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Cover photo courtesy Milescraft

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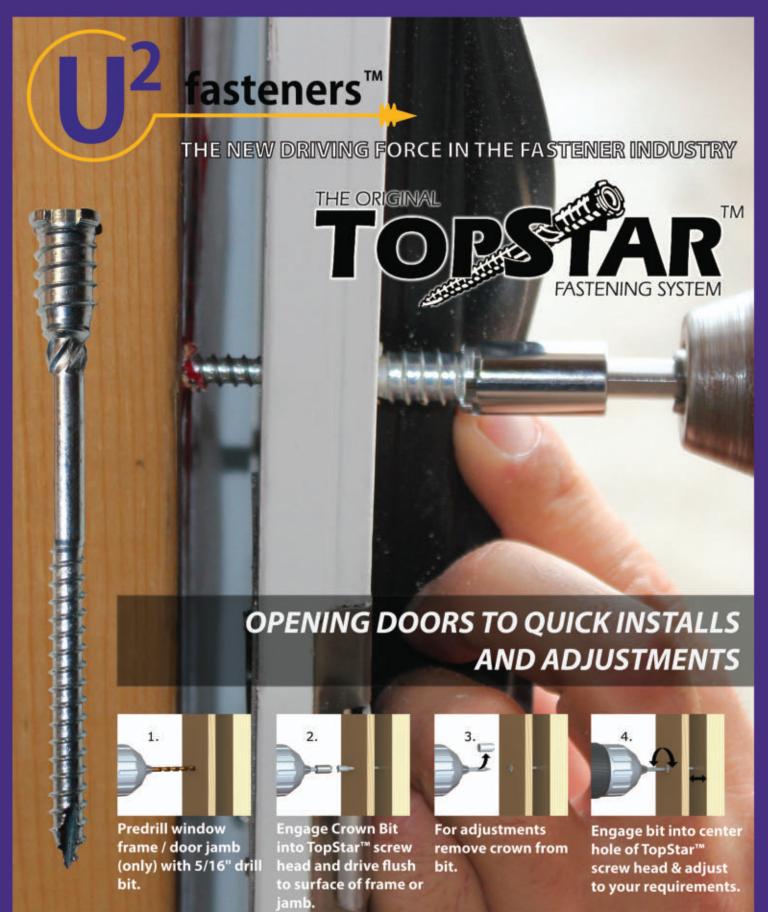
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Fasteners that contractors and engineers agree on. Find out why!



## From The Editor-In-Chief

y home life is changing, which tends to happen as time passes. My family and I are in the middle of trying to sell our fully remodeled house and buy a different one. It's a fairly agonizing process, because there seems to be countless things to consider. Off the top of my head, I'm factoring in variables such as affordability, condition of the home, return on investment, future repairs and upgrades, proximity to work and school, and affiliation with a quality school system. How can we get the most from the money we spend? Can we remodel another house now that we have kids in the home?

The biggest potential problem is that if you make a poor choice when buying a home, you're basically stuck with your decision for a while. When you have fulltime careers and children enrolled in school, moving to a new home feels like moving a mountain—a monumental feat that most people swear to never do again as soon as they settle into their new place.

And as I type this letter I've yet to move that mountain. We're still trying to find a new home, and we've got to make it happen because we've outgrown the old one. See, we're multiplying. On May 31, my wife Shanna and I welcomed our third child (and first daughter), Maribeth Quigley Weber, into the world.

She's beautiful. She's perfect.

But she doesn't have a bedroom, so wish us luck finding a house that has one for her.

And I'll keep you posted on how we decide to fix it up.





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How do Structural Screws compare to Lag Screws?

• Structural screws are just as strong or even stronger than lag screws and they're easier to use. Whereas • lag screws require a pilot hole to be drilled before they can be driven, you can just zip in a structural screw



to make a strong framing connection with any 18V driver (no pilot hole is necessary), which saves a lot of time and labor. The thinner shaft of the structural screw makes it easier to drive, and although they don't look as beefy as the traditional lags, structural screws are made of stronger steel and are heat-treated for maximum durability. Structural screws also feature Torx drive heads in addition to traditional hex-head styles. The additional contact points of a Torx drive prevents the kind of "cam-out" you get with Phillips screws.

• We found some stickdown tiles at the flooring store that had beveled edges for grout joints. Can resilient tiles be grouted?

• If you're choosing adhesive • tiles, make sure you select a product from a reputable manufacturer because some of the peeland-stick products have a poor track record of performance. But ves, resilient tiles can be grouted with Vinyl Floor Grout, which is more pliable than standard ceramic tile grout and will allow the resilient tiles to expand and contract without developing cracks in the joints. Also, the EHT staff recommends that prior to installing the stickdown tiles, you coat the subfloor with a Multipurpose Floor Primer to enhance the adhesive bond.

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## S. A Got-

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I see a lot of new power tools being advertised as having "brushless" motors.
What's the advantage?

• In a power tool's electric motor, a brush is a device that conducts current between stationary wires and • moving parts, most commonly in a rotating shaft. Electronic brushes often require replacement after the



tool sees a lot of wear. However, major tool manufacturers are moving toward brushless motors that not only eliminate the maintenance headache of brushes but also offer performance advantages over the older motors. Instead of wearable brushes, tool manufacturers engineer more steel and copper into the brushless motors for longer life as a result of reduced friction, less heat buildup and higher efficiency. Brushless motors can deliver significantly more power and run time. You'll find this new technology in professional-grade drills, drill/drivers, impact drivers and hammer-drills.

• Do I need a special kind • of concrete to make a concrete countertop?

• Ready-mix concrete companies like Quikrete and Sakrete offer special formulations for making pre-cast or cast-in-place concrete countertops. These products feature a "super-plasticizer" additive for a flowable mix at a low water-to-cement ratio. The superplasticizer delivers a high-flow fluid mix that minimizes the need for mechanical vibration for easy shaping. Mechanical vibration is necessary to release air pockets from the concrete and ensure a solid setup without voids or weak spots. These special countertop concrete mixes reduce shrinkage for long-lasting use and exceed 5,000 PSI compression strength in up to 28 days. EHT



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#### Nail Guns for the DIY'er



**By Matt Weber** 

ith a nail gun, you can aim a nail for perfect placement and stop worrying about bent fasteners or hammered thumbs. Nail guns also spare your elbow a lot of wear and tear; they drive nails with a single pull of the trigger, which saves tons of time compared to making multiple hammer swings for every nail in the project. Do I recommend them for a serious DIY'er? You bet I do.

But which nailer makes sense for you? With a range of sizes and

applications, here's a rundown of your choices.

#### **AIR NAILERS**

If you already own an air compressor and air hose, then a pneumatic nail gun will give you the most bang for the buck. If you don't own a compressor and you plan on handling your own home improvements, then a compressor system can be a sound power-tool investment. One of the biggest benefits is that air tools don't have their own motor. With cordless

electric tools, you have lots of small motors that can wear out, batteries to recharge, and rechargers to store. But with air tools, you have a single powerful motor that runs them all, so they can perform for years without failure. This makes the tools lighter, more compact and easier to handle—with less moving parts to malfunction. For this reason, air tools in general are known for their long-lasting value.

As far as nail guns, you'll also find the widest range of applications

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#### **TOOL SCHOOL**



Pneumatic framing nailers require a good deal of air power to function properly. An air compressor's ratings for pressure (measured in pounds per square inch, or PSI) and volume, (measured in cubic feet per minute, or CFM) should be equal to or greater than the requirements of the nailer, so check the specifications of both.

to be powered by air. Choose from pin nailers, brad nailers, finish nailers, framing nailers and even roofing guns all driven by air power. You can add to your air nailer collection as future projects demand.

