

# AISLED TIMBER HALLS AND RELATED BUILDINGS, CHIEFLY IN ESSEX

*By C. A. Hewett*

## INTRODUCTION

This monograph describes fifty-three timber buildings, within or just outside the boundaries of Essex. Their distribution is sufficiently restricted for them to be regarded as a sample from a single region, though no specifically regional characteristics in style of framing or methods of jointing are distinguished, and the wider distribution of any particular technique remains an open question.

The examples are arranged, provisionally, in a chronological sequence that is essentially determined on structural grounds but reinforced by circumstantial probabilities in the relevant historical and topographical evidence. The author is much indebted to S. E. Rigold for summarising the published documentation concerning them and for observations about the place of each in the pattern of settlement. Mr. Rigold stresses that he has done no deep research on any individual house but has confined himself to easily available sources and to his experience over a wider field. Decorative details, particularly mouldings, have been assessed out of context, by H. Forrester, to whom the author is equally indebted. Where discrepancies between structural and non-structural considerations have occurred, the extremes have been cited and a mean dating is proposed. The object of describing this large sample, many of which have been published elsewhere in varying degrees of thoroughness, is to expose the validity or otherwise of the structural hypotheses on which the chronological series is based, and to provide the serialised evidence for the investigations of individual features which follow the tabulated descriptions of the buildings. The whole constitutes additional evidence supporting, or in minor degree modifying, the views expressed by the author in 1969.<sup>1</sup>

It must be emphasised that the drawings are perspective, not isometric or axonometric, and that it cannot be assumed that any particular element in them has been measured in detail. Consequently they cannot be used for direct measuring-off. To a certain degree the drawings represent a subjective reconstruction of the proportions intended by the carpenter and their visual effect at close quarters. On the other hand, all parts shown as present, that is, solid, have actually been observed or are deduced from their immediately corresponding members. Nothing represented as solid is totally conjectural, and where parts of a frame (as at Purton Green Farm), or parts of individual major members (as in the end-frame of Southchurch Hall) are missing or beyond observation, they are omitted or broken off. Plans have been assumed to be laid out on a right-angled base. Obviously exceptional cases, as Durham House, Great Bardfield, have been stressed in the text.

#### THE BUILDINGS AND THEIR POSSIBLE DATES

*Great Bricett Hall*, Great Bricett, Suffolk, (TM 038508) is a ground-floor hall that formed the west claustral range of a small, rural Augustinian priory, founded c. 1110, successfully reclaimed as a cell of Nobiliac, near Limoges, in 1295, after a century of efforts to assert its independence, and, following the suppression of alien priories in 1414, assigned to King's College, Cambridge. In 1250, as a condition of maintaining his free chapel, it was stipulated that the founder's heir, Sir Amalric Peche, should attend the priory as the mother-church of his chapel on the major feasts with his entire household. This would be sufficient reason for the prior's hall, which in a small house would also be the guest-hall, being rebuilt on a scale suitable to entertain a knightly household, and as a secular-type, ground-floor hall, rather than in the more usual first-floor position. The stipulation may have been a ratification of an existing arrangement.<sup>2</sup>

Four bays remain, which include a cross-passage with four service-doors, of which the smallest is carved with dog-tooth and has mutilated foliate capitals. The hall is of two bays, partitioned off from the first and the fourth bays; both partition-frames laced with numerous slender braces fitting into squint-

trenches without notching. They are thus easily withdrawable in several directions, and some are composed of short timbers butted together in their trenches. The top-plates have through-splayed scarfs, face-pegged. There are straight braces to both tie-beams and top-plates, and secondary-rafters halved into the sides of the posts, and tie-beams, the crossing lap-joints of these providing firm evidence for the existence of former aisles. A part reconstruction of this frame is shown in Fig. 1.

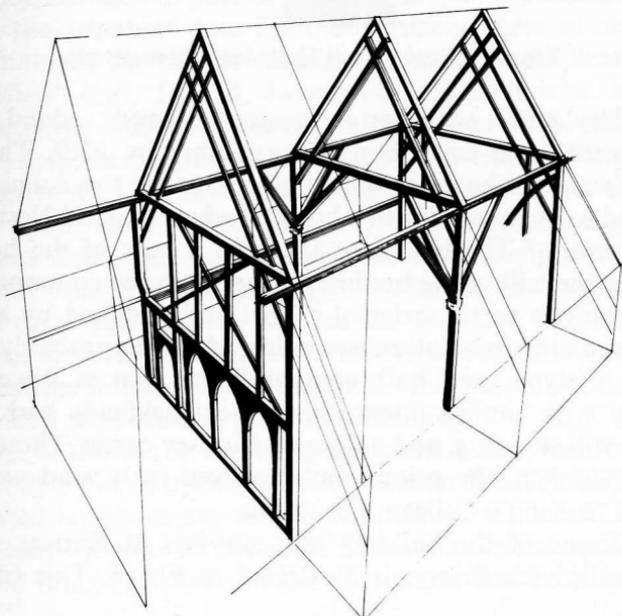


Fig. 1. Great Bricett Hall

Structural analogies are: the Cressing Temple barns,<sup>3</sup> both of which have much in common with Great Bricett, and the belfries at Navestock and Bradwell-juxta-Coggeshall, all in Essex. Taken in conjunction with decorative detail (Fig. 2) the evidence points to a date of *c.* 1250 but would equally admit of a decade or two earlier.

*Kersey Priory*, Kersey, Suffolk, (TL 998444) is another case of a ground-floor hall forming the west range of a small, rural Augustinian priory. Full conventual life probably did not begin until *c.* 1240, when Nesta, heiress of Adam de Cockfield, lord

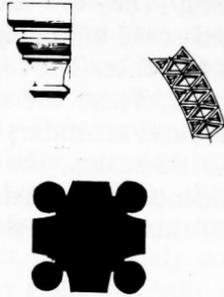


Fig. 2. Great Bricett Hall, decorative details

of Lindsey castle, with her successive husbands, added to the endowments of a small house in existence by 1219. This was probably only a hospital with brethren under the Augustinian rule, and to be equated with a hospital whose ground Nesta gave to the priory.<sup>4</sup> The hall may, then, be a relic of the hospital (perhaps the hall of the brethren rather than the common hall), at right-angles to the original chapel and matched by an east range when the foundation was enlarged. More probably it was a new, lay-type guest hall, comparable to that at Bricett and possibly with similar intent, since the Cockfields had a free chapel, still standing, and adjoining Lindsey castle. Though not classed as alien, the priory was dissolved early, and was also granted to King's College, Cambridge.

The frame of the building that survives at Kersey, now a house called the Priory, is illustrated in Fig. 3. This frame is

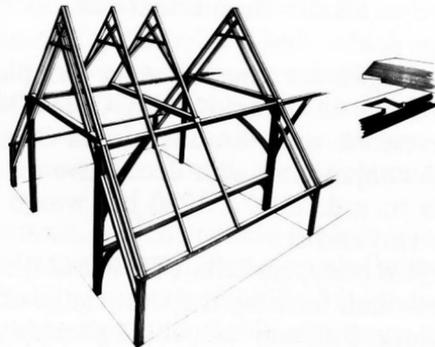


Fig. 3. Kersey Priory; right inset, tying joint

uncommonly large and finely wrought, with scissor-braced common-rafters, and paired principal- and secondary-rafters. It is also tied at the half-bay intervals with extra tie-beams. The braces shown in the drawing are visible today, and are slightly curved, the top-plates scarfed with a stop-splayed and tabled joint having under-squinted butts and two face-pegs through each tabling. This is an invaluable building in one respect. It proves that secondary-rafters and scissor-braces could be contemporaneous. No part of the structure, as illustrated, conflicts with the apparent date for the commencement of conventual life, namely, the middle decades of the thirteenth century.

*Fyfield Hall*, Fyfield, Essex. (TL 573069) is a large hall forming the nucleus of the capital messuage of the main manor of Fyfield, beside the Roding river and near the church and village centre. In 1221 it was divided between co-heirs, Langton and Beauchamp, who, however, seem to have arranged at various times that one or the other should enjoy most of the manor. Thus Stephen de Langton seems to have reunited most of it three years before he died in 1261, and Roger de Beauchamp seems to have held the whole in chief at his death in 1281.<sup>5</sup> Unless the house is older than 1221 these reunions might have provided the occasion for a new building.

Fig. 4, shows the surviving open hall which was formerly of two bays. No scarf-joints have yet been found, but four open notched lap-joints are visible, cut into the flanks of the central tie-beam which is 45 cm wide. These receive the upper ends of paired braces rising from the wall-posts, and both rafters and

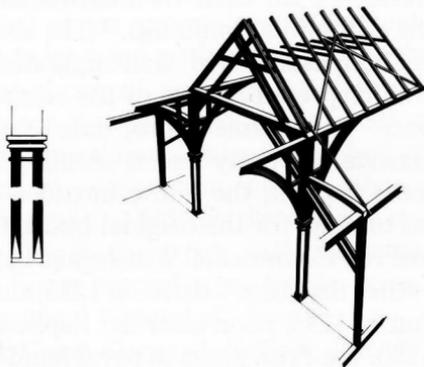


Fig. 4. Fyfield Hall; left inset, detail of post

secondary-rafters are also paired, and stepped on each edge of the tie-beam. All couples are fitted with collars, and long, straight wind-bracing is halved through the rafters in each slope. These braces form a saltire at mid-bay, as shown in the drawing. The posts have square capitals and brooch-stopped square bases, with octagonal shafts, (Fig. 4, inset). The detail of these posts, and the strutted curved bracing of the top-plates together point to a date during the first half of the thirteenth century.

*Place House*, Ware, Hertfordshire, (TL 359143) forms the mediæval nucleus of a large building, encased by extensive work of the sixteenth and seventeenth centuries, situated in Blue Coat Yard on the north-east fringe of the old town. From the 1660s to the 1760s it was used by Christ's Hospital, as an overflow to their "out-station" at Hertford. It was not among the original endowments of the Hospital,<sup>6</sup> but acquired, in 1685, after some years of use, from one William Collett.<sup>7</sup> It had apparently been sold in 1575 with what remained of the original manor of Ware to the Fanshawes.<sup>8</sup> About 1667 the lands were broken up, when, presumably, Collett got his parcel. Much of the original manor had been granted before 1081 in frankalmoign to the alien Priory of Ware,<sup>9</sup> a dependency of St. Évroul and not to be confused with the local Franciscan friary.<sup>10</sup> The endowments of the alien priory were granted to the Carthusians of Sheen and afterwards to Trinity College, Cambridge.<sup>11</sup> Until the former dissolution (1414) the patronage had remained with the lords of the lay part of the manor, who in the thirteenth century had intruded a lay residence for their own convenience, on priory land and near the conventual buildings.<sup>12</sup> The site of the priory seems not to have been established: that suggested, just north of the church,<sup>13</sup> is more probably that of the rectory which they held. "Place House" has a name appropriate to a spacious residence on ecclesiastical property and it seems probable that it represents, in some fashion, the house intruded on the Priory precinct. It seems too late for the original build, the complaints about which name the Countess of Winchester before 1235, and Joan de Bohun. After the latter's death in 1283, steps were taken to demolish it, but in 1295, soon after her nephew and heir had taken livery in 1290, the Priory was in royal hands.<sup>14</sup> This offers a possible occasion for a compromise which allowed the erection

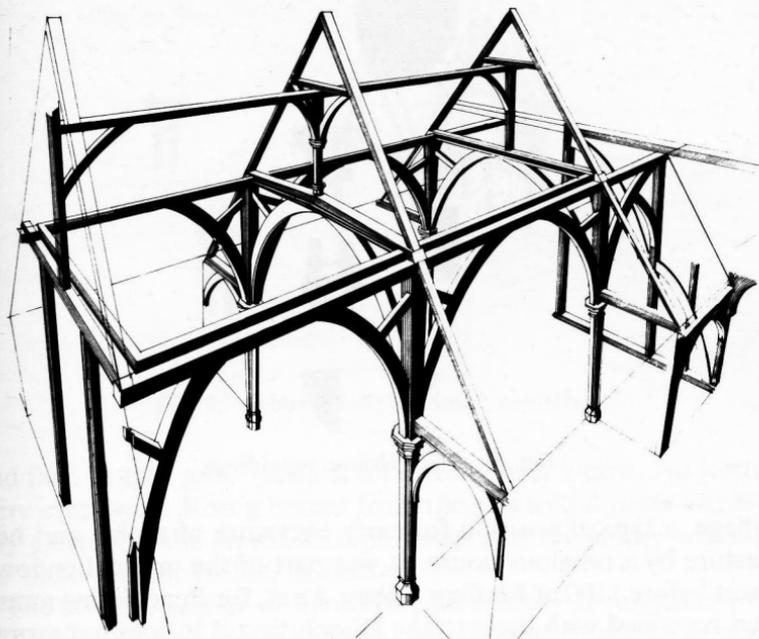


Fig. 5. Place House

of a new house, on or near the same site, and henceforward attached to the lay manor, on which, in 1515, two mansions were recorded—the Bury and Kiddswell<sup>15</sup> (? compare Kibbes Lane near Place House).

