

What to Expect From Your New Home

In an open letter to his clients, a builder prepares them for the inevitable squeaks and cracks

BY JOHN LEMON

No matter how carefully we build, in time, all our creations will develop minor flaws. A squeak here or a crack there may be structurally insignificant, but these flaws can loom as huge defects in the eyes of an unsuspecting homeowner who just paid hundreds of thousands of dollars for a new home.

Experience has taught me that the best way to address this problem is to inform my clients ahead of time that the future is not entirely rosy. These days, I send a letter to each of my customers at the end of the job. The content of the letter varies depending on the nature of the project and the client. But here is the gist of what I tell them.

Dear friends and clients:

Now that the punch list is completed and the troops have departed, I want to wish you the best of luck in your new home. I know that this process has been long and trying, but I hope the end result is worth the pain.

Although I can assure you that your house was built to the highest standards, no honest builder can promise you that the future will be trouble-free. I have composed this brief letter to prepare you for a few minor annoyances you may encounter as you begin to live in your new home.

IF YOU HEAR AN OCCASIONAL CREAK OR GROAN, THERE'S NO NEED TO PANIC. Besides the huge weight it places on the earth, your new home is a conglomeration of hundreds of disparate parts joined by thousands of mechanical fastenings. It's going to take time for this behemoth to reach an understanding with the dirt beneath it, and time for all the



individual pieces to settle down and get along. In the meantime, what you're hearing are the sounds of friction as a myriad of tiny pressure points build and release. Why these noises happen only at 4 o'clock Sunday morning remains a mystery.

I wish I could guarantee that you'll never hear a squeak when you climb the stairs or cross the floor (or at least that it would happen only in front of your teenager's bedroom door). We make every effort to produce the most stable floors possible, but the nature of wood makes a squeak-free floor as difficult to achieve as painless dentistry. I'll explain why in a moment.

Next to floor squeaks, cracks and cracking are the bane of all of us poor souls who make a living in construction. My cement finisher is fond of saying, "Sure my concrete work is guaranteed—guaranteed to crack!" Hairline cracks are a natural occurrence in new construction. Besides concrete, drywall, plaster, stucco and tile grout are all susceptible to cracking. If you never get a single crack in your house, consider yourself lucky.

HOW CAN SQUEAKS AND CRACKS BESET A BRAND-NEW HOUSE? The short answer is that all these aggravations are the result of movement. Movements occur in many places, for many reasons, not the least of which is gravity. As I mentioned earlier, the sheer weight of all those newly assembled components will cause them to compress and settle. No engineer can predict exactly how smoothly the multitude of building parts will meld or how the ground beneath will react to this new imposition. Besides weird noises, hairline cracks in the walls or in the foundation are common side effects of settlement.

Another more important source of movement in your new house is shrinkage. Much of today's framing lumber is green, heavy with sap and moisture. After the building is enclosed and the lumber dries out, it shrinks, sort of like bacon after you fry it, but not quite as bad. A house that is rained on heavily while it's being framed will likely experience more shrinkage than one that stays bone dry throughout the process.

Squeaking floors and nail heads popping through drywall are symptoms of lumber shrinkage. A squeak happens when a floor joist shrinks enough to allow a gap to open between it and the plywood subfloor (the noise comes from the plywood rubbing up and down on the nails). A nail head pops when a gap opens between a shrinking stud and the drywall.

Drywall cracks can also show up because of lumber shrinkage. Although any corner or

seam is vulnerable, areas particularly prone to cracking include headers and beams, centerlines of cathedral ceilings and joints that fall near window and door openings.

