UNDERGROUND "PIT FURNACE"

Look What He's Doing With "Smolder Energy"

"Since your report, I've had letters from New Zealand, Australia, Europe and hundreds from all parts of the U.S. and Canada. We hope to be on the market with commercial plans by the end of this year," says George Woods of Prospect, Ohio, whose "pit furnace" for producing "smolder energy" was first featured in FARM SHOW last winter.

Woods discovered smolder energy last year when the coal slag heap around his rural Prospect manufacturing facility — a building that used to house a coal-fired power plant — began to smoke and burn, and continued to smolder for months, producing temperatures of 500° and more without ever burning itself out.

"To see what would happen, I dumped a load of wood chips right over the hot spot," he relates. "Instead of burning off, it rained on them and they just steamed. When it kept burning and began giving off methane gas, I knew I had something. If it burned like that when uncontrolled, what would it do if I could control it."

To find out, George built a pit furnace last fall and, along with it, tried to duplicate conditions in the coal heap as closely as possible. He dug a 10 by 10 by 15-ft. hole just 100 ft. from his house.

George filled the pit with alternating layers of coal dust, cinders, and other combustibles. Vent pipes carry oxygen into the pit so he can control the rate of burn all the way to the bottom of the pit.

Across the top, he heaped a pile of wood chips, straw, grass, manure and other items that will compost rapidly from the heat of the pit. This pile is laced with several old steam radiators connected together with 1-in. pipe. The pipe runs underground to the house, carrying water which has picked up heat in the smoldering furnace.

George Woods has patented his underground smoldering furnace concept.

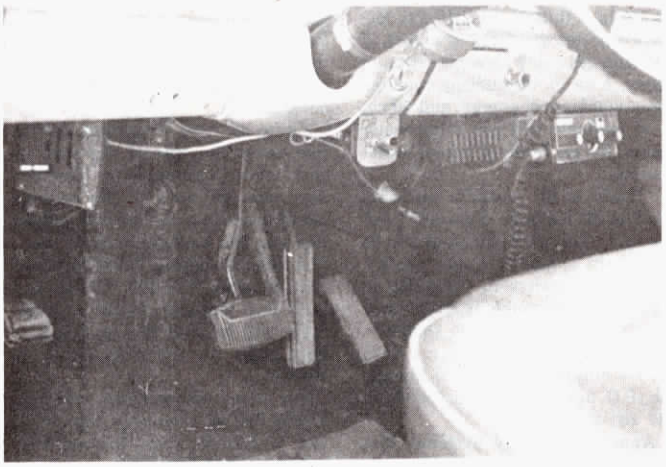
George sealed the pit with a layer of dirt and plastic, which lets him collect the methane given off by the smoldering materials for fuel.

Soon after the pit began burning, experiments were brought to an abrupt halt when water seepage into the pit put the fire out. George is now starting over with a fresh pit, and is designing a metal smolder energy furnace which he'll be able to control more precisely than his pit model.

Since all the materials used in the pit furnace were essentially free — cinders, coal dust, carbon, etc. — the only cost was about $500 to dig the pit, and for plumbing. George has patented his idea and plans to market plans for do-it-yourselfers.

"We were unable to respond to all those who have written but as soon as we get the bugs worked out, we'll contact everyone who wrote," George told FARM SHOW.

To get on the list for more information about smolder energy, contact: FARM SHOW Followup, George Woods, Woods' Carriers, Inc., P.O. Box 32, Prospect, Ohio 43342 (ph 614 494-2821).



Driver uses one accelerator for gasoline, the other when switching over to run the car on straight alcohol.

"FREE" HEAT FOR YOUR FARM SHOP

New Waste Oil Burner Rated At 600,000 Btu's

"Waste oil you've been throwing away can be used to provide 'free' heat for your farm shop or livestock buildings. It'll burn cleanly and efficiently 'as is' without any processing or treatment. And, since waste oil is at least equal, gallon for gallon, with fuel oil in terms of energy output, we think this is one of the best inflation fighting tools you can buy."

So says John Kurschner of the Kutrieb Corporation, Chetek, Wis., manufacturer of a complete line of waste oil burners, the first of which was featured in FARM SHOW three years ago. Latest new development is a 600,000 btu per hour burner called the PB-600.

"It can be easily adapted for heating livestock buildings, farm shops, alcohol stills, for drying grain, and for making maple syrup," says Kurschner.

The PB-600 is started by burning No. 1 or 2 fuel oil for a few minutes. Then the unit automatically switches itself to waste oil. No more fuel oil is needed from this point on.

"The waste oil is pumped to a vaporizer plate rather than being atomized, as in some carburetor-type burners. This allows for more efficient combustion in the burning chamber. An automatic electronic regulator controls the combustion process," explains Kurschner. "Nearly any type of waste oil can be used, including transmission, crankcase, brake and hydraulic oils. The oil drains through a 100 mesh screen as it's poured in — no other filtering or processing of the waste oil is required.

New PB-600 burns waste oil you've been throwing away.

"The heaters have to be cleaned every few days to remove residue which builds up in the burner unit, a chore which only takes a minute or two," says Kurschner.

The PB-600 retails for $4,995. The rest of Kutrieb's line of burners ranges from a 40,000 btu stove to an industrial-sized 500,000 btu furnace.

Kutrieb has just begun national distribution. For the name of your nearest dealer, and for more information, contact: FARM SHOW Followup, Kutrieb Corporation, 430 Phillip St., Chetek, Wis. 54728 (ph 715 924-4871).

LETS YOU BURN ALCOHOL OR GASOLINE IN SAME ENGINE

M & W Gear Develops Two-Fuel Alcohol Kit

With more and more fuel alcohol reaching the marketplace, M & W Gear Company, Gibson City, Ill., has become the first major U.S. manufacturer to develop a two-fuel kit for burning straight alcohol or gasoline. A flip of a switch is all it takes to convert from one fuel to the other.

"This is strictly experimental at this point, but with enough interest and alcohol to go around, we'll bring this on the market," says Bob Hall, midwest regional sales manager who unveiled the new system at the recent National Corn Growers Association meeting.

The M & W kit, installed in a 460 cu. in. Ford pickup engine, consists of two separate carburetors installed in place of the pickup's original single 4-barrel carburetor. Alcohol, piped from a tank in the pickup box, runs through a regulator and into the alcohol carburetor. A simple electric fuel line switch on the dash board changes the engine from one fuel and carburetor "on the go."

"It's difficult to start an engine on alcohol in cooler weather, so you'll start on gasoline and switch to alcohol as the engine warms up. If you plan to run mainly on alcohol you'll advance the timing several degrees to take advantage of the higher octane rating," says Hall.

As this issue of FARM SHOW went to press, M & W was finalizing plans for production and marketing of the unit.

For more information, contact: FARM SHOW Followup, M & W Gear, Rt. 47 So., Gibson City, Ill. 60936 (ph 217 784-4261).