

Designing for a Purpose

The desire to introduce fashionable features, such as a top-floor long gallery, into country houses demanded new solutions to make them possible. At Parham, the roof over the main range was designed to create an

unobstructed attic with sufficient head room for it to be used as one of the most important and most visited rooms in the house. It was decorated in a style similar to that of the hall and great chamber.



Figure A: The long gallery, created by Sir Thomas Palmer and decorated by the Bisshopps soon after 1602. The ceiling has been replaced more than once, the last time by Victor Heal in 1962. In order to achieve this uninterrupted space on the top floor, the roof had to be specially designed with tie-beams which ran beneath the floor rather than chest or shoulder height.

The original roof is a remarkable survival of Elizabethan carpentry. The anonymous master carpenter had to span a space 30 feet wide and 158 feet long without intruding into the room. The special form of construction, using high collars concealed above the ceiling and 'dropped-ties' hidden below the floor, can be seen in Figure B. He used a vast quantity of long, large-section oak timbers to form huge trusses with tie-beams some 30 feet long and principal rafters of 20 feet. The tie-beams and floor joists may have been imported from one of the Baltic ports, which exported oak esteemed for its quality and length. The more knotty principal rafters probably

came from parkland or hedgerows. Carpenters' tool marks cover the surfaces of the timbers. Axes and frame saws were used to convert the trees to timbers; chisels, gouges, compasses, and knives to mark them up; saws, augers, and chisels to cut them. The way in which the carpenter arranged the purlins and common rafters was very accomplished. By using two rows of purlins in line along the roof, and by making them the same depth as the principal rafters, he could form the common rafters (about 1,200 of them) from short lengths, which he tenoned into the purlins. The way in which the trusses are spaced irregularly shows that dormers were always intended.

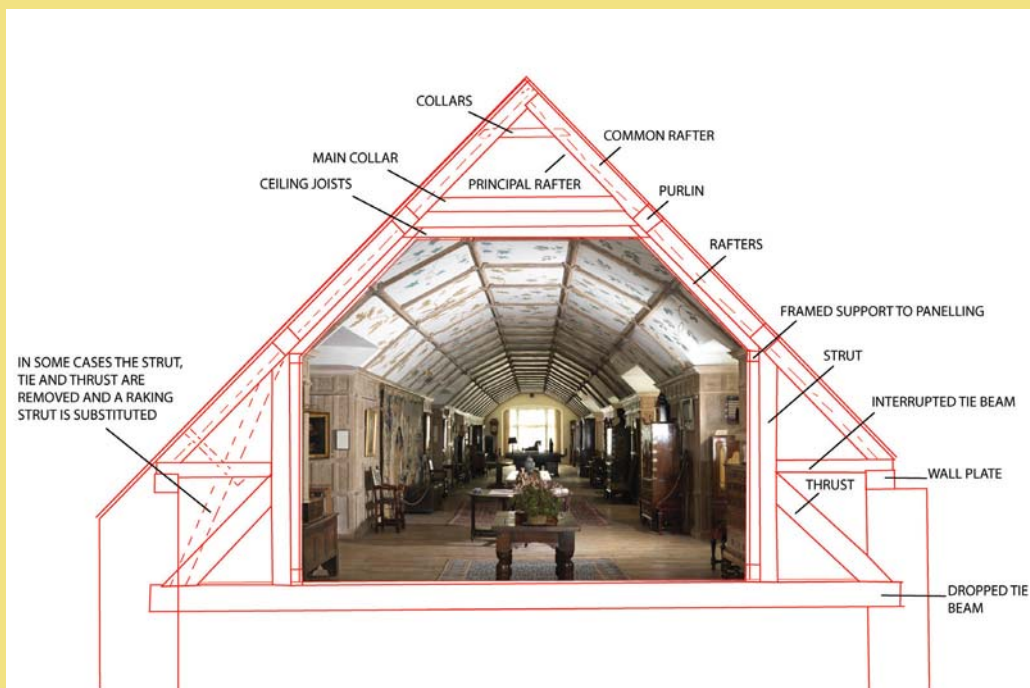


Figure B: This diagram, based on a measured drawing by Victor Heal, shows how the roof was constructed. A truss is a rigid transverse framework across a roof at intervals. It prevents the roof from spreading. It also carries the purlins, longitudinal timbers that support the common rafters, which are spaced regularly along the roof to hold the roof covering. The purlins are supported by the principal rafters, which form the sloping member of the truss. Each truss is braced by a collar, a horizontal timber connecting rafters at a point below the apex of the roof, and the tie-beam, the main horizontal timber. The tie-beam usually connects the top of walls, or the wall plates resting on them, but here it is interrupted and the stubs of it connected by struts to the dropped tie-beam beneath the floor.



Figure C: The long gallery at Chastleton House, Oxfordshire, created for Walter Jones at about the time Sir Thomas Bishshopp was fitting out the long gallery at Parham.

Long galleries received some of the most sumptuous plaster decoration of the period, reflecting the importance of the gallery in the sequence of public rooms. The exuberance of such plasterwork reached its apogee in ceilings like that of the gallery at Blickling Hall, Norfolk (1620). Galleries were also spaces where exercise could be taken indoors. At Chastleton, Oxfordshire, at Burton Agnes, Yorkshire, and at Knole, Kent, the floral decoration of the ceiling, stylised though it is, suggests that the garden has been transported inside. The elliptical barrel vaults at Chastleton and Burton Agnes heightened the illusion by creating the impression of a flower-covered bower from which the outdoor garden below could be viewed. At Parham in 1962 Victor Heal and the theatre designer Oliver Messel evoked that theme in modern form, and struck a compromise between a barrel vault and the nineteenth-century canted ceiling they replaced.