

CHAPTER 15

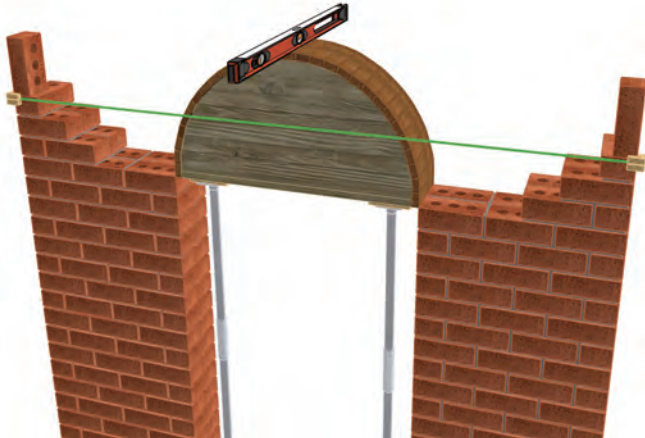
Arches



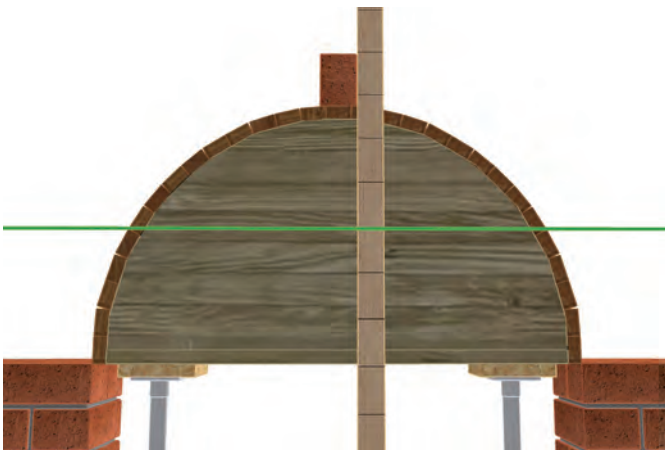
ARCHES

Setting up the centre (Formwork)

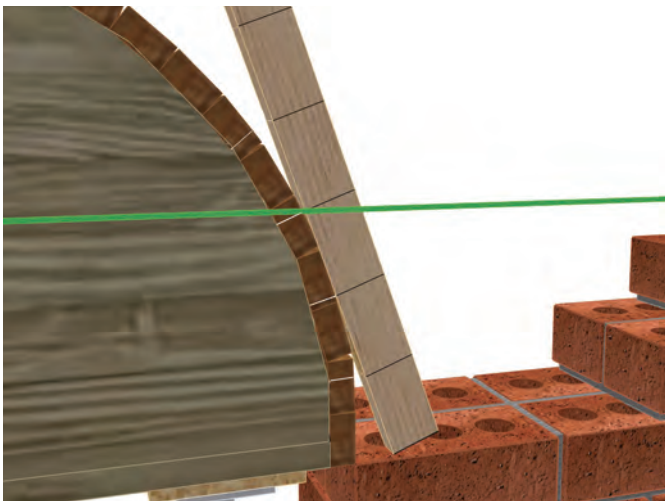
The following figures illustrate how to build an arch over an opening.



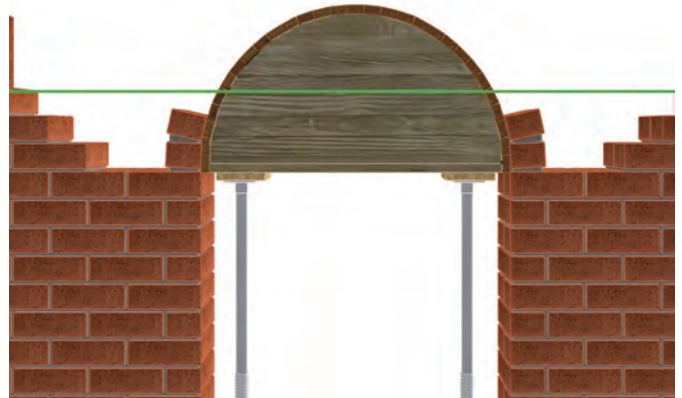
15.1 - Set up the arch support (centre) using a level. NOTE: The centre is set to the face of the wall by raising the line.



