

Workshop



SATURDAY PROJECT

BUZZ WORTHY

Build a set of boxes
that your backyard
bees will be proud
to call home >>

SATURDAY PROJECT

BEE THE CHANGE

Cottagers know that bees are in trouble. According to the David Suzuki Foundation, habitat loss is largely to blame. So why not give our little pollinator friends a leg up with this simple bee box project? Canada is home to hundreds of species of bees, including solitary mason bees (native to North America), which pollinate up to three times more than their honey-producing relatives. They love to nest in dark, narrow tunnels, such as the bamboo tubes used in this design. Paint your bee boxes in bright, floral colours, and you've got a cozy home base for the local pollinators to nest in when they're not sampling nearby flowers. —Paul Lewis

1 Start by tipping the blade of your table saw to 30° from vertical. Then, using a short length of 1x4 as a guide, adjust the fence so that the resulting cut bevels the edge of the board without reducing its width. The correct distance will be unique to your setup because several factors affect this distance—the initial board width, the blade diameter, and the blade thickness of your saw will vary. Rip one long edge of the board, then flip it around and rip the opposite edge.

2 Once the edges of the 1x4 are bevelled, cut the board into 6" lengths.

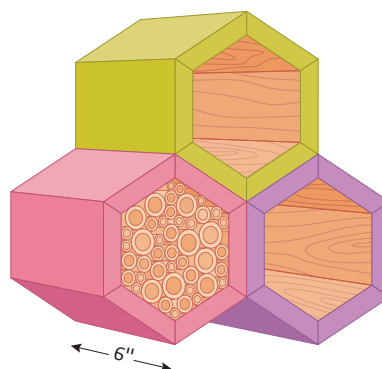
3 I use one of my favourite wood-working tricks to assemble the six sides together to form each box. Position the six pieces outside face down, bevelled-edge to bevelled-edge, on a flat surface, and apply a length of 1½"-wide painter's

tape beneath each join. Apply a bead of wood glue along the bottom of each V-groove where the pieces join. Now it's just a matter of rolling the sides up to form the hexagonal shape. 'Clamp' the final joint with some more painter's tape. Repeat these steps for each of the three boxes, and let the glue set overnight.

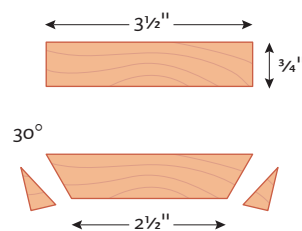
4 Paint each bee box a different colour (so the bees can distinguish between homes) using zero-voc paint (for bees, the less nasty the stuff the better). Don't paint the sides of the boxes that will end up being joined—the glue will adhere better. Once the paint has dried, apply glue to the mating surfaces, and clamp the

whole assembly together with some spring clamps. Once the glue has set, add a couple of ¼" wood screws to each connection. Use a stubby screwdriver to drive the screws in the tight space. Attach the D-ring hangers to the back.

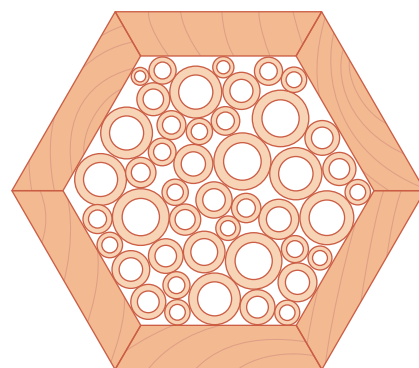
5 Cut enough 6" lengths of bamboo tubes to fill each box. Adhesive isn't required here since inserting the last few tubes will tighten everything up, and friction will hold the tubes in place. Hang your boxes in a location sheltered from rain and close to eye level. A warm, south-facing spot is ideal for keeping bees comfy.



Never use cedar for your bee box. It has natural properties which repel insects.

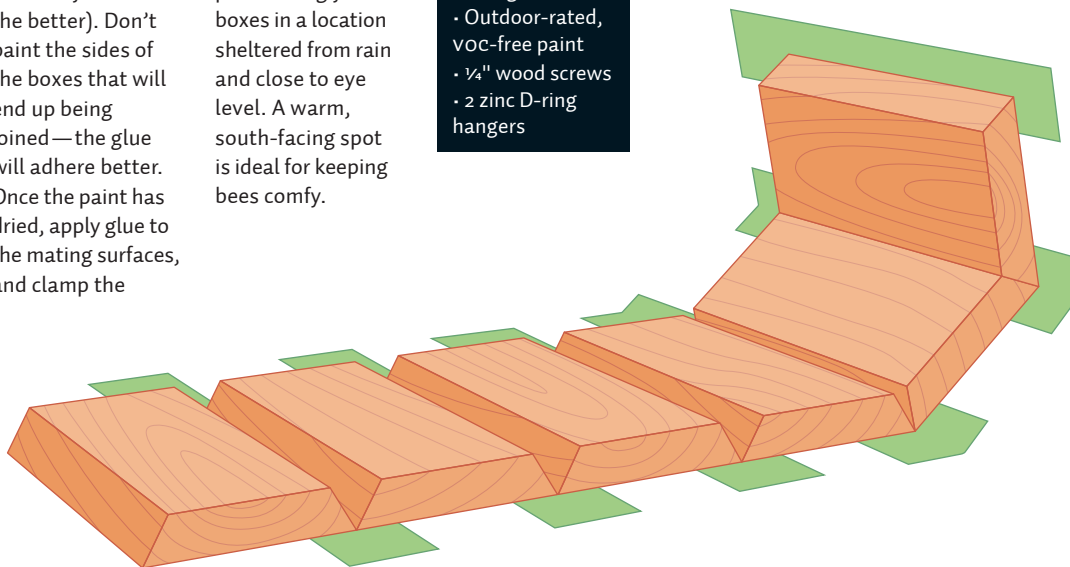


Mason bees use clay to furnish their nests. Dig up a bit of soil nearby to unearth some.



