

A Simple Way to Accurately Stamp Text on a Metal Block

Version 3

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I am a big fan of Mark Twain's quip "I didn't have time to write you a short letter so I wrote you a long one." I have seen many extremely elaborate machines that guided hand stamps into metal blocks. No doubt, all worked very well. But these machines seemed to take more time to design and build than the project being stamped. I have also seen simple machines, like using a 1/4" drive socket, as a stamp guide. The socket is welded to a washer and guide marks cut. The fit is sloppy and the resulting text tends to be misaligned.

Without a doubt, the best stamping guild is none at all. With practice, some are able to set these stamps so the letters are all uniform and properly spaced. My hat off to these artists. After many years of using stamps, I know that I am not in their league.

Dave Patterson wrote me the following:

Hold the stamp between the thumb and fore finger, at the base of the stamp. the thumb should be at the bottom of the letter fore finger at the top. after the first stamp is made you can align the next stamp with the fingers centered on the last stamped letter align the left edge of the stamp with the previous letter. you can adjust for thinner letters.

Most people can see a .003" to .006" difference. Some of the metal stamping machines I've used aren't any better.

The hardest part is the amount of force required to get all the letters the depth, i.e.. an M or W would need more force than an I.

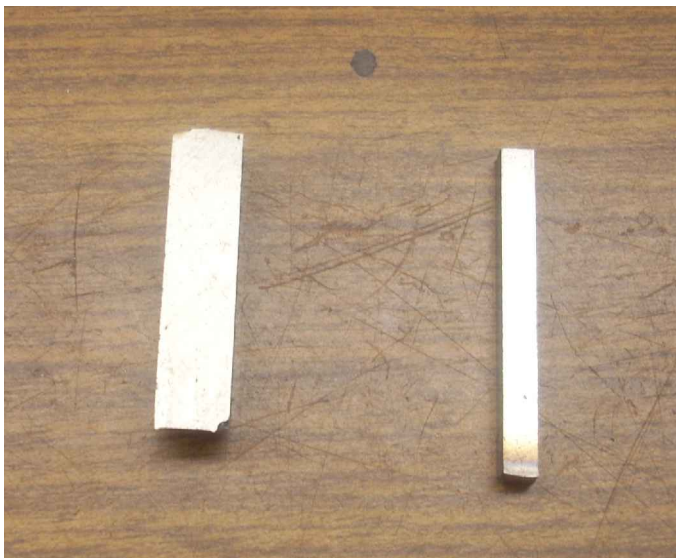
After a bit of head scratching, I have come up with a method that is so simple, I'm sure it was figured out many decades ago. I've just never read of this trick before.



My "machine" is made of bits of scrap clamped together. The key here is to use flat surfaces to provide my vertical alignment and a clamped bar plus spacers for the horizontal alignment.

Those striped blocks of metal look impressive but I'm just using them as flat surfaces. They could have been CRS.