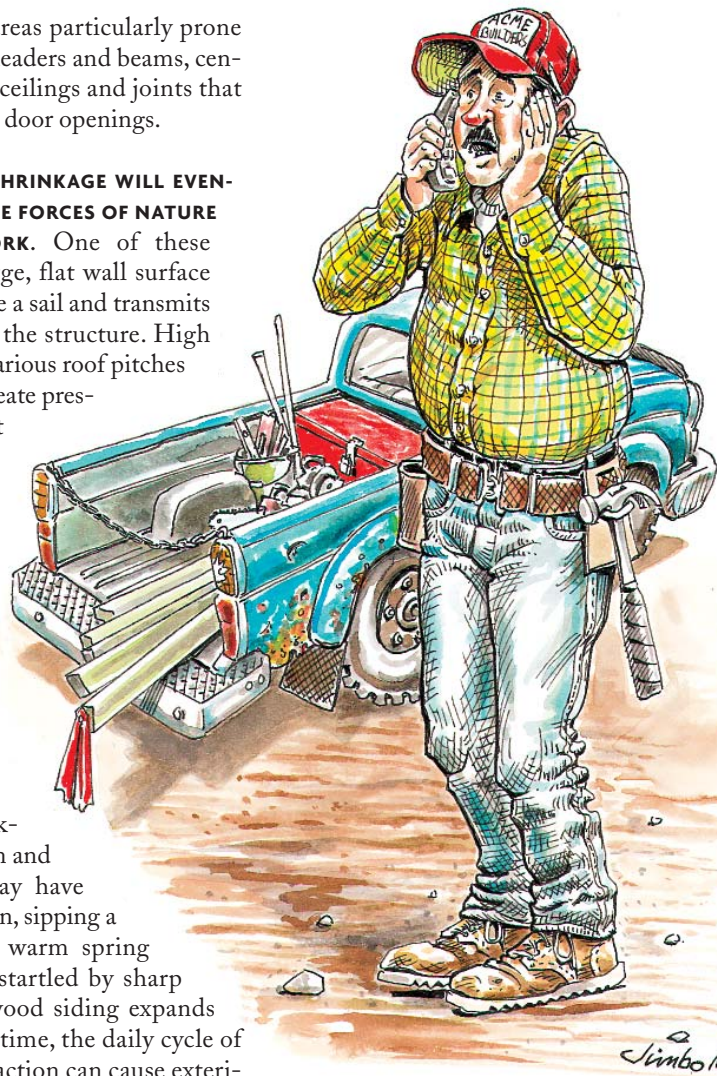
SETTLEMENT AND SHRINKAGE WILL EVENTUALLY STOP. BUT THE FORCES OF NATURE ARE ALWAYS AT WORK. One of these forces is wind. A large, flat wall surface captures the wind like a sail and transmits its force throughout the structure. High winds flowing over various roof pitches and overhangs can create pressure variations that move a building enough to crack drywall, plaster or stucco. All our structures are designed to resist these forces, but no builder can make guarantees against the effects of severe storms.

Other forces to reckon with are expansion and contraction. You may have sat outdoors in the sun, sipping a cup of coffee on a warm spring morning, and been startled by sharp popping noises as wood siding expands from the heat. Over time, the daily cycle of expansion and contraction can cause exterior-trim joints to separate, paint to check and hairline cracks to appear in stucco. It can also cause grout lines to crack on countertops that abut exterior walls.

Moisture can also make wood expand and contract. Fluctuations in humidity levels can swell doors and windows enough to bind or shrink woodwork enough to separate miters and expose paint lines. Imagine the frustration of a perfectionist carpenter who takes pride in crafting nice tight joints, only to see aggravating gaps open later.

Another source of movement those of us in California know all too well is the ground. Earthquakes are extreme examples of ground movement, but long-distance tremors and deep-underground fault shifts that go unnoticed by occupants can still affect a structure enough to cause cracks.

WHEN A PROBLEM SHOWS UP IN YOUR NEW HOME, YOU'D LIKE IT FIXED IMMEDIATELY. Although that's perfectly understandable, it may not be the best thing to do. If a door won't close or a floorboard squeaks, call us, and we'll take care of it right away. However,



when it comes to minor swelling or hairline cracks, I'll ask you to live with them for at least a year. The more time you allow for the building to reach equilibrium, the better chance permanent repairs can be made. We expect to come back (free of charge) one year after completion to repair cracks caused by shrinkage and settlement. After that, you should treat repairing cracks as routine maintenance for your home.

Along with chores such as cleaning gutters and changing furnace filters, I urge you to inspect the exterior walls for joint separations (where siding meets trim, for example) regularly. Recaulk wherever gaps open, and repaint wherever bare wood becomes exposed. Don't delay here because caulk and paint are your home's first line of defense against moisture penetration.

Sincerely,
John Lemon

John Lemon is a general contractor in Napa, California. Drawings by Jim Meehan.