EIGHT-PENNY NEWS

VOLUME 11 • NUMBER 12 SEPTEMBER 1993

Who Owns the Plans?

Recent amendments to the copyright law affect builders of knock-of f houses

by Rich Binsacca

Three years ago, Congress amended the law that protects architectural plans against copyright infringement — the unauthorized copying of original floor plans and elevations, including those of existing structures. As housing markets become more competitive, interest in the copyright law is growing among builders who want to protect investments made in creating original house designs as well as those who have infringed copyright and want to learn about how to protect themselves from a lawsuit. "Two-thirds of the calls I get are from builders who think someone has stolen their plans," says Mary DiCrescenzo of NAHB's legal department. "The rest are builders who are being sued for infringement."

It's the law. Actually, the law is simple: A drawing or built structure based on someone else's original design used without permission is an infringement of copyright. But because of the way the housing market has operated throughout its post-war history, with knock-offs of popular plans and elevations in nearly every market, builders have acquired a few key misconceptions that can get them in trouble.

For instance, making slight alterations to another builder's plans does not protect you from the law. In fact, it seals your guilt if you admit that you derived your plan — however altered, but still similar — from another design. One New Jersey builder even clipped a competitor's sales brochure to his own construction contract, a key piece of evidence that forced the builder to pay $50,000 in damages, and to significantly change the exterior elevations after losing the lawsuit. "We're not vindictive, but we want to get the value of spending time and money delivering unique plans to the market," says Andy Abramson of the Value Group, the builder who won the copyright lawsuit. "You can't allow your plans to be stolen."

Another dangerous misconception, especially among production builders, is the claim that there are only so many ways to design a floor plan given today's tight lots and high costs. But the argument misses the point: If two plans are similar, it is either coincidence or copyright infringement. "It comes down to a question of where the design came from," says copyright attorney David York. The court will decide whether the two plans are "strikingly similar" or "substantially similar." In the first case, there is no question of infringement, but in cases where plans are deemed to be "substantially similar," the suing builder must prove that the accused builder

continued

Exploding Water Heater Raises Safety Concerns

Earlier this year, a 200-pound, 66-gallon water heater ruptured in the basement of a home in South St. Paul, Minn., exploding with the destructive force of dynamite. The water heater developed enough thrust to propel it through the joists, subfloor, and hardwood flooring on the first floor, on up through the attic joists and roof rafters, and another 150 feet into the air before falling to the ground in a neighbor's yard. The force of the blast blew out the doors and windows, reduced furniture to rubble, and knocked the house off its foundation.

The rocketing water heater not only made the news, but also raised new concerns about water heater safety. "If enough things go wrong, that's what a water heater will do," says Frank Stanonik of the Gas Appliance Manufacturer's Association (GAMA). A pressure-relief valve is the third line of protection in modern water heaters. The first is the thermostat, which shuts down the heat source when the water reaches the preset temperature. If the thermostat fails, the high-temperature cutoff is second in line to protect against overheating.

The last safety device is the pressure-relief valve, which has been a standard feature on all water heaters for the past 25 years. The 40-year-old electric tank that exploded in St. Paul didn't have one. Today, all manufacturers are required to provide a separate tapping for the valve, but the actual fitting is often sold and installed separately by the contractor. Because differing local codes regulate the valve's capacity, which depends on tank size, manufacturers cannot make a universal fitting. Even when the manufacturer provides a valve in the shipping container, not all contractors bother to install it.

However, even a properly installed automatic relief valve is not foolproof and needs to be tested periodically to see if it is working properly. Lime deposits and other corrosive minerals in the water may damage the valve seat, causing the valve to malfunction. By simply tripping the lever on the valve for a few seconds, you can determine that the valve is still working properly. But it's important, Stanonik says, to test the valve regularly from the start because tampering with a valve that has gone unchecked for years may cause leaks. Under these circumstances, it's safest to shut the water heater off and replace the valve with a properly sized new one.

Finally, most codes require a standpipe to be attached to the valve, extending to within a few inches of the floor, to direct the steam away from someone working on or testing the valve. Pressure-relief valves should never be plumbed into the drainage system: If you can't see or hear the steam escaping, you have no way of knowing your water heater is malfunctioning. A better, if slightly more expensive, solution is to build a pan to catch the overflow and direct it to a drain. □

This house in South St. Paul, Minn., was destroyed by a ruptured water heater (inset right) that blasted its way through joists and rafters (inset left) before coming to rest in a neighbor 's yard.

