

During construction, huge vent pipes could be seen protruding from side of expanded metal shell.

## NEW CONSTRUCTION METHOD CUTS COSTS

# Missouri Farmers Build Underground Hog Barn

An underground farrowing barn built almost entirely by the owners themselves is causing a stir among hog owners who've had a chance to visit the unusual facility.

Rowland Gengelbach and son David began building the barn last year. They came up with the design for the half-circle shaped building and took it to underground building experts who helped perfect the design.

Key to the success of the 60-crate, 150 by 30-ft. farrowing barn is the half-circle design that uses a new expanded metal material made by United States Gypsum, Chicago, Ill. The 1/16-in. thick sheets are set up in a half-circle and 1 1/2-in. of concrete is sprayed on the inside. Then, 5 1/2 in. of concrete is sprayed on the outside. With no further support inside, and 3 to 12 ft. of dirt covering over the sides and top, the building becomes nearly impossible to crush and will support even the heaviest tractors and other equipment driven over the top of it.

The 13-ft. high building features a huge ventilation duct running down the center and big ventilation pipes down either side of the building. Air comes in to the ventilation duct from the open end of the building and is pulled out of it and down to the bottom of the exhaust pipes, where it's blown up above ground. The system will both heat and cool the building.

Below the ventilation duct, the Gengelbach's have installed an au-

tomatic feed cart system. The cart operates automatically, running on a track. It feeds sows according to the information on electronic ear tags, obtaining all its information from a central computer.

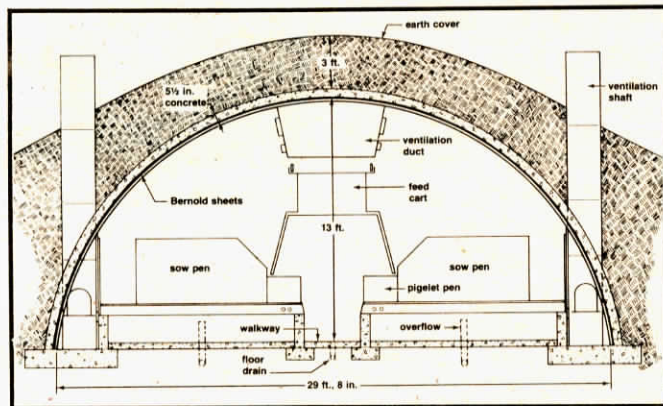
The Gengelbach's did most of the construction themselves, searching the state for many of the components. Some of the ventilation pipe, for instance is actually 5-ft. sewer pipe that was left over from a construction job. They bought it for a fraction of its original cost.

The two hog farmers don't expect to have any condensation problem inside, thanks to insulation of the shell and good ventilation. Manure is carried out from underneath the woven wire floors by a gentle flow of water to a 14-ft. deep lagoon at the end of the building.

"If it works out as well as we expect we may build a second underground building right next to it in the near future," Gengelbach told FARM SHOW.

The entire structure, complete with pens, wiring and other facilities, cost the Gengelbach's about \$138,000, not including their own labor and the computerized feeder. Plans and a list of materials are available from the United States Gypsum company.

For more information, contact: FARM SHOW Followup, United States Gypsum, 101 South Wacker Drive, Chicago, Ill. 60606 (ph 312 321-5786).



## NO NEED TO REMOVE THE SICKLE

# New Sickle Servicer Changes Sections Fast

On most machines, you can replace worn or broken sections in less than a minute without having to remove the sickle, says Jerry Cook, designer of a new air-powered tool called the Speed Sickle Servicer.

In three easy steps, it lets you remove the old and install a new section in a matter of seconds:

1. Using the airgun's V-chisel attachment, you shear off the top of the old rivet.
2. Next, remove the rest of the rivet with the airgun's punch-out attachment.
3. Put on the new section and use the airgun's punch attachment, and the anvil, to flatten the new rivets.

Cook notes that you can also use the airgun's V-chisel attachment to cut mufflers, exhaust pipes, bearings and thin sheet metal.

The tool is powered by most ordinary air compressors. Cook recommends that the air supply pressure be 110 psi or greater.

Sells for \$159.95, which includes the base with the chisel, punch and anvil attachments. Two types of anvils are available — one for flat and one for oval head rivets.

For more information, contact:



Sickle Servicer removes old rivets and installs new ones.

FARM SHOW Followup, Cook Tool Co., Rt. 1, Box 146, Trimble, Tenn. 38259 (ph 901 536-5100; evenings call 536-5340 or 297-3636).

## CALLS YOU 1 HR. BEFORE MARE BEGINS TO FOAL

# Birth Alarm For Horses

The signs given off by cattle, hogs and horses before birth are all different. Earlier this year (Vol. 8, No. 1), FARM SHOW featured a birth detector for cattle that pushed outward as the calf emerged from the birth canal, sending an electronic signal to the owner's house. Now the same company has introduced a new birth alarm for horses that goes off when prefoal stress begins 1 hr. before foaling, detecting temperature and humidity.

Night Owl Birthing Systems, Frankenmuth, Mich., is importing the horse alarm from a German company that already has alarms in use on some of Europe's leading stud farms.

"You can put a sending unit on each of your mares during foaling season and get a good night's sleep. You'll be alerted by a bedside monitor should any of the horses begin to foal," says Dr. Gerald Schmoling, staff veterinarian for the firm.

The alarm consists of a harness that wraps around the front of the mare's belly and up through the front legs. A monitoring unit rides against the animal's chest. It measures relative humidity — a combination of temperature and moisture — so that, as the animal heats up and begins to sweat



Alarm transmitter straps to mare's chest.

in prefoal stress, the alarm goes off. It can't be set off by either high temperatures or moisture alone so there's little chance of an accidental alarm.

The birth alarm is equipped with a transmitter that can send a signal up to one mile away. It's battery powered and sells for \$495 for a sender and base unit. A 110-volt AC-powered model is also available. One base unit can handle any number of alarms.

For more information, contact: FARM SHOW Followup, Night Owl Birthing Systems, 12430 East Curtis, Frankenmuth, Mich. 48734 (ph 517 652-9174).