

# "Friction" Furnace Requires No Fuel

Remember that "fuelless furnace" we told you about in the September-October (Vol. 2, No. 5) issue of FARM SHOW? It uses friction instead of fuel to heat an average size home "for only \$16 a month."

There have been some interesting new developments since we published that first report. Actually, there are 2 sides to the latest story, depending on whom you talk to:

**Side 1:** It's made up of those who claim the whole thing is a hoax — that it defies a basic law of physics. Latest among the "doubting Thomases" is Harold Schweiss, of Sherburn, Minn. He bought up two state franchises and hired a firm to produce a working model, which had just been completed and was ready for testing when the FARM SHOW issue carrying our story last summer went to press. "We decided the whole thing was a joke and got our money back", Mrs. Schweiss told FARM SHOW several weeks ago.

**Side 2:** This fast-growing group is made up of enthusiasts who are absolutely convinced that the Frenette friction furnace is for real. They have bought up every available franchise and, spurred by reports that a just-finished prototype came through a battery of tests with flying colors, are setting up dealerships in virtually every state.

Production of the first 100 Frenette fuelless furnaces is already underway by a newly-formed JFCG Corporation, headquartered in Springfield, Ky. They're slated for delivery in the next 2 or 3 months to individual state franchise holders. Full scale production and marketing will get underway this fall in time for the '79-'80 heating season, according to Charles Long, Jr., of Louisville, Ky., and a major stockholder in the JFCG Corp. Using blueprints supplied by inventor Frenette, he had a prototype built which, in his words, "works great. Does everything we hoped it would do and more."

Long says he has obtained exclusive manufacturing rights to the Frenette fuelless furnace. "We're setting up a plant in Springfield to manufacture the furnace, and also will be setting up licensing agreements with any other interested manufacturers throughout the United States and Canada," Long told FARM SHOW two weeks ago.

It all started during the winter of 1977-78. It was costing Eugene Frenette \$230 a month to buy fuel oil to heat his huge, old, uninsulated 12 room "Pillsbury" mansion in Londonderry, N.H. He launched a crash program to perfect his invention — a simple but unorthodox 'fuelless' furnace.

Frenette installed his first prototype friction heater in a 10 year old washing machine. It's made up of 2 cylinders spinning in opposite directions. There is a clearance of 1/8 in.

between the 2 cylinders (the outer one is 18 in. in dia.) which are lubricated by a coat of light oil. Spinning action of the cylinders, and the resulting friction, produces the heat, according to Frenette.

One of the first successful prototypes was built last August by Max Johnston, owner of Johnston's Metal Specialties Co., Creston, Iowa. "I admit I was skeptical at first. Sounded like a hoax to me," says Max, who was hired by the owner of one of the Frenette franchises to build a prototype. Following basic design specs supplied by Frenette, Johnston built a prototype which, in his words, "made a believer out of a lot of skeptics around here, including me. It cost about \$800 to build, including about 40 hrs. of labor. Now that we've built one, we could build another one in less time. We estimated its output at between 100,000 and 150,000 btu's. The friction stove produced no odor, made no more noise than you'd get with a furnace motor, and we had no vibration or other problems with the rotating circular drums which create the friction." Max told FARM SHOW.

According to Larry Nickerson, Frenette's son-in-law, all franchises have long since been sold out. Some individuals bought up 3 or 4 states. Cost of a state franchise, based on population, was \$2,500 cash, plus an additional down payment payable on availability of the first approved stoves, and a remaining balance spread out over 20 years. The Iowa franchise, for example, was priced at \$145,000. Of that, \$2,500 was payable immediately to hold the franchise, with \$32,250 payable upon availability of Frenette-approved furnaces for sale. The balance, plus interest, would be payable over 20 years in monthly installments.

Since unveiling his invention to local newspapers, Frenette has had to schedule appointments for the many people who have dropped in to see it. He says his stove has been called into question only by those who have not seen it.

