

## Stock Waterer Heated By "Earth Power"

We've seen a lot of ways to heat stock tanks over the years but an idea that recently came to our attention in Colorado might be the most cost-effective yet.

Tom Kilduff of the Natural Resources Conservation Services, Meeker, Colo., called to tell us about the giant, indestructible stock tanks the agency sells at cost to farmers. They're made out of 12 to 13-ft. dia. earth mover tires with the top bead cut off. The tires, which weigh as much as 22,000 lbs., are laid flat on the ground with the bottom sealed with concrete.

The beads are cut out of the giant tires by a Wyoming man who has invented a heavy-duty tire cutter (Contact: Richard Waldock at 307-334-3103). Kilduff's agency sells the water tanks to farmers in the area at cost - about \$300.

In the course of telling us about the tanks, Kilduff mentioned that he has been working on a new way to "heat" the big tanks in winter to keep them from freezing up. The problem is that many tanks are placed in remote areas without any way to keep them from freezing in winter.

A couple years ago Kilduff heard about an older farmer who had come up with a "no power" way to heat a stock tank using heat from the earth. What he did was to sink a large diameter pipe vertically into the ground

under the tank. Cold water drops down into the pipe where it's heated by the warmth underground. As the water warms, it rises back up into the tank. The circulating water keeps the tank from freezing up.

Kilduff has been experimenting with the idea. So far here's what he's tried.

On a 13-ft. dia. stock tank, he sinks a 24-in. dia. black plastic PVC corrugated pipe in the ground. He first puts a plastic cap over the bottom end. It's best to sink the pipe 15 to 20 ft. deep. The deeper the better since the ground gets warmer the deeper you go.

The biggest challenge with setting up the earth-heated tank is digging the 2-ft. dia., 20-ft. deep hole for the pipe. There's no posthole digger that will dig a hole that deep. If you do it with a backhoe, you must be certain to adequately repack the soil around the pipe. "You have to pack the soil tightly around the pipe so ground heat is transferred efficiently to the water. If there are air pockets around the pipe, the system will not work as efficiently," notes Kilduff.

The idea has worked great in tests. Now Kilduff is trying to determine exactly what size pipe is needed in relation to the size of the stock tank.

Contact: FARM SHOW Followup, Tom Kilduff, NRCS, P.O. Box 837, Meeker, Colo. 81641.

## He Turned 4-WD Pickup Into Self-Propelled "Rock Wagon"

"It's fun to drive and easy to unload," says Ardell Johnson, Lake Lillian, Minn., who converted a 1974 Chevy 3/4-ton 4-WD pickup into a nifty self-propelled "rock wagon" that dumps itself.

Johnson bought the pickup at an auction for \$600. He stripped it down to the frame, hood, 350 cu. in. gas engine, and automatic transmission. He used channel iron and sheet metal to build a "half cab" and made a dash for it onto which he installed the original gauges. He made a 6-ft. wide, 7-ft. long flatbed on back, using 4-in. channel iron to make a frame covered by tongue and groove flooring. The flatbed is raised or lowered by a hydraulic cylinder that's operated by a hydraulic pump bolted directly to an output

shaft on the transfer case. The pump is controlled by a lever in the cab.

A plexiglass windshield mounts on the hood just ahead of the cab. There's a steel mesh running board on each side of the cab and a steel mesh screen on the back side of the half cab to protect the driver from rocks.

"Kids really like driving it because the driver is out in the open, yet away from the dust," says Johnson. "I mounted an accelerator on the driver's side running board so the driver can stand on the running board while operating the vehicle and easily jump on and off it. He also has a better view of rocks than he would have from the seat. The flatbed is built low to the ground so it's easy to load.

"It has implement lights, turn signals, and

## In-Bin Sweep Auger Breaks Down Into Sections

This new in-bin sweep auger consists of separate 2 1/2-ft. long sections with a 1 1/2-ft. long end section that all lock together, making it easy to move the auger from bin to bin and allowing you to use one sweep auger for all your bins.

