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- Rise between stair treads is adjustable from 8 3/8 in. to 9 1/4 in.
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- A complete installation guide is included in all kits and an installation video is available upon request.
- Homeowner should consult with local building department concerning building codes prior to purchase.





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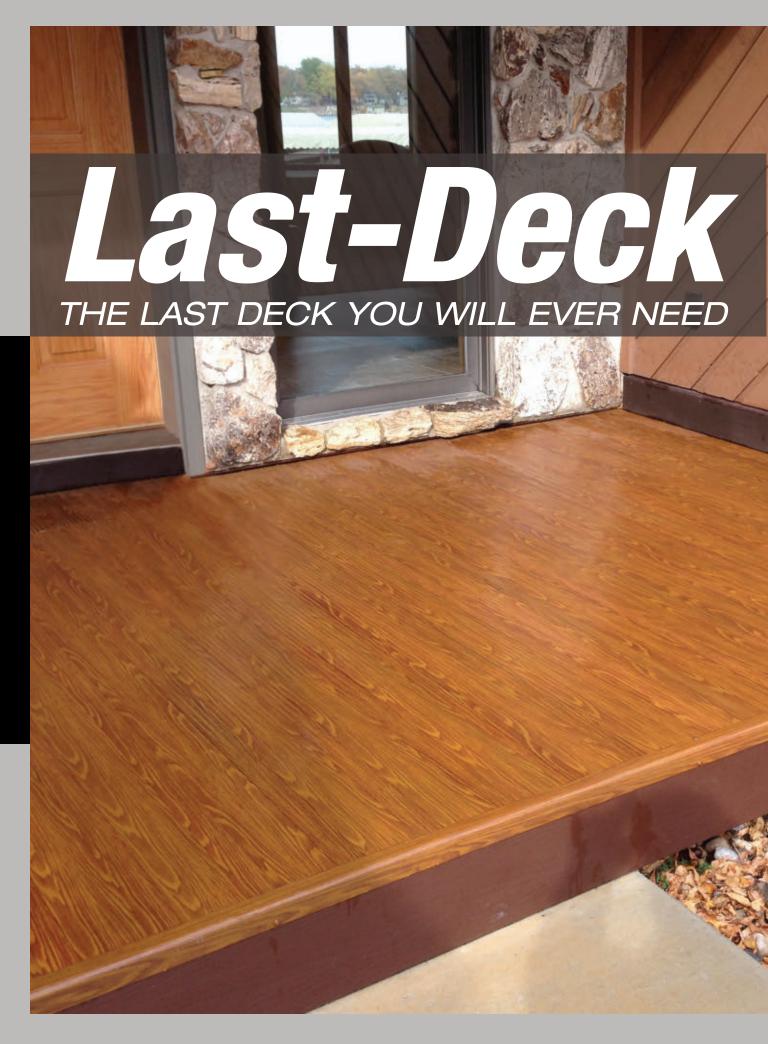














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### From The

pring is here, and with it comes warmer weather. Most of us wait all winter for this time of year, so we can get back outside and enjoy the sunshine. The change in weather, however, means homeowners should run down a checklist of springtime maintenance.

With melting snow and springtime rains, sump pumps may be running for first time since the fall. Make sure the discharge area is clear and water is flowing away from home.

Also, check for outside spigot (faucet) leaks, because extreme cold can damage pipes, especially if a hose was left connected or was dripping at the end of last season. Burst pipes too often go unnoticed until the first time they're turned on. Look for signs of pressure loss when the faucet is on, as well as the obvious signs water leaking inside your home.

It should go without saying to replace HVAC filters regularly, but we keep saying it because homeowners keep forgetting it. If the filter looks dark or full of dust/debris, change it. Having a hardwood floor and/or indoor pets usually requires more frequent filter changes.

Also, clean up your outdoor AC unit, removing any debris that might affect performance. Mulch, twigs and leaves from the fall and winter can all build up over time, restricting airflow and the performance of your HVAC system, so be sure to clear it all away.

A quick rundown of basic maintenance will ensure your home is in no need of repairs. Once you've determined it needs no



repairs, you're clear to plan this year's springtime home improvements, from deck and patio construction to gardening and landscaping projects. But that's another story ... which you'll find in Extreme How-To.





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How do I remove gutter nails?

 Old fashioned gutter nails are called "spikes" and ferrules," with the spikes being giant nails that pass through an aluminum sleeve (the ferrule) which holds a gutter to the fascia board of the house. To remove them you need to pull the nail. The problem is that the gutter is made of thin sheet metal which will crush and deform if you pry against it with a hammer or pry bar. To solve this problem, you need to fashion a "pry block" that will provide a solid object against which to leverage your prying tool. You can make a pry block from scrap 2x4 or 2x6. Measure the gutter, and cut the block to fit snugly between the fascia and the outer lip of the gutter, filling the void with solid wood. Then, simply place the block in the gutter and use your hammer or pry bar against it to pull out the nail and remove the ferrule.

How do I remove hardwood flooring that's been glued down?

• If the floor was installed correctly with a high-quality adhesive, then you're in for a tough job. It might be time to call a contractor who specializes in this type of work. A DIY approach would be to set a circ saw's blade depth so it cuts through the hardwoods but not subfloor. Make a cut parallel to the wall 15 to 18 inches away and along a seam between boards. Then make another parallel cut about 12 inches away. Next, make perpendicular cuts every 12 inches or so. Use pry bars and sledgehammers to work from the edge of the cuts, pulling up large sections rather than chunks if possible. Expect to invest a lot of time and labor. After the wood is up, use a floor scraper to remove the adhesive. With some strong adhesives, hand scrapers may not be effective and it might be necessary to rent a floor-scraping machine.





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What's the best way to repair cracked tile?

• The trouble with cracked tile is that it's difficult achieve a perfect like-new repair. However, if the problems • are minimal, the fact that tile is generally installed in a repeating pattern means you can make basic repairs that disguise the problem so it blends better with the rest of the floor and becomes less noticeable.

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Purchase some tile filler and paint that matches the color of tile. Mix some of the paint into the tile filler to match the color. Use a cotton swab to apply the filler to the crack, filling it completely. Allow the filler to dry a few seconds then wipe off the excess with a damp cloth.

How do I find the septic tank in my yard?

• The best clue is to find where the main drain line (4-in. pipe) exits your home, which indicates the tank might be located right outside from that location. Follow the pipe across the yard by probing every 2 feet with a metal probe. Septic tanks are required to be at least 5 feet from the house, although most are between 10 and 25 feet away. They are typically rectangular in shape and measure approximately 5 feet by 8 feet. In most cases, the septic tank is buried between 4 inches and 4 feet underground. You can use a metal probe to locate its edges and mark the perimeter. You can also check county records for building permits. which often include the installation of septic systems and may contain a diagram with dimensions that can help you locate the tank on your property. A diagram of your septic system might also have been included as part of your home inspection when you purchased the property. EHT



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### **Charred Wood for Home Décor**

Make Decorative Wood Pieces using Shou Sugi Ban-inspired Charring Techniques



**By Matt Weber** 

hou Sugi Ban" is a centuries-old Japanese method of preserving Japanese cedar siding by charring it. This wood-burning technique is now growing in popularity among homeowners in the U.S. and Canada for its decorative appeal.

The process involves charring the wood surface with exposed flame from a propane torch, then cooling it, cleaning it with a wire brush, rinsing, and then applying a finish coat. Although time-consuming, the final product can have a rich, silvery finish, and

the charred wood resists fire, rot, insects, and can last for decades. Depending on the heat and cleaning technique, a wide range of finish appearances can be created with Shou Sugi Ban. This application can be used for wood siding, accent walls, wainscoting, column/beam wraps, outdoor benches, and all sorts of creative applications.

### **GET INSPIRED**

In researching this topic, the *EHT* staff came across the folks at Inspire Woodcraft of Sacramento, California, who have tweaked their

wood-burning techniques to achieve a variety of truly handsome appearances and textures for wood.

With traditional Shou Sugi Ban, which literally translates to "burnt cedar board," the wood is tied together in bundles of three, forming a triangular chimney, which is placed on-end over a fire, pulling the flame upwards and charring the inside faces of the boards. The boards are then taken off the fire and cooled with water, stopping the burning process and hardening the blackened, charred surface. The cooled, black surface becomes resistant to sun and rain, insects, rot and fire itself.

