

My Resurrection of a Union Custom Loom by Franklin Drake

It towered in the back of my grandmother's attic, behind the steamer trunks and side-saddles, a huge and complicated wooden machine that seemed older than the house itself. "What is it?" I asked as a curious 6 year-old who'd found his way up a winding staircase one rainy morning.

"That? That's a loom. They used to weave cloth on it during the War, when the Yankees blockaded us and there was nothing to buy. Just leave it alone." My grandmother made me come down from the attic.

My grandmother's house was built in 1855, so everybody knew "the War" was when Sherman's army marched through, stealing whatever it did not burn. Apparently some resourceful ancestor had built a loom in wartime without nails, pegging together a framework and shafts that still carried musty strands of cotton warp. Long forgotten and slightly menacing with its rows of pegs and wooden teeth, it sat idle for almost a century. I was both fascinated and afraid of it, and I never forgot it.

Nearly 50 years later, one Saturday afternoon that curious grandson is wandering the aisles of a junk-tique store in rural southern Virginia. Now a hobbyist woodworker with a fascination for "dusty old things," I have an appalling habit of hauling home broken furniture and boxes of nondescript hardware. For the first time in my memory, I have found what looks like an old floor loom. Closer scrutiny with a flashlight reveals it to be a "Union Custom Loom," commercially made in Boonville, NY. A practiced eye tells me it is made from hardwood, but clearly it has sat in someone's barn or attic so long that it has weathered to a uniform gray. Its hardware, a wonderful collection of ratchets and chains and who-knows-what, is rusted solid. It even has treadles, like some wooden organ. Apparently nothing about it works right.

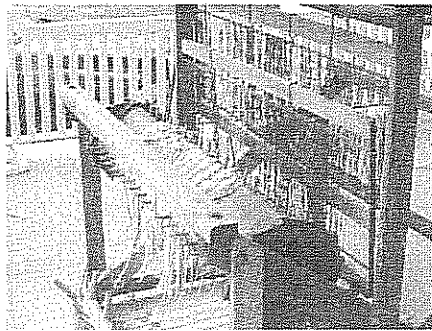
After a moment's bargaining, the shopowner and her husband are grunting it out the door and onto my pickup truck. Both they and I are delighted to see it go. Loose in every joint, my prize flaps and rattles home. It even leans on the turns. By the time I arrive, parts have split and shaken loose to dangle over the truck's sides. Together with an unidentifiable sackful of "These here go with it," I have a new puzzle, in 3 dimensions.

My teenage son and two of his football buddies had all they could handle to get it off the truck and onto the veranda. It wasn't so much heavy as it was gangly, with no place to grab that didn't pivot or pinch or drag behind. "So, like, what are you going to do with this, weave yourself a rug?" they snickered. Teenagers are such delightful conversationalists.

"No, I'm going to restore it," I said loftily. "and then I'm going to donate it to a crafts school someplace." They grunted a reply, before shuffling off to plunder my refrigerator

again. My skeptical wife wearily predicted a month's mess all over her porch.

I knew a bit about furniture and boats and houses made from wood, but this was something else entirely - a wooden machine. I didn't know the names of any of parts or even exactly how it was meant to work. No one I knew had ever owned a working loom. Each year for a decade I had stood in front of a "living display" at the State Fair, watching a costumed weaver operate a loom that seemed older than the world. But the press of the crowd and an impatient wife had always swept me on to the next display before I could gain an eyeful. The answer was obvious. I needed to consult the Source of All Knowledge, the Internet.



This is the "before" picture of the Union Custom Loom which Franklin Drake brought back to its original usefulness and beauty. It is shown on his porch in Wake Forest, North Carolina.



The "after" picture of the loom shows Norma Ritchie weaving the first rug on the newly restored Union Custom Loom in her home in Butler, Tennessee.

Within minutes, I had googled my way into the strange world of heddles and raddles and reeds and warps. There were obscure words like "countermarche" I had never seen in print, describing methods of a craft which seemed as arcane as its vocabulary. Blessedly, I stumbled on *The Weavers Friend*, and with it, a store of loom manufacturers' literature. In short order, I found a drawing of precisely the model I owned. To my astonished relief, even a reprint

of the owner's manual for my loom was available. Now I had it on the run.

