

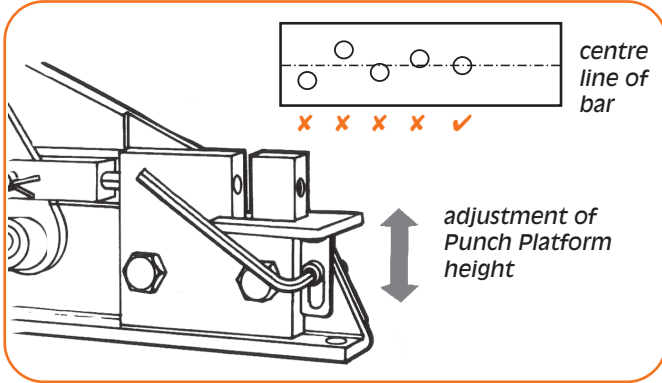
PROJECT 1: BOTTLE CANDELABRA

BEFORE STARTING this project read the instructions for the Practical Riveting/Bending/Rolling (RBR) tool, the Practical Punch/Shear tool, AND the MK 1/2 Scroll Former. The design project does not involve any Twists but for those with the Practical Twisting tool, we have shown some development ideas where twists can be incorporated. Read these instructions together with the accompanying Design Sheet before commencing the project.

Note that it may prove difficult to replicate this design exactly on the Master Punch/Shear, Master RBR and MK2/2H or Mk2/3 Scroll Formers, with a little more thought, similar designs should be achievable. In particular, the design might be needed to be modified to allow for the larger scroll sizes of the Mk 2 series scroll formers, the bending of the small collar and the final riveting of the individual components.

- 1 Take two 920mm (3ft) length of 12mm x 2mm (1/2" x 14 Gauge) steel strips and before cutting or bending them it is recommended that you use a cloth or abrasive paper to remove any excess oil, grease or scale from the strips.
- 2 Then take the first length and mark out 3 lengths of 250mm (9 7/8") using a fine tip marker pen or pencil. Use the Punch/Shear tool to cut three bars at the marks made. From the second length of steel, mark another 250mm (9 7/8") length and cut a fourth bar. For a neater finish you can trim the corners off each end of the bar. This will be used to make the decorative "C" scrolls to form the Candelabra arms (see Component 1 on the attached Design Sheet)
- 3 Out of the remaining bar of the first length measure 128mm (5") and cut using the Punch/Shear tool. Trim the corners on this also. This piece will be used to make the octagonal (eight sided) collar that sits on the neck of a wine bottle (see Component 2 on the attached Design Sheet)
- 4 From the remainder of the second bar, mark out four lengths of 75mm (3") using a fine tip marker pen or pencil. Again use the Punch/Shear tool to cut a bar at the mark made and trim the corners. This piece will be used to make the collar arms (see component 3 on the attached Design Sheet)
- 5 On each of the four 250mm (9 7/8") bars and using a fine tip marker pen or pencil, mark all the hole positions H1, and scroll end positions S1 as shown on the attached Design Sheet for component 1.
- 6 Then take the 128mm (5") bar and mark out carefully from one end 16mm (5/8") intervals so that you have eight equal divisions along the length of the bar as shown on the attached Design Sheet for component 2.
- 7 On each of the four 75mm (3") bars, mark all the hole positions H1, and H2 and bend positions B1 and B2 shown on the attached Design Sheet for component 3.
- 8 Then place one end of Component 1 into the centre of the Mk 1/2 Scroll Former and form a scroll in such a way that the S1 mark on the face of the bar will make contact with the scroll former's segment to signify when the scroll is formed. Repeat this at the other end of the bar ensuring the scrolls at each end face the same way to form a C scroll (see Diagram 1).

