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Archæologia Cantiana

SOME MAJOR KENTISH TIMBER BARNs

By S. E. RIGOLD, F.S.A.

THREE particularly grievous recent losses among the timber barns of Kent have come after decades of undocumented destruction.¹ In April, 1962, the unique and beautifully maintained barn at Nettlestead Place was accidentally burned; the smaller and less well preserved of the splendid pair at Court Lodge Farm, Lenham, was fired by two local urchins in September, 1962; late in 1965 the barn at Davington Court, the finest of its somewhat later sort, was demolished after a strenuous search for a use for it amid new housing, though it will be re-erected, at least in part, at East Haxted Farm, Edenbridge. These three were well recorded; Davington was the subject of a detailed survey by Mr. W. G. Prosser of the Royal Commission on Historical Monuments, to which the writer is grateful for their permission to publish it here, while Nettlestead and Lenham were studied by Professor Walter W. Horn and Mr. Ernest Born of the University of California,² who have been most generous in communicating all their information and drawings for comparison with the author's own, and allowing him to publish their photographs. He had made independent notes of these barns while they were standing, and, with the assistance of Mr. Kenneth Gravett, by way of an autopsy, after their destruction. Although some details must remain problematic, the collation of this evidence sufficed for 'obituaries' of lost scheduled Ancient Monuments. But it seemed that these accounts would be more valuable if incorporated in a comparative study of the greater timber barns of Kent, particularly as the

¹ Mr. F. C. Elliston-Erwood remembers seven more or less major barns in the particularly vulnerable Woolwich area, lost between c. 1900 and soon after World War I: Lesnes, Bostall, Plumstead (note 30), all mentioned below; also four in Eltham—Pippin Hill, Eltham Hill, where the baths now are, Well Hall, opposite 'Pleasaunce', and Well Hall Road, near Odeon cinema.

² A general study of aisled buildings and a special article on Nettlestead are forthcoming in the U.S. Prof. Horn's articles 'On the Origin of the medieval Bay-system', *Journ. Soc. Architect. Historians*, xvii (1958) and on the barn at Cholsey, Berks., *ibid.*, xxii (1963) are contributions to the subject.

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work of Mr. Cecil A. Hewett, on those of Essex,³ has already provided a terminology and a framework of hypotheses that can usefully be applied this side of the Thames. Most of these barns are quite unpublished, but it is not claimed that the coverage of eligible specimens is complete. Stone or brick barns, including such exceptional *bâtiments administratifs* as that at Boxley Abbey and the 'Archbishop's Stables' at Maidstone,⁴ are excluded. Where there are two barns at the same place they are designated 'Major' and 'Minor' in order of size, even though the 'Minor' barn is of major dimensions. The precision of surveying is not the same in all cases; the sections are somewhat generalized, and where the left side differs from the right it represents a variability not necessarily to be found in the same truss.

The barns described are distributed all over 'Old Kent' (the arable parts, of primary settlement), which has more truly great barns than the east Weald, Surrey and most, if not all, of Sussex, put together, though Essex may be even richer. This pattern contrasts the small tenures and mixed economy of the Weald with the extensive arable holdings of the great religious foundations, which, as in the case of the great stone barns of the Severn-Cotswold area,⁵ could provide the capital for enduring barns, whose very presence on such estates is an argument for a pre-Reformation date. The medieval lordship, so often 'spiritual', of each barn, as indicated below, will make this point clear. Whether they are properly called 'tithe-barns' is a superfluous question: a clerical lord was normally the impropiator of the living and would garner the capital and the decimal produce together.

CRITERIA FOR DATING

No special documentary research, has been undertaken, though, as Dr. R. A. L. Smith has observed,⁶ church demesnes were increasingly put to farm (fully equipped?), from the later fourteenth century. Apart from one or two published references and the Carbon 14 dates kindly made available by Professor Horn, the arguments are entirely derived from examination of the barns themselves. At this stage, therefore, a relative rather than an absolute dating is offered. Since

³ 'Structural Carpentry in Medieval Essex', *Med. Arch.*, vi-vii (1962-3), 240.

⁴ These are, in part or whole, two-storeyed. None of the Kentish timber barns has the residential or administrative section with an upper floor found in several of the great barns of the English 'mid-west' (v. note 5).

⁵ The area that includes such barns as Great Coxwell (W. Berks.), Tisbury and Bradford-on-Avon (Wilts.), Glastonbury and Pilton (Som.), Frocester and Stanway (Glos.), Bredon and Middle Littleton (S. Wores.) is also that of the landed wealth of such monasteries as Glastonbury, Shaftesbury, Gloucester, Tewkesbury, Pershore and Evesham (v. *The Antiquary*, xxxix, 168, 211, 256, and *Arch. Jour.*, cxxii (1965), 209. In a smaller area one may compare the holdings of Christ Church, St. Augustine's and Rochester.

⁶ *Canterbury Cathedral Priory*, 190 ff.

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the general design of Kentish barns evidently changed little over several centuries, it is by the finer points, and particularly the timber-joints, that this must be established. Some of these joints (e.g. the lap-joints of tie and plate), are difficult of access, and more probing from a ladder is required, but the scarf-joints (those joining timbers end-to-end) are relatively visible, and Mr. Hewett has worked out a possible course of development that may be of wide application.⁷ A brief account of the various methods of scarfing is introduced at this stage in order to define the terms, which are Mr. Hewett's, slightly simplified.

SCARFING

Scarf-joints can be either 'splayed' (cut obliquely)—in practice usually 'stop-splayed' (i.e. with a short back-cut to prevent the splayed surfaces from riding over), or 'halved' (cut parallel to the faces of the timber). The overlapping faces are secured by round pegs, at right angles to the main plane of contact, and sometimes, in addition, by larger, flat pegs ('keys'). The use of keys is recessive and has been observed in three early barns only. In timber houses the need for scarfing is limited, but it can be seen where lengths of more than, say, 24 ft. are unavoidable, e.g. in the collar-purlin of a crown-post, or in longitudinal plates—it is often conspicuous in the forward plate of a 'Wealden' front.

SPLAYED SCARFS

These occur in simple form, with unbroken plane of contact at Frindsbury (Fig. 1, A; Pl. VI, A), where the keys are very prominent and the butts not cut across but 'sallied', almost exactly as in the barn at Great Coxwell, Berks. (probably c. 1275),⁸ and in the more usual form, which is 'tabled', i.e. with a step in the middle of the plane of contact, at Littlebourne (Fig. 1, B), where the 'table' is slight and sometimes absent, at Mersham (probably), and, without 'keys' at Brook (Fig. 1, C) and in parts of Godmersham and perhaps of Lenham 'Minor'. These instances are associated with other relatively early features and may all come within the fourteenth century.

HALVED SCARFS

The typical later medieval scarf is halved horizontally. The normal form, seen in innumerable hall-houses and here illustrated (Fig. 1, D)

⁷ *Op. cit.* in note 3, p. 253 ff.

⁸ W. Horn and E. Born, *The Barns of the Abbey of Beaulieu at . . . Great Coxwell and Beaulieu St. Leonards*, advocate an even earlier date, but the consensus of the Vernacular Architecture Group was that c. 1275 would reconcile all the evidence.

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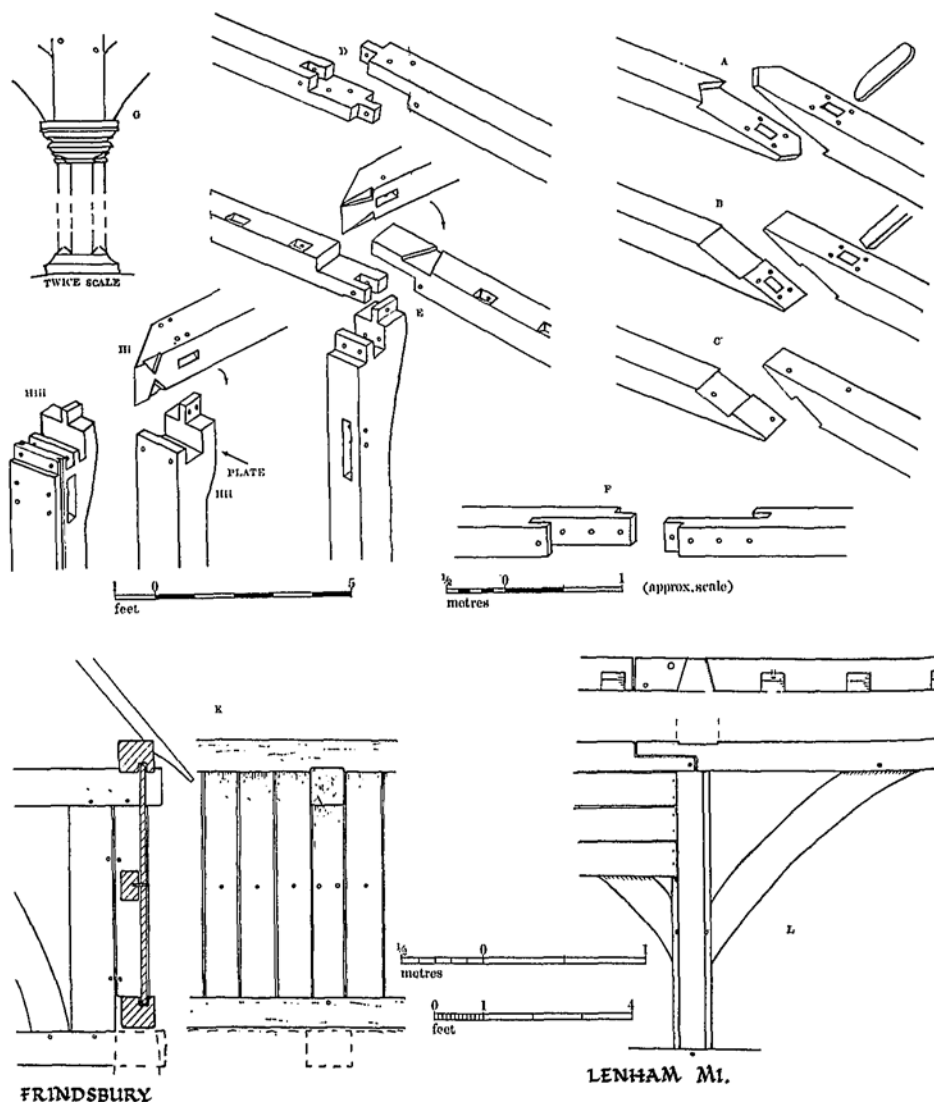


FIG. 1.

from the collar-purlin of the aisleless lesser barn at Willesborough, but clearly seen also at Davington (Fig. 8), has a clasped ('bridled') tenon at the end of each butt, visible from the underside. Mr. Hewett records variants in Essex with 'sallied' butts,⁹ but all the Kentish examples,

⁹ *Op. cit.* in note 3, Fig. 83b, c.

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and those in the Kentish-type barn at Upminster,¹⁰ are cut square. It is not always clear whether a barn has this scarf in its pure form, since, whereas at first plates were scarfed where convenient, later it was done directly over the posts and the tenon of the post-head formed a 'false tenon' to the 'bridle' of the scarf, as at Lenham 'Minor' (Fig. 1, E) and the rather comparable Faversham 'Major'. In these cases, at least, the bridled upper tenon is omitted. A horizontally halved scarf will be referred to as 'normal', whether or not the upper bridle is present. The post-medieval form, occurring once as early as Faversham 'Major' and described by Mr. Hewett as 'invariable after the seventeenth century', found in all barns noted in classes IV and V (except Ightham Mote), and here illustrated from Austin Lodge, Eynsford (Fig. 1, F; Pl. VII, B), is halved vertically and 'lipped', i.e. with tenons to one side, in the plane of the halving.