It is important, however, to match the nail gun with an appropriate air compressor. The compressor's ratings for pressure (measured in pounds per square inch, or PSI) and volume, (measured in cubic feet per minute, or CFM) should be equal to or greater than the requirements of the nailer, so check the specifications of both. The requirements for the nail guns vary with their size and application, so an air compressor that has the capacity to power a brad nailer might not have enough power for a framing



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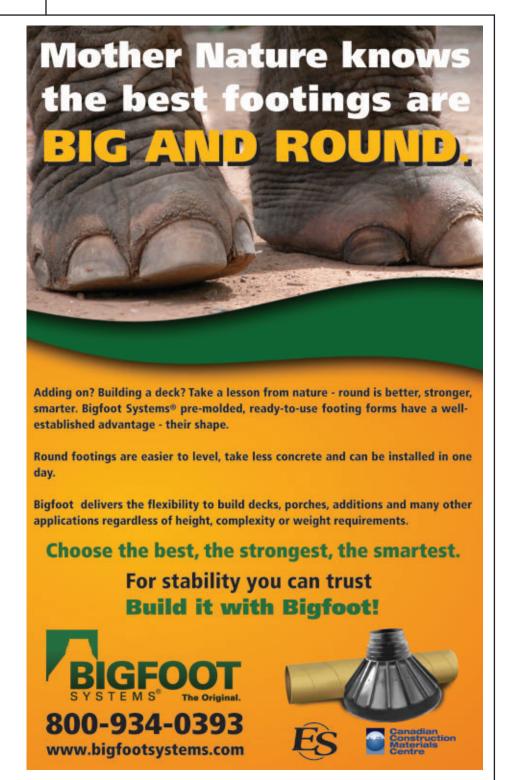


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#### TOOL SCHOOL

nailer. For example, the requirements for brad nailer average 0.3 CFM at 90 PSI, whereas the requirements for a framing nailer average 2.2 CFM at 90 PSI.

Note: If you plan to run other air tools simultaneously with the nailer, you should also make sure the compressor can handle the combined load.





The nails for nails guns are collated in strips or coils. Coil nail guns, like this Senco roofing nailer, allow for less reloading because they hold more nails. If you're a professional with a big job, coil nailers can be a timesaver. Most DIY'ers choose a strip nail gun.

Most pneumatic nail guns will require the nose to be pressed against a surface to fire. This is a safety feature so that the gun is not accidentally shot. There are usually two choices for operation: bump fire and sequential. Sequential requires you to pull the trigger each time you want to shoot a nail. Bump fire eliminates the trigger and fires each time the nail gun is pressed up against a surface, which can fire multiple nails very quickly.

#### CORDLESS FINISH NAILERS

As much as I love air tools, I do a lot of nailing, so it's nice to have a cordless option that's ready to grab and go.

An air compressor can be heavy and bulky, and even the portable models can be cumbersome to move around. The air hose can sometimes get in your way or become tangled, and you're limited by the reach of the hose as well as the availability of an electrical power supply. Plus,



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although an air-driven nailing system is an excellent setup for a worksite, sometimes you have a simple repair around the house that requires only a few nails, and then you're finished. It can be a chore to drag out a hose and compressor for small, quick jobs.

In these situations, a battery-powered cordless nailer gets the job done without the extra baggage. This cordless category is populated primarily by brad and finish nailers (15 to 18 gauge) powered by lithium-ion batteries. A number of reputable manufacturers make them, including Paslode, Bosch, Dewalt, Hitachi Power Tools, Senco, Ridgid, Ryobi and Porter-Cable.

Recently, I've been using the Porter-Cable 20V Max Lithium Ion 18-gauge Cordless Brad Nailer to install trimwork and build patio furniture. It's a lightweight (5.1 lbs), well-balanced and solidly constructed gun that's a good fit for a DIY'er. It has a fastenerlength capacity of 5/8 to 2 inches and a magazine capacity of 100 nails. The nailer is capable of driving up to 450 nails per charge using a 1.5Ah battery and up to 1,300 nails per charge using a



The Porter-Cable 20V Max 18gauge Cordless Brad Nailer is a good fit for a DIY'er—one I've recently been using for trim carpentry and building patio furniture.

4.0Ah battery (sold separately). It has several tool-free features including a tool-free jam release, tool-free depth adjustment wheel, and a tool-free "stall release lever" that resets the driver blade after a nail jam to reduce downtime.

#### CORDLESS FRAMING NAILERS

To drive a 3-1/2-in. framing nail through solid lumber requires a little more *oomph* than a battery delivers alone. To cut the hose for a framing nailer requires a combination of both battery power and gas fuel rods. When the nose of the gun is pressed to the work surface, flammable gas fuel is released into the combustion chamber where a fan mixes it with air. When the trigger is pulled, a spark ignites the gas mixture, creating combustion that drives the nail.

Sounds cool right? They are; in fact, every pro builder I know is in love with these things. But that coolness comes at a price, as the flagship tool in this categorythe Paslode Cordless Framing Nailer-can run \$300 to \$400, depending on model. Whether or not the cost of the tool makes sense for you depends on how much nailing you do (and how much you just love owning cool tools). I will say this: The reason all those pros are so in love is because the cordless framers offer all the performance of an air-powered tool without the hassle of the extra machinery, which means time saved on the job. To a contractor, time can equal money, and that saved time will soon justify the cost of the gun.

For a DIY'er who's wondering if such a purchase would prove to be a sound investment, I recommend first determining the scope of your upcoming framing projects and



The Paslode Cordless Framing Nailer is generally considered the flagship of this class of nailer.



#### TOOL SCHOOL

then consider how much time and hassle you'll save by investing in a nail gun, cordless or otherwise. And then factor in how much that time is worth to you...

As for me, I'm hooked. I have experience with a few generations of the Paslode Cordless Framer, and the strides the company has made in the tool's runtime and efficiency are truly remarkable. The latest model, the CF325XP Lithium-Ion 30-deg. Framing Nailer, delivers 15 percent more power than its predecessor. With a 7.4V lithium-ion battery, it delivers up to 9,000 shots per charge. For a full battery, recharge time is 1-1/2 hours, but a 2-minute quick charge will give you up to 200 extra shots! The framer is lightweight at only 7.2 lbs., and its compact design fits between 16 in. on-center studs, joists and roof trusses. Plus,



Cordless framing nailers are powered by a combination of lithium-ion batteries and gas fuel rods.



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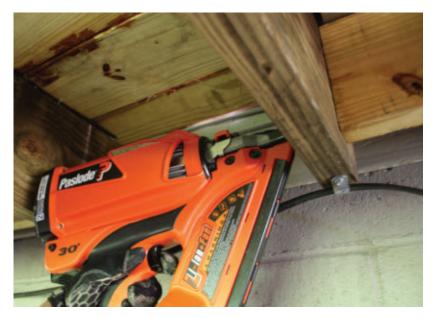


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#### TOOL SCHOOL



Paslode's latest model CF325XP has a compact design that fits between 16" on-center studs, joists and roof trusses.

for those of you in a cold climate, the new Paslode Framing Fuel with All Season Formula lets you keep working in temperatures down to 14 degrees F when compressor hoses are freezing. For "extreme" DIY'ers and pros on the go who have heavy-duty projects ahead, a cordless framing nailer is a worthy investment ... and quite possibly your next favorite tool. **EHT** 

#### BRAD VS. FINISH NAILS

To the novice DIY'er, a brad nailer and finish nailer might appear to be used for the same jobs, but each type of nail gun actually serves a different purpose. A brad nailer is designed to run 18-gauge, fine wire brad nails. These small nails are very hard to drive manually without bending the nails. Once they've been driven into wood, brad nails are nearly invisible to the naked eye, reducing (or eliminating) the need for wood putty to conceal the head. The disadvantage to using brad nails is that they don't have much holding strength for heavier carpentry projects, such as large crown molding or baseboards.