STATE BY STATE

New York: The Northeastern Subcontractors Association (NESCA) is encouraging a letter-writing campaign by its membership directed at stopping a proposed 19% increase in workers comp rates that would go into effect Oct. 1. NESCA's recommended alternatives to the increase include:

- using managed care;
- prohibiting third-party liability;
- putting an end to "double dipping" of unemployment and workers comp benefits;
- establishing a special task force to investigate fraud; and
- developing a merit rating system for small employers.

New Jersey: The legislature passed a bill requiring a permit for virtually all initial development within 150 feet of a beach, dune, or shoreline. It also closes a loophole in the 20-year-old Coastal Area Facilities Review Act (CAFRA) that exempted from review shoreline residential projects smaller than 24 units and commercial projects with fewer than 300 parking spaces. Projects involving three or more residential units or more than five commercial parking spaces now require a permit. The bill, which Governor Florio is expected to sign by the end of July, also establishes a 150-foot buffer zone around coastal wetlands.

Vermont: The $16 million in fixed-rate mortgage funds reserved in June for nearly 250 households by the Vermont Housing Finance Agency (VHFA) set a record for the most activity in a single month. The surge in loans is partly due to a special offering of no-down-payment loans made possible by the federal Mortgage Revenue Bond program. Ironically, the program is in jeopardy unless Congress acts to make it a permanent part of President Clinton's economic package. □

1993 NEC Changes Affect Kitchen Wiring

Every three years, the National Fire Protection Association publishes a new version of the National Electrical Code. The 1993 version contains some important changes for the kitchen and dining areas:

• ***Face-up receptacles are now banned*** from work surfaces and countertops, since they can collect dirt, grease, and spilled liquids. "Tombstone" receptacles will be allowed (see photo). Sec. 210-52(c).

• ***Fixed gas appliances*** that require incidental electric power for timers and ignition systems have been added to the exceptions that may be connected into a small-appliance branch circuit. Sec. 210-52(b)(1).

• ***Receptacles are now required*** at countertops 12 inches wide or wider, where previously the counter had to exceed 12 inches to need a receptacle. Also, the previous requirement for receptacles "for each 4 feet of countertop" has been reworded to say that at no place along a counter can the user be more than 24 inches away from an outlet. This means you must place a receptacle within 24 inches of each end of a counter — not within 4 feet of the end, as the previous wording was sometimes interpreted. Sec. 210-52(c).

• ***A peninsula is to be measured*** from its free end to the point where it intersects the main counter, not the wall. Receptacles are to be provided along peninsulas according to the rule mentioned above. (However, Figure 210-30 in the 1993 NEC Handbook is in error on this point). Countertop receptacles can be placed in upper cabinets, or in lower cabinets as long as they are no more than 12 inches lower than the countertop. Sec. 210-52(c).

• ***Railings have now been added to the "room divider" category.*** This means railings are treated as walls and must have receptacle outlets placed along them. Except for custom railings that can accommodate wall receptacle boxes, this will require the use of floor outlets. Sec. 210-52(a).

For railings separating kitchen/dining/pantry areas, an outlet would probably not be required on both sides, since a cord could pass through the rails. However, if a railing separates the kitchen/dining/pantry area from any other area, such as a living room, receptacle outlets are required on both sides. Sec. 210-52(b).

The 1993 NEC bans face-up outlets from countertops. Tombstone outlets, such as this one from Walker, are an acceptable alternative.

• ***Any 15- or 20-amp receptacle within 6 feet of a wet bar sink*** (straight line distance) and serving countertop surfaces must now have GFCI protection, whether it is in the kitchen or not. Sec. 210-8(a)(5).

• ***If a receptacle is being replaced*** in a location that would currently require a GFCI, then the replacement receptacle must have GFCI protection. Sec. 210-7(d). □

Rex Cauldwell is owner of Little Mountain Electric Co. in Copper Hill, Va., and a member of the NFPA.

Plans, *continued*

had access to the plans from a sales brochure, a home tour, a set of plans shopped by the buyer, or another means of infringement.

Protecting yourself. In addition to keeping their eyes open for knock-offs, builders who are worried about having plans stolen should register their plans with the federal copyright office. Though architectural work is protected upon creation of the design, a registered copyright used to stamp the drawings adds teeth to a lawsuit (in fact, without it, you might not be able to collect legal fees). In addition, some builders have taken to advising prospective buyers — in the sales office, in bid presentations, and in all company literature, including contracts — that shopping their house plans to other builders is an infringement.

For builders fearful of being sued for copyright infringement, the most obvious protection is to refrain from building someone else's plans, especially if they are brought in by a homebuyer looking for a low bid. But if you really need the work, protect yourself by finding out who really owns the plan and get permission to use them. You may be able to negotiate a use fee, similar to an agreement with a house plan service, that allows one-time use for a price — typically $500 per use. If you cannot locate the original owner, defer liability for ownership to the homebuyer. "Indemnify them to cover you if you get sued," says DiCrescenzo. NAHB offers a package of information about copyright law, including sample contract language.

