



photos by the author

The first trolley built by the Blue Ox—for the Eagle House Inn—is an exact replica of an 1866 trolley made for Brazil's Emperor Dom Pedro.

The Blue Ox—Making History Come Alive

by Deborah R. Upshaw

Restoration and preservation is a prime concern for many residents of Eureka, California—an attractive northern coastal city surrounded by redwoods. Here the fine architecture is as much a fascination as the area's natural wonders. More than 10,000 old homes remain in Eureka, and many buildings date back to the 1860's, reflecting styles that were popular in the Victorian era.

One man dedicated to the preservation of the town's local history and architectural treasures is Eric Hollenbeck, founder and owner of the Blue Ox Millworks. Situated on the shores of Humboldt Bay, his company specializes in reproduction and custom millwork. The Blue Ox makes wood products for residential and commercial structures, and has recently started manufacturing old-fashioned wooden trolley cars. Hollenbeck and his five employees shape interior and exterior mouldings, siding, gutters, rails, columns, door casings, balusters, banisters, wainscoting, and fancy fretwork.

"We do the gingerbread trim on the Victorians, and we can match any moulding desired, including original designs," Hollen-

Deborah R. Upshaw is a freelance writer from Eureka, California, and a frequent contributor to Popular Woodworking.

beck explains. "We work a lot with redwood, but we also use oak, mahogany, fir and birch."

Remarkably, the very machinery used to make the handsome wood embellishments are historical relics themselves, dating back to the turn of the century. Hollenbeck, who has been interested in reproducing bits of history since childhood, searched out the vintage machines capable of producing the fancy woodwork. He found some of the equipment sitting idle outdoors and facing disintegration, but he willingly restored them.

"My two square-headed moulding machines—a 1904 Woods and a 1922 Hermance—are among my most interesting wood-working machines. I pulled one out of the weeds near Yreka, and I found the other in some blackberry briars in Miranda. It took a year to put them together. Most of the parts were there, but I had to make a few myself to get them running," he recalls.

Hollenbeck's machines can cut dozens of styles of exterior and interior mouldings and complicated fretwork, as well as nine different styles of redwood gutters. They are capable of patterning wood up to 12" wide. The enormous and powerful machines each require two men to operate. Hollenbeck describes a typical scene of operation:



Hollenbeck takes the trolley—here, about 90% complete—for a test drive through Old Town, Eureka, during a fund-raising event.

head. Then I drop the belts to the other heads that aren't being used, and they remain static.

"On the other hand, there are some cases where I might use up to seven knives in one head. This series of knives, put in a certain order, cuts differently than the others and makes a pattern across the board."

Hollenbeck has one of the largest collections of cutter knives for these machines in existence—over 3,000! And if he doesn't have the knives necessary for a certain design, he hand grinds them himself. Other rare machines at the 12,000 square foot facility are a carriage saw mill equipped with a 52" circle head rig, a lathe capable of turning wood pieces 24" in diameter and 17' long, band saws up to 36", and a 1905 single-sided planer that can handle 32" wide planks. Another building houses a 1902 double drum sander which Hollenbeck discovered on an old logging skid road near Phillipsville. He disassembled it, pulling it



One of his first wooden vehicles, this Model T Depot Hack runs on a 2-cylinder gas engine and features redwood wainscoting.

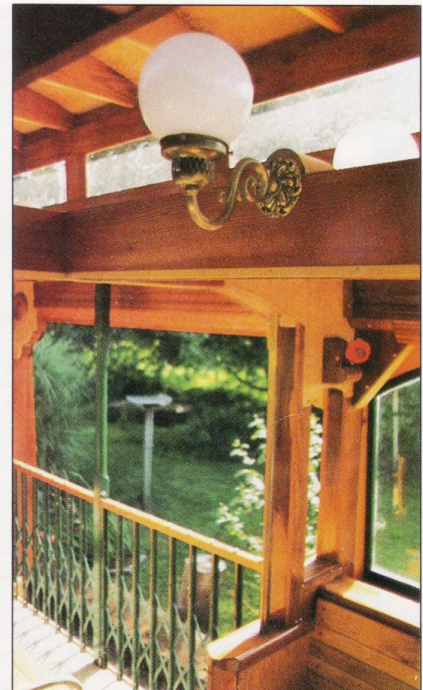
out part by part, and then meticulously restored it. Today the sander is used regularly on the many intricate moldings and wood products they make, some up to 42" wide.

