

Building a Common Press: Or, My Excellent Sabbatical Adventure

--By Jeff Groves--

Report 2 (March 2012), in which our author observes that the largest saw in your workshop is never quite large enough.



Changes in Plan

In my first report (www2.hmc.edu/~groves/pressreport1.pdf), I concluded by imagining that my next steps in replicating an eighteenth-century common press would be to cut the mortise and tenon joints for the foot assembly and then to begin carving the cutouts and dovetail joints for the cheeks. As I approached both of those tasks, however, it occurred to me that my later process might be more efficient if I first roughed out all of my lumber so that it was dimensionally close to the sizes of the finished pieces. Roughing was itself rough: it took me much more time than I had imagined. At this point, however, I have all of my wood essentially ready for finishing (which includes final planing, carving mortises and tenons, decoration, and sanding), and, as I'll discuss in more detail below, I've made progress on the cheeks.



Kids! Don't Try This at Home!

As to why roughing out took so long, here's the story. When I purchased my timber from E&K Vintage Wood, I was delighted to find that much of it was close in size to my finished dimensions—three-quarters of an inch thicker here, two inches wider there. This closeness encouraged me to believe that, rather than taking all of the wood to a lumber yard to be milled at considerable expense, I could save money and get a better feel for my wood by

cutting the lumber down to finish size in my own garage, using my handy band saw, worm-drive circular saw, and other toothy implements. As noted above, I've been successful in getting my wood cut to the right sizes, but if I had it to do all over again, I would take out at least some of the pieces to be milled. The problem was that for the larger parts, especially the cheeks (see the photo above), my power saws just weren't big enough. I wound up having to do a lot of trimming with a hand saw, and that demanded huge amounts of time and probably cut decades off my lifespan. It was hard work.



Not all of the work was done with saws, either. The forestay (in the photo at left) is made out of some kind of really hard, "Old Ironside" oak. When I tried to plane it to size, the plane just bounced off, no matter how sharp the blade, no matter the depth or the angle of the cut. As you can see from the chips on the floor, I wound up chiseling the wood to the thickness I wanted, then sanding it. Again, hard work.

There was, however, an unexpected benefit to putting in long hours sizing my lumber: I had a lot of time to think about how all of this might have worked in the eighteenth century and to recall some of the reading I did at AAS in the fall. And if you smell a few paragraphs-worth of speculative history coming up, well, you should trust your nose. To avoid the pseudo-scholarly digression, just jump down the page to the next set of photos.

In *The Country Printer*, Milton W. Hamilton notes that colonial printers generally "obtained their presses from England," and that presses "made in America did not become common until the non-importation agreements of the struggle over taxation gave an impetus to colonial manufacturing" (6). Isaiah Thomas dates the earliest press construction in North America to 1750 (35). The American importation of English presses essentially ceased by 1800 (see Hamilton, *Adam Ramage and His Presses*, 11-13). Between 1750 and 1800, as the printing trade grew in America and the need for presses increased, dedicated firms began to supply the demand. While Lawrence C. Wroth notes a newspaper story in 1769 about a New Haven clock maker who ventured beyond his usual scope of business to build a printing press for an American printer (83), by the 1790s numerous newspaper advertisements demonstrate that being a "printers' joiner" or "printing-press maker" had become a specialized American trade. Witness this advertisement from 1796:

JOHN HAMILTON, PRINTING-PRESS MAKER, INFORMS the PRINTERS in this and the neighboring states, that they may be supplied with PRESSES, made on an improved plan, after the best manner, and at three weeks notice. He has made presses for most of the printers in this state, New-York, and elsewhere; and has the happiness to find that his

endeavors to give satisfaction, have met their approbation.—His price is SEVENTY-FIVE DOLLARS, which, considering the manner in which he finishes his presses, he flatters himself will be considered as a moderate compensation. ([Elizabethtown] *New Jersey Journal*).

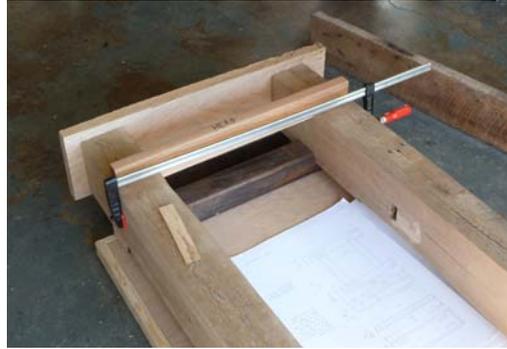
Three weeks! Geez, now I really feel inadequate as an apprentice joiner. Of course, three weeks could be the ideal case—this is an advertisement after all. But let's consider for a moment—given my experiences so far and my relative lack of skill in joinery—what would need to be in place for such a fast turnaround to be possible.

First, our printing-press maker would have had to have a reliable source for the iron work of the press, since he would not be constructing those parts himself. The spindle and nut would be the most time consuming to build from scratch, but the rails, rounce spit, and tympan hinges would all present their own little difficulties. Given Hamilton's "improved plan," perhaps he had a very specific set of instructions that he could give to the iron worker; if the iron worker had supplied Hamilton in the past, then maybe the smith also had a series of patterns and jigs that would speed the job. Perhaps demand was such that Hamilton planned ahead and had one or more sets of iron parts ready and waiting for the next order. There may also have been some trade in used iron work that would have sped up the process in certain situations. Consider the Thomas press at the American Antiquarian Society—while the timbers are worn and somewhat fragile, the spindle thread turns smoothly and tightly in the nut, and the rest of the iron work is in generally good condition. In cases where the iron had outlasted its original wooden framework, certainly pieces like the spindle and nut would be re-used.