What you'll need

- 10' 1x4 pine
- 15 60" bamboo stakes (¼–½" diameter)
- Painter's tape
- Outdoor-rated wood glue
- Outdoor-rated, VOC-free paint
- ¼" wood screws
- 2 zinc D-ring hangers



JACQUES PERRAULT

KNOW-HOW

Nut job

“Squirrels are basically little beavers,” says Ross Proudfoot, the owner of Cottage Country Pest Control in Victoria Harbour, Ont. “They have to chew—their teeth keep growing.” Therein lies the most serious problem of a squirrel in a cottage attic or overhang: aside from the aesthetic damage, squirrels will often gnaw on live electrical wires—potentially triggering a fire—on plastic plumbing. The difference between an intruder in the city and one at the lake? Proudfoot says: “Often, nobody’s looking at the cottage. They’re in there a long time.” Even if you don’t see the damage, you’ll hear them scurrying in the daytime, since squirrels are diurnal.

Prevention, of course, is the first defence. Limit access by keeping branches back from buildings. Plug cavities with tight-fitting trim or metal mesh. But if a squirrel is already checked in, there’s no harm in trying to coax it out an open door or window (a

hockey stick works), then blocking the entry point. Other disincentives include store-bought repellents that contain oil of black pepper and capsaicin, or a little prompting. The human voices of talk radio are threatening to a squirrel. So are many forms of bright light. Proudfoot likes to use a rotating disco ball light. Or, soak rags in apple cider vinegar or ammonia and put them in a plastic bag poked with holes to let the aroma escape. To a squirrel, it will smell like a predator.

If all that fails, live trapping and relocating may be in order, Proudfoot says. A pro will cost \$150 to \$500 “depending on how co-operative” the squirrel might be. You can, of course, buy your own live trap for about \$50.

Live trapping requires caution. Squirrels must be relocated quickly (they may die if kept in the trap too long) and within 1 km of where you caught them. But when your other option is to wait around for a cottage fire, you may be inclined to send your squirrelly tenants packing. —Derek McNaughton



For bait, squirrels can’t resist peanut butter with unsalted nuts or seeds scattered on top.

SOLUTIONS

Get a grip

Undoing old carpentry with a claw hammer gets frustrating when the claws strip the head right off a stubborn nail. Remove it by re-gripping the nail right at the wood and levering the hammer sideways, with the shank of the nail between the claws. The claws are narrower than they are long, so the distance to

the fulcrum is across one claw instead of the longer distance to the hammer’s head. A shorter fulcrum increases your leverage and makes extraction easier. The shorter fulcrum also means that you might pull the handle all the way over and raise the nail by only a centimetre or so. No problem. Just re-grip lower on the nail. Each pull bends the shank again, and the nail will be useless when you’re done. But then so is a headless nail. —Charles Long



The sharp angle bends the nail until you’re pulling on the shank itself instead of the head.

LIAM MCGAN, BRUSH CUTTER COURTESY MAKITA

REAL TOOLS

CUTTERS VS. WHACKERS



BRUSH CUTTER 30cc to 45cc

Useful for Cutting short to very long grass, brush, and even small saplings (up to 1" dia.)	Weight Gas models 12–18 lbs Energy Mixed gas; a few models take unmixed gas	Power Output High Cutting System String head or rigid circular cutting blade
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WEED WHACKER (A.K.A. STRING TRIMMER) 20cc to 28cc

Useful for Cutting short to medium grass; some models offer attachments for edging, hedge trimming, light debris blowing, and soil cultivating	Weight Gas models 10–15 lbs Battery 18–60V 8½–12 lbs Corded 4–7 lbs	Energy Mixed gas, unmixed gas, cordless electric, or 120V plug-in Power Output Low to medium Cutting System String head only
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Drop your guard for a minute, and the brush around your cabin starts creeping in—and around and over and through. Of course, in most cases, you want to live and let live. But some places—near your deck foundation, for example—you’re going to want to hack back. This is where brush cutters and weed whackers (also called string cutters) come in. But which one is right for you?

A weed whacker with a 20cc to 28cc engine is ideal for trimming the edges of the cottage yard, or even whole paths if your place only grows that sparse, wispy “cottage grass.” The latest pro-grade battery-powered trimmers perform as well as small gas-powered units. Safety goggles required.

