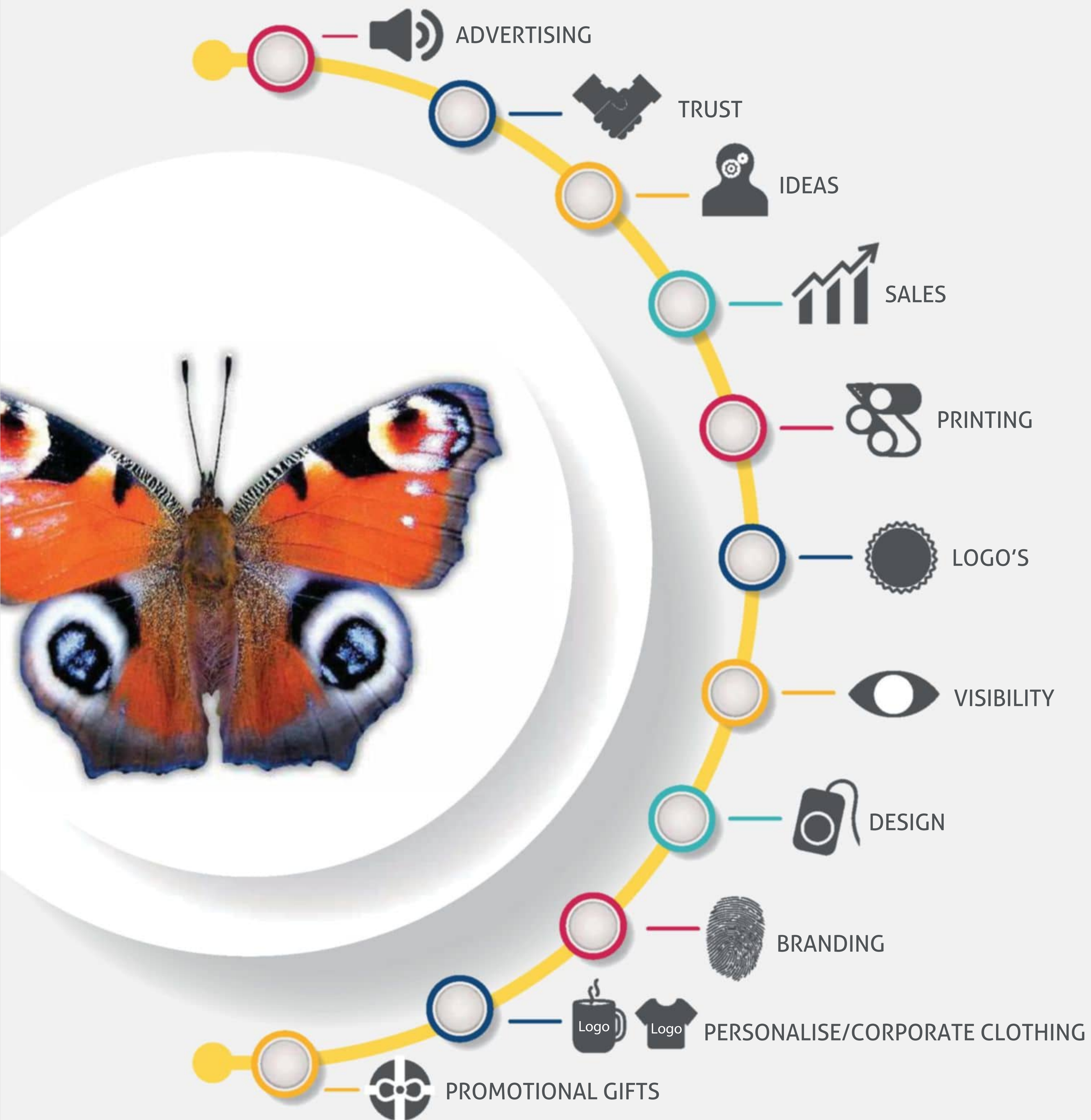
Bridle Joint: Also known as a tongue-and-fork joint, a bridle joint is a more complex type of woodworking joint. With a bridle joint, the end of one wooden workpiece is designed with an opening that supports the notched end of the other workpiece. Bridle joints are typically used for sloped beams and rafters.