Whatever you do, make the deal ironclad to protect yourself down the road. "If you have knowledge of ownership, but can't make a deal, then don't build it," DiCrescenzo says. "If you do, you're trapped." □

Rich Binsacca is a freelance writer in Walnut Creek, Calif., specializing in construction topics.

To register plans, contact the Registrar of Copyright (Library of Congress, Washington, DC 20559; 202/707-3000) and ask for form VA (Visual Arts). Submit the form with a set of plans and the $20 fee. Designs are registered upon receipt of documents. Photos of homes built after December 1, 1990 can also be registered separately. For more information and contract language, contact NAHB's Legal Department, 800/368-5242, ext. 359.

Finger-Jointed Studs Find New Popularity

Although finger-jointed studs have been available for almost 20 years, it wasn't until recently that many builders gained enough confidence in them to use the studs. They are made by mechanically fastening sections of 2x material with glued finger joints. In the past, these joints had a reputation for coming apart. As one framer said, "Lean against one and you're apt to find yourself flat on the floor with pieces of stud in your lap."

Industry representatives say weakness at the joints is no longer a problem. Jack Brace, president of TruMark Industries Inc. in Spokane, Wash., one of about six national manufacturers of finger-jointed studs, says the material's bad reputation stems from poor quality control by one large manufacturer. "It's amazing how quickly news of a bad product spreads among builders," he says.

Another reason builders were reluctant to work with finger-jointed studs was a lack of knowledge about engineered lumber. Now, as good clear stock becomes more expensive and harder to find, manufactured lumber products are becoming more attractive.

Some of the lumber TruMark manufactures is salvaged from job sites. Brace says his company gathered enough leftover wood from one development of 64 homes to manufacture finger-jointed studs to frame another five homes.

But the majority of the wood used for manufacturing finger-jointed studs is low-grade lumber purchased from mills. The bad sections are cut out and used in products like particleboard. Meanwhile, finger joints are cut into the ends of the clear sections with a machine similar to a shaper. The joints are bonded with a resorcinol glue.

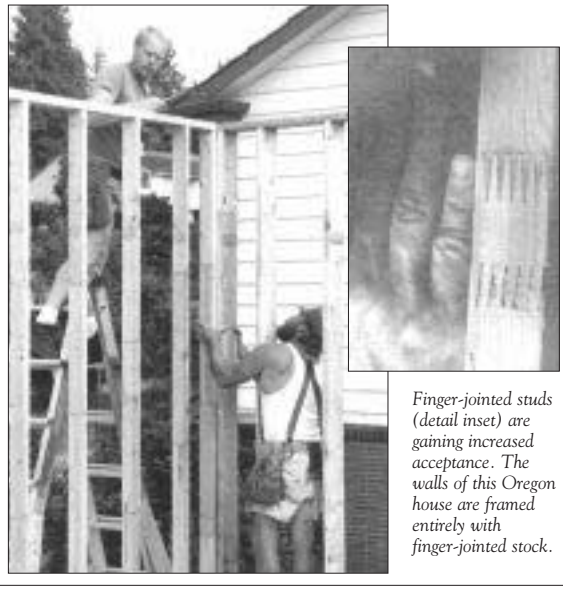
TruMark can produce finger-jointed studs up to 48 feet in length. Widths range from 2x3 to 2x12. Joints fall randomly along the length of a piece of stock, but rarely closer than every 14 inches, since shorter pieces slow the manufacturing process, Brace says.

Finger-jointed studs don't seem to have problems with twisting during dry-out. This is especially important with longer studs. Since flaws are removed in the manufacturing process, the material is straighter and, according to Brace, twice as strong as solid stock. Also, because the wood is dried to below a 19% moisture content before gluing, it is less likely to warp or twist.

All of this translates into fewer replacements and less time spent straightening studs when fine-tuning for drywall. These savings can sometimes save enough to make up for the 5% to 10% premium that finger-jointed studs carry over standard solid stock.

Tad Englund, president of Englund Development Company in Bellevue, Wash., says the extra cost is worthwhile. "One bad stud can destroy a wall. The buyers I work with are really savvy. The little cosmetic things, like a bulge in the wall, drive them nuts," he says. Working with finger-jointed stock also saves time. "Framers don't have to pick through them or take the time to crown them." □

Neil Momb is a framing contractor in Issaquah, Wash.



Finger-jointed studs (detail inset) are gaining increased acceptance. The walls of this Oregon house are framed entirely with finger-jointed stock.