Brush cutters are like weed whackers on steroids. A 30cc to 45cc model is ideal if your property grows thick grass, if the grass gets longer than 8" before you trim it, or if you need to beat back woody brush and towering weeds gone to seed. Although heavier than weed whackers, most brush cutters hang from a harness that puts the weight on your shoulders, not entirely on your arms. Extra power also means that a brush cutter can swing longer, heavier line, or even turn blades, allowing it to cover more ground in less time. Full face shield and ear protection are a must. —Steve Maxwell

STUFF WE LIKE

Spray for me

In the same way too much sun can make a face look like tree bark, UV rays will turn a burgundy boat cover into a hot state of pink in no time. Scotchgard Water & Sun Shield, however, is like sunscreen for fabric tops. The protectant creates a UV-resistant barrier that also sloughs off water, preventing pooling that can drip into the boat and lead to mould. It costs \$11 at hardware stores. I use it on my six-year-old boat cover every year, and it looks like new. To apply, hang your cover over a plank, out of the wind, and far from the lake; spray in slow, sweeping motions from about 6" away, but don’t saturate as you would sunscreen on your face. —D.M.





HIGH & DRY

Lifting the staircase out of the water protects it from algae and ice damage, and also from zebra mussels.

GREAT INVENTIONS

Stairway to heaven

Getting into the water is “never a problem,” says cottager Gary Yates. “I just jump in with the kids.”

But getting out of Lac de la Vieille, near Sainte-Thérèse-de-la-Gatineau, Que., was another matter, thanks to bum shoulders and knees that made it tough for Gary to shinny up the skinny, store-bought dock ladder. “In my younger days, I was really into sports,” says Gary, now 67. “Turns out it wasn’t easy on my joints.”

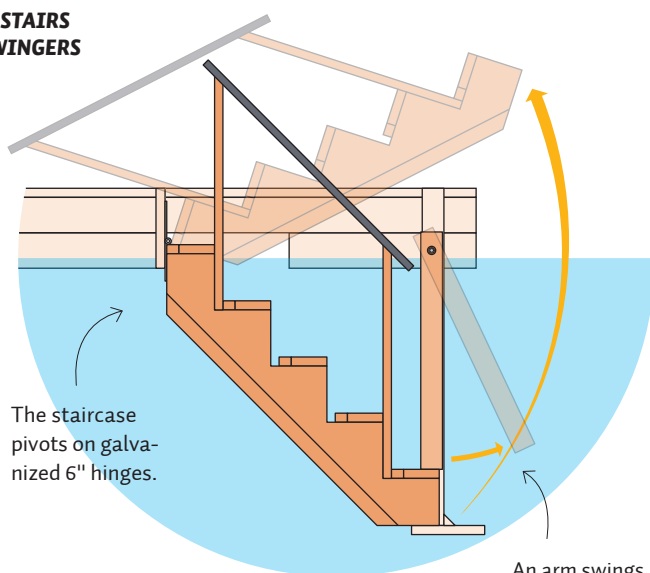
So Gary invented his own joint-friendly way out of the lake: a swing-in dock staircase, fashioned from two ready-made stringers and finished with full-dimension 2x6 and 2x3 cedar steps and 2x4 posts. Once in the drink, the steps settle onto a wooden frame that extends beneath the dock to form a base for the bottom of the stringers.

Finishing touches include no-slip treads made from asphalt rolled roofing and a handrail fashioned from a broomstick inside black polyethylene pipe. To keep the steps steady, Gary installed a 2x3 swing-arm on one of the uprights extending beneath the dock. When the staircase is lowered, Gary pivots the swingarm until it butts onto the top of a lower step, locking the stairs in place.

To haul in the steps, Gary releases the swingarm, allows the stairs to float to the surface, and flips them up, while his wife, Linda, slides a 2x6 across the gap in the dock. Retracting the staircase reduces algal slime on the treads and saves it from ice damage during the winter.

The staircase “facilitates the things we like to do at the cottage,” Gary says. “And it will help us keep doing them for as long as possible.” And it’s not just for “older and maturing” cottagers. “Our three-year-old granddaughter can get in and out all by herself. Supervised, of course!” —Ray Ford

THESE STAIRS ARE SWINGERS



The staircase pivots on galvanized 6" hinges.

An arm swings down to keep the stairs from floating up.

ILLUSTRATION: JACQUES PERRAULT; PHOTO COURTESY GARY YATES

Workshop

SATURDAY PROJECT

MISSILE IN ACTION

Whip up this weapon
of fast construction,
and wage sweet,
sweet war all
summer >>

LIAM MOGAN

>> SATURDAY PROJECT

LET'S DO LAUNCH

The demand for a well-built catapult has diminished over the last few centuries, but that doesn't mean spending an afternoon constructing a scaled-down version is not without benefits. After all, nothing brings siblings together more than battle! Kids can take the lead on this simple project, but you'll want an adult to handle the parts where your future siege engineers might cut their fingers off. Once your catapult is constructed, then it's time to duel for sibling supremacy. Bonus points if you can launch a marshmallow directly into Dad's mouth. —Brian Halbot

- 1 Cut out the cardboard support walls, and hand over to the kids for decoration.
- 2 From the piece of poplar, cut the base to length. Make the posts, arm, and crossarm from the remainder by ripping to 1/2" x 3/4" and cut to length as in the diagram. The crossarm should be 3 1/2" long.
- 3 Drill 1/4" holes in the arm where indicated—through the 3/4" face. Start 4" from the end.
- 4 Drill 1/4" holes in the vertical posts, 1 1/2" from the top.
- 5 Carefully notch each end of the crossarm about 1/8" deep and 1/2" to fit inside the posts.
- 6 Now for the glue gun. Hot glue can cause nasty burns, so use caution.

