

PROBLEM-SOLVING TOOLS & MATERIALS

A survey of innovative products that can
save time, money, and aggravation

by John Wagner

Every year, there are more “new” building products introduced than you can possibly keep up with — let alone learn about. On closer inspection, most of these turn out to be variations on last year’s “new” products. But occasionally a product comes along that offers something truly innovative — a new way to use expensive materials more efficiently, a clean solution to a common installation problem, or a way to save energy and improve comfort.

We’ve spoken to contractors across the country and sorted through reams of product literature to come up with the choices described here. Some of these products have been around for a few years, some are brand new. Some are best-suited for high-end projects, while others can help save money even on a tight budget. But whatever your market, you’ll find products here that can help you achieve the goal of cost-effective, high-quality construction.

FOUNDATIONS

Footing Form and Drain Combo



Here’s a new product that combines footing forms and perimeter drains into a single perforated PVC-extrusion. The 12-foot-long *Form-A-Drain* sections come in 6-inch and 8-inch sizes, and can be left in place after the footings are poured. The perforated walls act as a foundation drain, collecting and channeling water like a conventional drainpipe. Sections fit together using couplings and angle pieces, and are braced using stakes and kickers as with form boards.

Contact: CertainTeed Corp., P.O. Box 860, Valley Forge, PA 19482; 215/341-7000.

Treated-Wood Foundation Blocks



Unlike most insulated foundation forms, which are made from rigid foam, interlocking *Faswall* blocks are made of treated wood chips bonded with cement. Available in 9- and 12-inch widths, the stackable blocks are laid up like cement blocks, but without mortar. When concrete is poured into the blocks’ hollow cores, it forms an insulated, monolithic “post-and-beam” wall. Drywall, plaster, and siding may be applied directly to the blocks, which hold nails.

Contact: Insul Holz-Beton International, P.O. Box 88, Windsor, SC 29856; 803/642-9346.

Masonry Spacers



Laying concrete block correctly can be tricky, especially if you don’t do it regularly. These 20-gauge galvanized steel *Block Laying Tabs* maintain a 3/8-inch joint between blocks, both vertically and horizontally. After laying a level first course, you simply drop these tabs in place for your next course, spread mortar, and set your blocks. The tabs keep the courses aligned and level. At \$42 for 200 tabs (21¢ each), these tabs are perfect for small jobs that may not require a masonry sub.

Contact: Bilco Brick, P.O. Box 430, Lancaster, TX 75146; 800/487-3380.

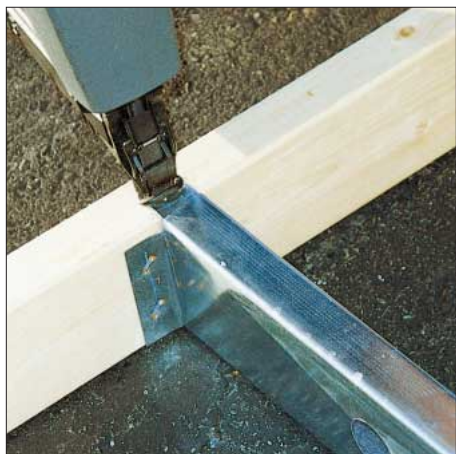
Prefab Insulated Headers



Heat loss through uninsulated or underinsulated headers can erode a wall's energy efficiency. One alternative is insulated *SWII-Headers*, which sandwich polystyrene insulation between $7/10$ -inch OSB webs and wood flanges, creating a box beam. The R-15.5 headers can be cut with carpenter's tools. An $11\frac{1}{4}$ -inch-deep header with 2x4 flanges costs \$3.50 per foot; 2x6 flanges run \$4.40 per foot.

Contact: Superior Wood Systems Inc., P.O. Box 1208, 1301 Garfield Ave., Superior, WI 54880; 715/392-1822.

Steel Studs for the Rest of Us



The *Carpenter's Steel Stud* is perfect for builders who want to give steel studs a try without retooling. Both ends of each 8-foot-long stud have three flanges to nail or staple into wood top and bottom plates. The steel studs are designed for nonbearing walls, and can be shortened with a power saw; use snips to form new flanges. Predrilled holes accommodate plumbing and wiring.