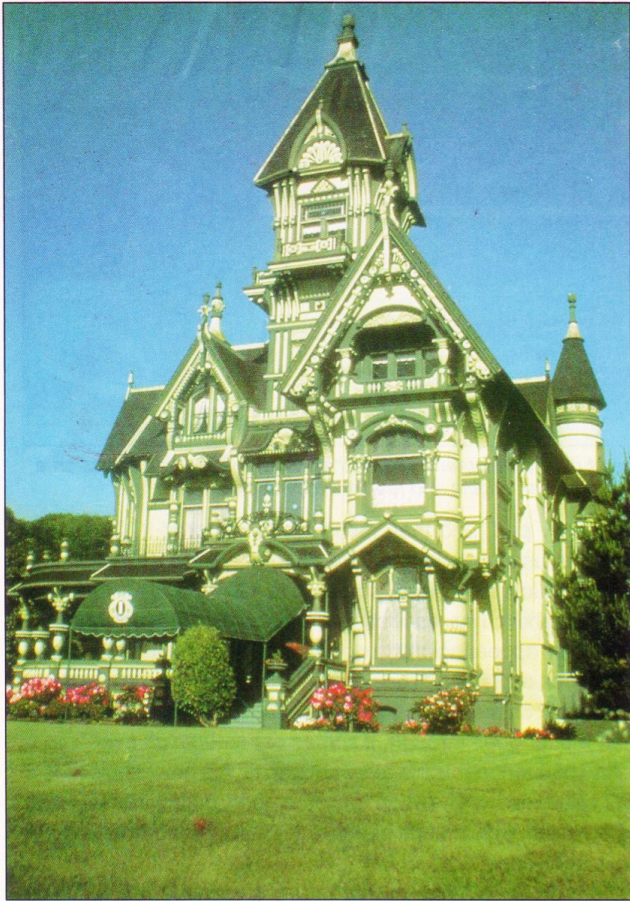
"The sander has oscillating drums which prevent sanding marks from appearing on the wood. And it sands in any direction," Hollenbeck explained. "I use coarse grit sandpaper on one drum and fine grit on the other. It's able to sand the cross grain, too, so when a door goes through, it comes out smooth all over."

An 1866 tenoner is his oldest machine; his newest piece is a 1947 band resaw. The shop has other tools dating from 1862 to 1942. Hollenbeck intends eventually to turn his company into a public showcase.

"I am going to make this company a working museum," he says, "where people can see what the old-time machines can do. I plan to put up large convex mirrors above the machines so people can watch them spew out sawdust and make the fancy

The three trolley cars currently being built by Hollenbeck's Blue Ox Millworks are modeled after an old time trolley car that ran in Eureka, California, at the turn of the century. The fancy trim, interior details and side-facing seats will take riders back to an earlier, more gracious era.





