Jerry Brandt, La Grange, Mo.: "I was always laying my battery tester and anti-freeze tester down somewhere and then accidentally breaking them. I solved the problem by attaching a couple pieces of pvc pipe to the side of my work bench to hold them."



Edwin Burtness, Orfordville, Wis.: "I find that an empty fuel injector cleaner



bottle makes a good funnel. To store the bottle I screw the cap to the bottom of a shelf and hang it there. That way whenever I'm not using the funnel it stays clean and handy.'

Jim Sadler, Dunkerton, Iowa: "The slide gate on my grain bin sump was hard to open and close, so I designed and built



this chain/crank system that works like a garage door opener. I attached bearing brackets to support a sprocket and crank that I mounted on the bin unloading auger, and I also attached a bracket and pulley to the bin. The chain that runs around the sprocket is attached to a rod on the slide gate. To open and close the slide gate, I just turn the crank."



Orley Killoran, Pincher Creek, Alberta: "Here's how I salvaged my 12-volt cordless drill after the original battery packs failed. I bought a small 12-volt gel cell battery from a surplus store. Then I cut the top off an old battery case, extended the wires from the drill, and strapped the new battery onto the bottom.

"The drill is now a bit heavier than before, but it has more torque than it did with the original batteries and will run forever. When the battery needs a charge I just hook it up to a 12-volt charger for a few hours, without even having to disconnect the battery from the drill

"I salvaged an 18-volt flashlight from a drill kit by replacing the 18-volt bulb with a 6-volt bulb from a 4-cell flashlight. Then I hot glued the bulb to a 4-cell 'D' battery holder from Radio Shack. These aren't rechargeable so I just use it as a 4-cell flashlight. It works great. It stays where I put it, and I can rotate the lamp head for the best angle.'

W. Gray Abercrombie, Broad Run, Va.: "The on-off solenoid switch on my 1994 Dodge pickup equipped with a Cummins diesel engine went bad. I saved money by substituting the push-pull cable off a tractor."

Charles Myers, Zanesville, Ohio: "We fill 22-oz. squirt bottles with Luboil multipurpose lubricant and squirt some onto each sealed bearing every day that I'm using a particular implement (www.conklin.com).

An extension on front holds mower's front wheels in place as mower is lifted up.



Air Jack Makes Maintenance Easy

Sharpening mower blades and doing other work on lawn mowers got easier after Mike Moore built a hoist out of an old air bumper jack.

"I bought it from an old filling station and modified it for my shop," he says.

He credits James Bowie in Tipton, Iowa, for welding up the extension on the front that securely holds the mower's front wheels in place when the front end is lifted up. Square tubing slides in and out for different width machines. A safety lock locks the lift in place.

The \$200 he spent to buy and modify the jack was well worth it, Moore says, compared to ratcheting up a manual jack.

"It is fast, heavy-duty and portable. You can easily roll it where you want it," he says. Contact: FARM SHOW Followup, Mike

Moore, 604 Meridian St., Tipton, Iowa 52772 (ph 563 889-0703).



Money-Saving Repairs &

Maintenance **Shortcuts**

Have you come up with any unusual money-saving repair methods for fixing farm equipment? What maintenance shortcuts have you found? Have you had any equipment recalled by the factory? Name a particularly tough mechanical problem you've had with a piece of equipment and how you solved it.

These are a few of the questions we asked randomly selected FARM SHOW readers. If you have a repair tip, maintenance shortcut, or other mechanical experience you'd like to share, send details to: FARM SHOW, P.O. Box 1029, Lakeville, Minn. 55044 or email us at: editor@farmshow.com.

Mark Newhall, Editor

Luboil keeps the seal soft so that it grips the shaft and keeps dirt and dust from getting into the bearing. We haven't had a sealed bearing fail for several years, as long as it's located where we can put Luboil on it.'

Mark Ragan, East Dublin, Ga .: "I made a simple nail driver to get into hard-to-reach areas using a piece of 1/4-in. round tubing and a 1/4-in. dia. steel pencil rod. I slide the rod into one end of the tube and weld a solid piece of steel to the other end. I cut off the pencil rod so it's inset inside the tube a bit. I just pound on the piece of steel on top of the tube to drive the nail.'

Jerry Brandt, jbrandt000@centurytel. net: "I have an old golf cart that is batterypowered. It runs on 36 volts and has six 6-volt batteries. The 36-volt charger it came with stopped working. Ebay wanted lots of money for one. I bought 3 cheap 12-volt chargers at a yard sale and charge 2 batteries at a time with each one. I plug them all in at once and put them on a timer. Works great."

Frank Hofmann, Oxford, N.Y.: "To loosen a stuck allen head screw in a locking collar on a bearing, just hit the collar with a big punch on each side of the screw. Be careful not to hit it so hard you pinch the threaded hole. This method is much easier than trying to heat the screw and works just as well.'

Lawrence Schaub, Belle Fourche, S. Dak .: "Regular maintenance of my New Holland 855 round baler is very important because of the poor design of some of the components on this chain-driven baler. For example, the bale rollers ride on ball bearings that need regular oiling or they will quickly go bad. They each cost \$50.

"Also, there are 10 rollers on this baler and it's not only very expensive to replace them, it's also a major job.

"The baler came with a 2-gal. plastic container that holds oil. It lubricates the chain-drive with a 1/8-in. plastic tube when the door is open. However, the door is open only long enough to oil part of the chain. So I mounted hooks on each side of the baler to hold a 5-gal. pail of oil with a 1/4-in. tube feeding out the bottom. Before I start baling, I hang up the pails and engage the pto drive, running the machine until the chain is welloiled. Then I take the pails off the baler and I'm ready to bale."



Don Warden, Nowthen, Minn .: "Here is a time-saving idea I came up with. I was



building a new hay rack and had to drive in a bunch of 6-in. long 60D nails. Driving all those nails with a maul got tiring real quick. So I came up with the idea of using an air chisel that came with a planishing hammer. The shaft happened to fit through a 3/4-in. drive by 1 1/2-in. socket. All I had to do was hold the socket on the nail and drive it in. Worked great."



Lawrence Schaub, Belle Fourche, S. Dak.: "I used two 5 by 6-in. treated poles 11 ft. high in my shop to support a 12-in. steel I-beam running from one side to the other. Then I fitted an overhead trolley to lift heavy equipment, such as rear wheels off a tractor. The chain hoist I use will lift 2,000 lbs. Very simple and handy."

Robert VonKamp (rhenryvk@frontier. com): "I read with amusement in your last issue how Steve Cunningham of New Hampshire took a sledge hammer to a

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