The craftsmen at Inspire Woodcraft haven't exactly adhered to Japanese tradition, and in doing so have created some beautiful wood finishes with creative flair.

Jodee Bickell of Inspire Woodcraft explains: "One day while designing a coffee table, we had the idea of lightly burning the edges of the boards we were using, and then staining the



Jodee Bickell of Inspire Woodcraft suggests choosing lightly colored softwood for charred-wood applications.

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### **SKILL SAVVY**

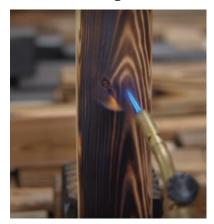


A Bernzomatic hand torch works well for charring wood.

boards one color. The theory was that it would give the boards a light-to-dark contrast and give an interesting visual effect. While we were right in theory, it didn't turn out exactly how we wanted. So we kept developing the process, trying to achieve a look we were satisfied with. What we soon discovered is that by fully scorching a piece of wood and then brushing away the loose char, the wood grain itself would stay intact and blacken, while the soft springwood in between the grain could be removed, leaving a beautiful, contrasting visual element not normally seen. The only logical next step in our minds was to add a colorful stain, wipe it down, and see what happened.

"The results that we achieved in the beginning was just that: the beginning," Bickell says. "We use different kinds of brushes, machinery, burn techniques, milling and stain methods in our work, because each technique develops completely different results. We now have figured

out how to incorporate all these different techniques to create captivating visuals for art/decor pieces and for a unique, one-of-a-kind wall covering."



Keep the flame a consistent distance from the wood surface and move it in the same direction as the woodgrain.





No masking, simply hose off over-spray.

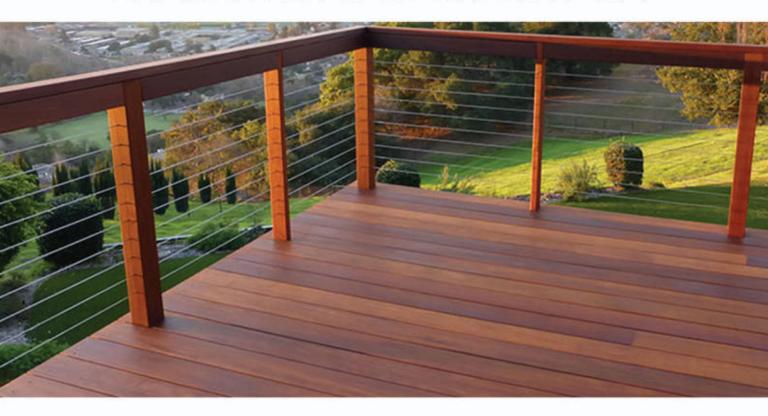
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### **SKILL SAVVY**

To check out the different burned wood finishes Bickell has achieved, *EHT* readers should check out the Inspire Woodcraft videos on YouTube, where he offers a detailed tutorial on the various phases of the process. Here's a rundown of the basics.

### WOOD SELECTION

When selecting wood for charring, look for construction-grade softwood lumber, such as hemlock, pine, spruce and fir, which have a soft grain. This is because after you burn the surface, you're going to scrape out the soft springwood between the bands



The soft springwood will burn more quickly and deeply than the dark woodgrain.



If you plan to brush out the springwood for a high-contrast effect, you only need to blacken the entire surface, which will leave a sheen on the surface.

of woodgrain. It's much more difficult to remove that material when working with hardwood. The soft whitewood species are also lighter in color, which essentially serves as a blank canvas for the coloration to follow. Choose wood pieces with the lightest color available.

Grain orientation is also a concern. When selecting wood, check the board's end-grain for the growth rings. You want to apply the Shou Sugi Ban technique to the outside (bark-side) of the tree



For a fully blackened effect, you can char the wood until it won't take any more flame, leaving an alligator-like texture on the surface.

for the most interesting grain pattern.

Finally, look for wood labeled "KD," which stands for kiln-dried. Wood with high moisture content won't dry out and therefore won't work well for the charring technique.

### **WOOD BURNING TIPS**

For smaller projects, Bickell uses a Berzomatic torch (propane or MAPP gas) to char the wood surface. For larger projects, he uses a weed torch

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### **SKILL SAVVY**

connected to a propage tank. but beginners should stick with a small handheld Bernzomatic.

It should go without saying that you'll need a safe place to work with open flame, away from any

notably flammable materials. A welding table can be used to provide a non-flammable working surface, or you can use a wood workbench if you don't mind the likelihood of char marks.

Bickell supports the workpiece on a bench and passes the flame over the wood surface along the same direction as the woodgrain. Move the flame in a consistent pattern with smooth, even strokes to avoid blotchiness as the wood darkens. Keep the flame the same distance from the wood throughout the process. The first pass over the entire face of the board will have some charring effect, but it is essentially heating the wood in preparation for the following passes, which will char the grain and springwood. The soft springwood will burn faster and deeper than the hard grain. Note that if you plan to brush out the softwood for a high-contrast effect, then you don't need to burn the wood to the point that it looks like firewood. If you plan to remove the springwood, you only need to blacken the entire board surface.

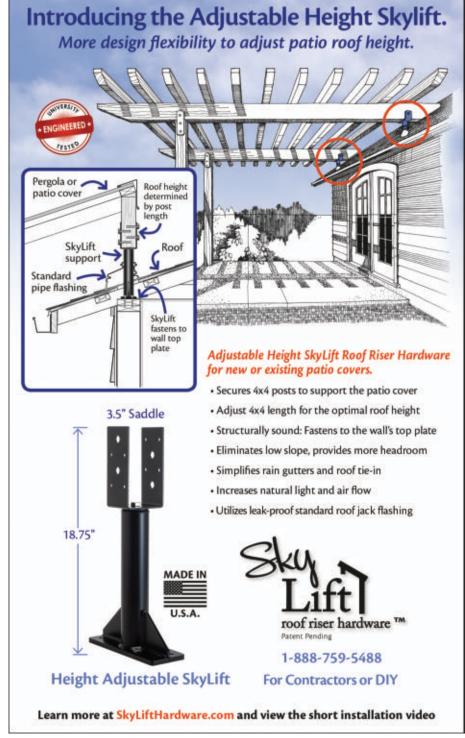
The perfect charred wood or Shou Sugi Ban-inspired finish



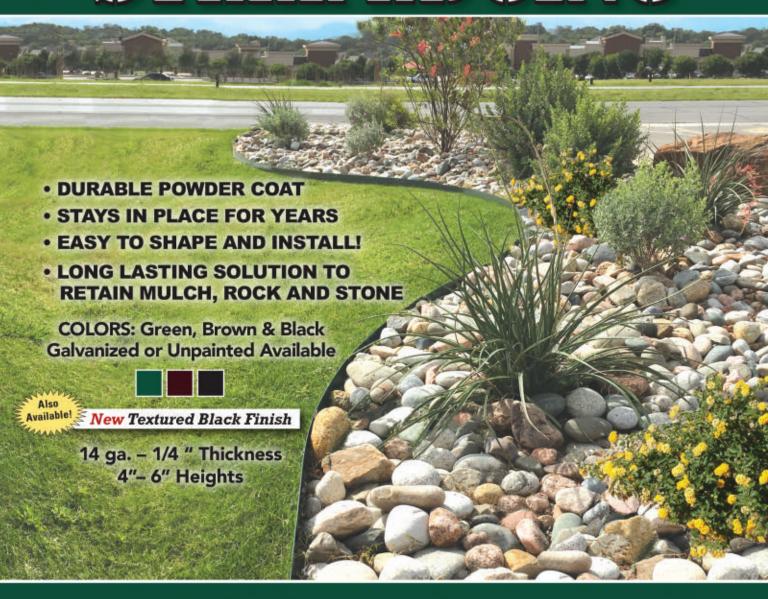
A nylon utility brush will be the first step to remove loose char.



The nylon brush will leave a smooth sheen and expose variations in the grain bands.



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### **SKILL SAVVY**

comes down to the burn technique. This depends largely on the degree to which the surface is burned, or how long the wood is exposed to the flame.