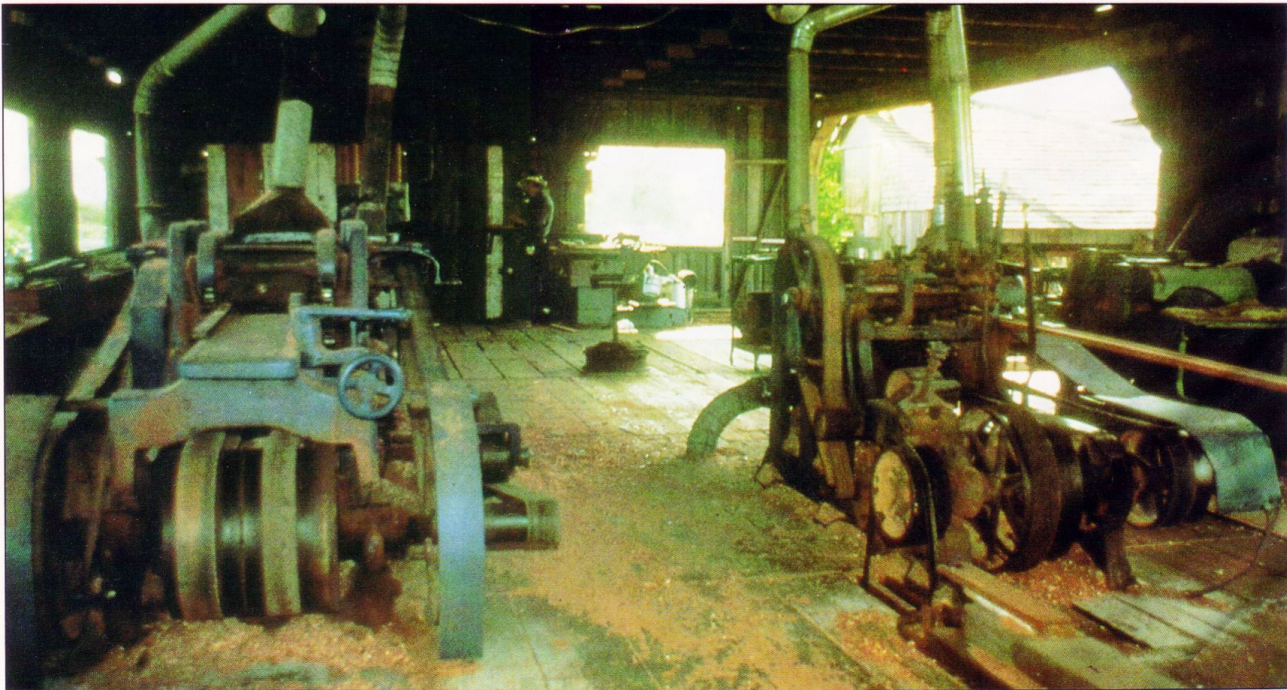
The Carson Mansion above attracts thousands of visitors to Eureka each year to admire its beautiful architecture and trim. In the window close-up to the right are shown casings, corbels, plinth blocks, and a few of the 2,000 rosettes embellishing the Eagle House Inn.



"With the motor on, the heads start spinning rapidly. You push the wood through and suddenly you're surrounded by shrouds of sawdust. You can feel a tremendous power. Then, at the opposite end, a huge finished rain gutter comes poking its head out."

Each moulding machine has four heads with cutter knives in each. This makes it possible to cut four sides of a board at once, although it isn't always necessary to use the four heads simultaneously. "In some cases I may not want to use all four heads. For example, with a door casing, you need a pattern only on one side. I have to decide whether to run the pattern off the top or bottom

Two square-headed moulding machines—a 1904 Woods and a 1922 Hermance—rescued from weeds and blackberry briars, and rebuilt by Eric Hollenbeck, now make fancy gingerbread trim, gutters, and other custom Victorian woodwork at the Blue Ox Millworks.



gingerbread trim for homes and buildings. It would be a real kick for tourists." The tour would proceed along a catwalk where people could look through several large picture windows and see the work going on inside. The setting of the Blue Ox Millworks is an attraction in itself—on the edge of Humboldt Bay, overlooking sea lions basking in the sun on small islands, with herons, egrets and seagulls flying overhead.