Second, our printing-press maker would probably have made patterns and jigs for the wooden portion of this "improved" press. Building angle-cutting guides, cheek templates, and decoration patterns would be time consuming for the first press, but they would be timesavers for subsequent presses of the same size and construction. Certain tasks, such as cutting the decorative bead that is often seen on the cheeks and other parts of the press, might have been standardized through the creation of specialized planes for particular patterns.

Third, our printing-press maker would need a reliable source of lumber that was adequately seasoned and sized appropriately when it was delivered. (Concerning the difficulties in securing such a reliable source, Clifford K. Shipton notes that in 1792 Isaiah Thomas "ordered four new presses made at Hartford, and when the manufacturers were unable to find good wood for them, he hunted it up in Boston" [63].) Some of this lumber may have been used rather than new, although Hamilton and his joiners would in that case have had to work around pre-existing mortises, tenons, peg holes, angled cuts, and sawn sizes dating from the wood's earlier life as part of a house, barn, ship, etc. Whether new or used, Hamilton's goal of a three-week turnaround would demand that the wood arrive in his shop sized and ready to be carved, planed, and finished. Perhaps my imagination is too colored by how long it's taken me to size my lumber, but unless he had a very extensive operation with some really toothy saws, he'd want lumber that needed minimal cutting. Again, if he was building to a standard pattern, it would have been very easy for him to specify the lumber sizes and quantities that he needed.

As the printing-press maker's trade developed, then, it would have come to depend on iron and lumber suppliers who could make the process of building a press more efficient. There is probably a scholarly literature about such suppliers, although I don't yet know it—I hope to do some digging this summer to determine whether my speculations are close to the mark or not.



A Return to the Main Thread of the Narrative, Accompanied by a Reliance on the Effectiveness of Photographs

Having sized my lumber, I next began to finish out the cheeks, the main uprights of the press. These were cut out of a single beam of elm, they are the most difficult pieces in the whole of the construction, and I live in fear and trembling until they are finished, lest I screw them up. The cheeks of the Isaiah Thomas press are 8 inches wide by $4\frac{3}{8}$ inches thick. The elm beam that I purchased was $7\frac{1}{2}$ by $5\frac{1}{2}$, so I compensated for the slight lack in width by finishing my beam to 5 inches thick. My press will be 3 inches shorter than the Thomas press due to the original size of the elm beam.

In the two images above, you can see the cheeks clamped into a set of jigs I made to square the inside faces of the cheeks. I had to do this because the elm beam from which I cut the cheeks was slightly twisted—about a half inch out of square over 12 feet. I planed the inside faces so that they would be parallel to each other, but the outside faces will remain slightly out of square because I don't want to remove any more of the wood's thickness. The jigs allowed me to test my planing, and I was within about a sixteenth of an inch over the inside faces—good enough for replica eighteenth-century work. In the right image, you can see the beginnings of the cap for the press—I will have to laminate this out of two pieces of modern white oak because I couldn't find a beefy enough piece of old wood.

Having demonstrated to myself that I had two faces that were reasonably parallel to each other, I then began to carve the cutouts and dovetails in the cheeks.



Reading the images from left to right, top to bottom, I began by scoring the cutouts with a circular saw, then chiseled, planed, and sanded the resulting surface. Once I had the cutouts in both cheeks relieved to the correct depth, I began working on the “cyma reversa” for the near cheek—that is, the S-curved sections that will support the two-piece till. These were not easy for someone of my skill level, and if you look carefully you can spot some places where I cut a bit too deeply in my initial attempt to round the curve. Following that, I began working on the till dovetail, first drilling out some of the mortise, and then finishing it with a chisel. In order to test my angles, I cut the dovetail tenons on the near side of the till pieces and made the block that locks the till in place.



That's my progress to date. Later this week, I'll finish carving the near cheek. I'll be away for spring break, and so won't get to the off cheek until later in March. I will be very relieved (as will the cheeks) when I've finished these two pieces—they've been nail-biters.

Until Next Time

Many thanks, Dear Reader, for sticking with me this far. In my next report—probably a month or so from now—I hope that I'll be able to show something that looks less like the collection of sized lumber at left, and more like the standing frame of a fully operational Death Star—er, I mean, an eighteenth-century common press. I won't have concluded the marathon by then, certainly, but I hope that I'll be able to glimpse the finish line in the hazy distance.

Sources:

Milton W. Hamilton, *Adam Ramage and His Presses* (Portland, Maine: The Southworth-Anthoensen Press, 1942).

_____, *The Country Printer: New York State, 1785-1830*, 2nd ed. (Port Washington, L.I., NY: Ira J. Friedman, 1964).

Clifford K. Shipton, *Isaiah Thomas: Printer, Patriot and Philanthropist, 1749-1831* (Rochester: The Printing House of Leo Hart, 1948).

Isaiah Thomas, *The History of Printing in America, with a Biography of Printers & an Account of Newspapers*, ed. Marcus A. McCorison (New York: Weathervane Books, 1970).

Lawrence C. Wroth, *The Colonial Printer* (Portland, ME: The Southworth-Anthoensen Press, 1938 [second ed.; first 1931; reprinted 1964]).