For a more blackened end product, a different surface effect can be achieved by charring the wood until it won't take any more flame. This technique ultimately makes the board surface more fire-retardant but also distorts the surface with a distinct alligator-like texture. The surface can then be brushed to even out the color and then clear-coated to finish.

### **BRUSHING THE SURFACE**

A variety of brushes can be used to different effect. Bickell recommends a nylon utility brush for removing loose char. He uses wire brushes with bristles of different



For a more dramatic grain contrast, use a wire brush to remove the charred softwood between the darker bands of grain.



A drill-mounted Nyalox flap wheel can speed up the brushing process.

stiffness (stainless steel, brass), to vary the tooling effects left on the wood surface. He also uses a few drill-mounted brush attachments to speed up the process (specifically a Nyalox flap brush that can spin in the direction of the wood grain).

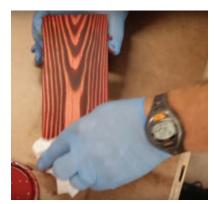
The nylon brush alone will achieve a fairly uniform sheen. The more aggressive wire brushes will remove more char, revealing the lighter springwood beneath but leaving the dark rings of the harder grain for a higher contrast.

### STAIN AND FINISH

After you've brushed and cleaned your charred wood, it can then be clear-coated to preserve its natural color or be enhanced with the use of a stain or dye. The colorants are wiped or brushed



To enhance the look of your charred wood, you can add stain or dye.



After the colorant penetrates the wood grain, the excess is wiped off to reveal the new color tone.

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### **Use both for maximum control!**

### **SKILL SAVVY**

onto the wood surface, and then the excess is wiped off to leave the desired tint.

For top coats, Bickell prefers water-based products such as Polycrylic from MinWax and the thicker Enduro-Var urethane from General Finishes (excellent for coating a fully charred wood surface).

Various products and techniques can achieve truly artful effects in a charred wood finish, and Bickell demonstrates these in his Inspire Woodcraft YouTube video series, which *EHT* urges you to check out. He goes into detail about his personal preferences and methods of application.

From accent walls to outdoor furniture, a charred finish is an interesting design element that can give your next woodcraft project a unique character of its own.

You can learn more about Shou Sugi Ban-inspired wood charring and other woodcraft techniques at www.inspirewoodcraft.com. **EHT** 



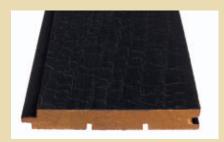
If you prefer a fully blackened look, first brush away the loose char and then brush on a urethane clear coat.



The urethane top coat will preserve the wood's color and texture for years to come.

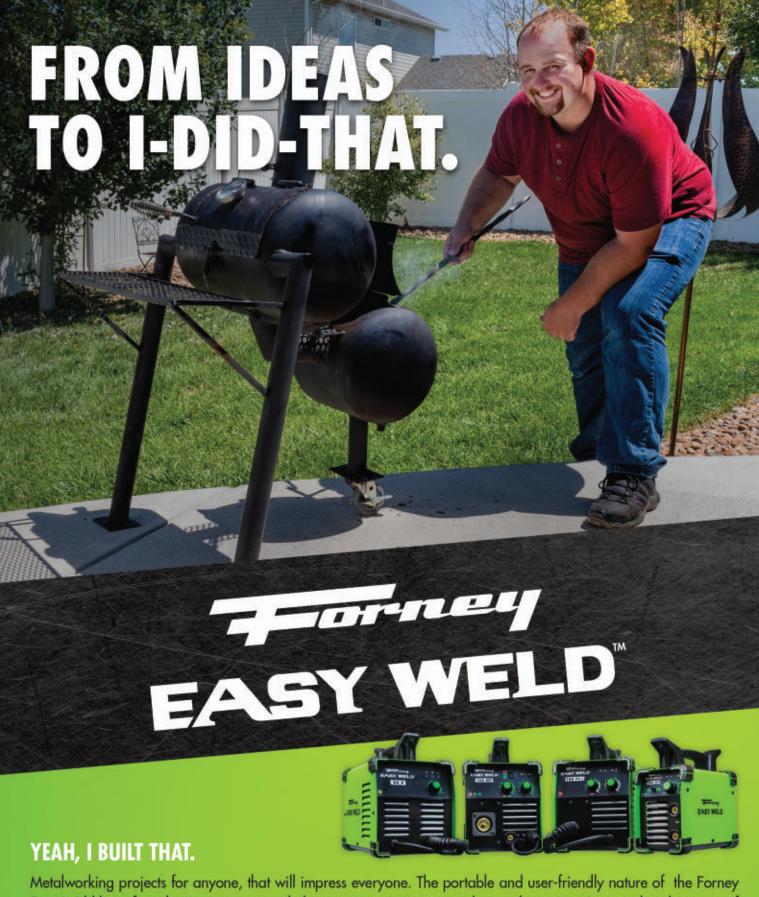
### IGNITE CLADDING BY THERMORY USA

Ignite cladding, a new product from Thermory USA, provides the look of Shou Sugi Ban with durability all the way to the core. And unlike charred wood, Ignite has no messy residue. Ignite offers the realistic look of charred wood, without the flames. The cladding is created from thermally-modified wood using a process of heat and steam that enhances the wood's stability and lessens its weight. Ignite achieves its signature dragon scale pattern by embossing, brushing and tinting thermally modified Scots pine. Unlike modern Shou Sugi Ban, which is often created by hand with a torch, Ignite is created with a deceptively flame-free process. It is also available with only the brushed texture. The thermal modification gives the wood consistent rot resistance throughout the board, a high level of dimensional stability, and a consistent appearance from batch to batch. Learn more at www.thermoryusa.com.





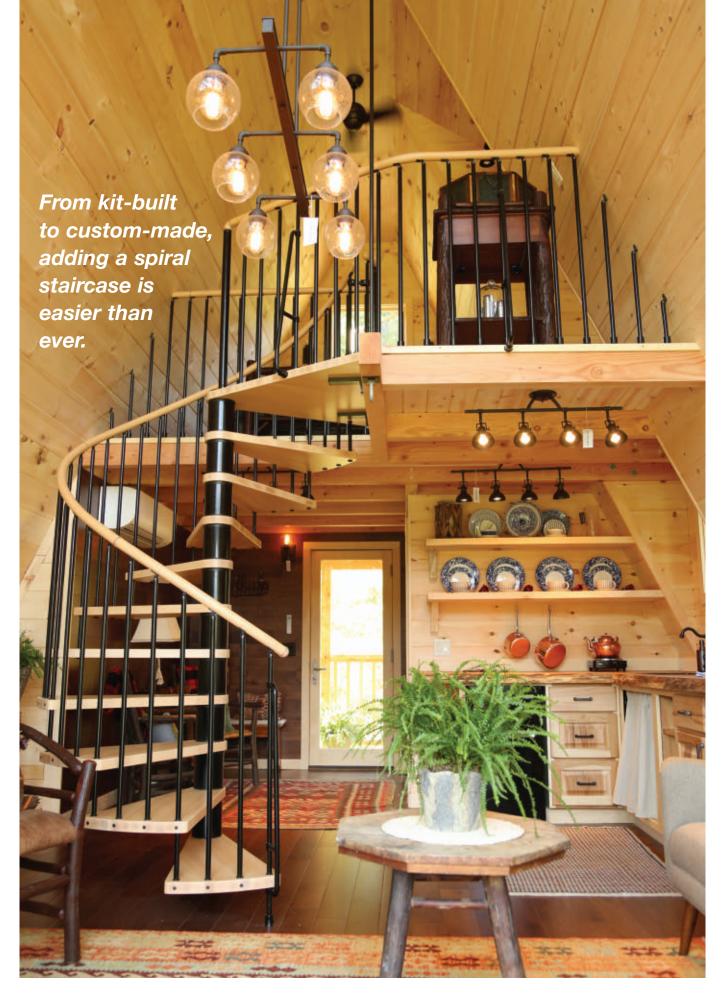




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# ADDINGA SPIRAL STAIRCASE

piral stairs boast the unmistakable design of having treads wind around a central pole, and typically have a handrail on the outer side only. This design is usually employed because a tight spiral stair with a central pole is a highly efficient use of floor space. Although planning and constructing a spiral staircase traditionally has been a difficult feat, developments in manufacturing have led to the introduction of modular spiral stairs. Steps and handrails can be bolted together on-site to form a complete unit, and the stairs can be made from steel, timber concrete or a combination of materials.