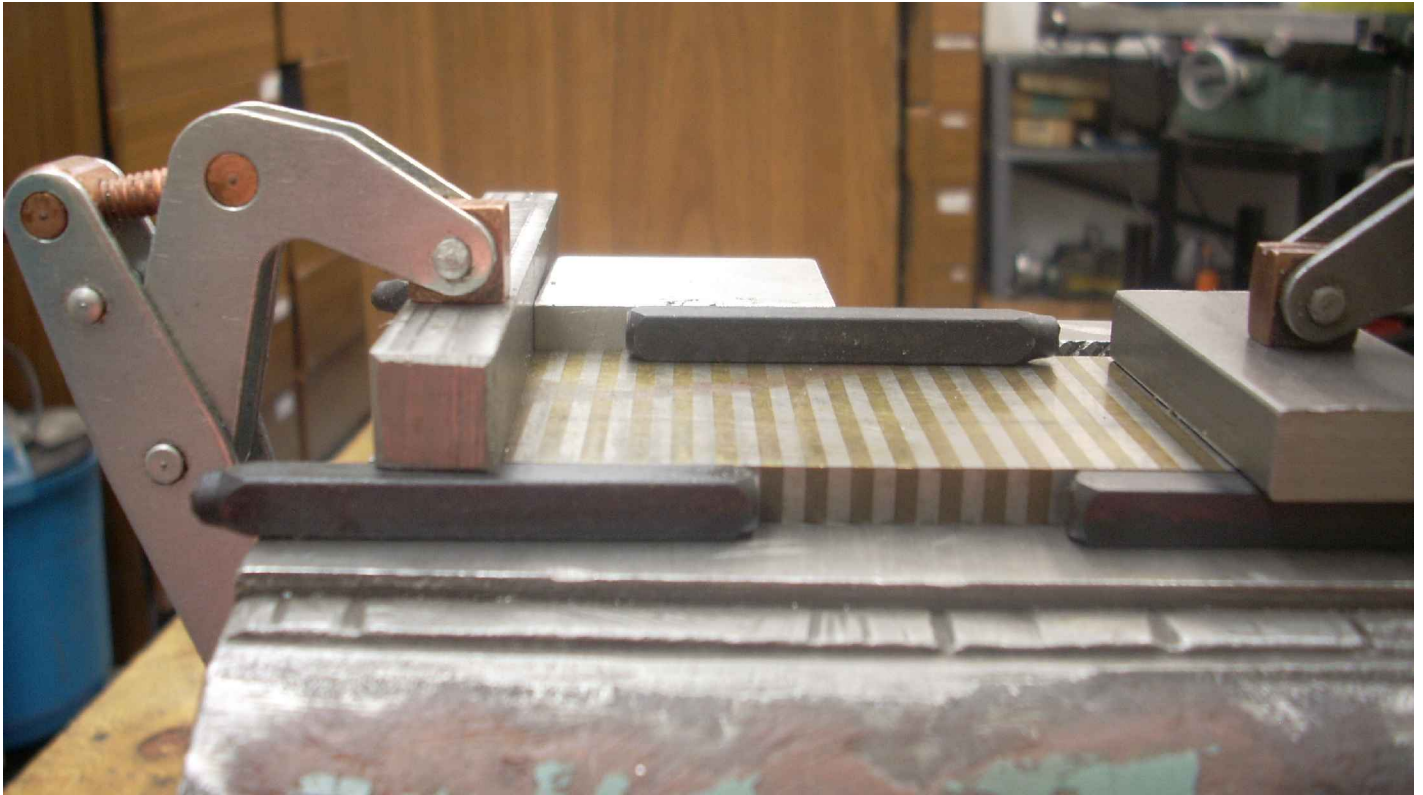
My stamp set has all letters and numbers centered on the end. However, not all characters are the same width so for best results, I need to vary the spacing between stamps. This is possible by using more spacer blocks but I found it too complex and open to error.



Here is the "heart" of my machine. On the left is a 1" piece of 1/4" square HSS. On the right is a 1" piece of 1/8" HSS. My stamps all have a 1/4" square body.

I found that the impressions came out about right if the bodies of the stamps were moved over 1/8" from the previous position. For more control, you could also use a 1/16" by 1". I suspect you would then need to look at the previous letter and the next letter to decide which spacer is best.

I am using a few of my stamps to set the vertical height of my fixture in my bench vise. Note that the top of the block at the back of my fixture has been set true with one of the stamps. The guide block

