Arnold Watkins, Kuna, Idaho: "I keep baler shear bolts handy by putting them in a small plastic bottle - an empty 16-oz. plastic soft drink bottle will do - with a little oil in it. I just screw the nuts on the shear pins a bit and drop them into the bottle, then screw on the top. Keeps them handy and they never get rusty. They're even easy to find in the dark."

Bruce Gamble, Gamble Machining, Rt. 1, Box 173, La Feria, Texas 78559: "We've had a lot of trouble with brass center shafts on 14-in. Waterman gated pipe bonnets. The shafts would twist off because the metal is so soft. So I started making replacements out of stainless steel and they work great. They're 7/8-in. dia. and 20 in. long. As the brass ones break or twist, I replace them with stainless. I haven't broken a stainless one yet. We put 18-in. T-handles on them in place of the standard 10-in. wheel. We sell stainless shafts for $50 apiece. The T-handles sell for $10."

Ken Odegard, Bozeman, Mont.: "You don't have to use hot tar to patch cracks and holes in asphalt driveways and parking lots. Hot deep fat frying oil works just as well and is cheaper and less messy to use. Hot tar doesn't penetrate as well, looks like patch work when you're done, and doesn't last as long frying oil.

"You can get used oil from restaurants or you can buy the oil new. Heat it up to 175° to 200° and pour it into cracks till they fill up. You don't need to blow dirt out first since the hot grease is much thinner than tar and will penetrate to the bottom. After the oil hardens, shovel up the excess with a square shovel. You can sprinkle sand on top if you wish.

"To patch larger holes in asphalt, mix sand or dirt with hot grease in the hole till it's thick. When it cools, it'll be as hard as the asphalt around it."

Lawson Jones, Webster, N.Dak.: "I was able to greatly improved the residue handling ability of my Summers Superweeder cultivator by cutting off the bottom half of the S-tines and welding straight pieces of 5/8-in. dia. steel rod onto them. Then I rotated the S-tines on the toolbars so the rods run perpendicular to the ground. They do a great job breaking up straw residue into pieces shorter than 4 in. and stirring up the soil, thanks to vibration provided by the S-tines. Breaking up the straw keeps our air seeder from plugging up."

Maurice Bodin, Bowden, Alberta: "I used a power steering pump off an old car to add power steering to my International C tractor. I bolted the pump to the side of the tractor. There wasn't room for a pulley up front on the crankshaft, without moving the radiator forward, so I welded a pulley onto the back side of the alternator drive pulley. A 12-ft. long hydraulic hose runs from the belt-driven pump up to an orbit steering motor mounted on the tractor's front axle. The motor powers a pair of hydraulic cylinders connected to the steering arms on the front axle.

"I used a 2-in. dia. pulley, but it works kind of slow and I sometimes can't get the belt tight enough. A 6-in. dia. pulley would work better. The 3/8-in. dia. hose I used doesn't deliver oil to the cylinders as fast as I would like. Next time I'd use bigger hose."

Johnny Crawshaw, Clay Center, Kan.: "Diesel tractors equipped with a mechanical fuel pump that supplies fuel to the injection pump can be seriously damaged, or even ruined, if the diaphragn on the mechanical pump ruptures and leaks fuel into the engine. I eliminated the possibility of this problem on my Oliver 1655 tractor by replacing the mechanical fuel pump with an electric fuel pump. Electric pumps don't have diaphragms so they they're less likely to leak. It cost only about $40. New mechanical fuel pumps sell for $65 to $90.

"I used a 4-in. wide, 7-in. long piece of 16-ga. sheet metal to mount the electric fuel pump, bending the sheet metal a couple of times. The sheet metal bolts to the mechanical fuel pump's original mounting holes. I ran a wire from the pump up to the ignition switch so that it starts running as soon as I turn on the switch to start the engine. I also plan to mount an electric fuel pump on my Oliver 1850 tractor that's equipped with a Perkins diesel."

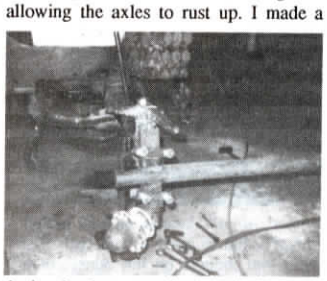
Jordan Scott, Neponset, Ill.: "I found a great way to heat my shop in the winter without spending a lot of money. It's a commercial heating system designed for motel swimming pools that I bought from Illinois Valley Electric Cooperative, Princeton, Ill. It pumps water through plastic pipe buried under the floor of the 50 by 70-ft. building, which I use as a combination shop and feed processing area. I installed the system when I constructed the building four years ago.

"We laid 3/4-in. dia. plastic pipe in rows 2 ft. apart about 2 in. below the floor surface. We covered the layer of sand under the concrete with plastic, then tied the pipe to concrete reinforcing wire and poured the concrete over it. The thermostat-controlled electric boiler comes with a 2-gal. expansion tank, manifold, and pump. The buried pipe serves as a reservoir and is divided into six heating zones to keep the building evenly heated. I laid the pipe every 1 ft. in the 16 by 10-ft. office area. The thermostat is in the office which I keep at 60 degrees. The rest of the building stays at about 45 degrees even in the coldest weather, but the floor stays at about 70 degrees. I mix methanol with the water to keep it from freezing.