THE PLACE OF KENT IN THE DISTRIBUTION OF AISLED BARNs

With the exception of Nettlestead, and of one or two examples mentioned by way of comparison, all the barns described here are 'aisled', i.e. with an aisle or outshot on either side of the main body, which is bounded by an open range of posts—the usual way of achieving greater width than the standard length of a tie-beam. Compound roofs, such as hammer-beams are rare in utilitarian buildings.¹¹ Base-crucks, as in the one instance at Wrotham, are used to eliminate some of the posts in an essentially aisled structure, at least where there are no stone walls to resist the thrust,¹² but there is no firm distinction between the methods of aisle-structure in all-timber and in 'hard-cased' barns.¹³ Nevertheless, aisling is particularly characteristic of the largest area in England where all-timber barns are the rule, outside which the tendency is to length rather than width. A precise definition of this area is not yet available, but it covers the South-East, as far west as the downs of north Hampshire and the middle Thames below Oxford and as far north as the Cambridge area. It thus extends beyond the area of persistent crown-post roofs, into the Wessex-Chiltern region of double-framed roofs.¹⁴

¹⁰ *Ibid.*, Fig. 82c. Halving need not be absolutely horizontal; for a vestigial slight splay cf. Hewett, as above, Fig. 83a, and a barn at Lover's Lane, Newark, Notts.

¹¹ E.g. the stone barn at Westenhangar, and the re-used roof at Winterbourne Clenston barn, Dorset.

¹² As at Frocester, *Arch. J.* as in note 5, and Stanway—both base-crucked throughout.

¹³ Barns with stone pillars are another matter (e.g. Cholsey; Canon's Barn, Wells, Som.; Perrières, Calvados; Warnavilliers, Oise—v. W. Horn as in note 2).

¹⁴ Map on p. 352 of *Culture and Environment*, Cyril Fox, *Festschrift*. The well-known aisled barns at Harmondsworth, Middx. (*Trans. London and Middx. Arch. Soc.*, iv (1871), 417) and Little Wymondley, Herts. (Horn, *op. cit.* in note 2, re Cholsey) are already in the 'double-framed' area.

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The Kentish barns are remarkable for their uniformity, particularly in the important matter of bracing the main posts across the aisles. In all but one of the medieval examples described here it is the same: each post stands on a transverse post-plate extending to the aisle walls¹⁵ and a single long brace, hereinafter called a 'Shore',¹⁶ stiffens the head of the post to the outer end of the post-plate—vertical to horizontal. It thus 'passes' the aisle-tie into which it is halved ('squint-trenched'). In Essex, by contrast, though the time-series is longer, Mr. Hewett has noted much variety of bracing;¹⁷ the 'Kentish' form only occurs at Upminster, just over the River,¹⁸ though there are cases of an allied vertical-to-vertical (post-head to wall-post) bracing,¹⁹ recorded also in a lost barn at Dover,²⁰ at Wanborough, Surrey,²¹ and Titchfield, Hants.²²

CLASS I: BARNS WITH PASSING SHORES AND CROWN-POST ROOFS

To this class belong all those of first magnitude. When the collar-purlin and crown-post roof, overwhelmingly the commonest type in Kent for all medieval purposes, began, is still uncertain,²³ but it was well before 1300. In barns, its obsolescence after c. 1500 seems to have been quicker than in houses, and there was a recognized alternative (see Class II). It is only above tie-beam-level that the first three classes differ and a type-specimen of Class I is described in detail as a standard of reference for them all.

A. Type-Specimen: Court Lodge, Brook (TR 066443) on a demesne of Christ Church, Canterbury. This barn (Pls. I, B, II, A; Figs. 2, 6) is chosen because it is well preserved, unaltered in its internal structure,

¹⁵ The post-plates may stand on continuous ground-walls, or on stylobates at either end. In Kent the latter always appear to be alterations, but the thirteenth-century barns at the Templar site of S. Witham, Lincs., all had stylobates. See Class V, for the possibility of low ties instead of post-plates.

¹⁶ This term is used in the seventeenth-century description of the lost timber Austin Lodge belfry at Benenden; *Arch. Cant.*, xxii (1897), 46. Mr. Hewett uses 'passing brace'.

¹⁷ *Op. cit.* in note 3, pl. XXIII-XXV, esp. XXIV, c.

¹⁸ *Ibid.*, pl. XXV, c.

¹⁹ *Ibid.*, fig. 85 f; observed at Thurrock, Clavering, Weeley (F. H. Crossley, *Timber Building in England*, pl. 127) and Farnham, Essex.

²⁰ *Arch. J.*, cxv (1958), pl. XV; an anomalous barn with a sort of reversed assembly in the aisles.

²¹ An odd barn, the only aisled barn in Surrey known to Mr. Gravett, except Ravensbury (*v.* note 29); it has no jowls and the clumsily jointed and almost straight shores look like a rustic survival of the ancient system of duplicated rafters seen, e.g. at Cressing Temple, Essex (*op. cit.* in note 3, pl. XXIII, d).

²² Alternating with hammer-beams supported from the wall-posts. In short, these unsatisfactory braces have a wider distribution than the efficient Kentish type. General analogies to both can be found in Normandy.

²³ J. M. Fletcher and P. S. Spokes, 'The Origin and Development of Crown-post Roofs', *Med. Arch.*, viii (1964), 152.

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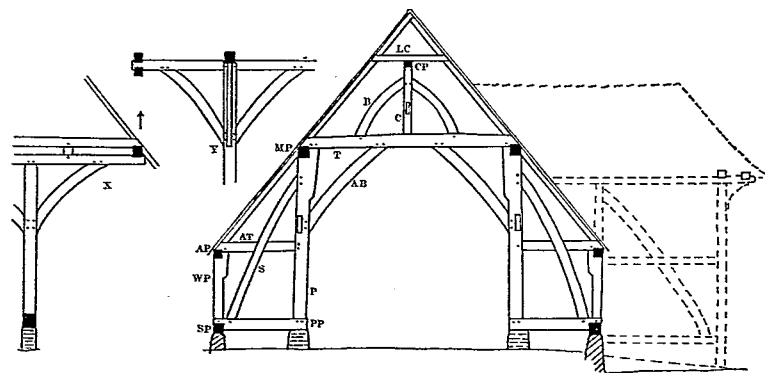
seems to come in the early maturity of its evolving series, and is specially accessible, having, since 1958, housed the Agricultural Museum of Wye College. It lies south-west-north-east. The size is fairly modest—117 × 31 ft. As usual, the aisles are returned round each end ('terminal outshots'), and the roof is fully hipped to an outer wall of even height (cf. Pl. III, A). It has six full bays—two 'central bays' (those between the passage-bays), two passage-bays, normally used as threshing-floors (very slightly narrower), and two outer bays.

There is a difference in treatment between the two ends, exemplifying two alternative constructions that may be found in this position, both also seen in Fig. 5 (Lenham 'Minor'). The lie of the scarfing (the usual indication) shows that it was assembled from the south-west. At this point the main plates extend for half a bay beyond the last full bay and then comes the terminal outshot, which includes a central ('axial') post with its own post-plate and passing shore. On this post is balanced and braced a terminal tie-beam, which carries the ends of the main plates projecting over the half-bay. A half-bay and end thus treated will be called 'cantilevered'. In one detail here Brook is exceptional: the tie-beam is duplicated—an upper tie is lifted on the lower by two blocking pieces and the two ties clasp the ends of the arcade-plates (Fig. 2, x, y). This provided extra stability during assembly, but it may also be accounted a survival—duplicated or clasping ties occur in sundry base-cruck structures²⁴ and are among the archaic features of the barn at Belchamp Hall, Essex.²⁵ At the other end of the terminal outshot adjoins a full bay: this type of end will be called 'normal'. The six full bays, the cantilevered half-bay and the two outshots make $7\frac{1}{2}$ bays in all.

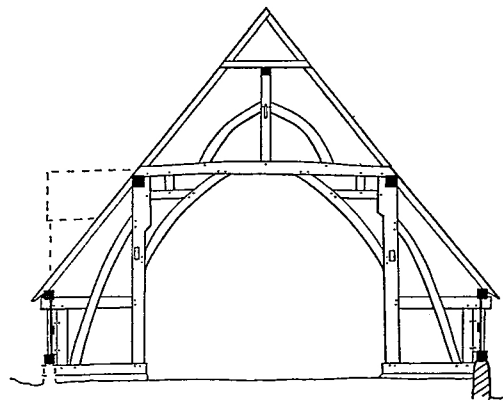
The components of the transverse frames are lettered for reference (Fig. 2). The main posts (P) are slightly, but deliberately, cambered inwards, as usual in Kentish barns, and stiffened by the shores (S) to the post-plates (PP); they are accurately squared throughout, but not chamfered and the long, regular 'jowls' (thickened heads) are of somewhat archaic profile (cf. Frindsbury). The wall-posts (WP) are also jowled and in this case stand on the post-plates, not directly on the sole-plates (SP). The posts in each tier carry, in the same order, the square-sectioned, longitudinal main plates (MP) or the aisle-plates (AP) and above them, the main ties (T) or the aisle-ties (AT), respectively. This order is designated 'normal assembly' (compare the two following barns for the alternative). The main ties are stout, well centred on the posts and only slightly deepened at the centre. They are stiffened to the posts by gently curved arch-braces (AB), rising from

²⁴ E.g. Middle Littleton barn, Worcs.; halls at W. Bromwich, Staffs., Long Crendon, Bucks., etc.

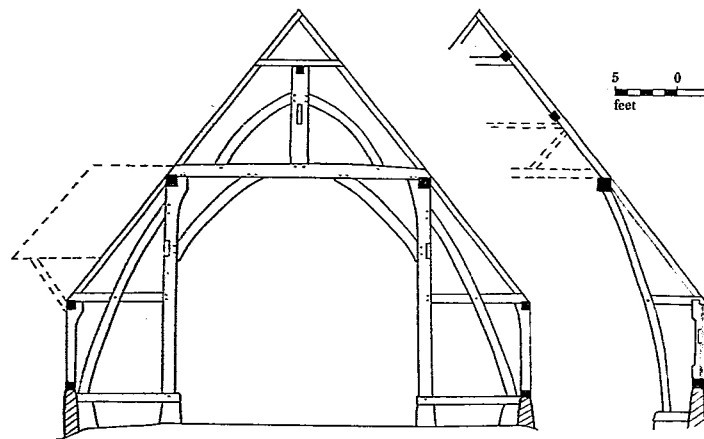
²⁵ *Op. cit.* in note 3, fig. 85, b.



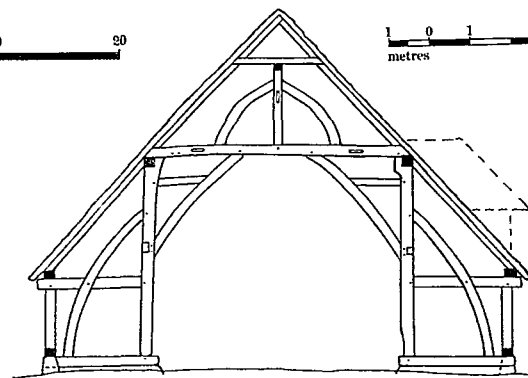
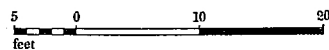
BROOK



FRINDSBURY



GODMERSHAM



LITTLEBOURNE

FIG. 2.

