

Money-Saving Repairs & Maintenance Shortcuts

to hold the barrel and a vise at the other end that clamps down on the stock. The vise consists of one stationary wood block and a moveable block that's held to the base by a door hinge. It clamps down on the gun by tightening a wing nut on a bolt that runs through both blocks.

All parts of the vise that touch the gun are covered by strips of carpeting to avoid scratches.

Clair & Warren Wilson, Winchester, Ill.: All with their sons, Clair and Warren are well-known locally for their ability to tackle



just about any repair job in their well-equipped farm shop. That means they have a lot of tools, including sets of king-size wrenches for big jobs. Moving tools around the shop and across the farm yard was difficult until they built this 3-wheel cart fitted with car wheels.

The big automotive tires roll easily across uneven terrain. The frame of the cart is built heavy, with plenty of storage drawers for all kinds of tools. An A-shaped tool holder on top holds the biggest wrenches.

The up-front caster wheel is steered by a hand handle off a toy wagon.

Howard Vogel, Waverly, Iowa: "After looking at various commercial chop saws, I



reached three conclusions: They weren't built heavy enough, they didn't cut angles with the accuracy I required, and I couldn't jus-

tify the expense.

"So I built my own chop saw that'll cut 100 percent accurately at virtually any angle and will go through anything. For instance, I once cut a crankshaft from an old Volkswagen car for a man who had tried unsuccessfully to cut it with a power hacksaw.

"My chop saw is fitted with industrial strength, high-speed, 14-in. dia. blades and is powered by a 1 hp motor off an old milking machine. It's rewired for 110 volts instead of 220. The saw mounts on a piece of 1 by 6 with a saw arbor mounted on the opposite end. The platform-mounted motor and arbor mount on a 5/8-in. dia. rod that runs across the back of my work bench. This allows me to slide the saw left or right of the vise on front of the bench. The vise bolts to a plywood disc that rotates and is marked off in degree increments that let me know exactly what angle I'm cutting.

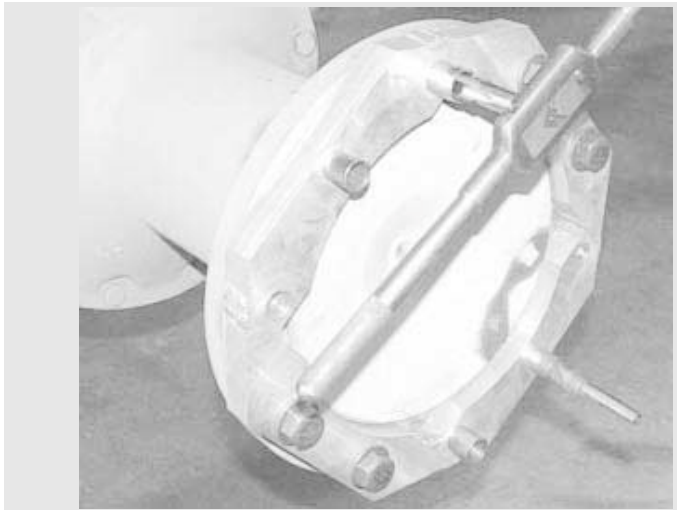
"Works better than any commercial unit I know of and didn't cost more than \$20 to build."

Tom Dutton, Menoken, N. Dak.: Tom came up with these inventions to make life easier around his farm.



"I made a folding, four-legged portable vise stand from scrap 1 1/2-in. sq. tubing. I made a hinge for the top of the folding frame out of 3/4-in. sq. tubing and 1/2-in. dia. round bar. The stand holds the vise about waist high. It stores easily and is exceptionally stable.

"I made a bin auger from an old 6-in. dia. auger that had a worn out tube. I used two



Innovative Hub Fix Using Helicoil Inserts

When the threads got stripped on a pair of Deere 8820 planetary drives, Marvin Gorden knew he either had to shell out for some expensive replacement drives, or find a way to retap the threads. He decided on the latter solution but that required some innovative, seat-of-his-pants engineering.