Using the manual over the following weeks, I took apart the loom, a piece at a time. Meanwhile I read up on the history of the manufacturer. I was able to guess my 45" 2 shaft counterbalance rug model was built sometime in the 1920's. The factory literature revealed it was made from "selected hardwoods" for rural homemakers to weave rag rugs for family and profit. During the Depression, apparently the factory had resorted to cutting its prices and painting its looms bright blue. I suspect the aim was more than just eye appeal; paint can cover the knots of lower-grade woods. Mine was never painted, and the beech and chestnut lumber was flawless. If the wood had ever been varnished, it had long since flaked or worn away.

Gradually, a scrub down with steel wool soaked in boiled linseed oil revealed a honey colored patina I could not have copied with modern furniture stain. The loom had been built with more than two dozen 3/8" carriage bolts over 3" long, backed with iron washers and old-style square nuts. Lap joints and mortising were meant to provide a rigid frame, complete with a shuttle rack. All of the hardware appeared original and all of it was unplated iron. Its thin black paint had lost out to rust long ago. This machine was not built like a toy, but for long hours of hard use by someone who needed the money it could make. It had been used, too. I cut a basketful of tangled cotton warp in three colors from the warp beam.

I wanted to resurrect the loom to a usable "as new" condition. That meant the corroded 12-dent reed had to go, along with the wire heddles that were crumbling into rust. The rest of the machinery yielded to penetrating oil and a wrench. I mounted a 6" steel braided wire wheel onto my wood lathe, and discovered how effectively it removed rust from the iron and skin from my knuckles. I also re-learned how friction causes heat and how to juggle hot hardware.

As restoration progressed, I recognized the manufacturer had used off-the-shelf materials wherever possible. The warp beam release lever was simple round bar stock, bent to fit. The spool rack spindles began as large common nails, with their flat heads clipped off after insertion into the rack plank. The chain suspending the shafts from the top roller was identical to the copper-plated window-weight chain in my 1910 house. Yes, that particular style is still made - I had a supply remaining from my last window repair. I even had enough to re-chain the treadles as well.

Piece by piece, the loom disappeared from the veranda and then reappeared in my basement shop, gleaming softly with fresh varnish
(continued on the next page)

My Resurrection of a Union Custom Loom by Franklin Drake

and black metal paint. Sometimes I had to stop the tear-down to reassemble some of the parts before I forgot how they fitted together. Sometimes I was a little late; I found the main framework could be reassembled at least 4 different ways, and of that 3 of those are wrong. Cracks and splits in the wood disappeared with modern waterproof glue and plenty of clamps. To my surprise, I found no rot and no pieces that required outright replacement. Except for the crank and some pointed wooden pegs in the warp beam, the loom was entirely intact. Even the detachable warp guide for the rear beam emerged from a sackful of odd parts.

Trying to clean the rust from the 12-dent reed was just too disagreeable. The heddles were also beyond use, so it was back to the Internet to find replacements. I am now firmly convinced that absolutely anything can be found for sale there. Within an hour, I had 600 new eye-heddles and a 46" stainless steel 12

dent reed on order. The heddles' length matched the originals perfectly, but the modern reed was only 4 1/2" high, unlike the 5 1/2" original.

A slight modification of the beater was needed to accommodate the replacement, but it now appears to fit nicely. The heavy iron beater handle lends plenty of weight as the whole frame pivots back and forth.

When the 2 shafts were re-heddled and re-hung with their shining chains, the loom really seemed to come alive. It moved like it was intended to, when I pressed the treadles. In that moment I finally realized what "counterbalance" actually means. I also saw a loom that probably looked as good as it did when Coolidge was President.

