

Backfill

Still Grinding After 200 Years

Andy Shrake fixes windmills. Not the newfangled kilowatt-generating type, but the all-wood grain-grinding beauties built some 200 years ago. With 14 still standing on Nantucket, Cape Cod, and Rhode Island, repairing them is a full-time job. As Shrake's name is passed along among preservation committees, he travels from mill to mill, fending off the ravages of weather and insects. "There's no owner's manual for these things," he says. "You have to figure it out for yourself." He gathers clues from old photos and other windmills in his care, and draws on a deep well of knowledge acquired over decades of conservation work.

The job shown here involved repairing the Jonathan Young Windmill in Orleans, Mass. Shrake used a chainsaw mill and a power planer to hew a new "dragger pole" (1); this 43-foot-long beam keeps the sails facing the wind while acting as a brace against its force. Inside the mill, the 6-foot-diameter brake wheel (2) — named for the oak-drum brakes wrapping its rim — engages the wobbler gear on the vertical shaft, turning the millstone to grind the grain. Most of the mill's original wooden parts remain intact and functional.

To secure the dragger pole, Shrake drilled a hole (3) for a steel pin culled from an automotive drive shaft. Grappling hooks connected to both sides of a steel ring on the beam's square haunch will distribute the dragging force to the rotating rim of the mill's conical roof. The dragger wheel (4) came from an old wagon and is protected from decay with epoxy resin and paint. The top of the mill will be rotated every four months or so to ensure even weathering of the new beam.

Thanks to Shrake's repairs, the mill is now operable for the first time since it was moved to the site in 1986. As for Shrake, he's already moved on to the next challenge. —

Dave Holbrook