Mortise-and-Tenon Joint: A mortise-and-tenon joint is a popular type of joint for woodworking projects. It receives its namesake from its use of a mortise and tenon. A mortise is an opening that supports a notched end known as a tenon. Mortise-and-tenon joints are strong and long-lasting. You can find them in furniture, cabinets, doors and windows.

Lap Joint: Finally, a lap joint is a type of woodworking joint that requires the placement of a wooden workpiece over another workpiece. With a lap joint, the ends of the wooden workpieces are designed with alternating patterns. Some of them have a half lap pattern, whereas others have a cross lap or dovetail lap pattern. Regardless, one end is placed inside the other end.



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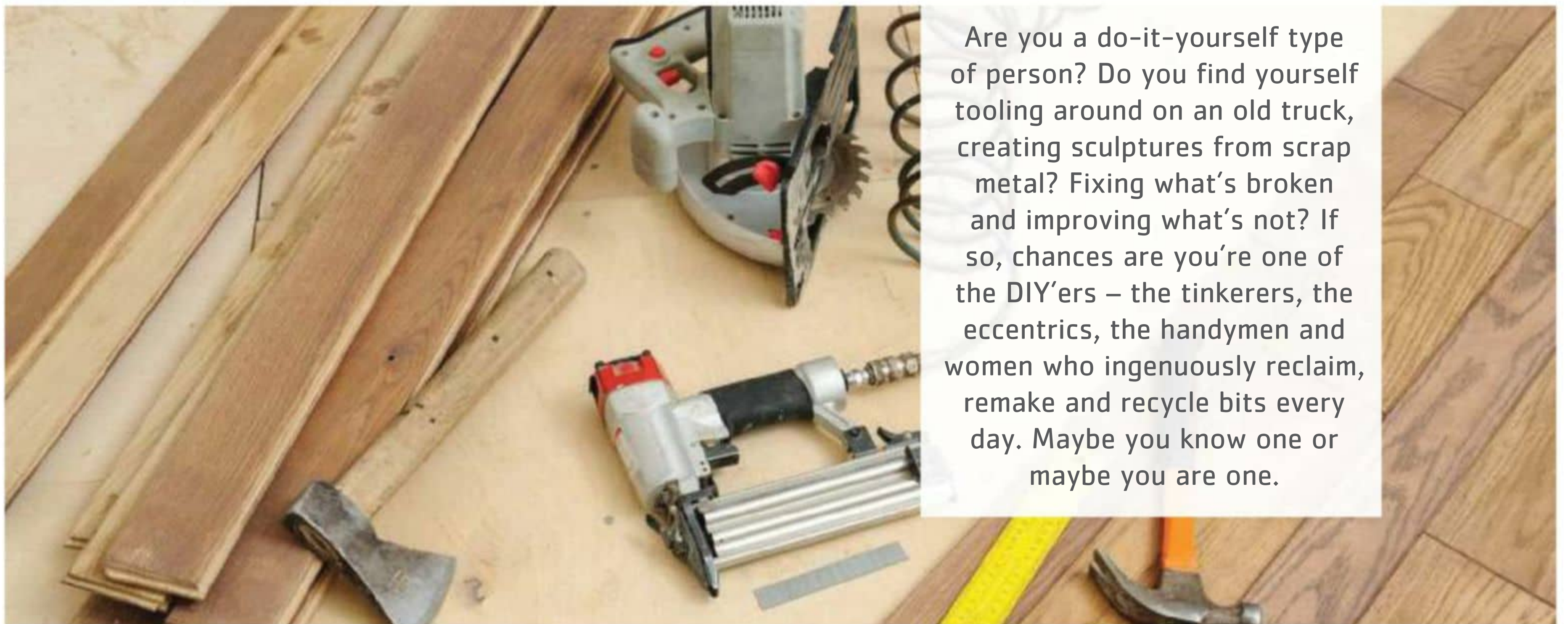


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		Fax/email the form and proof of payment to 086-234-5052
		(Please note: there is an additional fee of R69 if payment is made in cash)

Price valid until 31 March 2023



Are you a do-it-yourself type of person? Do you find yourself tooling around on an old truck, creating sculptures from scrap metal? Fixing what's broken and improving what's not? If so, chances are you're one of the DIY'ers – the tinkerers, the eccentrics, the handymen and women who ingeniously reclaim, remake and recycle bits every day. Maybe you know one or maybe you are one.