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about the same level as the longitudinal arcade-braces to the main-plates. The ties carry unchamfered square crown-posts (C), braced down to the ties by steep, gently curved braces (B), and up to the collar-purlin (CP) by longitudinal braces. The rafters, with a light collar (LC) to each couple, have no side purlins whatever, either in the main body or in the aisles.

The outer frame alone shows some renewal, but the aisle-plate, with the same scarfing as the rest, is largely intact, without any sign of arch-bracing to the wall-posts. The sides are now, as usual, weather-boarded, and have recently been provided with windows. The original cladding nowhere remains.

The carpentry is excellent, the proportions compact, the use of pegs is generous, but the shore is not pegged where it passes the aisle-tie. The scarfing is consistently 'splayed and tabled' (Fig. 1, C), but with two face-pegs only—no 'keys'. These features, together with the form of the jowls and the duplicated tie, are symptoms of a fairly early date. The fact that Brook was one of the five demesnes leased in 1374-5 by the managing Prior Eastry may have something to do with it.²⁶

The waggon-porches are certainly additions, but the barn was evidently designed, like most of the later, larger barns, with two passage-bays. The porches are of deep projection, whereas the usual porches or 'midstreys', are mere hipped canopies on brackets rising to about main-plate level. The name 'midstrey' suggests the earlier practice of having a single passage in the middle, as the earlier, though much longer, barns at Frindsbury and Littlebourne originally had, and as smaller barns continued to have. In its two-passage plan Brook is forward-looking. The porches have long braces 'passing' the half-height rails, thus repeating the pattern of the passing shores. Their upper plates project on brackets or 'knees' and carry inner and outer lintels at different heights.²⁷ The workmanship of the porches is good but lacks the early compactness.

B. Two Early Great Barns: Manor Farm, Frindsbury and Littlebourne Court

These have several archaic features in common: splayed scarfs with 'keys', extra stiffening in the spandrels of the arch-braces, and, above all, 'reversed assembly' in the aisles. This term, now proving useful in many contexts, was devised by Mr. Hewett²⁸ to describe an old-fashioned and recessive order of assemblage found in some Essex

²⁶ *Op. cit.* in note 6, 192 n.

²⁷ Cf. the two plates of a 'Wealden' front.

²⁸ *Op. cit.* in note 3, esp. p. 246.

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barns (in some cases, as at Upminster, in the aisles only), whereby the longitudinal plates rest on top of the ties and are not set into the heads of the posts, which consequently need no jowl. The only earlier article purporting to cover Kentish barns, by J. Davies,²⁹ contains an inadequate description and drawing of that at Manor Farm, Plumstead, an ancient demesne of St. Augustine's, which may in part have been very old, with reversed assembly in both tiers.³⁰

Frindsbury (TQ 747700), Pls. I, A, VI, A; Figs. 1, A, K, 2, 6). On a demesne of St. Andrew of Rochester, this is the undoubted queen of the Kentish barns: though not very large in section it is by far the longest surviving barn (over 210 ft.—64 m.), and on every count stylistically the oldest. Its carpentry is peerless, its preservation generally excellent, including a high proportion of its original cladding (a fantastic rarity). It lies north-south and has thirteen bays plus two terminal outshots. The lie of the scarfing shows it was assembled from the *penultimate* bay from the north, thus obviating any such device as that at Brook. Both ends are 'normal', and without axial posts. Originally, it only had one passage, in the central (seventh) bay, but extra entrances have been made at various times (with two small midstreys at the north-west), the latest being an axial entrance at the south. The standard design is already achieved, with passing shores, unpegged at the intersection, and down-braced crown-posts; the broad sections of all timbers and the long jowls are more pronounced than at Brook. The only exceptional members in the main body are the extra horizontal struts in the spandrels of the transverse arch-braces which in most, but not all, cases carry short vertical struts to the main ties (Pl. VI, A). This strutting of the spandrels is found in a number of early fourteenth-century halls:³¹ it is too massive just to carry a boarding-in or other infil and the strut may be a non-functional reminiscence of a duplicated tie.³² The 'reversed assembly' structure of the aisles (Fig. 1, K) is much more elaborate than at Littlebourne. There are two wall-posts in each aisle-frame, filleted together by pegs at two levels and sharing a common

²⁹ *Woolwich and Dist. Ant. Soc., Ann. Rep., etc.*, v (1899-1900), 67; called 'Kentish Barns and their Prototypes', but mostly consists of anthropological fantasies.

³⁰ *Ibid.*, figs. on pp. 70, 74, 84; the barn has a wide (24-ft.) body, of six bays, queen-strut roof, straight thick braces, no jowls, apparently reversed assembly in the aisles, with aisle-ties notched into the face, and an impossible assembly in the main body that could also be reversed (but misunderstood); these latter features look very old, but some, including the jowless posts occur in the relatively late queen-strut barn, of elm, at Ravensbury, Mitcham (*Surrey Arch. Coll.*, lii (1950-1), 84).

³¹ E.g. Lampetts, Fyfield, Essex (*Arch. J.*, cxii (1955), 88).

³² The lower tie, cut off at the arch-brace, is seen in base-cruck houses at Bolney, Sussex (Mason, *Framed Buildings of the Weald*, 22), and the newly discovered one at Hamden, Smarden. In relation to it the siting of the arcade-plate is 'reversed', whereas in the barns the strut stops at the post and carries nothing.

mortice on the underside of the aisle-tie, which projects beyond the aisle-plate it carries. The inner wall-post and the shore stand on the post-plate, the outer wall-post is tenoned into the sole plate, which now rests entirely on the ground-wall, but perhaps originally ran over the post-plate, as the aisle-plate runs over the aisle tie. If so, the post-plate and aisle-tie projected to the same degree (as shown on Fig. 1, K). A half-height rail joins the outer wall-posts to a half-way stud between the sole-plate and the aisle-plate. Both aisle-plate and sole-plate have grooves stopped at the half-way stud, and in these are fitted edge-to-edge vertical planks, an inch thick, each one pegged to the half-height rail. This almost stave-like cladding cannot be renewed without displacing the aisle-plates, which in turn, cannot be removed without displacing the aisle rafters which are housed over them.

The splayed, keyed scarfing, with sallied butts has already been noted, and all the details would point to a date not long after, possibly even before, 1300.

Littlebourne (TR 210579) (Figs. 2, 6) on a demesne of St. Augustine's, is now and probably always was thatched; its roof-pitch is somewhat lower than Frindsbury, which, like all the others, unless otherwise described, was probably intended to be tiled; it is shorter (172 ft.) but rather larger in section, approaching what became the normal proportions. It lies north-east-south-west; the south-west end, from which it was assembled, is 'normal', with an additional axial post. Thence followed seven full bays, nearly square, and a cantilevered half-bay and terminal outshot at the north-east. Like Frindsbury, it has normal assembly in the main body, with horizontal struts, some of them now missing, in the spandrels (but no vertical struts) and braced crown-posts. It also has empty mortices in the sides of the main ties; these would seem to have been for 'dragon-ties', spanning the angles to the upper side of the main arcade-plate, in a fashion known in some early framed buildings;³³ but none is now in position. There are other signs of reconstruction—most of the aisle-structure has 'reversed assembly', but in the north-west part it has been altered to 'normal'. The construction in the aisles is simple: the single wall-posts stand on the sole-plates which run freely over the post-plates as the aisle-plates run over the aisle-ties, and the projection of the transverse members is slight. Grooves, as at Frindsbury, survive in a few sections of the aisle-plates, most of which seem to have been renewed, and nothing remains of the cladding. At present there are two midstreys, but originally there seems to have been a single passage in the central bay.

³³ E.g. Chennels Brook, Horsham (Mason, *op. cit.*, 34), in the cross-wing; Friern Bridge, Salisbury; and well into the fourteenth century at Steventon and elsewhere in Berks.

The carpentry is inferior to Frindsbury: the trees were often not large enough to be squared throughout, leaving some untrimmed faces, and the jowls vary in shape and are never as ample as at Frindsbury. The arch-braces, which are squarish in section, while aiming at straightness, follow any adventitious curvature in the timber. But the braces of the crown-posts, which seem to be contemporary, describe bold and deliberate curves.

The splayed, generally tabled, scarfing, with rough keys, has been described (Fig. 1, B). The barn shows no real typological advance on Frindsbury, and in its straight timbers and (?) dragon-ties is actually more old-fashioned. But little can be argued from this: where Frindsbury is a true masterpiece, in the early fourteenth century St. Augustine's was too involved with rebuilding the Abbey to overspend on a barn.

C. Barns of Mature Type

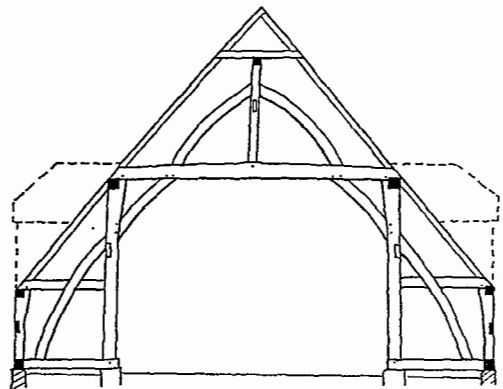
Great Delce, Rochester (TQ 740669) (Figs. 3, 6). A lay tenement, but St. Andrew of Rochester gathered the tithes together with those of the demesnes of Borstal and Nashenden. Did the Priory build the barn? It was demolished in 1926 and the record is derived from drawings and photographs by W. Coles Finch.³⁴ It was 130 ft. long, with six full bays (two central and two passage bays, each with a half-hipped midstreys on both façades and, apparently, identical 'normal' ends, with unshored axial posts. The assembly and scarfing were 'normal' throughout. The proportions were large and the main body unusually wide. The relatively low aisles, the half-height rail with two intermediate posts per bay, the low-set shores, the large braces to the crown-post and the moderately thick arch-braces, all suggest a fairly early date, though a shade more developed than Brook.

Temple Manor, Strood, (TQ 733686) (Fig. 3) came by devious means in 1344 to Denny Abbey, Cambs., which probably put it to farm.³⁵ The barn had no particularly early features to suggest that it was built then (still less built under the Templars, though an earlier barn is recorded);³⁶ the general character would suggest a century or so later. It was complete in 1934, when a unique photograph was taken, but demolished before 1950, when the site came into the guardianship of the Ministry of Works. It was a short (84 ft.) barn, with five full bays, including a central passage-bay with midstreys, plus 'normal' terminal outshots. The proximity to Delce and Frindsbury makes a useful

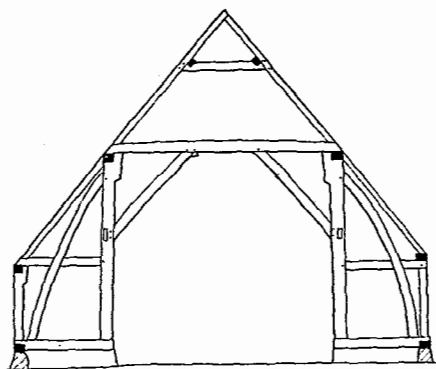
³⁴ *The Lore of the Countryside*, 197, plan p. 204; full set of photographs in Rochester Museum. I thank Mr. Gravett for this reference.

³⁵ 'Two Camerae of the Military Orders', *Arch. J.*, cxxii (1965), 86, esp. p. 91; the section of the barn there printed (p. 94) is here corrected in a few details.