So, am I about to become a weaver? No, I am a woodworker without the patience to warp 600 heddles and 35 spindles. My goal was to resurrect a loom loose in every joint and rusted

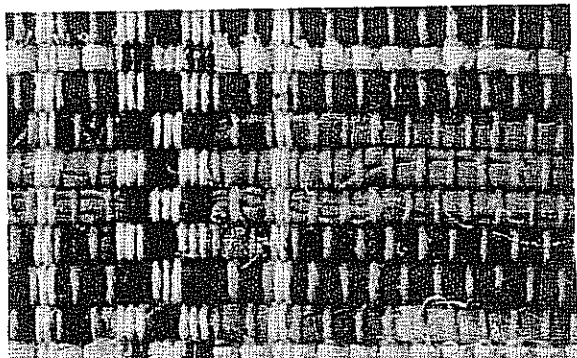
to a standstill, and then find someone who will enjoy using it as much as I enjoyed restoring it. My wife's goal is to get it off the porch. We will both succeed.

My grandmother's house still stands, empty now save for its ghosts and memories, and a huge old loom in a dark attic. You know, I bet I could get back there some Saturday. With a little time I could climb there and see what's left of that loom. With a little work, I bet it could. . . . The End

Update on the Union Custom Loom:
The loom now resides in the home of Bob and Norma Ritchie in Butler, Tennessee. Norma weaves rag rugs on it. The Union Custom Loom is one of the finest hand looms ever invented for the weaving of rag rugs.

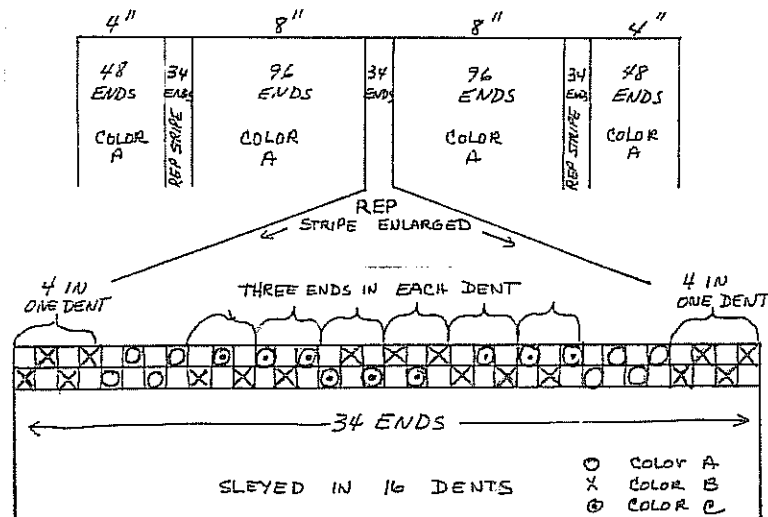
Clustered Warp Stripe Rug or Rep Stripe Rug

Clustered Warp Stripe Rug or Rep Stripe Rug
Warp: 8/4 cotton carpet warp in three colors
Weft: Fabric strips, one color or Hit and Miss
Sett: 12 ends per inch
Width in reed. 28"
Total number of warp ends: 390
Threading: 1,2,1,2



In this rug the three checkerboard stripes are formed by closely set warps in alternating colors B and C. The warp ends are sleyed three ends per dent in the striped areas.
(Plan by Paula Pfaff)

See: Meany, Janet and Paula Pfaff, "Weaving Rag Rugs," Learning Exchange 29, *Shuttle Spindle & Dyepot*, Volume XXXII, No. 3, Issue 127, Summer 2001, Pages 43 -47.



In a Clustered Warp/ Rep Stripe Rug, the warp is sett very closely in certain sections to produce a vertical stripe accent. If two contrasting colors are alternated in the warp and threaded as Log Cabin, just in the stripe area, a "checkerboard" effect will develop. The warps must be dense enough to cover the weft for this to be successful. Additional accent stripes, also sett very closely, can be added on either side of the larger warp stripes. The remainder of the rug may be sleyed at the usual number of warp ends per inch (12 e.p.i.)
This rep stripe design is taken from a rag rug runner ninety nine feet long and 33 1/2 inches wide.