The frame of the nucleus, (Fig. 5) indicates a two-bay hall, laterally divided at an uncertain date and retaining its cross-passage and service-wing with jetty. This is the most sophisticated frame yet discussed, possessing a scarf of great complexity that should place it within the second half of the thirteenth century. The fine mouldings, as on the tie-beams and crown-post (Fig. 6), taken in conjunction with the beautiful scarf-joint, suggest a dating of *c.* 1295 for the earliest remaining parts of the building. This is consistent with the hypothesis presented above, a new house erected some twelve years after the demolition of the original "intruded" house.

*Abbas Hall*, Great Cornard, Suffolk, (TL 902409) is a large, isolated, upland homestead, nearly 2 km from the riverside

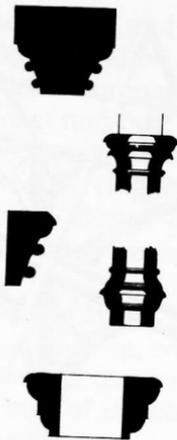


Fig. 6. Place House, mouldings

village, a typical position for early enclosure of arable and hill pasture by a religious house. It was part of the original endowment before 1100 of Malling Abbey, Kent, for Benedictine nuns; and remained with them to the Dissolution.<sup>16</sup> It does not represent the piece of land in Suffolk that they had licence to exchange in 1318, which they did not implement until 1446.<sup>17</sup> Nevertheless, owing to the distance and the difficulty of nuns in supervising demesnes it was probably at farm for a long period. In the mid-thirteenth century the abbey was making expensive improvements to its own fabric<sup>18</sup>, and according to what seems to have been the custom,<sup>19</sup> could have equipped, or re-equipped the tenement for leasing about or soon after that date.

What survives is a two-bay open hall in remarkably good order. It is hipped over the service end and has had an early sixteenth-century cross-wing built on to its opposite end. Fig. 7 shows the central frame with the partition frame that divides the service area from the hall, to the right of the drawing. This partition incorporates two service-doorways with two-centred heads and hollow chamfers. The floor over the service rooms is lodged. The roof is of secondary-rafter type, and all couples, both principal and common, are fitted with collars. The secondary-rafters are continuous and made from extremely long timbers, halved into both posts and ties, with lap-dovetails at their upper ends. The top-plates are scarfed with a stop-splayed

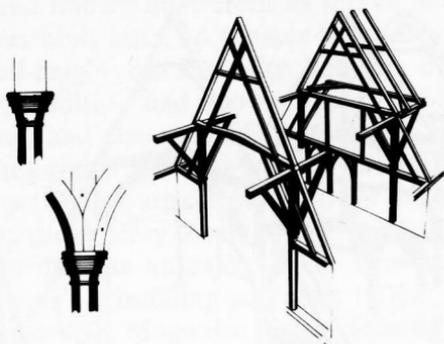


Fig. 7. Abbas Hall; left inset, capitals

and face-pegged joint which is set directly over a post. No jowls were employed. Rising braces from the sills to the posts originally existed at the service-end partition and the empty sockets for these remain visible, as shown.

The second quarter of the thirteenth century is suggested for this building. The profiles of the capitals (Fig. 7, insets) carved on the principal-posts and the service-door jambs support such a dating.

*Stanton's Farm*, Black Notley, Essex, (TL 769198) is a substantial homestead, a "secondary settlement" in this scattered valley-parish, 1 km from the church and manor-house but not a marginal assart. It is accessible and well above the flood-plain, and with plenty of arable land behind it. Though the land may have some association with the Stanton family from the mid-thirteenth century, a final concord in 1306 suggests that a messuage, probably this one, then passed to a new and prospering generation that may well account for the fine new hall.<sup>20</sup> The very large barn pertaining embodies numerous posts that show open notched lap-joints, indicating that arable farming had been extensive at least during the preceding century.

Both "ends" were originally in series with the open hall (Fig. 8), under a unitary and, doubtless, hipped roof. There are substantial remains of an oriel belonging to the first build, and a single-framed roof built in seven cants, chase-tenoned throughout. The service end was within the hipped and barn-like volume of the building, two of its visible doorways having two-centred

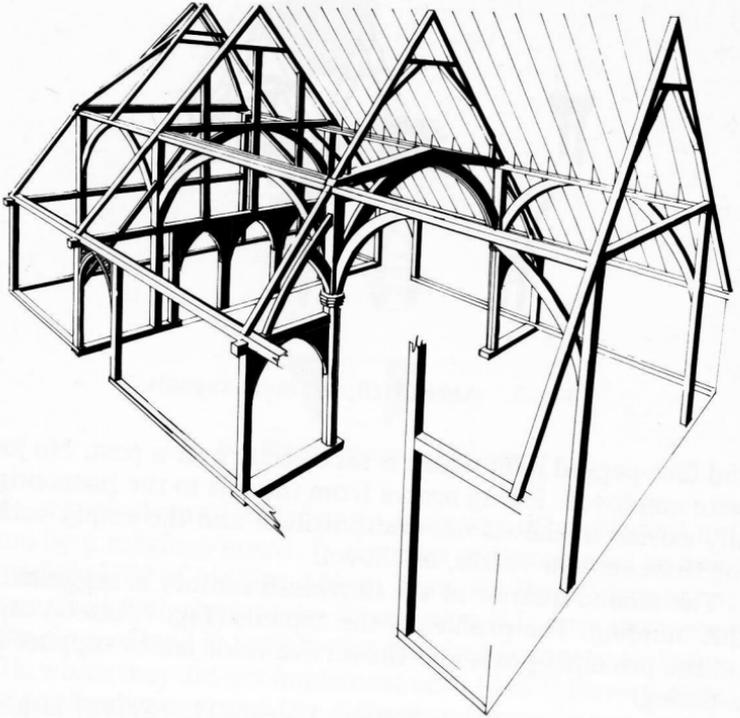


Fig. 8. Stanton's Farm



Fig. 9. Stanton's Farm, mouldings

heads and blind tracery quatrefoils as shown in the drawing. A cross-wing was built later, to replace these service rooms, and there is a full-height discontinuity between it and the older building. This addition had a crown-post roof (now converted to side-purlins) and the ends of its common-joists assist with its dating. The original services were covered by a lodged floor. The mouldings (Fig. 9), are characteristic of the opening decades of the fourteenth century, even if the roof-framing and other features might indicate an earlier date. This is consistent with the hypothesis of a rebuilding just after 1306.

*Wynter's Armourie*, Magdalen Laver, Essex, (TL 499091) is a substantial house on a moated site in a parish without a nucleated village and now almost completely cleared, from what was once an extension of "Epping" forest, by linking up assarts based on a number of similar tenements, often moated. This is the completed "Wealden" situation, and much of the work was done in the later Middle Ages, from the thirteenth century onwards. An Alan Wynter was in occupation by 1248 and his successors continued to prosper, unhampered by much in the way of manorial incidents.<sup>21</sup>

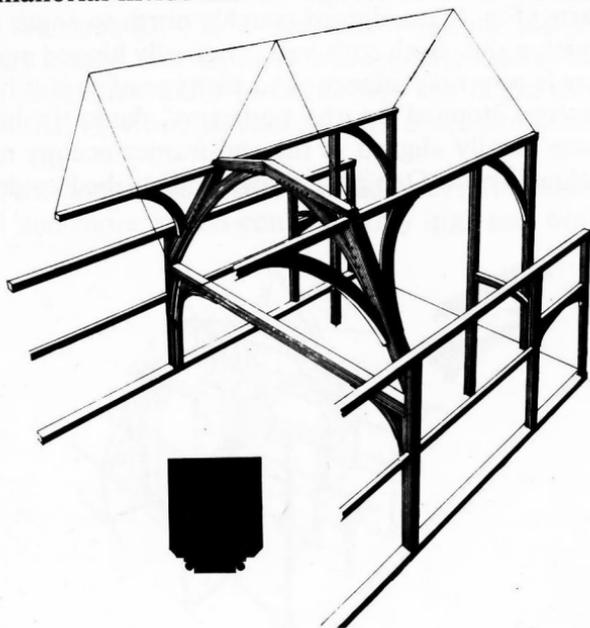


Fig. 10. Wynter's Armourie

The framing of the hall of this house is shown in Fig. 10, showing the main curiosity of the building, its low tie-beam which crosses the hall at a little above head-level, almost certainly indicating that the floor has been raised. There is evidence for the original existence of a crown-post on the central collar. Such mouldings as exist (Fig. 10, inset) are inadequate for dating purposes, but the scarfing of the "purlins" is closely datable. These are stop-splayed and tabled with a "feather-wedge" between their tablings, and no less than ten face-pegs. The closing joint (Fig. 51) and *c.* 1290 is suggested. Slightly earlier dates are not precluded. The solar-wing is of such archaic construction that it is probably contemporary, while the service wing is clearly of later date.

*The Barn, Sandonbury*, Sandon, Hertfordshire, (TL 324345) is the larger of two great barns on an ancient upland site in the tenure of St. Paul's, London, traditionally granted by King Athelstan. Already at farm in 1155, the buildings which included two great and two lesser barns, were repaired under John de St. Lawrence, farmer in 1222.<sup>22</sup>

The barn, (Fig. 11) is aligned roughly north to south and has six bays with aisles. Both ends were originally hipped and angled. There is now no evidence as to the type of roof it had. The passing-braces stopped on the tie-beams' flanks in housings, whilst those axially aligned in the end-frames occupy notched-laps of refined form. One post shows undisturbed evidence for

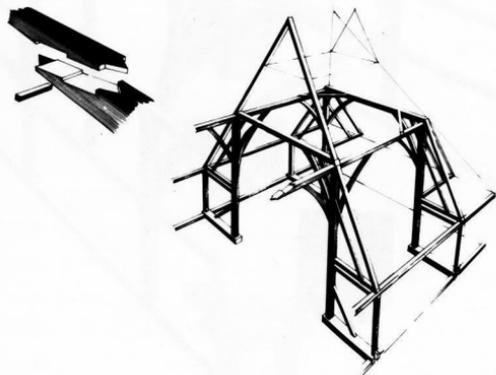


Fig. 11. Sandonbury Barn

the former existence of two rare details: the fitting of double outshut ties that clasped the eaves-plates, and the sole-braces that maintained the right-angle between posts and plates. This last was also originally present at Abbas Hall. A hint of curvature can be seen in the major braces of this barn. The top-plate scarf is splayed and tabled, and has sallied-butts (Fig. 11, inset).