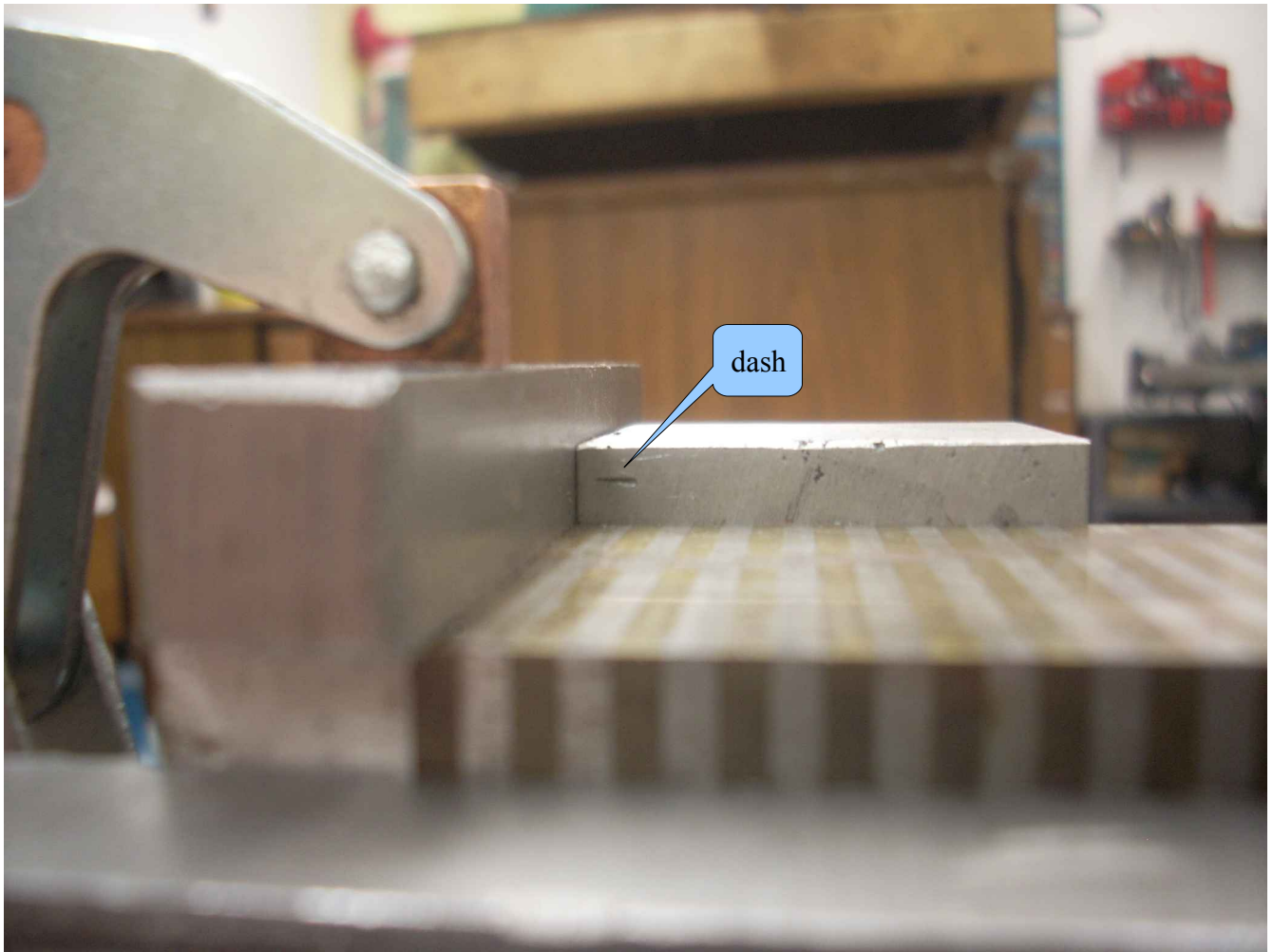


clamped on the left must be perpendicular to the surface being stamped. When the vise is tightened, all of the stamps are removed. The second block shown in the first picture provides extra support for thin stock being stamped. I didn't use it here.



Note that the end of the stamp is 1/4" above the vise jaw so there is plenty of room for my hammer. I can repeatedly tap on the stamp with no risk of stamp movement. I found that taking 5 taps and inspecting the impression worked well. If I want to go deeper, I just push the stamp back against the guide block and surface block and tap a few more times.