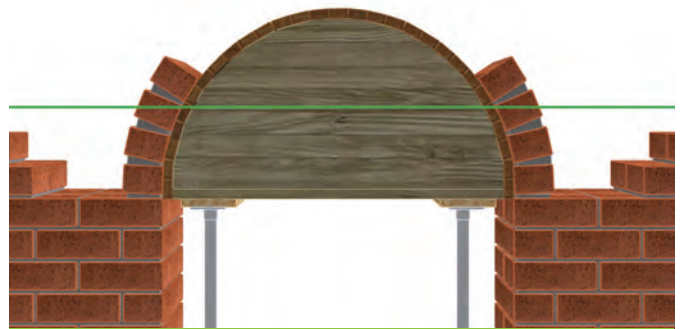
15.2 - Ensure that the top of the brick arch corresponds with the top of a brick course.



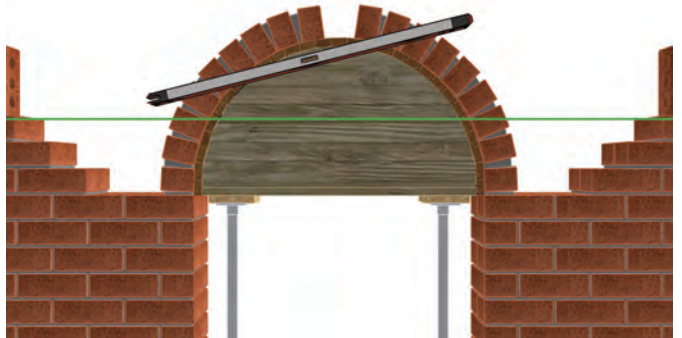
15.3 - Mark off the arch bricks positions by using a gauge rod to avoid unnecessary cutting of bricks.



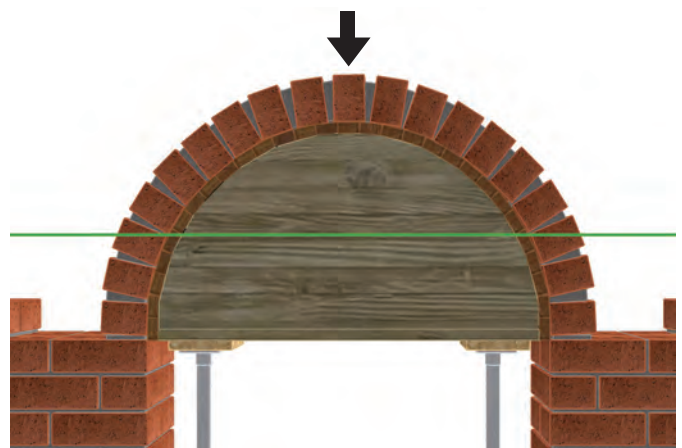
15.4 - Build two courses on each side.



15.5 - Build up evenly on each side to prevent the arch centre from being pushed out of position.



15.6 - Check the face of the arch with a level or a straight edge.



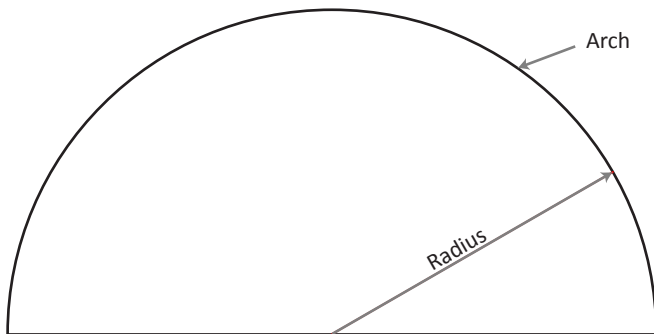
15.7 - Insert the key brick which will complete the arch. NOTE: The key brick is the top most brick of an arch.