Contact: HL Stud Corp., 2000 W. Henderson, Suite 60, Columbus, OH 43220; 614/451-8100.

Engineered Framing



Timberstrand is one of a growing number of engineered wood products now directly competing with dimensional lumber in price and performance. Made from compressed aspen chips oriented as in OSB, Timberstrand is currently code-approved for two applications. The $1\frac{1}{4}$ -inch-thick *Rim Board* is available in depths that match I-joist floor systems. The *Light Duty Header* is available in dimensions of 4x6, 4x8, 4x10, and 4x12.

Contact: Trus Joist MacMillan, 200 East Mallard, Boise, ID 83706; 208/364-1200.

Bug-Free Foam Panels



The threat of insect infiltration has long been a problem for users of foam-core panels. But AFM Corp.

may have solved the problem with a new approach to keeping termites and carpenter ants at bay. Sold nationwide under the name *R-Control Panels*, the EPS foam panels with OSB faces are impregnated with borate, a naturally occurring, low-toxicity pesticide that's effective against insects but nontoxic to humans. AFM's tests indicate that the foam is not degraded by the borate nor invaded by insects that typically infest foam.

Contact: AFM Corporation, Box 246, Excelsior, MN 55331; 800/255-0176.

One-Piece Cold Roof Panel



Insulating exposed-beam cathedral ceilings often calls for two roof decks that sandwich rigid foam panels, with battens to provide a venting air space. Now you can accomplish the same thing with a single lay-in-place panel. *Celo-Vent* is a 4x8 prefab panel that creates a properly vented insulated roof deck in one fell swoop. Each panel consists of a shingle deck of $\frac{1}{2}$ -inch OSB, a layer of 3-inch-wide fiberboard battens, and a sheet of rigid foam insulation. The panels are fastened through the OSB shingle deck to the underlying rafters with nails or screws. Four panel thicknesses are available, from 2 inches to $4\frac{1}{2}$ inches, offering a range of insulation values from R-6 to R-25.8. A 4-inch-thick R-21 panel costs approximately \$48.

Contact: Celotex Corp., P.O. Box 31602, Tampa, FL 33631; 813/873-1700.

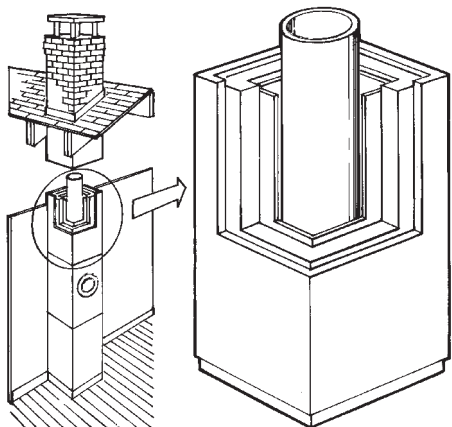
Instant Balcony



Getting light into remodeled attic space usually means building skylights, dormers, or expensive balconies. Velux-America now offers an instant balcony that pops right out of a dual-sash roof window. The *Cabrio Balcony Roof Window* is 100 inches high by 37 inches wide. It can be installed in roof slopes from 8.5 to 16, and flashed to any existing roof type. The top sash on the Cabrio opens up to become a small roof, while the bottom sash opens outward to create a glass-front balcony railing. The small step-out balcony costs around \$2,600. An added plus: The Cabrio uses laminated, low-e, argon-filled glazing.

Contact: Velux-America Inc., P.O. Box 5001, Greenwood, SC 29648; 800/283-2831.

True Zero Clearance



The HT-10 system is a prefabricated Class-A, UL-listed zero-clearance chimney. The sections are 2 feet high by 16

inches square, with interlocking joints that are sealed during installation with fire-rated adhesive caulk. A 24-gauge stainless steel liner is at the center of each box, surrounded by 1/4-inch-thick, high-density ceramic fiber insulation that will contain 2,100°F temperatures. Surrounding that is a 2-inch layer of mineral wool and a 1-inch-thick, high-density calcium-silicate refractory board that can be drywalled, painted, wallpapered, stuccoed, bricked, or covered with stone, wood, or veneer. A stainless-steel chimney cap, hinged for easy cleaning, goes on top.