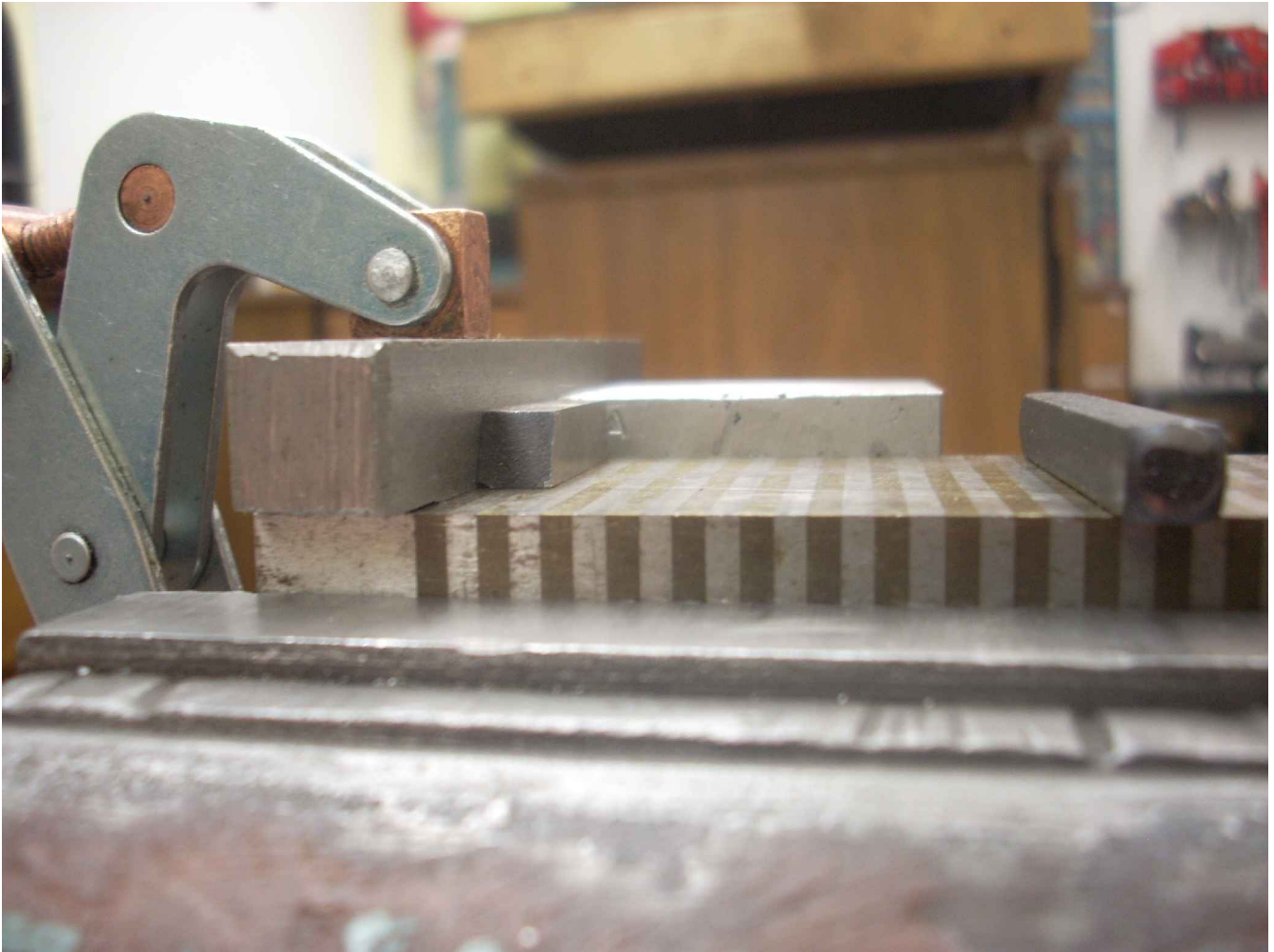
The support of the stamps is so good, I was able to go back to any previous imprint and hit it again without any noticeable misalignment.