- Generously glue the following:
- The walls to the base.
 - The posts to the walls, making sure they're aligned, so that the bolt will pass unobstructed through the posts and the arm (test this out while the glue is malleable).
 - The crossarm to the posts.
 - The bucket to the arm, at the far end from the holes, on the 1/2" face.
- 7 Insert the bolt through the posts and the arm, and lightly tighten the nut. Kids can play around with the three holes to see how each alters the trajectory of the marshmallow.

- 8 Screw the cup hook into the base on the bucket side and the eye screw into the bottom of the catapult's arm, on the opposite side from the bucket. Stretch the elastic band to each.
- 9 To load your weapon, pull down the bucket with your finger, and place one marshmallow inside. Simply let go to launch. This means war!

IT'S A DRAW
Decorate before assembly. This will keep kids busy while an adult does the cutting.

The crossarm is notched to fit snug inside the posts and give the catapult extra support.

- What you'll need**
- 2' 1x4 poplar or scrap wood
 - Heavy-duty cardboard
 - 1 5/8" cup hook
 - 1 medium eye screw
 - 1 thick 5" elastic
 - Hot glue
 - Cardboard tube 1 1/2" dia. x 3/4" (a paper towel tube will work)
 - 1 1/4" x 4" bolt and nut
 - Assorted materials (paint, markers) for decoration

Any open cylinder shape works well for the bucket. Get inventive! Empty fruit cup? Go bananas.

KNOW-HOW Spoiler alert

Once a year, you have to change the oil in the lower unit of your boat engine. But are you paying attention to what it's telling you? Used oil can reveal critical info about the state of the lower unit. I called Steve Ricketts at Stern Drive Connections and Mark Meeks at Crate's Lake Country Boats, both in Orillia, Ont., for the intel. Here are the telltale signs that will warn you of trouble ahead.

If your oil comes out coffee-black, with a burnt smell, that can indicate bearing problems, and changing bearings is a job for the pros.

When your oil comes out looking

like a milkshake, you likely have water inside the lower unit. If the engine has been sitting a while, the water, which is heavier, will settle to the bottom; when the drain plug is removed, any water will ooze out first—more than a teaspoon may mean a trip to the shop.

The drain plugs in most newer lower ends are magnetized. The plug will trap miniscule metal filings—"fuzz"—which are generally not an indication of trouble. However, if you can roll the particles between your finger and thumb, and they're the size of a pinhead, then you'll need to bring a sample (of oil and fuzz) into the shop for inspection. —Wayne Lennox

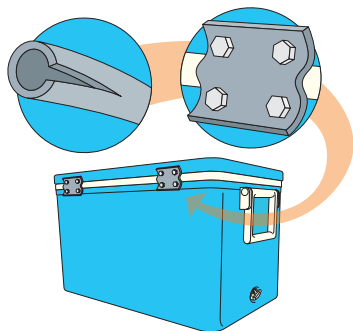
Original colour
Some discoloration from use is to be expected, but oil in a healthy engine should come out looking a lot like it went in.

A bit milky
There's water in your lower unit.

Burnt black
You've got a problem with your bearings.



Clean oil is critical for protecting the gears in your lower unit.



SOLUTIONS

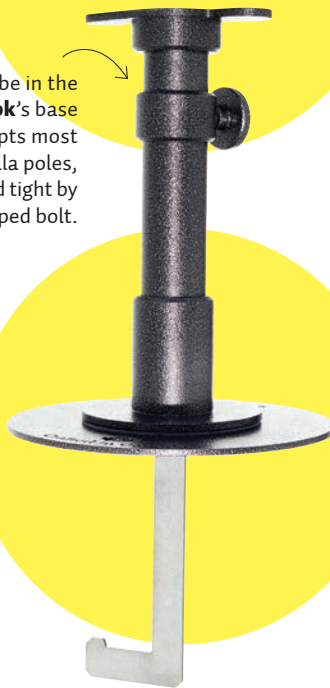
Keep your cool

Open. Close. Open. Close. Life is cruelly repetitive for a cottage cooler, so it's no surprise that plastic fatigue can make an icebox come unhinged. If that happens, stay chill with this emergency fix.

Remove and retain broken hinges and screws. Cut pieces of rubber garden hose, slit them open, spread them flat, and trim to the size of the hinges. Hold the piece of hose (with its exterior facing the cooler) against the same holes that held the hinges. Attach with the original screws, using the broken hinge as a washer for the screws if it's still in good shape—which will also cover up the hose.

Now, back to your weekend. Open. Close. Open. Close. —Ray Ford

A tube in the **J-hook's** base accepts most umbrella poles, squeezed tight by a capped bolt.



Heavy-duty **D-rings**, typically made for truck beds and trailers, can handle boats in rough waters.



The **EZE Docker** is designed to slide between deck boards. It only needs a $\frac{3}{8}$ " gap.

STUFF WE LIKE

Dock stars

Three pieces of smart dock hardware to solve pesky problems by the water.

J-HOOK

Umbrellas are too often sacrificed to the wind gods by anchors and bases that just won't hold, even those as heavy and ugly as concrete blocks. The J-Hook, built in Canada by Lakehouse Innovations, promises a six-pound solution that "will never blow over." Made of stainless steel and aluminum, this hook has a flat, thin bar shaped like a J that passes through narrow gaps in deck boards, hooking under a joist. The J shaft fits into a base that, when rotated clockwise, draws the J tight to the joist. Expensive, at \$355 from lakehouseinc.com, but the materials are high quality and the J-Hook is built to last.

