Letters

Heart Side Down

To the Editor:

I recently read Henry Spies' response to a question on laying deck lumber in January's "On the House" column.

The California Redwood Association recommends applying the pith side (heart side) *down*—not up. This reduces grain raising and splinters, thus providing a smoother, safer surface.

Keith Kersell
Manager, Technical Services
The Pacific Lumber Co.
San Francisco, Calif.

Conflicting Opinions on Vapor Barriers

To the Editor:

Help! Over the past three years, you've convinced us that a good vapor barrier is essential in a well-insulated, tightly built home. We've recently visited four different manufacturers of well-built "modular" homes (with 2x6 construction, 4x10 floor joists, well-insulated walls, etc.). None of them offer vapor barriers.

Some manufacturers say they used to install vapor barriers, but they've found that vapor barriers aren't necessary. Instead, they've designed the walls to "breathe" (the salesmen weren't sure of the physics involved). We've read of a recent study in Oregon that came to the same conclusion—vapor barriers may not be necessary!

What's going on here? Are we going to be very sorry if we buy a modular home without a vapor barrier? Or are they somehow right in asserting that we won't end up with wet insulation and rotting walls?

We'd sure appreciate a comment from Bill Lotz. We attended one of his seminars and as a result thought we really understood dew points, vapor barriers, vapor dams, etc. Are we missing something, or are the modular-home manufacturers in need of one of his seminars?

Fred Blonder
Jay, Maine

The lack of a vapor barrier in a modular home certainly would prevent me from buying one. While many modular-home manufacturers vent the wall cavity to allow water in the fiberglass insulation to escape, this technique can negate the thermal value of the fiberglass. Air flow and loose-fill fibrous insulations do not go together unless you buy an air filter. Air flow can reduce the R-value of the fiberglass to zero.

In my opinion, omitting the poly vapor barrier and relying upon cavity ventilation is not the way to go. Stopping the moisture before it gets into the wall is much simpler, easier and cheaper than venting the moisture from the wall cavity. —Bill Lotz

In Defense of Sunspaces

To the Editor:

In your January issue, Henri de Marne states, "The only reason for building a sunspace is that you want it and can afford it; no savings of fuel cost can legitimately be used to warrant its construction."

Not necessarily. A south-facing sunspace, with good solar exposure and a method of bringing the solar heat captured in the sunspace into the house (via vents, fans or even just open windows and doors), can deliver quite a bit of solar heat to the house. In fact, roughly a gallon of oil per year can be saved for every square foot of south-facing glazing (depending on several factors, such as how warm the sunspace is kept at night, insulation levels, etc.)

This is not an overwhelming savings, of course; if oil is $1 a gallon, a sunspace with a 10' x 6' glazed area would save $160 a year in fuel, or well over $1,000 in a 10-year period.

While this certainly isn't enough to offset the entire cost of such a greenhouse, it certainly shouldn't be ignored, either. Proper siting and proper heat transfer to the house should be considered by the client, designer and builder to get the most out of a sunspace.

In short, I agree that you shouldn't build a sunspace unless you want the space—for sunning, living or plant-growing—but you also shouldn't ignore the solar-heating potential of a well-designed sunspace when deciding whether to build one.

Andrew Shapiro
Providence, R.I.

Andrew Shapiro is the author of The Homeowner's Complete Guide to Add-On Solar Greenhouses and Sunspaces, *published by Rodale Press. The book was reviewed in our August 1985 issue.* —Ed.

In Search of Sonar Tapes

To the Editor:

I found the February article by Jon Eakes on "tools of the trade" most-informative.

I am very interested in the sonar tapes he mentioned and am writing to ask if you have a list of regional suppliers. I've been searching the local market for some time but can't seem to locate these measuring devices.

Dave Benton
Storbridge, Mass.

We contacted several tool distributors and didn't have any luck either—until we did what Jon suggested in the first place and called a supplier of surveying instruments. (Like they say, if all else fails, follow the directions.)

One supplier in your neck of the woods is the Carl Heinrich Co. (711 Concord Ave., Cambridge, Mass. 02138; phone 617/864-4840), which offers the "DMC 100" version for $250. More elaborate infared and sonar devices are available starting at a mere $4,000. —Ed.

Chimney Clarifications

To the Editor:

The Research Division of the Canada Mortgage and Housing Corp. (the agency responsible for advising the Canadian federal government on housing policy) has been focusing much of its research on combustion-venting problems for several years now. As a result, I found your December 1985 issue on chimneys timely and well done.

I would like to point out a few errors in the article "Understanding Chimneys," by Tom Urban, however. I strongly agree with most of his recommended renovations and improvements in design, but his explanations of draft (in paragraphs five, six and nine) are not correct.

Draft is a measure of *pressure*—not *velocity* as stated. A water column, or "draft gauge," is a pressure-measuring device. If there are no excessive restrictions to flow, more draft will induce more flow, and therefore more velocity. But a high-draft measurement can (temporarily) occur with *no* flow or flow velocity (although temperatures would quickly fall and draft would decrease if flow stopped).

One of the dictionaries I checked had more than 20 definitions for draft—none of which could be applied correctly to our chimney problem—so misuse of the word is easy to understand.