*Tiptoft's* Service wing, Wimbish, Essex, (TL 590368) is now a large H-plan house upon an isolated and moated site, in a district of scattered homesteads with few integrated villages. This is a situation comparable to that of Wynter's, but reclaimed from upland scrub rather than from heavy woodland. The house is 2 km from the church and primary manor-house. The holding was reckoned a second manor from the fourteenth century. It takes its name from the tenure of Sir John Tiptoft, between 1348 and 1367, but was also sometimes known, as Wantones.<sup>23</sup> The earliest part of the building, the service wing, shows that the house was of importance well before the building of the well-known hall described below. It is debatable whether this hall should be ascribed to Tiptoft or to his predecessor, Sir John Wantone (d. 1347), but since Wantone did not hold the primary manor and Tiptoft's was his only seat in Wimbish (compare Baythorne Hall) he is perhaps the better candidate. He was buried in Wimbish church, with a delicate brass to his memory.

Today, the house is fully cased in red brick, which covers the open hall and more or less contemporary high-end wing, both

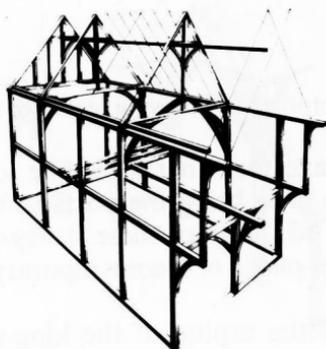


Fig. 12. Tiptoft's, service wing

of which were added to the service wing, resulting in an H-plan house. The frame of the service wing, (Fig. 12) is most unusual in many respects. It has an evidently ancient roof, apparently with king-posts after the French fashion, passing high, light collars and not reaching the ridge, a first-floor that is half lodged and half framed; and not a framing method for its single jetty which is the most archaic in the writer's experience.

The wall beneath this jetty can be seen (Fig. 12). It was without studs and had a "samson-post" with braces in three directions at its top; this frame was evidently in-filled with cob. At each side the projection of the jetty was achieved by the short puncheons, of "fashion-pieces", that tenon into the storey-posts and were supported by curved braces beneath. The first floor thus embodies only eight mortise-and-tenon joints, all unrefined.

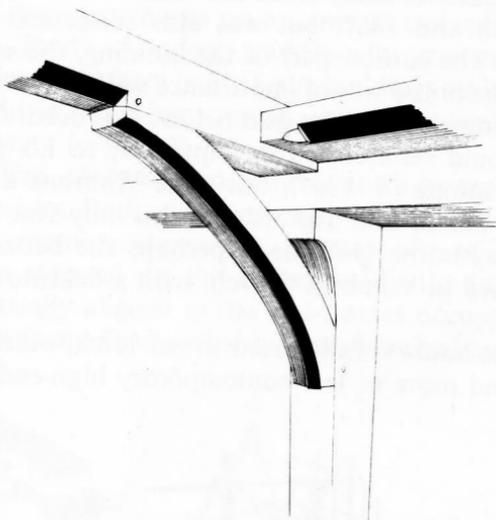


Fig. 13. Tiptoft's, service wing, detail of storey posts

The storey-posts have tops that look like jowls, but are not, since their function is to bring the posts to the same width as the top-plates (Fig. 13). Two of these storey-posts show empty mortises, for the top-plates of a contemporary hall, replaced by the present one.

The treatment of the capital of the king-post and the roll-moulding on the wall-head (Fig. 14) together with the archaism

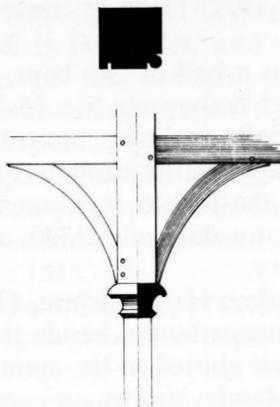


Fig. 14. Tiptofts, service wing. Above roll moulding, below King post of the jettying, suggest the final decades of the thirteenth century for this wing.

*Edgar's Farm*, Stowmarket, Suffolk, (TM 047577) is a house near the south bank of the Gipping and formerly in Combs, isolated until modern development arrived, but never remote, nor, seemingly having much land attached to it. It takes its name from the Adgor or Atgor family, of whom John Adgor was acquiring lands and a messuage, perhaps this one, in Combs in 1342.<sup>24</sup> The family were still holding land in the parish about a century later. Though on an agricultural holding the house may represent urban wealth from adjoining Stowmarket, where

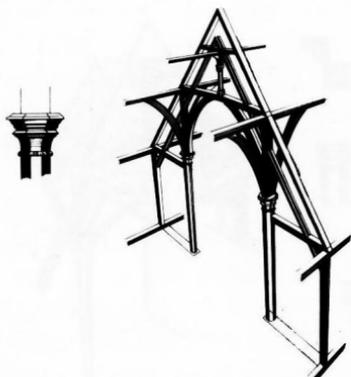


Fig. 15. Edgar's Farm, Stowmarket

it is now (February 1972) being re-erected in the Museum of Rural Life.

What survived was a hall of two bays, laterally divided, the central frame of which is shown in Fig. 15. The roof had secondary-rafters, fitted in pairs as shown, but without crossings above the collar. The profiles of the capitals to the principal posts (Fig. 15, inset) and the foliate enrichment of the annulets at their neckings suggest a date of *c.* 1300, or the first quarter of the fourteenth century.

*Thorley Hall*, Thorley, Hertfordshire, (TL 477189) is today part of an isolated manor-house, beside the church of a settlement which has largely shifted to the main road, 1½ km distant. It was held of the Mandevilles by an eponymous family until 1269, when it was conveyed to William Gerbergh of Yarmouth, presumably a burgess and perhaps a Netherlander. His descendants held it until 1393 when it passed to absentees. Clearly one of the Gerberghs was responsible for the hall; they were the only resident landlords of any consequence.<sup>25</sup>

Of the house now known by this name the hall (Fig. 16) constitutes the smallest part. It now forms a minor wing at right-angles to a later and larger addition, described below. The drawing shows what was the central frame of the hall, converted into a hammerbeam structure at one side. This conversion was effected at a time when both reversed-assembly and the edge-halved scarf shown were still current carpenters' practices. Originally this was a normal building with aisles, a crown-post



Fig. 16. Thorley Hall

roof, and some uncomprehended survivals of notch-lapped passing-braces, paired in the aisles, and single beneath the tie-beams. The form of the notched lap-joints is highly advanced, in addition to being "secret". The workman who fitted them obviously did not understand their function in earlier framing, examples of which he had evidently seen. The braces used, for both crown-post and tie-beam, are well curved and the profile of the capitals, shown inset, suggests a date soon after 1300—perhaps *c.* 1315.

*Purton Green*, Stansfield, Suffolk, (TL 783535) is a small and isolated hall-house, possibly the first house on a new enclosure of indifferent upland country, with poor communications, and about 1 km north of the church of this now "shrunk" village. This is a remarkable survival, on marginal land, of something far below the "manor-worthy" houses hitherto treated.<sup>26</sup>

The house, externally re-cased in close studding and one end completely rebuilt in the sixteenth century, contained the skeleton of an open aisled hall of two transverse frames, with hipped ends (Fig. 17). The complex but structurally inefficient roof has joints of indeterminate quality. The scarf of the top-plates occurs only once, to lengthen a timber by about 3 feet at its end. It is stop-splayed and tabled with undersquinted and sallied butts, twice pegged through each tabling. The internal angles above the principal posts have angle-ties. The mouldings on the posts, according to Forester, would tend to a date quite late in the fourteenth century, but the scarf and all structural features, indeed the very conception of the aisled hall, conflict with this.

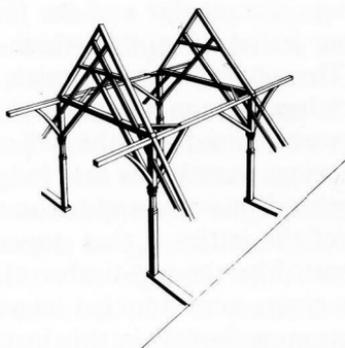


Fig. 17. Purton Green Farm

Even allowing that this may be a conservative and vernacular building, a wide margin of error is advisable. Somewhere between c. 1290 and c. 1340 is suggested.

*Priory Place*, Little Dunmow, Essex, (TL 655212) is a large, free-standing hall-house, built roughly parallel with, and about 30 m west of, the site of the west claustral range of a relatively large and wealthy Augustinian priory. The latter was founded in 1106 and to judge from the standing parts of the church alone, prosperous enough to sustain expensive rebuilding in the early thirteenth and mid-fourteenth centuries.<sup>27</sup> The house may have served as a guest-hall for important patrons (compare Bricett and, perhaps, Kersey), but was strictly extra-claustral.

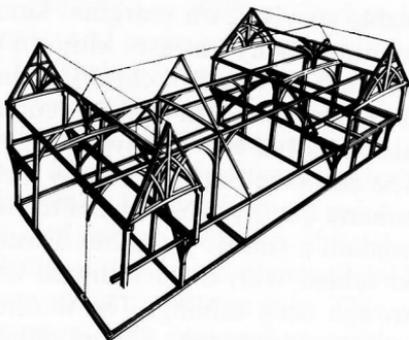


Fig. 18. *Priory Place*

The basic structure was of one build, originally comprising an open hall, with aisles, and jettied wings, at either end. (Fig. 18) The ground-plan was rectangular and the first floor of H-plan by virtue of the four jetties, (Fig. 19), which have already been fully published.<sup>28</sup> The whole was very much altered during the sixteenth century, when a stairs wing and chimney-stacks were added and a floor was inserted into the hall space. The primary floors in the jettied wings were 30 per cent lodged and 70 per cent framed, with unrefined mortise-and-tenon joints. The most obvious archaism of the jetties is that none of the oversailing floor-joists is supported by the top-timber of the walls beneath (Fig. 19). The side girths were doubled in order to achieve the requisite projection, even though in this instance it is not very deep. All the storey-posts had jowls and the numerous scarfs

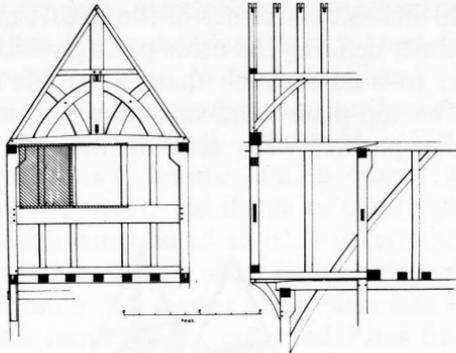


Fig. 19. Priory Place, Jetties

were stop-splayed with under squinted butts. Crown-posts survive in both wings and the gables were saltire-braced, i.e. the down-braces from the crown-posts in the gable-frames are crossed by other braces in a manner more typical of York than of Essex.

Only two moulded members exist in the house, a scroll, datable within wide limits, *c.* 1290 to *c.* 1380, here applied to the high-end side-girth, and the other a variety common during the period *c.* 1350 to *c.* 1375, here integral with the service side-girth. In view of the experimental jettying, the scarfing and the fully developed jowls, a date between *c.* 1290 and *c.* 1325 is suggested with some reservation. On Kentish analogies the scarfing would not vitiate a date in the second or even the third quarter of the fourteenth century.

*Little Chesterford*, Manor House, Essex, (TL 514417) is a modest manor-house adjoining the church and a small dependent village, beside the river, with arable and some woods rising from it, in the upper Cam valley, an area of early and intense settlement with easy communications. In the thirteenth and fourteenth centuries it was subinfeudated to successive generations of the le Breton family, as a single knight's fee.<sup>29</sup>

The timber building is an open, aisled hall, built against a pre-existing hall-on-undercroft of stone, which remained as the low-end wing. A high-end wing, also of timber, was added, but it is not structurally clear whether this was contemporary with, or a little later than the hall. The resultant H-plan was complete by

c. 1330. Fig. 20 shows two frames of the hall. That to the right was a spere-frame, defining the cross-passage, with grooves cut in its members to hold screens; that to the left is the central open frame. The top-plate scarf was stop-splayed and tabled, while the collar-purlins were scarfed with through-splayed joints.