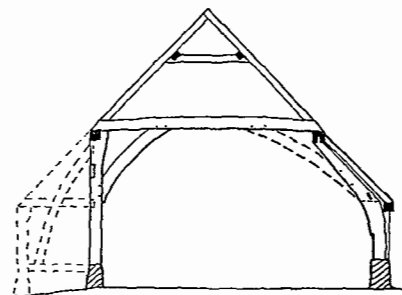
³⁶ *Ibid.*, p. 89.



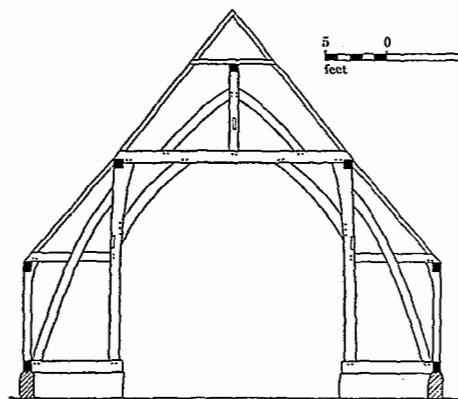
DELCE



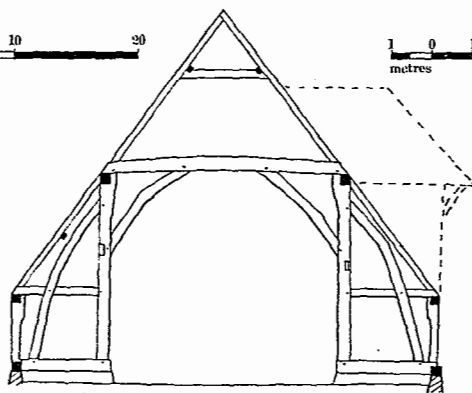
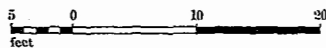
MERSHAM



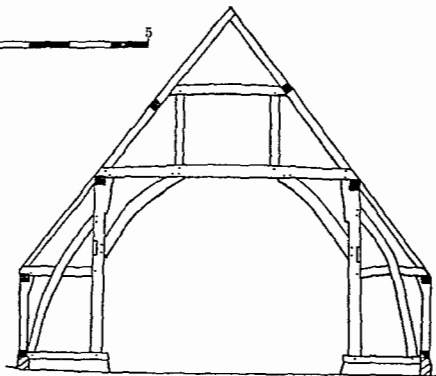
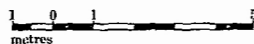
TOWN FARM, WROTHAM



TEMPLE MANOR, STROOD



WILLESBOROUGH MA.



TEYNHAM

comparison: in construction the transverse frames are identical with Delce, even to its braced crown-posts, but the proportions are quite different: whereas the low aisles of Delce ally it to Frindsbury, the singularly high aisles of Strood Temple suggest a later date, as do the relatively thin arch-braces, while the spreading braces of the crown-posts also look late of their kind.

Faversham, Abbey Farm, Minor Barn (TRO 22617) (Pl. II, B; Figs. 4, 6). Part of the curia of the royal abbey; again, a short barn, though slightly larger than Strood (86 ft. at present), like which it has five full bays, nearly square, except the central passage-bay with midstrey. It has now only one terminal outshot, at the 'normal' west end, which has a shored axial post. The rafters suggest that the east end, from which it was assembled, and which is now gabled, had a cantilevered half bay as well as an outshot. Exceptionally, one crown-post is braced upwards in two directions but none is braced to the tie. The workmanship is solid and generously pegged, the arch-braces moderately thick and well-centred on the posts, the shores set fairly high and generally 'elbowed', the wall-posts are sometimes jowled also at the base and, quite exceptionally, every wall-post is arch-braced to the aisle-plate.

All this suggests a middle-period barn of first quality, and the fine finish is carried right to the roof, where the crown-posts are all stop-chamfered. But then, in striking contrast, several of the posts are not squared at their bases (i.e. as always, at the *tops* of the trees, when growing), but present untrimmed trunks—in two cases untrimmed forks supporting the posts on two 'legs'. The fantastic effect cannot be accidental.

Lenham, Court Lodge, 'Major' Barn (TQ 899520) (Pls. III, B, IV; Figs. 4, 6). On a demesne of St. Augustine's, which was the head of a 'deanery' including both temporalities and spiritualities,³⁷ this barn, until the sad destruction of its companion, was one of a pair flanking an extensive curia (Pl. III, B). It is the largest surviving barn of its type, lying north-east-south-west and comprising the original build, with its single midstrey, to the north-east, and an extension at the south-west all on a high flint ground-wall, 160 ft. overall. The original seven full bays, of even size except the northernmost, have a terminal outshot with unshored axial post. The main post-structure is unrivalled in regularity and grandeur (Pl. IV); the aisles are relatively low, the shores and the braces to each crown-post long and slender, the arch-braces fairly well centred and stout. There are a few signs of alteration even in this part; the ogee-braces in the passage-bay (Fig. 4, W)³⁸ are insertions and, at least at the north-east end, the outer frame seems once to have been arch-braced throughout. The passage bay is the

³⁷ Hasted (quarto ed.), v, 443.

³⁸ Ogee-braces are rather typical of the Lenham area.



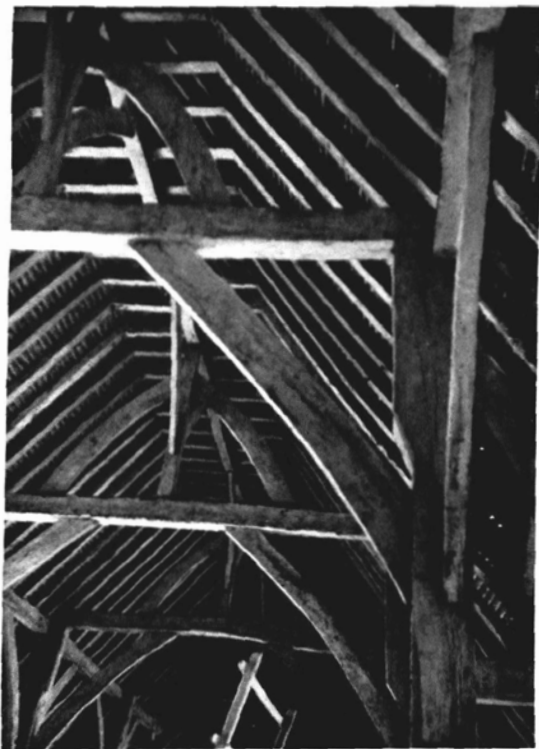
A. Frindsbury: S.E. Corner, showing Cladding.

S.E.R.



B. Brook: Interior of Barn from N.E.

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S.E.R.

A. Brook: Roof from S.W., showing Jowls and Crown-posts.



S.E.R.

B. Faversham Minor: S.W. part, showing unshaped Posts.



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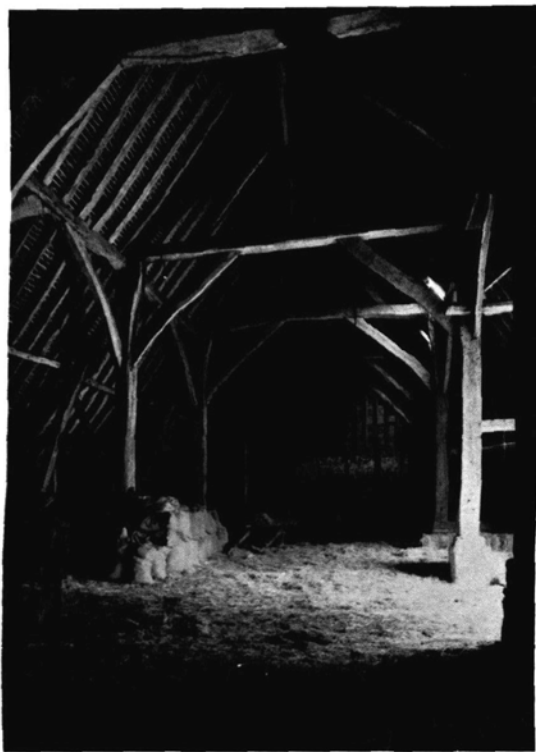
A. Godmersham: Exterior from N.E.



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B. Lenham: Two Barns from S.

PLATE IV



Copyright National Monuments Record
Lenham Major: Interior from N.

PLATE V



Courtesy of Prof. W. Horn
Lenham Minor: Interior from E.



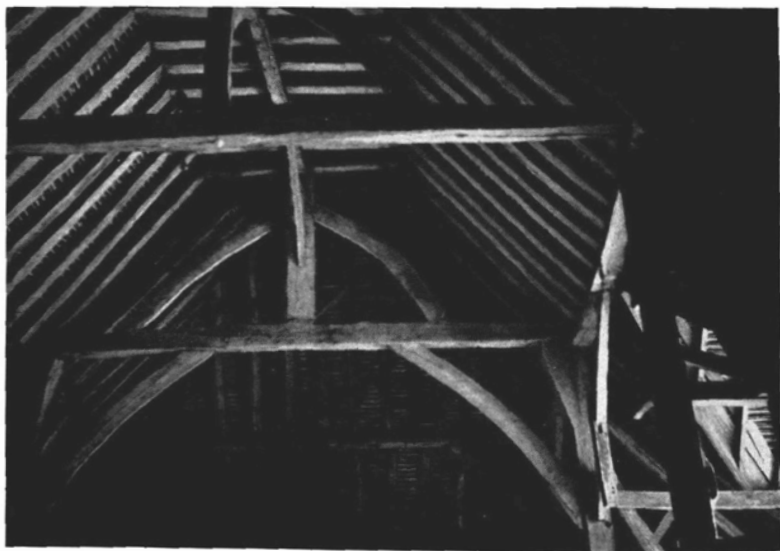
S.E.R.

A. Frindsbury: Post-head, showing strutted Spandrel and keyed Scarf.



A. Baker

B. Town Farm, Wrotham: Base-cruck.



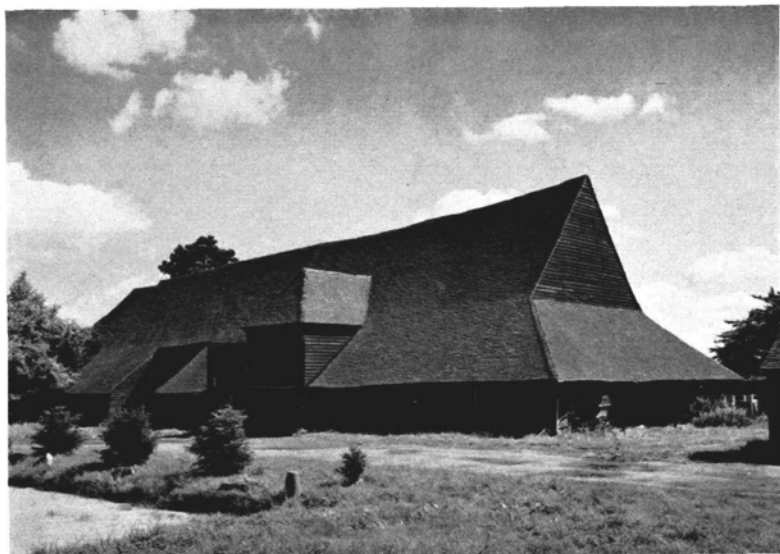
S.E.R.

A. Godmersham: Roof at N. end.



S.E.R.

B. Austin Lodge, Eynsford: Halved Scarf and eccentric Braces.



Courtesy of Prof. W. Horn

A. Nettlestead: Exterior from S.W.



Courtesy of Prof. W. Horn

B. Nettlestead: Roof Truss.



Courtesy of Prof. W. Horn

A. Nettlestead: Crown-post in Gatehouse.



S.E.R.

