

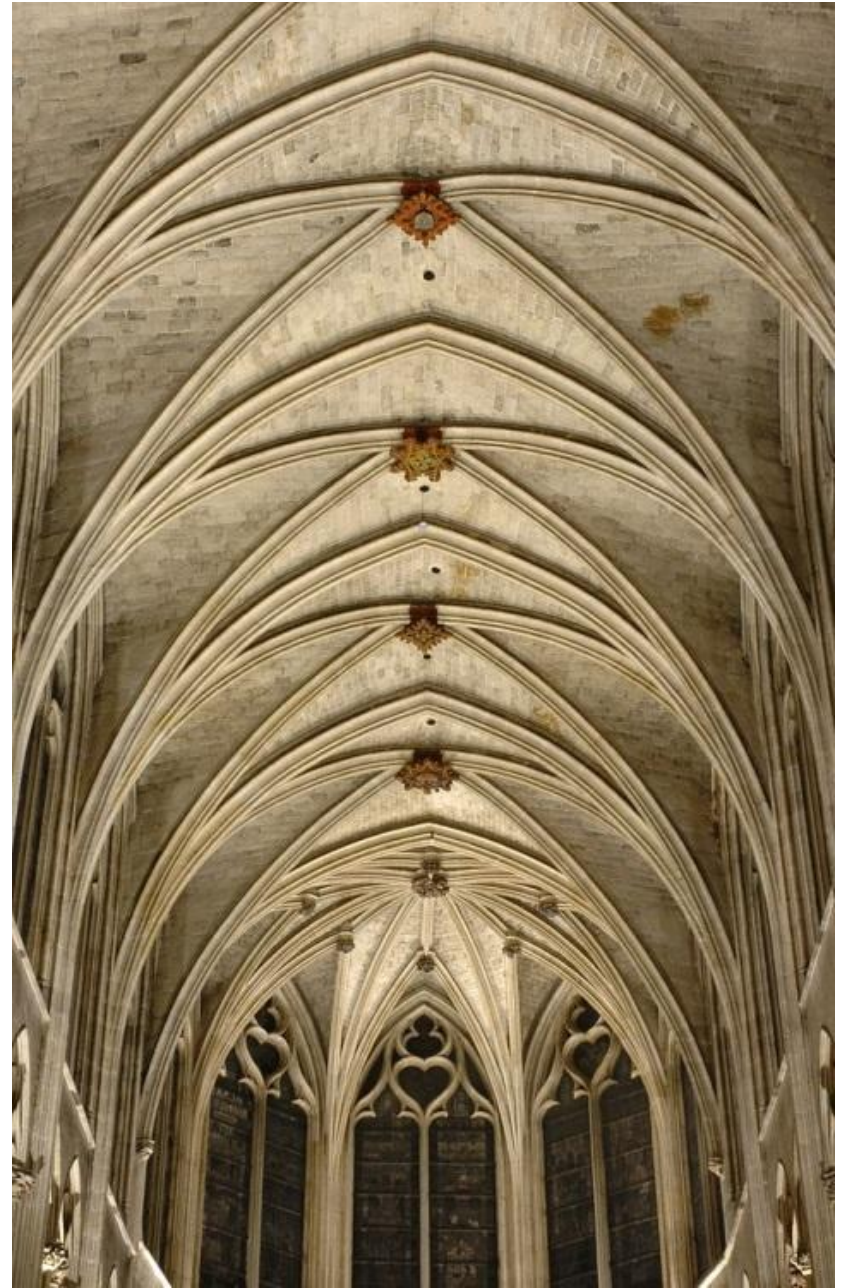
VAULT

VAULT TYPES



IN ARCHITECTURE, A VAULT IS A SELF-SUPPORTING ARCHED FORM, USUALLY OF STONE OR BRICK, SERVING TO COVER A SPACE WITH A CEILING OR ROOF.

THE SIMPLEST KIND OF VAULT IS THE BARREL VAULT (ALSO CALLED A WAGON OR TUNNEL VAULT), WHICH IS GENERALLY SEMICIRCULAR IN SHAPE. THE BARREL VAULT IS A CONTINUOUS ARCH, THE LENGTH BEING GREATER THAN ITS DIAMETER. AS IN BUILDING AN ARCH, A TEMPORARY SUPPORT IS NEEDED WHILE RINGS OF VOUSOIRS ARE CONSTRUCTED AND THE RINGS PLACED IN POSITION.