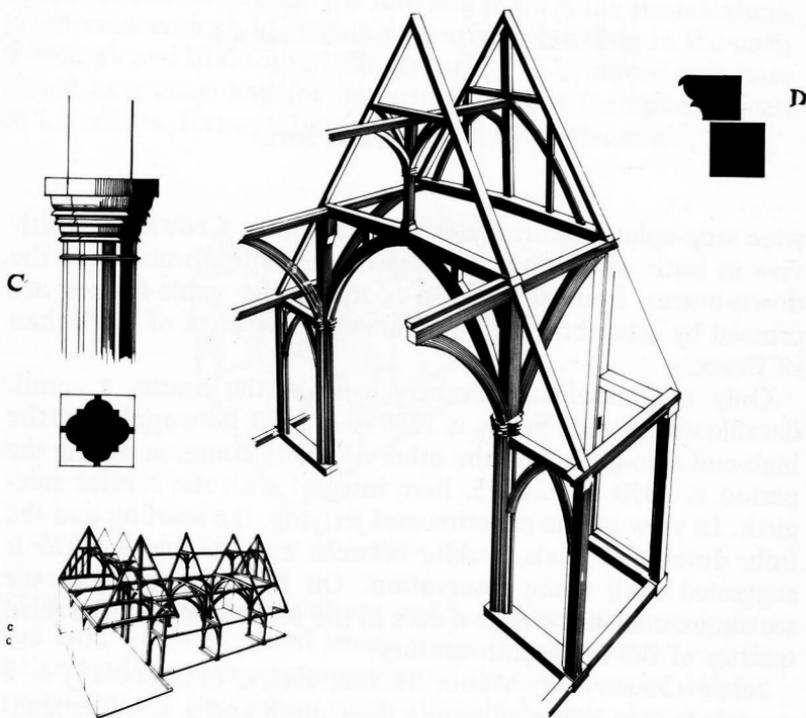


Fig. 20. Little Chesterford

The numerous profiles to be found in this building include those on the principal-posts and the hall top-plates. They are of strongly "Decorated" character and quite orthodox: a date between c. 1315 and c. 1330 is suggested.

*Southchurch Hall*, Southchurch, Essex, (TQ 894896) is a fairly large manor-house on a moated site some distance from the church, and both now engulfed in suburbia, among which the hall has been preserved as a library in a public park. It was

held of Christ Church, Canterbury, by an eponymous family, of which the last, Peter de Southchurch, died in 1309, when his heiress conveyed it to William le Flete.<sup>30</sup> According to Moran he was the father, certainly the predecessor of John de Newenton—alias de Prittlewell—who held in 1350 and was, as perhaps his father was before him, a citizen and spicer of London. If this is correct, and if one or other built the present hall, urban wealth contributed to it. It is certainly very showy and bourgeois inside. On the other hand, however much Christ Church drew from it, the manor was a large one with 640 acres of arable, mills, money-rents, etc., and Peter de Southchurch could easily have afforded to build the hall.

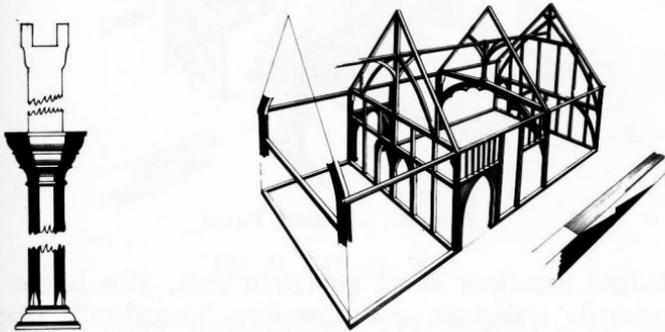


Fig. 21. Southchurch Hall

The first structure was an open hall that was never aisled. The complete frame of the hall range, as far as it survives or is visible, and omitting a jettied cross wing at the high end, is shown in Fig. 21. The gable-frame at the service end incorporates timbers that were probably "eaves-blades", indicating a half-hip. There are many parallels in Kent and Surrey,<sup>31</sup> while full-height crucks in such a context would be unprecedented. All the scarfing is splayed-and-tabled, without transverse wedging the "lightning" joint, or *Trait-de-Jupiter*. The central tie-beam has large soffit-cusps and carries a crown-post, of which the capital and base are shown in Fig. 21, left, with broach-stops and ovoli of a generalized "Decorated" type. The structural details, such as the scarfing, might appear to conflict with the decorative evidence for dating, but it is suggested that the ultimate limit is the middle of the fourteenth century.

*Fressingfield*, Church Farm, "Stables", Suffolk, (TM 261777) is the disused hall of a homestead immediately west of the church in a village that was both integrated and prosperous in the later Middle Ages. Part of an open hall survives here, (Fig. 22), one gable-end, a spered type of hall-frame, with one and a half bays of a hall. This has been laterally divided by a clamped,

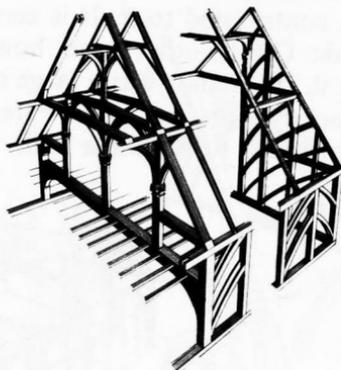


Fig. 22. Church Farm

and lodged first-floor at an uncertain date. This is the most unnecessarily elaborate, and therefore "decadent", piece of carpentry in the present series. It is both impressive, and of questionable efficiency. The scarfing used is "fished", an innovation of this time, while the wind-bracing is the most prodigious seen by the writer, paired on both inner and outer wall-faces. The timbers are rich in mouldings (Fig. 23), and indicate a date of c. 1330-40.

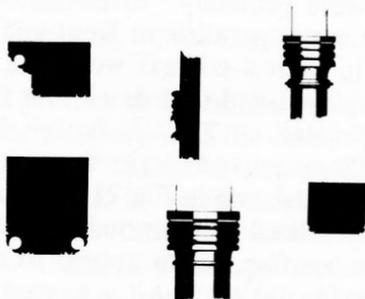


Fig. 23. Church Farm, details

The early work of *Thorley Hall*, Thorley, Hertfordshire, (TL 477189) has already been described. The largest part of the present house is a wing, apparently built as a high-end wing. One bay of the roof of this is shown in Fig. 24. It has a good crown-post roof, and a curious example of the splayed-and-tabled scarf without wedges (Fig. 24 left). The end-joints of the floor-joists cannot be seen, but what is visible of the wing is recorded for future reference, without prejudice to the date, which must remain uncertain.

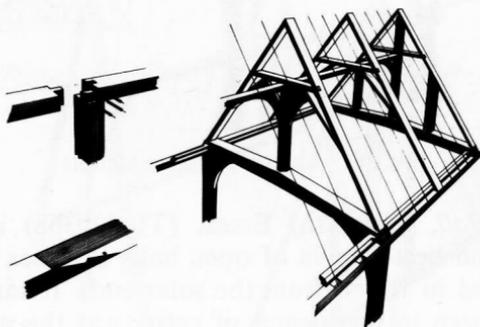


Fig. 24. Thorley Hall

*Lampett's Farm*, Fyfield, Essex, (TL 562073) is an isolated but accessible tenement, one of several in this intensely settled parish. It takes its name from Thomas Lampett, who was in possession before 1358, and dead by 1411, and may very probably have built it. The documents concern tenure, not acquisition.<sup>32</sup>

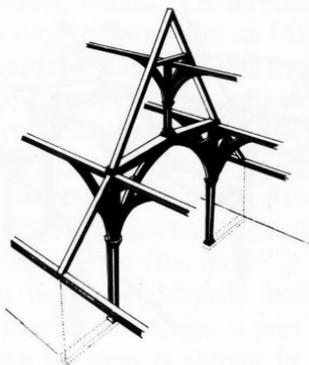


Fig. 25. Lampett's Farm

This is a laterally divided open hall, with aisles, and an approximately contemporary service wing. Another wing was added in the late sixteenth century. The central frame crossing the hall is shown (Fig. 25). The crown-post fitted in this frame (Fig. 26) has mouldings which suggest the second quarter of the fourteenth century.

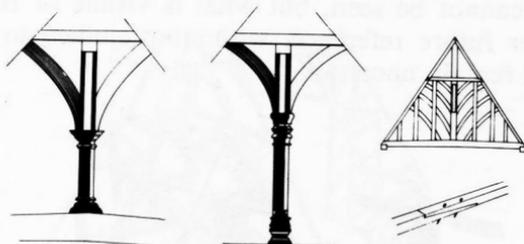


Fig. 26. Lampett's Farm, details

*Tiptoft's Hall*, Wimbish, Essex, (TL 590368) is the most impressive and best known of open halls in Essex (Fig. 27, as though viewed in frame from the solar-end). It cannot, unfortunately, be seen in this degree of entirety at the present time. Both ends of this roof mount crown-studs for the support of the collar-purlin which continues beyond them to meet the principal rafters in the roofs of the cross-wings. The collar-purlin, and one eaves-plate, both show splayed-and-tabled scarfs; and there are remains of an oriel. The section and decorative profiles of the posts of this hall indicate a date between *c.* 1300 and *c.* 1325.



Fig. 27. Tiptoft's Hall

The solar to this hall is difficult to examine, but its roof is shown in Fig. 28. As shown in this drawing the hall top-plates are tenoned into those of the solar, proving a single and overall design for both. The two crown-posts have doubly jowelled heads which clasp the collar-purlin (Fig. 28, left).

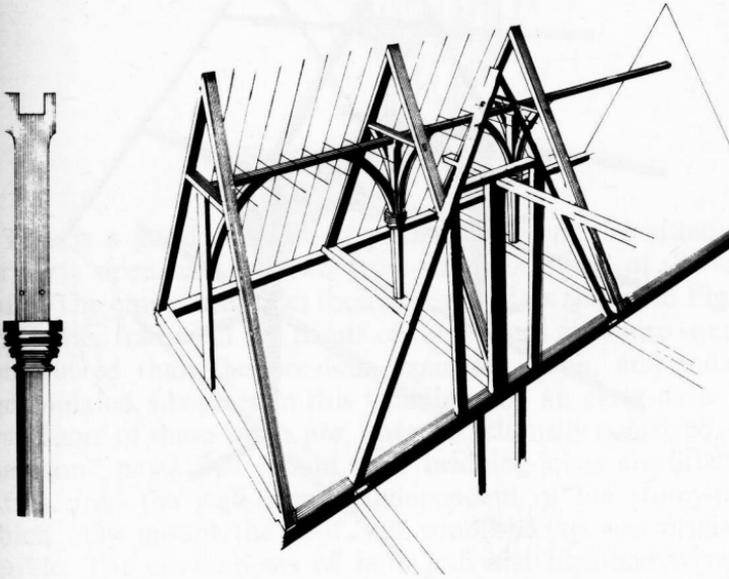


Fig. 28 Tiptoft's Hall, solar

*Maldon Hall*, Maldon, Essex, (TR 838062) the manor-house of Little Maldon, is on a moated site at Maldon Wick, outside the *burh*. The integrity of the original manor seems to have broken before 1295, but the fourteenth-century tenants were in general of the sort to require such a hall as the present one; whereas those of the fifteenth century were great proprietors and absentees. The incomer, William Amory, who acquired most of the manor from the Baynards shortly before 1341, is a likely candidate for builder of this hall.<sup>33</sup>

A formerly open hall has recently been discovered here, embedded in a complex of buildings; a partly "restored" drawing of that which can be seen is shown in Fig. 29. The aisles seem to have been screened off, longitudinally, in the manner

noted at Kersey Hospital, from the central open area. The profiles of the crown-post suggest the decade 1340–50; and the other more complex section from the side screen (Fig. 29, left), would also be possible at this date.

