

HABA FLYPRESS TOOLING WORKSHOP : May 2003

From The HABA Letters :

John Crouchet was the featured demonstrator at the September HABA meeting. He put on a most informative flypress demonstration. John brought his press from Marble Falls and put it through its paces from about 9:00 to 3:00.

John is a great demonstrator and teacher. There was never a dull moment. He had everyone focused all day. It was so good six HABA members are/will be the proud owners of this versatile tool. Robert Killbuck put together an order for four presses which should be delivered this month. The new owners will be Tim Bailey, Clint Jones, Steve Green and Robert. Les Cook and Bryan Bateman each purchased a press at Gold Machine.

John told us about the tool's history and all the uses it had over the years. John is a jeweler turned blacksmith. As a jeweler he spent many hours stamping out pieces. Now as a blacksmith he is discovering more and more ways to save time and produce good results in the blacksmith shop.

A theme that ran through his demonstration is that tooling for the press can be made quickly. John added a large flat table to his press to which he clamps fences and jigs that are easy to setup and change.

Three pieces I can remember John making are: a twist, a ring and a beautiful two piece light switch cover. The twist demonstrated how well parallel lines can be made with the press. The sides of the 5/8" stock were punched with a straight chisel and the corners were punched with small round fuller. All of this was done cold. Then the bar was heated and twisted.

The ring was made so fast I did not even see him do it. I saw John marking off one inch sections on a half inch square bar. The next thing I know he had a ring!

To set up for the ring, John set the depth of the press. The marked bar was set between two blocks and the press struck each one inch mark on the bar, bending it the same amount. In no time the straight bar had a ring in it.

The last demo piece was the two piece light switch cover. John had two blanks of 1/8" plate. He stamped the edges of each piece, cut out the corners of the bottom plate, textured the surface in the forge and riveted the two pieces together with copper rivets. If you were not convinced about the value of the flypress before the light cover demonstration, you were hooked now.

Now we need to have more flypress demonstrations by HABA members.



Following is a series of e-mails with pictures describing several different kinds of flypress tooling by John Crouchet. Please see the February 2003 for John's first e-mail.

I am sending you several separate emails with tool pictures just because it is easier that way.

This first picture is my most used tools. All are ground on a belt sander from H-13 tool steel because I occasionally use them on hot iron and there is no way to effectively quench a tool that is chucked up in the press. H-13, being an air-hardening steel, stands up to this much better than ordinary tool steels. (Never quench H-13, just let it air cool.) The chisel is ground to the traditional blacksmith shape (like a canoe on the end) and is used for both decorative chiseled edges and for starting the slits for slit and drift work (especially great if you are attempting to slit and drift on the diagonal which is good looking, but hard to do freehand.

Starting the slit (top and bottom) with the fly press will take care of half the control problem. For the other half... well, just hold your mouth right and practice a lot. (To slit on the diagonal, you will need a V block to set the bar in. You may already have one in your treadle hammer tooling, or it is quickly made from any angle iron scrap.)

To start a slit on the middle of the it leaves a slight more accurate or joints, you can welding clamps same place each



the flat, just line the chisel up in what looks like bar and take a light stroke. If it looks good where mark, then smack it a good one! If you want to be if you are doing two dozen mortise and tenon set up a long piece of angle iron and a couple of for a fence so the chisel comes down in exactly the time.

The butcher will drawn out and marks screwing light switch plate I did at the meeting.

make a clean separation between what is to be what is not, without a lot an errant hammer up the transition. I use it on set downs, like the

The little set hammer (which is just plain square stock, slightly rounded at the edges) is more useful than it looks. It will make a great little decorative edge or corner, just by bringing it down, half on and half off, of an edge or corner. It will also do a quick job of cleaning up edges that looked a little rough when you finished hammering them.

All of these tools are ground on the end of a bar of tool steel and then cut off about an inch or inch and a quarter long. They are then welded to a piece of one inch mild steel bar to chuck up in the fly press. Your arbor hole may not be one inch. If I recall, the arbor hole measurement on Dan's presses was 5/8 inch.

I never bother to put a pressure plate on my tooling because with a one inch arbor hole, there is just not much need. The smaller the arbor hole gets, the more I would vote for a pressure plate, especially for a tool that will get a lot of use. This will take the pressure off of the hole itself and put it on the end of the ram where it can't screw anything up.

To keep from making the pressure plate over and over again, I think Dan Morris advocates using a permanent little tooling holder. I think there is a picture of it on his website. With one of those, all you would need to build each time is whatever little one or one and a quarter inch tool you need. (Remember when ordering material to go in the arbor hole that regular hot rolled bar stock is not exactly made to size. A 5/8 inch hot rolled bar will not fit in a 5/8 inch hole. For a good fit, you will need to order cold rolled bar stock. It is not expensive, since it is still just mild steel, and a twenty foot bar will last you forever, using it at the rate of a couple of inches per tool.

John Crouchet

Following is a series of e-mails with pictures describing several different kinds of flypress tooling by John Crouchet. Please see the February 2003 for John's first e-mail.

Here are a few John's words about flypress tooling. "Fortunately, it is not very hard to build tooling for those babies. I mostly stick to plain old blacksmith tools, like fullers and chisels, etc. which are much less complex than doing dies and blanking punches. My experience is that the fancier and more specialized you make a tool, the less it is good for."

BENDING

This set up consists of two bars, each ground to a bread-loaf shape and welded to a 1/2 by 3 inch bar about



twenty inches long. It fits across the big plate you saw bolted to my flypress and I clamp it down with a couple of small welding clamps. Another bread-loaf bar is welded to a stem for my top tool. These bread-loaf bars are all just mild steel.

This is a wonderful tool for straightening cold bar stock ~ much better than standing at the anvil pounding away. It will also do a good job of bending circles or partial circles. For a full circle taller than your press opening, you will need to change out the top tool for one that extends out past the front of the press. I will send that picture in the next email.

John

TEARDOP

I use these teardrop shape punches - and several similar, but bigger or smaller or more curved- to put the relief into thick iron leaves. Some of these punches down each side of an oak



leaf really make a world of difference. They are made from H-13, since I always use them on hot iron.

John

BALLS

These tools are made by welding large ball bearings onto mild steel support bars. By sizing the gap between the balls properly for a given size flat bar, you can just tap your way down the flat bar, quickly giving it a nice even "scalloped" edge on both sides. The single ball bearing is used to just do one side of a bar and you will need to set up a fence on the other side to keep it from skittering away with every hit.

These ball bearings are about one and a quarter inches in diameter. They are available at hardware stores or most big supply companies. They are not expensive.

All of this tooling has been tig welded, would do just as well, but would of cleanup after welding. Actually, all of down, so I would not be surprised if you tools on with superglue or bubblegum most of my tools just like the regular version, but I cut them off about an them to a stem. It's not too high-tech, the work out the door.



but a mig (or stick) course need more the force is straight could hold these and spit. I make hammered-on inch long and weld but it's fast and it gets

John