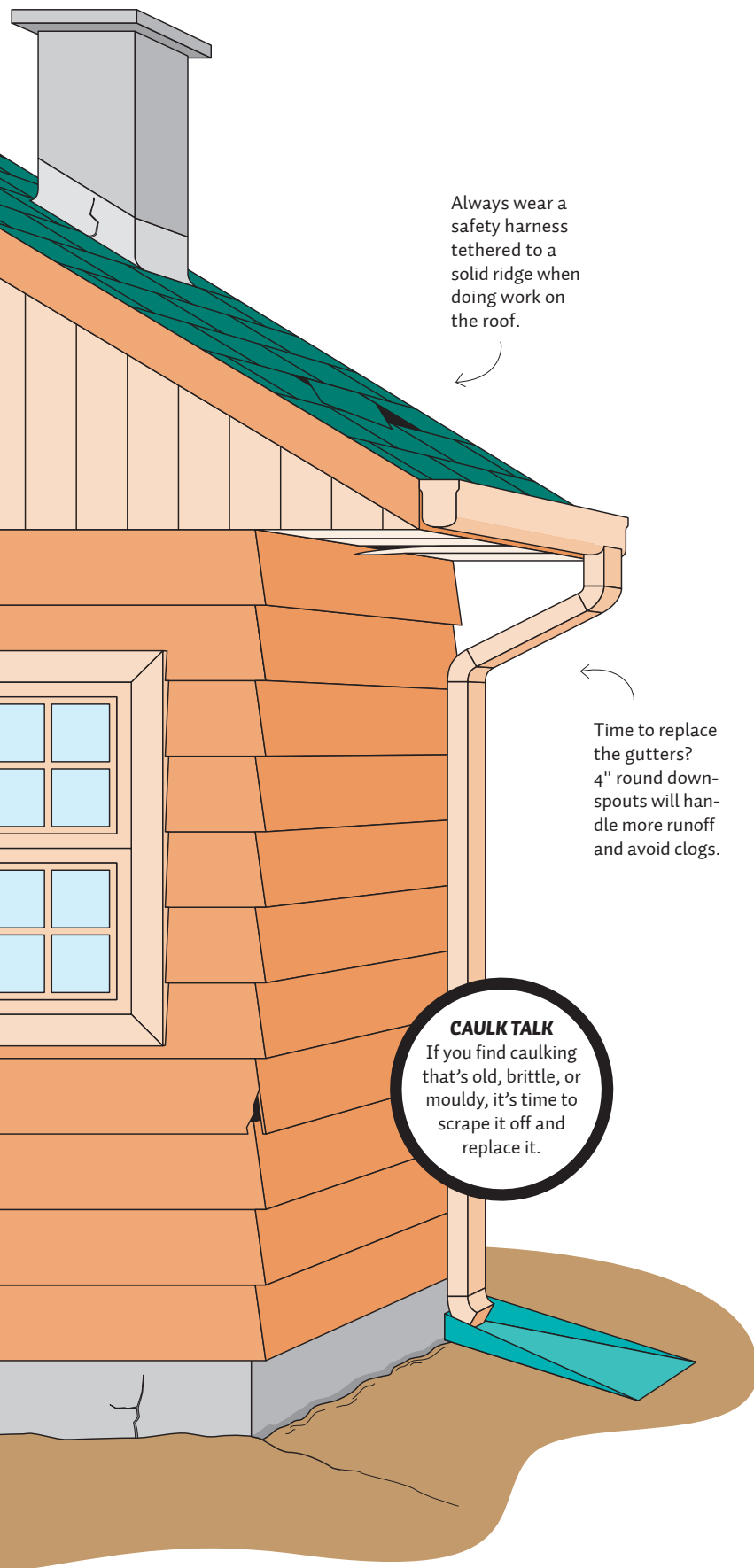
ZINC-PLATED D-RINGS

Erickson Manufacturing makes a $2\frac{1}{2}$ " surface-mount tie-down that can handle 3,666 lbs, meaning that your dock will break before letting go of even the heaviest of boats. Zinc-plated

to stop rust, the anchor employs a thick D-ring that sits under a humped plate. With the plate fastened to a sturdy deck board, the ring lies flat when not in use. Even looped with a stout rope and a sound knot, the bright, highly visible ring rises only slightly, saving toes from harm and neighbours across the lake from colourful language. About \$9 at Princess Auto.

EZE DOCKER

Better than having a cleat that tucks away is having one that can be removed and stored—even taken along when boating anywhere that might not have mooring points. Enter the EZE Docker, a one-piece, spring-loaded portable dock ring made in Ontario. Simply push the ring between the gaps of deck boards and twist 90 degrees. Zinc-plated, the EZE Docker's eye secures rope to small watercraft, but can only hold bigger boats for short periods in calm water, since it could potentially come loose with repeated yanking. \$35 for two at Home Depot. —Derek McNaughton



JOB JAR

Stay beautiful on the outside

When it comes to cottage exterior maintenance, proactive care trumps procrastination. Taking the time now to maintain the building envelope will pay it forward in the saved time from a larger repair.

TAKE IT FROM THE TOP

On a mild day, don soft-sole footwear like sneakers to climb up and inspect your roof. (If the pitch is very steep, best to leave this job to a pro roofer.) Bring a can of roofing tar with you, and look for damaged or loose shingles. A dab of tar applied to the underside of a loose shingle tab will secure it back to the roof.