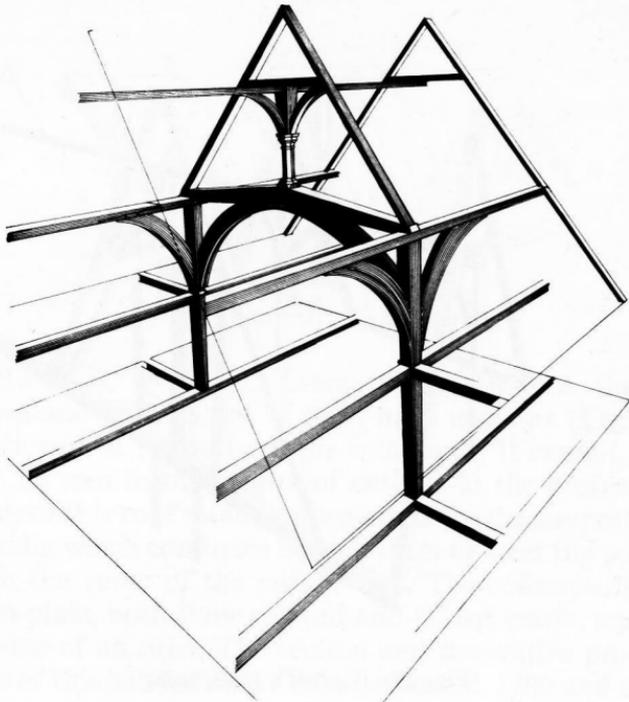


Fig. 29. Maldon Hall

*Baythorne Hall*, Birdbrook, Essex, (TL 710427) rather than Baythorne Park, a seventeenth-century house 1 km to the east, presumably represents the original capital message of the Baythorne estate. It lies low, beside the Stour, which recently flooded its ground floor. It is fairly isolated but with a small secondary village lying between it and the other chief house. In the fourteenth century it was held by the Wantones, as was Tiptoft's at Wimbish, but remained with them until divided between coheireses in 1391. Baythorne Hall may have been built by a Wantone at the time when the other manor had been released to Tiptoft.<sup>34</sup>

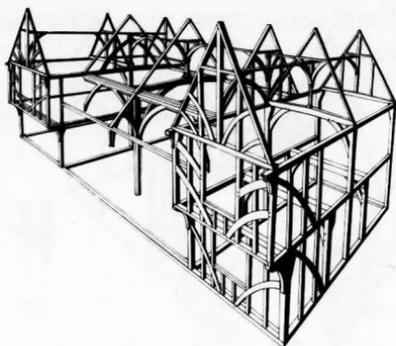


Fig. 30. Baythorn Hall

This is a good example of primary H-plan, the aisled and formerly open hall and two cross-wings being all of the same build. The entire frame, as though restored, is shown in Fig. 30. The jetties framed at the fronts of both wings are more soundly constructed than the previous examples given, and indicate consolidated advances in this technique by an early date. The first-floors of these wings are, however, clumsily contrived. The "samson" posts that mount their bridging-joists are fitted, as extras, into the wall-frames, independent of the storey-posts which only mount the roof. All wind-bracing was originally double. The crown-posts of both hall and high-end wing are shown in Fig. 31, left, and right, respectively. The left suggests a date of *c.* 1350 or a little later.

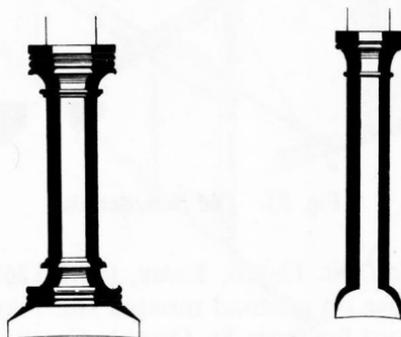


Fig. 31 Baythorn Hall, detail

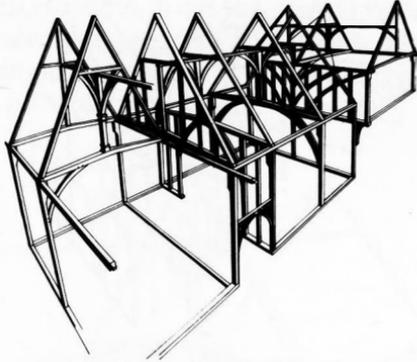


Fig. 32. Old Sun

*Old Sun Inn*, Saffron Walden, Essex, (TL 536427) no longer an inn, is in a medium-sized market town of much traffic. It is of H-plan with jettied cross-wings and the whole structure may be of one build (Fig. 32). The hall was always without aisles and possessed a spere-frame against the cross-passage. The doorway shown in the drawing has survived, complete with door, and has richly traceried spandrels that suggest a date of *c.* 1350–60. The pierced tracery of the service wing lights and the blind tracery of the door-durns are shown in Fig. 33.

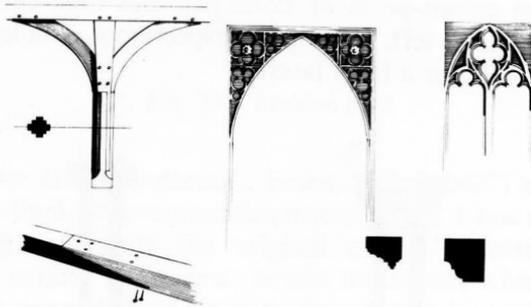


Fig. 33. Old Sun, details

*St. Clere's Hall*, St. Osyth, Essex, (TM 126148) is a large and isolated house on a broad moated site 1 km south-east of the Priory, but not far from St. Osyth's Creek on low, but not marshy land. This was held a separate manor from Chich, the

ecclesiastical tenement, by an eponymous family from the times of Henry III or earlier, until 1556, but not, or not entirely, in chief; e.g. John St. Clere, a possible builder of the present hall, held half a fee of the Vere Earl of Oxford in 1334.<sup>35</sup>

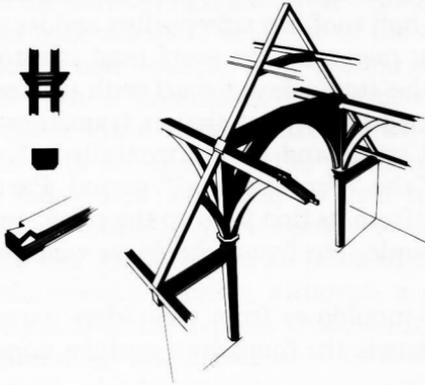


Fig. 34. St. Clere's Hall



Fig. 35. St. Clere's Hall, service wing

This is a hall still open to its ridge, with aisles and two cross-wings, the central frame crossing the hall is shown in Fig. 34. Only the service wing is contemporary with the hall, and this is also illustrated in Fig. 35. This building has a heightened value in the present series since it has been carbon-dated to  $1350 \pm 30$  years.<sup>36</sup> The hall roof has side-purlins and its assembly order is, at the eaves, reversed. The scarf used is also shown in the drawing. It is the stop-splayed scarf with square, vertical, and bridled butts a form of joint that is transitional between the earlier, splayed scarfs and the horizontally halved and bridled form typical of the "Perpendicular" period. Part of the service wing was open, from its first floor to the ridge, and had a collar-arched main couple. The front with frieze windows, is obviously an alteration.

A variety of mouldings from the oldest parts of this house suggest a date late in the fourteenth century, consistent with the

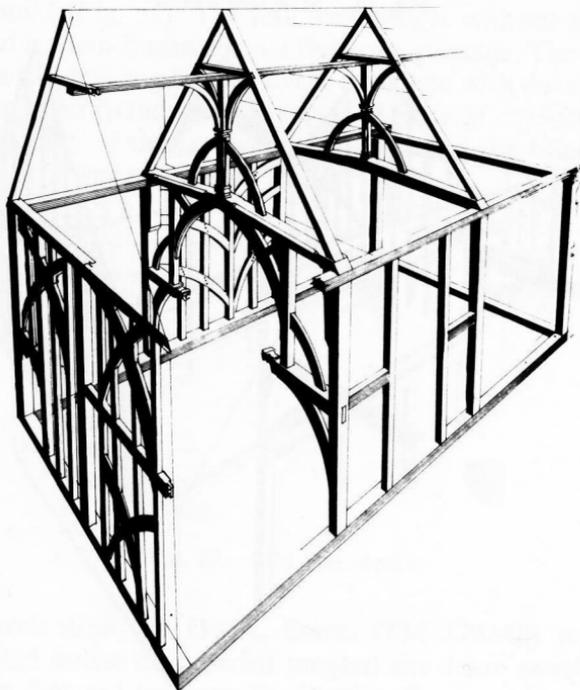


Fig. 36. Durham House

transitional scarf, but straining the carbon 14 date, at least to the limit of its standard deviation.

*Durham House*, Great Bardfield, Essex, (TL 674304) is sited at a corner in the High Street of a large and integrated village. This house has an aisleless hall and clear evidence for a service wing, which has been rebuilt. The frame of the hall is shown in Fig. 36. It evidently had windows from ground level to its eaves, and was fitted with a decorative, but structurally spurious, hammerbeam frame within. Both saltire and triple wind-bracing were fitted, and both are shown in the positions in which they remain visible today, not necessarily to their total extent. The ground plan is rhomboidal in conformity with the irregular boundary of the site. Even the crown-posts of the hall roof are worked in a rhomboidal section, although a cross-quadrant! The decorative detail of these posts is shown in Fig. 37. It has no definitive mouldings and a date of *c.* 1370 is suggested. The "hammer beams" have what seem to be portraits of a man and a woman carved on their inner ends. The woman wears the square crimped coif of that period.

*Gatehouse Farm*, Felstead, Essex, (TL 695225) is a fairly modest farm just north of Gransmore Green,<sup>37</sup> over 2 km from the village on the approaches to Stane Street, clearly part of a secondary, though not intergrated, settlement or "forstal", taken in from moorland or scrub.

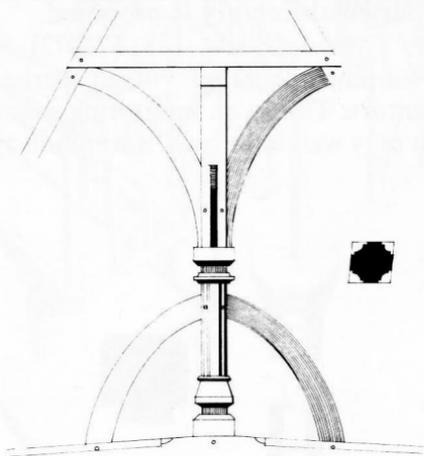


Fig. 37. Durham House, detail

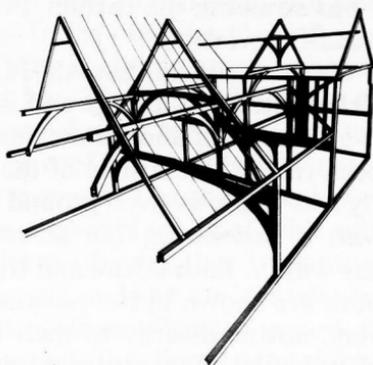


Fig. 38. Gatehouse Farm

This was an H-plan house with central hall open to its ridge when surveyed by R.C.H.M., early in this century; one cross wing has since then been demolished, and the central tie-beam converted, crudely, into a pair of now collapsing hammerbeams. The remaining parts, with central beam shown complete, are illustrated in Fig. 38. The service wing retains one doorway with a four-centred head, and has its joists fitted with barefaced soffit-tenons; as had those at Baythorne Hall aforementioned. A representative capital and base of the queen-posts are shown in Fig. 39, with a section through the beam. A date in the third quarter of the fourteenth century is proposed.

*Bridge House*, Fyfield, Essex, (TL 572072) is on a small tenement in a loosely integrated village, perhaps combining trade with agriculture. This is an interesting example of a small open-hall, which may well have been a common type during the

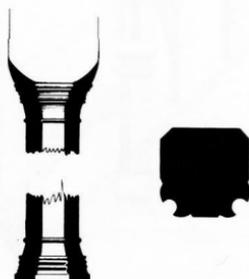


Fig. 39. Gatehouse Farm, detail

fourteenth century. The frame, as much of it as has survived, is shown in Fig. 40. The manner of fitting both collar and braces into the same housing, with nail-headed pegs; and the detail of the crown-post are shown (Fig. 40, insets).