For larger, more bulky wood trim, you will need to use a finish nailer, which drives 15- or 16-gauge finish nails that are slightly larger

than a brad nail, giving them better holding power. However, because of the fastener's larger diameter, you will need to conceal the nail heads with putty. Plus, the thicker finish nail is more likely to split the wood than a brad.

In a perfect world, a DIY woodworker will have both nailers on hand for projects, but if you need to prioritize, then you should probably start with a brad nailer, which can handle most trimwork and light-duty projects with minimal touchup.





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## HOUSE, BASEMENT

By Mark Clement

he basement in my century-old house—like most century old houses I'd guess—was damp. Downright wet at times. It smelled and there was mega-mold. We kept stuff down there because we had no other choice, but it was gross. Dusty too. And when the dust got wet, it was kind of like cat litter. For a room with a higher population of spiders than people, it was a net-generator of general disgust-

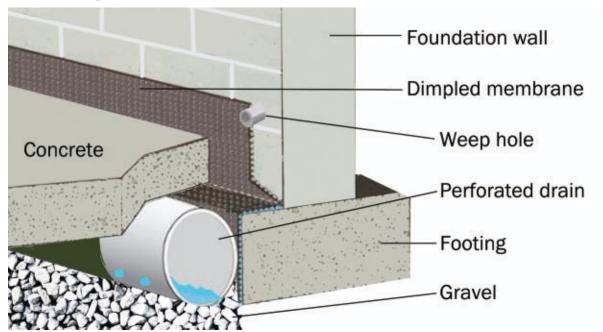
ingness for the whole house.

So the first step in the overall rescue renovation of the space was taking a big bite, jumping off the top rope, mixing some more metaphors to smash, grab and dig in a perimeter drain.

#### WHAT IS A PERIMETER DRAIN?

A perimeter drain, aka "French drain" and "drain tile", is basically a trench around the outside of the basement floor. The water conduit is a 3-inch perforated pipe surrounded by landscape fabric and packed in rocks. The pipe pitches, ideally 1/4-in. per foot, and is covered with concrete. It also has a weeping membrane between it and the wall, so water can drip down the wall and escape into the drain system. The whole thing daylights into a sump pit in the lowest corner of the basement where water collects and is removed by a sump pump.

#### OLD HOUSE, DRY BASEMENT



This deep channel drainage system generally requires removing 12-18" of concrete slab where the floor and wall meet along with excavation of subsoil at the side of the footing. A perforated pipe or channel, combined with washed gravel, is laid parallel to the footing with a slight pitch to a collection tank where a sump pump discharges the water.

#### STRONG BACK, WEAK MIND

This job is a LOT of work. In theory, a perimeter drain is a reasonably easy landscape project. Problem is, it's inside your house. So, there's still a lot to think about and organize to keep the genie in the jar.

Stuff. If your basement is occupied with all the stuff most basements are occupied with, the first step is to protect the storage items and appliances. Once dirt starts coming out, it takes up all kinds of space fast. And dirt is dirty, so drape your stuff.

Sluggo. While it seems ridiculous to see me using a sledgehammer for this, it was better than a jackhammer for the slab I encountered, which was thin. While a smaller breaker hammer might've been the key, a full-tilt jackhammer would likely spend more time stuck in the 'crete or the compacted soil beneath it, and I'd be wrestling it



The first breech of the concrete is going to be with something brutal and cro-magnon in nature.

Prepare for blisters.

out. They're too heavy to wrestle for long periods of time, so I just smashed it. And yes, I wore eye protection.

I used a Fiskars sledge for this. It has one typical flat face and



A mattock is an indispensible dirt breaker-upper.

one wedge-shaped face. That wedge shaped face pulverized this slab. All my sledgehammers are nicknamed Sluggo.

**Mattock.** Next up in the cavalcade of indoor landscaping, the



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#### OLD HOUSE, DRY BASEMENT

best dirt loosener is a mattock, AKA grub hoe. It pierced the thin membrane of concrete reasonably well and got me into the dirt below.

#### DIG IN, OUT, UP, AND CARRY OUT

It's around now—during all the digging and dirt work—that you might begin to question your sanity. I did.

But what I focused on was the thousands upon thousands of dollars I was saving instead of the hundreds I was spending.

I hauled 10-Gallons at a time. Until someone invents a better dirt hauler than two 5-gallon buckets, it's bucket brigade all the way.

I found that a short-handled shovel was best for filling the bucket from a big pile and that a flat-edged shovel was best for scooping up from the concrete floor once the pile got smaller.



There's a lot of digging involved, and every inch of it is against a wall. Because the pipe is pitched, the closer you get to the sump area, the deeper it gets. I was down almost 2 feet.

The dirt pile is not small, not light and it's in the way.





I tried to keep the work in chunks. Dig for a while (drink gallon of coffee ... from the pot if needed), then haul for a while.

Where it goes. I used three approaches for this job to get the dirt managed. First approach was a dumpster. Dumpster guys don't like dirt and rock loaded in their cans, so you either have to pay extra for it, use a smaller box, or they won't take the job. The second approach, which I liked best, was that a friend with a dump truck did me a solid and getting rid of that load was cheap. Third approach was my utility trailer and a land-reclamation site in my town (they're filling in a quarry). This was the cheapest (50 bucks per load I think) but also the most work, because I then had to shovel the dirt back off the trailer,





connects end-to-end so you can

make a continuous tube around

#### OLD HOUSE, DRY BASEMENT



Wrapping the pipe in landscape fabric will reduce blockage inside the pipe.



This is a good cross-section of a pipe going in. Because the entire floor was dug out here (for adding a bathroom), you can see the stone, pipe and fabric.



the room. It's also pretty important that the holes are positioned to sides, not up and down. Until they're trapped in stone, the pipes are pretty easy to move. Especially if your skull is thick.

Fabric. I wrapped my drainpipe in landscape fabric. It probably wasn't entirely necessary, but I had visions of it filling with silt at some point in the future and since it will be buried in concrete, I figured an extra step was easier now than later.

#### MEMBRANE, CONCRETE AND PIT

Membrane. The last step before concrete is a dimpled membrane that crawls up the wall above the new slab line and goes past the concrete into the gravel field. I run mine straight down the wall.

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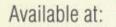
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Wet basements typically mean wet walls. Pressure from outside the house is greater than the pressure inside, and water can weep down the walls. If there's no way for it to get into the drain system, that's a problem. The dimpled membrane creates a pathway for the water to pass.

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The best way to win the war with water is to let it out. The dimpled membrane (left of photo on the floor) lines the wall. Gravel and concrete then cover the pipe.

Concrete. Bags of concrete are laborious. However, I did this job in sections that made hauling and mixing bags a little easier—and, again, way less expensive—than managing a concrete truck, chutes and yards of concrete flying into my basement.

So if you mix, you need space for a wheelbarrow and buckets for water.

Pit. You can buy plastic barrel sump pits and drop them in your hole, then run the pipes to them. That would be faster and easier than what I did. But, they can cost a couple hundred bucks. Mine cost maybe twenty. It took a little while, but I built some forms out of some scrap lumber and poured concrete walls for the pit. You could argue it was a waste of time.