- 9 Repeat step 8 for the other bars to make four identical Component 1's.
- 10 Next, with a spare piece of steel set up the Riveting/Bending/Rolling tool to bend an angle of 135 Degrees - as shown in Template 1. Take care to set this angle carefully as it is important when bending component 2 the octagonal collar.
- 11 With the angle set correctly place, place component 2 into the Riveting/Bending/Rolling Tool and bend at each position B1 in sequence taking a lot of care. On the last bend the two ends of the bar should meet and just touch. If there is a gap, a very slight adjustment of the bending angle and re-bending should close up the gap. If the opposite has happened and the ends don't meet and the collar is quite octagonal you may need to re-make another collar (component 2)
- 12 With the angle still set at 135 degrees, place component 3 into the Riveting/Bending/Rolling tool and bend at position B1. Repeat this on the other three component 3's.
- 13 Next, with a spare piece of steel set up the Riveting/Bending/Rolling tool to now bend an angle of 90 degrees - as shown in Template 2.
- 14 With the angle still set at 90 degrees, place component 3 into the Riveting/Bending/Rolling tool and bend at position B2. Repeat this on the other three component no. 3's to form the component shape shown in Diagram 3.
- 15 Next adjust the platform on the Punch/Shear tool so that it is ready to punch holes in 12mm x 2mm (1/2" x 14 Gauge) steel. Take a small piece of spare material in this size and punch a sample hole. The hole should be on the centre line as shown in the picture below. If not adjust the punching platform height with the allen key provided on the adjustment bolt, either up or down (as necessary). Move the sample piece of bar and punch another hole to test if alignment is correct. When you have got the hole central tighten up the adjustment bolt.



- 16 Next take Component 1 and punch hole H1 in each of the four component 1's.
- 17 Next take Component 2 and punch hole H1 in the four faces of the collar as marked.
- 18 Next take Component 3 and punch hole H1 and H2 in each of the four component 3's.

Continued Overleaf



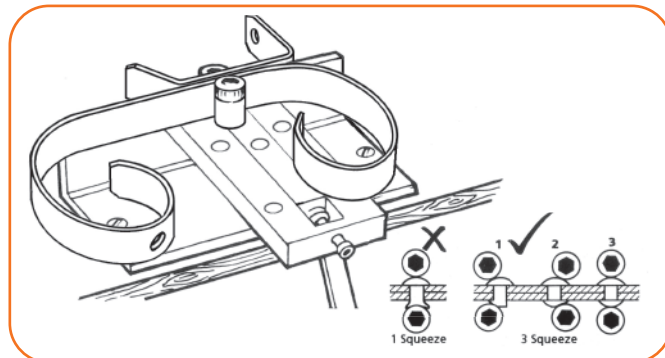
Starter Pack 2



PROJECT 1: BOTTLE CANDELABRA



- 19** Then set up the Riveting/Bending/Rolling Tool for riveting by ensuring the two rivet posts are fitted and the Winding Handle (for rolling) is removed. Start by taking one component 1 and one component 3 and placing a 6mm x 3mm (1/4" x 1/8") rivet through holes H1 in both components 1 and 3 and using the tool to rivet the two pieces of metal together (as shown in the diagram below). Repeat this for the remaining pairs of component 1 and 3.



- 20** Then in a similar way take one of the riveted Component 1 & 3 assemblies and offer it up to the collar and place a 6mm x 3mm (1/4" x 1/8") rivet through holes H2 in both components 2 and 3 to create one arm of the candelabra. Use the tool to rivet the arm in position as shown in diagram 4.

- 21** Repeat step 20 for the remaining three arms. When all joints are riveted, check that the arms are straight and at right angles to each other and if not manipulate them to line up and nip up any loose rivet joints.

- 22** Finally, use the Punch & Shear tool to punch the four holes required for fixing the candle trays on. To do this place the outer scroll of each arm in the

Punch/Shear and punch a hole at the high spot of each of the four outer scrolls.

- 23** Then finish off by attaching the candle tray with a nut and bolt fixing or if you want the tray to be a contrasting colour, do so after the metalwork has been painted.

- 24** And that is your project completed. Your simple candelabra should fit snugly over a standard sized red wine bottle (and some white wine bottles for that matter). We hope that these two Starter Projects have helped you teach you the basics of using Metalcraft tools to make simple practical and decorative metalwork. Why not have a go at the other two projects in your Starter Pack to gain further confidence.