Although a spiral staircase can't be used as the main access to your home (per building code requirements), it can be a convenient way to get from one level to another and will occupy half the space. Are you planning an addition and need a convenient way to access the new area? Have you built a deck and need quick access to another level? This article explores some of the modern spiral staircase options available to homeowners in need of such a solution. Note that

building codes impose restrictions on the use of spiral stairs, so check with your local inspector for guidelines.

### **SPIRAL STAIRS IN A KIT**

Spiral and modular staircase kits from Arké can be built in a day by the average DIY home enthusiast. Arké is the U.S.-based subsidiary of Italian spiral stair company Albini & Fontanot. Arké spiral stair kits come in a variety of setups and materials, such as wood, metal and steel. The kits require no special tools or skills for assembly. The all-in-one kits include treads, landing, balusters, handrails, hardware and accessories. There is nothing to paint, weld, stain or seal, and the kits are in stock for immediate delivery.

The homeowner designs the Arké spiral stair online with a simple step-by-step website tool at Arkéstairs.com. Once you've determined your staircase style, your exact height measurement, the directional turn of the spiral, and the size/type of your landing, Arké assembles a kit to fit your needs and ships it to arrive within seven working days, ready

### ADDING A SPIRAL STAIRCASE



A tight spiral stair with a central pole is a highly efficient use of floor space.

The all-in-one kits from Arké include treads, landing, balusters, handrails, hardware and accessories.

.....

for installation even by a do-ityourselfer.

When ordering a staircase kit, the first step is to decide whether or not it's an indoor or outdoor installation. Step Two is to measure from the finished floor on the top level to the finished floor on the bottom level of the proposed stair location. This determines the exact height required for the installation.

Next, measure your total amount of available space to determine the correct diameter of the stair. The finished space should be at least two inches larger than the total staircase diameter. (Note: If the installation must meet the IRC Building Code, the homeowner will need to choose the largest of Arké's three sizes—63-in. diameter—which is designed to meet the code requirement.)

with your choice of wood or metal treads. Each model contains all the necessary components and detailed assembly instructions as well as a DVD.

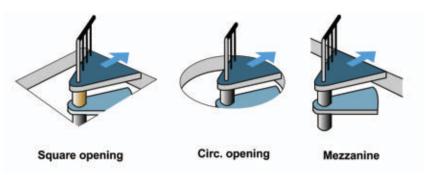
When it comes time for installation, the Arké kits offer three unique design features that address common problems. First, the system's height is adjustable with the use of a patented spacer system. Rather than rely on an exact height measurement, the standard spiral kit is adjustable in height

from approximately 8 ft.-3in. to 10 feet. (For heights above 10 feet, additional risers and center pole extensions are available.)

Another key Arké feature is the option for directional turn of the spiral. Most manufacturers produce a specific unit based on the rotational turn (clockwise or counterclockwise) of the spiral for specific installation. This requires careful planning and measurement to avoid a restricted or blocked floor exit. The standard Arké kits are designed to make a complete



With the Arké spiral staircase kit, height is adjustable with the use of a patented spacer system.



Arké premiere interior kits offer a patented universal landing as a standard feature, which provides greater flexibility and easier installation.

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360-degree turn. Therefore, the first step will be directly underneath the landing. However, by adding or subtracting risers the rotation will change by approx. 30 degrees per riser. Furthermore,

Arké spiral stairs can be turned in either clockwise or counterclockwise, which greatly minimizes the chance of error in the order and installation.

Finally, Arké offers options in

landing size and type. For the landing at the top of the stairs, most manufacturers produce a specific design for the planned installation, either a mezzanine, round or square landing area.



Assembly of the Arke kit begins with installation of the base-plate and the center pole.



The treads and spacers slide over the pole.



Add the second section to extend the height.



Arké's premiere interior kits offer a patented universal landing as a standard feature, which provides greater flexibility and easier installation. Learn more at www.arkestairs.com.



The staircase shown has a mezzanine landing.

### ZOOOM PLUS ELECTRIC SCISSOR LOFT LADDER

The Fontanot Zooom Plus is an electric scissor loft ladder manufactured entirely in aluminum with treads and levers in die-cast aluminum. A remote-control opens and closes the stair. In case of a power shortage, the stair can be operated manually. It features black carpeted treads, a 3/64-in. thick sheet-steel hatch frame, and the panel is made from high-grade 35/64-in. premium poplar plywood covered with a high-performing isolation material. Visit www.arkestairs.com.





The handrail screws on one section at a time.



A spiral staircase kit from Arké can be assembled in a day.



### ADDING A SPIRAL STAIRCASE

### **CUSTOM MADE TO ORDER**

For a completely customized staircase design, Goddard Manufacturing specializes in hand-crafted spiral staircases built to your specifications. Choose from several different styles of spiral stairs to fit almost any application, and the professional craftsmen at Goddard will try to create the design you want. Custom options include a variety of designs in handrails, treads and decorative balusters.

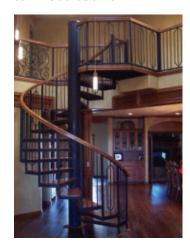
These unique custom spiral staircases are created using oak, hickory, steel and other materials for both interior and exterior. If you're looking for something unique in your spiral staircase, such as oak treads, all-steel treads, red oak handrails, all metal rails, or anything you can imagine in a spiral staircase that you don't see advertised

by Goddard, just ask the reps at the company. They will work with you to create the custom stairs you want, made in the USA in Logan, Kansas.

To get the most strength, cleanest lines, and best-looking spiral stairs possible, the staircase will be welded into one solid structure and is usually shipped as one piece. (Wood spiral staircases are disassembled and boxed for shipping). If the area is ready for the spiral stairs to be installed, two people can usually install it in less than an hour. The All Wood Spiral Staircase is shipped disassembled and takes four to six hours to reassemble.

Note that because these are custom-built stairs, you should allow 3 to 8 weeks for build time (depending on your specific design) and shipping.

For more information, visit www.spiral-staircases.com or call 1-800-536-4341. **EHT** 



For a completely customized staircase design, Goddard Manufacturing specializes in handcrafted spiral staircases built to your specifications.





Wood spiral staircases from Goddard will be disassembled and boxed for shipping, but metal staircases will be welded and shipped as one piece.



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design.





# BUILD A PLANTER BAR FROM TREATED WOOD

# Real Wood Treated to Last and Versatile for Outdoor Projects

his isn't your Grandma's backyard. That's right.
Gone are the days of cheap folding lawn chairs and rusty tables. The trend toward making outdoor living spaces more luxurious and more livable has steadily increased over the past few years. Homeowners are looking to

expand their living and entertaining space outside.

Affordable, adaptable treated wood has risen to meet the challenge of creative, useful outdoor living spaces. "Preserved wood is eco-friendly and long-lasting," says Matt Roughen, Head of Marketing North America for Lonza Wood

Protection. "It has proven itself as an exceptional building material that retains the natural beauty of wood, because it is wood. While many companies offer products that look like wood, others like Lonza, choose the real thing and provide the preservatives to extend the life of the wood."

By Belinda Remley



# When others can't...

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# BUILD A PLANTER BAR FROM TREATED WOOD



An outdoor deck remains the most popular application for backyard improvement, but it is not the only project that is catching the fancy of builders. While many homeowners leave deck building to the pros, they are excited and eager to take on weekend projects to improve their backyard living. "The most popular backyard project behind decks is the raised bed garden," says Roughen. "Homeowners do their research and gain project inspiration and build plans via the internet and from store associates at their local home-improvement store. Then, they plunge into projects with confidence."

Roughen explains that it is important to have a real plan for building a project. "Good plans let the builder know what supplies are needed and about how much time the build may take. The plan should include step-by-step instructions that take the project from a pile of treated wood to a beautiful outdoor addition. So, armed with a detailed plan, contractors and DIY'ers can head to the store to pick up the wood,

hardware and any other supplies they need."

Lonza provides free plans that can be found on their website www.wolmanizedwood.com to help homeowners in their quest for backyard bliss. "Among our plans is a raised bed garden, a picnic table, and our latest addition, a planter bar." Roughen says. "We designed and built it at Lonza's

facility to show homeowners how this can be a weekend do-it-yourself project and to provide a new, unique project idea."