I built plywood forms and poured concrete walls for the sump pit.



For your sump pit, the easiest approach is to purchase a plastic sump basin.

One other thing: Although this project typically functions with a sump pump, I waited to install my pump because I was doing a million other jobs once the drain was installed like framing walls, scheduling the electrician, etc. As time passed, I noticed something: The only thing in the hole was dust.

I expected water to at least be seeping in there—that would happen for sure in other ground-water scenarios—but for



#### **DIRTY DIRT**

I had to run an air cleaner on this job. This unit, called BuildClean, is a high-end professional deal with HEPA filtration (it is awesome if you are a pro). I'm not sure HEPA was necessary, but the dirt I dug up was musty and had who-knows-what in it. We literally got colds. The air filter saved the day.





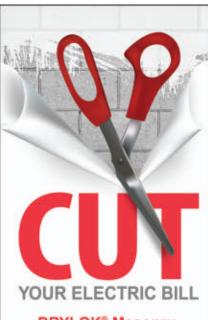
#### WAVE MOISTURE CONTROL FOR BASEMENTS

Odors, mold growth and dampness in a basement or crawl space are indications of stagnant excess moisture that creates an unhealthy environment for the whole house. In addition, these areas have high levels of combustion gases, radon and toxins. Wave Home Solutions has a developed a computerized sensor



control ventilation unit that will automatically monitor conditions, lower relative humidity and expel harmful indoor air pollutants. Unlike a dehumidifier, this has no maintenance, no buckets or filters, operates 24/7, and uses only about \$3/month of electricity as opposed to \$60-90 for a dehumidifier. It's a sensible approach to dealing with everyday living conditions, transforming the worst air mass in the house from a damp, odorous, polluted air into a dry, fresh, healthy environment.

Controlling moisture sources from the outside and combining it with Wave ventilation will provide a total solution for everyday living conditions. Wave ventilation expels the entire air mass at the lowest level so it will not be pulled upwards into the living area and will create a healthy air exchange for the entire house. It increases HVAC efficiency for the entire house by keeping it drier, and provides additional comfort for the living area. Check out www.wavehomesolutions.com or call them at 800-293-9577.



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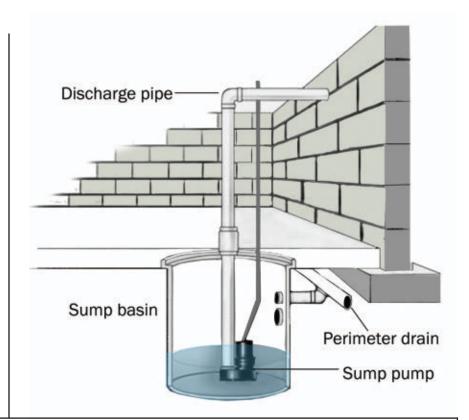


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the ground water we have here, just installing the drain system created enough of a relief valve that the ground water stays outside the building envelope.

I don't need a sump pump to pass inspection either, so basically I have a giant hole in my floor. I can cover it up and regain part of a closet that otherwise would have no floor and a pipe running up the wall. **EHT** 

It's a good idea to choose a battery back-up sump pump to prevent failure during power outages. All discharge pipe penetrations should be sealed to prevent moisture from escaping the pump basin.

## ORDERING AND **ORGANIZING**

This is where the strong back, weak mind thing kind of breaks down. There's a lot to think about when doing a job like this because it happens all over the yard and house.

Outside, it's important to think about where things will be stored and how you'll order them: In bags or in bulk. If you have a dumpster, is there room to get by it with stone or concrete or other supplies? I live in town, so there's no spacious double-wide driveways for me. This stuff is always on the top of my mind. It's good practice for being generally efficient too.



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# WOODWORKING TOOL Roundup

rom making your own picture frames to constructing your own furniture, woodwork is one area where many DIY'ers cut their teeth and where many skilled professionals make an honest living. Whether you're wet behind the ears or a seasoned expert at the craft, here's a roundup of handy new woodworking tools to consider for your next equipment purchase.



#### **POCKETJIG200**

The Milescraft PocketJig200 (#1323) allows you to connect your work pieces in a quick and timely manner. Whether you want to build storage projects, cabinets, shelves or bookcases, this pocket-screw kit does it all. Use it to create corner joints, T-joints, framing joints, miter joints, and make repairs. With built-in board thicknesses, there is no need to manually measure. Just

set this jig to your desired setting, set the depth of your bit and start drilling. There

are four common board thickness settings built into the jig: 1/2-, 3/4-, 1- and 1-1/2-in. (12, 19, 27, 38mm). The plastic carrying case contains everything you need to get started with your first pocket holes. Included are the following: double barrel pocket hole jig, drill bit, T20 drivers (3 and 6 in.), quick connect, stop collar with hex key, plugs and an assortment of different sized T20 pocket hole screws. With this type of T20

screw head, you can get maximum torque on the screw with little chance of the screw head stripping out. Visit www.milescraft.com.











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#### POCKETJIG100

Also from Milescraft, thePocketJig100 (#1321) gives you a quick and easy way to join workpieces with pocket screws and make small repairs around your house. The compact design allows you to do applications where a small jig is required. There are four common board thickness settings built into the jig: 1/2-, 3/4-, 1- and 1-1/2-in. (12, 19, 27, 38mm), virtually eliminating the need for manual measurements. The jig includes the following: single barrel pocket-hole jig, drill bit, 6" T20 driver, stop collar and hex key. This kit does not include the T20 screws that go with the driver, but they can be purchased separately. Any screws and driver can be used with this jig. Visit www.milescraft.com.

## GRIZZLY T27417 EDGE BELT AND SPINDLE SANDER

The Grizzly Model T27417 Oscillating Edge Belt and Spindle Sander has a 1/2-HP, 120V, single-phase motor that rotates at 11,500 RPM. It quickly converts from belt to spindle operation with the included spindle nut wrench. The T27417 features 1/2-in. spindle and 3/4-, 1-, 1-1/2-, and 2-in. diameter sanding drums with matching sleeves. Spindle speed is variable from 0–2000 RPM with 58 oscillations per minute. The sanding belt measures 4x24-in. and turns at a speed of 1,575 FPM. The table tilts 0–45 deg. with detents at 0, 15, 22.5, 30 and 45 deg. Visit www.grizzly.com.





# DEWALT FLEXVOLT TRACK SAW

The new FlexVolt 60V Max 6-1/2-in. Track Saw (DCS520) combines the convenience of cordless power with the precision, portability and versatility of a corded track saw. With an efficient brushless motor, specially designed transmission, and precision-ground woodworking blade to minimize deflection, the track saw delivers a finished edge just like a table saw.