The cost of \$70 to \$75 per linear foot is competitive with standard boxed-in metal chimneys since no framing or air space is required. And you don't have to worry about how to tastefully finish the chimney above the roofline.

Contact: Furnex-Division of Hale Industries Inc., 17 Foss Rd., Lewiston, ME 04240; 800/692-9054.

Wood Substitutes



Fiber-cement products are a durable alternative to conventional siding and roofing. *Hardiplank*, *Hardipanel*, and *Hardishake* are composition materials made from Portland cement, cellulose fiber, and ground sand. The products are imprinted with wood-grain patterns so they look like the real thing, but they are impervious to rot, termites, vermin, and UV light damage. All three come with a Class-A fire rating, and can be nailed or screwed in place like wood.

Contact: James Hardie Building Products, 10901 Elm Ave., Fontana, CA 92337; 800/942-7343.

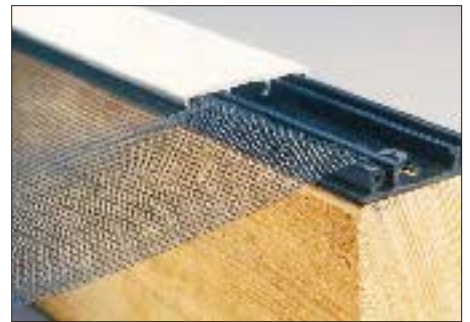
Stable Deck Boards



PT decking resists decay, but it still cups and checks from water infiltration. *Supreme Decking* is milled to encourage runoff and reduce cupping. In the process, southern pine 2x6s are first milled down to 1 1/4x5 inches to eliminate rough edges. Then a 1/8-inch crown is milled across the face to speed water runoff. Relief channels cut lengthwise on the board's underside absorb expansion and reduce cupping. You'll pay about 10% more than you would for 5/4x6-inch decking.

Contact: Burke Lumber, 10125 Richmond Highway, Lorton, VA 22079; 703/339-7363.

Simple Screen



Screening a porch with wooden strips nailed over stapled-on screening can be tedious and frustrating. *Screen-Tight* is a new system that uses a channel and spline to clamp the screen in place. A vinyl cap neatly hides the seams. A standard screening wheel is all you need to seat the screen and spline firmly in place, and the base and cap pieces can be trimmed with sheet metal shears.

Contact: Screen-Tight, 407 Saint James St., Georgetown, SC 29440; 800/768-7325.

Safer Treated Wood



Manufacturers of treated wood are looking for safe alternatives to CCA, which contains arsenic. The acronym for one substitute, called *ACQ Preserve*, stands for alkaline (a carrier), copper (the primary fungicide), and "quat" (an ammonium compound that kills some fungi that copper can't). Available in a range of wood species, including Doug fir and southern pine, ACQ Preserve lumber comes in all standard sizes and a range of preservative densities, from 0.25 to 1 pound per cubic foot. The code organization ICBO has approved the material; other code bodies are likely to follow suit.

Contact: Chemical Specialties Inc., One Woodlawn Green, Suite 250, Charlotte, NC 28217; 800/421-8661.

Mixing Oil and Water



The trend toward banning VOCs (volatile organic compounds) is forcing some oil paints off the market. Painters who are used to oil paint's superior finish and penetration are trying *H₂Oil-Base*, a tintable primer-sealer that goes on like oil-based paint, but cleans up with soap and water. Its low-VOC level even passes California's tough air pollution laws.

Contact: Wm. Zinsser & Co. Inc., 173 Belmont Dr., Somerset, NJ 08875; 908/469-8100.

HOME AUTOMATION

Low-Profile X-10 Devices



A powerline carrier technology called X-10 uses existing AC house wiring to control appliances and lighting by remote control. Plug an appliance or light into an X-10 module, plug the module into any socket, and you can control the appliance or light from an X-10 control module elsewhere in the home. Unlike bulky, plug-in X-10 devices, *Decora Electronic Controls* look like conventional switches and receptacles, and can be installed in standard electrical boxes.

Contact: Leviton, 59-25 Little Neck Pkwy., Little Neck, NY 11362; 800/323-8920.

Basic Home Security



The \$3,500 *HAI Home Control & Security System* will equip a 2,500-square-foot home with more than 20 security zones and control the hvac, lighting, and appliances. Standard features include motion and smoke detectors, and installation requires minimal wiring (low-voltage wires need to be run only for sensors and thermostats). The dealer-installed system also operates with X-10 controllers.