VAULT TYPES

DOMES

The circular buildings supported beehive shaped corbel domed vaults of unfired mud-bricks and also represent the first evidence for settlements with an upper floor. Similar beehive tombs, called tholoi, exist in Crete and Northern Iraq.

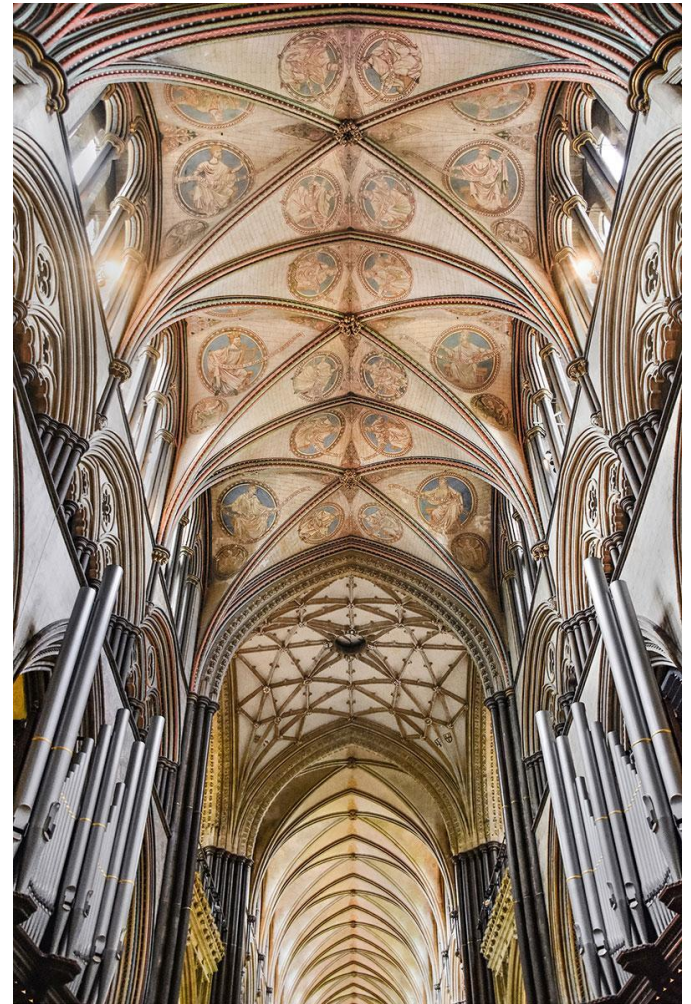
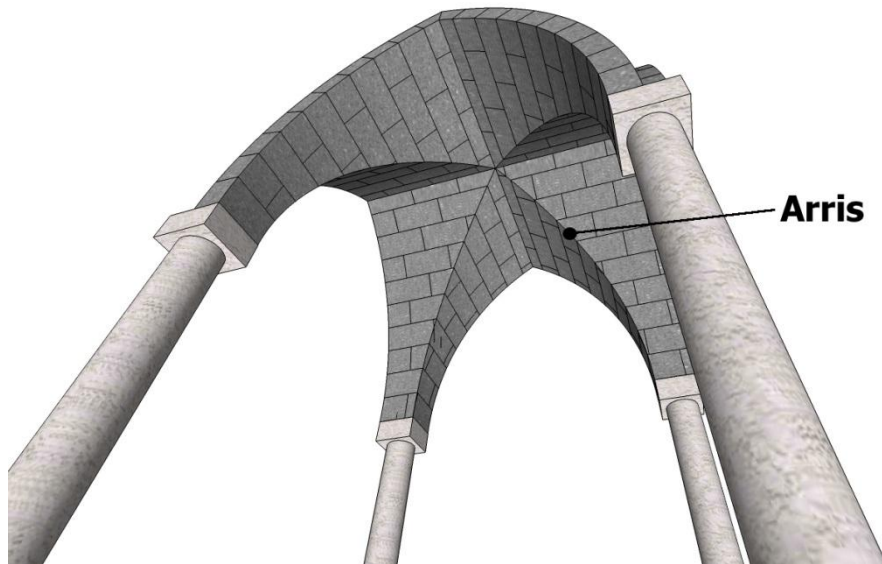


