



As truck drives up ramp and crosses pivot point, right, the front-end of the ramp drops to the ground, raising the ramp wheels off the ground (far right in photo).

## INGENIOUS WAY TO RAISE VEHICLE FOR MAINTENANCE

# “Teeter Totter” Drive-Up Ramp For Cars, Trucks

“It works perfectly. If I were going to build another one I wouldn’t change a thing,” says Bruce Ogram, Elmira, Ontario who built an ingenious “teeter totter” drive-up ramp for car and truck maintenance that does the job of expensive hydraulic hoists but has the advantage of total portability.

Ogram wanted to work under cars and trucks but he didn’t have a good spot to build a permanent ramp. Also, he wanted to use the ramp to clean the undersides of vehicles with a high pressure washer and then to apply undercoating, and he wanted to be able to do that messy work in an out-of-the-way spot.

The unique “teeter totter” ramp he built is 30 ft. long and pivots at a point 17 ft. from the lower ramp end. The car or truck drives up the ramps, made out of 10-in. wide I-beams, and when it passes the pivot point it over-balances the ramp and drops it to the ground. The fall of the ramp is cushioned by 20-in. truck tires. When the vehicle backs off, the rear end drops to the ground, also cushioned by tires.

“There’s only a mild bump when it drops to the ground because if you drive slowly across the pivot point it’ll drop slowly. The tires help cushion it as does the suspension system of the vehicle,” says Ogram.

One of the I-beam tracks is anchored solidly to the ramp frame while the other track slides back and forth to fit varying wheel spacings. It’ll narrow up enough to accommodate a garden tractor.

The main support legs are made from 6 1/2 by 8 by 3/8-in. H-beam. The top end legs are made from 2 1/2 by 10-in. channel iron. Bracing consists of 2-in. dia. pipe with flattened ends welded to the legs with 1/4-in. thick flat iron gussets. On the left side as you drive up the ramp there’s a 2 by 6-ft. catwalk and a ladder that swings out to

dismount from the vehicle.

When a vehicle is in the raised position, it’s approximately 5 ft. 6 in. above the ground. It could be built higher or lower as desired, says Ogram.

A 13-ft. by 10-in. I-beam serves as the pivot point, and it also slides out for use as the tongue for transport. The pivot beam is fitted with small cast iron wheels so it can be rolled from the pivot to the lower end of the ramp to be put in place for transport. Moving and mounting the tongue is an easy one-man job with the use of hydraulic jacks.

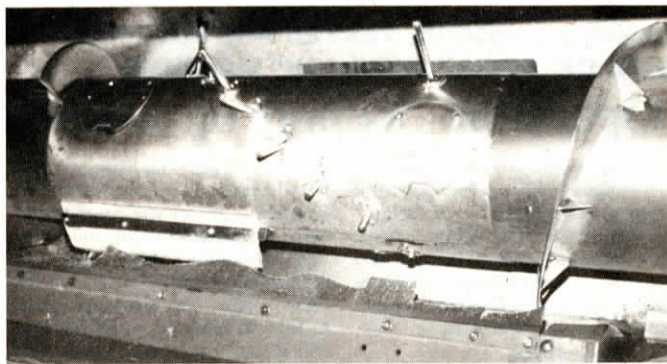
There’s a low railing along each side of the tracks - 6 in. above the bottom of the track - that keeps the tires on track. A strip of expanded metal grating laid into each track provides good traction even when wet or covered with snow. A 6-in. piece of angle iron across the end of each track acts as a “stop”.

To get onto the ramp, two hinged 4-ft. long, 10-in. wide channel iron tracks extend to the ground from the bottom of the ramp resting on the truck tire cushions.

“We’ve taken the ramp on the highway pulling it behind our Ford Econoline van. Transport width is 8 ft., 6 in. We had no more problem than pulling a load of hay,” says Ogram, who says the ramp weighs 5,865 lbs. although it’s balanced so that tongue weight is no more than 115 lbs. Total cost of construction was \$1,162.68, using mostly scrap materials, and it took 177 hrs. of shop time.

The biggest vehicle Ogram has driven onto the ramp is his Ford van but he says it’ll handle bigger pickups and trucks.

For more details, send a stamped envelope to: FARM SHOW Followup, Bruce Ogram, Rt. 4, Elmira, Ontario Canada N3B 2Z3 (ph 519 669-3771).



Rubber belting bolts to the paddles which are positioned 4 in. in from either side of the feederhouse opening. Juhnke says the 45° mounting angle is critical.

## Add-On Feeder Paddles For Deere Combines

“It’s unbelievable how this simple modification improved the feeding and cleaning ability of my combine. I haven’t used the header reverser since I installed the paddles more than 2 years ago,” says Leonard Juhnke, Sedgwick, Kan., who solved feeding problems with his Deere combine by removing auger flighting from the center of the feeder auger and replacing it with 24-in. wide “paddles” that help push material into the feederhouse.

Juhnke says that when he first bought his Deere combine, it had a “severe feeding problem in wheat and milo. “We broke the main header driveline due to vibration and lack of proper feeding. The drive belt on the primary countershaft kept wearing out - we’d go through 5 or 6 belts a season. Material would back-feed from the cylinder and the raddle chain continually jumped off the sprockets in the feederhouse. And in general the lack of smooth-feeding caused vibration and problems throughout the entire machine.”

Juhnke says Deere and company was aware of the problems and worked closely with owners of 8820’s and 7720’s to come up with modifications to solve the problems. One of their first suggestions was to remove the flighting on the feeder auger in front of the feederhouse. “That prevented some of the bunching up at the center of the feederhouse but it didn’t solve the entire problem. Then the company advised owners to speed up the beater 50% but that caused the beaters to break down - the bearings wore out - and they had to be replaced. So they told us to slow the beater down again and stepped up the speed of the sieves and straw walkers. But still there was too much vibration. At the end of the first two years, Deere brought the combines in and repaired them. They really tried to solve the problem but they couldn’t seem to

do it.”

When all of Deere’s efforts failed to solve the feeding problem to his satisfaction, Juhnke decided to try to come up with his own solution. He observed that Deere’s cornhead had two paddles on the feeder auger and thought they might work just as well on the grain platform. He attached two 24 by 4-in. paddles on the feeder auger directly in front of the feederhouse and directly opposite the pickup fingers. The paddles, made out of 1/8-in. thick steel plate, weld to the auger at a 45° angle and are covered with 6-in. wide pieces of heavy-duty rubber belting that “sweep” the floor of the platform.

“I mounted the paddles on the auger three times before I got them right. The 45° angle is critical because it keeps material from wrapping around the paddles. This modification works better than I ever thought it would. The combine now works to perfection, feeding so smoothly and evenly you almost can’t believe it. The best thing about it is that this is such a cheap and inexpensive way to solve a problem that has been bothering Deere for years,” says Juhnke.

The paddles are positioned on either side of the feederhouse opening, 4 in. in from either side of the opening. The rubber belting that’s bolted to the paddles was salvaged from used bucket elevator. Juhnke says the belting is probably not needed but he likes the flexibility it provides and the way it sweeps the floor of the platform. The 6-in. wide belting overlaps the 4-in. wide paddles by 2 in. He says the 3/8-in. thick belting must be replaced periodically.

Although Juhnke has no plans to develop the feeder paddles commercially, he says he’s willing to visit by phone with farmers who want to try the idea. You can reach him at 316 772-5638.



A hitch attaches to the drive-up end of the ramp so Ogram can easily park it out of the way when not in use.