

## Spray Nozzle Cleaner

The desire for a safe, fast and easy way to clean plugged spray nozzles led Murdock, Minn., farmer Harold Peterson to build a nozzle cleaner for his sprayer. His idea, a "Sugarbeet Growers Idea Contest" winner, features an old LP gas tank with a 250 psi rating used as an air supply tank. Other parts included pipe fittings, a pressure gauge, hose long enough to reach each end of the sprayer, and a valve stem used to fill the tank with an air compressor.

Peterson mounted the tank on an angle iron frame mounted on his sprayer. The tank is secured to the frame with chains and can be easily removed for other uses. No precleaning of the tank was required.

Peterson reports that the high pressure air supply speeds nozzle and screen cleaning, and helps save money by ensuring proper chemical application and eliminating nozzle damage caused by using a knife or wire to unplug clogged nozzles.



## Retractable Combine Steps

Paul Hewlett, Adrian, Mich., made a device to raise and lower the platform steps on his Deere 55 combine that'll work on other combines with a similar problem.

"When combining corn, the ladder hangs out the side into the next set of corn rows and has to be lifted up and out of the way to keep from knocking down any unpicked corn. Lifting this ladder gets to be a nuisance by the end of a long day. The combine has a hydraulic reel-lift for the grain table but, when the cornhead is in use, this hydraulic outlet is not needed.

"I eliminated the ladder problem by using the unused hydraulic outlet to make a retracting system. Most of the parts

came from the scrap pile except for a used cylinder and a new quick-coupler. Parts came to a total cost of \$30 and it took a few afternoons of work.

"There are springs on the device because the reel-lift hydraulics are pressurized. The springs create back-pressure which allows the cylinder to retract.

"We've used our ladder retractor for three seasons now and it works great. The amount of time needed to lower the ladder is approximately 15 sec. and it raises in just 5 sec., controlled from inside the cab."

Contact: FARM SHOW Followup, Paul Hewlett, 41 Ridgemont Dr., Adrian, Mich. 49221.

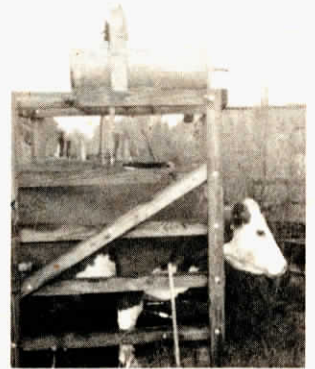
## "Shoo-Fly" Cattle Gate

"The weight of the cow does the spraying," says Mrs. Hazel Bush, Newton, Ga., who came up with a self-sprayer for cattle. It's equipped with a spring-loaded floor that activates an overhead sprayer which sprays the animal passing below with pesticides or other protective chemicals.

"We use it on our small herd. There's no stress on the animals and it uses no energy. You can put it in dairy barns, in any opening gate, by feeders and waterers, or in any other area animals move through regularly," Bush told FARM SHOW.

The sprayer consists of a wooden frame slightly wider than a good-sized steer and about 6 ft. tall. A 25-gal. tank is mounted on top with a spray head extended down below it. A cable runs from the spray head down to the spring-loaded floor. When the animal steps on the floor, the cable activates the sprayer and the animal is liberally coated with spray.

Bush is interested in locating



a manufacturer for the sprayer. She also sells do-it-yourself plans for \$3.00.

For a set of plans, send \$3.00 and a self-addressed, stamped envelope, to: FARM SHOW Followup, Mrs. Hazel Bush, Rt. 1, Box 73C, Newton, Ga. 31770 (ph 912 734-5760).

## Homemade Field Measurer

Instead of paying up to \$400 for an acreage counter or field measuring device Minnesota farmers Loren and Earl Ingebreton, of Felton, developed their own inexpensive model for about \$20.

The Ingebretons, whose idea was a "Sugarbeet Growers Ideas Contest" winner, say you need the following items to rig up your acreage meter — an inexpensive hand calculator, double strand speaker wire, a magnetic reed switch (get the "closed" model which is available in electronics stores). You also need an old wheel weight, a magnet, a quick coupler for disconnecting the wires and an ohmmeter.

Loren notes that he used a Radio Shack EC-203 calculator but that many other models will work just as well. He suggests avoiding the very thin calculators as they don't have a lot of room to work in.

To begin, you remove the back of the calculator and find the terminal for the (=) button. You find this by depressing the (=) button and using the ohmmeter which will show a reading when the probes are placed on the correct terminal.

Next solder one strand of the double strand wire to each terminal post. Also, melt or punch a hole in the back cover for the wire to exit. To this wire fasten the quick disconnect coupler, to which you attach a longer sec-

tion of wire that runs to the reed switch. The coupler makes it easy to remove the calculator for other uses.

Next, connect each lead to a terminal of the magnetic reed switch. To test the switch, turn the calculator on and push the (+) button. When you pass the magnet past the switch, the number should blink, counting it the first time. Each pass of the magnet past the switch should add the number again.

The Ingebretons mounted the calculator on the handlebar of their 3-wheeler, fastening the reed switch to the left fork and mounting the magnet on a wheel weight secured to the wheel rim.

The Ingebretons use the system on their 3-wheeler to measure distances but you can also modify the system to fit on planters, drills and other implements to measure acres covered.

To do this, attach the magnet on a ground driven shaft on the implement and mount the reed switch so the magnet will pass it on each revolution.

The constant to punch into the calculator will be the result of width the implement covers (in feet), times distance covered in one revolution of the shaft (in feet), times .000023 (translation of a square foot as a fraction of an acre. An acre equals 43,560 sq. feet).