In the past, I had a few of these third hands. They are ok, but small and not very stable. So I wanted something better. I wanted a third hand with a bigger stand. This is why I bought some flexible plastic pipes used to cool CNC machines. In addition, I bought some Alligator clips. The big ones, not the small ones. Then, I went to the local do-it yourself shop and bought me a piece of wood. At the end, I wanted something like that:

Unfortunately, even if the piece of wood was much bigger than the old third hand, it was still not stable, because it was not heavy enough. As everybody knows, wood swims on water and is therefore not very heavy. So, what is heavy enough? As a Swiss, of course, I thought of gold which is 19 times heavier than water. But then, I looked at my budget and I refused this plan. So, I googled and found this chart:

According this chart, the second best choice was lead. And this was much more compatible with my budget. It was only 25 Euro for 5kg. And because lead has a melting point of only 327 degrees centigrade or 621 degrees Fahrenheit I decided to melt it, and pour it into a cavity milled into the wood. Easier said than done. From a video of AvE I knew, that I needed a heat resistant pot. You might say, I could have used an old can made of iron, because iron does not melt at 320 degrees. But, being professional, I purchased a graphite crucible. I was also curious about this graphite material.

So, the refined plan was, to melt this lead in the crucible using my standard gas torch, pour it into the cavity, and done. This was easier thought than done. First, I tried to heat the lead. I was able to melt it, but I was not able to keep the whole quantity melted. And to pour it, it needs to be heated up to a higher temperature than just melting temperature. Otherwise, it becomes solid during pouring and before it is where you want it. So, after quite some time, this was the result. Not very encouraging. And I had another problem: How to hold the crucible during pouring. It breaks, if you try to keep it with a gripper.

So, I had to choose a bigger tool. I remembered, that my father has a gas welding equipment. I knew, that this can be used to cut steel, so I decided to give it a try.

Here, I was a little more cautious and moved to the outside. And really, the lead melted like butter in the sun, as we say here in Switzerland. I was also able to heat it above its melting point. In the meantime, I also decided to use some wires to solve the problem with holding the crucible during pouring. Not very professional, you might note…

But during the pouring, something obvious, but forgotten by a beginner like me, happened. The wood started to burn. Not dangerous, but I had to use water to cool it down.

After cooling the entire part, I had to glue the lead into its place. Because the burned wood was not nice looking, I decided to color the whole part. At the very end, I mounted 4 plastic feet which, together with its weight, makes the whole third hand very stable. And this is the result: The old one is very unstable compared the new one. And the new has more space for bigger and heavier parts

After seeing my unprofessional behavior with mechanical parts, you might think, that I should stick with electronics. And this is, what I will do. Stay tuned.