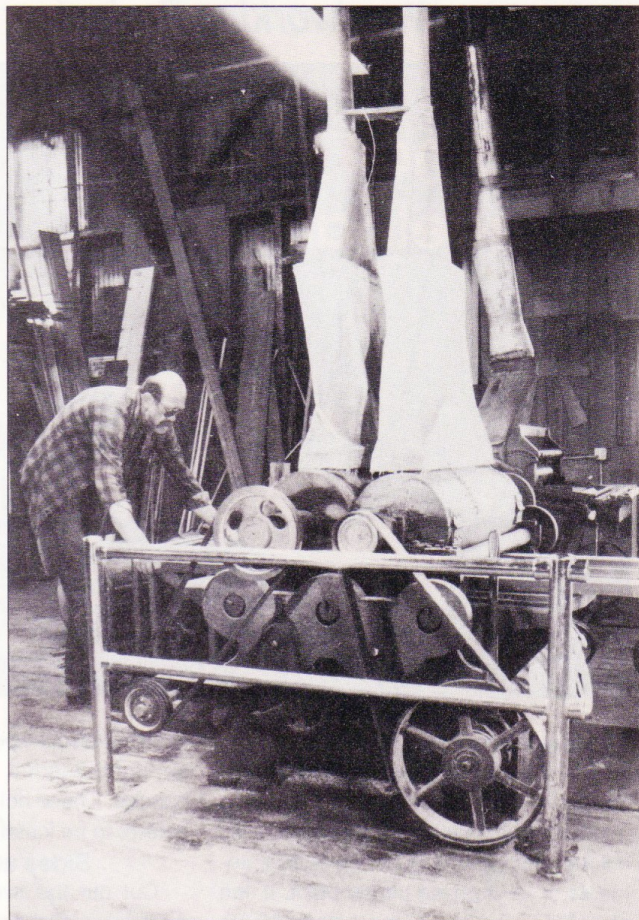
One of the biggest jobs recently completed by the Blue Ox was millwork for the Eagle House Bed and Breakfast Inn, established in Eureka in 1888. The machines turned out thousands of board feet of mouldings, siding, wainscoting, balconies, turned columns, rosettes, and much more for the restoration of this historic building. Then, knowing that Hollenbeck had experience building old-time wooden vehicles, including a Model T Depot Hack and a 1912 Franklin, the owners of the Eagle House commissioned him to build a trolley car—a replica of the trolley built in 1866 for Emperor Dom Pedro of Brazil. The trolley has a body made almost entirely of 3/8" fir plywood and stained mahogany, and is finished with a clear marine urethane finish. The interior features handsome oak accents and plush leather upholstery.

His successful trolley car project led to a major commission—building three gas-powered trolleys for the City of Eureka. The local Historical Society, Heritage Society, and the Eureka Business Improvement District Association are the organizers and funders of the trolley car undertaking, and it will mean steady work for the folks at Blue Ox during the coming months.

"I'm patterning them after the original Trolley Car #3 that ran in this city from 1903 to the mid 1940's," Hollenbeck explains. "Each 30-foot long trolley will have a 671 GMC diesel engine with an Allison transmission. The wooden framework or skeleton will be made from Douglas fir 3 X 8's, and the skin will be 3/8" fir plywood. Redwood will be used inside and out."

Hollenbeck, who's always been curious about what could and couldn't be done with wood in automotive applications, feels that his design ideas are feasible. "We are rediscovering applications of wood to automotive design that the early auto manufacturers used in the teens and twenties. We have found that wood and steel can be combined to produce both an aesthetically pleasing

Hollenbeck has collected or made over 3,000 cutter knives for his vintage moulding machines.



Blue Ox employee Todd Jensen runs a door through the 1902 Heath double drum sander.

and a strong and durable vehicle."

Eventually these 32-passenger trolleys will serve local citizens and tourists in providing transportation around the city, as well as special charters and holiday tours. The trolleys will harmonize well with the historic flavor of the Old Town district and the many old neighborhoods. Amazingly, the location of the Blue Ox Millworks where the trolleys are being built is the same site where the old North Mountain Power Company once stood—the company which housed the electric-powered trolley fleet of yesterday.

Hollenbeck hints that the Blue Ox may become even more involved in manufacturing similar vehicles in the future. "I think it would be a real boon to this community to have a non-polluting manufacturing company building trolley cars, cable cars and the like. It would blend right in with my idea of turning the Blue Ox into a theme park or working museum." Certainly this new development will have positive effects on a business that began humbly fifteen years ago.

Hollenbeck hasn't let these modest achievements alter his outlook or his business philosophy. Dressed casually in jeans, a pipe between his teeth, wearing a hard hat painted with a rainbow and redwoods, an aura of small town friendliness about him, he states his claim to success:

"The thing you have to do is stay with it. Some things work and some things don't. But you keep going along with your hopes and dreams. I think you're only beaten when you quit." **DW**