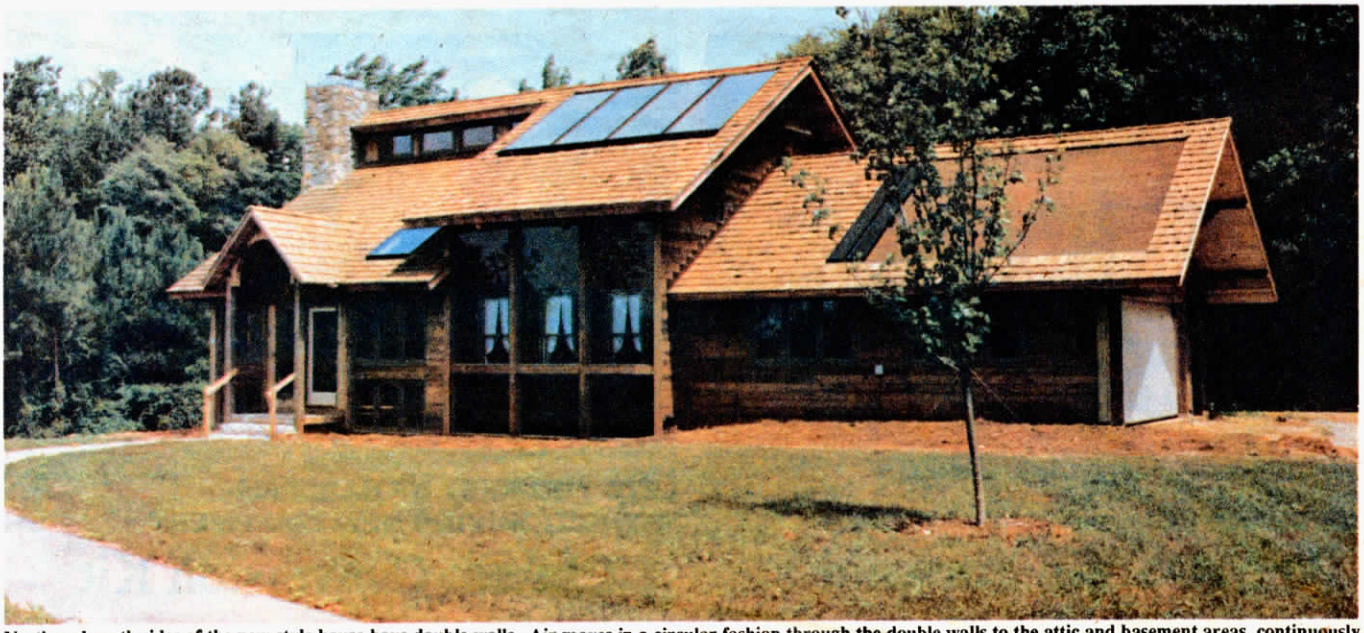

North and south sides of the new-style house have double walls. Air moves in a circular fashion through the double walls to the attic and basement areas, continuously circulating in the air space that surrounds the interior living area. These air currents help heat the house in winter and cool it in the summer.

New "No-Furnace" House Heats And Cools Itself

By Bill Gergen, Associate Editor

A new "no-furnace" house built with salt-injected wood requires little or no energy to heat or cool, according to the designers, Enertia Building Systems, Wake Forest, N.C.

The house has insulation only in the roof. Its interior and exterior walls are made of wood that has been pressure-treated and injected with salt (the first time the process has ever been used for home construction) to enable it to absorb and store heat or cold. The dense, treated lumber slowly releases stored energy into the home over an extended period of time, thus reducing energy demands.

The key feature of the new-style house is the "envelope" construction of the north and south walls which are double-layered with an air space between. Heated air flows freely in a circular motion through the walls, ceiling and basement, radiating into the house through interior walls.

"The house is essentially self-heating and requires only occasional use of a wood stove in the basement to keep the temperature at 68 to 72°, even with outside temperatures as low as 20° below," says Michael Sykes, inventor of the system and president of the company. "There are no fans or controls to move heat through the walls. As heat rises it is distributed by natural convection. The house itself acts as a giant heat pump. The colder outside air gets, the greater the temperature difference between the north and south walls, and the faster heated air circulates."

Large south-facing glass windows heat the air in the "envelope" walls, as do major appliances, such as refrigerators, ranges and water heaters, which are vented to the "envelope." "During winter, most people use a wood stove in the basement," says Sykes. "It sends heated air up through the 'envelope', rather than directly into the house. The salt-treated lumber stores heat and slowly releases it into the inner part of the house. Any wood, soot or smoke stays in the basement."

In summer, when heated air rises within the "envelope", it goes out the house's top vent, and cool air is drawn in through basement vents on the north side of the house. A summer roof window further heats air on the south side of the "envelope," widening the temperature difference between the two walls. This speeds up the circulation pattern within the "envelope," allowing more cool air from the basement vents to enter.

Sykes has built 8 of his patented "envelope" homes in states ranging from North Carolina in the south to New Hampshire in the north. Richard and Andrea Pinkham, Kingston, N.H., have lived in their "envelope" home for three years with no conventional heating system - only a mid-sized wood stove in the basement. "Building this house was the best decision we ever made," says Andrea. "In the past three years we've averaged 1 1/2 cords of wood per year. Even during periods of 10 to 20° below weather with no sun, there's a three to four day lag before temperatures in the living space are affected."

Pinkham says their house cost about the same to build as a conventional house. "But down the road we'll make out a lot better because we're saving several hundred dollars each year in utility costs. And because of the salt treatment, the house never requires painting."

Houses are manufactured and sold as precut and numbered kits. Sykes is looking for dealers.

For more information, contact: FARM SHOW Followup, Enertia Building Systems, Rt. 1, Box 67, Wake Forest, NC 27587 (ph 919 556-7876).

The tractor wheel spins on the small wheel at the end of the boom making it easy to line up lug bolt holes.

"Go Anywhere" Load Lifter

New uses are busting out all over for the new "go anywhere" load lifter invented by Minnesota farmer Ardean Hauschild, of Wheaton.

It all started last fall when Ardean went to the hospital for back surgery. Told that he could no longer do any heavy lifting, he turned to his farm shop to develop a lift that would allow him to change heavy tractor duals without straining his bad back. He has since discovered dozens of other uses for his Dual-Help lift, such as lifting barrels and engines, or putting on or taking off tractor cabs. "We can make custom booms for special lifting jobs that require extra long reach or height," says Hauschild who patented his invention and is having it produced commercially.

The lift is on wheels and can be towed to the field, and down the hiway, behind a car, tractor or pickup. For example, if a tractor develops a flat tire in the field, the lift can be taken right to the field to retrieve the tire and transport it to town, or to headquarters, for fixing.

For changing tractor duals, the outer end of the lift boom is equipped with a small wheel which lifts and carries the tractor wheel. The tractor wheel spins on the small wheel, allowing you to easily line up lug bolt holes without lifting a finger.

Hauschild equipped the current model for manual adjustment of the cylinder that controls reach of the boom, and the cylinder controlling lift height. Automatic controls will be offered as an option on production models, which Hauschild hopes to retail for "right at $900."

For more information, contact: FARM SHOW Followup, Ardean Hauschild, Box 115, Rt. 1, Wheaton, Minn. 56296 (ph 612 563-4539).