

## "Whirlwind" Terracing Plow

"I was looking for a tool to rebuild terraces which could be simply hooked up and pulled by an average tractor," reports Adrian Arnold, Tipton, Kan., who built his own "whirlwind" terracing plow.

"When rebuilding terraces, I run the tractor engine slower so dirt is rolled in a hump. On the next round, I run the tractor faster to throw dirt on top of the first pass," he explains.

The base of his terracer is a heavy-duty Case 5-14 plow. He removed the first and fifth bottoms and spaced out the remaining three bottoms to make room for the augers. He also replaced

the moldboards with metal plates and mounted a steel plate under each auger to prevent dragging. The 14-in. shares were replaced by 18-in. shares and the shanks reinforced with ½-in. plate steel.

Three augers are belt-driven off a field cutter gearbox. Powered by 1,000 rpm pto tractor power, the first auger runs at 950 rpms, the second at 970, and the third at 1,050.

Arnold notes that the plow first had four augers but he took one off because it made the unit too hard to pull. He says a 120 hp. or larger tractor works well.

He also equipped the unit



with a motorcycle wheel and odometer for keeping track of mileage when doing custom work.

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## Home-Built Rock Crusher

Frank Ray adds lots of lime to his fields near Winfield, Kan., and, rather than buy it he decided to build his own rock crusher and go into the business. The resulting machine crushes 30 to 50 ton of rock per hour and weighs over 15,000 lbs.

Ray has lots of high calcium rock on his farm suitable for making ag lime. He simply dynamites it out of the ground, runs it through his crusher and sells it to neighbors who apply it to fields at the rate of 3 to 10 ton per acre.

The crusher consists of a heavy 8-ft. dia. crushing wheel 44 in. wide with heavy metal cross bars that break the rock

into pieces no larger than a pea. The crushed rock is dumped out onto a conveyor belt that carries it away to a storage pile.

Crushing wheel can handle rocks up to about the size of a watermelon. The crusher wheel is driven by a large, 15-ft. dia. flywheel that's belt-driven off a large engine-driven pulley. Ray built every part of the crusher himself including all the pulleys drives on the conveyors and crusher.

The huge crushing wheel is mounted in a heavy metal housing. When rocks are dropped in the top they're crushed by the ever-narrowing margin of the housing. The wheel just barely clears the housing at the bottom,



crushing the rock to powder.

The crushing wheel spins at about 60 rpm's. The end plates of the wheel are 1¼-in. thick

steel welded to the shaft. The metal crushing bars are made from 2½ by 5 in. steel.

## Deere Combine Rotary Screen

"All pre-1974 Deere combines were built without rotary screens. They were cooled by mounting a fan on the backside of the radiator to pull air in through the hood of the combine. The hood has screens which plug up easily so dirt gets into the engine compartment and radiator, causing the machine to overheat. In 1974, Deere began installing rotary screens on all combines and offered a kit to put screens on all earlier models," says Aubrey Baker, Spring Hill, Tenn.

"After I bought a 1973 4400 combine in 1980, I experienced overheating from trash and dust and had to clean the radiator at least once a day with compressed air. When I looked for a rotary screen, I found that Deere no longer offers a kit. A man at a salvage yard told me I could adapt a rotary screen from Gleaner or International to my combine a lot easier than a Deere screen so I bought a used Gleaner rotary screen.

My neighbor, Sam Smith, built an adapter plate to mount



the screen on. He made it so the screen sets in a slot on each side and can easily be lifted up and removed. I had to buy a reverse flow fan from Deere to change the direction of the air flow through the radiator. The rotary screen has a small fan on the inside of it. Each blade of the fan had to be trimmed 3/8 in. so that the screen wouldn't turn too fast. I also had to add a small brush at the bottom of the screen to help keep it clean.

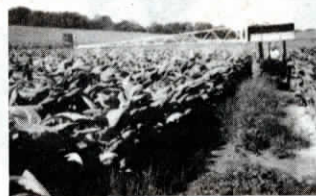
"This past fall I ran it in very dusty conditions and had no problems at all with either the rotary screen or with overheating problems. It took just half a

## Over-The-Top Crop Sprayer Fits Tractor Loader Bucket

"We use it to spray tobacco but it'd work as well on corn, soybeans or other row crops," says Kenny Ferree, Laconia, Ind., about a loader-mounted spray boom that attaches to a tractor loader bucket for work in tall-growing crops.

The unique spray boom reaches out to one side of the tractor about 24 ft. and raises and lowers with the bucket. It'll spray 8 40-in. spaced rows at a time. In tobacco fields, Ferree leaves a 9-ft. wide roadway every 16 rows for the tractor to travel in.

The boom was built out of ½-in. pipe and ¾-in. sucker rod. There's a 50 gal. tank mounted on the tractor 3-pt. A regulator



and control box mount on the tractor fender for easy access by the driver. The boom raises as high as the loader. The boom folds up hydraulically for transport.

"It works so great I wish I'd had it years ago," says Ferree.

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day to install the screen, which turns by the air being pulled through it. There are no belts, pulleys, or countershafts to wear out or break. It has only two small bearings that will never need to be replaced.

Adapting a Deere screen to the combine would have cost twice as much and taken at least two days to install."

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