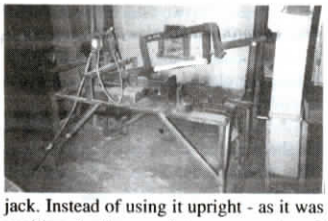
I started with a piece of channel iron. I had to heat one side and smash it so it would fit. I cut a notch out of the thin side and welded a 5/8-in. square nut to the opposite side. Then I welded flat iron to fill in the open sides and inserted a grade 5 5/8-in. dia. bolt through a piece of flat iron welded to the side with the nut on it. I use my air impact wrench to operate it. Works perfectly."

Jacob Slingerland, Diamond City, Alberta: When the drive spline on his combine's transmission started to work loose, Jacob Slingerland, Diamond City, Alberta, solved the problem by cutting the coupler open lengthwise and welding two 3-in. long, 1/2-in. thick steel bars alongside the slot, leaving a 1/4-in. wide gap. He then drilled three holes through the bars and inserted three 1/2-in. dia. bolts to "clamp" both sides of the coupler together.

"It worked. After one season I couldn't see any additional wear on the splines," says Slingerland. "I placed a washer between the bars as I welded them in order to keep the gap between them. I removed the coupler's grease fitting and cut the slot out through the threaded mounting hole because I didn't think there was any reason to grease the spline."

Joe Vieck, Vincennes, Ind.: "I made my own power hack saw using an old pump



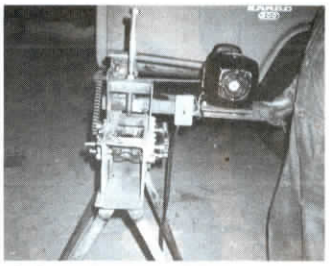
jack. Instead of using it upright - as it was positioned when used to pump water - I placed it in a horizontal position and attached metal framework to hold a blade. We use it to cut 6-in. steel casings. I equipped it with both a fast and slow switch. I use the slow mode to cut the 6-in. casings as well as aluminum irrigation pipe. The cutting table is fitted with an attachment for cutting angles. It really works great and was inexpensive to build."

Darren Sehn, Richmound, Sask.: Sehn used a 2-ft. length of 10 by 6 by 1/4-in. rectangular steel beam, a gearbox, and a

1/3 hp electric motor to make a powered "pipe bender".

"I use it to straighten out bent pipe or to bend pipe into almost any shape I need," says Sehn, who primarily uses the pipe bender with oil field well tubing to make livestock corrals.

He drilled three holes in each side of



the beam, then inserted three steel shafts fitted with drive rollers through the holes. The front and back shafts are chain-driven by the motor while the middle shaft is stationary. The motor belt-drives a 40:1 gearbox that chain-drives the front shaft. The front shaft then chain-drives the back shaft via chains and sprockets on the other side of the beam.

Sehn feeds pipe into one end of the beam, laying it on top of the middle shaft. The back and front shafts then pull the pipe in and it comes out the other end of the beam. To bend the pipe, Sehn cut a 1/2-in. slot into each side of the beam above the middle holes. He can adjust the position of the middle shaft by turning a threaded rod mounted in a steel bracket that's mounted on top of the beam.

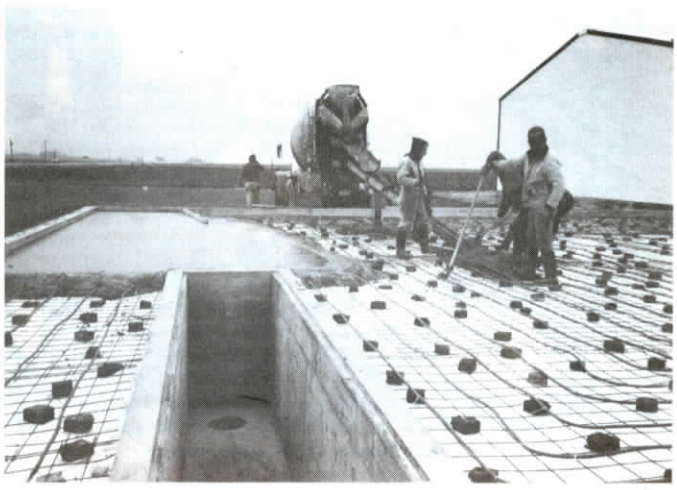
Each end of the beam is supported by a pair of steel legs. Sehn welded threaded couplers to the bottom of the beam for the legs, allowing him to quickly remove them so he can transport the pipe bender in the back of his pickup.

Sehn spent less than $500 to build the pipe bender, which will handle pipe up to 1 1/2 in. in dia.

