#### **Automatic Panfish Scaler**

Cleaning sunfish and crappies is an easy job with this new "catch and clean" scaler.

The unit is powered by a 110-volt electric motor and consists of a 15-in. dia. aluminum drum housed inside a rectangular aluminum box with about 2 in. of water in it. The drum has a hinged trap door and holds 20 to 30 fish. The drum is covered by expanded metal.

Simply put the fish inside the drum and turn the motor on. As the drum rotates, the fish tumble against the expanded metal which scrapes off the scales. As the drum moves through the water the fish get washed clean.

"It takes all the work out of cleaning fish. In 15 to 20 minutes you will have the fish cleaned and ready to be cut up," says inventor Al Gruenhagen.

He's looking for a manufacturer.

Contact: FARM SHOW Followup, Al Gruenhagen, 9043 10<sup>th</sup> Ave. S., Bloomington, Minn. 55420 (ph 952 876-0511).

Panfish scaler is powered by a 110-volt electric motor and consists of a 15-in. dia. aluminum drum housed inside a rectangular aluminum box with about 2 in. of water in it. Part of the drum is covered by expanded metal. As drum rotates, the fish tumble against the expanded metal which scrapes off the scales.



# Sprayer Converted To "High Volume" Pressure Washer

"I use an old pto-driven orchard sprayer as a high pressure washer to wash off farm equipment. It cost me very little and pumps out a lot more water than anything on the market," says Robert Gibson, Canby, Oregon.

The sprayer is powered by a pto-driven piston pump and was originally equipped with a fan on back that Gibson removed. He hooked up a 30-ft. length of rubber hose to the sprayer pump. The last 3 ft. of the hose consists of a 1/2-in. dia. water pipe that has a brass garden hose nozzle attached to it. The pipe serves as a handhold.

To operate the washer, Gibson idles the tractor's engine and then engages the pto. "With the engine idling, the pipe squirts just a little harder than a garden hose," he says. "However, as soon as I throttle the engine up it really puts out a lot of pressure. In fact, I have to make sure I have a good grip on the

pipe or it'll get away from me. At 1,000 lbs. pressure it can pump 28 gpm compared to 3 to 4 gpm for commercial models. It washes mud off faster than any high pressure washer on the market. Works great for washing mud off bulldozer track frames.

"It has enough pressure that it will blow grease off equipment using just straight water but I sometimes dump soap into the tank to wash off oil film."

Contact: FARM SHOW Followup, Robert Gibson, 29176 S. Barlow Rd., Canby, Oregon 97013 (ph 503 651-2800).

"It cost very little and pumps out a lot more water than anything on the market," says Robert Gibson, who uses an old pto-driven orchard sprayer as a high pressure washer to wash off farm equipment.



#### Wheelbarrow Converted Into Dumping Lawn Cart

Hugh Morgan found a cheap way to make a dumping lawn cart by coming up with a way to hitch his wheelbarrow to a garden tractor. Now he can cover greater distances and dump loads quickly while still being able to use the wheelbarrow on its own.

Morgan used a drawbar made from a piece of pipe and painted it green to match the wheelbarrow.

He then widened the two-wheel axle from 19 in. to 26 in. and replaced the original wheels with pneumatic tires mounted on rims fitted with ball bearings. These alterations let Morgan travel at the tractor's maximum speed without the wheelbarrow tipping over.

The biggest time wheelbarrow hpping over. The biggest time saver is that he doesn't have to get off his tractor to empty a light load. "I haul a lot of grass clippings with it," he says. For heavy loads or more precise dumping into forms or next to buildings, you can quickly unhook the wheelbarrow and use it normally. "You just lift the hitch off the axle," he says.

Contact: FARM SHOW Followup, Hugh Morgan, 405 West High St., Liberty, Ind. 47353 (email: bhm@uconline.com).

#### **Solar-Powered Trickle Charger**

Trickle chargers are great if you've got an electric cord that'll reach out behind the shed. If not, a solar-powered trickle charger can really come in handy.

"Solar-powered trickle chargers are absolutely fantastic for anything that uses a battery and is inactive for a period of time," says Curt Shoup, owner of Solar Power Concepts, Santa Ana, Calif. "If you park an RV or other vehicle for any amount of time, the battery will decay. The older the battery, the faster the decay."

The amphour capacity of the battery dictates what size solar module you need, advises Shoup. "The cost of a solar module is all in the size of the solar cell array. As size increases, cost increases proportionately."

There is a big difference, he warns, between maintainers that hold the battery at 20 percent of charge and full-fledged battery chargers. Trickle chargers will, over time, bring a battery up to 50 to 70 percent of charge.

"A 65 amphour battery could use a 1 to 2watt solar module to hold its charge. A4 to 5-watt module could bring the battery up to 70 to 80 percent level of charge. If you want a full charge, you would have to get into a 20 to 25-watt charger with a controller."

"Solar-powered trickle chargers can come in handy for anything that uses a battery," says Curt Shoup, owner of Solar Power Concepts.

Prices vary from \$40 to 50 for a single car battery trickle charger to hundreds of dollars for a large RV unit.

Contact FARM SHOW Followup, Curt Shoup, Solar Power Concepts, 1945 E. Occidental St., Santa Ana, Calif. 92705 (ph 714 259-9772; email: JRV products@msn.com).

By hitching his wheelbar row to a garden tractor, Hugh Morgan found a cheap way to make a dumping lawn cart.

## Shovel Lined With Sharp "Teeth"

"It works great for cutting out tree roots and makes digging in hard soil much easier," says Bill Reeks, Cromwell, Ky., who modified a conventional pointed shovel by cutting "teeth" into the sides and bottom of it.

He first removed part of each side to make it lighter and narrower for easier digging. Then he cut in the teeth and ground each one to a sharp edge.

Contact: FARM SHOW Followup, Bill Reeks, 7104B U.S. Hwy. 231 South, Cromwell, Ky. 42333 (ph 270 274-3361).



Bill Reeks modified a conventional pointed shovel by cutting "teeth" into the sides and bottom of it.

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