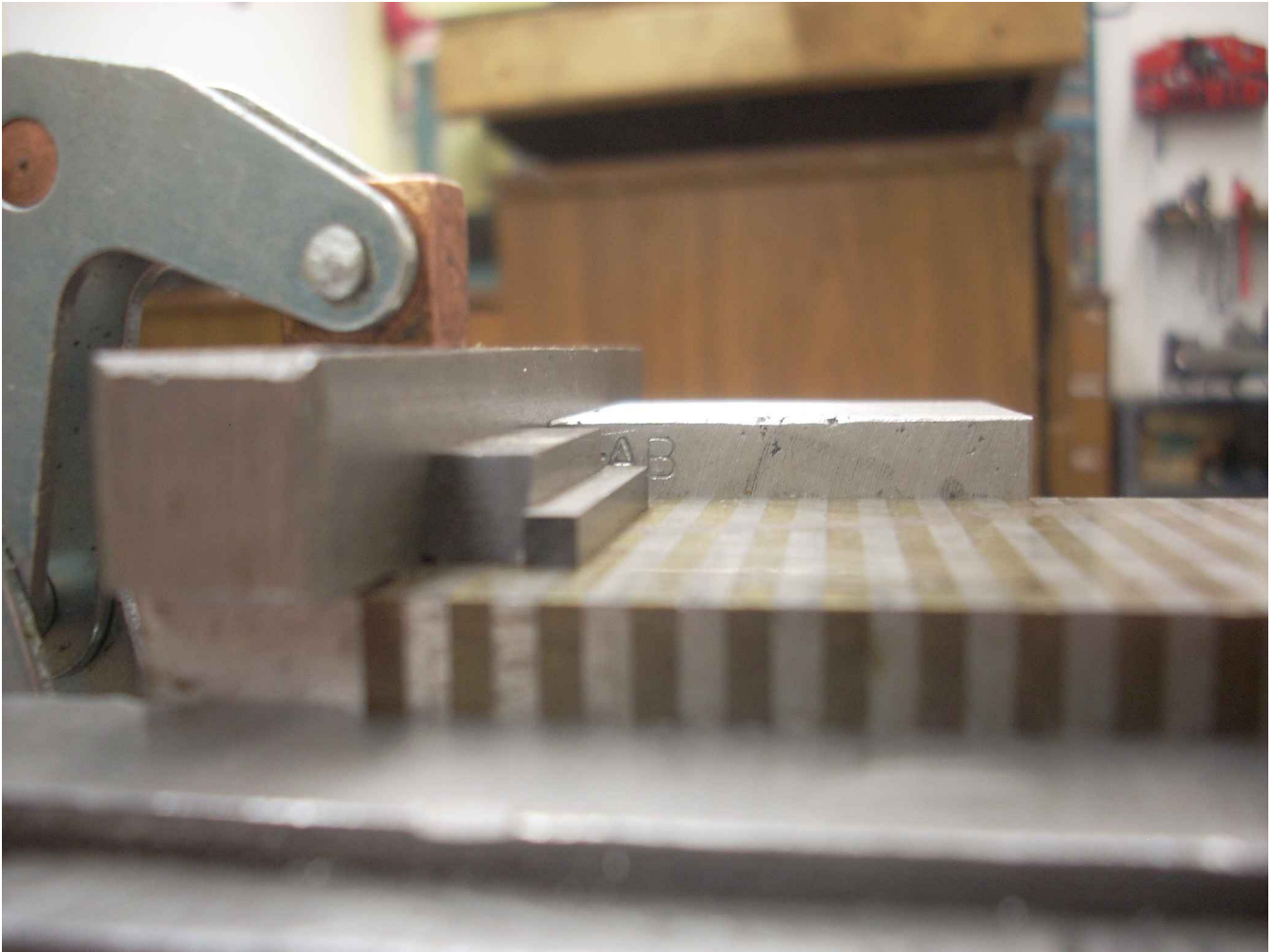
If you look closely, you may be able to see that the first impression, a dash, is not exactly even. After making this mark plus the next one, I discovered that my guide bar on the left was crooked.



