



Clifford and Clarence Arnal enlarged the hopper on their Harley rock picker and designed a new scissors-type lift to dump hopper into truck.



Before using the rock picker, they windrow rocks with either a tooth rake or a roller rake. Modified picker handles stones up to about 14 in. diameter.

## Rebuilt Rock Picker Cleans Fields Fast

The Arnal Brothers, Clifford and Clarence, Ravenscrag, Saskatchewan, say the idea behind their major overhaul of a commercial rock picker was to streamline a tedious and never-ending task.

The Arnals, with help from Clifford and his five sons, farm what they claim is some of the rockiest soil in the world. They spend

weeks every year clearing rocks from fields.

When they went shopping for a rock picker they felt that the Harley rock picker, made by Harley Enterprises of Clarissa, Minnesota, was closest to what they wanted. As heavy and well-built as it was, though, it wasn't good enough. So they proceeded to beef it up to fit their needs.

The hopper on the Harley picker holds a cubic yard of material. The Arnals use 3-ton dump trucks with 2-ft. sides to haul stones away from the rock picker and it would have taken four or five hoppers to fill a truck. They wanted to dump into each truck just once, so they rebuilt the hopper to hold 4 1/2 yards. "That's about all a 3-ton truck will hold," Clifford notes.

Because of that change in the hopper, the axles and frame on the original rock picker were no longer adequate. The original design had two fixed axles with single wheels. They changed this to a walking tandem with two sets of duals on each side of the rock picker. They lengthened the frame and the feed conveyor to give it more capacity, but it still has the original tumbling cylinder that separates soil from the stones.

They left in place the second conveyor that moves rocks from the cylinder to the rock hopper, but added a paddle to help move the rocks off the conveyor into the hopper.

They had to design a new scissors-type lift in order to pick up and dump the enlarged rock hopper. They added two 4-ft. hydraulic cylinders, one mounted on either side, be-



Two 4-ft. hydraulic cylinders raise box high enough to dump into truck. A second set of smaller cylinders tips hopper to dump it.

Between the lift frame and the main frame near the axles to raise the box high enough to dump into a truck. A second set of smaller cylinders tips the hopper to dump it.

Clarence says they can use the rock picker behind a tractor as small as a 4020 John Deere, but notes that on sloping ground, it's better to have something bigger because of the weight of the rocks when the hopper is full.

Before using the rock picker, they windrow rocks with either a tooth rake or a roller rake, depending on the size of rocks in the field. After windrowing, they pick up the larg-

est rocks with a fork-type picker. "The modified picker will handle stones up to about 14 in. in diameter," Clifford says. Once it's rolling, the big rock picker will fill up in about 5 minutes and it takes just a minute to dump it into a truck.

"If you have enough trucks, you can clear a lot of land in a short time," he says. The Arnals have hauled as many as 100 truckloads of rock in a day using the modified picker and two trucks.

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## Giant Pendulum Clock Amazes Shop Visitors

Harry Benjamin doesn't have any excuse for losing track of time when working in his farm shop. That's because one entire wall is taken up by a giant 16-ft. pendulum clock he made out of old farm machinery parts.

The clock's pendulum is a lugged, 5-ft. dia. steel wheel from a 1930's IH tractor. The clock has a 2-ft. dia. face and four chimes made from 7-in. dia. oxygen bottles. They're painted gold and cut to different lengths to make different sounds.

"It draws a lot of attention whenever anyone walks into the room," says Benjamin, of Shelby, Montana. He told FARM SHOW the secret of his clock. Although the pendulum moves back and forth, it's really just for show. The clock movement itself is electric.

All the clock's components are attached to steel brackets that are screwed to the wall beams. The pendulum wheel is supported by a 2 1/2-in. dia. pipe, which rides on a roller bearing at the center of a serrated steel wheel located just below the clock face. Benjamin made the serrated wheel by welding metal fins onto an old implement wheel rim.

The serrated wheel is attached by a hori-

zontal steel bar to another wheel with weights suspended from it. The weights ride on a chain that leads over to the serrated wheel and put constant tension on the wheel fins to keep the pendulum moving.

A rope attached to the bottom end of the chain is used to rewind the clock.

"The weight keeps tension on the fins and is what keeps it all going," says Benjamin. "The clock stops whenever the weight contacts the floor. When that happens, I use the chain to pull the weights clear back to the top again. Every time the serrated wheel clicks it lowers the weights an inch or so."

The chimes are not working yet but Benjamin plans to make them sound every hour.

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One entire wall of Harry Benjamin's shop is taken up by a giant 16-ft. pendulum clock he made out of old farm machinery parts.