# PLANTER BAR CONSTRUCTION

The planter bar is about 6 feet wide, 4 feet high, and 32 inches deep. It is made from preserved wood and sits on casters for easier mobility. There are holes for drop-in round galvanized steel bucket planters on each side of the bar. "We included the planters thinking they would make ideal herb gardens," explains plan designer Josh Miley. "However, they would also be a lovely spot for seasonal, flowering plants to dress up the bar area. It also makes a fun gathering spot to create refreshing summer cocktails."

"We also personalized our bar with two bins—one for trash and one for recycling," Miley says. "We included a slightly lower preparation level, making it easier and more comfortable for the bartender to entertain his or her guests. Below the drink



prep area is storage, where we chose to include a galvanized steel bucket for ice and drinks. To add style and function, we created screened barn doors for the front area that includes the trash cans and the storage area."

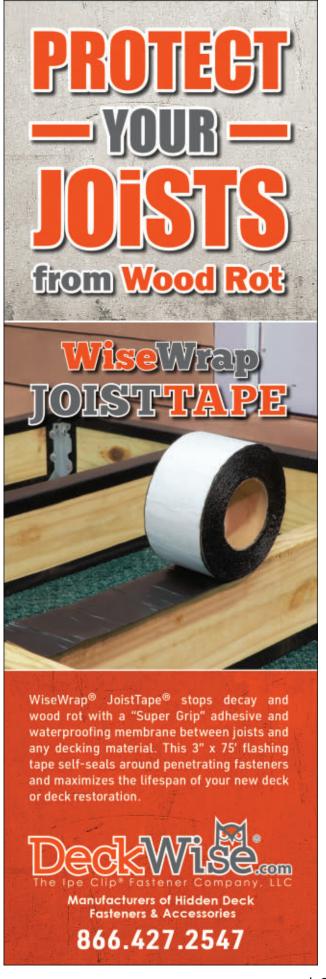
Miley says, "Using our plan and securing all of the materials ahead of time, a semi-experienced weekend warrior should be able to complete the build over a long weekend. And, cost for materials is about \$400 for a project that adds beauty and function to your backyard."

With any outdoor living addition from larger projects like decks and fences to smaller ones like raised bed gardens and the planter bar described here, it is important to choose the right treated wood for your application. The American Wood Protection Association (AWPA) has updated its standards to offer specific guidance in the use of treated wood. AWPA is a non-profit organization whose members are industry individuals who work together to govern wood preservation standards. Industry leaders who are members of AWPA found it necessary to update the standards by which wood is preserved because using wood properly is imperative for a finished project to last.

Consumers can either purchase Above Ground or Ground Contact preserved wood for their project. "It just depends on the severity of the exposure conditions of the wood," explains Roughen. "Ground Contact preserved wood is treated to a higher retention level than Above Ground. That simply means there is more preservative in Ground Contact preserved wood to offer protection for more demanding end uses like raised bed gardens."

Further guidelines say that Above Ground preserved wood is intended for the parts of a project that are at least 6 inches above the ground, where the wood dries easily, and where it is well-ventilated around all the boards. While Ground Contact preserved wood is versatile enough to be used in almost any application, it must be used in applications where the wood

- will come in contact with or be within 6 inches of the ground or fresh water
- is critical to the structure and difficult to repair or replace
- is in certain physically Above Ground uses exposed to harsher conditions such as prolonged contact with soil, vegetation or sprinklers



# BUILD A PLANTER BAR FROM TREATED WOOD

"As an example, treated wood that is not subjected to prolonged wetting from sprinklers or that has good air flow around like a pergola canopy can be treated to Above Ground retentions," Roughen says. "Wood that is critically necessary to a structure and is not easy to replace, such as posts and joists, should be treated to Ground Contact retentions."

No matter what your plans for a backyard living space, preserved wood remains the most versatile, affordable, easily accessed building material. It is the ideal choice for projects such as the planter bar recently created by Lonza. With the proper plans and the right wood for your application, your project—big or small—will be not only fun to build but also will be an enjoyable addition to your outdoor living space.

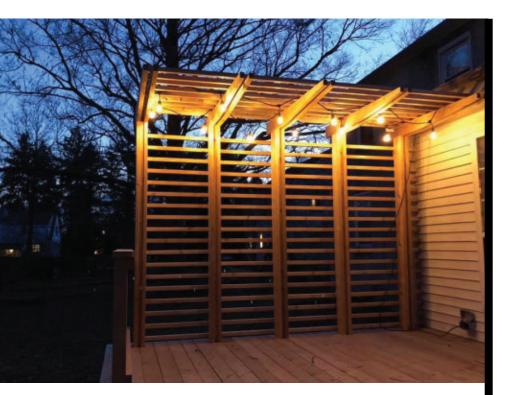






# **Throwing Shade**

Make a deck guard rail into a shade-throwing thing of DIY beauty.



**Mark Clement** 

n this episode of the DIY Pro Show we're gonna turn this...



... into this!



Using this!



Your deck's guard rails don't have to just be guard rails. They can be dialed-in, detailed, designed. They can be elements that create space and place. I don't want to get too woo-woo on the design-y stuff, but there's more than a little merit to it as I saw come to life in this project.

Nevertheless, the design needs to live in the world and across time. So, in addition to the cedar posts, rails, rafters and cladding, the keystone that carries the arch (so to speak) are the fasteners, namely the structural screws and their placement in the frame and the finish. We'll get to that below.

In the meantime, the road to Pergs-gard starts with the framed deck. Here's how I crossed the Rainbow Bridge. (Too deep on the Thor references here? I might consider getting some kind of social life...)

# **BRIDGE BOARDS**

The awesomeness of the shade structure starts after framing is completed. The first step after that is to straighten the outside band joist—and keep it that way during assembly. I do this with what I call "bridge boards;" basically 4-foot scraps screwed to interior joists. To make sure the band is straight, I run a string along the top corner from end to end and nudge the band as needed. Once straight, I fasten the bridge boards to it, and it's held fast.



Note: I know some contractors complain about using pressure-treated lumber, but what my lumberyard calls "#2 wet" is nearly arrow-straight. Every. Single. Board. Crowning them is all but a waste of time, because they're dead-on. Thicknesses can vary, but this is only an issue when using composite decking. If the

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# **MATERIAL MARKET**

lumber undulates at all, the reflective surface of composites can be noticeable (not an issue with wood decking).

### **BOTTOM BLOCKS**

With the band straight, I fasten 2x10 blocks to the underside of the joist. These serve to "bottom out" the post when I install it. A clamp makes it easier to install alone. The reason my hands are outstretched in the photo is because the snowflakes that were falling were so big, they practically made noise when they hit the ground and they were extra beautiful.



To fasten the bottom block to the interior joist, I pre-drilled some pilot holes with my countersink bit and blew some 3-in. screws in there.



# **BUILD THE POSTS**

I used my patented\* (\*not patented, but I'm pretty sure I invented this) built-up posts—a 3-ply assembly of 2x6-2x4-2x6—to create a strong, inexpensive and very stable post. Both my client and I really dig the shadow lines, texture and unique look.

To get the 2x4 ply centered easily on the 2x6 ply, I start by making an inch-wide gauge block from

a scrap of 2-by. Flush up the bottoms, then run the block on the 2x4 and flush it up with the edge of the 2x6. Fasten with 2-1/2-in. stainless steel Spax trim head deck screws.



For the third ply of the built-up posts, apply the second 2x6 to the 2x4. Use the block again and fasten.

Note that the 2x4 is 5-1/2 inches longer than the 2x6s. We'll revisit this later.



### **BLOCKING**

The secret in the structural sauce here is 2x10 blocking between the joists.

Basically, I build a harness around the post with 2x10. I start with the blocks that go between the joists, setting them while the post rests on the post-base installed earlier. I shim as necessary. Then, with the post dead-on plumb, I install blocking between the cross-joist blocking.



I then freeze everything with #10 x 3-in. deck screws (my preference is Spax HCRx-coated). We'll come back later and replace these screws with 5/16 x 6-inch Spax Power Lags.