The finished candelabra can now be painted in a wide variety of finishes (smooth, satin, hammer and metallic) either by aerosol or by brush application. Powder coating and plastic dip finishes can also be applied but these type of finishes are more for commercial/industrial scale finishing.

However, even with aerosol or paint finish you can make your finished item look professional. In this case we used paints from the Plasti-kote and Hammerite ranges - available from most DIY and Painting/Decorating outlets. For best results, always follow instructions on the tin and make sure the metal is free of all scale, dirt, grease or rust.

In the section on the opposite page, we show how this basic design can be adapted to include other decorative features using other functions of Metalcraft tools. Below we show the same design but using different candle trays and colours. Note the use of liquid in the bottle to create additional ballast for increased stability (or on the front cover shot the use of layered coloured sand to make the empty bottle into a feature).



Development Of Bottle Candelabra Idea

Once you have made this simple but effective bottle candelabra you can adapt it very easily to work with T-Lights instead of ball candles.



Once you have impressed friends and family with these ideas for the dinner table, you can develop other ideas with an entertaining theme, like this simple wine bottle and wine glass holder.



As an alternative, you can make a simple wall mounted wine glass holder to grace any bar or kitchen.



Alternatively, you can make an elegant dinner candle version using our W1, W1A and W1B candle holders which when combined and painted in contrasting colours can change the whole appearance of the idea.

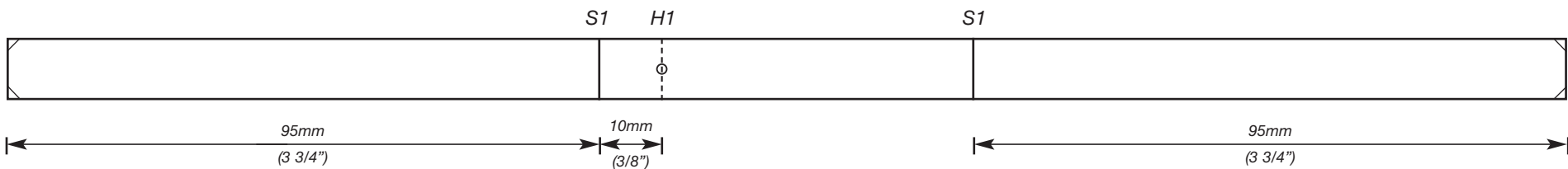


If you don't want to use a wine bottle, you can easily adapt the idea by adding scrolls to each of the collar arms (Component 3) and putting a lower identical collar on to form an attractive centre piece (shown here).



And if the sun decides to shine and your entertaining moves outdoors, you can still make many ideas for picnics and barbecues like this simple bottle holder.

Starter Pack 2 PROJECT 1: BOTTLE CANDELABRA - DESIGN SHEET



Component 1 - Candelabra Arm

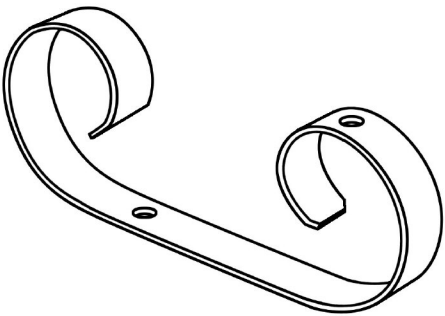
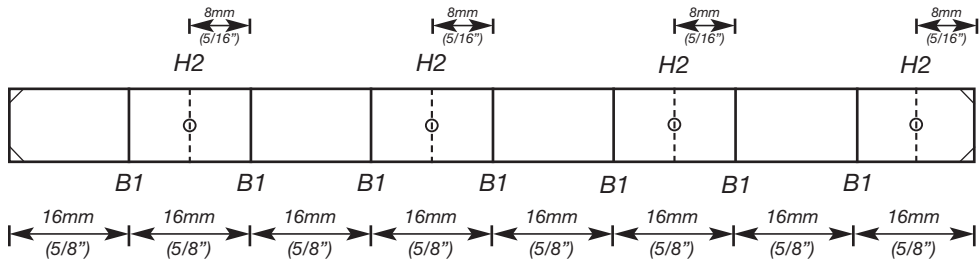


