

# Building a Common Press: Or, My Excellent Sabbatical Adventure

--By Jeff Groves--

*Report 1 (January 2012), in which my appreciation for eighteenth-century joinery grows immensely.*



## Introduction

Since 2007, and with the help and support of many friends and colleagues, I've been developing a teaching studio in Honnold Library at the Claremont Colleges. Because the studio is in the basement of the library building, the librarians and I have christened it The First-Floor Press. Every semester, students at the Claremont Colleges learn to print on one of our four presses: a Columbian (c. 1850), an Albion (c. 1870), a Washington-style Reliance (1911), and a Chandler and Price 8x12 jobbing platen (1907).

As I've worked with these beautiful iron machines over the last few years and have come to understand their mechanical designs, I've also become intrigued by the technology they replaced: the wooden common press. In talking with students about this technological transition, however, I found myself stumbling occasionally when trying to describe why iron presses made wooden ones obsolete. I'd never worked with a common press, and I didn't know enough about these amazing machines to offer a very convincing narrative of their decline. And so it occurred to me in a moment of either inspiration or madness (I can't really say which just yet) that to learn more about the common press, I should build one. My Special Collections librarian, Carrie Marsh, encouraged this fanciful notion and offered to house the press, should I ever complete it, in the Special Collections Reading Room at Honnold. And so the adventure began.

(The Isaiah Thomas press, American Antiquarian Society, Worcester, Massachusetts; photo by the author.)



AAS

I had long admired the Isaiah Thomas press at the American Antiquarian Society in Worcester, Massachusetts. This press was built in London in 1747. After quickly finding its way to North America, it was owned by Zechariah Fowle, to whom Thomas was apprenticed at the age of six. Later in life, Thomas purchased the press, using it first in Boston and then moving it to Worcester to avoid having it seized by the British in 1775. Thomas used the press to print *The Worcester Spy*, a pioneering American newspaper. In an inventory of his shop in 1796, Thomas listed this machine among his twelve presses, calling out its special relationship to his career by designating it as “No. 1.” In 1830, Thomas gave the press to the American Antiquarian Society in a codicil of his will, and it has been an honored possession of the Society for nearly two centuries.

The Thomas press seemed like a good model for my project, and AAS awarded me a month-long Jay and Deborah Last Fellowship to study the press’s mechanism, its history, and its historical context, so off to Worcester I went in October of 2011. When not examining printed and manuscript sources in the reading room, I could usually be found leaning over or crawling under the press, tape measure and calipers in hand. I spent many of my evenings and weekends drawing a set of plans from measurements and rough sketches, constantly comparing my drawings to the diagrams and descriptions in two of my key sources: Joseph Moxon’s *Mechanick Exercises on the Whole Art of Printing* (1683) and Elizabeth Harris and Clinton Sisson’s *The Common Press* (1978). I also consulted a number of early nineteenth-century printing manuals to make sure that I was correctly understanding and accurately representing the many pieces of the press.



## Tools

The month in Worcester flew by, but I managed to finish my plans by the time I needed to say goodbye to my AAS colleagues. Returning home, I reorganized our garage (my wife Teresa Shaw agreed that our car could live in the driveway for the foreseeable future) and got my “wood shop” ready for the project. I had decided while in Worcester that in order to have a shot at finishing the press during my sabbatical, I would need to be somewhat less than authentically eighteenth century in my choice of tools and methods for working the wood and metal. So, while I am using hand tools extensively—planes, chisels, brace and bit, handsaws, rasps and files, a forge hammer—I’m also relying regularly on a bandsaw, a Shopsmith (a convertible machine that can be used as a lathe, a table saw, a sander, or a drill press), an oxygen-acetylene torch, a MIG arc welder, and various electric hand tools. In addition to my garage, I’ve done some of the iron work in a shop that belongs to my mother, Lorine Petty, in Northern California.



