



Leonard Seltzer, Manhattan, Ill. ph 815 478-3578: "I came up with a simple T-shaped metal bracket made from 1 1/2-in. angle iron and flat steel plate that makes it easy to weld two pipes together at a 90 degree angle. It keeps the pipes from rolling around and getting off center."



"The bracket measures about 8 in. long by 5 in. wide. I use a small square to line up the pipes and a pair of vise grips to secure the pipes to the bracket."

"The bracket could be made to any size, depending on your needs."

Doug Brown, Columbia, Tenn.: "I converted a 6-ft. long, stainless steel hospital gurney into a rolling tool bench. The gurney rides on big caster wheels which work beautifully on gravel. I can just roll the gurney out of my shop to whatever piece of equipment I need to work on. Gurneys are the mobile units used by hospitals to roll people around. I got mine from a local hospital that was going to throw it away, even though it was in like-new condition."

"The gurney has brakes on it, and I can

lock any of the wheels to run straight. I removed the chrome arm rails and mounted them on front of my Chevy S-10 pickup to



serve as a grill guard. It fit perfectly and the pickup headlights fit right through it. Several of my neighbors also use gurneys to haul stuff around their businesses."

"I added a 1 by 4 board to each side of the gurney to keep tools from falling off, and bolted a smaller piece on top of the 1 by 4 to hold screwdrivers. I keep a tray at one end of the gurney for sockets, and an ice cream bucket at the other end for parts."

Arco Rosenow, 1223 Hallock Hollow, Chillicothe, Ill. 61523 ph and fax 309 274-2107: "When doing shop work, I often have trouble adding and dividing fractions. For example, adding 11 7/16 and 7/32 and then dividing by two. If you think about it, most important things are divisible by 12 such as a 24-hour day, 60-minute hour, 360 degrees in a circle, etc., so why not convert the inch so it's divisible by 12?"

"Someone else thought about this before I did and designed a ruler that has each inch divided into 24 marks. He calls each mark a 'bob'. It doesn't sound like a big deal but after playing with it for a day I quit using my other rulers. The 1/4, 1/2, 3/4 and 1-in. dimensions all measure exactly the same. Where this ruler really shines is when you're measuring odd dimensions, or you have to cut a board to fit accurately within 1/100 of an inch without guessing. These rulers aren't

FARM SHOW®

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 E-mail us at: Editor@farmshow.com.

Mark Newhall, Editor

widely available and the stainless steel one, because it is handmade, is horribly expensive at more than \$100 for a 24-in. ruler. However, I was able to buy a few 16-ft. retractable-type measurers at a decent price and am willing to pass them onto your readers for \$10 each plus \$4.95 S&H. Once you try this ruler it really makes a lot of sense."



trouble marking where to drill holes with my drill press. I couldn't get a punch in there and I don't have an angle-head drill.

"So I took a drill bit of the size to fit the hole and forced a 2-in. piece of rubber hose on the end of it. I put another drill bit the same size in my electric drill and punched it into the rubber tape to make a flexible shaft."

"I couldn't put much pressure on it since the drill just pushed deeper into the hose but I did get a perfect punch mark for my drill press."



Noel Hicks, Palmyra, Ill.: He took an old foot-powered grindstone, built a stand for it and motorized the grindstone. It works a lot better than modern high-speed grinders because it grinds slowly and doesn't burn the edges as fast, says Hicks.

To store steel rods and gas pipes, Hicks took an old harrow, backfolded it and welded it into that position. It's an inverted "V" with



harrow spikes sticking out. It gives him plenty of storage space for metal rods, angle iron, and other odds and ends. It's easy to

Retractable toolbox sits in middle of pickup bed when not in use. When needed, it rotates up and over the side of the box at the flip of a switch.



Retractable Toolbox Powered By Satellite Worm Gear

Marshall Litchfield, Macomb, Ill., wanted a retractable toolbox on the side of his pickup so he wouldn't have to climb into the truck every time he needed a tool. So he made a one-of-a-kind toolbox that sits in the middle of the pickup bed when it's not needed and rotates up and over to the side of the bed at the flip of a switch.

He designed a hinged metal frame for the toolbox and used the worm gear to raise and lower it. The worm gear is powered off the truck's battery.

"The toolbox lays over in a horizontal position on the pickup bed while I'm traveling, but then raises to an upright position when I need a tool," says Litchfield.

The worm gear is actually a telescoping linear actuator that was originally used to position a satellite dish. The actuator shaft extends the width of the pickup bed and mounts on a metal frame. The toolbox is

hinged to the pickup bed, directly below the frame, by a single pin.

A switch under the dash inside the cab controls the toolbox. A microswitch on the actuator automatically shuts it off as soon as the toolbox is all the way up or down.

The actuator connects to a trailer plug on the frame that supports the toolbox. "By disconnecting the plug and removing one screw I can slide the entire frame out."

"It's really handy to use. All my tools are right there where I have easy access to them," says Litchfield, who uses the toolbox on his Dodge Dakota 1/2-ton pickup. "I built a metal lip on front of the toolbox that comes out over the side of the pickup bed 3 or 4 inches, so when the toolbox is open I have a place to lay my tools."

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Don Rickard, Russellville, Ark.: "I had lots of short lengths of angle iron and pvc pipe that were difficult to locate in boxes and piles around my shop."

"So I took two lengths of 2 by 4-in. fence wire and attached it to the rafters a few feet apart. You have to attach it securely because the weight of the steel adds up."

"With this system, you can locate whatever you need at a glance."

Bill Varcasio, Waterford, N.Y.: "To make a cheap homemade step for my Ford 3600, I took a 30-in. long piece of metal bracing and bent it to form an arc. Then I drilled some holes on the existing tractor step, securing the stirrup with nuts and bolts. It works great."

Rich Vink, Topeka, Kansas: "To prevent flash burns while welding, I cut the sleeve off an old sweatshirt, sewed elastic into the cut-off end, and put it on the arm opposite the welder."

Vilas Noyes, Montfort, Wis.: "I was mounting an engine on a metal frame and had