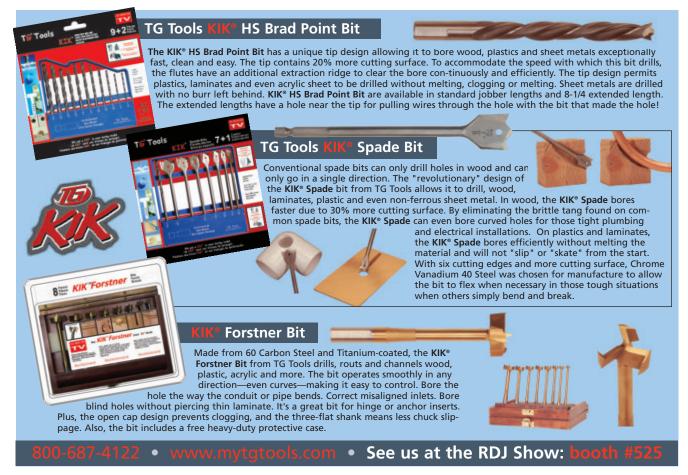
The Track Saw is capable of an on-track cut depth of 2-1/8 in. (54mm) at 90 deg. and 1-5/8 in. (41mm) at 45 deg. Included is a

depth scale to accurately indicate exact depth of cut. The scale accounts for the thickness of the track from the bottom of the track down to 1/16 in. With straight plunge and a parallel-link plunge mechanism, the saw can be used in a variety of orientations. A dual-edge track allows for fast setup and long anti-splinter guard length. In addition, a rail adjustment feature allows the saw to be accurately adjusted.

# FESTOOL DOMINO CUTTER

The Domino connecting system unifies the benefits of all previously existing joinery systems: the stability of mortise and tenon, the flexibility of biscuits used in furniture making, and the precision of the round dowel used in shelving. The key is the Festool Domino Cutter's





# WOODWORKING TOOL Roundup



#### **TABLELEGS.COM**

Building a quality wood table base or a complete wood table with aprons has never been quicker, using the patentpending EasyBase system from TableLegs.com. With the online configurator at TableLegs.com, customers can design their exact table base or complete table needed for their project. Alternatively, customers can order a table base or a complete table designed by the company with EasyBase joinery. Either way, the components are shipped via FedEx and the customer builds/assembles the table base or complete table in less than 10 minutes using only an Allen (hex) wrench, which is included in every order. The EasyBase uses mortise and tenons for perfect alignment of the table legs and aprons, and a unique interlocking corner-block system creates a solid joinery connection—with no glue or clamps or previous woodworking experience required. And the legs are removable.

#### MILESCRAFT CIRCLEGUIDEKIT

With the Milescraft CircleGuideKit you can cut circles from 1.5 inches in diameter to 52 inches in diameter. With the included TurnLock base plate, this

product is compatible with most routers. There is no longer a need for that homemade circle cutting jig; the CircleGuideKit does it all for you and includes everything you need to cut your desired circle. It also includes a bonus Offset Base for finishing edges on your work piece. There is a small circle jig and large circle jig included in the kit that have imperial and metric scales and easy readout windows for precise measurements. The kit also includes a 1/4-in. router bit. No more measuring, marking or making your own jigs, simply set the diameter of your circle and start cutting. Visit www.milescraft.com.

#### ONEIDA AIR SYSTEMS' UNIVERSAL DUST-FREE ROUTER HOOD

The Universal Dust-Free Router Hood boasts a virtually dust-free routing experience for the woodworker, contractor, and DIY'er. This patent-pending router accessory captures nearly all of the dust, chips and shavings



generated by portable routers, enabling a woodworker, contractor or DIY'er to have a virtually dust-free routing experience. Unlike other products on the market, the Universal Dust-Free Router Hood features both a universal base plate to fit nearly any make and model of portable router, as well as an upper dust dome and lower chip cover that combine to fully encapsulate the router bit. This enables superior dust capture at two different collection points, simultaneously, and ultimately helps to extend the useful life of the router bit. Made in the USA, it's available for purchase now at www.oneida-air.com.





# WOODWORKING TOOL Roundup

#### HITACHI 15 AMP 10 IN. JOBSITE TABLE SAW

The new Hitachi 10 in. jobsite table saw (C10RJ) with foldand-roll stand features a 15 Amp motor with 4,500 RPMs to powerfully and easily rip through tough hardwoods. The stand is designed with sturdy legs for easy set up and break





down, providing stability while in use. The C10RJ stand also incorporates durable wheels to ensure the user can maneuver through tough terrain with ease. Capable of a 3-1/8-in. cut at 90 degrees and 2-1/4-in. cut at 45 degrees, this table saw provides convenient on-board storage for the push stick, blade guard, anti-kickback pawls and other accessories. Visit hitachipowertools.com.



#### **KREG RIP-CUT**

Kreg makes it easy to cut sheet goods with the new Rip-Cut, a tool that turns an ordinary circular saw into a precision edge-guided cutting tool. The Rip-Cut makes straight, accurate, repeatable cuts in plywood, MDF, and other large sheets. Whether you're making rip cuts or crosscuts, (up to 24-in. wide), the Rip-Cut does it with simple setup, precise accuracy and great saw controland without having to mark and measure each cut. It utilizes a long edge guide that follows the straight edge of the sheet you are cutting. The extra-long guide supports the saw at the beginning, during, and at the end of the cut. A large hand-hold in the guide makes it easy to grip and adds great control. That edge guide is connected to an aluminum rail that holds your saw on a universal saw sled. The rail has a built-in measuring scale, so all you have to do is lock the saw in at the measurement you want-up to 24 inches— and then make your cut by holding the edge guide against the edge of the sheet as you push your saw along. Visit kregtool.com.

#### **SENCO FINISHPRO 30XP**

Senco introduces its smallest and lightest 15-gauge tool for trim and fine woodworking. The new FinishPro 30XP, with a magnesium main body that weighs just 3.8 lbs., is one of the lightest 15gauge tools available, maximizing ease-of-use. Measuring 12 inches in length and 9-5/8-in. high, it is also extremely maneuverable in tight spaces such as cabinets, while strong and durable enough to handle a range of finish and trim projects. The FinishPro 30XP accepts 1- to 2-in. 15-gauge 34deg. angled strip finish nails. Its E-Z Clear latch virtually eliminates fastener jams and associated downtime, and its NeverLube



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# WOODWORKING TOOL Roundup

design requires no oil and means no worries about oil staining a finish. The tool-free adjustable depth-of-drive provides consistent countersink depth. The 30XP has a 5-year warranty and comes with a carrying case. Visit www.senco.com.

#### **WORX AI DRILL**

Advanced intelligence can be defined as the capability of a machine to imitate intelligent human behavior, and that's just what the Worx engineers had in mind when they developed the Ai Drill. The new Ai Drill has three drive modes including Drill, SafeDrive and PulseAssist, which are activated by touch-sensitive keypads on the top of the drill. The Worx Ai Drill has no clutch settings; it relies



entirely on the tool's internal electronics to safely drill holes. drive and remove screws, regardless of the work material. When SafeDrive is selected, it delivers just the right amount of torque necessary to drive the screw and then backs off once the screw head is flush with the surface. With PulseAssist, the Ai Drill applies enough bit rotation to drive the screw snug to the surface without overtightening or stripping the screw head. This feature also works in reverse to back out stubborn screws without damaging the screw head. The

drill moves at a slow, optimal speed so it doesn't strip screws. BitLock is also a key feature: Load a drill or driver bit into the tool's chuck, and its motorized jaws not only tighten but selfcenter the bit, and does it with 30 percent more torque than hand tightening. Visit worx.com.





# PORTAMATE MITER SAW STAND

The newest miter saw stand (PM-6500) from Portamate features heavy-duty construction and folds quickly for easy transport and storage. With a 500-lb. weight capacity and up to 16 ft. of material support, this stand will get maximum efficiency out of your miter saw or other

tabletop tool. The stand includes two material-support stops as well as universal quick mounts for miter saws, band saws, scroll saws, planers and more. Visit www.portamate.com.