DIAGRAM No. 1



Component 2 - Collar

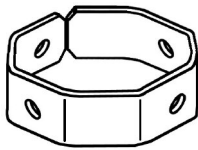
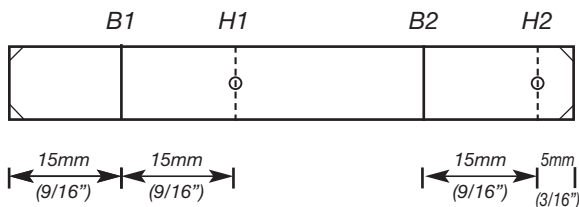


DIAGRAM No. 2



Component 3 - Collar Arm

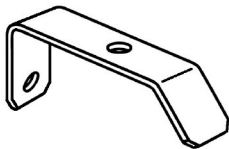


DIAGRAM No. 3

List of Materials Required:

2 x 920mm (3ft) Length of 12mm x 2mm (1/2" x 14 Gauge) Steel Strip [Re-Order Ref: MC036]

8 x 6mm x 3mm Rivets (1/4" x 1/8") [Re-Order Ref: MC050L]

4 x 10mm x 3mm Nuts & Bolts [Re-Order Ref: MC060L]

4 x Sunburst Candles Trays [Re-Order Ref: MC1201P]