B. Nettlestead: Braces in Wall-frame.

third; whether there was originally a corresponding one in the eighth, as now, making ten full bays, is not clear. At present they total nine, the last two being rebuilt in different character, together with the 'normal' south-west terminal outshot, with no axial post. The present eighth bay begins with a complete new truss from post-plates right up to crown-post, butted up to the last of the old trusses and only of half-thickness, and the next truss stands on stylobates without post-plates. In this part, the arch-brace and ties are too 'eccentric' as in the later group (see below), the jowls differ from those in the main part, which die into the post in typically 'middle period' fashion, while the side purlins in the later aisles seem to be original, with every alternate half-length of rafter pegged to them. The scarfing in the main part is neat and 'normal'; in the addition, it is clumsy and lacks the upper bridle.

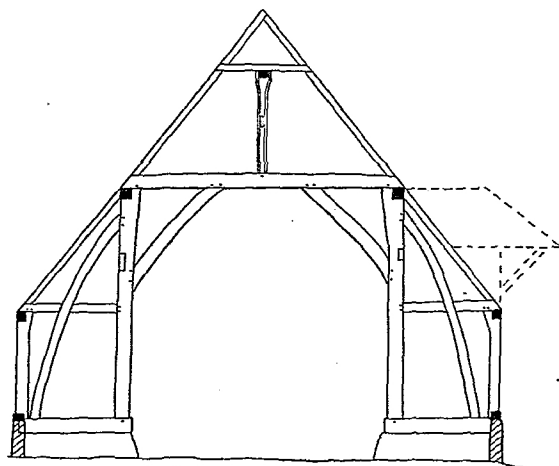
Excluding the addition, this barn is a typical mature specimen of Class I. There is documentary evidence—a sentence of excommunication on the perpetrators—that the barns at Lenham were deliberately burned together with the church in 1298,³⁹ but both barns described here, with the possible exception of the east part of the 'Minor' barn, appear too mature to be their immediate replacements. It is possible that the north-east central post of the great barn, which carries an oblique trench, is re-used, and the Carbon 14 date⁴⁰ would suggest an unexpected earlier build, difficult to reconcile with the present structure.

D. Barns with Late Characteristics.

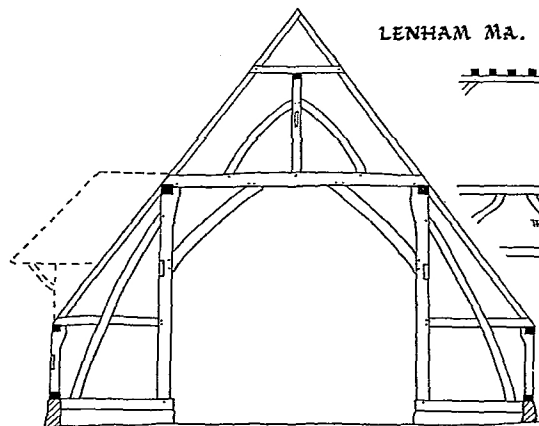
In addition to those that follow, Temple Manor, the added section of Lenham 'Major', and perhaps part of Godmersham could probably be placed here. The characteristics of this final group are the relatively high aisles, the narrow and deep ties, placed 'eccentrically' (i.e. to one side of the heads of posts—Fig. 4, Z), always on the same side that the shore 'passes' the aisle-tie, and the thin, deep and equally eccentric arch-braces. The compact massiveness of the early barns has disappeared. Braces to the crown-posts are usually eliminated, as well as the upper bridle of the halved scarf. The west part of Lenham 'minor' was typical, though not the latest, of the group and it is on account of this part of it, which was studied in detail after the fire, that the barn is treated in this section, without prejudice to the date of the eastern part. These 'late' characteristics may be provisionally assigned to the later fifteenth and early sixteenth centuries.

³⁹ *Regist. Rob. Winchelsey Cant. Archiep.* (Cant. and York Soc.), iii, 233.

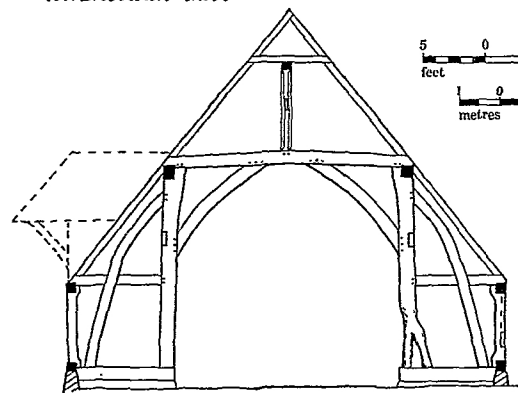
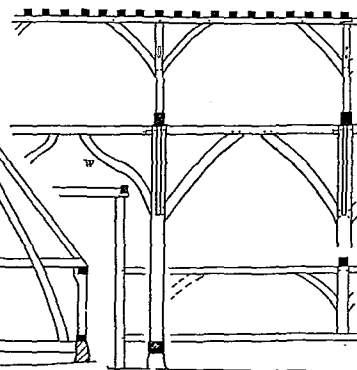
⁴⁰ Prof. Horn has kindly sent (8th December, 1966) a corrected date, 'on analysis of a post and rafter', of 'between 1330 and 1345'. This is puzzling, both typologically and on the assumption of some re-use from 1298.



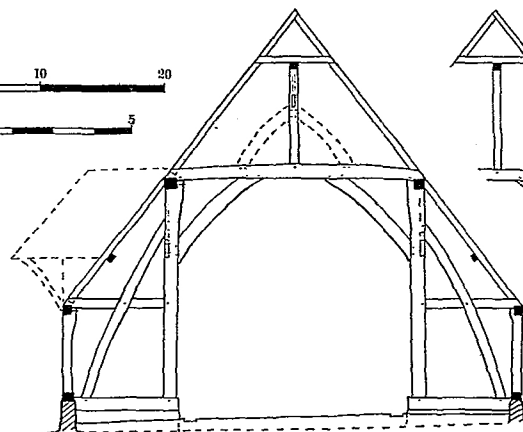
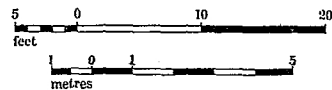
FAVERSHAM MA.



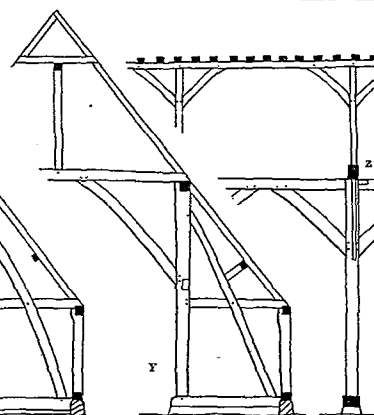
LENHAM MA.



FAVERSHAM MI.



LENHAM MI.



SOME MAJOR KENTISH TIMBER BARN

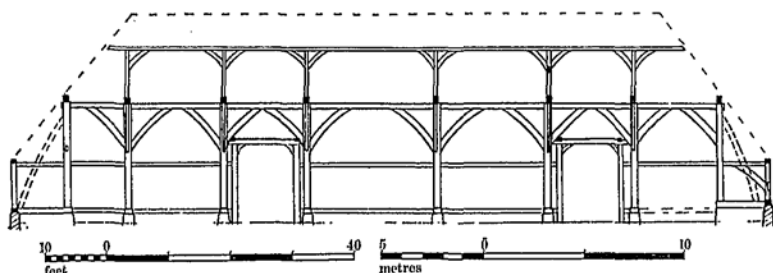


FIG. 5. Lenham Minor. Longitudinal Section. Rafters, light Collars and light Studs omitted.

Lenham Court Lodge, Minor Barn (TQ 899521) (Pls. III, B, V; Figs. 4, 5, 6). This formed the north side of the curia, and, like Nettlestead, it abutted a stone gatehouse of which one side remains. The barn was 128 ft. long and broadened slightly towards the east. It comprised six full bays (two central and two passage bays, with midstreys on the south only), in two builds. One build, not totally destroyed, assembled from the west, extended from a 'normal' terminal outshot, with axial post, originally shored, over two fairly equal bays, including the west passage bay, and probably over a third bay. The complete section (Fig. 4), based on the second truss, and all details of joints determined after the fire (Fig. 1, E) came from this part, which had typical deep, eccentric ties (Fig. 4, Z) and braces and stout crown-posts (only the third being braced, as dotted on diagram). The rest was of square-sectioned construction but rather spindly and had needed repeated repairs, the last in 1953. The braces and ties flanking the east passage bay were well centred and relatively stout, and a photograph seems to show a splayed scarf in the centre of the bay, apparently indicating assembly from the east. Was this part (Fig. 4, Y) a reconstruction incorporating something of that of 1298?⁴¹ The bays varied in length (the second central bay was square) and the east end had a cantilevered half bay, the axial post also originally shored.

The following details of the west part came to light in the 'autopsy':

- (i) The tenon of the post formed a false tenon to the lower 'bridle' and the upper bridle was absent.
- (ii) The dovetailed lap-joint of tie and plate was perfectly regular.
- (iii) Every alternate rafter was pegged at the base.

These details are shown in Fig. 1, E; they are also true of the west terminal outshot (Fig. 1, L), where

⁴¹ A Carbon 14 date, reported by Prof. Horn (8th December, 1966), based on two samples from one post-plate, indicating 'between 1270 and 1345—perhaps around 1300', argues the affirmative.

SOME MAJOR KENTISH TIMBER BARNS

- (iv) the central wall-post carried arch-braces each side, as did the west corner-posts.
- (v) This wall-post was rebated to take edge-to-edge horizontal boards, which formed the original cladding, as was probably the case in all 'mature' (C) and later (D) barns.

Faversham Abbey, 'Major' Barn (TR 021617) (Figs. 4, 6). A large barn, 132 ft. long, not very squarely set out, lying north-south and assembled from the north. Both ends 'normal', with shored axial posts. Six full bays of which the third, narrower, bay forms the only passage. The ties are eccentric, the transverse arch-braces very deep (a foot or more wide), and the gaps between the arcade braces long. Only the corner-posts carry arch-braces to the aisle-plates. The aisles are quite high and all transverse dimensions large, and the timbers are long and relatively slender, especially the shores. The crown-posts are neatly chamfered and clasp the collar-purlin, jowled on each side.

Upper Hardres Court (TR 152505). On a secular tenement; not examined in detail, but long and large in section, with the rafters very well preserved, without added side-purlins. In its slender carpentry, unbraced crown-posts and other details, it is similar to Faversham 'major'.

E. Miscellaneous Barns, in part, at least of Class I

Godmersham Court Lodge (TR 061505). On a demesne of Christ Church, externally a barn of neat and uniform appearance (Pl. III, A), 121 ft. long, lying north-south, with two midstreys and unusually high ground-walls; internally very complicated and deserving of fuller analysis than is afforded here. The north end is of crown-post construction with high aisles (Fig. 2), comprising a 'normal' end with axial post, a normal 13-ft. bay and then an odd threshing-floor, divided into a 13½-ft. and a 7½-ft. section by a tie and crown-post, originally not carried on posts, but now supported by inserted struts. The braced crown-post between the bays is unusually broad and clasps the collar-purlin without any jowl. The other crown-posts are lighter, and it looks as though they were intended to continue further south but never did so. The south half shows much reconstruction; there are certainly fragments of an earlier barn here, including several splayed scarfs and one wall-post, morticed for a half-height rail and vertically grooved, the head of which seems to have been intended for reversed assembly (see half-section). Apparently the rebuilding of the earlier part of the barn took place when the struts were inserted in the north half, as these resemble the curious slender shores held back by spur-ties almost in cruck-fashion, which have been inserted on an oblique line, in the south half, to help carry the main plates. The roof above,

SOME MAJOR KENTISH TIMBER BARNS

with light collars at intervals (see Class II), has added side purlins and angle-struts and presents a general patchwork.