Wayne Tjeerdsma, Avon, S.Dak.: Tjeerdsma is the innovative farmer-manufacturer who came up with the Slectro row

shut-off for Case-IH air planters (Contact: Slectro Co., P.O. Box 226, Avon, S. Dak. 57315 ph 605 286-3221). Now he's come up with another idea that he developed for use in his own shop. This 4-bucket "lube station" is designed to hold four 5-gal. buckets of motor oil, hydraulic oil, or any other flowable material. Buckets set easily into tip-down cradles, held in place by rubber bunge cords. The tipping cradles are balanced so the buckets always return to upright position when you let go of the handle so you'll never spill out the contents of an entire bucket if the handle slips. Sells for $100. Tjeerdsma also plans to build bigger models to handle 30 and 50-gal. drums.

Malcolm Stopani-Thomson, Elgin, Ontario: "I have an extensive shallow-underground watering system for my garden and orchard and since frost in this area goes down 4 ft., we have to clear all water from the system each fall to keep lines from freezing. To do this, I put together a simple tool that screws onto a standard garden tap. It consists of 3 in. of 1/2-in. copper pipe, one copper end cap, one used tire valve, and a solid brass female hose end (cheap white steel ones won't solder). First, remove the valve stem mechanism and use a plumbers torch to burn the rubber off the casing. Clean away the charred rubber debris, drill a hole in the end cap to fit the valve stem, liberally apply plumber's flux to all four items, assemble the components, and solder them together. With the valve mechanism installed, the tool screws easily on and off a garden tap and allows air to be blown into the watering system wherever and whenever needed."

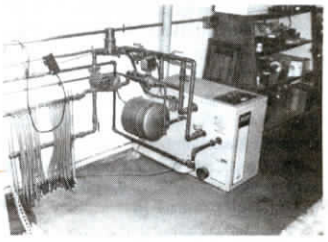


BillBroaddus, Raymond, Ill.: Bill's happy with the in-floor heat system he installed in his 54 by 54-ft. farm shop. He ran pipes under the floor of the shop and pumps hot water through them with a gas-fired boiler. To install the system, he worked closely with the manufacturer of the equipment he bought - Heat Way, 3131 West Chestnut, Springfield, Missouri.

When constructing the shop, Bill first put down a layer of rock,then covered the rock with a layer of finer rock (he used "turkey grit"). He then put down an inch of styrofoam insulation before laying down reinforcing wire, which he rested on pieces of brick. Water pipe was then tied to the wire so it would stay in place. He ran 14 loops of pipe under the shop floor that run out from the furnace and then back again. He stresses that the loops must be the same length - or within at least 10 percent - so heat delivered is even. You can put either water or anti-freeze in the pipes.

When laying out the pipe, loops are laid closer together along the outside walls. when getting toward the center of the shop, pipe can be spread further apart.

The hot water boiler rests along one wall and sends hot water out through the 14 loops. Broaddus says it provides a nice, even heat that makes it a lot more pleasant to work in the shop in winter. It's also an efficient way to heat, he notes.



Replacement Exhaust Manifolds For Chevrolet, Dodge Trucks

A North Dakota auto and truck parts dealer who handles both new and used parts has come up with new replacement exhaust manifolds for Chevrolet trucks equipped with 366 and 427 cu. in. gas engines, as well as for Dodge trucks equipped with 413 cu. in. gas engines.

Mike Geller says the manifolds on these engines are so prone to cracking that it's rare to find a used engine with a reusable manifold. All he could offer to customers was full-price new replacements that had the same weaknesses as the originals.

He solved the problem by producing his own line of replacement manifolds. He had patterns made, with extra material added to the critical areas prone to cracking. The new manifolds are about 7 lbs. heavier than the originals. "I've never had one fail yet," says Geller. Replacement manifolds for Chevrolet engines sell for $129.95; $175 for Dodge engines.

Geller also remanufactures Erie 610 hubs for tag axles. Erie stopped production on the parts so Geller bought the original molds and now makes hubs built to original specs. They sell for $450.

Contact: FARM SHOW Followup, Mike Geller, Geller's Auto & Truck Parts, Box 2431, 4453 West Main Ave., Fargo, N. Dak. 58108 (ph 701 282-4461).

Jack R.Kiser, Fremont, Ohio: "My Cub Cadet 1200 riding mower uses three blades that cost about $45 to replace. When the blades get dull I save money by cutting off the end of each blade and welding on a length of 1/4-in. steel, then bolting on a mower sicklebar section. The sections sell for only $1.08 apiece. When they get dull I turn them over to use the other cutting edge, doubling the life of each section. In four years I've broken only one bolt when it hit a rock. I haven't had any problems with this setup and it's safe to use."