### **DECK BOARDS**

Technically speaking, the deck boards aren't part of the design. But inasmuch as they're notched around the posts, they're not *not* part of the design, either.

To make sure I have room to saw them evenly—and so they balance with the cladding installed later—I overhang the first three deck boards 2 inches past the band joist and install to finished length (this is another reason to get the outside band nice and straight with the bridge boards). I run the rest of the deck boards all snaggletooth. Once they're all installed, I snap a line between them and cut in place. I love doing this. Ready. Set-y. Go Get-y.

Leaving 2 inches also enables me to get the saw's deck to pass the posts cleanly with a little room to spare.



### пр

If you have an obstruction that impedes you from getting your

driver near the fastener, try adding a bit holder to your bit holder.



## **CUTTING RAFTERS**

Cut the taper off your rafters with a circ saw.



Like post height, there are no rules for this other than your sense of proportion. On these 5-ft. rafters, I left 16 inches flat to integrate with the post and cantilever off the back, before starting the taper. The rafter tapers from 5-1/2 inches to 2 inches and the end of the board. After I cut the first rafter, I use the cut-off as a pattern for the remaining rafters.

Also, check the boards before cutting. If there's some crappy lumber-band mark, gouge, scrape from the lumberyard goons or stain—and I had plenty on this order—position the unit so you can cut that off or bury it on the inside face of the rafter.

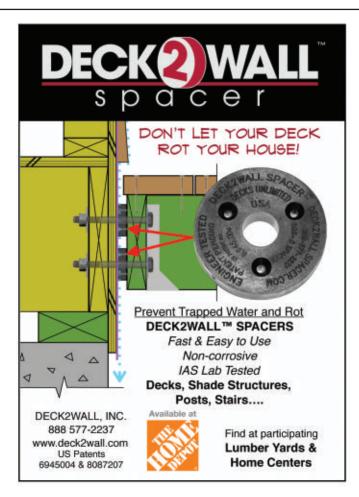
To erase the saw marks on the taper cut, I cleaned them up with my Porter-Cable benchtop jointer. It made the cut super-flat and sucked out all the blade marks. It's a detail, but I love it.



### **INSTALLING RAFTERS**

The rafters really need to be installed uniformly. Making accurate, repeatable layout marks are the keys to that castle.





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# **MATERIAL MARKET**

I used a tape, layout square and combination square to get every piece uniform. A critical layout location is the Power Lag locations. They need to bite into the 2x4 center ply. I use my

top-left/bottom right rule too.

Top left/bottom right means that when I install the fasteners, the top one is oriented to the left side of the board and the bottom to the right. That way, when I

install the screws from the opposite side they can't run into each other.

Also, I want them all in the same exact place on each post, so I laid those marks out carefully with my combination square.

To get the rafters installed, I found the best way to get them on layout and to have my body in a suitable position to drive the #10s was to use my Little Giant articulating ladder. I extended it to get on top of the post and leaned—leaned it ... love this thing—inward to optimize body position.

Then, I squared up the rafter to the post and fastened.



## **CLADDING**

The horizontal cladding for the shade structure is cedar 2x4 ripped in half on the table saw, which leaves it 1-1/2 in. x 1-11/16 or so. Again, I cleaned up the saw marks on the jointer. To recreate the factory bullnoze, I hit the squared-up edges with a round-over bit on the router. I installed them with the 1-1/2-in. face to the post.



After marking my layout for the horizontal cladding at 5-in. on-center along the outside of the posts, I installed a piece near the



guardrail height. Before installing any more cladding, I re-check the posts for plumb just to be sure nothing moved.

Because time is passing.

Any under-supported wood can move or twist. So the time to learn if that happened is before you drive a billion screws into it. Ergo: I take the ole whiskey to it. In case nobody knows what I'm talking about (not uncommon), level vials used to have alcohol in them to keep them from freezing, hence "whiskey sticks."



One post was a little out—the 3-ply posts are really stable—so I took two bar clamps and squeezed it into plumb. It's basically the same idea as the bridge board.

### **RAFTERS AGAIN**

Now that the posts are frozen and the cladding is set, it's time to lock in the rafters.

To do that, I remove the #10s and replace with 5/16 x 4-in. Spax coated Power Lags with a washer head. An added benefit of using the #10s to set the rafters is that they create a pilot hole that makes setting the Power Lag easier and more accurate.



### **PURLINS**

Lots going on here, most of it is impossible to show without making a feature-length film directed by Martin Scorcese. In a rare case for me, a few words are worth a single photo. Here goes...

Similar to pre-checking the posts for plumb above, I made sure the rafters were running



# **MATERIAL MARKET**

parallel to the deck boards before setting all the purlins. In hindsight, it might've been easier to do this before installing all the cladding, but since this has never been built before...well...it's a work in progress. Using the front purlin as a brace, I was able to finagle each rafter assembly in-line (not parallel, but this is difficult to explain) with the deck boards below. The result is that they were all parallel with one another. To keep the unsupported rafter assemblies from squeezing together before the purlins could hold them, I made a little T-block. Laying out the purlins 6 inches on-center worked out nicely.



### AND THEN...

This is an actual photo of me loving this.



It's my client's design and I had my doubts, as all carpenters do.

But sweet googly-moogly, this is so awesome looking that I'm 100-percent in. I'd build another one tomorrow. Locked tight with Power Lags and joist blocking, top to bottom I have zero doubts in its structural integrity. I have less than zero doubts about how cool it'll be to sit out here in summer and enjoy how cool it is on a warm summer night. **EHT** 

Editor's Note: Visit Mark's little corner of the internet at youtube.com/myfixituplife.

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# SUNTUF & SUNTOP CORRUGATED ROOFING PANELS

SunTuf Corrugated Polycarbonate Roofing Panels are a great choice to help make outdoor covered projects come to life. SunTuf panels are lightweight, super tough and easy to install. Use them to cover just about any type of outdoor structure for increased outdoor living area, storage or shelter—rain or shine!

Whether you're building a simple storage shed, a patio cover, skylight, or a full-fledged outdoor living area, SunTuf will protect against nearly any weather condition. Virtually unbreakable, SunTuf is up to 20 times more impact-resistant than fiberglass, and offers the best hail protection available in transparent or translucent products. It easily withstands snow,



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If you're looking for 100-percent shade for your roof cover project, SunTop Corrugated FOAM Polycarbonate is available in opaque, vibrant colors. The non-transparent structure of the SunTop panels provides complete shade plus protection from harmful UV radiation. Lightweight yet tough, SunTop also offers rigidity and impact resistance, and can stand up to Mother Nature's full range of weather.

Learn how to easily enhance your outdoor living space by visiting: www.PalramAmericas.com/SunTuf.





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# Weld Yourself a Summer-Ready Yard

Transform your lawn into the ideal outdoor entertainment space with these DIY welding projects.



Rachel Bigum

project with the help of a Forney Easy Weld machine and the following step by step instructions.

### **Tools and Materials**

- Forney Easy Weld machine (140 MP, or 100 ST)
- 3 BBQ size (30 lbs.) propane tanks
- 3' of 4" round tubing
- 3' of 6" round tubing
- 2'x2' piece of diamond plate
- 3'x3' piece of expanded metal
- 10' of 2" round tubing
- BBQ/smoker thermometer
- 2' of 1/2" bar stock
- 6"x6" 8-gauge sheet metal
- 15' of 1/2" angle iron
- Metal wheel (to move smoker)
- 2 latches
- 3 hinges
- Cutting wheels
- · Grinding wheels
- Angle grinder

Summer is in the air, and you know what that means—it's time to bring that dull backyard to life.

It might seem impossible to find the right additions to turn a boring yard into an optimal space for outdoor entertaining, but when you know how to weld, or if you're just beginning, this can be a much easier feat.

Skip spending an arm and a leg on common adornments this summer. Instead, grab a Forney welder and create two unique and functional additions for a perfect outdoor entertainment space.

# BUILD A WOOD BURNING SMOKER

Treat your family and friends to a one-of-a-kind dining experience by blending your metalworking skills with your meat smoking skills! The unique design will spice up any backyard, and your company will be shocked to hear you did it yourself. New to this kind of cooking? No problem. For the amateur or novice user, the small size of this smoker is ideal for beginning or perfecting your smoking skills. New to welding? That's not a problem either. Welders of any skill level can easily build this



Build a smoker by welding together propane tanks, tubing and expanded metal.