*Porter's Hall*, Boreham, Essex, (TL 760105) is about 1 km from the church and village nucleus, but only just off the main, and Roman, Colchester road; with some medieval "ribbon-development" along it. Although reckoned as a manor, Porters

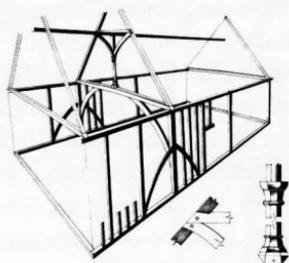


Fig. 40. Bridge House

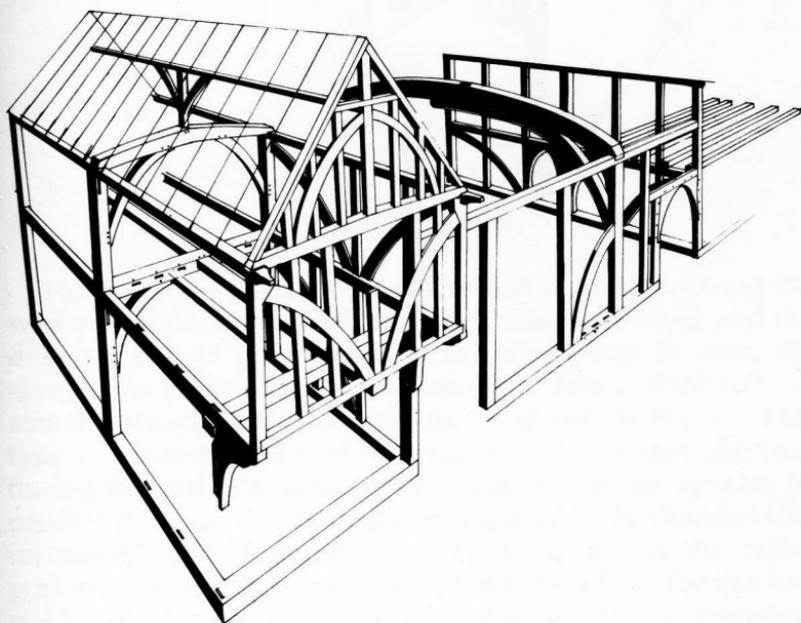


Fig. 41. Porter's Hall

contained less than 50 acres, and the house was a little less pretentious than others described herein. One Porter, who may well have been responsible for the house (now demolished) held it in 1386; and its decorative framing may have been due to the commercial advantages of its siting.<sup>38</sup>

This much re-faced house had to be cleared from the near route of a new motorway. Its frame is shown in Fig. 41. The service wing could not be fully recovered from the evidence, but its joists were certainly lodged. All structural detail, and the curvature of the service doorheads suggest a date late in the fourteenth century. A door leaf remained.

*House at Great Sampford, Essex, (TL 643358)* was evidently a farmhouse but situated in the street of a straggling village. This building has for a long time been divided into tenements, and only one of these could be examined. It was, evidently, H-planned with a three-bay hall having no aisles, and two jettied cross-wings. The salient feature—the central frame across the hall—is shown in Fig. 42. The crown-post on this frame is tall,

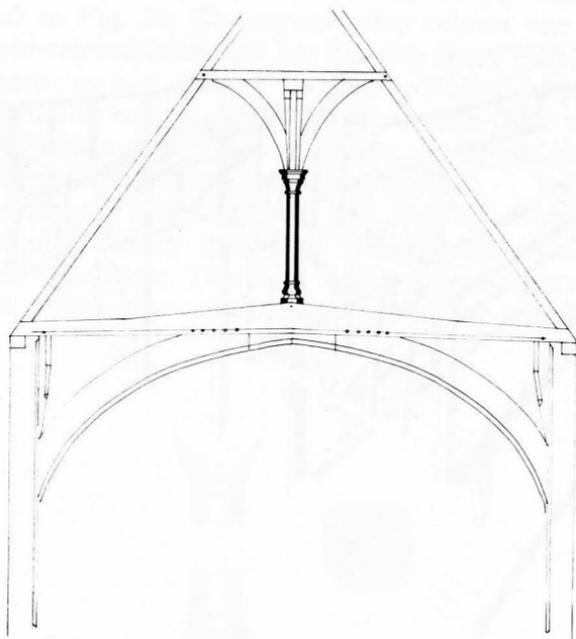


Fig. 42. House at Great Sampford

and very slim, with a bell-spread foot; its capital has a beaked half-roll, and a date of *c.* 1400 is proposed for it, and consequently for the house.

*Hill Farm*, *Fyfield*, *Essex*, (TL 589046) is a biggish farmhouse on the once wooded periphery of the parish, perhaps representing continued assarting. Nothing seems available of its history.

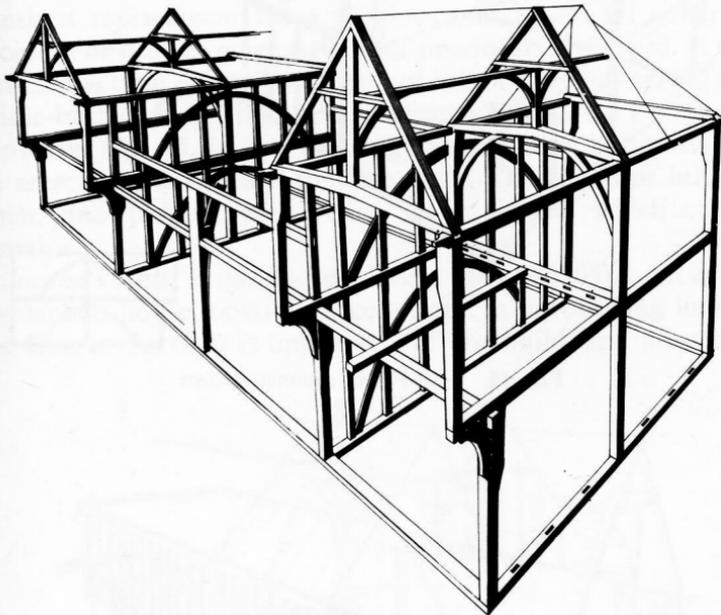


Fig. 43. Hill Farm

The house, of H-plan, was extensively renovated during the winter of 1969, and at that time the frame was visible, and the drawing, Fig. 43 was produced. So far as could be seen, the arch-braces of the central frame rose to the height of the collars; and the reconstructed result of this is shown in Fig. 44. This type of collar-arched roof was much used in Essex churches during the early fifteenth century, and this house appears to provide a secular and domestic example of it. In churches (for instance Great Horkesley, and Gosfield, Essex) the collar purlin was butted between frames, but the evidence for this had not survived in the house. The lap-dovetails for the spur-ties, necessary in these roofs, were seen during the renovation. The

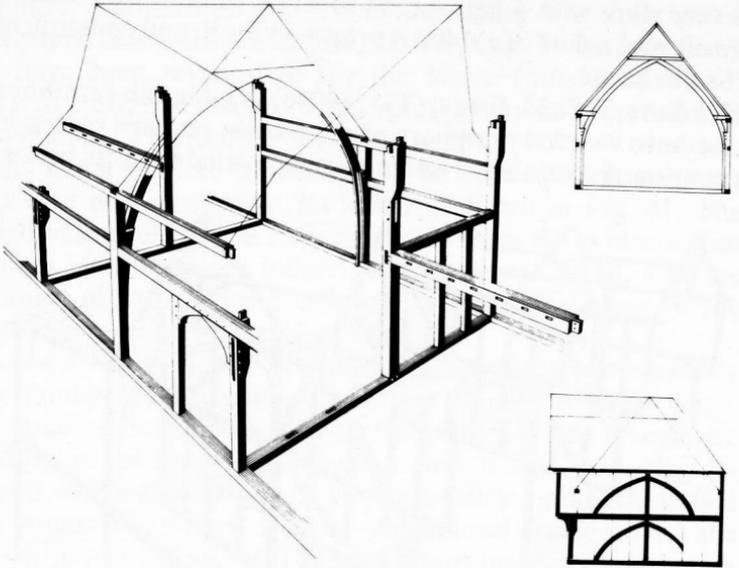


Fig. 44. Hill Farm, reconstruction

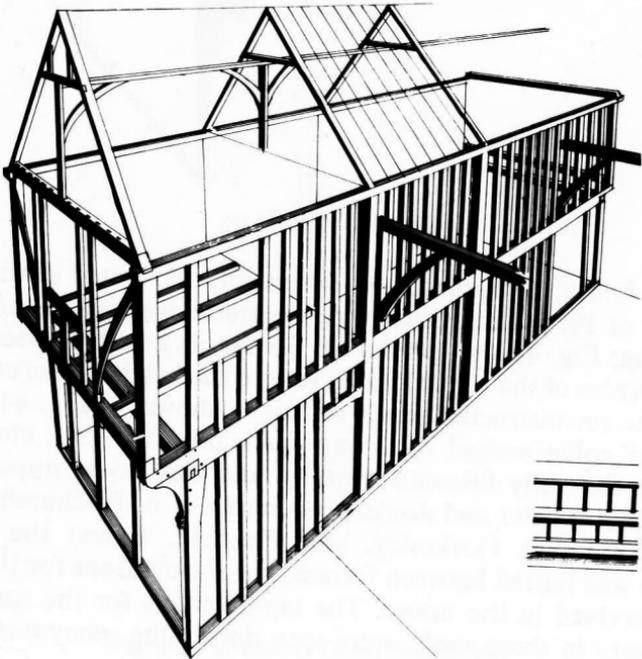


Fig. 45. Solar wing, St. Clere's Hall

eaves were raised in the seventeenth century, when bladed-scarfing was used for the new top-plates.

No mouldings existed in this house, but the floor-joists of both wings had central-tenons, unrefined; one cross-passage doorway had a four-centred head, suggesting a Perpendicular dating. A date not earlier than *c.* 1375 is proposed.<sup>39</sup>

*The Solar-wing*, St. Clere's Hall, St. Osyth, Essex, was evidently a replacement for a previous one, destroyed either by accident or design, part of the hall previously described. It was built some time during the period of use of the edge-halved and bridle-butted scarf, the "Perpendicular", and its framing is shown in Fig. 45. In this drawing the truncated hall posts can be seen, cut off beneath the side girth. The roof was initially open, and painted with yellow ochre inside, which colour remains.

*Jacobe's Hall*, Brightlingsea, Essex, (TM 085165) is an urban H-planned house, possibly once an inn, in an outlying limb of the Cinque Ports. It is apparently of one build, and must be a

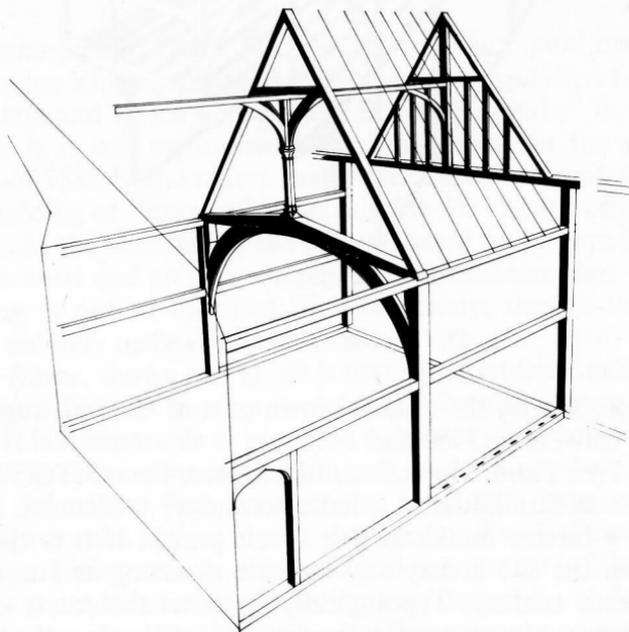


Fig. 46. Jacobe's Hall

late example of the type. Its hall was originally open but now laterally divided. The frame is shown in Fig. 46. Although large numbers of houses have in the past been ascribed to the fifteenth century on inadequate grounds, in Essex at least, a major house with such clear indications of that date, as in this case, is quite a rarity. The service wing, which can be stated, positively, to be of the same build as the hall, is shown in Fig. 47.