Inspect the flashings at the intersections of roof and wall, vent, and chimney. Fill in any voids or cracks with a similarly coloured caulk. I prefer water-based types such as Dap Alex Plus for ease of cleanup and low toxicity. One of the oft-neglected tenets of caulk application is laying down an adequate body of caulk so that it has sufficient volume to shrink without cracking; think bead, not film.

WINDOW TO THE WALL

Pressure wash the walls from the top down with no more than 2,500 PSI, being careful to not drive water into any spaces between siding or where caulk is missing. Again, examine the condition of caulk at flashings and intersections. Water is insidious, and from entry in cracked caulk, it can travel a surprising distance, wreaking havoc along the way. Clean the existing breached caulk with a mild multi-surface cleaner such as Nature Clean, and rinse well before applying a paintable water-based caulk.

Lightly misting a freshly applied bead of caulk with water also makes tooling smoother in hot, dry weather. If your wood siding's finish is worn away in places, it's time to lightly sand any rough areas and the edges of bare spots. Touch up with the original finish before you apply an entire coat to help even out the look.

If you discover cracks in your masonry, master mason Stefano Marmina in North Bay, Ont., advises that a mixture of one part cement to five parts sand, with the maximum recommended amount of plasticizer (read the package), is the mortar of choice. With high adhesion and a thinner viscosity, it works well when using a brick jointer to force mortar into those gaps that let water (and ice) do their nasty business. If you can erode your mortar with a fingernail, call a pro, as this indicates a degraded lime-based mortar; replacing it requires an experienced mason.

GET TO THE BOTTOM OF THINGS

Look for breaches at the intersection of walls and bed-rock, then clean and caulk. Lastly, examine the lay of the land; to be safe, soil should be sloped outward at least 1" per foot. This encourages rain and snowmelt to flow away, not toward, the cottage. — Sean Ledoux

Workshop



SKILL SET

LET THERE BE LIGHT

When was the last
time you dusted off
this cottage classic?

Here's how to
get lit >>

SKILL SET REKINDLE THE OLD FLAME

Behold, Grandma's trusty oil lamp, demystified.
May your cottage be cozy and bright

The flat-wick

is the most common and practical model. For sheer candle power, nothing beats the old Aladdins, but their wicks are much more fragile.

Your fuel

choices for filling the oil font are either kerosene or lamp oil; the latter is preferable, because it's more stable, but avoid scented or coloured concoctions—these can clog the wick and reduce performance.

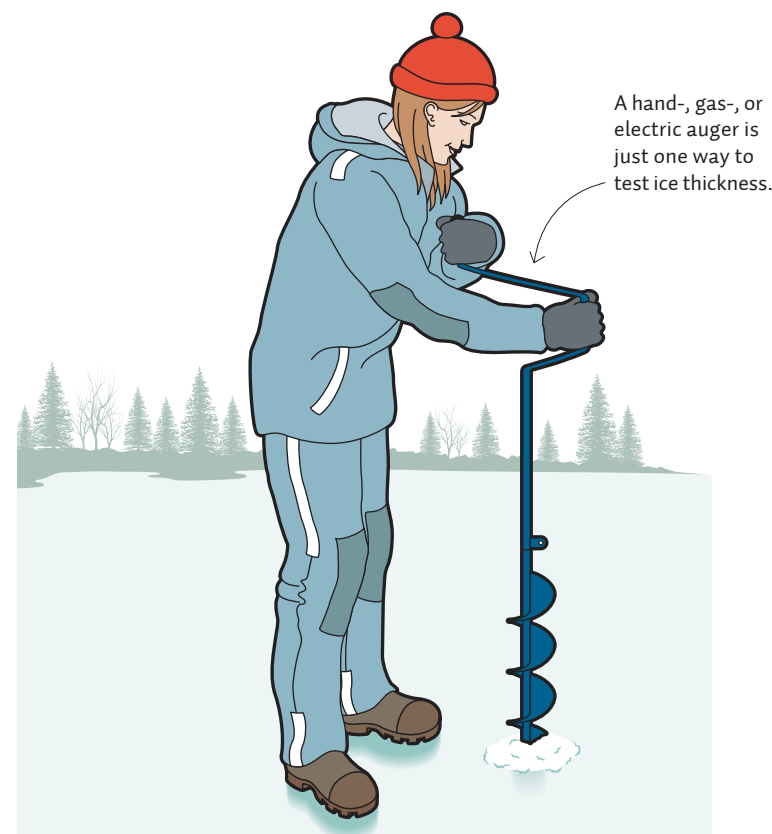
Lamp maintenance is straightforward. If the flame has peaks and valleys, then the wick needs trimming (the flame should have a consistent shape). Cut the singed top straight off with scissors, and then snip off each corner at a 45° angle.

To extinguish, cup the top with your hand and blow.

The chimney will need some attention from time to time. Wash it in soapy water or, according to my mother-in-law, scrub it with wadded up newspaper. It's also a good idea to take out the deflector (the small domed piece beneath the flame) and remove any bugs and dust (an old, narrow paintbrush may help). This debris can affect performance.

Operation

is a no-brainer. Remove the chimney, raise the wick, and light. Replace the chimney, and adjust the wick for best light and least smoke. As a rule, the wick height should not exceed that of the deflector.
—Wayne Lennox



KNOW-HOW

Are you on thin ice?

As a kid, I usually sent my baby brother onto the ice to test its thickness. Miraculously, he never died. But there are less perilous (and more effective) ways to test ice thickness.