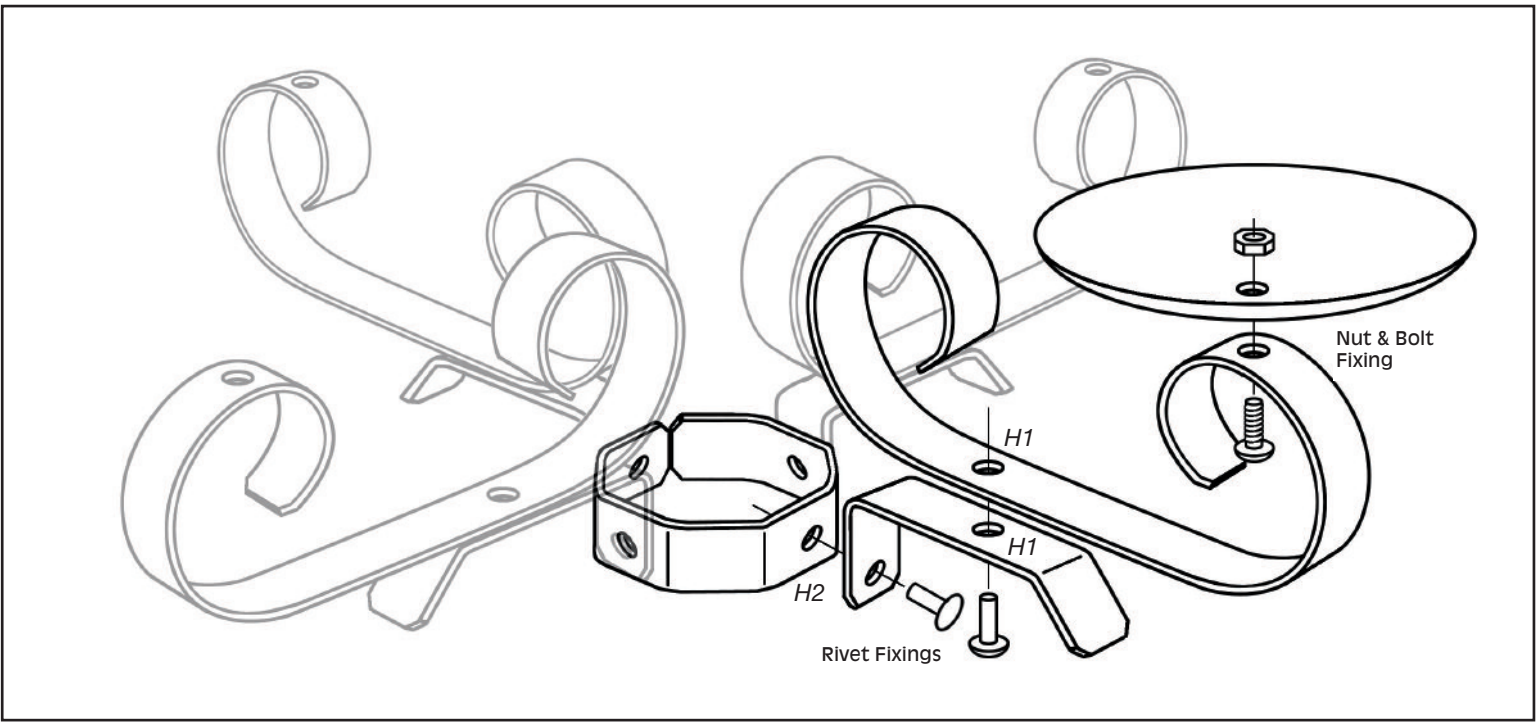
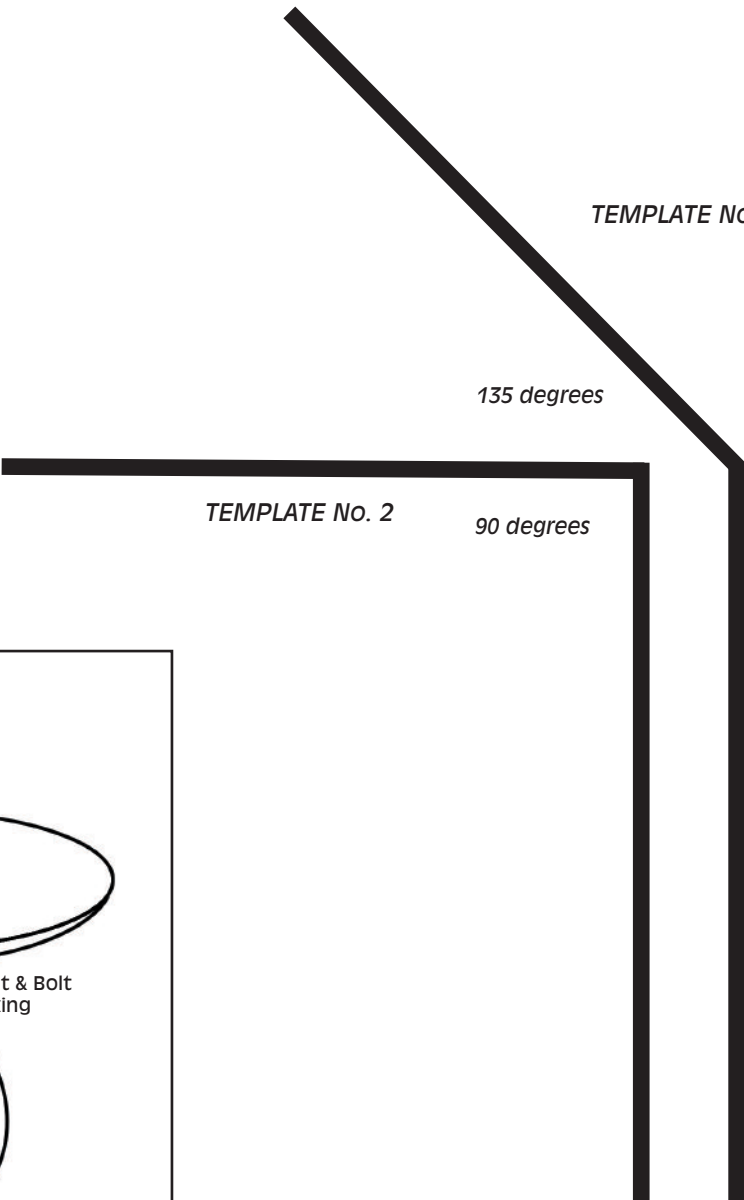


DIAGRAM No. 4



TEMPLATE No. 1

TEMPLATE No. 2