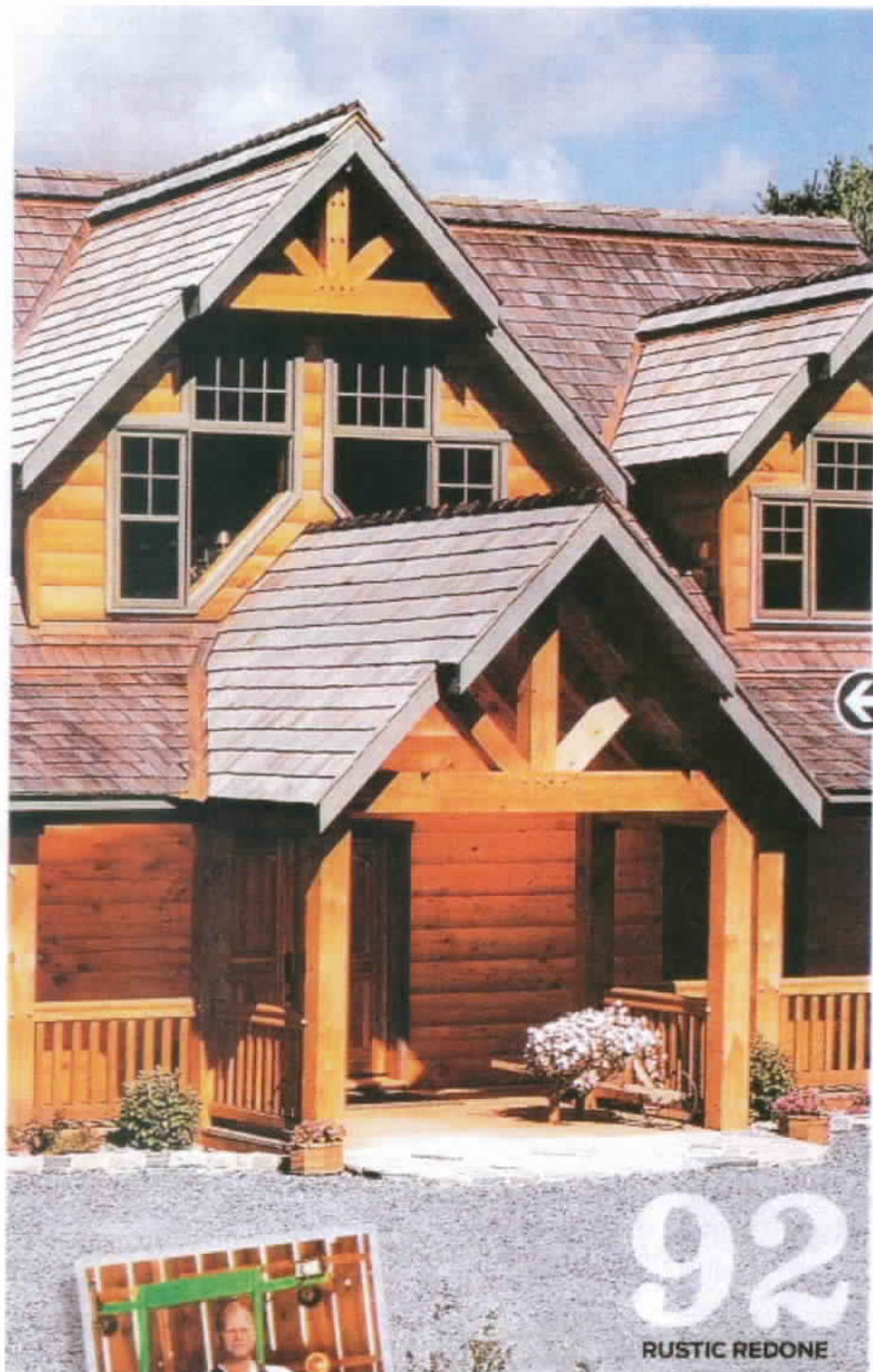


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ON THE COVER Mike Holmes contemplates tractors. Cover photo: Mike Dunphy Photo assistant: Alex Schuldt



BY CHRISTOPHER REYNOLDS

For most of us, a log home seems like a rustic throwback—a less practical, less comfortable house that should be relegated to summertime or weekend use. And if you imagined something like Abe Lincoln's drafty, dirt-floored, one-room cabin, you'd be right.

Problems, which can still plague any house, loomed extra large in those traditionally built log homes where every layer of logs (called a course) had a seam above and one below that could widen over time and allow the weather in. Cracks (called checks) formed in the drying logs, trapping moisture and creating a haven for insects. The entire structure was prone to mold and mildew. The maintenance a traditional log home required was so labor-intensive it felt as if you were rebuilding it every few years.

So, why are they still being built now? Many new models, which

have the look, are actually made with far different techniques. Now, unlike in the past, they're relatively quick to construct—an appealing quality for eager homeowners. Then, there's also the popular belief that the chief material, which is still logs, is clean and chemical-free—praises seldom heaped on newer building materials.

"New log homes can last for centuries," says Robert W. Chambers, a River Falls, Wisconsin-based log-home builder of 28 years. "And heavy timber is a great thermal insulator, so they're very warm, too. Wood is also a naturally no-VOC building material." That's not something you can say about lots of conventional framing with its drywall and insulation.

New methods let you enjoy wood's organic benefits with little to none of the old drawbacks. In fact, for each old problem, builders have found a new-era solution.



