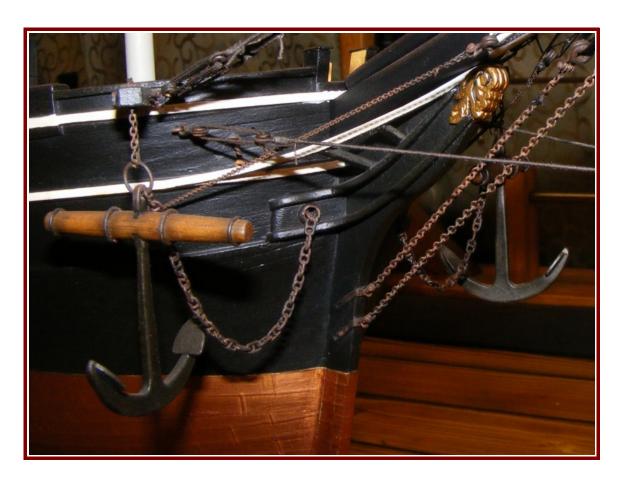
## A Guide to Making Stud-Link Chain for Scale Shipmodeling





This is a tutorial on how I made the stud-link chain for my Charles W. Morgan. It is a very tedious project, but if done correctly you can make some very authentic looking chain for your anchors. I will state here at the start, that there are improvements that can be made to the making of this chain to make it even better.

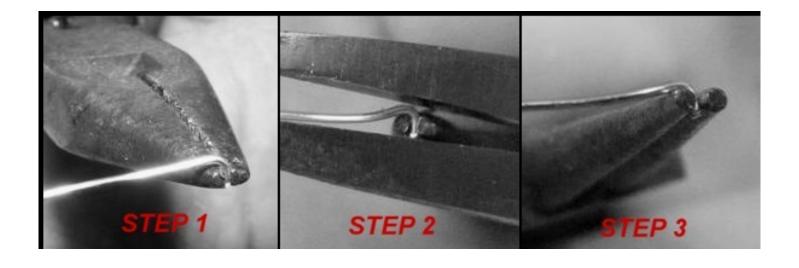
## **LETS GET STARTED:** (Done in gray-scale for clarity.)

First you must find the appropriate sized wire for your chain. The size of wire I used was 0.020'' brass. Each link turned out to be about 3mm long, by 2mm wide. My model of the Morgan is  $1/64^{th}$  scale, or 3/16''=1'0''

Step 1: Clamp the end of the wire in the very tip of a small pair of needle nose pliers. No need to let the wire protrude out the other side of the pliers, unless you want to file the end of the wire flat. Bend the wire to 90 degrees. Use this first step to determine the inside width of the link. If your chain needs to be bigger, then place the wire at the appropriate sizing of the plier jaws.

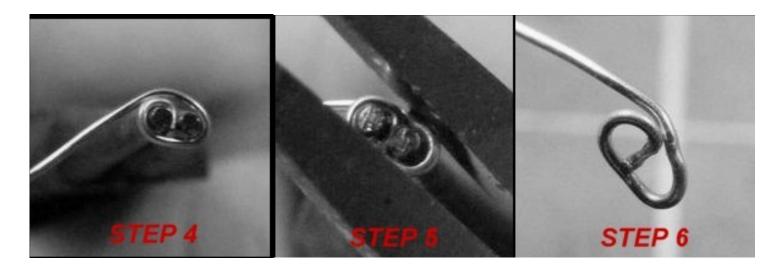
Step 2: To make sure it has a good sharp bend, I use another pair of pliers to squeeze it.

Step 3: Now remove the wire from the needle nose pliers, and put the wire into a pair of round nose pliers. This where you can determine how big your chain link will be. If you want it smallest it can be, then you work at the very tip of the pliers. If you want it bigger, then just move it down the plier jaws till it is the size you desire.



- Step 4: Tightly wrap the wire around the plier jaws.
- Step 5: Give an extra squeeze as you did in step 2.

Step 6: Remove from the pliers.

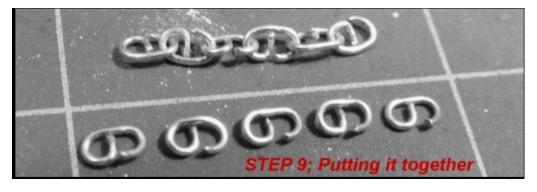


Step 7: Clip off the excess wire. Make sure it is as flush to the stud as possible.

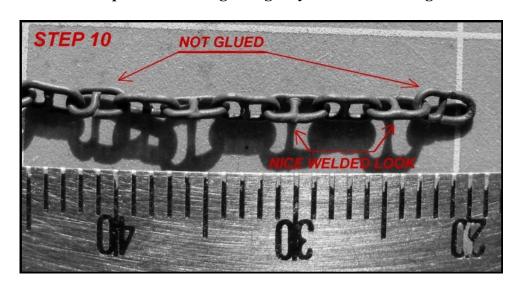
Step 8: This is what you end up with. Doesn't look like much at this point.

Step 9: Once you have some links made, you can start putting them together. When you put them together, try to keep the links running the same direction. As you can see in the pictures, one loop of the link has more space than the other half of the link. So if you keep them running in the same direction, the chain will have a more uniform look to it.



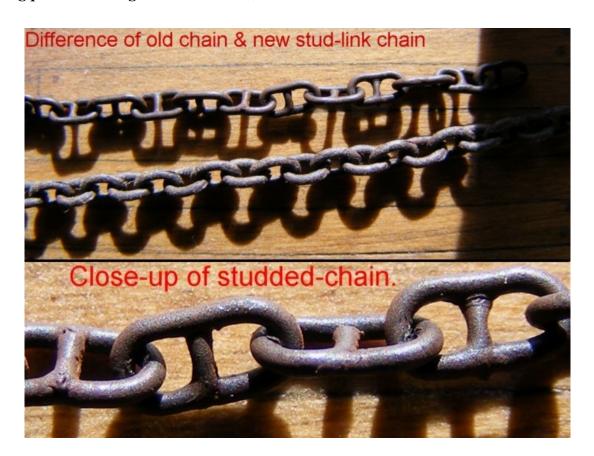


Step 10: Now if you are good at soldering, then soldering would be to way to go as far as closing in the connection points of these links. If not, (like me) then superglue will work as well. The only two things we are after here are closing the gaps so the links don't come apart from each other, and to get an authentic welded look. Solder, and superglue will give the same result in these two aspects. Soldering will give you a much stronger chain though.



## Giving the chain its finish look:

After all the steps have been carried out, I spay painted the chain with "Krylon" Ultra-Flat Black, Camouflage paint. When dry, I rubbed some of Doc O'Brien's Muddy-Red weathering powder on to give it a little rust, and worn look.



## *NOTE:*

[ ou could file down the end of a pair of needle nose pliers to save some steps. That would be fine if all the chain you make is the same size. But if you end up making chain for a different scale ship at this time, and maybe another scale at another time, then your going to have many different filed down pliers laying around. I prefer the additional steps as described. This way I can make different sizes using the same pliers.