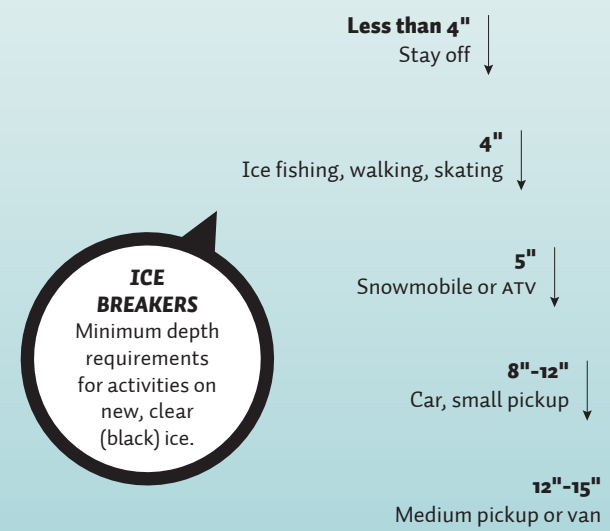
Cordless drill and wood auger bit Mark an 18" wood-auger bit with tape at safe-ice depths of 4", 6", and 12", and cut vertical holes in the ice with a cordless drill. The flutes in the bit will force ice chips out of the hole. When you hit water, the markings on the bit suggest how deep you drilled. A tape measure into the hole, hooked on the underside of the ice, confirms the depth.

Ice chisel or "spud" Homemade or bought, a rebar-sized metal rod with a sharp, flat blade like a chisel welded to one end and a handle on the other is sometimes called a spud. Stab the chisel into the ice, repeatedly, creating a hole. (A crowbar can work in a pinch.) Measure ice thickness with a tape.

Chainsaw Cut a 12-by-12-inch square into the ice. When it floats, tilt or lift it and measure. Ensure the square goes back into the hole to refreeze, and add a stick to flag the hazard.

Homemade test pole A 2"-dia. hardwood dowel, 60" long, makes for a quick ice-testing poker stick. Pre-drill a 3/16" pilot hole 4" deep in one end. Squeeze some PL Premium adhesive into the hole, then tap in a 10" nail about 5" deep. Grind the head of the nail to a sharp point. Shorter versions make for good, hand-held ice picks you can use to pull yourself out of a hole should you fall through.

Hatchet With one hand, swing the sharp side of a hatchet or small axe hard into the ice. If no water appears, the ice is likely hard enough to walk on, or close to 4". (This method is imprecise at best, so use with caution.)—Derek McNaughton



Walk this way

No matter what method you use, always remember to test in more than one spot, says Lauren Phillips, a team leader and training officer with Prince George Search and Rescue. "There's huge variability even just a few footsteps away." The best and safest ice to walk on is always black (also called clear), newly formed ice. According to the Canadian Red Cross, white opaque ice (formed by wet snow freezing on the ice) is half as strong as black ice, and grey ice is deemed unsafe as it indicates the presence of water. "If you're not sure," says Phillips, "just stay off the ice altogether."

REVIVAL

Bright Idea



"We used those classic Coleman oil lanterns when my father took us camping, growing up," says Norm Dinner, a 58-year-old cottager on Manitouwabing Lake. These fond memories inspired him to craft this brilliant DIY upcycled oil-lamp chandelier for the cottage.

He scoured antique markets and found three original Coleman lamps for \$20 each. "From there I just started putting them together with 3/4" copper pipe and 1/2" for the smaller red lantern, which houses the electrical box in its oil font. "I wanted to use as much of the original lantern as possible."

Norm used epoxy instead of soldering to keep it all together. Although the days of camping by oil light are long gone for the Dinners, they have a new lamp light to create memories under at the cottage, on at the flick of a switch. —Brett McGarry

SATURDAY PROJECT

Hidden card trick

This pine tea light holder has a secret. The top pivots to reveal a space inside sized for two decks of playing cards. Hidden in plain sight, your cards can be close at hand *and* safe from spills. The key to making this project look table-worthy is cutting the edges flush after assembly and lining up the grain to complete the illusion of a solid block of wood. Combine this with a couple of neat tricks—a cut brass screw for the top pivot and magnets as hidden latches—and you’ve got a fun, simple project with more function than meets the eye. —Paul Lewis

1 Cut three pieces at 5¼" by 7⅞". These are your three layers.

2 Prepare the middle layer as in Fig. 1. Set the table saw fence ¾" from the blade and cut along the length of each side. You'll end up with three pieces. Cut the wider centre piece in half horizontally, then test-fit the cards before gluing the pieces together as in Fig. 2. Leaving the middle pieces long at this stage allows them to be cut flush after assembly.

3 Once the glue has dried, make a small finger recess using

a 1"-dia. spindle sander. If you don't have a spindle sander, you can improvise one by wrapping sandpaper around a 1" dowel.

4 Bore the holes for the magnets now, before continuing the assembly: line up the edges of the top and middle layers and bore a tiny pilot hole (⅛"-dia.) through the centre layer and into the top layer. Then bore shallow ⅝"-dia. pockets that will hold the magnets.

The pilot holes will ensure the magnets will line up.

5 Glue and clamp the middle layer to the bottom layer so that the edges line up. Then temporarily attach the top with strips of the double-sided tape.

