New Large Rock Saw

So here is the start of a 14 inch rock saw it will offer much more precision than the first one.

Got the basic rock slide and top plate welded together now, made the two guide rods removable. They simply slip through the front support bar and screw into the back support bar which is welded to the steel plate. Still debating on whether to use 3/4 in.

pillow blocks shown or 1/2 or 5/8 size. The Diamond saw blade has a 3/4 inch hole in it for mounting. Got some large cupped washers ordered for securing the blade to the shaft, still waiting on those.

Made a stand for the new rock saw out of 3/4 in square steel tubing got a cheap 3/4 inch shaft already threaded on one end at Lowes for only $1.50. I found a 3/4 x 10 in bolt that works great for this part. Linda wanted it to be high enough to stand at it and work with it so the legs are 3 ft. high.

Those long awaited blade washers came in today so I put the blade on the 3/4 in. shaft and also mounted the 4 inch pulley on other end. I also raised the bearings up a inch with 1 in square tubing under them. This allows me to cut a larger slice

from rocks. The bearing bolts were inserted from the bottom and welded in place so they won't turn if I remove the bearings from above. Also installed a plastic U shaped bar to clamp down on the rocks being cut. I used 5/16 all thread bolted in the slide platform to hold the rocks. Wing nuts adjust rock clamp down force on top of the plastic.

Rock Saw is almost finished now, got frame pretty much finished and motor mounted. Put a water trough under the blade to keep blade lubricated and cool, also installed a water sprayer to spray area of cut on rock and blade. It hooks to a water facet and has a control valve in the line.

I installed a rear rope that has a weight on it to help pull the rock platform forward

into the blade. It goes straight back and over a little pulley and downward, the weight will be lead but I'm not sure how much is needed at this time. I also decided to use some thick outdoor carpet on rock platform to secure the rock being cut.

Here is the copper tube sprayer firmly mounted to the platform. It has a small drip system control valve on the platform to adjust the spray. The end of the copper is hammered almost shut to give a flat sort of wide spray to the area being cut. This can be a problem area I've found keeping the water where you want it. This copper is easily adjusted and stays put unlike some other systems I've tried. The only thing left now is wire motor to a switch, add a lead weight, maybe install a water shield then give it a try.

Got the rock saw finished now, wired , lead weight to pull slide installed, and tested.

Here it is in action cutting a tough agate rock, it slowly chews its way across the rock, perfect straight thin line. The blade does throw a mist of water forward, up, and rearwards. I may or may not install a cover for that, since its not that big a deal where we intend to use it in the yard.

This is a close-up of the rock being cut, I cut several rocks this morning and depending on rock hardness it may take a minute or 10. This project exceeded my expectations.