

## **Grease Gun Shop Heater**

"It's amazing how much heat it puts out and how cheap it is to run. Works better than any portable commercial heater on the market," says Glen Teel, Hays, Kan., about the propane-fired heater he made out of miscellaneous parts, including a grease gun and zerk used as a fire nozzle.

"I got the idea one cold day while working on a motor in my shop by myself," says Teel. "I was trying to warm up the shop with an old wood stove. It was a big unit that took up a lot of shop space. To keep the building warm enough you were so busy keeping the fire going you couldn't get any work done. I decided there had to be a better way to stay warm."

Teel didn't want to spend the money on a commercial gas heater because of the cost and because of fumes given off by the heaters, so he decided to design his own clean-burning unit. He used a piece of stove pipe, an old heater motor, spark plug, miscellaneous valves and electric controls, as well as the grease gun and grease zerk.

"One gallon of propane will last over 10 hrs. No one who's ever come into the shop while it's burning has smelled any fumes. It keeps the building so warm it melts snow off the roof," says Teel.

The body of the heater consists of a short length of stove pipe with a 2-lb. coffee can attached to close off the back end. A 1/4-in. dia. gas pipe is inserted through the bottom of the can into the center of the stove pipe. A grease zerk, with the ball and spring removed, is inserted into the end of the pipe, which is surrounded by the barrel of a grease gun. A 3-in. dia. metal cone is positioned 3 in. from the end of the grease gun barrel. A spark plug igniter, energized by a Model T coil, mounts just above the end of the grease gun barrel.

When gas is turned on, the spark plug ignites it as it shoots out of the grease zerk. The barrel of the grease gun directs the flame into the cone, which bounces the flame backward to burn up all unburned gases. An old auto heater blower,



## Above-Ground Fuel Tank Set-Up

A Michigan farmer says his above-ground fueling station was inexpensive to set up and makes it easy to spot leaks if they ever occur.

Nate Ellis, who farms near Grand Junction, already had a concrete slab behind his workshop. He mounted two 1,000-gal. tanks - one for gas and one for diesel - on timber "cribs" made out of 8 by 8-in treated timbers.

He mounted his electric metering fuel pump, which used to be mounted on the ground, up on a pedestal between the tanks. The pedestal is made out of a heavy steel pipe and is fitted with hangars for the nozzles and handy on-off switches for each of the tanks.

Ellis likes being able to keep an eye out for leaks and the fact that all components are out in the open where they're easy to get to.

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mounted at the rear end of the heater, then forces heat out the end of the stove pipe.

"The heat it produces is extraordinary. The cone burns everything up so there's no fumes and the airflow produced by the blower makes it burn real hot and gets the heat out into the room. Without the blower, you wouldn't get much heat. You set the flame by controlling the flow of gas out of the propane bottle. My heater doesn't have a safety shut-off valve or regulator but they could easily be added.

I have to be real careful when lighting it not to let in too much gas before ignition, and when setting the flame you can't let in too much fuel or the heater will melt itself down," says Teel, who's considering putting together plans detailing how to put together and safely operate his homebuilt heater.

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## Hydraulic Drawbar Works Like A 3-Pt. Hitch

When Stony Adkins, Chandlerville, Ill., traded for a new Deere 4-WD tractor with a conventional drawbar instead of a 3-pt. hitch, he had to solve the problem of folding his trailing Deere 7000 planter.

The planter is designed so that the tongue must be lifted to do the folding. To solve the problem, Adkins called on local fabricator Bill Meteer, Athens, Ill., who's known for his skills as a problem solver.

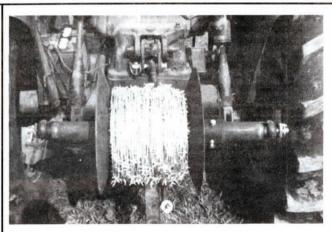
The solution they agreed to try was to modify the drawbar tongue by building a hydraulic lift into it.

An important consideration in making

the conversion was to maintain a horizontal connection for the hitch clevis portion throughout the upward lift movement of the modified drawbar. That is, the clevis had to be held level as the planter folds because it continues to pull.

The men developed a cantilever-type action with a special-built crank and connecting link activated by a single hydraulic cylinder. Adkins says it does everything he'd hoped.

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## 3-Pt. Barbed Wire Unrolling Reel

"T've used this wire unrolling reel to string several hundred feet of fence and it's worked great. The wire has never hung up once and if the fence is in a location where the tractor can't go, you just take the unroller off the tractor and walk with it," says Garry Cottrell, Rose Hill, Va.

He used two 16-in. disc blades to "cradle" the roll of wire. The disc on the left is welded solid to a length of 2-in. dia.

pipe. The disc on the right is welded to a 6-in. length of 2 1/2 in. dia. pipe that slides on and off the 2-in. pipe and is held in place with set screws. Drawbar pins on either end of the wire reel allow it to mount in place of the tractor drawbar on the 3-pt. arms.

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