Contrary to the information in the sixth paragraph, there are no firm correlations between barometric pressure and the amount of moisture in the air. (If nothing else, any correlations that might apply in one part of the continent would differ in another.) The presence of excessive moisture (*i.e.,* high relative or absolute humidity levels) will result in a *lower* density, making the air *lighter* and *easier* to move than drier air—not heavier and harder to move, as stated in the article.

Because water molecules are 35 percent lighter than air molecules, at the same temperature and barometric pressure there is less mass in a given volume of "wet" air than in dry air, since the density of the moist air is lower. If lower air temperatures and higher barometric conditions happen to occur more frequently when relative humidity is high, it would be *possible* for "heavier" air to result, but the air would be even heavier if the relative humidity were low under those same weather conditions.

Low barometric pressure can result in reduced draft for a given furnace/chimney/house combination because of the resultant lower air density outside the chimney (although this is not a major effect).

The last sentence in paragraph six is correct as stated, but for different reasons than those inferred. When the velocity of the flue gas is lower, heat losses from the chimney are higher—so the average flue-gas temperatures are reduced, and the "draft" is also smaller.

The secret of a good chimney is plenty of insulation between the liner and the outdoors to reduce the heat loss that cools the flue gases, and a "small enough" flue passage to speed up the flue-gas flow and further decrease the draft-robbing heat losses. Installing an insulated liner gives a double edge—a lower rate of heat loss and a shorter time exposed to that lower rate of heat loss.

My final comment relates to the last sentence of paragraph nine, which reads, "And because less fuel is lost, the stove will operate more efficiently." The sentence would read correctly if reworded this way: "And because less *heat* is lost *getting to the chimney, draft is improved* and the stove *may* operate more efficiently." It also will operate more safely, because creosote plate-out will be reduced.

Please keep up the good work, and do not be deterred by the need for minor "corrections" such as this. The more an article is discussed, the better chance it will be remembered and put into use.

Jim H. White
Canada Mortgage & Housing Corp.
Ottawa, Canada

More on Tyvek

To the Editor:

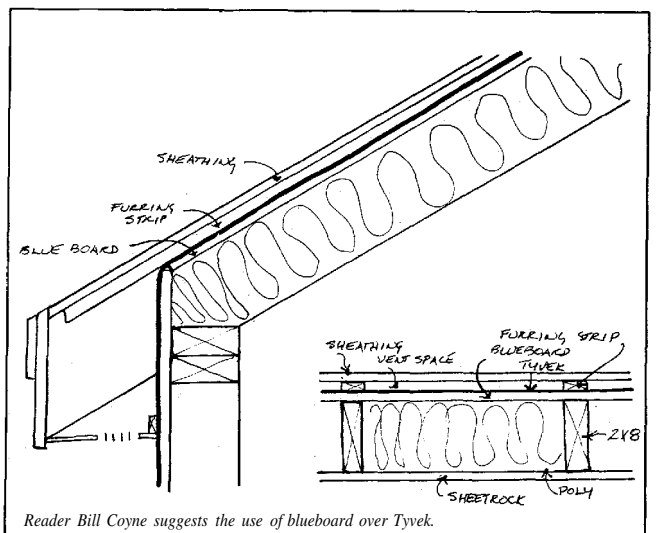
I have encountered problems doing essentially what Richard Cobbs suggests in his letter (February issue)—that is, put Tyvek over the rafters with furring strips, then install soffit vents to allow air movement between the Tyvek and the sheathing.

I wish to caution others and ask Richard if he has had any problems with the Tyvek crinkling from the wind. In my case, if I had installed sheetrock after insulating and before noticing the very audible crinkle, it would have been an even more expensive mistake.

Richard's theory seems okay, but my experience indicates that Tyvek should not be installed this way. I have found that if I put Tyvek over blueboard, followed by furring and then sheathing, it works okay (see diagram).

Thank you for your excellent publication.

Bill Coyne
St. George, Maine



Reader Bill Coyne suggests the use of blueboard over Tyvek.

...And the Crowd Clamors for an Index

To the Editor:

We find your magazine/newspaper very interesting. It has the variety and direct discussion of the facts about building that makes for an informative publication.

...Which brings me to my question: I have a file containing every one of your papers for the past three years. Do you offer an annual index through 1983? It would help me put these back issues to work as a reference tool.

Gary Stead
Berco, Inc.
West Newbury, Mass.

To the Editor:

You've got a hell of a lot of information in just one issue—a yearly index would be a great help.

R. Mclntyre
Shaftsbury, Vt.

To the Editor:

I would like to find out if *NEB* has binders and indexes for past issues. I find that I refer to past articles quite often and would do so more often if they were easily accessible.

As a reader for the past three years, I have enjoyed the many fine articles that have appeared. Your paper speaks directly to me and my remodeling business, unlike many "how-to" magazines and publications.

Denny Ghyssels
Stony Creek Construction
Stony Creek, Conn.

We're making progress, but even we never really appreciated how much stuff we've published. Even so (and though we hate to be so bold as to say it), hell won't *freeze over before we're done. Stay tuned—we hope to have an index available by May.* —Ed.