Wickhambreaux, Wickham Court (TR 220588). A large thatched barn, about 150 ft. long, with two passages and midstreys each side, not examined in detail. A bad piece of carpentry that had shown weakness centuries ago, when one hip was replaced by a brick gable. Basically a normal Class I barn, with many of the original members ill-squared and showing the shape of the tree, it is now full of patches and reinforcements, but somehow this rickety and alarming structure has stood.

Chislet Court (TR 224644). One of the greatest and most ancient demesnes of St. Augustine's, had, until it was burned in 1925, probably the largest timber barn in Kent, thatched overall. All I can gather of it comes from Mr. Frank Spanton of Marshside, who with his father farmed it at the time and who kindly gave me benefit of his clear memory. It consisted of an east-west range, some 240 ft. long and 40 ft. wide (a very respectable modern aisleless barn covering most of the site shows that even 40 years ago, the carpenter's skill was not yet dead), and a smaller range, running south from the east end. Even so, the reported 'acre of thatch' is hard to credit.⁴² Both parts clearly belonged to Class I, with shores and crown-posts, and included two builds, not precisely corresponding with the two ranges. One build was of early character, with square-sectioned arch-braces, nearly straight and braced crown-posts; in the other, the arch-braces were thinner, deeper and more curved, and the crown-posts unbraced. It is hoped that more may come to light of this major lost monument.

CLASS II: BARNS WITH PASSING SHORES AND POSTLESS ROOFS

This is perhaps the commonest category, but most are small. Up to tie-level it is identical with Class I: above it is not the expected simple trussed-rafter roof with a light collar to each couple, but a roof which, without proper principal rafters, has light but fairly deep collars, at intervals only, bearing light side-purlins. This is the type of roof that occurs, above the heavy collars, in the great barns of Wessex and the Cotswolds,⁴³ even before a true double-framed roof appeared, and though it is easy enough to rebuild a roof above the ties, there seems little doubt that it was already used in Kent for barns well into the Middle Ages, and it certainly lingered long afterwards. The examples here described clearly never had crown-posts. The late, but still pre-Dissolution barn at Lesnes (see below) represents a

⁴² So Mr. Spanton, and C. Igglesden in *A Saunter through Kent* . . . , xviii, but there is no escaping the gigantic area involved.

⁴³ E.g. Frocester, *op. cit.* in notes 5, 12, and Stanway; v. Crossley, *op. cit.* in note 19, pl. 129, 130.

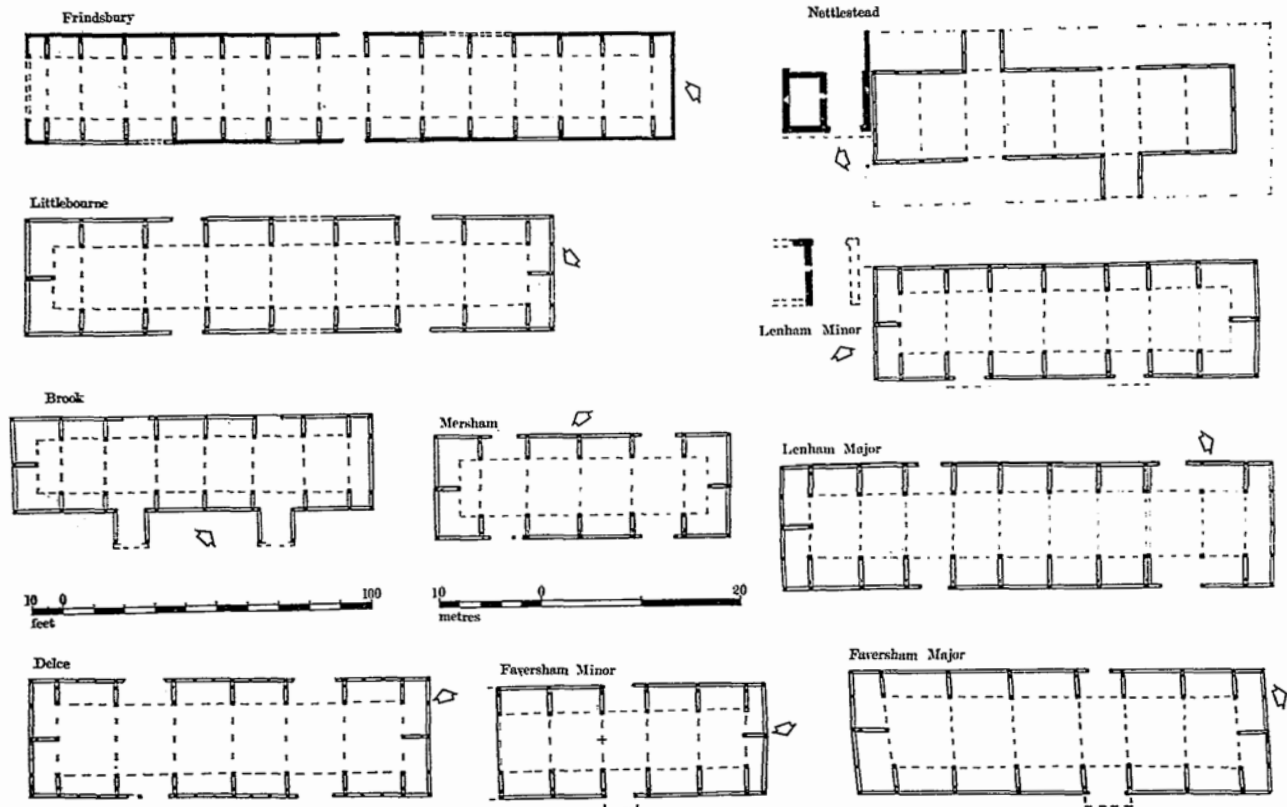


FIG. 6.

SOME MAJOR KENTISH TIMBER BARNs

compromise between this and the incoming queen-strut type. It occurs at least as far into Sussex as Pebsham, near Hastings.⁴⁴

Mersham Court (TR 052394) (Figs. 3, 6). On a tenure of Christ Church (but not in demesne), a moderate-sized barn lying south-east-north-west, with four full bays, nearly square, and both ends cantilevered. Some details are obscured by partitions and flitches. The north-west full bay and most of the aisles, were rebuilt in the late phase (cf. Class I, D) with thin, deep braces, but the rest of the post-structure, with a patch of reversed assembly in one aisle, remains from an early barn that may well be as old as the fourteenth-century stone hall adjoining. All scarfs have long 'keys', those in the original build probably splayed, and the original braces are thick, nearly straight, and well-centred; some iron nails are used (as at Brook, to which in some ways it is akin, but more archaic); at the heads of the transverse arch-braces, on the south-west side only, are pegged wedges (a feature I have only seen elsewhere in the stone barn at Frocester, Glos., documented to 1284-1306).

Willesborough Court 'Major' Barn (TR 030415) (Fig. 3). On a tenure of St. Augustine's, early sub-let; of similar dimensions to Mersham, with five full bays including central passage and midstreys. Considerable replacement, but the original parts, with fairly thick braces, etc., are reminiscent of Mersham, but more advanced and 'normal'. Pegs are used sparingly (one where the replacements have two).

*St. Radegund's Abbey 'Minor' (E) Barn*⁴⁵ (TR 275418). A short barn (about 70 by 30 ft.) with five bays including central passage; its high aisles and deep, eccentric transverse braces, show it to be a late, but no doubt pre-Dissolution, version of the same type.⁴⁵

Sellindge Court (TR 093385). A long (over 150 ft.) barn, of modest section, with two passage bays and midstreys. Rather 'chunky' carpentry. Not examined in detail, but does not appear to be early.

Aldington, Ruffin's Hill (TR 072360). Now partly stone-walled. Transverse dimensions much as Willesborough, but bay-lengths very varied. That irregularity of bays is a late tendency (cf. Lenham, 'Minor') is confirmed by the typically ultimate medieval short braces ('knees') and high jowls.

Woolwich, Bostall Farm (TQ 460777). Survived long enough to be ascribed to the seventeenth century by R.C.H.M.,⁴⁶ but was clearly earlier, with added struts in the aisles. Probably only about 30 ft. wide, with six 16-ft. bays (112 ft.), without terminal outshots or hips. Relatively low-pitched roof, as benefitted thatching.

⁴⁴ TQ 765090; much altered, now has queen-struts throughout, but has passing shores and 'normal' scarfing in some parts, and short arcade-braces.

⁴⁵ The 'major' barn is of stone, partly ruined, with much later internal timbers.

⁴⁶ R.C.H.M., *Inventory . . . , London, East*, 1930, 113, pl. 188; Davies, *op. cit.* in note 29, 71.

SOME MAJOR KENTISH TIMBER BARNS

Marshside, N. Chislet (TR 223658) of two sizeable barns here one is of this class.

An Exceptional Barn, allied to Class II, Town Farm, Wrotham (TQ 620606). Though hardly a major barn, this (Fig. 3) is included because it contained the first ground base-cruck to be discovered in Kent.⁴⁷ It was found in 1961 by Mr. Alfred Baker, when it had just been repaired for use as a byre. By 1965 the farm had been sold, the barn demolished and a tennis-court on the site. The barn had been much altered; originally it had comprised a pair of 9½-ft. bays on either side of a 12½-ft. passage-bay, with aisles and terminal outshots. Later the S aisle and hips had been removed, the west outshot thrown into the adjoining bay and posts at this end renewed. The single-base cruck, 10 in. thick (Pl. VI, B), spanned the north aisle to the east of the passage-bay, doubtless to allow a waggon to turn. There were suggestions of shores to the other posts flanking the passage-bay, but nowhere else. A post had been inserted to support the head of the base-cruck, and its long arch-brace removed. The arcade braces were relatively thin and not early-looking, those of the second post from the south-west being of ogee form. The only archaic feature beside the base-cruck was the low aisle that it dictated, and the base-cruck itself may have been re-used even before the alterations.

CLASS III: BARNS WITH PASSING SHORES AND QUEEN-STRUT ROOFS

This class was probably small, covering the short period when the Kentish passing shore still survived the general acceptance of the true queen-strut roof with principal rafters, as evolved, probably in Wessex. The second and third quarters of the sixteenth century may well cover them all, and they are valuable as confirming the lateness of certain other features found in the context of Classes I and II.

Davington Court (TR 001615). A secular tenement, nothing to do with the Priory, which several times changed hands after the death of Ralph Symonds in 1542. Some details suggest building activity at the house around the 1540's or 50's and the barn is perhaps to be associated with this. Before its demolition the writer examined it several times and Mr. Prosser produced the survey (Figs. 7, 8).

It was a large barn of elm (125 ft.) lying north-west-south-east, assembled from the south-east with eight bays of varying length, the passage-bays being square. It had no terminal outshots, but may

⁴⁷ The writer has since discovered a base-cruck hall at Hamden in Smarden; the Sussex examples found by Mr. R. T. Mason are summarized in his *Framed Buildings of the Weald*, 21 and fig. 4—one, at Ticehurst, is a few yards from the border, and first-floor base-crucks are known in Kent (Burnt House, Benover; Frogholt, Newington-next-Hythe; Etchinghill; Barton Cott., Kennington). The Wrotham example is short and compact in comparison.