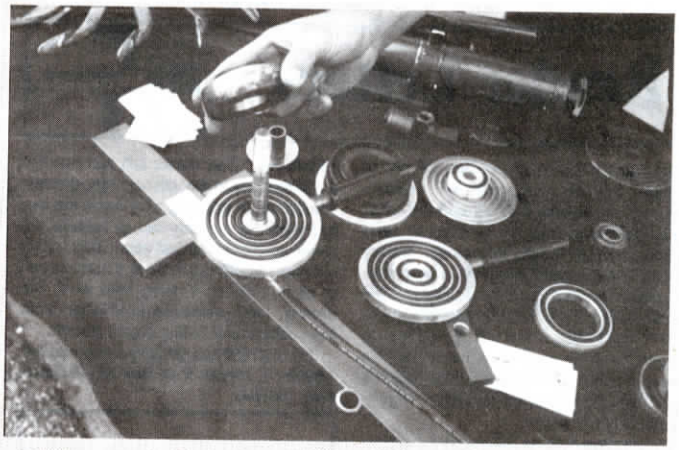
"I installed 1 1/2 in. of styrofoam around the perimeter of the building 2 ft. down from the floor and 2 ft. in so that cold air can't migrate in from the sides of the building. The walls of the building have 3 in. of fiberglass insulation and the roll-up doors are insulated.

"It costs $10 to $11 per day to heat the entire building in the coldest weather, but the average cost in winter is only $3 to $4 per day. Total cost was about $4,700 but because I qualify for off-off peak rates, the cooperative refunded $2,700. That made my out-of-pocket cost only about $2,000."

Wayne Veeder, Litchfield, Neb.: "It's often difficult to move the front axles out on tractors equipped with wide front ends, especially if the tractor sits for a long time allowing the axles to rust up. I made a



device that lets me twist the spindles until they will turn. It consists of a short length of steel pipe welded to a length of 3-in. channel iron that fastens onto the wheel mounting arm with two U-bolts. I stick a long piece of pipe through this short piece of pipe on the tractor and use it for leverage to to twist the axle loose."



Universal Greaser "Saves" Sealed Bearings

"It'll grease most any sealed bearing up to 2 in. inside dia.," says Anthony Feldt, distributor of a new universal bearing greaser.

Two issues ago (Vol. 18, No. 2) FARM SHOW featured Feldt's "Bearing Saver" for rotary hoes that lets you grease sealed rotary hoe bearings without taking the bearings out of the wheel. The new universal greaser works on the same principle.

It consists of a round flat metal plate fitted with different dia. rubber seals around a center vertical shaft. The bearing to be greased is laid over the shaft, flat on the plate, and then a tapered plate is tightened down over the top of the bearing. You then inject grease using a grease gun through a hole in the center shaft. As grease is forced into the bearing under pressure, you rotate it so the seal on the bearing isn't damaged.

"We can grease 90 percent of sealed bearings, resulting in tremendous savings in parts and improved performance of equipment," says Feldt, who sells the greaser for $149, including a grease gun.

Contact: FARM SHOW Followup, Feldt Sales, Rt. 1, Box 2, Park, Kan. 67751 (ph 800 327-3441 or 913 673-4280).

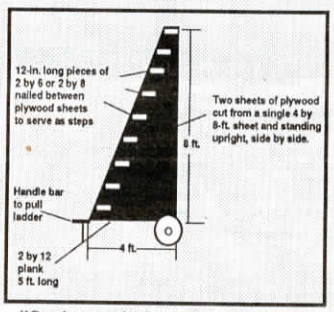
Easy-To-Build Portable Ladder

If you frequently need a ladder in your farm shop, you'll like this easy-to-build portable ladder put together by Alvin Baumgartner, Cissna Park, Ill., using a single 4 by 8-ft. sheet of 1/2-in. plywood and a few pieces of scrap lumber.

He cut the sheet of plywood in half diagonally - with a 6-in. "flat top" on one end of each piece - so that he ended up with two identical pieces. The two pieces stand side by side with the 3 1/2-ft. long end on bottom.

He nailed a 5-ft. long 2 by 12-in. board between the two sheets of plywood at bottom and then used 12-in. long pieces of 2 by 6's for steps, nailing them between the plywood sheets up the angled sides of the plywood.

The last step was fitting some scrap wheels to the bottom of the ladder and fitting a handle and stand to the front end to make the ladder easy to move around the shop and set up.



"One bonus of this idea is that you can use the area between the plywood for storage, and hang tools on the outside of it as well. I put hooks on the outside of it for shovels, rakes, brooms and other tools," says Baumgartner.

Contact: FARM SHOW Followup, Alvin Baumgartner, P.O. Box 382 Z.C., Cissna, Park, Ill. 60924.

"World's Best Shop Light"

"Most farmers who buy one tell me it becomes one of the best tools in their shop," says Jim Wilkens, inventor of a new "quadruple-jointed" shop light with an extension arm that reaches up as high as 14 ft. or can be laid flat along the ground to see underneath a piece of equipment.

"Quick Lite" has four joints that bend either way so you can maneuver the light into virtually any configuration to get light wherever it's needed. You can mount the base on the hub of a wheel to make it portable, or on a wall, table, post, or even on the back of a field service truck to make repairs in the field.

All the joints are spring balanced so it stays wherever you put it. There's two electrical outlets out on the extension arm to power hand tools as well as an on-off switch.

The light is shipped with your choice of a

300-watt halogen light, a 150-watt flood light or a 12-volt 55-watt halogen light for truck mounting. Sells for $249.50. A 10-ft. model sells for $224.50.

Contact: FARM SHOW Followup, Jim Wilkens, Wilkens & Co., 507 S. 7th., Atwood, Kan. 67730 (ph 913 626-3998).