which became its main westerly defence. King Henry V's pleasance (*Med. Archaeol.*, viii (1966), 222–3) and the earl of Leicester's aquatic entertainments for Queen Elizabeth are reminders of its later importance for pleasure; it is indeed only through Hollar's views that one can restore to the present forlorn ruins one of the formative features of the castle's history.

**M. W. THOMPSON**

**MEDIEVAL TIMBERWORK AT BISHAM ABBEY (FIGS. 64–6)**

The mansion known as Bisham Abbey lies on the Berkshire side of the Thames, close to Marlow (SU 846849). An account, with plan, in the *Victoria County History*50 and illustrated descriptions by E. T. Long51 say little about the medieval timberwork, much of which survives from the first two phases (plan of these phases only, FIG. 64), i.e. the 13th-century manor house erected by the Knights Templar, and the great chamber added by the earl of Salisbury in the 14th century.

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**TEMPLARS’ HALL AND SOLAR**

*Hall.* The stone-built, ground-floor hall is probably the widest unaisled hall that has survived from before 1300.52 Including the cross-passage at the W. end, its internal dimensions are 52 by 30 ft. The work has been attributed53 to c. 1280 from the mouldings on the famous porch, the entrance-door and the window in the south gable, but in the present state of knowledge a date nearer 1260 seems more likely for these features.

The Templars spanned the hall with a roof of rafters, light collars and scissor-braces. This type54 had appeared in England by the 1st quarter of the 13th century (it was used over the W. front of Peterborough Cathedral) and by the middle of the

50 V.C.H., Berks., III (1923), 139.
century had been adopted for spanning 25- to 35-ft. widths over the main bodies of
great churches. There are examples in Salisbury and Ely cathedrals and Westminster
Abbey. A form of scissor-bracing occurs in mature Norwegian stave-churches of the 2nd
half of the 12th century. There was substantial restoration of the hall roof in 1859, but
the existing twenty-nine scissor-brace couples (FIG. 65) are mainly in the original
positions and of the original form. The scroll-moulding (FIG. 65) of the inner wall-plates
probably also represents the original design.

The roof is readily examined from the gallery at the W. end. Adjacent to the W.
wall a long crown-post rests on an original tie-beam (FIG. 65). There is scroll-moulding on the capital of this post similar to that on the outer arch of the hall porch. A mortice at the top of this would have held a brace from it to a collar-purlin. It seems therefore that the hall roof must have originally included crown-posts on three or four tie-beams.

The following sequence is suggested for the early development of 'trussed rafter', or 'collar-rafter', roofs over much of England:

<table>
<thead>
<tr>
<th>Century</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>13th century, 1st half</td>
<td>No purlins. Trusses usually have collars and some form of diagonal bracing, often scissors</td>
</tr>
<tr>
<td>13th century, 2nd half</td>
<td>Widespread use of scissor-braces. Appearance of collar-purlins and crown-posts (to provide longitudinal stability)</td>
</tr>
<tr>
<td>14th century</td>
<td>Collar-purlin assemblies now usual. Progressive elimination of the upper part of scissor-braces to give diagonal braces below the collar</td>
</tr>
</tbody>
</table>

Solar. The solar lay over offices at the passage end of the hall. Minor internal modifications in 1969 north of the kitchen passage have exposed the joists which here support the first floor. Their character indicates that they are original.

A bridging-joist, 45 ft. long and 11 by 9 in. in section, runs axially (FIG. 64) from end to end of the wing. Transverse common joists, about 7 by 5 in. and spaced at 25-in. intervals, span the 20-ft. width. They are not framed, but lodged: at their ends, on plates partly embedded in the walls; at their centres, on the bridging-joists. This jointless system, found in a number of 13th-century two-story stone buildings (e.g. the service-wing at Little Chesterford manor house, Essex), became progressively obsolete as joists began to be housed in the bridging-joist by tenons. Also, in the 14th century the bridging-joist began to be set not, as here, axially, but transversely to the range, the common joists then being aligned axially.

Montagu's Great Chamber

This ran the length of a stone range, 67½ by 23 ft. internally, in which a cloister or undershot passage occupied part of the ground floor. The addition of this range to the Templars' building certainly occurred after 1336 when William, Lord Montagu (1301-44), one of the young king’s chief supporters and instrumental in the capture of Mortimer, obtained possession of this important manor. He had been granted it (but on reversion) the previous year; a year later he was created earl of Salisbury and founded the Augustinian priory at Bisham.

As indicated in the Victoria County History, this range is certainly 14th-century. Long has suggested that it was built c. 1370 by William's son, also William Montagu, the 2nd earl of Salisbury (1328-97). Window-tracery might support this date, but historical considerations, as well as details of the roof itself, are more consistent with the time of the first William Montagu. It would be understandable for this fighting to have made Bisham a principal residence and to have started the range even before the priory. Completion by 1340, a date already used by one of us, is therefore proposed.

The original timber roof (FIG. 66), exposed in the long garret, which was formed in the 16th century when a ceiling was inserted at wall-top level, is divided into five bays by main trusses. These have a cambered heavy collar which carries a crown-post and is supported by arch braces. Square-set side purlins, 8 by 8 in., are butted to the trusses. Above, there is the usual crown-post system, with light upper collars and collar-purlin.

55 C. A. Hewett, Med. Archaeol., x (1966), 94, fig. 35.
57 See photographs in opp. cit, in notes 51 and 53.
BISHAM ABBEY, BERKSHIRE

Above, trusses of roof over great chamber, and on r., mortice on wall-plate; below, on l., scarf-joint on collar-purlin, and, on r., view and section of chamfered side purlin and cornice (pp. 222, 224)
On the last (and also on the bressummer which flanks the cloister) there are splayed scarf-joints of *trait de Jupiter* profile (fig. 66). Both the side purlins and the cornices resting on them are impressively moulded (fig. 66) with a three-quarter hollow between rolls and fillets; there is a similar moulding on the inner wall-plate. The cambered collars are supported by blades (which we call cave-blades because they occur at the eaves), so curved as partly to rest with a tenon on the inner wall-plate (fig. 66), and partly to continue as posts on the inside of the wall. When the chamber was ceiled, the lower parts of these posts were removed. There are assembly-marks for the rafters in positions near the ashlars, while the main trusses have marks on their arch braces. This roof has certain similarities with that at Old Parsonage, Marlow, near by.58

J. M. FLETCHER and C. A. HEWETT

A RING-BROOCH FROM WATERLOOVILLE, HANTS (PL. XXXIV, D; FIGS. 67–8)

This gold ring-brooch, diam. 0·6 in. (1·5 cm.), was found in a garden at Waterloo­ville, Hants, and is now in the City Museum, Portsmouth (PL. XXXIV, D; FIG. 67). On each side of the ring there are biconical collets, ht. 0·2 in. (0·50 cm.), one empty, the other set with a sapphire. The pin is attached in the middle of a split four-petalled rosette by a hinge looped around the ring of the brooch, and the point of the pin rests