

Medium Size “Flat Jaw Tongs”

By
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The following instructions will explain to you how to forge a set of medium size ‘Flat Jaw’ tongs using traditional methods. Using the material described below you will end up with a set of tongs that will hold up to about 3/8” material. If you need larger tongs, use the same technique and larger material.

Material needed – 18” of 1/2” square bar
1”x 1/4” rivet

Tools needed – Forge & fuel (coal, charcoal or propane)
Hammers
Anvil
Vise
Center punch
1/4” drill or punch
Marker (marks a lot, soap stone, silver pencil)
Protractor or Square
Ruler
Tongs

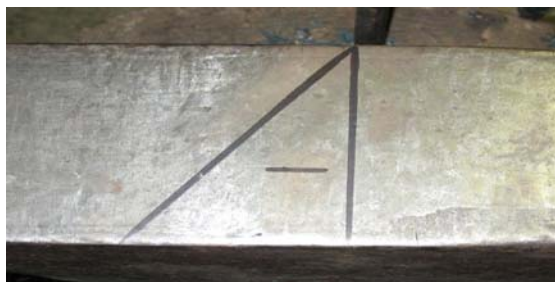
Step 1 ‘Mark the anvil face’

Use a protractor or framing square and mark the face of the anvil.

Make one line 90° across the face of the anvil.

Make a 30° diagonal mark across the face which intersects the original mark on the far side of the anvil.

Make a mark 1 1/2 “from the near side of the anvil.

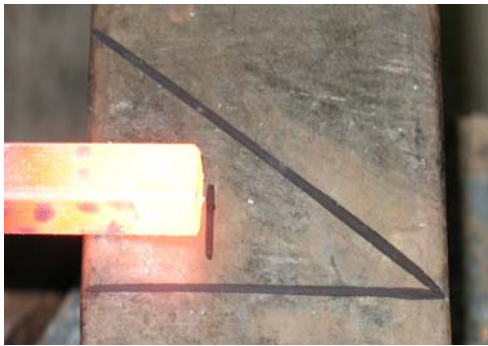


Step 2 'Forging the Jaw'

Taking pretty good heat, heat approximately 2½" of the end of the bar.

Place 1½" of the bar on the near side to the anvil. Use the 1½" mark you placed on the anvil for you measurement. The bar should be parallel with the 90° line.

Start with 'Half Face Blows' and set the bar down about half the thickness (1/4"). Leave the increase in width. The length will end up about 2".



Step 3 'Starting the boss'

Take another pretty good heat. Turn the bar ¼ turn counterclockwise (left). Place the end over the far side of the anvil using the 30° mark. The edge of the anvil should be about 1/8" passed the shoulder you forged in step 2. Use 'Half Face Blows' to set the bar down about half the thickness. The area you set down needs to be about as wide as the head of your hammer.

Now taper toward the rein. Make sure and forge the boss towards you forming a rounded area.



Step 4 'Finishing the boss'

Before heating, use the anvil to make a mark 1" from the edge of the jaw. The mark is made on the flat side.

Now, take a good heat. Turn the bar ¼ turn counterclockwise (left) again. Place over the far side of the anvil. Extend until you feel the mark you made with the edge of the anvil. About 1". Use 'Half Face Blows' and set down about half the thickness again.



Step 5 'Do it again'

Turn the piece around and forge the other end just like the one finished using steps 1-4.



Step 6 'Cut in half'

Measure the center and cut in half. You should have approximately 7" from the rein side of the boss to the end of the rein.

Step 7 'Draw out the reins'

Draw the reins out to approximately 12 or 13". I found the easiest way for me is to start drawing out the end and work back towards the boss.

Step 8 'Drill or punch the boss'

Mark the center of the boss with a center punch. Drill or punch a 1/4" hole in the center. Do this on one side only.



Before drilling the second boss, align the two pieces and mark the undrilled side with a silver pencil through the hole you drilled in the 1st boss. This will assure the two pieces will align properly when riveted.



Step 9 **'Rivet pieces together'**

Use a ¼" x 1" rivet. The rivet should stick out approximately twice its diameter.

Pass the rivet through both pieces. Place the head of the rivet against the face of the anvil and set the rivet. Use a small hammer or a ball peen to form a head on the rivet.

Don't worry about the rivet being too tight. You can loosen it by heating, then opening and closing the tongs while quenching in water.

To prevent damage to a button head rivet use a backing plate to set the rivet.

Step 10 **'Adjust the tongs for ¼" material'**

Heat the jaw & boss area to about orange color. Place a piece of ¼" material between the jaws and squeeze them together in a vise. The jaws are now adjusted to hold ¼" material.

The reins can be adjusted at the same time by placing a piece of ¼" round bar between the reins as close to the boss as you can. Now, close the reins until they feel comfortable in your hand.

Adjust with larger or smaller material as required.

Tighten the rivet if needed, then adjust as noted in step 9.

All Photographs & Illustrations by Tee Hines