

Logger Specializes In “Twisted” Trees

With 10,000 acres of timber needing to be thinned out in publicly owned nearby forests, Gordon West saw an opportunity for himself and other woodworkers in his part of New Mexico. He and other loggers, woodworkers and environmentalists formed a coalition to thin the forest, reduce fire risk and help the local economy.

“We got the environmentalists together with the Forest Service, and everyone could agree that there were a lot of trees that needed to be cut down,” says West.

The catch, of course, was that the logs to be removed had to fit specific guidelines and they had to be taken out with minimal damage to the forest floor. The problem was that such low return thinning wouldn’t justify a half million-dollar piece of equipment.

“I ran across a Komatsu articulated dump truck with 600 hours on it,” says West. “It would have been \$125,000 new, but I got it for only \$18,000. I put a knuckle boom on it, took the sides off and turned the bed into a log trailer.”

Recently a Forest Service hydrologist told him his rig provided the least impact from logging she had ever seen. With the removal problem solved, West turned to utilization. One problem is that many of the logs being removed are twisted due to over crowding.

So West found a way to make better use of the twisted and knotted logs by developing a machine that combines a lathe-type table with a laser line projector, band saw arm and a drill.

He calls it the Center Line System and it will take a log up to 18 ft. long. The laser line projector helps find the center point so the operator can cut and drill as needed. It can bore, mortise, tenon, groove, notch and flatten sections of logs. West uses it to make truss parts as good as any made from milled logs.

“Twisted logs are as strong or stronger than straight ones; they are just harder to work with,” he says. “With this machine, you can cut repeatable joints in natural logs quickly. It can also be done by hand, but it’s very time consuming.”

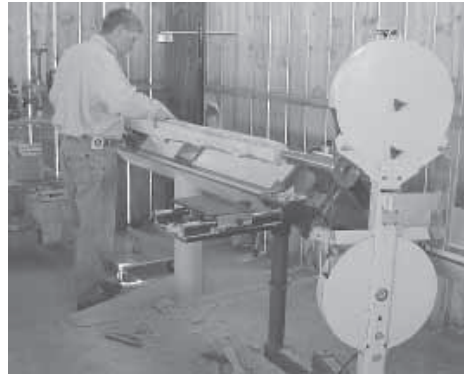
Six area businesses have formed a consortium to utilize and share the thinned logs. In addition to West’s Santa Clara Woodworks, there is a furniture maker who also does architectural detail work and carving. Another fellow does log timber framing using rough round wood instead of squared logs. A blacksmith makes ironwork to fit the needs of the woodworkers. West and others are also looking at ways to use the wood chips. For example, West is fabricating building blocks from wood chips mixed with a binder material.

“They’re structural and yet they can be sawed, drilled, nailed and screwed into,” says West. “It’s better than adobe or concrete.” West has prototype wood blocks, but needs to find a lower cost binder for the idea to be commercially viable.

While he has no plans to build and sell the logging machine, West is selling the



West found a Komatsu articulated dump truck, put a knuckle boom on it, took the sides off, and turned the bed into a log trailer.



To handle “twisted” trees, West created a machine that combines a lathe-type table with a laser line projector, band saw arm and a drill. Center Line System can bore, mortise, tenon, groove, notch and flatten logs up to 18 ft. long.

Centerline System machine. It’s priced at \$24,500. West also offers two-day instruction classes for buyers.

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Trailer walker can be fitted and removed in seconds. It works by progressively chocking the trailer wheels as the drawbar is levered from side to side, which makes it easy to push or pull a trailer even if it’s heavily loaded.

“Trailer Walker” Helps Move Heavy Loads By Hand

A New Zealand fencing contractor has come up with a new way to safely maneuver heavy trailers by hand.

Ross Hart says his “trailer walker” can be fitted and removed in seconds. It works by progressively chocking the trailer wheels as the drawbar is levered from side to side, which makes it easy to push or pull the trailer even if it’s heavily loaded.

With his new device, wheeled loads up to three times heavier than normal can be inched uphill or downhill - safely.

“As long as you can get some leverage on the drawbar, the trailer walkers will deliver pushing or pulling movement to the trailer,” he says. “It’s really surprising how even short movements, one wheel after the other, will result in progress in complete safety to the operator.”

The trailer walker is designed to fit most modern round or box-section axles. The chocks are positioned either in front of, or behind, both wheels. If you want to move the trailer away from you, you place the chocks

in front of the wheels. If you want to move the trailer toward you, you place the chocks in back.

The chocks are made from heavy rubber and are hexagonal in shape so they’re free to rotate to follow uneven ground.

As the drawbar leverage moves the trailer wheel or wheels on one side, the device and its chocks follow into position to lock that side against any runaway weight and/or the leverage exerted next on the other side of the trailer. This crabbing movement gently moves the trailer in the desired direction.

He got the idea after being injured while trying to maneuver a trailer by hand on a steep slope. He says the same idea could also be used to move boats, caravans, and other kinds of trailers.

An added chain and padlock can be used to extend the trailer walker into a security device.

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Tracey Palechek spent about \$4,000 on the garbage truck box he and his son turned into a cattle feeder. “At 650 cu. ft., it has nearly three times the capacity of our silage wagon,” he says.



Garbage Truck Cattle Feeder

Tired of fixing broken floor chains in silage wagons and making multiple trips to fill cattle bunks with silage, Tracy Palechek and his son Chris went looking for alternatives. When Palechek saw the box from a garbage truck at a local salvage yard, he figured it might work.

“At 650 cu. ft., it had nearly three times the capacity of our silage wagon,” explains Palechek. “With the double acting cylinder in it to push the silage to the front, we could get away from floor chains that always seemed to break when the wagon was full.”

The first step was to cut the top off to make it easy to fill. They then mounted it on a Deere 300 stackwagon bed. Palechek figured that the walking beam axle would spread out the load on soft ground in the spring.

They built a beater system for the front of the box out of salvaged pto shafts. The shafts had come from silage cutters and been replaced due to faulty bearings. Sections of angle iron were welded to the shafts. Worn silage cutter knives welded to the angle irons serve as teeth on the beaters.

A gearbox from a silage cutter mounts on the beater and provides power through an old truck transmission. The same system also powers the elevator that Palechek mounted in front of the beater.

“We can change speeds of the elevator and the beater,” says Palechek.

Just when the two thought they were finished, they discovered that more modifica-

tions were needed. The hydraulic system on their tractors couldn’t pump out the 40-gpm flow rate needed by the 12-ft. double acting cylinder.

“We took it out and replaced it with a single acting cylinder from a gravel truck that only needed about 20 gpm,” says Palechek. “That would push the silage out, but we still needed to pull the cylinder back.”

The solution was a seemingly complex system involving a second cylinder and a set of pulleys mounted vertically to the back wall of the box. Palechek hooked an 8-in. cylinder with a 2-in. rod and a reach of 36 in. next to the push cylinder and connected to the same hydraulic circuit. He attached a length of cable to the end of the rod and ran it through four pulleys for a 4 to 1 multiplier and a fifth one to change direction, finally attaching it to the push wall. As a result, when the rod extends 3 ft., the cable moves 12 ft., enough to return the large cylinder and its push wall to the rear of the box again.

“The competing hydraulic pressures keep the cables tight,” explains Palechek. “Once we got the two cylinders working, the thing worked pretty good. Even with replacing the cylinders, we probably don’t have \$4,000 in it. A new wagon would cost around \$35,000 and wouldn’t hold nearly as much.”

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