As with any welding project, it's critical to wear appropriate safety attire. A welding helmet and safety glasses will help protect your eyes from harmful arc flash. You'll also want to have a pair of welding gloves and a fire-resistant jacket or apron to protect your body and clothes.

Begin this project by cleaning the propane tanks with water and soap to ensure there is no trace of propane left inside.

With a cutting wheel, cut the top of two propane tanks and weld them together to make one large tank.

On the large tank, cut out the smoke chamber door to a functional size. On the smaller propane tank (fire box), cut out a door to the desired size.

Next, build a piece to connect the two tanks. Cut two 4- or 6-in. pieces (depending on your desired size) from the 4-in. tubing. On one end of each pipe, cut a 45-degree angle. Weld these angles together to create an "L" shape (90-deg. angle).

On the top of the fire box (small tank) and the bottom of the smoke chamber (large tank), cut a 4-in. diameter hole to weld the "L" shape tubing to. This "L" shape connects the smoke chamber to the fire box, allowing the smoke to cook the food.

Next, weld hinges on the doors of the smoke chamber and fire box. The smoke chamber gets two hinges on the top of the door (on opposing sides), the fire box gets one hinge on the top of the door in the middle.

Cut the diamond plate 2 inches wide to create a finishing trim to the smoke chamber door. Weld these strips to every side of the smoke chamber apart from the hinge side. On the inside of the propane tank, weld the last 2-in. wide diamond plate strip to the



Two 30-lb. propane tanks are cut and welded together as the smoke chamber. A single tank is used for the fire box.



# **PROJECT NEXT**



Expanded metal is used for the grill surface.

hinge side only. Repeat this last step for the fire box as well.

Cut out a 6-in. round hole in the top of the smoke chamber for the smoke stack.

Out of the 6-in. tubing, create a smoke stack about 6 to 12 inches high. Tack weld this to the smoke

chamber and complete with full welds. For added strength, weld the smoke stack on the outside and inside of the propane tank. (Note: Install a hinged metal cap on the smoke stack if you intend to leave your smoker outside.)

Cut the leg supports out of 2-in.



Construct a hinged fire-box lid from diamond plate.

round tubing to desired height for the smoke chamber. It's important that you make these high enough to easily look into the smoke chamber without bending over (you can customize this based on your height).

Tack weld those legs to the bottom of the smoke chamber, then finish with complete welds.

Make the support leg from the fire box touch the ground by cutting 2-in. round tubing to the desired size. Don't forget to include the height of your wheel to the length of the support leg.

Tack the leg support to the fire box, then finish with complete welds.



Near the bottom of the fire box, add an air-intake that can slide back and forth to regulate airflow and heat. Use covers on the barstock handles to protect your hands from the hot metal.

Create a shelf in the fire box and smoke chamber with expanded metal and angle iron supports. For the smoke chamber, weld angle iron in large chunks around the inside of the propane tank. Here, you use large chunks instead of small pieces for a sturdier shelf for heavy heat. Cut expanded metal to the diameter of the inner propane tank to rest on top of the angle iron pieces. Don't tack weld expanded metal to the



Weld L-shaped metal tubing to connect the smoke chamber and fire box.

angle iron because you want to be able to remove the shelves for cleaning. To make shelves removable, cut the expanded sheet shelf in half. (Pictured is additional shelving made to smoke chicken wings and smaller meat; this is optional).

For the fire box, make sure your shelf is welded inside at an angle with the highest point closest to the door. This ensures that oxygen can get in from the air-intake adjustment on the outside of the smoker box (this will be explained in the next step). Tack weld 1- to 2-in. pieces of angle iron around the fire box and finish with complete welds. Again, don't weld the expanded metal to the angle iron so you can still remove the shelf for cleaning.

Now, create an air-intake in the fire box. Cut out a small square hole in the bottom of the fire box. Cut the metal sheet a little bit larger than the shape of the hole to create a cover. Weld on angle iron as a guide for the cover, so it can easily move back and forth to regulate the air intake to the fire.



A wheel installed on the leg support will help with mobility.

Weld expanded metal inside the air intake.

Next, weld one latch to the smoke chamber and one latch to the fire box.

Weld the bar stock to each door to create a handle. Remember, these will get hot when in use



# **PROJECT NEXT**



A bolt-on barbecue thermometer allows to you monitor cooking temperature.

unless you put a handle cover over them (this is optional).

Drill a hole the size of the thermometer in the smoke chamber and attach the thermometer. Most BBO thermometers can be bolted on.

As an additional option, weld a shelf onto the front of the smoke chamber. This shelf can help hold the meat when you're checking to see if it's finished, or to act as a support. To create this shelf, use angle iron and expanded metal.

Weld diagonal supports under the shelf for support.

A standard grill is no match for the tender meat you can smoke in this smoker. Now family and friends can enjoy freshly smoked meat, while marveling at the fact you built the smoker yourself.

### **BUILD A GARDEN TRELLIS**

As the temperature rises, so does the desire for fresh grown vegetables. A garden trellis is perfect for any vine plant growing in your garden. Spoil your guests with hand-grown cucumbers or green beans as a side to that freshly smoked meat.

These step-by-step instructions can be modified for a variety of different garden configurations but will work best for existing planter boxes.

### **Tools and Materials**

- · Forney Easy Weld machine (140 MP, 100 ST or 140 FC-i)
- 3 pieces of ½" rebar, 10' length (less or more depending on desired trellis size)
- 1 4'x8' sheet of concrete reinforcement mesh
- Magnets

# FORNEY EASY WELD MACHINES

The Forney Easy Weld line of machines are perfect for any do-it-yourselfer, auto enthusiast, metalwork artist and hobbyist. The Forney Easy Weld 140 MP is MIG, Stick and TIG capable, making it ideal for a variety of outdoor projects and repairs. The Forney Easy Weld 100 ST is capable of Stick and TIG welding, and is our lightest welder weighing in at 9.65 lbs. Additionally, the Forney Easy Weld 140 FC-i is an excellent flux-core wire welder. This machine doesn't require



gas and features infinite voltage and wire feed speed control. All Forney Easy Weld machines plug into standard household power, making it easy to bring the welder to your backyard rather than lugging the project to your machine. Furthermore, if your project requires working with thicker materials the Forney line of welders feature machines with more power. Visit www.forneyind.com.



To make the garden trellis, begin by creating a rebar base (square or rectangle shape) and cut to desired size.

Just like the wood burning smoker, this project requires adequate personal protective equipment. A welding helmet, safety glasses, welding gloves and a fire-resistant jacket or sleeves should be worn for this project.

The small garden pictured had three garden boxes placed 3.5-ft. apart. A trellis was needed to keep the cucumbers off the ground and for the vines grow up.

Begin by creating a rebar base (square or rectangle shape) and cut to desired size.

Next, lay out your pieces. Use the ground as your flat edge and a magnet to help keep it square. Tack weld the rebar frame. Finish with complete welds once you've ensured that it's square.

Bend the rebar into a desired arch. This can be done by hand or with the help of a torch.

Place the arch inside the frame and begin tack welding once everything is square to the base. Go over with complete welds.

Bend the concrete mesh over the arched rebar and tack weld as you go. It's easiest to start on one side and work your way over the arch. Tack welds should hold the rebar in place, but if you find you need full welds for a stronger hold, go back over the tack welds accordingly.

Cut off any excess mesh with a cutting wheel and grind it smooth with a grinding wheel.

Now it's time to attach the trellis to your planter boxes. Either drill a hole in the rebar and the planter box to secure it or screw a larger screw into the side of the planter box and rest the trellis on top. If you're confident the trellis is stable, attach it to the planter box as desired.

For the materials used with this project, we found an ideal wire-feed speed setting of 8-10 while using between 5 and 6 on the voltage setting.

If you don't have a magnet, use

Bend the rebar arches and tack weld concrete reinforcement mesh to the frame to provide a place for vines to climb.

a metal clamp to ensure the workpiece is stable while welding.

Finally, help the vine to move up the trellis once the vegetable starts growing, threading the vine as necessary and using plant ties to help it hold position.

That's all there is to it! Now your friends and family can gaze at your charming garden while eating fresh grown vegetables. Whichever way you look at it, this addition is exactly what your yard needs this summer.

