

Arbor Press Attachments, Version 1.0

By R. G. Sparber

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After watching the masterful video by “Unisawyer”
(<https://www.homemadetools.net/forum/make-one-ton-arbor-press-tooling-78821#post156265>

or at

https://www.youtube.com/watch?time_continue=1&v=hKpZdGiggNc&feature=emb_logo)

I knew I was going to spend the morning in my shop.

I own a small arbor press but rarely use it. After some thought, I realized it was because I didn't have any attachments that I liked. Unisawyer opened my eyes to the possibilities.



The one attachment that came with the press was this disk. I never needed the cutouts and when I used a patch of the solid area, the disk would rock. It didn't give me a lot of confidence.



Ultrasimple attachment #1 was to put that disk aside and put down a plate of hot rolled steel. It has a 3/8" hole in it. Future attachments can have a 3/8" rod on the back to engage this hole. No more rocking.

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Unisawyer made up pair of “presser plates” (timestamp 9:23) with the back turned down to 3/8”. I had a puck of CRS in my junk drawer. I drilled and reamed it 3/8” and then pushed a pin into the hole. It won’t be as strong as a turned down spigot but will be fine as long as I don’t push too hard on the unsupported part of the face.



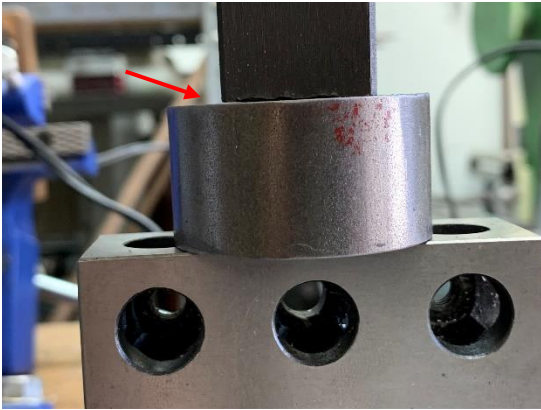
Eventually, I will make the second presser plate but for now, I find the flat plate is fine.



This picture also shows my locking screw. Unisawyer suggested using a set screw that is below the surface of the ram. This is a metric thread and I didn’t have a matching set screw². I could have drilled out the threaded hole and cut SAE threads. But instead, I made a knob.

The “washers” on both sides of the rubber puck are worn out grinder dresser wheels. As I tightened the nut on the backside, these wheels sunk into the puck. There is no chance of the puck spinning free. And where did I get that rubber puck? It was left over from rebuilding my bolt cutters (<https://rick.sparber.org/BoltCutter.pdf>) when I cut it out of an old hockey puck. Not much is wasted in my shop.

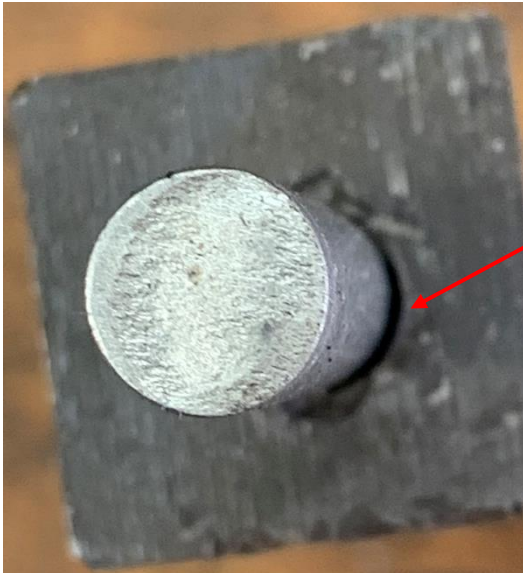
² It is 4/7/2020 and I am avoiding going near other people like at the hardware store in an effort to not come down with the COVID-19 virus.



When I locked my new presser plate into the ram and lowered it down on my plate, I noticed that it was cocked. It is hard to see in this picture but there is a gap on the left side of the ram when the puck rested on a 1-2-3 block.



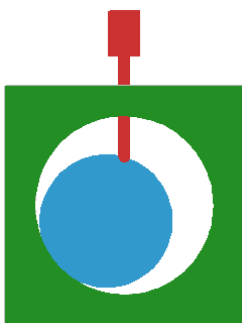
I removed the presser plate and lowered the ram down on my 1-2-3 block. It was square. So time to figure out why the disk was not square.



I removed the ram and put a 3/8" rod down the hole. That was when I realized the bore was elongated. You can see that distortion as a black crescent.

As I tightened the locking screw, the rod was being pushed into this distorted area causing it to tilt.

My solution was to drill the hole out using the next larger drill. This was done with my hand drill. I figured it would follow the existing hole so there was no risk of drilling off true.



The idea is that the recut hole is aligned with the ram. It doesn't matter that the rod is a loose fit because I only need the rod to be aligned, not centered, with the ram's major axis. As the screw (red) pushes on the rod (blue), it locks the rod against the wall of the hole in the ram (green). Remember, the purpose of the rod is to hold the attachment to the ram. The major force is through the attachment and into the bottom face of the ram.



Unisawyer explains that the presser plate can be used to flatten sheet stock. It worked great!



The next attachment inspired by Unisawyer was a set of punches. I had these hand punches and found that they fit into the bore. I'm using a hockey puck to support the stock as I punch through. If this is too soft a surface, I have some expanded PVC, a piece of hardwood, and some brass. One of them should work.



Just to try out his last suggestion, I fitted a 3/8" rod to the ram. Then I aligned the plate's 3/8" hole.



With some scrap waterproof membrane down on the plate, it was easy to drive the rod through.



The small hole was punched by the smallest punch shown above. The large hole was from the rod and plate arrangement.

This is enough motivation for me to make a set of “wad cutters” as can be seen at timestamp 7:19 of Unisawyer’s video. But that will be for another day.

Acknowledgments

Thanks to “Unisawyer” for giving me an enjoyable few hours in my shop plus turning my arbor press into a more useful tool.

I welcome your comments and questions.

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