Contact: Home Automation Inc., 2709 Ridgelake Dr., Metairie, LA 70002; 504/833-7256.

Total Home Automation



Integrating home automation systems with appliances made by a variety of manufacturers has been a challenge for the industry. *Total Home* is a computer-based system that controls security, temperature, lighting, and most appliances. Total Home can be programmed with 17 different "lifestyle modes" (such as "vacation," "mornings," "evenings," and "bedtime") and also works with X-10 devices. Systems start at \$4,500, and are installed by the manufacturer.

Contact: Honeywell's Total Home, 2701 4th Ave., Minneapolis, MN 55408; 800/345-6770, ext. 2039.

Smart Lock



The *Alert-Lock* is a new home-security product that doesn't need remote sensors and low-voltage wiring: An alarm is built right into the lock. The Alert-Lock is available in a wide range of styles and is installed like a normal lockset. Once locked with a key, the alarm is set, and an adjustable vibration-sensitive sensor sends out a 130-decibel signal if the lock is tampered with. The lock will operate for three to four months off a 9-volt battery.

Contact: Pease Industries Inc., 7100 Dixie Hwy., Fairfield, OH 45014; 513/870-3600.

INTERIOR PRODUCTS

Quiet Range Hood



High-cfm overhead range hood fans are notoriously loud. The new *Elite Kitchen Ventilation Systems* have remote-mounted, in-line centrifugal fans that reduce noise levels in living areas to near zero. By placing the fan far from the actual hood (in a crawlspace, on the roof, or outside on exterior side-walls), Elite fans with air flow ratings of up to 540 cfm are still quiet. These three-speed range-hood systems also have filters that can be taken out and cleaned in a dishwasher.

Contact: Fantech Inc., 1712 Northgate Blvd., Sarasota, FL 34234; 800/747-1762.

Bendable Moldings



Elastomeric polymer and polyester manufacturing processes have made great strides in reducing the cost of wood substitutes. One company has used the new technology to make high-strength flexible trim that comes in more than 3,500 profiles. The material

looks like wood, but bends and behaves like dense rubber. The company offers two product lines: *Z-Flex*, which is designed for high-profile curved trim installations; and *Trim Flex*, which is perfect for less demanding applications. (The narrow, flatter trim will bend to tighter curves than wider, deeper profiles.) Both products can be nailed, screwed, or glued; both take paint well, and can be stained to reveal pine or oak "grain" patterns.

Contact: Flex Trim Industries Inc., 11479 Sixth St., Rancho Cucamonga, CA 91730; 800/356-9060.

Postformed Solid Surfacing



The manufacturer of *Formstone Lite* claims that it has the advantages of solid surfacing without the premium price. The composite countertop consists of a 3mm-thick sheet of Avonite bonded to a rigid, moisture-resistant copolymer substrate, and postformed with a 180-degree round-over edge (a backsplash is optional). The surface is stain- and scratch-resistant, and comes in three colors and two granite patterns. Seams are sealed with Avonite's Avo-Bond kits, and caps are available for exposed edges.

Contact: Avonite, 1945 S. Highway 304, Belen, NM 87002; 800/428-6648.

Recycled Wallboard

FiberBond is a fiber-reinforced gypsum panel that is available for use as wallboard as well as exterior sheathing. It's a composite blend of recycled cellulose fibers and gypsum that won't delaminate because there are no paper or fiberglass surfaces. Available in 1/2-inch and 5/8-inch thicknesses, FiberBond is treated on the front and



back faces to make it highly water resistant. It can be faced with stone, brick veneer, and stucco, and it also provides a nail base for wood shingles and shakes.

Contact: Louisiana-Pacific, 1000 Woodfalls Rd., Suite 134, Schaumburg, IL 60173; 708/517-8833.

Heavy-Duty Laminate



A new countertop material combines the flexibility of plastic laminate with the durability of solid surfacing. *Nuvel* is a high-density, mineral-filled thermoplastic polymer that is extruded in 30- to 60-inch-wide sheets up to 12 feet long. It has solid-through color (standard thickness is .090 inches), so burns, scratches, and gouges can be readily fixed. Nuvel can be postformed, vacuum-formed, and thermoformed with tight radii, and the seams are virtually invisible. The material can be cut, planed, and routed with carpenter's tools.