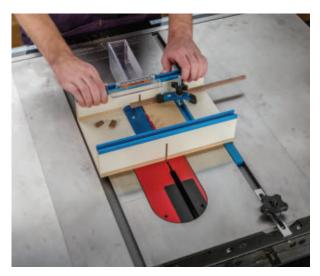
#### ROCKLER TABLE SAW SMALL PARTS SLED

Rockler Woodworking and Hardware offers a new jig for the table saw that makes it easier to achieve clean, controlled cuts on small parts. The Rockler Table Saw Small Parts Sled provides zero-clearance support for small workpieces, and it incorporates an innovative drop-off ramp that allows cut pieces to gently fall away from the blade onto the sled platform. This feature solves the perennial problem of small pieces being nicked and flung across the shop by the spinning blade. The Small Parts Sled is guided by an integral miter bar that slides in standard 3/4x3/8-in. miter slots. It features a low-friction melaminecoated MDF platform with front and rear fences. Universal T-tracks



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# WOODWORKING TOOL Roundup



run the length of the fences for attaching stops and the clear blade guard, which helps keep the user's hands away from the cutting area. Another T-track runs perpendicular to the fences for securing hold-downs. A safety stop with expandable miter bar is included; when positioned at the front of the saw, it prevents the sled from being pushed so far that the blade extends out the back beyond the blade guard. Visit www.rockler.com

#### **RYOBI 18V ONE+ PALM ROUTER P601**

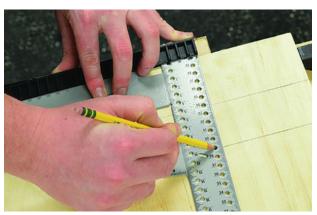
The new 18V Palm Router's convenient, portable size makes this tool a great addition to your collection of ONE+ lithium-ion tools. This palm router has microadjustment for precise depth control and cuts over 600 linear ft. per charge. With 29,000 RPM users receive fast, powerful trimming to get the job done. The quick release lever for easy depth adjustment makes this router one of the easiest to use



on the market. LEDs also illuminate work surfaces for increased cutting visibility so your cuts are always precise. Visit ryobitools.com.

# MILESCRAFT FRAMINGSQUARE300

This imperial FramingSquare300 is used to lay out a "square" or right angles, and can also be used to measure angles with the built-in easy measurement readout. The tool includes a built-in retractable edge guide and euro-style hinge mounting holes. Use this multipurpose square to mark saw cuts, lay out shelf-pins and more. It has three quick angle finders for 30-, 45- and 60-deg. angles. Visit milescraft.com.

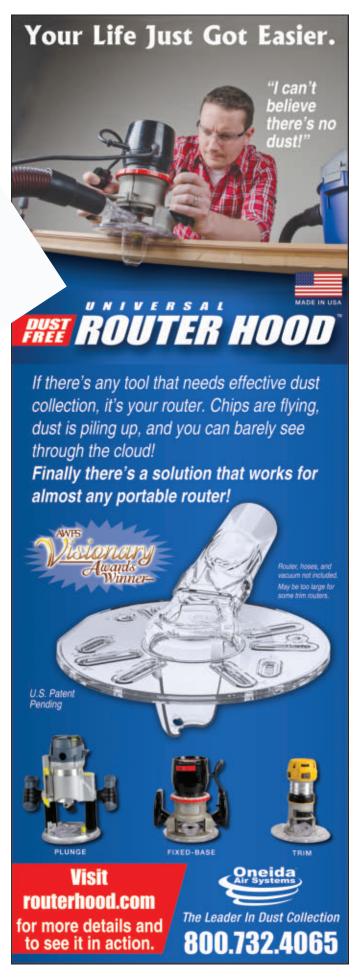


#### **GORILLA GLUE CLEAR**

The new Clear Gorilla Glue offers users the same recognizable versatility and strength for which Gorilla is known in a crystal clear, no-foam formula. This extension to the Gorilla legacy is born from users' need for translucent glue without sacrificing its water resistance, thick consistency or versatility. Clear



Gorilla Glue can be trusted both on indoor and outdoor projects that affix glass, foam, wood, metal, ceramic and more. Available in 1.75-fl. oz. and 3.75-fl. oz. bottles. Clear Gorilla glue offers an extended working time, which allows you reposition your project. It is also gap filling which allows you to glue uneven surfaces. Visit gorillatough.com.

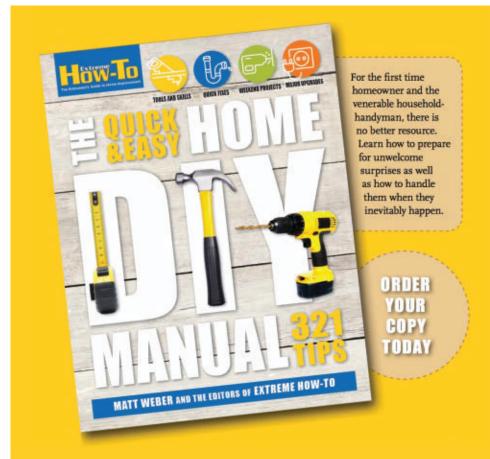


# WOODWORKING TOOL Roundup

#### BOSTITCH CORDLESS 18GA BRAD NAILER

The new Bostitch Cordless 18-gauge Brad Nailer drives brads from 5/8 to 2-1/8 inches. It features a narrow nose designed for clear line of sight and accuracy of nail placement, tool-free depth adjustment, and a tool-free selector switch for sequential or contact-actuation (bump fire) modes. The toolfree jam release quickly and easily clears nail jams, and multi-functional LED lights help to provide both workspace illumination and tool diagnostics. A brushless motor offers optimal runtime and durability. and a low-nail lockout prevents dry firing and unwanted marks on the work material. Visit www.bostitch.com. EHT





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Contols	Computerized	Easy
Durability	Aluminum	Vary
Maintenance	No	Buckets/Filters
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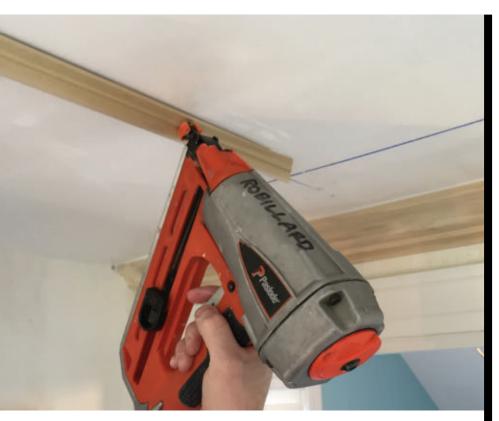


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# **Treat Your Ceiling**

Apply an Astragal Molding Treatment to a Ceiling



By Rob Robillard

dding a ceiling molding treatment that is then painted with contrasting colors commands attention in almost any room. This article will cover how to apply astragal molding on a ceiling.

Astragal molding has a profile composed of a half-round surface surrounded by two flat "fillet" planes. An astragal is an architectural element used at the top or base of a column, and is also found on furniture, French doors (as a door stop) and other woodwork.

In the last 20 years or so, astragal molding has also been used as wainscot wall molding. In this

situation, the astragal molding is used to simulate decorative panel outlines on walls, which add depth and character. I call it the "cheap man's" wainscoting.

# ASTRAGAL MOLDINGS COMPLEMENT CROWN

I've yet to find a carpenter that will argue with me that crown molding does not change the perceived shape of a room. In a space that's tall and narrow, adding a crown accentuates ceiling height while creating the illusion of width. Crown molding is just plain sexy. In fact, astragal moldings applied to ceilings can complement a

crown molding and create a more intricate aesthetically pleasing look.

Astragal ceiling moldings are almost exclusively paired with crown molding. When painted a trim color they add a nice layering contrast of light and dark convex shadow lines. This contrast gives definition to the crown and astragal moldings, and is a nice architectural effect.