Doing some welding research and watching tutorial videos can truly help you become comfortable in the trade. And if you mess up a weld, an angle grinder will become your best friend. Learning how to use other metalworking tools like angle grinders or plasma cutters will benefit your skills and enhance your projects.

Channel a little ingenuity and your DIY skills to create the perfect backyard entertainment space. Although it may be intimidating at first, metalworking can be easier than you think. After some practice, you'll discover that welding is a simple hobby that anyone can do.

If you're just beginning to weld, you'll soon realize how easy it is; getting your guests to leave your new backyard oasis could prove a bit more challenging! **EHT** 

**Editor's Note:** Rachel Bigum. is Jr. Copywriter at Forney Industries.

# **Cover your Gutters**

Keep them Clean and Clog-free



logged gutters present a multitude of problems for a home. To begin with, they're ugly, but that's really the least of a homeowner's concerns. When gutters are packed with leaves and debris, they don't catch rain runoff as intended. This runoff spills over the edges of the gutter and lands around the foundation of the home, where it can cause all sorts of landscape erosion, ponding, and—with enough accumulation—even a foundation leak.
Furthermore, all that damp, rotting debris that gets stuck in a clogged

debris that gets stuck in a clogged gutter can cause problems at the roof line. The fascia boards that hold the gutter system are often made of wood, and when gutters fill with water, the boards start to rot. The built-up organic matter



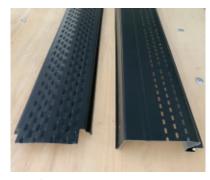
Clogged gutters can lead to rot, insects and foundation problems.

also provides a prime spot for insect infestation. And in cold climates, clogged gutters can freeze and create ice dams that prevent water from draining off the roof, eventually causing it to seep into the home.

With all these reasons to keep them clean, you'd think gutter maintenance would be a top priority for homeowners everywhere. Yet, gutters are often overlooked or discarded because cleaning them is a nasty chore, and it often requires working from an extension ladder, which many homeowners aren't anxious to do. Finally, there's the simple fact that by virtue of their elevated location, homeowners aren't always aware of the how clogged they are. In other words, since they're out of sight, they're out of

That's why God gave us gutter covers.

We recently installed a couple of sleek-looking gutter products



E-Z Gutter products install with a friction fit.



E-Z Shield snaps right over hidden hangers in residential gutters.



Seam the 4' sections by overlapping the notches.



Then fasten with a sheet metal screw.

# E-Z GUTTER STEEL SCREEN PRODUCTS

E-Z Gutter also offers screen covers made from .028 expanded galvanized steel that is powder-coated with Midwest Enterprises' own proprietary powder for maximum durability. Steel screen gutter guards are available with either medium or small holes, and are ideal for medium to heavy debris loads. Also available are powder-coated aluminum screens, which are excellent for locations where salt spray and other extreme environments cause other products to corrode. All products are made in the USA. Visit www.e-zgutter.com



from E-Z Gutter, which offers a wide variety of gutter protectors to eliminate clogs from debris. We selected a couple of EZ-Gutter's aluminum solid perforated gutter covers designed for best

protection from the elements. And installation could not be simpler. Aside from a ladder, you don't even need tools, because the covers simply snap into place. **EHT** 



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While much of the process used to treat southern yellow pine is a trade secret, it has been thoroughly tested by the Scientific Certification Systems lab or SCS, a leader in environmentally-friendly building product certification. YellaWood products are treated with the first wood preservative process to achieve EPP certification and also carries the world-renowned UL GREENGUARD Gold certification. What's more, builders can earn up to 18 points toward NGBS certification. Visit yellawood.com.

## **DAVINCI ROOFSCAPES COMPOSITE SIDING**

DaVinci Roofscapes has launched a new line of composite siding that features the appearance of authentic cedar shakes. DaVinci Hand-Split Shake Siding products are available in eight colors. The new composite siding shakes resist impact, fire, mold, algae, insects, salt air and high winds. And, while they'll look as attractive as real cedar, they won't curl, cup or split like real cedar. Each tile in the siding line is 18 inches tall with a 5/8-in. thickness and comes in 8- or 10-in. widths. The 10-in. pieces have a simulated keyway to give the appearance of 4- and 6-in. width shakes placed together to provide a multi-width appearance. Made of virgin resins, UV and





thermal stabilizers plus a highly-specialized fire retardant, the siding is resistant to expansion and contraction that can happen with fluctuating weather conditions and temperatures. DaVinci has introduced five new colors for the DaVinci Hand-Split Shake Siding product line: Bark, Granite, Sage, Slate Blue and Taupe. Three additional color blends from the Nature Crafted Collection will also be available in the siding profiles: Aged Cedar, Black Oak and Mossy Cedar. Visit www.davinciroofscapes.com.

### **ECOSMART TANKLESS WATER HEATERS**

According to the US Department of Energy, water heating systems account for an average of 18 percent of electricity costs. EcoSmart, a leading Rheem brand of efficient electric tankless water heaters, helps reduce energy costs in homes and businesses by up to 50 percent with its patented green energy products. Recently EcoSmart has unveiled its new brand design, including an image of a globe, shaped as a blue water drop. The EcoSmart electric tankless water heaters include the ECO 11, an 11.8-kW electric tankless water heater ideal for providing hot water for point-of-use or low-flow applications—perfect for multiple or single use, depending on climate. The ECO 18 is an 18-kW electric tankless water heater perfect for a large apartment or townhome with 2 bathrooms for up to 3 people. The ECO 27 is one of the most powerful models from EcoSmart, with the capacity to handle a large single-family home and deliver endless hot water to multiple fixtures, even in colder climates. Each unit provides instant, consistent, and endless hot water with self-modulating technology—meaning they will adjust how much energy



input is needed based on how much hot water is demanded. Every EcoSmart electric tankless water heater is designed to provide endless hot water, save space, save energy, time and money. Visit www.ecosmartus.com.

# WAGNER CONTROL PRO 130 AIRLESS PAINT SPRAYER

Designed for projects that require at least a gallon of paint, in as little as two minutes the Wagner Control Pro 130 can spray a coat of paint on an 8x10 foot wall (without having to thin the paint), making quick work of staining or painting decks, fences, porches and garden sheds, as well as interior walls and surfaces. The Control Pro 130 takes the intimidation out of airless spraying for DIY'ers of all skill levels. Compared to traditional airless sprayers, the Control Pro 130's High Efficiency Airless (HEA) gun and tip technology produces a soft and controllable spray pattern, making it more



user-friendly. It also produces up to 55 percent less overspray, saving on paint consumption and reducing time required for masking around the project. This is a lightweight sprayer with a 25-ft. hose. Visit wagnerspraytech.com.

## **ROAMWILD MULTI PULL SAW PRO**

The Roamwild Multi Pull Saw Pro incorporates new and unique features and leaves a fine finish to wood and plastic. The saw is engineered for great balance, so it's as comfortable to use when cutting a large piece of sheet material or trimming the thinnest slither from the finest piece of hardwood. The saw will give a smooth sanded finish on any wood or plastic, and it can be used in any position.

The three-point sharpened teeth are hardened, with a minimal set and specially cut on extremely high-quality steel so cutting on the pull stroke is so easy. It can flush cut without damaging the surface it is resting on. The Roamwild Multi-Pull Saw has a general carpentry edge along the base of its blade and a fine-cut edge at a perfect angle along the top of the blade. The Roamwild Multi-Pull Saw PRO version also encompasses a tack hammer and puller built into in the handle, and even a handy measuring ruler and angle tool too. Visit www.roam-wild.com.

## FIRST SATURDAY LIME

With spring upon us, many are starting to return to their gardens. Unfortunately, so are insects and pests. First Saturday Lime is a first-of-its-kind pest repellent made from insoluble hydrated lime so that it dries out insects and unwanted pests, but is safe to use around people and animals. Developed by two sisters who are third generation in the limestone business, First Saturday Lime can also be used to prevent algae growth in ponds, protect firewood from insects and even whitewash walls, fences and more. Pour around the base of your home once a month for safe, effective insect control. Deodorize chicken coops, stables, barns and kennels. Increases soil pH levels for "sweeter," more fertile soil. Visit firstsaturdaylime.com.



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