

dave west clocks

[| Home](#) | [Antique Mantle Clocks](#) | [Antique Wall Clocks](#) | [Unusual Antique Clocks](#) | [Bargain Basement Clocks](#) | [Antique Anniversary Clocks](#) | [Cut Clock Glass](#) | [Antique Clock Repairs](#) | [Contact Us](#) | [Longcase clocks](#) | [Links Page](#) | [Antique Battery Clocks](#) | [Wheel and Pinion Cutting](#)

How to replace a missing Gathering Pallet

While repairing a Longcase clock one of the missing pieces was the gathering pallet. All of the books I have read on the subject refer to buying a pallet blank from the material suppliers, I cannot understand why. The making of the pallet is just an exercise in sawing and filing. In fact it is so basic that I would begrudge the time spent in filling in an order form and then have to post the letter and wait for the part to arrive. I could have the rough blank made in less time than filling in the order form!

In my example the measurement from the gathering pallet centre to the locked position is just over 16mm. A piece of mild steel was centre punched 17mm from one end and drilled 1-1mm. A hand hacksaw was used to remove the waste. The profile was made using large files. At this point the pallet is still attached to the parent metal to aid in holding it while shaping. Please note that no needle files have been used so far. At this point I have a rough blank with a hole drilled for the square taper. In my example the taper of the arbor was $-.045$ to $-.055$ over a length of $1/4$, a very fine taper! I made a tapered drift to form the hole from a piece of blue pivot steel or you could make one from silver steel. A useful formula to use, when looking for the diagonal (diameter) is? $\text{Div} \times -.7071 =$. In my example the larger diameter is $.055$, so, $-.055 \text{ div} \times -.7071 = -.077$. This formula will also work when making a winding square to a given size. A piece of pivot steel was found that was near to this diameter ($-.080$) and ground to a square taper. I made a holding tube for the drift from mild steel. This makes it easier to hold in use and saves the polished hammer face from bruising. I find it easier to do the punching on the bench using a large slice of cast iron as an anvil. You could place the stake into the vice but you would be forever bending down to pick the drift up when removing it. The holding tube is made a good fit but can be removed to flip the drift over into the stake and use a smaller punch to remove the drift.

I had problems with the mid section of the bore and had to resort to using a piercing saw to clear the unwanted metal. Once the taper is formed I filled the nib down to the half way point and used needle files and emery sticks to polish most of the pallet. At this point it was sawn free from the parent metal. Curve the back of the nib and check for size. This will mean filling the end of the nib and re filling the curve until the pallet is gathering about $1 \frac{1}{4}$ of the rack teeth. Place the rack hook into the second last tooth and mark the pallet tail for length using the locking pin as a guide for clearance, cut and file to shape. Test the tail for good locking when the last tooth has been gathered. Tidy up with needle files and polish. While I was typing this article a friend phoned and I told him I was putting together an article about making a LC gathering pallet. He responded with the typical reply that they are difficult to make. I hope this article will break the myth about a part of the Longcase clock that is frequently missing.

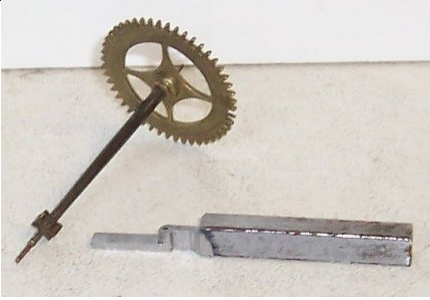
David Creed



Scrap steel centre punched and ready to drill, 1-1mm.



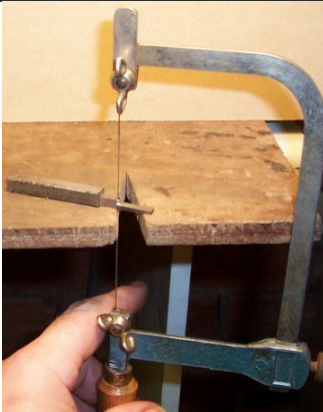
2 The hole has been drilled and the waste removed.



3 The blank has been roughly shaped and ready for making the square hole.



4 The drift with its holder and a steel stake with various holes. Note the drift looks larger than it should due to the camera angle.



5 Using the piercing saw to remove a small amount of metal from the middle of the bore.



6 The pallet ready to be parted from the parent metal.



8 The finished pallet.



7 The rough pallet at the locked position, ready for filing and polishing.

[BACK](#)

[Home](#) | [Antique Mantle Clocks](#) | [Antique Wall Clocks](#) | [Unusual Antique Clocks](#) | [Bargain Basement Clocks](#) | [Antique Anniversary Clocks](#) | [Clock of the Month](#) | [Antique Clock Repairs](#) | [Contact Us](#) | [Links Page](#) | [Antique Battery Clocks](#) | [Longcase clock](#) |