The problem was drilling out existing holes in the hubs and then tapping for new bolts. To work, the holes would have to be absolutely straight. And the only way he could think of to do that was to make a jig.

He used aluminum bar stock but notes that you could also use steel. He cut the aluminum into four pieces and welded them together into a hexagonal frame. Then he got exact measurements from the center of the hub to each bolt hole, and took the jig to a machine shop with a CNC mill (very common nowadays, he says). The shop then drilled the 10 holes to spec.

Gorden inserted stainless steel sleeves into four of the holes to guide the drill bits because the bits would have chewed up the aluminum. He uses four bolts to hold the jig to the hub. He then drills and taps holes, and then rotates the jig to drill the rest of the holes.

Once all the holes are drilled and tapped, he removes the jig and inserts helicoil inserts.



These stainless steel inserts create permanent, strong threads better than anything you can make by tapping a hole. You just drill the hole out slightly larger than you need and screw in the Helicoil inserts. (For more information on these, contact: Emhart, Heli-Coil, 510 River Rd., Shelton, Ct. 06484 ph 203 924-9341).

"This jig cost me \$250 to make but it was worth it and the repaired hub is like new. So far I have replaced the threads in four wheel hubs," he notes.

Gorden is also inventor of Gorden Rotor bars for Case-IH specialty rotors and he runs a popular "combine talk" web site, www.Harvesting.com.

Contact: FARM SHOW Followup, Marvin Gorden, Gorden Harvesting & Equipment, P.O. Box 12783, Wichita, Kan. 67277 (ph 800-745-1680).

"Infinitely Adjustable" Jack Stand Filled With Steel Shot

"Our new-style jack stand uses steel shot instead of pins to set the height so there's no danger of a pin shearing. Another advantage is that you can set the stand at exactly the desired height anywhere, from 13 3/4 to 20 1/2 inches," says Cameron Klasson, S.A.E.F. Finishing & Fabrication, Gentry, Ark.

The 6-ton jack stands consist of a chrome "neck" inside a hollow steel cylinder. As you pull the neck up to the desired position shot flows from the neck into the base, forming a solid mass of steel under the neck. To reset the jack stand, you simply turn it upside down so shot flows back into the neck.

"The only way the jackstand will go down is if you tip it upside down," says Klasson. "The stand will safely support loads up to 25,000 lbs. It comes with a powder coated finish."



The jack stand is sold in pairs for \$79 per pair plus \$12 S&H.

Contact: FARM SHOW Followup, S.A.E.F. Finishing & Fabrication, 19058 Jackson Rd., Gentry, Ark. 72734 (ph 501 736-4659).

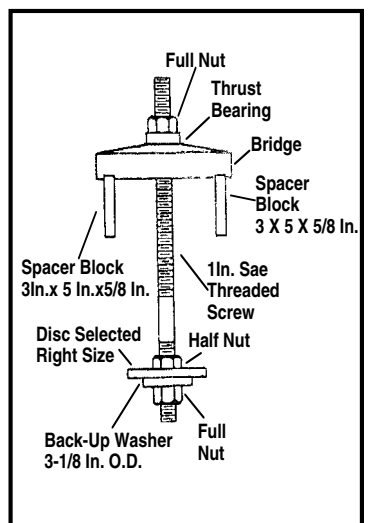
small U-joints from an old front-wheel drive car to make the upward joint in the auger just outside the bin. Drive is provided by an orbital motor off an old drag auger.

"I also made a baler pickup lift to reduce the number of teeth we break. It's made from



an old hydraulic cylinder and scrap iron bolted to the frame of our OMC baler. We bolted a short piece of chain to the original lift spot on the pickup so it can flex freely. The modification saves us a lot of money in broken teeth."

E & K Ag Products, HCR 3, Box 905, Gainesville, Mo. 65655 (ph 417 679-3530): "Our new sleeve puller is designed to remove or install even the tightest sleeves. It's made of rustproof steel and equipped with a 1-in.



dia. center screw rod. It also comes with six discs.

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