

Weekly work updates from February 2004 through December 2004 on the restoration of the 1895 lumber schooner *C. A. Thayer*

February 16 - 20, 2004

The big activity this week was beginning to take off the outer planking in the topside area – above the waterline. This is all 4-inch material, most of it 8 to 10 inches wide. They started on the starboard side amidships. By the end of the week, both starboard and port sides were stripped from the poop bulkhead to the focsle break, and down to just above the bottom paint line.

Most of the planking in this area was replacement, done over the years. This is an area prone to rot and to damage from piers and tugs. Almost all of the replacement planking was fastened with spikes alone. We have seen no replacements using trunnels. The presence of trunnels is an indication of original planking. There was some fastening with through-bolts, in areas where the frames were so rotten that they would not hold spikes. In the areas replaced, the trunnels were cut off flush with the face of the frame timbers. There were some frame timber replacements amidships in the starboard side, reasonably well done, but in short lengths. The original fastenings seem to have been a spike and a trunnel into each frame through each plank.

We finally get to look at the top timbers – the upper timbers or “futtocks” of the frames. The first thing we looked for was the fastening pattern for the clamp and the thick ceiling. There are clearly drift bolts driven from the outside. We see their heads countersunk into the outer face of the framing. It would seem that the drift ends that we see on the inside of the clamp and thick ceiling, clinched over rings, are all driven from the outside.

This means that the ceiling was put in before the outer planking. We had thought that the drifts were driven blind from the inside, like big nails, with clinch-ring heads, ending short of the outboard face of the frames. The drift heads we see are in effect round countersink type, either formed in the course of driving the drift or shaped, probably hot, by a blacksmith. It is probably true that clinch rings are always used to form the “points” of through drifts – that is, the end opposite the head.

Because the ceiling was put in first, and fastened from the outside of the bare frames, any repairs or replacements to the thick ceiling will have to be done before the outer planking goes on. Another complicating factor is that the thick ceiling is edge-fastened, with blind drifts driven down through each successive strake as the planks go on. These edge-drifts are vital to the stiffness of the structure, in preventing the planks from sliding fore-and-aft. But this makes repairs very tricky. It will be easy enough to saw through the drifts at the plank seams and remove a given plank, but it is impossible to refasten it in original fashion without working either from the top or bottom.

Much will depend on the condition of the thick ceiling planks. Looking from the outside, it seems that the upper strakes amidships are in decent shape, but as we move aft the condition gets worse. Another problem is the localized condition of the planking around

the steel drifts. In many, if not most, cases, the deterioration of the steel has infected the surrounding wood with a condition called "nail sickness." The rusting steel leaches into the wood, causing it to become stringy and soft. Rather than being firmly located in the plank, the fastening is in the center of a pocket of soft spongy material, and therefore has a bit of give. The structural purposes of the ceiling are somewhat undermined. It may be desirable to core out the soft material around the old fastening and drive in a plug of new material. The plug would then be drilled through for the new fastening. We will see how much of this we end up doing.

During the upcoming week, we will begin to examine the framing timbers in detail and get some idea of how much material should be replaced. Another question is the pattern of the framing. In some places along the length there are filler timbers between the frames. It is unclear at this point whether these are original or replacement timbers, why they are placed just where they are, and how far down they go into the hull. There is a lot to look at and figure out. Things are getting very interesting.