

Circular Stairway Doubles As A Chimney

"The most effective chimneys are located at the center of the house because warm chimneys draw better than cold chimneys," says Eugene Bassler, Maquoketa, Iowa, who designed a chimney for his wood stove that also serves as a circular stairway with metal steps that help distribute heat throughout the house.

The chimney is fashioned from two 10-ft. long sections of heavy 10-in. dia. iron well pipe that Bassler bought at a local junk yard for \$60. Steel angle iron tabs were welded to the pipe at correct intervals for the rise and run of the steps, which were formed at a local iron shop from 1/8-in. diamond pattern steel plate for about \$220.

Bassler cut a 6-in. hole in the well pipe to accommodate a 6-in. stove pipe from his stove, which is located in the basement. The 6-in. steel pipe fit so tight it didn't need welding. A stainless steel 6-in. flue runs up the center of the well pipe and out the roof. "We pop-riveted it together and let it down into the well pipe, spaced approximately 2 in. from each side of the well pipe by crushed beer cans. The stainless steel flue pipe extends up through the roof while the well pipe/stairway extends only into the attic. Cool attic air floods into

the space between the two pipes, helping to keep the well pipe from getting too hot," says Bassler.

There is a 7 by 9-in. hinged access door in the well pipe near the stove through which the flue and stove pipe were joined.

"We've used our circular stairway chimney since 1979 and it works great. The steel steps distribute heat evenly from the chimney and yet they don't get uncomfortably warm. It makes for warm, even heat and also looks good and saves space," says Bassler.

The stairway has a bannister made with 1-in. sq. steel pipe and 5/16-in. steel chain that's threaded through eye bolts.

In addition to his innovative chimney, Bassler has also designed a gas igniter for his wood stove. The igniter works from an electric thermostat. On nights when he expects to need a fire in the morning, he fills the stove with wood. When the temperature drops, the gas ignites the wood and gets the fire off to an easy start. When the house temperature reaches a preset temperature, the gas shuts off.

For more information, contact: FARM SHOW Followup, Bassler Heating, Eugene Bassler, Rt. 2, Maquoketa, Iowa 52060 (ph 319 686-4347).

Home-Built Swath Turner

"It turns hay like a moldboard plow turns sod," says Andy Murdoch, Eckville, Alta., inventor of a swath turner that he uses to speed hay drying.

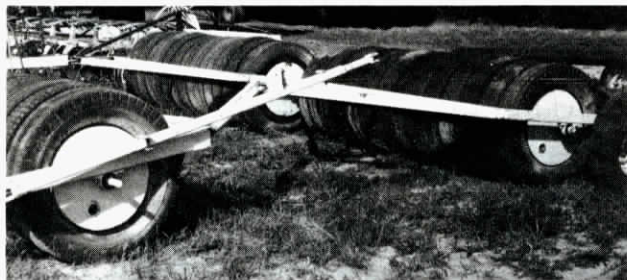
It uses a pickup reel salvaged from an old baler. The pickup feeds windrows to two cone-shaped rollers that, in turn, feed the hay to a smooth moldboard-shaped deflector which does the actual turning.

"We read a story in FARM SHOW several years ago about a windrow turner built at the University of Tennessee. I felt I could build a simpler one for my own use and I've discovered that a swath turner is much easier on leaves than a rake and does just as quick a job. When you're still a day or so away from baling, you can often flip the windrow in the morning and be able to bale later that same day. It helps to get an even curing job that improves the quality of the hay," explains

Murdoch, noting that, "We also use it to salvage crops that get rained on."

The key to the swath turner is that it doesn't mix up the hay. The drums spin at a rate 1/3 faster than the reel, tossing the windrow up onto the deflector on the back, which flips the windrow over. The two cones are driven by hydraulic orbit motors but Murdoch says they could also be chain-driven. The windrow turner can also be pulled behind a round baler with the chamber open, using the baler pickup to pick up the hay and feed it to the trailing turner in place of its own pickup reel. The turner moves the windrow over the distance of about the width of one windrow.

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Tire Cultipacker

Minnesota farmer Harry Zimmer, of Raymond, and his son, Randy, used old truck tires to build themselves a 46-ft. wide cultipacker for pulling behind their field cultivator.

"We like to use the packer on our peat ground to pack the soil for a uniform seedbed, and to help conserve moisture," points out Randy.

The rig features a 23-ft. wide main section with two 11½ ft. wings that fold directly behind the main section for transport.

using two, 2 by 24-in. hydraulic cylinders.

To make the cultipacker, the Zimmers used 56 10-by-20 truck tires — 14 on each wing and 28 in the center section. They simply slid the tires onto a round, water-tight axle — they aren't fastened to the axle or to each other. Randy says the tires aren't filled with concrete or pressurized. If extra weight is needed, the axle is filled with water.

On-The-Go Combine Grain Dryer

"We're making use of heat that would otherwise go to waste," says Frank Williamson, Sidney, Ohio, who's come up with an on-the-go combine grain dryer that'll take as much as one percentage point of moisture out of a hopper full of grain.

The in-hopper grain dryer uses heat siphoned off the combine engine cooling system. Williamson simply mounts a pair of radiator heater cores and a small blower near the combine grain tank. Warmed-up air blows up into the tank through perforated metal grates that he installs in the bottom of the tank.

Williamson says the constant flow of warm air into the hopper dries grain continuously without any change in harvest procedures. The only problem he's found is that when unloading

the warm grain, it cools off and picks up moisture again through condensation. He says one solution to the problem may be to heat the grain-hauling trucks in a similar way to keep grain warm all the way back to the dryers.

The first prototype in-hopper dryer is installed in a Gleaner M2 combine. Williamson may also try to use heat from exhaust gas to dry grain in addition to the engine coolant. "We want to use waste heat to start drying grain in the combine without taking up the time and attention of the combine operator," notes Williamson.

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