11 signs you're a DIY'er

You have half-finished projects in various places throughout your home

You pour your heart and soul into your projects, but they take time! After all, your projects aren't just another product that can be bought in the store. You think through every detail to ensure your project is a great success. In fact, you're an expert at explaining to your guests what your project will eventually look like... if you ever get around to finishing it!

You're a bit unconventional

You don't always go by the book. You do things the best way you know how because you know just how you want something to look. You like to push boundaries and become a trendsetter in the process.

You're always looking to repurpose that box, basket, bag or piece of ribbon

Creating something from nothing is your greatest ability! You're able to completely transform and repurpose something that otherwise would've been thrown away. You take leftover scraps and turn them into a finished project.

You're not afraid to get dirty

As a DIY'er, your hands and clothing are often covered in paint, glue and other craft mediums. But that's just part of the creation process and you wouldn't have it any other way!

You own a drill, staple gun, glue gun, various paint brushes, stacks of fabric, sewing machine, etc

Having the right tools on hand makes for a much easier project. And, with all the projects you've completed, you've amassed quite the collection!

Your local hardware store's employees know you by name

You spend a lot of time at the hardware store and probably ask a lot of questions, too. Not only are you known by name, but you know all the tricks to find what you're looking for, like where to find the extra inventory on that one item that appears to be sold out.

You're extra patient

DIY'ing can require a huge amount of patience. Sometimes a project gets messed up and you have to start over. Other times it can seem impossible to get something to look or fit together like it should. Other times, you're simply

waiting for paint or glue to dry. As a DIY'er, patience isn't optional!

You have a need to personalise

You not only want to do a project on your own, but you want it to make it your own. Whether that means a monogram or just a paint job, everything you create is custom and uniquely you.

You're resilient

You've overcome DIY injuries and complete project failures. But despite setbacks, you never give up. You keep moving forward!

You don't want to do it all on your own

As a DIY'er, you know your limitations. Especially when it comes to major construction projects. You may opt to hire a professional for complex projects, and take great pleasure in choosing the materials, fixtures and lighting.

You're constantly looking for ways to be inspired

You love sharing your great ideas and are always interested in seeing what fellow DIY'ers have created. You find inspiration everywhere, and your creative gears are always turning.



messe frankfurt

Hobby-X

4-7 May 2023

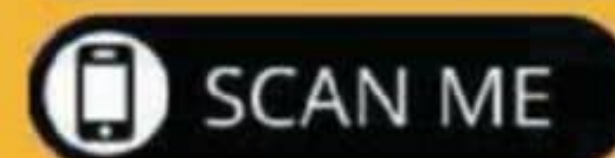
Kyalami Grand Prix Circuit and
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Hobby-X is a trade and consumer show that showcases a variety of hobbies and crafts. At Hobby-X visitors can explore the latest products and supplies related to their favorite hobbies and crafts, learn new techniques, and connect with other hobbyists and experts in their field. The show typically features exhibitors selling supplies, tools, and finished products related to hobbies and crafts, as well as demonstrations and workshops led by experts. It is a must-attend event for anyone interested in hobbies and crafts.



Show times:
09h00 till 17h00 daily

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Circular Saw



M4000B
Blower



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M4501KB
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M2300B
Compound
Mitre Saw



M4301B
Jig Saw



M3601B
Router
(Plunge Type)



M9203B
Finishing
Sander



M9400B
Belt Sander



M9200B
Finishing
Sander



M9204B
Random Orbit
Sander



M1902B
Power Planer



M1901B
Power Planer