## In Search of Wood

Ever since reading Harris and Sisson’s *The Common Press*, in which the authors note that seasoned, full-thickness timbers are difficult to find, I had worried that locating a supply of old, stable wood would be the hardest part of this project—and certainly the most expensive. Why old wood as opposed to what’s available at Home Depot? Well, I need to use hardwood in the press, and some hardwoods have the unfortunate tendency to twist and check as they dry and season. Because I have to fashion two very large dovetail joints in the cheeks of the press (the cheeks are the tall upright timbers), I need to know that the wood I use will be stable, especially that it won’t twist, which could make the dovetail joints bind. To guarantee stability, then, I wanted to find old wood. I looked around at various suppliers of vintage wood in the first month of my return from Worcester, but I wasn’t having much luck finding material of the kind or in the dimensions that I needed. I was just about to consider whether laminating seasoned but relatively new oak into full-thickness timbers would be the best course of action, when I came across a web advertisement for E & K Vintage Wood in Culver City, California. Eric Freed at E & K was very helpful and enthusiastic about the project, and so after two visits to the E & K yard (a huge lot stacked high with old timbers—exciting to any wood junkies out there) and some work with yard manager Evan Hyde, I drove away with a load of old oak and even elm—more about this wood below.

The Thomas press is constructed mostly of elm, although parts of the carriage assembly (the horizontal part of the press, which was probably rebuilt during No. 1's active life) are made of white oak or chestnut. The hind-rail assembly and forestay are made of white oak and were added to the press in a 1977 conservation effort. Common presses were often constructed of a mix of hardwoods, and that will be the case with the one I'm building. In addition to elm and white oak, some of the wood I'm using I scavenged from a building site at Harvey Mudd College, where I teach. When the construction of a new building caused two olive trees to be cut down, I asked for a few lengths of straight branch wood. Olive is a very hard and beautiful wood, although it's a little difficult to work with because it shrinks considerably as it dries. I decided to use olive for the rounce, girt barrel, and gallows, and so far it's been behaving nicely.

## The Rounce Assembly



While I was looking around for wood in the weeks before Christmas, I decided to start some of the iron work for the press. I began with the rounce assembly, which hangs beneath the carriage of the press. When you crank the rounce, it moves the carriage in and out from under the platen. In the top three photos just above, you can see a length of olive wood being rounded out with a draw knife, then turned into shape on the Shopsmith. In the three lower photos, you can see the spit being fashioned (the spit is the axle that passes through the center of the barrel). For authenticity's sake, I decided to file the rounce-end of the spit by hand, rather than turning it on a lathe. Eight hours and two cramped hands later, I had a decent graduated end that went from square to smaller round to still smaller square. In the third of the lower photos, you can see most of the rounce assembly, including the hangers that will secure the assembly to the press and the leather girts that will be nailed one end to the barrel, the other end to the plank.



## Got Wood!

Back to the wood from E & K. In the photo above, the two large beams on the left of the image are elm; the rest of the wood shown is oak. Since driving the wood home and spreading it out in my garage, I've been deciding how to use each piece, and I've begun cutting the wood into appropriate lengths so that I can have a little more room to move around in my rather limited space.



The handsome young fellow in the left-hand photo above is my nephew Alex Morgan, who has been helping me occasionally while home on break. As you can see, once you get below the gray patina of the old wood, the interior is gorgeous. Alex and I have found, though, that dry white oak is very hard—I seem to be constantly sharpening my tools. The two photos on the right show the feet of the press roughed into shape with saw, chisel, and rasp.



## More Metal

Paul Stovall, the machinist at Harvey Mudd, has been building the spindle, nut, and garter for my project. While he has a bit more work to do, as you can see these pieces are turning out wonderfully. You rock, Paul! I've also been continuing to plug away at some of the other ironwork, fashioning the rails and some of the "cramps," which support the carriage on the rails. Given the beauty of Paul's work, I don't think I'll insert photos of my amateur blacksmithing here....

## Next Steps

In the coming days, I'll begin the first real test of my evolving woodworking skills by chiseling three mortises in both of the feet of the press. I'll then fashion the feet cross members and put the foot assembly together on a base that I've already built. Then it will be time to begin working the two cheeks out of a single twelve-foot beam of elm. I have no slop to play with—when I cut the beam in half, I have to get it right the first time. That's a little scary. I'll be working on the cheeks for a while, relieving the inner surface for the carriage assembly, carving the dovetail joints for the head and winter, and decorating them both with a subtle bead on all the edges of the beam, as was done with the Thomas press. Unlike my eighteenth-century counterparts, however, I may cheat and use a router for the decorative edge. After the cheeks, I'll move on to the hind-rail assembly, the cap, the head, and the winter. Once those are done, I'll have something that will begin to look like a common press. At that point, I'll write another report to let you know how things are going. In the meantime, wish me luck with those mortises!