HOMES

This traditional structure boasts benefits some modern homes are missing



What Has Changed?

The most livable log homes today are built much like modern houses, with either an insulated or poured concrete foundation and a conventional roof. The difference is the way the log walls fit together: Now they're precut, stacked tighter and stay that way longer.



From the Forest to Your Front Door

The most durable and practical log homes share some very specific traits—from the species of the wood to the way it's processed and finished. First, one mark of a good company is using Northern-grown trees harvested in winter. The shorter growing season creates tighter growth rings and the sap mostly drains out of a tree in winter. White pine is an excellent choice, but cedar, red pine and Douglas fir are also good. Logs dried to a moisture level of less than 20 percent slowly, over the course of a year or two are the ideal material. So, ask the



BETWEEN LOGS, foam and butyl tape form a tough, durable seal.



EXTERIORS range from clean to classic.



Sapwood Heartwood



Outside D



Double D



Round Groove



Teardrop



V Groove

MILLED LOG PROFILES can vary from round to hand-hewn for that rougher, traditional look. But flat profiles work best for purposes of weather-resistance.

Stacked Logs

In the past, log walls were built by stacking each log atop the one below. Because the logs shifted and shrank over time (mainly during the home's first decade), problems would always occur. Issue 1: Wind and water entered the house through gaps between logs. Issue 2: As walls settled, windows and doors cracked and stopped

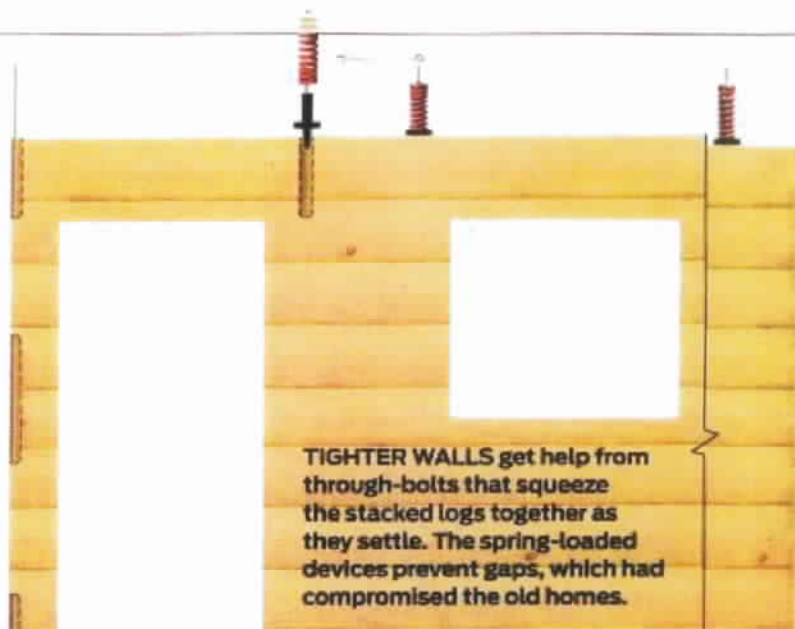
working properly. Originally gaps between logs were stuffed with moss and mud, a process called chinking. Now, strips of foam called backer rod fill the gaps, which then get sealed with mortar. This practice, in which logs are separated by gleaming white mortar strips, offers the look that was traditional in the Western U.S. and some people request that. However, this type of seal still lasts only five years or so. That's the main reason many classic-



WEATHERPROOFING a log home requires a three-pronged technique, which combines gray butyl tape, black closed-cell foam and white latex caulk at the corners and in between logs.

manufacturer to explain its drying time. Dried logs are then milled, and ideally coated with a natural, low-VOC primer.

“This should allow for five to six months of leeway before a homeowner has to have the logs stained,” says Patrick Chouinard, a True North Log Homes design consultant. Yes, log homes often come unfinished, unless you pay a little extra. But they’re also green: The logs are cut to exact design specifications, with very little waste, mostly to ensure they win certification from the Forest Stewardship Council. Requesting pre-cut chases and compartments for electrical components, which save on construction time, is a smart step. Most companies will ship the house in pieces for assembly on-site. (Typically, roof ends, dormers and interior walls get covered by sawn-log veneer; that adds a useful layer of insulation.) Once the log shell is erected, roofers, finish carpenters, electricians and plumbers complete the home.



TIGHTER WALLS get help from through-bolts that squeeze the stacked logs together as they settle. The spring-loaded devices prevent gaps, which had compromised the old homes.



DOVETAIL CORNERS have outward, downward angles that shed moisture.



SADDLE-NOTCH CORNERS look traditional but don't shed water as well.

looking structures stood for a long time, but weren't livable for a long time—without loads of maintenance. Good news: A chinkless, dovetailed look, more common in Eastern North American examples from long ago, is also authentic—and more practical for modern living.

Now, opt to build log walls that fit together without old-fashioned chinking, and the machine-made, tongue-and-groove pro-

file carved into the top and bottom of each log can make them as airtight as conventional walls. The high-tech milled pieces join instead of stack, with sealant squeezed in between each course. And most manufacturers add their own special combination of gaskets and sealants between the courses. “We use an elastomeric caulking tape on the tongues. It's flexible and moves well with the logs,” says Raymond King, vice president of Discovery Dream



REINFORCING OPENINGS for windows and doors with steel bars (shown left) is key in a frame of shifting logs.