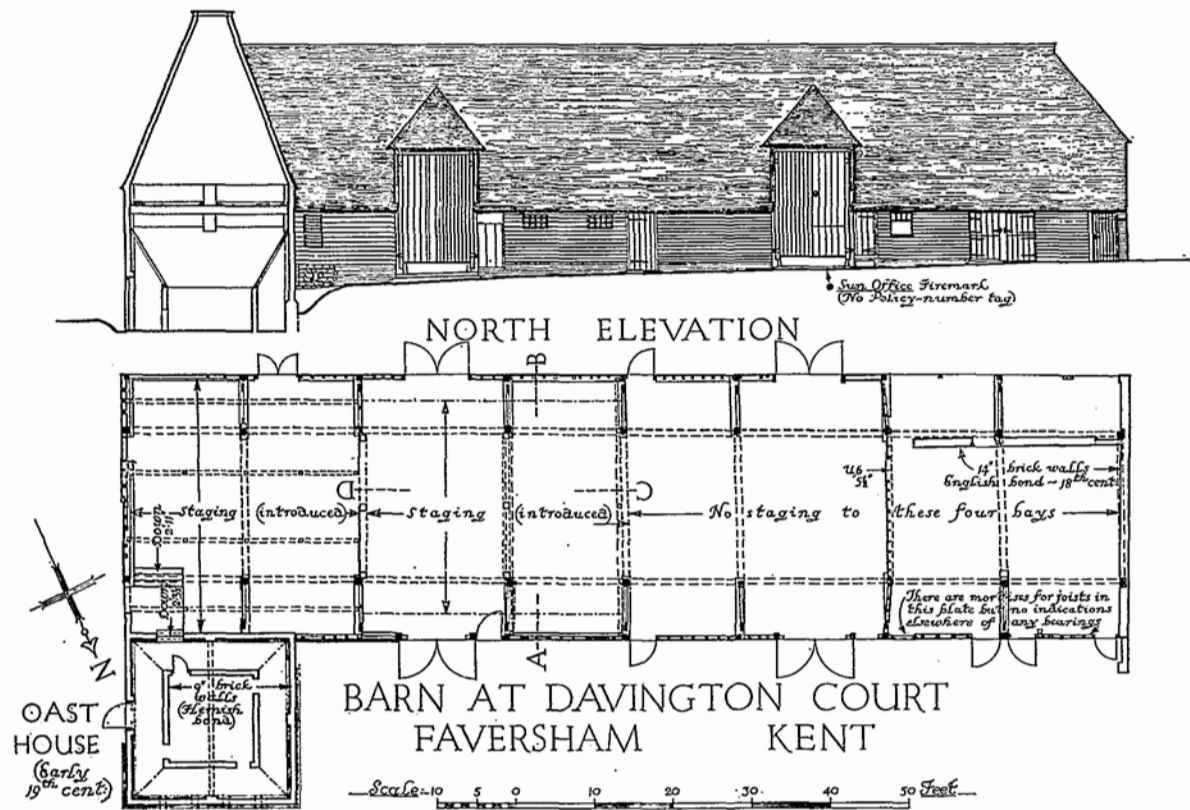


FIG. 7.

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SOME MAJOR KENTISH TIMBER BARNs

have once had one at the north-west. Certain incidental details are noted on Fig. 8 and here it will suffice to say how it compares with the foregoing classes below tie-level and foreshadows later classes above it. As in late barns of Class I, the aisles are fairly high, the timbers slender, the braces thin and deep, the shores, in some but not all cases, pegged at their intersection. The transverse arch-braces, but not the ties, are very eccentric, and the arcade-braces set well apart. All members have a rough chamfer. The scarfing is halved and bridled in normal fashion. Above the ties there are principals over the post and intermediate principals (two in the square bays) between them. Side-purlins join the principals, alternately above and below collar-level, in a manner which will often recur; these are called 'alternating purlins'. The not very heavy collars and queen-struts are placed eccentrically on the ties, on the opposite side from the arch-braces. All rafters are pegged to the purlins.

Teynham Court (TQ 966637) (Fig. 3). Adjoining and probably once belonging to a lost manor of the Archbishop. The barn is in two thatched sections, at right angles: one belongs to Class IV, but the other is of ultimate medieval date, lying north-south, with five 14½-ft. bays, including the central passage-bay. In section, it is identical with Davington and only slightly smaller, and like it has alternating purlins.

CLASS IV: BARNs WITH BRACES NOT PASSING THE AISLE-TIE

In Kent this class is effectively post-medieval. The deep down-braces or shores give place to short down-braces, approaching the quadrant braces of Elizabethan frame-building. That apart, the continuity with the last group is complete. In the first example, Lesnes, as in some aisled barns in Normandy,⁴⁸ there are two tiers of braces, from the head of the post to the aisle-tie and from the middle of the post to the post-plate. The latter soon disappears and the upper one becomes straight, like a reduplicated principal in the aisles. In this form it is quite common in minor barns of the queen-strut period (late sixteenth and seventeenth centuries).

Lesnes Abbey (TQ 475787). Demolished in 1900 but briefly described by J. Davies⁴⁹ and rather better by Sir Alfred Clapham,⁵⁰ both with illustrations, from which the section (Fig. 9) has been drawn. Clapham shows that, between 1524 and 1528, £16 5s. 4d. was spent on a new barn, possibly this one, though the timbers alone should have cost

⁴⁸ E.g. Manoir du Fay, Bourg Achard, Eure: R. Quénédey, *Les Provinces de l'Ancienne France, Normandie* (Eure, pl. II, 2). Barn demolished after partial collapse in the 1950s.

⁴⁹ *Op. cit.* in note 29, 71-3 and frontispiece.

⁵⁰ *Lesnes Abbey*, 28 (documentation), 42 (description) and pl. VI.

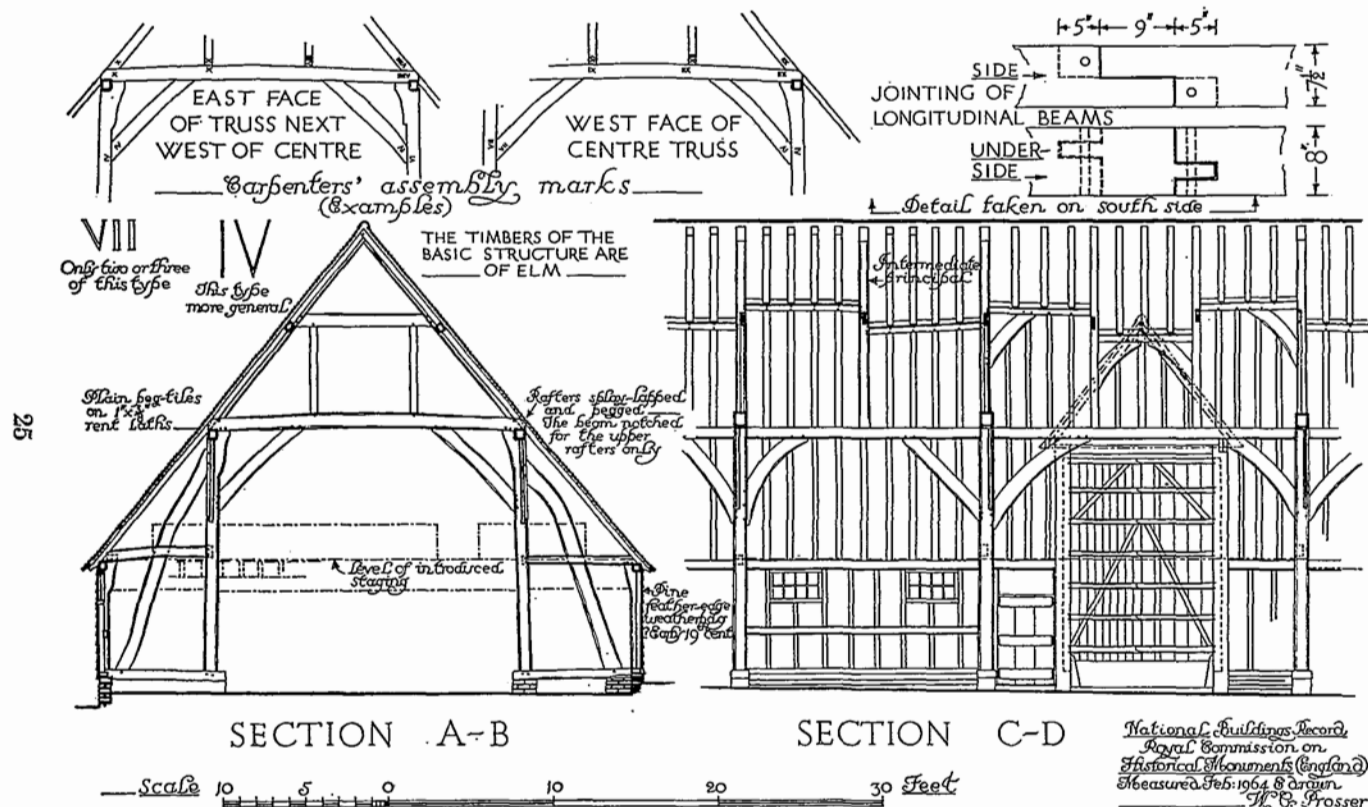


FIG. 8. Davington Court.

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more. It measured 118 ft. by 40 ft. in nine bays (three central bays, two passages, with apparently, terminal outshots). The arch-braces were typically thin and deep, the braces to the aisle-tie short and those to the post-plate rather longer. Above the tie the roof was low-pitched and thatched and, in spite of the queen-struts, was nearer Class II than Class III: it had no proper principals and continuous side purlins with light wind-braces. Whether the document is relevant or not, the barn is quite what might be expected, at least in north-west Kent, in the first third of the sixteenth century. Like Davington it was rather generously pegged.

Broomfield, near Herne, Parsonage Farm (TR 200668) (Fig. 9). A large barn of elm, formerly thatched, and a superb specimen of this phase. It consists of ten bays, normally of 13 ft. (four central bays and two 15-ft. passage-bays with deep waggon-porches) plus terminal outshots. It has straight or curved braces to the aisle-tie only, arch-braces strongly eccentric, jowls well shaped, including basal jowls to the wall-posts, queen-struts to the principals, not to the collars, alternating purlins and vertically halved and lipped scarfing throughout. In every point this is a legitimate descendant of the great barns of old, and probably not long after 1600.

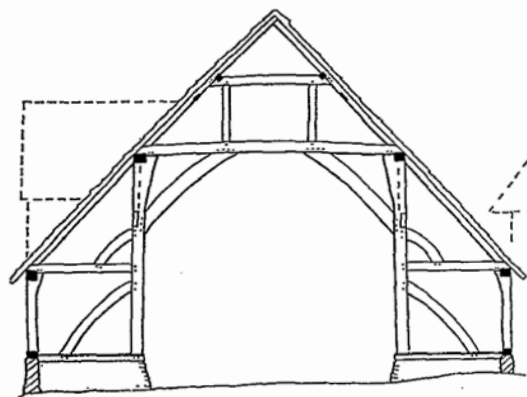
Lower Newlands, Teynham (TQ 970625). This barn, attached to a remarkable, early hall, has recently been dismantled and the details opened to examination. It was much newer than the hall and, in fact, a typical, fairly minor barn of Class IV, agreeing in most points with Broomfield, but with a simple roof, as Class II.