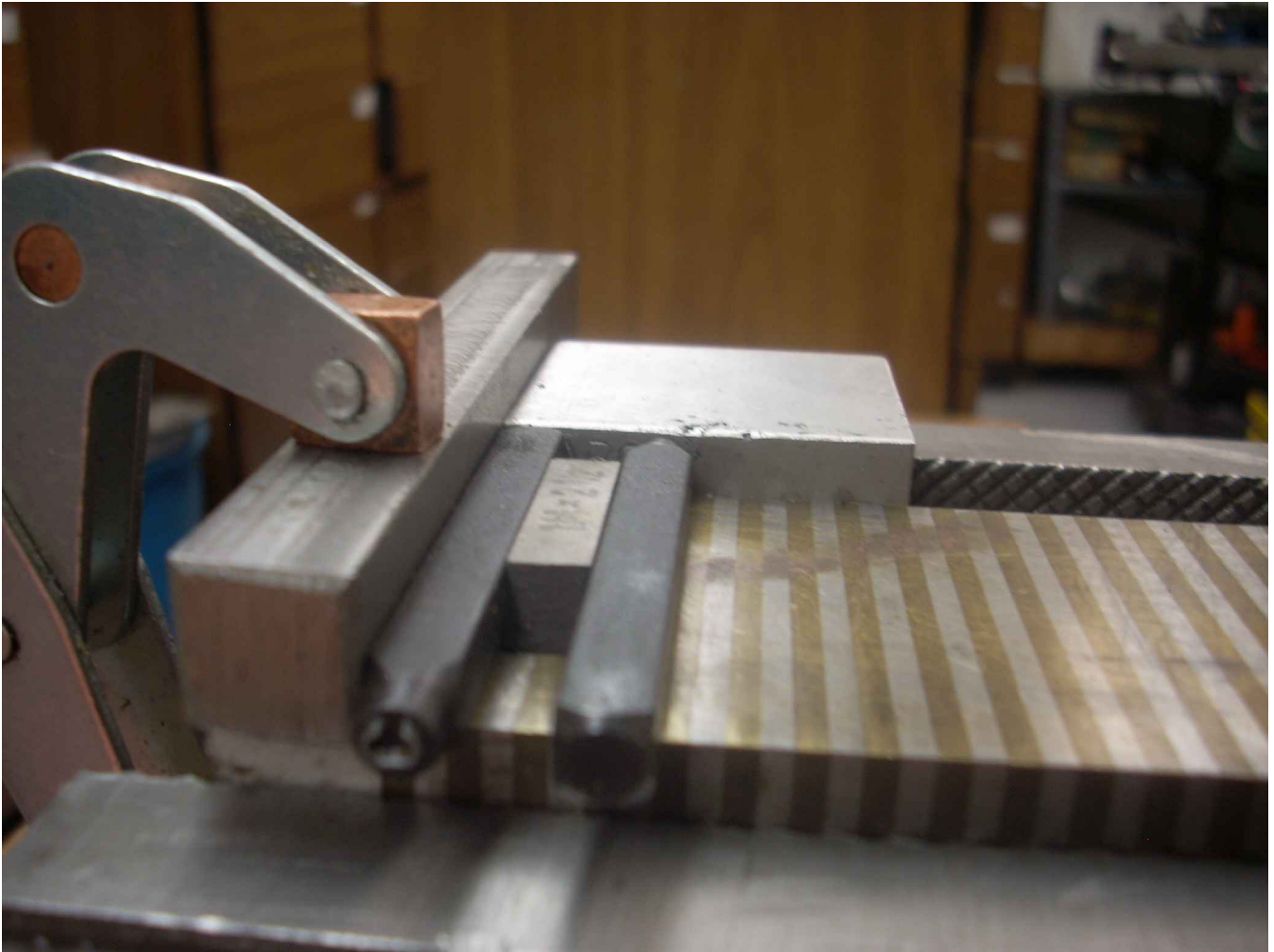
In order to position my second stamp, I have put down my 1/8" piece of HSS. I can then flank it with my next stamp and be assured that the next character will be exactly 1/8" offset from the first one.