Demand Grows for Engineered Products

Many builders are taking a closer look at I-joists and other engineered lumber products in light of the recent surge in lumber prices. Although prices for engineered wood products have risen somewhat, many have become more competitive with solid-sawn lumber. For example, some manufacturers are currently offering 12-inch I-joists at $1.19 per lineal foot, which is very competitive with recent 2x12 quotes for some western framing lumber according to a recent report in *Random Lengths*, a timber industry newsletter.

Historically, engineered lumber prices have had a strong reputation for price stability. However, now manufacturers are facing some of the same supply shortages as lumber mills, which is forcing them to pay more for fiber and to adjust their prices much more frequently than in previous years. Some manufacturers of I-joists are reportedly switching from plywood to OSB webs to help hold down prices. □

Steel, Cement, and Drywall Prices May Rise

When the price of framing lumber nearly doubled earlier this year, the prices of steel, cement, and drywall did not follow. Industry observers and savvy suppliers alike, however, expect price increases of perhaps 10% or more by late summer. In addition to normal spring price hikes in anticipation of greater summer demand, the same pressures that drove up lumber prices seemed poised to do the same to steel and cement. These include pent-up demand for commercial projects, duties placed on imported steel, and a desire to gain back profits lost during the recession.

"Manufacturers seem to feel they should get it all back this year," says Kurt Boehlein, office manager at New Berlin Redi-Mix in New Berlin, Wis. As of June, his suppliers of cement, rebar, and wire mesh had successfully raised prices by 9%.

The price of drywall and related products has also increased. Most manufacturers raise prices in early summer when demand is usually highest, but late spring rains held the market in check. "We expected a June 1 increase, but it didn't happen," says Mike Anderson of Fleming Materials in Milwaukee, a steel framing and drywall products supplier. However, most producers have followed the lead of one manufacturer's scheduled August increase, resulting in a 10% price increase in gypsum products. □

Fiberglass and Cancer: Chink in the Link

Don't remove those masks just yet, but a new study published in a scientific journal further refutes the claim that glass fibers — the material used for insulation and other building products — cause cancer and lung disease. The Swiss study, conducted at the Research and Consulting Company (RCC) in Geneva, was consistent with earlier studies that showed no difference between animals exposed to fiberglass and those breathing filtered air. Fiberglass was listed as a possible carcinogen in 1987 based on the results of studies in which fibers were injected directly into animal subjects. The RCC technique, however, better simulates actual exposure. The new evidence suggests that, under actual conditions, natural defense mechanisms may inhibit damage.

Though still promoting safe installation practices, the North American Insulation Manufacturers Association (NAIMA), a trade group for fiberglass, rock wool, and slag wood insulation products, says the independent study supports their claim that fiberglass insulation is safe to make, install, and live with under normal circumstances. □

From What We Gather

Nails, not staples, are the preferred method for attaching all asphalt shingles, according to the Asphalt Roofing Manufacturers Assoc. (ARMA). At its last board meeting, ARMA adopted the policy in response to problems with stapling of shingles. Staples can work if installed properly, but they are prone to be overdriven, underdriven, or crooked, leading to problems, according to an ARMA technical bulletin.

The effects of moderate lead poisoning might be at least partly reversible, according to a new study published in *The Journal of the American Medical Assoc*. The study conducted at the Albert Einstein College of Medicine in New York City found that children's IQ scores rose as much as ten points as the level of lead in their blood was lowered with treatment. Researchers caution that the study is not definitive and needs to be followed up with additional research.

Question: What bathroom fixture costs $23.4 million and can work upside down or sideways? Answer: NASA's new zero-gravity toilet for the space shuttle. Admitting to Congress that the toilet cost $20 million more than planned, a NASA spokesman defended the project, saying "this is not simply a toilet, but a complete sewage collection and treatment plant contained in a space half the size of a telephone booth." NASA conceded that it initially underestimated the complexity of the device, which has some 4,000 parts.

U.S. companies throw away over $3.5 billion each year by paying suppliers twice for the same invoice, according to consultant Bob Fields of Fields & Assoc. in Burlingame, Calif. On average, 0.1% of a company's payments are duplicate due to a combination of human error and deficient software. A major problem, says Fields, is that a single input error on an invoice number — such as omitting a hyphen — will defeat the software's error checking routines.

Homes purchased under FHA now require a signed lead-based paint disclosure from borrowers purchasing homes built before 1978. Prior to closing, buyers must read and sign the disclosure, which identifies lead-based paint as common to pre-1978 homes, describes warning signs and health risks, and offers mitigation and avoidance techniques. FHA will not process loans unless the signed disclosure notice is attached. □