BARREL VAULT

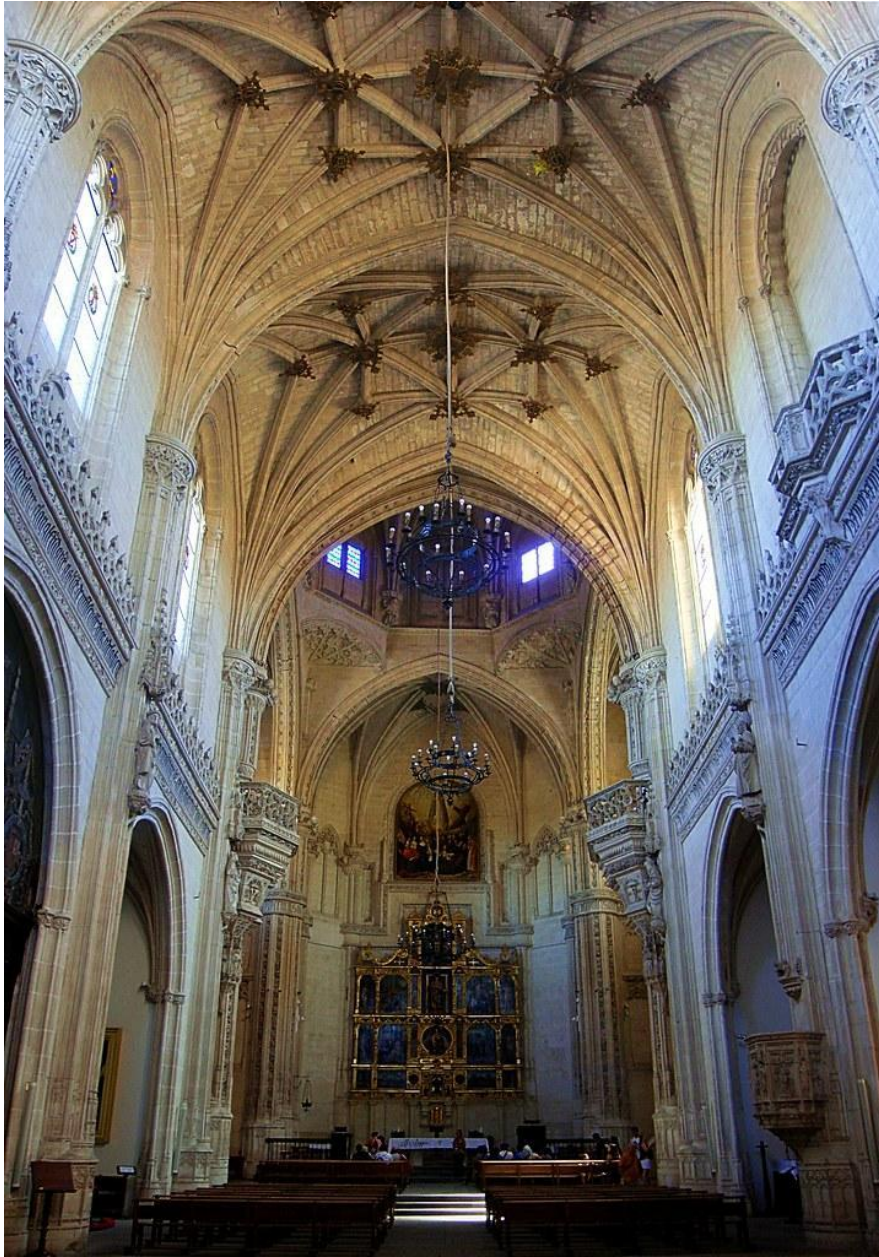


A barrel vault is the simplest form of a vault and resembles a barrel or tunnel cut lengthwise in half. The effect is that of a structure composed of continuous semicircular or pointed sections.

GROIN VAULTS



When two semicircular barrel vaults of the same diameter cross one another their intersection (a true ellipse) is known as a groin vault



RIB VAULT

Reference has been made to the rib vault in Roman work, where the intersecting barrel vaults were not of the same diameter. Their construction must at all times have been somewhat difficult, but where the barrel vaulting was carried round over the choir aisle and was intersected by semicones instead of cylinders, it became worse and the groins more complicated.

FAN VAULT

The fan vault would seem to have owed its origin to the employment of centerings of one curve for all the ribs, instead of having separate centerings for the transverse, diagonal wall and intermediate ribs; it was facilitated also by the introduction of the four-centred arch, because the lower portion of the arch formed part of the fan, or conoid, and the upper part could be extended at pleasure with a greater radius across the vault.

