The original notes are in italics, and my shop notes are in block letters.

Question: "are the legs on a 30 degree angle?"

I didn't measure the angle so I don't know what it is. I calculated the leg tilt by using a carpenters framing square to measure the tilt as 5 1/4 inch out, and 14" off the ground. You can set the square on the stock, measure those numbers directly, and draw the cut line(s), without ever knowing what the angle is.

(So, in the notes you'll see the original maker wasn't sure what angle to cut. We settled on 15 degrees, and that works fine. I also make the legs 15" long, which allows you to adjust up for a fairly tall smith, but still lets you shorten enough for a pretty short smith. If you have a bandsaw or chopsaw, etc., that cuts pretty precisely, then levelling is easy.)

Even though the drawings call for 3/8" plate, it isn't necessary to have plate that thick. Many steel suppliers sell pre-cut 12"x12"x1/4" plates, sometimes with pre-punched bolt holes, that will work well and are economical to purchase. If you cut off just enough of the corners at a 45° angle that the downward pointing angle iron guides will clear the bottom plate, and weld those guides on the bottom of the top plate and not the edges, you'll have suitable clearance to put 11 ½" pieces of 1"x12" or 2"x12" (since 12" lumber is actually 11 ½" wide, you'll have an 11 ½"x11 ½" square)

I weld the tops together first. If you're making several, it helps to make a fixture or jig to keep all the legs plumb and true. If you're only making one, a level will help you accomplish that. Then, I put the tops upside down on my welding table, with the angle iron guides sticking up, and put the bottom plate between the guides. I clamp the entire thing securely to the welding table. Weld the two 'back' legs in the corners of one side of the bottom plate (sticking up) and spread them as far apart as you can while still clearing the angle iron guides of the top plate. Weld them solidly in place. It may not be necessary to weld all the way around the leg. That much heat will cause a little warpage to the bottom plate. But it does need to be solid enough to withstand the weight of the anvil you'll be using, and the pounding that work will give it. I weld all the way around, and find that the warpage is negligible.

Then I flip them upright, and set them on the plates which will be the feet, on my level workbench. I then check to see how far off level the top plate is. I then either do a bit of grinding on the ends of the leg(s) that are too long, and/or add a bit of spacers to the legs that are too short -- such as just sticking a piece of mig wire under it, or a thin piece of metal to tweak it and get the top nice and level. I then weld the feet on while it's sitting level. I think sometimes, I've even just held it up with my hand to make it level, and then did a quick tack weld to the foot.

When welding the feet on, especially when laying down a big weld to fill a gap, the material will distort. But all it does, is cause the feet to cup upwards, which is actually a good thing because it creates very slightly curved feet that works fine to create a center contact point of the feet to touch the ground.

Even if you end up with a little rocking of the anvil, that tends to go away with time as you use the anvil. The wood then tends to compress to fit the curve of the base plate and that stops the rocking in time.

A handy accessory that is easy to add is a pivoting tool tray. I use a 6" rod of ½" hot rolled steel, that makes a slip fit inside a ½" pipe nipple. I get a 4" nipple, and cut the threads off. It might be necessary to run a ½" drill through the nipple to insure the rod slides freely in it. Take the 6" rod and make a 90° bend

in the center. Weld the pipe nipple to one of the angle iron guides on the top piece of the stand, making sure it's plumb with the guide. That nipple will go on the far side of the anvil from where you do the most work, and it's up to your preference whether the tool tray will pivot to the left or right. Done this way, you'll have the option of pivoting your tool tray to be on the far side of your anvil, or under either the horn or the heel. My preference is to have it under the heel of the anvil, since I use the horn for so many tasks.

To make the tray, make an angle iron frame of a convenient size. Mine are usually about 8"x10", but it depends on what angle iron is handy at the time. Make a bottom for the tray out of expanded steel, so that it won't collect scale and dirt, and tack that into the angle frame. The mesh of the expanded steel should be small enough that punches and other small tools won't fall through it.

When the tray is made, drop one leg of the ½" rod you bent into the pipe nipple welded to the stand. Weld the other leg of the rod to the side of the tool tray, being sure to keep the tray level. Take a look at the accompanying photos to see a finished tool tray.

4-24-2013

BGCM Anvil Stands

Curt Welch
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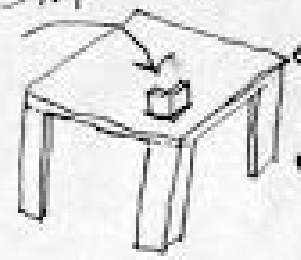
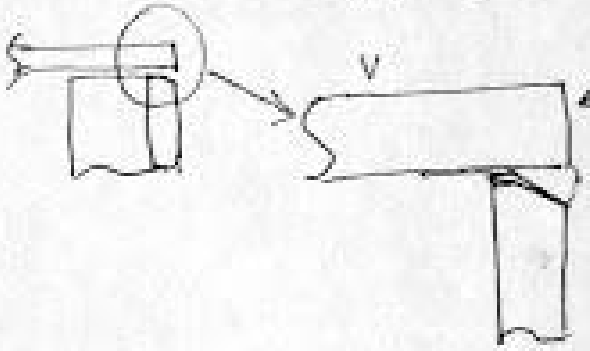
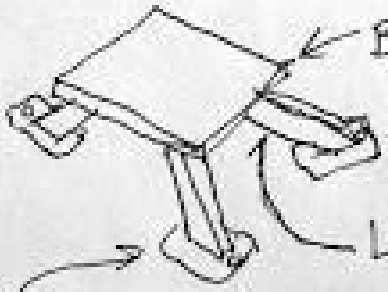
Anvil corner braces x4 ¼ x 2" x 2" x 2" welded outside edge 1 of 2



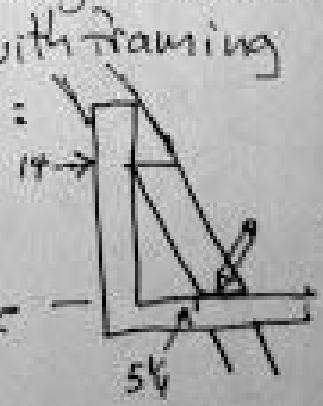
Top plate ⅜" thick 12" x 12½"

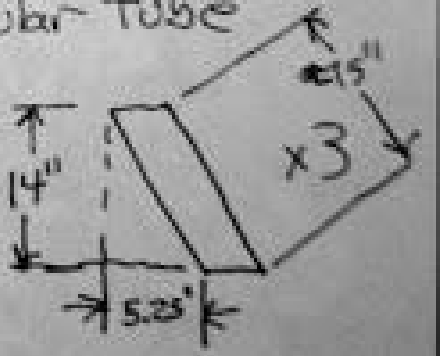
Corner legs
¼" x 2" x 2" angle iron 10" long

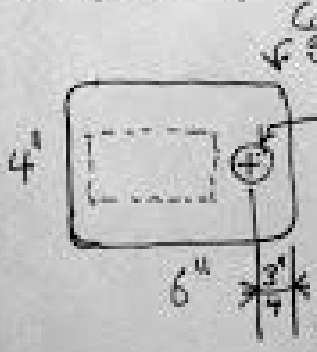




lay out angle cuts on legs with framing square:





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