CLASS V: BARNS WITH ANGLE-STRUTS BUT NO TRANSVERSE BRACING

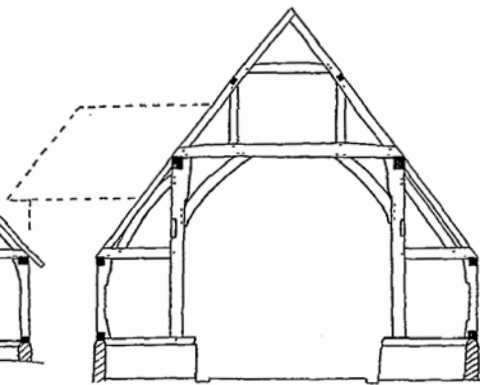
The abandonment of the rather vestigial braces from post to aisle-tie, and the substitution of angle-struts (such as had already been used to support added side-purlins—cf. Fig. 4, Y) at first in the aisles, and later, to the exclusion of queen-struts, in the main body, seems to have been complete by the end of the seventeenth century. A few major late aisled barns are described here, as typical of their large category. Most of them show persistent features from earlier traditions.

Northbourne Court (TR 337523). Now brick-walled, but here mentioned to show that there is nothing monastic in the great barn on this ancient demesne of St. Augustine's. It has alternating purlins in both main body and aisles, unsupported collars in the main part and angle-struts in the aisles.

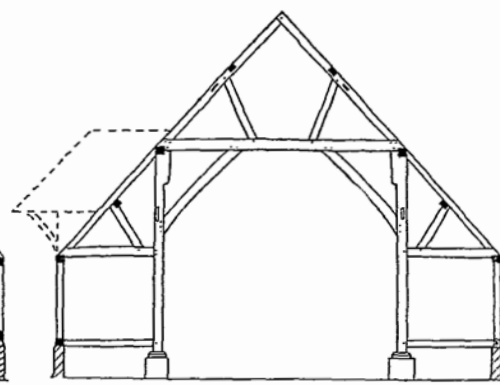
Austin Lodge, Eynsford (TQ 538638) (Fig. 9). Properly Orkesden, once a sub-manor of Eynsford. A barn of respectable size (120 ft. by 36 ft.) in ten bays (four central bays and two passage-bays with midstreys (compare Broomfield), rising in floor-level throughout its length, with half-hipped ends. It has no post-plates but low-set ties



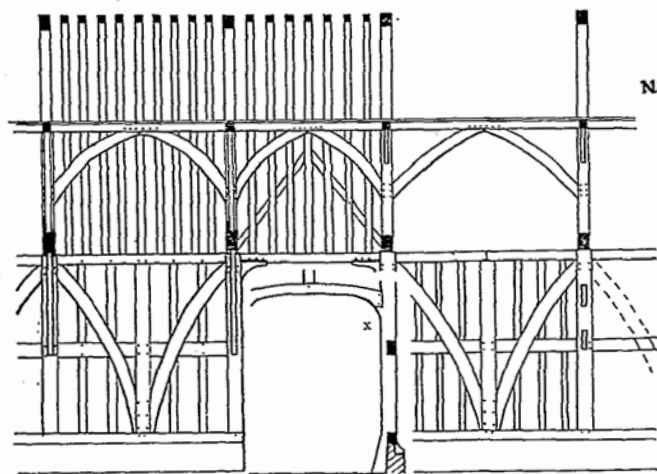
LESNES



BROOMFIELD



AUSTIN LODGE, EYNSFORD



NETTLESTEAD

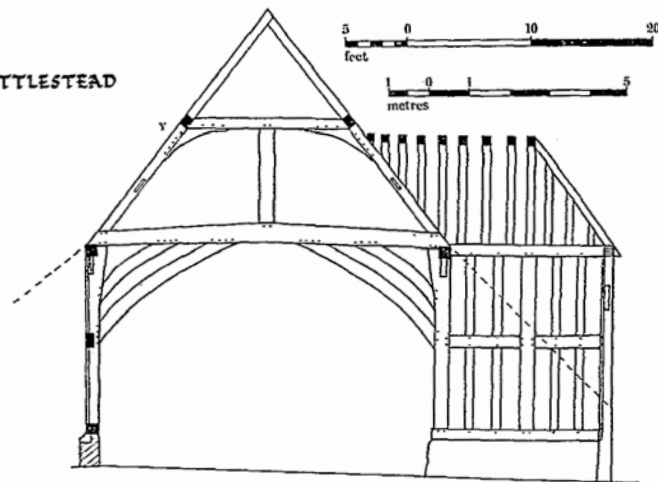


FIG. 9.

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from the bases of the posts to the walls, as found in a late medieval context, e.g. at Drayton St. Leonard, Oxon. It has alternating purlins, remarkably curved arcade-braces, but straight transverse arch-braces, and no collars but angle-struts in aisles and main body. The timbers are slender but most accurately worked, and the vertically halved and lipped scarfing has been taken as a type-specimen (Fig. 1, F, Pl. VII, B). A classic example of its kind, probably dating from the early eighteenth century.

Sheepcote Farm, St. Mary Cray (TQ 487680). Rather more 'vernacular' than Austin Lodge, and externally much like a late medieval barn; about 108 ft. by 34 ft., in seven bays (three central bays and two passage-bays, with midstreys on alternate sides), plus terminal outshots. It still has proper post-plates, very eccentric transverse arch-braces and continuous side purlins. There are angle struts in the main body, but none in the aisles. Part of the house dates from 1725. Is the barn contemporary?

CLASS VI: A MAJOR AISLELESS BARN—*Nettlestead Place (TQ 684520)*

This was in a class by itself, but one may contrast with it many late medieval aisleless barns of some size, with crown-post,⁵¹ postless collar,⁵² or queen-strut⁵³ roofs which have a strong half-height rail, to which the posts are braced. This group seems to ally itself with the earlier barns of Class IV, where the posts are braced transversely to the aisle tie, and some alterations to Nettlestead approximated to this form; but, as designed, it possessed in its superb braces (Pl. IX, B) from the head of the post to the sole-plate, a series of passing shores in the plane of the walls. A really early aisleless barn in Kent has yet to be identified. The passage of Nettlestead from the Pympe, via Rainsford, to Scott of Scott's Hall, during the half-century after 1496, gives no hint as to who commissioned this splendid barn, but the carpenter was of exceptional experience and imagination, and its destruction has meant the loss of a monument without parallel in England.⁵⁴

The barn adjoined a stone gatehouse of early fourteenth-century date, with a shouldered arch and a jettied timber upper chamber, the mouldings of whose crown-post (Fig. 1, G, Pl. IX, A) allow it to be contemporary with the stonework, and an early example of down-braced framing. This has been restored. The barn was much later—Professor Horn reports a provisional Carbon 14 date of c. 1450, derived

⁵¹ E.g. Willesborough 'Minor'; the latest, typologically, with quadrant braces to the crown-posts, is at Grafty Green.

⁵² E.g. Leyland's Orchard, Meopham (this is aisled on one side).

⁵³ E.g. Yorkshill Farm, nr. Ide Hill.

⁵⁴ There is a full and well-illustrated account of Nettlestead Place and barn by A. Oswald, in *Country Life*, 16 and 23 October, 1958. That by W. E. Ball in *Arch. Cant.*, xxviii (1909), taking the church glass as its text, is largely genealogical.

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from a sole-plate. This is unexpectedly early, but the barn was not to be judged by 'vernacular' standards. The estate was in wardship from 1454 to 1468.

It had neither hips nor aisles (the outshots on three sides were recent lean-to's), but depended on 30-ft. tie-beams, and lay north-east-south-west in eight bays, 117 ft. in all (two central and two narrower passage-bays, each with a single high waggon-porch), giving plenty of room for a large loaded waggon to manoeuvre (Fig. 9, X). It stood on an unusually well-finished ground-wall, faced in squared rag, with a hollow-chamfered plinth-mould. Each bay-length, counting two lengths to the end-walls, had an intermediate post and half-height rail, into which were squint-trenched the grandest braces ever seen (Pl. IX, B), in a perfect arc from the heads of the main posts to the feet of the intermediates. Where the barn overlapped the gatehouse a blind half-truss abutted a normal bay-length forming the rest of the end-wall. The tie-beams were deep and cambered upwards in the centre, with well-centred and well-pegged, double arch-braces. These carried a true double-framed roof, with butted side-purlins, curved wind-braces, and heavy collars supported on broad king-struts and small arch-braces or 'knees' (Fig. 9, Y). The walls of the porches were like typical bay-lengths, but without braces.

The affinities of the structure, conceived in quadrilateral panes, each originally containing two light studs, were with Wessex rather than Kent, and all the proportions, e.g. the very deep tiles, were consistently late in character. There had been some rebuilding, especially towards the north, where short braces had been contrived in the upper half of the walls. Some of the arch-braces had been removed and some timbers and joints were obscured by fitches. Many of the joints must remain unknown, but certain details revealed after the fire were rather unorthodox. In at least one case the lap-joint of tie and plate had two longitudinal notches (much as in an ordinary overlap of jettied joists over upper plate), in others it had the usual transverse dovetail (Fig. 1, H, i; compare Fig. 1, E). The post-heads were likewise of two forms—one plain enough (Fig. 1, H, ii), the other with two upstanding tenons (Fig. 1, H, iii).⁵⁵ This may have been to secure a scarf, which appears to have been halved vertically, and where it came over an intermediate post, the butted ends were pared back and pegged from the outside, thus disguising the joint. The posts were grooved to hold the cladding of edge-to-edge horizontal boarding, which remained in a few places. The structure of the door-frames, with

⁵⁵ Prof. Horn has prepared a generalized drawing of the complete assembly of wall-frame and cladding, showing the more normal forms of post-head and lap-joint, as were no doubt used through most of the barn. The aberrant instances, Fig. 1, H, i, H, iii, were drawn after the fire; their exact position is unknown.

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arched lintels and basal jowls to the posts is shown inset on Fig. 9, X. The main corner-posts were rebated internally, and the plates over those in the porches mitred at the junction—both late and 'domestic' refinements.

ADDENDUM TO CLASS V

Ightham Mote (TQ 585535). This barn was burned out in September 1966, and the still largely complete frame was examined after the fire. It was a wide (40-ft.) but short (68-ft.), aisled, thatched barn of elm. From the east end, from which it was assembled, it comprised three normal bays (two $10\frac{1}{2}$ ft. and $11\frac{1}{2}$ ft.), an 11-ft. passage-bay, with midstreys, and another normal $11\frac{1}{2}$ -ft. bay, separated from a terminal 13-ft. bay (there were no terminal outshots) by a continuous transverse sole-plate, instead of short post-plates, originally with a half-height rail above it—six bays, including the eccentric passage and the partitioned end-bay. The body of the barn was wide—22 ft. between the faces of the posts, which were slender (7 in. by 8 in.) and 15 ft. high with long and beautifully finished jowls. The very eccentric transverse arch-braces were *reversed* quadrants of about 4-ft. radius, i.e. curved convexly; the arcade-braces were short, thin and nearly straight. There were originally no angle struts or any form of bracing in the aisles, and no proper wall-posts, but only normal slender studs. The main trusses had angle-struts and relatively low-set collars. There were two tiers of alternating purlins, one above the collars, the other below the point of support from the angle-struts. All this indicates a delicately finished barn of one build, not earlier than the seventeenth century, but the scarfs of the oblong-sectioned main plates were horizontally halved and bridled in traditional fashion, much as at Davington.