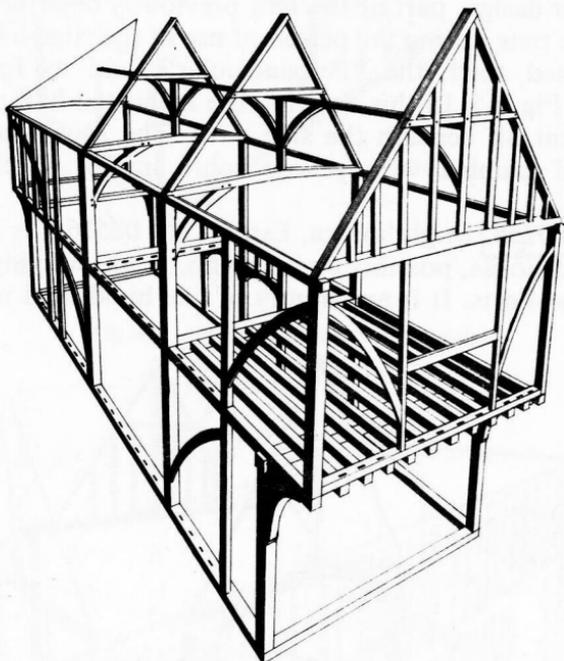


Fig. 47. Jacobe's Hall, service wing

The profiles on the central crown-post of the hall suggest a date of between *c.* 1460 and 1470.

*Deal Tree Farm*, Hook End, Blackmore, Essex, (TQ 590008) is a modest farmhouse in a loose secondary settlement, representing a further intake in this forest parish. If it is the first house on the site it may well indicate assarting as late as the seventeenth century. Typologically it seems the latest of the series, but the problematic Fryerning Hall is described with reference to it.

The house was examined whilst undergoing a rebuilding during 1969, and the framing then visible is shown in Fig. 48. The inset shows the short edge-halved scarf used, and the door heads surviving on the cross-passage doorways are also seen. The roof was without any purlins. The only features that assist with the dating of the house are: the scarf-joint, and the form of the door heads, of which type date-inscribed examples are known, as in the church at Sutton, Essex (1630).

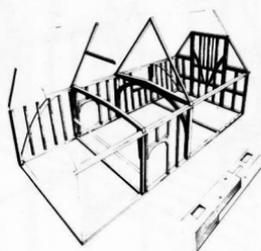


Fig. 48. Deal Tree Farm

*Fryerning Hall*, Essex, (TL 639002) was the capital message of a manor which belonged to the knights Hospitallers from an early date and which appears as "Ginge Hospitalis" in 1254,<sup>40</sup> though it is not mentioned under that name in the general return of 1338.<sup>41</sup> The tenure may have called for a very specialised building of "camera" type, suitable for clerical officials in transit. At the Dissolution the manor passed to William Berners and his heirs and an immediately post-Dissolution date for the building is not to be ruled out completely, though the plan seems unlikely in the circumstances.

The frame, shown in Fig. 49 is that of a first-floor hall (alternatively a Great Chamber and Inner Chamber), open to the ridge. It is comparable in plan to a public or guild hall, not to a late medieval continuous-jetty house, and, in any case, is unjettied. Like Deal Tree Farm, it was fitted with large window-openings at each end, evidently unglazed and with diamond-set mullions. Unfortunately, the structural components of the frame are not moulded, but the building was heated by a chimney-stack built against the side frame, which seems to be contemporaneous. The existing chimney beams are, however, moulded and

at least one is original to the chimney. A date of c. 1475 is suggested for the most diagnostic chimney-beam and the carcass of the house seems generally consistent with this, though certain details, such as the dovetailed collars, might point to up to a century earlier.

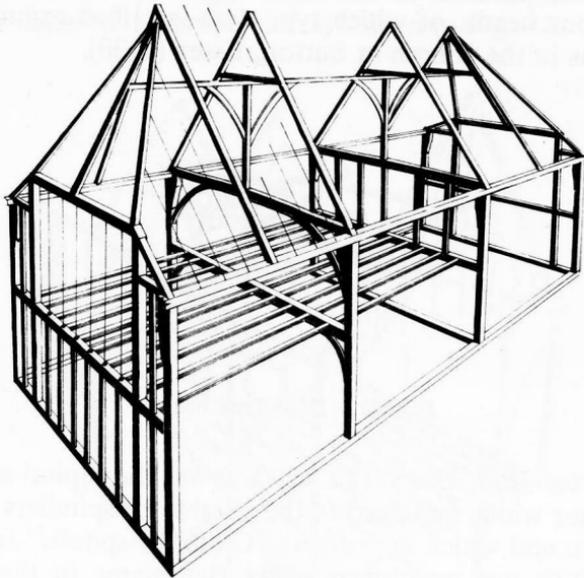


Fig. 49. Fryerning Hall

*Old House*, Wakes Colne, Essex, (TL 879292) is an isolated farm on rising clayey ground, once wooded, behind the primary valley settlement. The name is long established: it is so styled on Chapman & André's map of 1772-4.

The house is described *hors-de-série*, and mainly for its analogies with some of the others. It had an open, aisleless hall with contemporary high-end wing. The service wing has been rebuilt, apparently during the late sixteenth century. Fig. 50 shows the high-end solar and what has survived of the framing of the hall. The roofs to both originally had crown-posts, and the hall formerly had oriel windows that did not rise to the eaves. The jettying of the solar is curiously jointed, in a manner similar to that at St. Clere's Hall. The mouldings worked on the sill-timber of the solar and on the first-floor tie-beam are in the

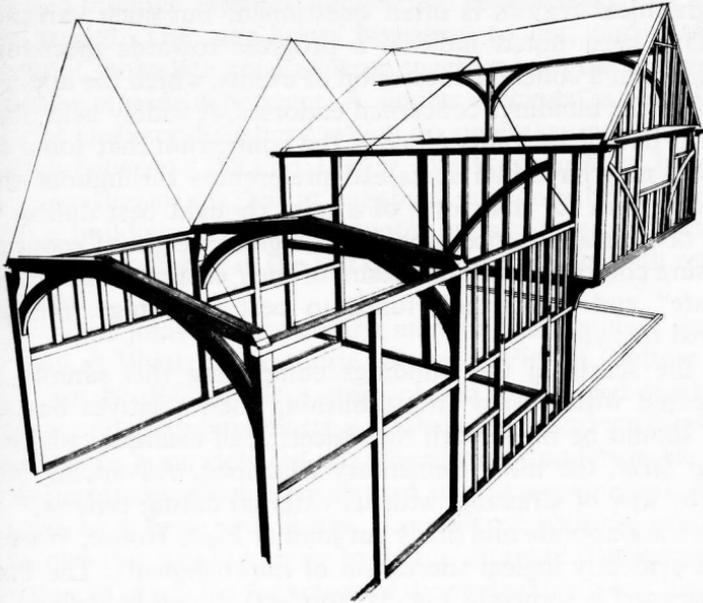


Fig. 50. Old House

“Perpendicular” manner but not amenable to close dating. The plentiful close-studding in a rural setting, and the windowsills at varying heights look like relatively advanced features, even for Essex.

#### THE SIGNIFICANCE OF THE EXAMPLES IN THE DEVELOPMENT OF CARPENTRY

##### *The Scarfing*

The majority of the buildings described incorporate scarf-joints of the splayed category, and the most archaic among them, Great Bricett Hall, has a through-splayed scarf with numerous face-pegs, a type which retrospective reasoning would ascribe to the earlier part of the thirteenth century. The mechanically improved splayed-and-tabled scarf of the Cressing Wheat Barn, which appears to be consequent on this type, has been carbon-dated to  $1255 \pm 30$  years, and, in any case, there are strong historical reasons for placing it before 1308. The chronological utility of such variations in a given type of joint, even in a limited

geographical region, is often questioned, but such variations as have been noted indicate a progress towards mechanical efficiency in a coherent succession of events, which the apparent dates of the buildings concerned endorses. A widely held objection to dating by joints alone is the contention that some carpenters may have had sustained preferences throughout their working lives for that form of a joint thought best during the time of their apprenticeships, but the great weight of economic pressure combined with the desire of their customers to be "up-to-date" and spend their funds to best advantage, militates against this view.

If the scarfs in the buildings comprising this sample are compared with a view to establishing their relative dates, a start should be made with the Bricett Hall example, which is, *prima facie*, the most elementary described. Advancing from thereby way of Cressing, with its external dating criteria,<sup>42</sup> we reach the elaborate and finely cut joint at Place House, Ware — in an evidently logical succession of improvements. The Place House scarf is shown in Fig. 51 (top left). It can be defined as: a stop-splayed scarf with under-squinted butts, tongued and

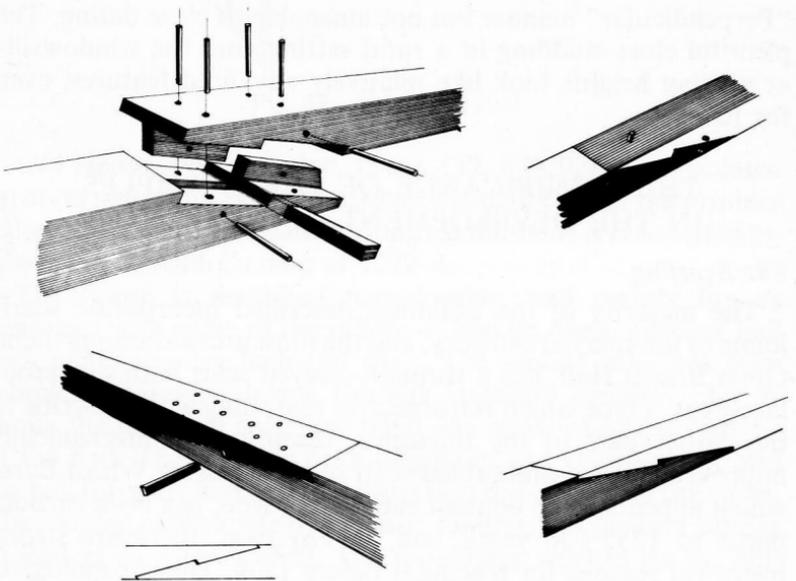


Fig. 51. Scarf joints

grooved tablings, laterally wedged and edge-pegged, and finally face-pegged. The man-hours necessary to cut, and assemble this joint, postulate great expense together with the presence of a master of wide experience. A similar specimen is recorded at the Old Deanery, Salisbury, which documentary evidence seems to date between 1258 and 1274.<sup>43</sup> The Ware joint is, however, an improvement on that at Salisbury, and, on the assumption that, in buildings of the finest quality such as these, information travelled fast, a date in the last quarter of the thirteenth century is logical.

The next joint of outstanding merit is the top-plate scarf of the hall at Wynter's Armourie, shown in Fig. 51 (bottom left). This can be defined as: a stop-splayed and tabled scarf with square, under-squinted butts, a feather-wedge and ten face-pegs. This was so accurately cut as to be virtually undetectable, after all the centuries which have elapsed since it was finished. Again, it must have been very costly. If compared with the preceding examples this would appear to be the ultimate development of this type of scarf; the reduction of the wedge to a mere "feather" or slip, is economy of means that creates a concomitant increase in efficiency in relation to the quantity of material used; this can only derive from the earlier type at Cressing which had a square-sectioned wedge—at the expense of the lengths of tabling. The closing decades of the thirteenth century is proposed for this work.