Contact: Formica Corp., 10155 Reading Rd., Cincinnati, OH 45241; 800/367-6422.

Concrete Coil Nailer



Powder-actuated tools aren't the only way to drive fasteners into concrete. Hitachi's NC65AC concrete nailer pounds thick-shank (.145 inch) collated nails into concrete using a driver blade that hammers the nail like a palm nailer. The 1- to 2½-inch nails come in plastic collated coils. Depending on whether you're fastening wood or sheet steel to concrete, the gun operates at air pressures from 70 to 120 psi.

Contact: Hitachi Power Tools, 3950 Steve Reynolds Blvd., Norcross, GA 30093; 800/706-7337.

Steel Coil Nailer



If you're working with steel framing, Erico's ET500 coil nailer is designed to fasten plywood to 16-, 18-, 20-, or 22-gauge steel studs, and to anchor decking to steel joists and rafters. The ET500 shoots steel pins nearly as fast as a framing nailer. Each 1½-inch-long, high-carbon pin (300 to a coil) has a ballistic point for easy penetration, and a helical knurl (like a screw thread) for holding power. The ET500 gun runs on a standard air compressor at 75 to 90 psi and sells for \$550. The nails go for \$55 per thousand.

Contact: Erico Tool & Fasteners Inc., 29019 Solon Rd., Solon, OH 44139; 800/248-2376.

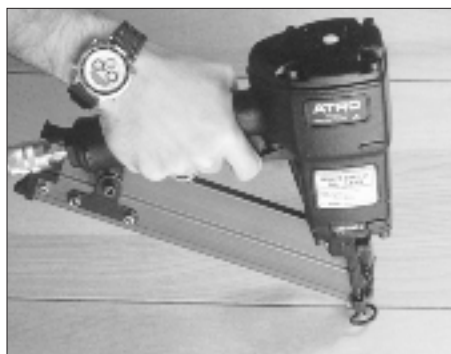
Dustless Drywall Sander



The *Drywall Finishing System* is an electric drywall sander with an articulating head and built-in vacuum hookup. The powerful sanding head moves freely from wall to ceiling without folding over while the vacuum sucks out dust through a highly flexible universal joint. The shroud covering the sanding pads is fitted with brushes that confine the dust and simultaneously sweep the wall so the vacuum can do its work. The sander sells for about \$360, not including the vacuum.

Contact: Porter-Cable Professional Power Tools, 4825 Hwy. 45 North, Jackson, TN 38302; 800/321-9443.

Oil-Less Air Guns



Georgia-Pacific recently introduced a line of oil-less air guns made by Italian-based Atro International. The new guns require less maintenance than other nail guns because they don't use O-rings.

The O-rings in conventional nail guns create a compression seal between

the piston and the cylinder wall. The O-rings glide on a film of oil — otherwise friction would peel them off the piston — but they are susceptible to temperature extremes and damage from grit that enters the tool through the air line.

Georgia-Pacific's new Atro nailers use a Teflon piston, which rides on a microfine film of air without O-rings or lubrication. According to Georgia-Pacific, the Atro guns work well in cold weather (down to -4°F), when the lubrication in other tools gums up.

Contact: Georgia-Pacific, 133 Peachtree St. NE, Atlanta, GA 30303; 800/284-5347.

Digital Water Level



This computer level for calculating grades and elevations may replace laser beacons and optical levels. *Compulevel* consists of a briefcase-sized base unit connected by a durable cord to a portable module that has a liquid crystal readout and a keypad. Wherever you set the module, it will read out the height from the base unit benchmark in feet and inches (in eighths or tenths) or metrics. With 100 feet of cord, the module will read out up to 20 feet above or below the base unit. It works around corners, and the base unit memory can store up to 160 measurements. *Compulevel* can work with a computer or AutoCAD to produce maps and site profiles. It's not fragile: It weighs 10 pounds, runs 75 hours on a 9-volt battery, and can be hosed off. The price is \$1,200.

Contact: Stanley Works, 600 Myrtle St., New Britain, CT 06053; 800/262-2161.