Many folk will paint the crown, the astragal and the small ceiling space in between the two all one trim color, and then paint the rest of the ceiling a different color or shade. The effect is the illusion of a stepped or larger crown/ceiling molding.

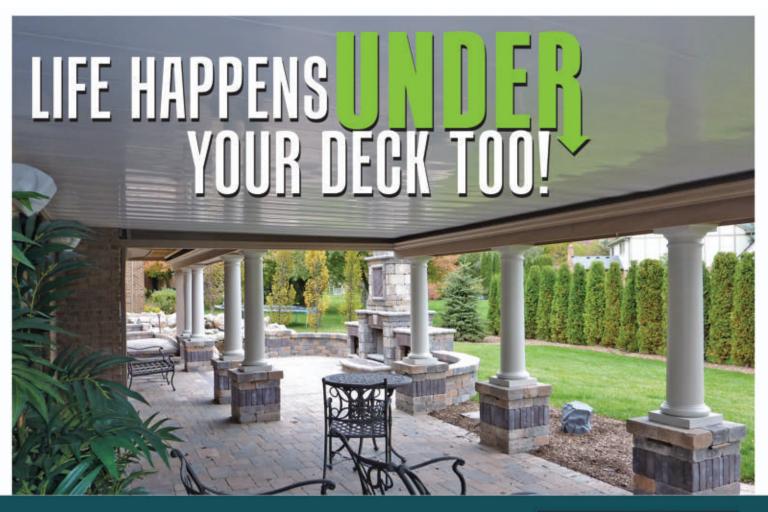
Sometimes people will add an astragal ceiling treatment to frame the perimeter of a room with a hanging light and architectural ornamental rim.

# WHAT'S THE PROPER SPACING?

After the crown molding is applied to the room it is time to decide on the spacing for your astragal ceiling molding. Astragal molding can be spaced according to your desire, but In my experience they are typically deployed 8 to 10 inches away from the crown.

For this project we chose 8-in. spacing. The ceilings are 8 feet tall, and we felt that the 8-in. space had a nice proportion.

To test our 8-in. spacing idea we used a laser level to shoot a line on the ceiling for a visual reference. Once satisfied, we measured and marked 8 inches off each wall, and then snapped



Interlocking panel design that is watertight.

Easy to remove and replace for structural access.

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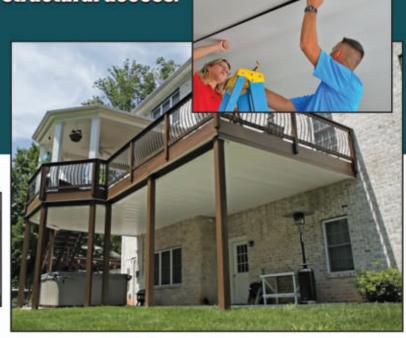
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BEFORE



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# **PROJECT NEXT**



a chalk line to mark the crown side of our astragal molding.

# LOCATE CEILING NAILERS

This particular house was built in 1960 and had plaster ceilings applied over 1x3 (2-1/2-in.) ceiling strapping.

Strapping refers to the strips of wood that are installed perpendicular to the ceiling rafters and 16" on center. Strapping can be useful to hang drywall, blue



Astragal is installed 8" to 10" from crown.

## ZIP-UP UNDERDECK TRANSFORMS UNUSED AREA BELOW A DECK INTO DRY OUTDOOR LIVING SPACE

Transform the underutilized area under a raised deck into dry outdoor living and storage space while maintaining maximum headroom and accessibility to the underside of the deck. Zip-UP UnderDeck is made from durable interlocking PVC components engineered to fit together easily. Creating a water-tight barrier that channels water to effective drainage, the system provides a clean, grid-free flat, non-corrugated, washable mold- and mildew-resistant paintable ceiling surface. The panels unzip for quick access to dropped items from the deck above and for cleaning. The panels do not kink like aluminum, look nicer and are easier to work with. Suitable for both residential and commercial installations, Zip-UP UnderDeck meets Class A Fire Rating and has passed Dade County, Florida standards for hurricane testing, which is the "gold" standard around the country.

Zip-UP UnderDeck installs easily with just a few tools. The screw-in/zip-in-place system uses five components: wall trim that attaches to walls or joists around the perimeter, main rail that runs the length of the deck, one-foot wide panels that are the visible surface of the system, and pitching rails that channel any water from above for effective drainage. An average size deck can easily be completed in one day. Available in three finishes and two colors (white and beige), Zip-Up UnderDeck is backed by a 25-year warranty. Visit www.zipupceilings.com.





board, level a ceiling, mount recessed lighting and temporarily hold up insulation. Strapping is also used when joists, rafters or trusses were installed further apart than 16 inches on center.

The first row of strapping is always against the wall, the second row is 14-3/4 in. apart from the first row and all subsequent rows are 16 inches on center from each other until you reach the end wall.

If your ceiling is not strapped, locate the ceiling joists.

**Tip:** Use a stud finder to first locate the strapping. Then, use a finish nail to penetrate and confirm its true location. Once I locate one piece of strapping and set a finish nail, I pull a tape from that nail and mark 16-in. on-centers. I confirm every third mark to make sure I measured correctly (or more accurately, if the previous carpenter measured and installed correctly).

Because the strapping is installed perpendicular to the ceiling joists, you will only be able to directly nail two astragal moldings into solid nailers. The other two astragal sides of the rectangular pattern will not be directly nailed into solid backing.

### HOW TO APPLY ASTRAGAL MOLDING ON A CEILING

I recommend using an acrylic latex caulk adhesive applied to back of the astragal molding in a wave-like pattern. Don't skimp on the goop!

#### Installation steps:

- 1. Measure 8-10 inches off the wall in three locations on all four walls in the room.
- 2. Stretch and snap chalk lines to outline your astragal pattern on the ceiling.



- 3. Measure your lengths, measuring the chalk lines from corner to corner.
- 4. Cut 45-degree outside miters on both ends.
- 5. Install the two opposing astragals that can be directly nailed into the strapping of joists.
- 6. Once installed, measure, cut and install the opposite two astragal moldings.
- 7. Press the moldings against the ceiling surface, ensuring good caulk contact.



- 8. Line up the astragal molding along the chalk line.
- 9. Install two opposing pneumatic finish nails, one on each side of the astragal molding every 12 inches.
- 10. Work the molding as you fasten to ensure you stay on the line and avoid a wavy molding strip. Working from one end of the ceiling toward the other end, move down the ceiling, and move the astragal molding as needed to follow the chalk line. Save the waves for the beach!



adjust the astragal as you fasten to ensure it follows the chalk line with no visible waves.

# **PROJECT NEXT**

- 11. On the areas that have strapping above, install the nails directly into the strapping.
- 12. On the opposite sides with the non-strapped ceiling area, install two nails at opposing angles to better grip the ceiling plaster board.
- 13. Once complete, set and fill all nail holes flush with wood putty. Don't overfill the holes or you will create an overhead, shoulder-aching, sanding nightmare.
  - 14. Caulk all seams smooth.
- 15. Prime, sand and paint according to the painting scheme.

