



Portable "Drill Press"

"We use it almost every day in our shop. It works so well we've started to manufacture it," says T.J. Shambaugh Jr., Cerro Gordo, Ill., who came up with a handy new portable "drill press" that makes it easier to drill precision holes in big pieces of equipment that can't be fitted to a stationary drill press.

The Driller's Helper was one of the grand prize winners in a recent contest sponsored by Farm Journal for home-built shop ideas.

"It sure beats using a chain and a 2 by 4 to put down pressure on a drill to force it through a piece of steel. That often ends up jerking and breaking the bit and it requires two people to do it," says Shambaugh.

His portable press consists of a U-shaped metal bracket that goes over the top of the drill handle. It's got long lower legs for added stability. A length of chain is welded to the lower end of one of the legs. It's

wrapped tightly around the piece being drilled and fastened to a hook on the other leg. A length of 1/2-in. dia. rod, with a T-type handle on top, was screwed through the top of the U-frame and against the handle of the drill in order to put the exact amount of pressure on the drill bit to keep it cutting smoothly.

"It'll do drilling jobs that might otherwise require a commercial magnetic drill holder that could cost \$900 or more," says Shambaugh, who sells the Driller's Helper for \$25. He also sells a detailed do-it-yourself plan (Shambaugh is trained as an engineer) and description for \$5.

For more information, contact: FARM SHOW Followup, T.J. Shambaugh Jr., Shambaugh Unlimited, P.O. Box 895, Cerro Gordo, Ill. 61818 (ph 217 763-4541).

"Steering Wheel" Toy For Pigs

Old steering wheels make great toys for pigs, according to Mike Segeren, Charing Cross, Ontario, who bolts old steering wheels to chains and hangs them from the ceilings of his three finishing barns.

The steering wheels, one per pen, hang 1 1/2 to 2 ft. above the floor. Segeren makes two different types. A single chain model with one wheel and a double chain "teeter totter" model with two wheels.

"I've tried lots of different pig toys. Some of them don't work and the others wear out too fast," says Segeren, who started using steering wheels for toys six months ago. "They work better than anything on the market because they last longer and they stay out of the way. Four or five hogs at a time can play with them."

To make the single wheel model, Segeren runs a 3/16-in. dia. chain through the center of a steering wheel and inserts a 1 1/2-in. long, 1/4-in. dia. bolt through the chain. The wheel rests on top of the bolt. The chain hangs from the ceiling on a hook so that the steering wheel hangs 18 to 24 in. above the floor. The single chain model is suspended above the slats and near the gutter to keep pigs active at the back of the pen and to help keep the floor clean up front."

To make a double-wheeled toy, Segeren bolts a pair of chains to both ends of a 16-in. long flat bar. The bar hangs from the ceiling on a 2-ft. long piece of chain attached to the middle of the bar. A steering wheel hangs from each side of the bar and Segeren positions the bar over a pen partition so the



wheels hang in separate pens. "The pigs can play with it from both pens, causing the steering wheels to move up and down like a teeter totter. The wheels are located near the feeders, keeping the remainder of the pen quieter."

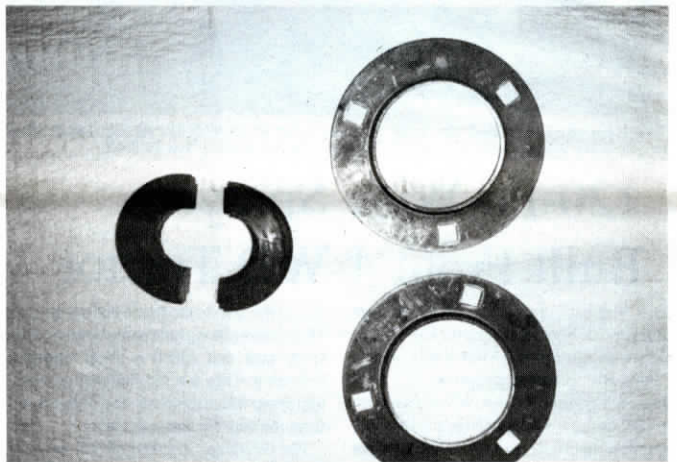
According to Segeren, both solid and soft-covered steering wheels will work. "After pigs chew off the covers you're left with a steel ring and a chain for pigs to play with."

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**"Best
Ideas"**

Editor's Note: Have you got a "best idea" you'd like to share with FARM SHOW readers? It might be a new wrinkle in cropping, livestock, machinery or whatever. Maybe it's still experimental but looks promising. Or, maybe you've already proven it works. We'd like to hear about it. Write to: Best Ideas, c/o FARM SHOW, P.O. Box 1029, Lakeville, Minn.



Brakke's split plastic bearing, left, has no moving parts. He uses the same flanges, right, that held the original bearings.

"Quick Replace" Plastic Bearings

Lynn Brakke, Wolverton, Minn., designed a split plastic bearing for the bed chain drive shaft on his sugarbeet harvester, and says it's quicker and easier to replace than a conventional steel ball bearing and lasts longer. Brakke machined Nylatron 3-in. dia. plastic stock to the shape of the original conventional bearing and cut the plastic bearing ring in half so it would slip right onto the shaft. He then cut out the original bearing and replaced it with the split plastic bearing, using the same flanges which held the original bearing in place.

"These split plastic bearings can be installed in hard-to-reach places in only 5 min., and they hardly wear at all," says Brakke, who mounted three of the plastic bearings last year on his sugarbeet harvester. "I've had problems for years replacing bearings on this drive shaft. It's 13 ft. long and has five bearings and eight sprockets. The drive shaft runs in dirt which gets into the bearings and blocks lubrication so they don't last long. It takes the better part of a day to clean dirt off the shaft and slide

the bearings and sprockets on and off. My split plastic bearings have no moving parts and are self-lubricating so they should last much longer. I removed them last fall and detected no wear at all. If they do fail it takes only 5 min. to replace them. I simply remove three bolts to loosen the flanges and the split bearing falls off the shaft."

Brakke recommends using high-density Nylatron because other types of super-hard plastic don't machine as well. According to Brakke, plastic bearings can be used to replace bearings on any type of equipment, although he notes that to this point he's only tried it on relatively low speed shafts.

Brakke used 6 in. of Nylatron plastic stock, which cost \$25, to make the three bearings. He bought the Nylatron plastic from Cope Plastics, 3331 University Drive S., Fargo, N.D. 58103 (ph 701 232-6412). Machining cost \$75.

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