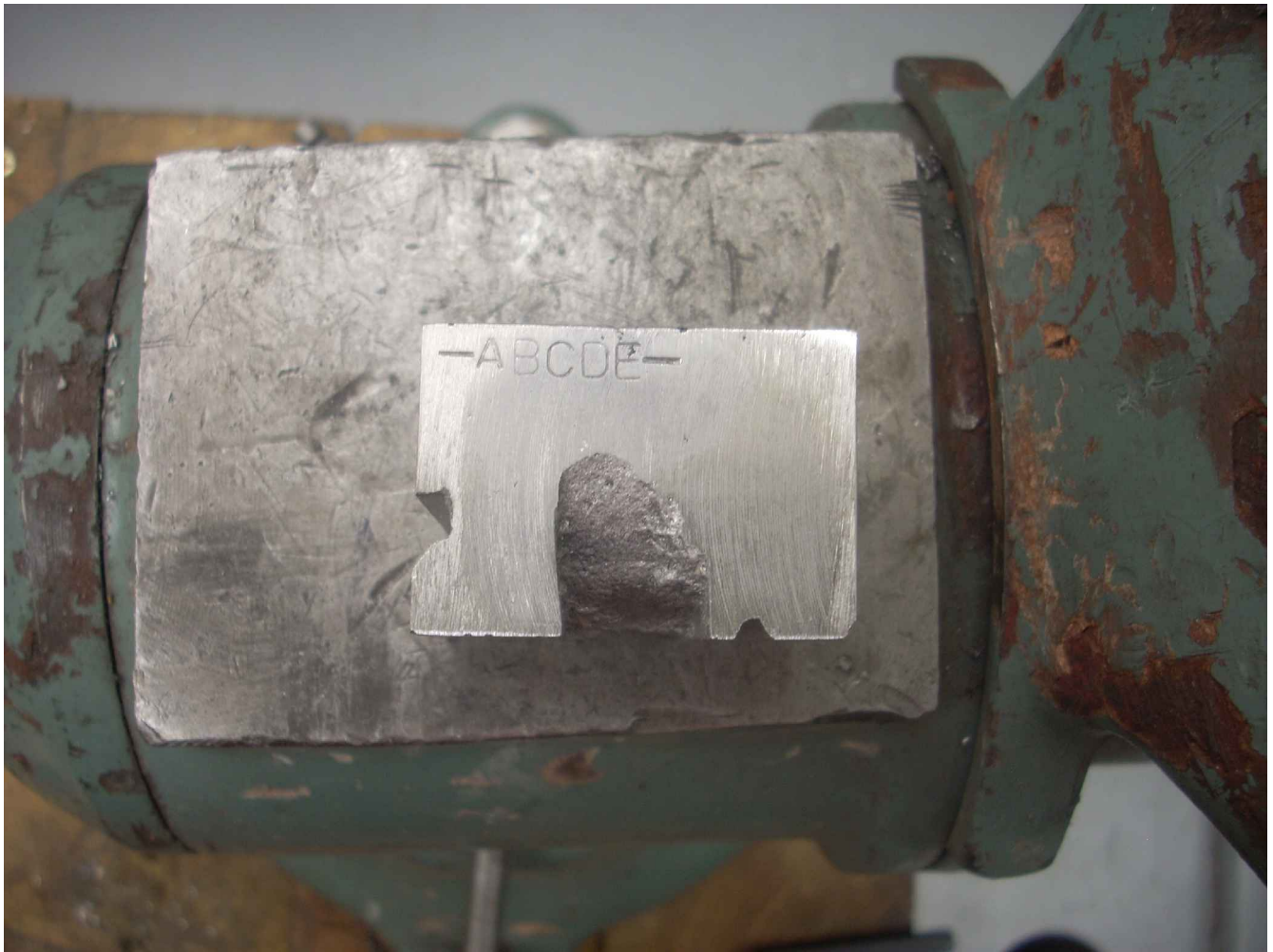
You may be able to see the letter “A” in this picture. I have put down my piece of 1/4” HSS in preparation for the third stamp.



After stamping the letter “B”, I add back in the 1/8” spacer in preparation for using the “C” stamp.



At this point I want my stamp to be 1/2" from the first stamp. A spare stamp give me the first 1/4" and my slug of 1/4" HSS gives me my second 1/4". Note that by using my HSS spacer next to the stamp I will be hitting with my hammer, I don't risk striking that first stamp that is being used as a spacer.



Here is the resulting sample. You can clearly see that the letter A is not right due to the misaligned side guide but that the rest of the letters are fairly uniform. This is a lot better than I get by eye.



This is the same block after being touched to the belt sander and then a bit of black ink rubbed into the impressions. A thin black line has been placed across the picture to show alignment. The letters are lined up but it looks like the block is not lined up with the letters.

I will use this arrangement a few times and see if it is generally useful. If so, I may break down and actually bolt a few blocks of CRS together to make a more permanent stamping machine.

This article presents an idea that is barely a “proof of concept”. I welcome your comments that will improve the design.

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