#### **CROWNING ACHIEVEMENT**

Installing crown molding is today's most-pursued architectural

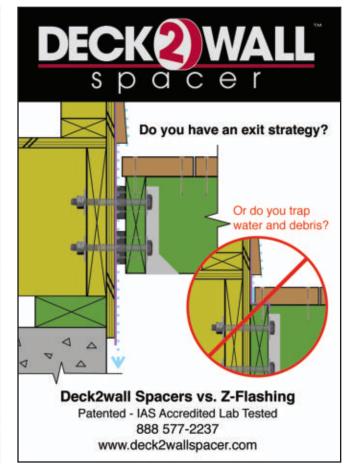


Complete the project by painting the trim and surrounding room with complementary paint colors.

upgrade. Crown molding with accompanying astragal molding gives the junction of the walls and ceiling both depth and formality. **EHT** 

Editor's Note: Rob Robillard is a professional carpenter and remodeler. Visit his website at www.ConcordCarpenter.com.





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# Six Simple Ways to Save Energy

Do Your Part (the Lazy Way)



Power bills giving you the blues? That's a common problem when the weather is blazing hot, the air conditioner is running full-blast, and then the mailman drops off that dreaded envelope. It's also common in the dead of winter, when the heater is cranked up to eleven.

Some energy-saving upgrades take a lot of time, effort and/or money, like window replacements, adding new insulation, replacing inefficient appliances.

But some steps are easy. For the lazy DIY'er, here's a list of simple tactics to save energy around the home—so simple you won't even break a sweat.

# RETHINK YOUR LIGHT BULBS

Compared to the old-fashioned incandescent bulbs, new CFL or LED bulbs use only a fraction of the electricity. They produce the same brightness (lumens) while using fewer watts, plus they last longer for less frequent bulb replacements. CFL or LED bulbs are not all the same, however, when it comes to performance. Bulbs certified with the U.S. DOE's Energy Star label indicate they've undergone extensive testing. An Energy Star-certified light bulb uses about 70 to 90 percent less energy and lasts 10-25 times longer. Plus, most Energy Star

LED bulbs are dimmable (check the package for more information).

#### **USE YOUR CEILING FAN**

Remember that a ceiling fan uses less energy than your airconditioner, so use the fan to lower your energy bill and still stay comfortable. Just be sure to turn it off when you leave the room.

One often-overlooked aspect of a ceiling fan is its Reverse feature. Your fan probably has a directional switch on the motor, so reverse your fan in winter to produce a gentle updraft, forcing warm air that hovers near the ceiling down into the living space.

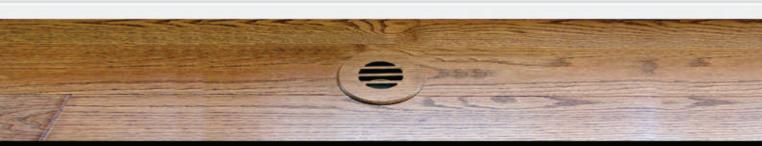


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# **SKILL SAVVY**



# ALTER YOUR LAUNDRY HABITS

When it comes to the temperature setting on a washing machine, many people simply set it and forget it. But water heating actually makes up about 90 percent of the energy it takes to operate a clothes washer. If you use the cold water setting on your clothes washer, that's money in the bank (yours). Specially formulated laundry detergents are available for cold water washing.

Here's a few more simple laundry tips: Wash fuller loads so that you wash fewer loads. On occasions when you need to run a small load, set the machine to use a lower water level. Also, consider using longer spin times in the washer to reduce the amount of drying energy needed.



Speaking of the dryer, it seems that for most homeowners the clothesline has gone the way of the dodo. According to the Department of Energy, more than 80 percent of US homes now have a clothes dryer, accounting for 6 percent of residential electricity consumption.

Cleaning the lint trap after each use is one of the easiest things you can do to improve air circulation and increase the efficiency of the dryer. Also, consider using a lower heat setting to conserve energy. Use the moisture sensor option to avoid over-drying clothes. And don't overstuff the dryer because it causes longer drying cycles.

### REPLACE YOUR HVAC FILTER (AGAIN)

Practically every home energy-saving article you'll read will mention the importance of changing your air filter regularly. So why mention it here? Because people still forget the filter because it's not readily visible. And for most people, out of sight is out of mind. I'm a prime example; I write about home improvement routinely and forget to change my system's filter routinely.

If the filter looks dirty after a month, change it, especially during heavy use months (winter and summer). At a minimum, change the filter every three months. A



Adhesive weatherstripping is sold in rolls made of vinyl foam, rubber foam and EPDM rubber in a variety of profiles.



# **SKILL SAVVY**

dirty filter will slow down air flow and make the system work harder (and use more electricity) to keep you warm or cool. A clean filter will also prevent dust and dirt from building up in the system, which can lead to expensive maintenance and/or early system failure.

### **ADJUST YOUR WATER TEMPERATURE**

If your home has a water heater with a tank, set the heater thermostat to 120 degrees F or lower. This will reduce the amount of energy it takes to produce and maintain your hot water by not overheating it. When you're away on vacation, turn off electric heaters and turn down gas heaters so you're not heating water that no one is using. The average household spends more

than \$250 per year on water heating, which makes it the second largest home-energy expenditure behind heating and cooling.

#### **TOOL-FREE WEATHER SEALS**

Let's say you've sworn off manual labor for the weekend but you're annoyed by a drafty window. It doesn't get much easier than slapping up some self-stick weatherstripping. The stuff is sold in rolls, so the only tool you'll need is a pair of scissors to snip it to length. You'll find adhesive tapes made of vinyl foam, rubber foam, and EPDM rubber in a number of profiles. Thickness typically ranges from 1/4 to 1 inch.

Does your home need to be caulked, but you hate the sticky, gooey application process? I don't



Rope caulk has a clay-like consistency, and you press it into cracks and gaps with your fingertips.

blame you. One option is rope caulking which has a dry, clay-like consistency similar to plumber's putty, and you press it into cracks or gaps up to 1/4 inch, shaping the bead with your fingertips. Rope caulk is easy to remove, and no caulk gun or cleanup is required.

Sealing air gaps around doors and windows can save you 10 to 15 percent on your energy bills. **EHT** 



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# PRODUCTS

#### 2000 SERIES GARAGE DOORS FROM HAAS DOOR

The energy-efficient 2000 Series garage doors from Haas Door are 2 inches thick and have an R-value of 17.66. The heavy-gauge galvanized steel doors include embossed wood grain and are filled with dense CFC-free polyurethane





foam insulation to help give them superior energy efficiency. A full thermal break is used in the tongue-and-groove construction of the 2000 Series doors. This rigid vinyl extrusion seals the joints and eliminates metal-to-metal contact, which limits the transfer of temperature. Visit www.haasdoor.com.

# LIQUID WRENCH PRO PENETRANT AND LUBRICANT WITH FLASHSIGHT TECHNOLOGY

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#### **HYDROCARE SMART DESCALER**

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in wasted energy and water, performance inefficiencies, damage, early replacement of appliances and is not covered by manufacturer warranties. Limescale will also clog pipes and fixtures, reducing water flow and pressure at faucets and showerheads. The Smart Descaler's proprietary technology transmits a powerful signal into the water that creates an electrochemical reaction and restructuring of the minerals in the water that will prevent them from developing into scale and will create carbonic acid to effectively remove limescale buildup. All the pipes, appliances and fixtures will be restored to pristine conditions. Unlike other electronic devices, this creates an unparalleled strong signal that has more frequency and capacity to work in all types of pipe, plumbing loops, hardness levels and pH. It constantly transmits its powerful signal 24/7 and does not require water flowing. A computer determines optimum operation and location of the unit. It's unbelievably easy—just clamp it on a pipe and plug it in. The savings are substantial from increased efficiency, reduced maintenance, increased appliance life and less water wasted. Visit www.wavehomesolutions.com.

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