Physicists not only deem the claim untrue, they are incensed that the so-called "friction" furnace is getting so much attention. "You can't get energy out without putting energy in. You can't make energy; you can only transform it," they point out. Says James Halderson, University of Idaho agricultural engineer: "The heater, discussed in your FARM SHOW article, can produce no more or no less heat than the amount of electricity which the motor takes in driving the load. Electric heaters do the same thing but in a simpler manner. To promote the device as having capabilities to do otherwise is misleading, it seems to me."

Undaunted, Frenette and his franchise holders are moving full speed ahead in getting the new fric-

tion furnace on the market.

"It works beautifully," says Charles Long, Jr., of the prototype friction furnace which, using blueprints supplied by Frenette, he hired custom built. He says it produces right at 100,000 btu's and is "at least 95% efficient." Its 8 in. fan moves 853 cu. ft. of air and is driven by a 3 hp. motor. Temperature of outgoing air is 200° when the fan kicks in, and levels out to about 140° during continuous operation, says Long.

He scoffs at the idea that the fuelless furnace defies a basic law of physics: "A secondary energy source is created by the foaming and expansion of the special layer of oil between the 2 rotating drums," he explains.

He says the outside drum is 18 1/4 in. in dia., and the inside drum about 18 in., leaving a small clearance between which is filled with the special oil. The drums rotate at about 1,000 rpm and, according to Long, are "perfectly balanced and produce no vibrations. The furnace runs as quiet as a regular furnace and there is no odor. It is designed to tie into the existing air ducts of a conventional furnace. Although it probably wouldn't require any venting since no fuel is burned and there is no flame, we probably will recommend that it be vented as a safety precaution. Present projections indicate we should be able to retail production models for about \$1,200, and that the stove will operate in mid-winter in Northern states for about \$20 a month."

In Iowa, L. D. "Lou" Powell, of Des Moines, teamed up with Bueal Hedstrom, of Dennison, to have a working model produced, based on blueprints supplied by Frenette. They have set up their own Hedstrom-Powell Co., headquartered at 8170 Hickman Road, Des Moines, and are showing the working model to dealers they are setting up in their franchise territory, which includes Iowa, Minnesota, Ohio, and all of Canada, according to Powell.

Powell admits that he, like many others, was highly skeptical of the new-style heater when he first heard about it: "It's one of those got-to-see-it-to-believe-it inventions. Now that I've seen it work, I believe it."

We're told that interested FARM SHOW readers can get on a list to receive literature and other information — when it becomes available — by writing to the national headquarters office of the inventor. Keep in mind that the friction furnace isn't yet in full-scale commercial production and that it may be several months or more before you hear anything. Contact: FARM SHOW Followup, Frenette Furnace, Box 255, Derry, N.H. 03038 (ph 603 432-8313).

# World's First Sun Powered Car

They're calling it the world's first solar-powered car. It's the Solar Surrey. Runs on "soaked up" sun and doesn't cost a thing to operate.

Solar panels, mounted on the roof, collect the sun's energy and convert it to electricity. This electricity charges six-volt batteries which, in turn, run the car's electric motor.

The experimental Solar Surrey was built as part of a solar cell test program at the Lawrence Livermore



Laboratory, a branch of the University of California. The research is sponsored by the U.S. Department of Energy.

The primary problem with developing such a vehicle is cost of the cells. "Panels on the Surrey cost almost \$3,000," Dr. G. A. Armantrout, an engineer who helped develop the car, told FARM SHOW. "There are 22 panels on the car. Each panel contains 44 2-in. dia. silicone solar cells and delivers 16.5 volts at 0.6 amps for a power output of 10 watts.

Top road speed on level ground is 11 mph. Armantrout says fully charged batteries will run the car for about 30 miles. After that, it would require 5 full days for solar energy to fully recharge the batteries.

The experimental car's capacity could be increased with additional panels, and research is continuing on solar cell efficiency. Armantrout expects improved panels to double the current range. The car can carry up to 2 passengers and a 700 lb. load.

At this time, the car isn't available commercially. Department of Energy researchers are exploring ways to increase efficiency of the solar cells.

For more information, contact: FARM SHOW Followup, Dr. G. A. Armantrout, Lawrence Livermore Laboratory, University of California, Box 808, Livermore, Calif. 94550 (ph 415 422-1100).