



Frame of digger is made of 8 in. wide steel beam and the fork of 1½ in. thick steel plate.

PULLS AND LIFTS ROCK FROM GROUND

Rock Digger Mounts On Tractor Loader

Tractor loaders work great for pulling rocks out of the ground, according to R.S. Norton, a Rocanville, Sask., farmer who's begun manufacturing a new loader-mounted rock digger.

"Because it's mounted on a loader it can pull much larger rocks out of the ground than 3-pt. mounted rock diggers. Hydraulic cylinders on the digger let you tip the forks under the rock and you can lift on the loader as you pull on the rock," says Norton, noting that he's been able to pull out rocks up to 4 ft. in dia. using an 85 hp. tractor.

Norton uses the digger on his Versatile 160 tractor which features reversible controls and a rear-mounted tractor loader. It mounts in place of the bucket using the same pins and cylinders with no modification to the loader. The frame of the digger is made from 8-in. wide steel beam and the fork is made from 1½-in. steel plate. The tips of the fork are hard-surfaced.

"The forks penetrate the ground down to 24 in. You simply position

the fork down under the far side of the rock, tipping them back under, if possible, and then lift the loader as you back up. If the rock won't come right out, the forks slip off over the top of it. There's much less stress on the equipment than trying to push rocks out," says Norton.

Norton says the amazing thing about his rock digger is how little soil it disturbs. "For most large rocks all you've got left is the hole it comes out of. And it's very fast. Soon after I built the first one it took me two days to haul away all the rocks I dug out in about 7 hours."

To this point Norton has only built the digger to fit Versatile 150 and 160 tractors as well as the larger Versatile 256 and 276 tractors. He plans to fit other loaders if demand develops. The smaller digger sells for \$995 and the larger \$1,295 (Canadian).

For more information, contact: FARM SHOW Followup, R.S. Norton, Cinnabar Farms, Box 23, Rocanville, Sask. SOA 3L0 (ph 306 645-4441).

KEEPS TRACK OF TEMPERATURE IN UP TO 11 BINS UP TO ¼ MILE AWAY

Build Your Own Low-Cost Grain Bin Monitor

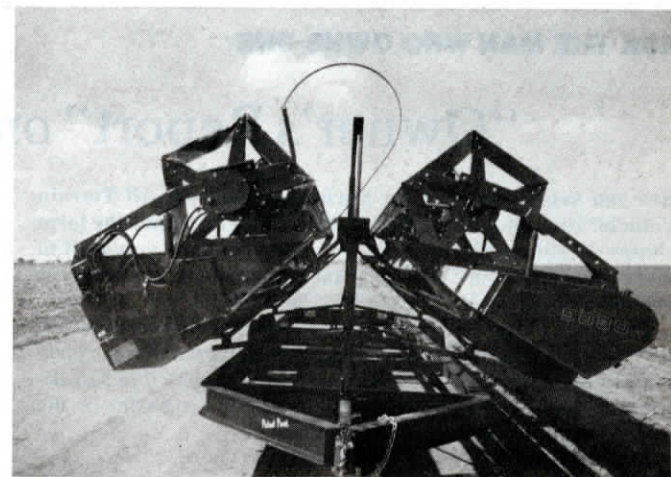
You could spend as much as \$500 to \$1,000 for a ready-made remote temperature monitor or, with a set of plans developed by government researchers in Alberta, Canada, you can build one for as little as \$30.

Ag Engineer Edwin Thornton says you can buy all parts, except the thermistor probes themselves, at most electronic stores. All you need for tools is a soldering iron.

The monitor makes use of temperature probes containing thermistors to sense temperature. A thermistor is

a resistor that alters in resistance depending on temperature change. The change in resistance is balanced by an electronic "Wheatstone bridge" and output is sent to the meter. The thermistor temperature probes can be permanently installed in livestock barns or grain bins up to ¼ mile away, letting you remotely check conditions in barns and look for hot spots in grain.

Total costs for components is about \$30 plus, about \$6 for each thermistor and the cost of wiring. The unit



Headers are loaded one on each side, then raised vertically as shown below.

TRANSPORT WIDTH IS ONLY 8½ FT.

"Double" Header Carrier Narrows For Transport

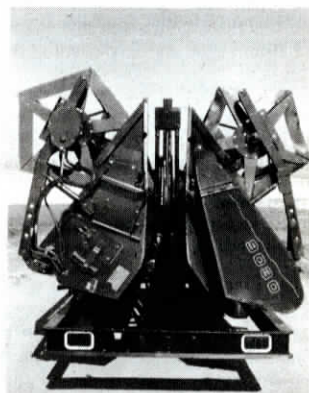
A new double header carrier from Farris Mfg., Edson, Kan., uniquely positions two grain headers, of any make, so total road width is only 8½ ft. wide — the maximum allowable transport width in many states.

Keys to the innovative trailer designed by Gary Farris, Edson, Kan., are hydraulically-powered cradles, one on each side, on which the headers sit.

To load a header, you set it on the cradle, release it from the combine, then strap it down with nylon straps. After loading the second header on the other side, you simply hit a switch and two 2½ by 40-in. hydraulic cylinders pivot both cradles until the heads are sitting side by side, guards facing up.

A battery pack powers the hydraulic system. The trailer itself is 35-ft. long and will handle any make of grain header 18 to 30 ft. long. The front axle is equipped with air brakes.

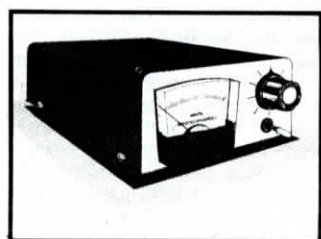
The double header carrier sells for \$6,000. Farris will also modify existing double header carriers with his



Cylinder pivots both cradles so heads "stand" side by side.

cradle system. Plans are in the works to adapt the trailer to handle row crop heads.

For more information, contact: FARM SHOW Followup, Farris Mfg., Box 125, Edson, Kan. 67733 (ph 913 899-6234).



Parts needed to build your own monitor are available at most electronic stores.