



Round Bale Shredder Built From Old Flail Chopper

Harold Steel and his sons, Terry and John, modified an old Deere flail chopper for use as a round bale straw chopper to make straw bedding for their 100-cow free stall barn. The Steels cut off the front half of the hood over the knives, removed the chopper's tongue and pto shaft, and built a frame made from 5-in. channel iron around it. They remounted the wheels onto the right side of the frame. On the left side of the chopper they mounted an 18-in. long pto shaft and a 90 degree gearbox (removed from a New Holland 717 silo blower). The bale rotates on a 7-ft. wide, 3 1/2-ft. long conveyor over a wood floor. They shortened up the chopper spout which blows chopped straw into stalls. The rig is 2-pt. mounted on a Farmall 460 "fast-hitch" tractor.

"It takes much of the work out of bedding stalls in our milking parlor," says Harold. "We had been piling 25 bales at a time onto the back of a pickup and shaking the bales apart, but it took too much time and cows tended to drag straw out of the stalls. Now it takes only about 20 minutes to bed all the stalls and straw stays in the stalls longer because it's chopped into small pieces almost as fine as sawdust. We never have to handle

straw by hand except when we roll the bale out to the conveyor. We drive up the 10-ft. wide alley and blow bedding into stalls on the left side. When we reach the end we turn the spout 180 degrees and back out while we blow bedding into stalls on the right side. The chopper is close coupled to the tractor and the wheels swivel so there's no problem backing up."

The bale conveyor slants down toward the chopper knives and is powered by a hydraulic motor removed from an old combine header. The Steels made the conveyor out of manure spreader sprockets, chain, links, and angle iron slats. A hinged pan made from sheet metal mounts under the conveyor to keep straw from falling onto the alley. The operator can control conveyor speed and bale rotation independent of the speed of the auger and knives. A pair of 6-in. rollers made from well casing are mounted on the chopper and act as guides to help the bale rotate.

The Steels paid \$500 for the chopper and spent a total of \$1,100 to build the straw chopper.

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Bifold Doors On "Irrigation Pipe" Buildings

Grover Thompson, Alliance, Neb., used 2-in. sq. tubing and 27-ga. sheet metal to build four 14-ft. high bifold doors for three different buildings that he constructed from used 6 5/8-in. dia. center pivot irrigation pipe.

Thompson welded together sections of irrigation pipe to build the frames for a 50 by 60-ft. shop building and an attached 40 by 60-ft. lean-to machinery shed. The shop building is equipped with a 20-ft. wide bifold door and the lean-to with two bifold doors, 15 and 12 ft. in width. He also built a 40-ft. wide airplane hangar which has a bifold door across its full width.

"I spent only about one third as much as I would have on commercial buildings and bifold doors," says Thompson. "Commercial bifold doors cost about \$100 per foot so a 40-ft. wide door sells for about \$4,000. I built my 40-ft. door for \$1,200."

Thompson opens and closes the doors by pulling a two-way switch. An electric motor powers a gearbox, removed from a center pivot irrigation system, which winches in cables wrapped around a pipe along the bottom of each door.

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Harold M. Johnson, Editorial Director



Heavy-Duty Rock Picker Clears A 12-Ft. Swath

You've never seen anything like the heavy-duty, hydrostatic rock picker built by Al Woznikoski and Maurice Jacobs, Tisdale, Sask., that completely clears a 12-ft. wide swath in one pass, depositing rocks and roots into an 8 by 10-ft. dump bucket on back.

Rock picker is equipped with a 5-ft. wide, 7-in. dia. steel rock-gathering rotor in the middle and two 4-ft. wide side rotors that rake rocks toward the center. The center rotor, equipped with 4 rows of staggered fingers spaced 6 in. apart, picks up rocks and drops them onto a 5-ft. wide "rock ladder" behind the rotor that's made out of Deere Caterpillar tracks. It conveys them into the bucket.

"We probably overbuilt it, but it does a clean job and picks up whatever's in front of it, including large rocks," says Woznikoski, who does custom work and pulls the rock picker with a 160 hp tractor. "We built it because we were tired of picking rocks and roots by hand. The key to our rock picker is the center rotor. It'll dig out large loose rocks up to 2 ft. in diameter. Other commercial rock pickers jump right over large buried rocks. Another key feature is the automatic trip

mechanism in front of the center rotor. When the machine encounters an obstacle it can't handle, only the center section, including the rotor and ladder, lifts up, not the entire machine. It keeps fingers on the center rotor from bending. The hydraulic-dump bucket holds more than two yards of rocks and is twice as large as any commercial model."

Woznikoski and Jacobs built the frame from 1/2 and 3/4-in. heavy wall sq. tubing. They built the side rotors from 3/8-in. sidewall steel pipe and the center rotor from 3/4-in. steel. The "rock ladder" above the rotor is equipped with Deere dozer tracks with slats welded across them spaced 2 ft. apart. Fingers are then welded to the slats, spaced 6 in. apart and made from 1/2-in. angle iron.

The patented rock picker is equipped with two 2-stage hydraulic pumps and four hydraulic motors which operate the center rotor, rock ladder, and two side rotors. It cost more than \$30,000 to build and is supported by dual truck tires. Implement tires support the side rotors.

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