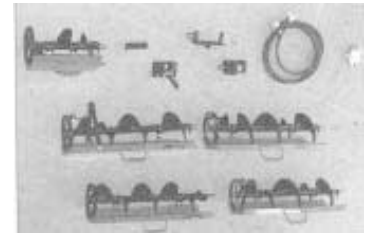
The Wheatheart "In-Bin Super Sweep's" 8-in. dia. auger sections are assembled by locking short stub shafts together. Each section rides on a small steel wheel at one end and is fitted with a backboard that scrapes the bin floor clean. The standard kit comes with 11 1/2 ft. of flighting which is enough for a 24-ft. dia. bin. By adding more sections you can make the auger fit bigger bins. An in-bin pivot assembly allows the auger to be adjusted up to 10 in. to make it fit any bin. A safety shut-off valve automatically shuts the auger off if anything gets tangled in it.

The standard kit for a 24-ft. dia. bin sells for about \$1,000.

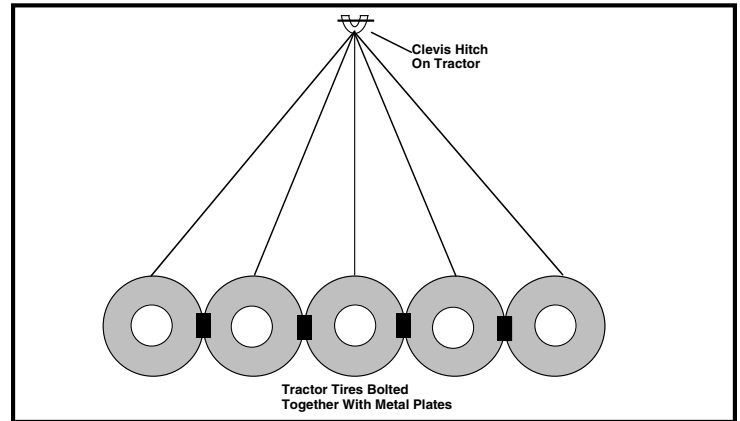
Contact: FARM SHOW Followup, Norwood Sales, Inc., 102 Sunflower Ave., Cooperstown, N. Dak. 58425 (ph 800 446-0316 or 701 797-3684; fax 3685).



In-bin sweep auger can be disassembled and moved from bin to bin, allowing you to use one sweep auger for all your bins.



Auger kit consists of separate 2 1/2-ft. long sections and a 1 1/2-ft. long end section that all lock together.



## He Plows Snow With Tractor Tires

"I used to clean snow out of my yard with a tractor loader but then it would be piled everywhere and when the wind blew, it would drift right back in. I decided to find a better way," says Warren Jenneman, Minot, N.Dak.

"A local tire dealer had big tractor tires available for free. They even delivered them to my place. I bolted them together side by side with a 2 by 3-in. steel plate over the bolts on each tire so the bolts wouldn't pull through. Then I ran a chain from each tire up to a clevis on the tractor drawbar. That

way no tire can sag backward.

"This tire plow is 25 ft. wide. I pull it with a Deere 4630 with duals. I pull it around the driveway and just keep working the snow down. I've used it to clear snowfalls of up to 25 in. and it worked great. I had to tie the chains together just behind the tractor to narrow them up so they wouldn't catch on the duals when turning."

Contact: FARM SHOW Followup, Warren Jenneman, 10200 100th St. S.W., Minot, N.Dak. 58701.



Easy-to-load "rock wagon" was built out of a 1974 Chevy 3/4-ton 4-WD pickup.

brake lights on it as well as license plates so I can drive it on the highway. I also use it for other jobs such as hauling seed, etc. I recently mounted hydraulic outlets on back so that I can operate an orbit motor and auger, allowing me to deliver seed from my gravity wagon to my planter. I also plan to build a trip tail-



Dumping rocks off the 6 by 7-ft. flatbed is as simple as pulling a lever in the cab.

gate for it so that I can use it to spread gravel." Johnson used channel iron to make the front bumper and sheet metal to make fenders for the front wheels.

Contact: FARM SHOW Followup, Ardell W. Johnson, 18511 45th St. S.E., Lake Lillian, Minn. 56253 (ph 320 995-6574).