

THE VOICE OF THE HEARTH, BARBECUE AND PATIO INDUSTRIES

DECEMBER 2006

# HEARTH & Home<sup>®</sup>

A PUBLICATION OF VILLAGE WEST PUBLISHING

PRICE \$5.00



## House ON THE COVE

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## Making Coal Burning Easier and Better



(L to R) Ed Tucker, Nell, Paul and Bill Waelder, Paul Voleko.

**N**eil Waelder is president of Automation Correct, a company he formed with his brother, Paul. His recent goal was to create a new thermostat that would allow coal stoves to maintain constant heat.

Working out of a two-bay garage, Waelder, a control system engineer, invented the Coal-Trol, a thermostat and power control unit for automatic feed coal stoves and furnaces. "It will maintain room temperature within one degree of the thermostat setting," he says.

The present price ranges from \$250 to \$400, but as with most items, volume eventually will reduce those prices substantially. The key to rapidly lowering prices is to sell directly to stove manufacturers, as well as dealers. Leisure Line Stove Co, in Berwick, Pennsylvania, already has ordered 40 units to distribute to its dealers.

According to Waelder, existing coal stove thermostats were adapted from those on oil and natural gas furnaces, and those appliances heat up and cool down very rapidly. Solid fuels, such as coal and pellets, release heat at a slower rate, he says.

A microprocessor within the Coal-Trol computes the temperature and other factors controlling heat output 60 times per second, then sends signals adjusting the feeder motor and fan. "This works just like a car's cruise control," says Waelder. "Conditions are constantly changing, yet a constant speed is maintained.

Seeking volume, Waelder is contacting stove manufacturers; he is still trying to figure out the economics of selling a retrofit device to dealers. "We're starting with coal," says Waelder, "but this unit will work equally well for other biomass products such as wood pellets or switch grass."



TSI Energy Star

### Automatic Fire-Starters

Waelder also has been working on another problem - an automatic fire-starting device for coal-burning stoves and furnaces. "Right now," he says, "there is no user-friendly, automatic way to ignite a coal fire." With the help of SATOP (Space Alliance Technology Outreach Program), which is a NASA-funded program, he was put in contact with engineers with years of experience in heat transfer and flow analysis in high temperature applications. The result is an igniter that will be on the market, in limited quantities, in 2006. For more information, go to [www.automationcorrect.com](http://www.automationcorrect.com).

**H&H:** How many dealers are you up to now?

**Stauffenberg:** "We have over 400 dealers."

**H&H:** Regionally, where was the activity this year?

**Stauffenberg:** "We not only saw a large increase in sales in the Midwest, which we anticipated, but there was a resurgence of activity in the New England market, which was a surprise. The Mid-Atlantic area has been on a very fast track, and continued that growth this year."

**H&H:** Do you attribute that growth to the high price of pellets?

**Stauffenberg:** "Yes, the high price of pellets and the question of its availability. Because of that, more dealers were looking at coal and coal-burning appliances."

**H&H:** Does such growth surprise you in a season where homeowners in the Northeast will be paying substantially less for fossil fuels to heat their homes than last year? This was a year not conducive to the growth of alternative fuels, but very much leveraged against it. Yet you had a banner year.

**Stauffenberg:** "We were just talking about that last week. We are continually seeking input from our dealers. They tell us their wood stove sales have slowed considerably. Their pellet stove sales have slowed as well, but, surprisingly, their coal stove business has not slowed at all.

"Dealers tell us that a coal stove can, in fact, produce enough Btu output to actually displace a great amount of oil usage from a home. They may have to use oil only for their domestic hot water, while the coal stove, even if it is in the living room, will move the heat pretty consistently throughout the entire home and be the sole source of heat in the house."

**H&H:** How did you price your coal this year?

**Stauffenberg:** "We took a careful approach to the pricing of our fuel. The additional cost of anthracite coal this year was confined strictly to what our operation costs in mining and preparation have been. We completely ignored