15.8 - Begin to build up the brickwork on either side of the arch. NOTE: The neat cutting in on the sides.



15.9 - The wooden support is removed and a portion of the uncompleted brickwork on the one side is shown.

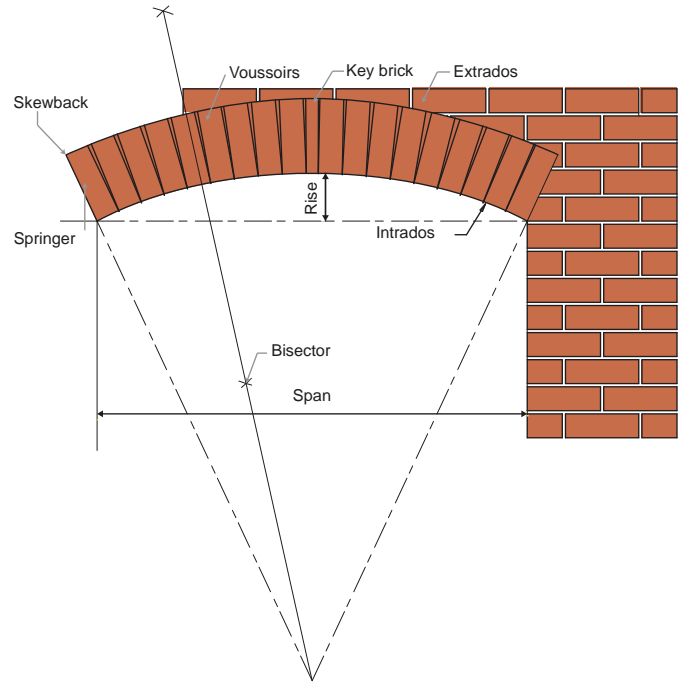


15.10 - Semi-circle as used in a semi-circular arch

The setting out of a semi-circular arch is simple. Half the span is the rise.

Segmental arches

ROUGH segmental arches are built of standard bricks and the mortar between each brick is wedge-shaped. These arches are normally executed in stock bricks because the arch is used internally as a relieving arch. Before we can set out the arch we must know the rise. The rise to any segmental arch is normally one-sixth of the span.

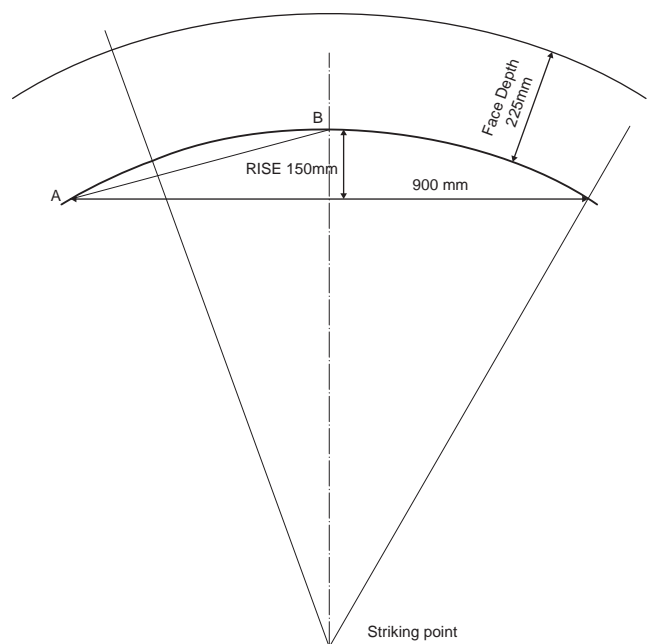


15.10 - Semi-circle as used in a semi-circular arch

Illustrated above is an arch built with a one-brick-on-end-ring. Notice the wedge-shaped mortar joints.

To set out the Arch

- Draw the span, assuming it to be 900mm.
- Draw a perpendicular bisector.
- Mark off rise 150mm.
- Join (a) and (b) and bisect.
- Where the bisector intersects the arch, point (c) is the striking point of the required arch.



15.12 - Geometrical setting out of a segmental arch