6 Cut all four edges of the assembly flush, then separate the top from the middle and bottom layers. Bore the 1½"-dia. pockets in the top, ½" deep, for the tea lights.

7 Line up the top again, and drive the brass pivot screw just until the smooth shank of the screw is halfway into the wood (Fig. 3). Cut the brass screw just above the surface of the wood with a rotary tool spinning a small abrasive cutting wheel. Sand the shank of the brass screw flush with the surface of the wood with a random-orbit sander fitted with 150-grit sandpaper.

8 Lastly, adhere the magnets into the pockets with a drop of epoxy.

FIG. 1 Cut the middle piece into sections

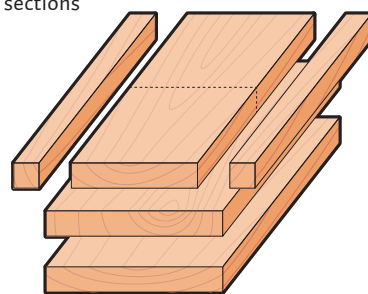


FIG. 2 Glue the middle pieces together

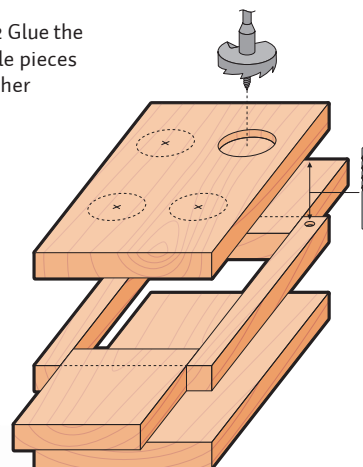
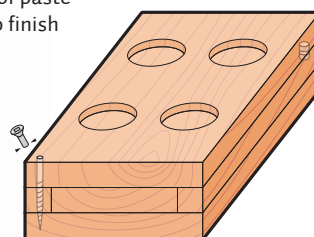


FIG. 3 Use two coats of paste wax to finish



Save the nicest piece of pine for the top.



What you'll need

- 2' 1x6 pine
- 2" #8 brass screw
- 2 rare earth magnets, ⅝"-dia
- Double-sided tape
- Epoxy
- Paste wax



Push a button on the handle and this roof rake extends up to 17'.

STUFF WE LIKE

Take a little off the top

Cottage roofs are designed to carry our northern snow loads, but outbuilding roofs may not be. Where possible, remove as much snow as you can from the safety of the ground with a snow rake (we like this \$50 24" telescoping model from Home Hardware). It's safer for you than scrambling up onto a snowy roof, and you're less likely to cause shingle damage. —W.L.

JOB JAR

IT'S ALL ABOUT FLOW

Water pipes tend to freeze more often in cottage country than in the city, and that's why every four-season cottager should know a few pipe-thawing tricks.

When you turn on a tap that should be working and nothing comes out, test other fixtures to infer where the frozen blockage could be. Finding out the location and extent of the freezing is the vital starting point, but there's something even more important. When water freezes, it expands, often strongly enough to burst pipes. Always remember that a damaged pipe probably won't leak water while it's still frozen, but it could leak lots of water as it thaws. Always look for longitudinal splits as you're defrosting pipes, and never leave your cottage with frozen pipes and the water still turned on.

Applying heat to frozen pipes is the goal, and you've got options. Pouring hot water on them is effective when you can get to the trouble spot and if pooled water doesn't matter where you're working. If the pipe is sloped, even a bit, hot water will run along the pipe and deliver thawing action into areas out of reach. A hair dryer works too, or you can bust out the heat gun (like a hair dryer, but super-charged), set on medium. Never use a hand-held torch or any open flame to thaw pipes. It's a fire hazard and will damage plastic.

Pipes freeze most often in areas with little air circulation. Your cottage might be above freezing in the middle of the kitchen during a winter visit, but pipes travelling through a lower kitchen cupboard or behind shelves could still get cold enough to freeze. A room fan is surprisingly effective at defrosting pipes in an otherwise warm room. Pull back the furniture, open the cupboard, then train the airflow in the area of the frozen pipe. Keep a close eye out for water leaks until the pipes thaw and prove themselves sound.

Don't be surprised if hot water supply lines freeze before cold ones (it's called the Mpemba effect and it's worth a google). And leave freeze-prone fixtures running a small steady stream to keep the line from refreezing until you get to fixing it properly. —Steve Maxwell

ATV plows are so fun, the kids will beg to do the plowing. Nice work, Myles.



REAL TOOL

Plow king

It sounds weird, but few outdoor tasks are as satisfying as plowing snow with an ATV. The curl of powder flowing over the blade, the tidy path behind you, the joy of a machine doing hard labour—it's a task requiring focus as much as a stout plow.

A good plow kit, which costs about \$550, will not only clear deep snow from long laneways in just minutes, it also opens up the possibility of creating Zamboni-grade skating rinks on the lake without the exhausting work of shovelling by hand.

Depending on the manufacturer, plows attach simply to an ATV, usually with just a couple of tab- or lynch-pins clipped to a pre-fastened mount. A plow moves up or down via an ATV's winch rope, and the blade angle is usually set by pulling a hand lever. Sure, a plow takes up space in the shed, but it's a lot more fun than shovelling two feet of misery off a 250-foot driveway—or paying someone else to do it. —D.M.

LEFT, LIAM MORGAN; RIGHT, COURTESY DEREK MCNAUGHTON