The remaining scarfs, which are both similar and exceptional, are those at Purton Green and Sandonbury — the last mentioned being illustrated in Fig. 11 (inset). The latter is definable as: stop-splayed with sallied and under-squinted butts, unpegged. Such joints as this were exceptionally finely cut, and obviously very costly to produce, in terms of both timber by the cubic foot, and fine craftsmen by the man-hour, or, in medieval concept, by the man-day. They can be ascribed to that period immediately following upon the perfection of splayed scarfs (cf. Wynter's), and between *c.* 1290 and *c.* 1325 is suggested. Although costly, these joints were cheaper than those used at Salisbury and Ware, and since their great cost was less "cost-effective" in terms of the strength of the resultant join, they must be considered "decadent". A similarly derived scarf is that at Thorley Hall, used in the second build there; this is

shown in Fig. 51 (top right). This is an ambitious joint which apparently has a tongued-and-grooved tabling, edge-pegged; the craftsman having lost sight of the fact that tablings are only useful in combination with under-squinted butts. The second quarter of the fourteenth century is suggested for this example.

The predominant type of splayed scarf found in high quality carpentry, between *c.* 1225 and *c.* 1330, is that shown in Fig. 51 (bottom right). This was used for the top-plates of the hall at little Chesterford. It is a plain and efficient joint which had been perfected since the Crossing Wheat barn was built and could well have satisfied the most exacting of carpenters from that time until about 1330. Fig. 52 (top left) shows a scarf used for the collar-purlin of the Old Sun Inn, which is ascribed to 1350-60, and the iron spikes which secure it are shown in solid black. The use of spikes seems to be an innovation of about the third quarter of the fourteenth century: it is found, in lighter braces as well as scarfs, in the barns at Mersham (*c.* 1355?) and Brook (*c.* 1375?), both in Kent.<sup>44</sup> There is much evidence, throughout the Thames valley area, that splayed scarfing was used until late in the century for jointing lesser timbers, such as purlins. It occurs throughout the above-mentioned Kentish barns, but the latest recorded Essex case, in the purlin of the service wing at Lampett's farm, is ascribed to *c.* 1380. The hall of the Poor Priests' Hospital at Canterbury, certainly no earlier than that, on archaeological sequence alone, has splay-scarfed collar purlins.

The phenomenon of the butted-and-fished scarf, in the "stable" at Fressingfield<sup>45</sup>, apparently reflects the general freedom and bold experiment of the "Decorated" period in England. This joint does not, so far as is known, materially affect the general evolution of scarfs. A far more important development is represented at Prior's Hall, Widdington,<sup>46</sup> and, further developed, in the construction of the hall, at St. Clere's. The result was the joint illustrated in Fig. 34 (inset). This combined the long tradition of splaying the halvings of scarfs, with the novelty of bridling their terminal abutments. It marks the transition to the most persistent scarf of the "Perpendicular" phase. The St. Clere's specimen has a carbon date of *c.* 1350. Few examples of this scarf are reported, to date,<sup>47</sup> and it seems to have stayed in use just long enough to bring about the adoption of the succeeding type.

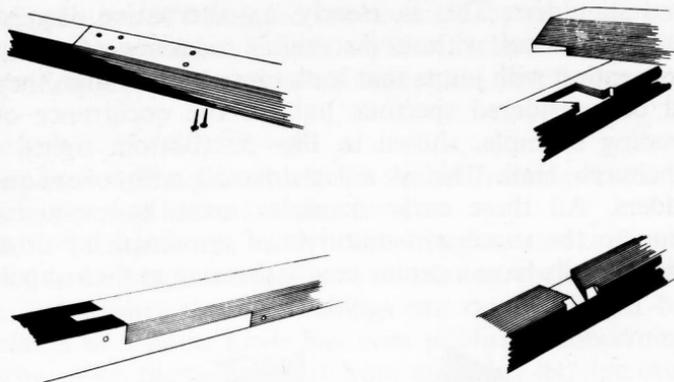


Fig. 52. Scarf joints and tying joints

This ensuing scarf-type is exemplified by the joint shown in Fig. 52 (bottom left), from *Jacobe's Hall*. It is edge-halved and bridled-butted, with two edge-pegs; both joint and building are ascribed to *c.* 1460–70. The halvings at *Jacobe's* are of great length, as was usual in early examples, and the course of development was the gradual shortening of the halved parts—as in the specimen shown regarding *Deal Tree Farm*, in Fig. 48 (inset). The ultimate, and shortest example of this type known, was formerly in the barn at *Brett's Hall, Tendring*, which has been previously published.<sup>48</sup> The succeeding type of scarf was face-halved, is called “bladed”,<sup>49</sup> and was apparently something of a novelty about the year 1575, when *Rook Hall* was built, at *Cressing*.

### *The tying Joints*

The tying joints used in the buildings listed also show a progression, motivated by a desire to produce unwithdrawable joints which, should they partially fail and slightly withdraw, conceal this deficiency from view. The most archaic of our sample, *Bricett Hall*, is tied at all points with the lap-dovetail having entrant-shoulders. This joint has been published in the context of *Cressing*,<sup>50</sup> where it has been dated to *c.* 1255. It is evident that joints were designed to conceal their own mechanical failures. The next form in this series is that used at the *Kersey Priory*—shown in Fig. 52 (top right), and also at *Purton Green Farmhouse*; both of which have lap-dovetails with

housed shoulders. This is, clearly, an alternative disguise for partial withdrawal, without discernible reduction of costs. This preoccupation with joints that look more perfect than they are, could be considered specious but for the occurrence of the succeeding example, shown in Fig. 52 (bottom right), from Southchurch Hall. This is a lap-dovetail with over-squinted shoulders. All these early examples must be evaluated in relation to the successive centuries of unrefined lap-dovetails which normally have a gaping cavity showing at their shoulders.

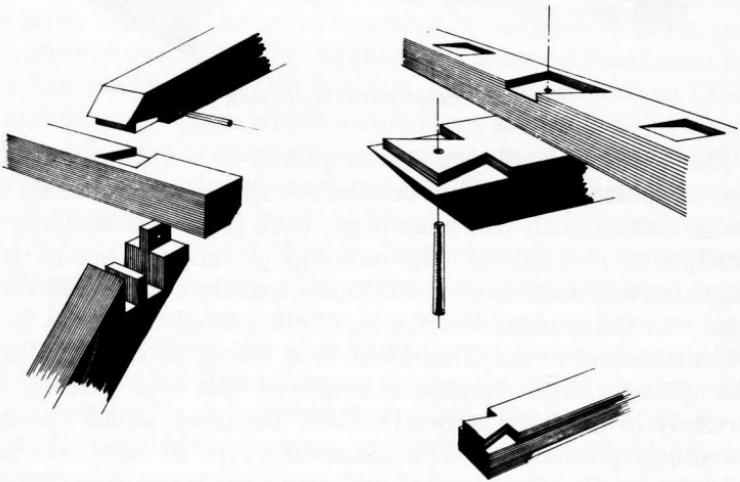


Fig. 53. Tying joints

From this point (Southchurch Hall) forward the course of development is less clear. The joint shown in respect of Wynter's Armourie, in Fig. 53 (left), is constant in this region between *c.* 1300 and *c.* 1800, and variations were either trivial or debasing. During the times of the Black Death a dearth of truly competent craftsmen seems to have produced such oddities as the transfixing of lap-dovetails with pegs. An example of this is shown in Fig. 53 (top right), from Lampett's Farm. The peg could add nothing to the security of this joint. The final specimen is from St. Clere's Hall, of an aisle tie-beam using the lap-dovetail in the supine position, to effect a "reversed-assembly"—shown in Fig. 53 (bottom right). This is a joint, however, telling us little about its date of execution. Other variations took place,

such as the use of barefaced lap-dovetails by some carpenters, but these are more likely to indicate local "schools of carpentry", than widespread practices of chronological significance.

### *The Methods of Jetty-framing*

This is a technique which, in timber-framing, took many years to develop into a familiar form.

Whilst comparisons with corbelling, corbel-tabling and stepped corbelling in masonry are interesting, they do not assist, since in masonry these corbellings are rarely effected by the projection of a floor. Little has been published concerning the steps by which the commonest form of timber-jettying evolved, and the present series seems to afford sufficient variety of techniques to outline this process. It is evident that the service wing at Tiptoft's (Fig. 12) must be the earliest jetty among those described. It shows an inexperienced approach to the problem, perhaps a country craftsman trying an urban technique. The structural point of importance here is the fact that the side-girths do not themselves project, the storey-posts are continuous, and two short extensions of the side-girth were tenoned into them, structurally the weakest method possible.

A certain improvement is seen at Priory Place, Dunmow, the eight jetties of which house were effected by the use of precisely twice as much timber as was later normal and adequate. The side-girths were doubled, only the upper one projected, and was supported by a brace, as shown in Fig. 19. This is still, however, an experimental jetty, since the oversailing floor is not supported by the top of the wall beneath it; but instead has a brace to alternate joists,<sup>51</sup> a prodigal expense of the means, to achieve a minimal projection, of the least rigidity.

The next jetty in the series is that to the solar-wing at Wynter's Armourie, shown in Fig. 54 (top left). This is a logical development of the method at Priory Place, since the side-girths were considered adequate to carry the oversailing upper wall, without doubling. The archaism of this specimen is visible in the sparse and open character of the wall, and its sole-bracing (as at Abbas Hall, originally; and Sandonbury barn), together with the open-spandrelled and steep bracing. In the next example, Baythorne Hall, Fig. 54 (bottom left), the type of jetty-framing appeared that was to continue right down to the ultimate "hewn" form;<sup>52</sup>

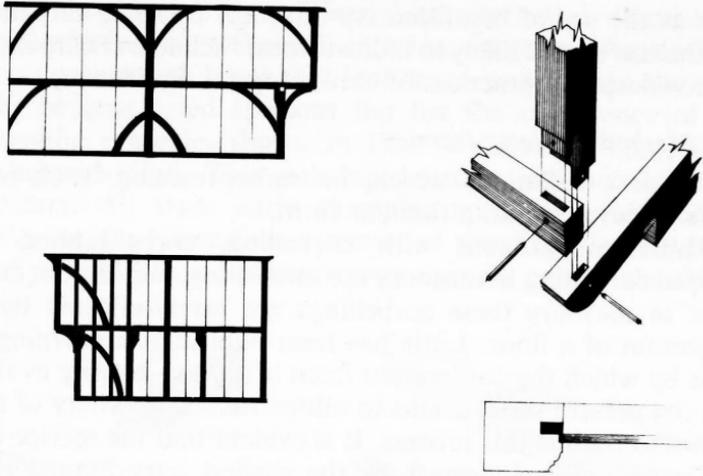


Fig. 54. Jetty framing and floor framing

but it was combined with the archaism of posts to support its bridging joists. This is ascribed to *c.* 1350, when the use of solid and grown knees was already practiced. The idea that floors needed the support of posts had survived, however, and this would derive from such floors as that at the Stone Wing of Little Chesterford Manorhouse, of *c.* 1225;<sup>53</sup> and it is interesting to notice that such "samson-posts" were moved from the centres of the floors, and placed in the walls, before they were dispensed with in the light of more building experience.

At some time shortly after this building, the simpler and most commonly seen jetty-frame evidently appeared; as in the example at Porter's Hall, shown in Fig. 41. This is here ascribed to *c.* 1370. Succeeding experiments were focused on the intricacies of securing the outer end of the first-floor sills, as comparisons between the examples of St. Clere's Hall, Old House, and Porter's will show.

#### *The Methods of Floor-framing*

Among the buildings described the oldest preserving a first-floor is Abbas Hall, which may be ascribed in its surviving form to the first half of the thirteenth century. This has no jettying, and the small floor fitted is lodged in place. Something very similar exists over the service end at Stanton's Hall Farm.

Both seem to derive from such floors as were laid into stone buildings, as at Little Chesterford, or the tower of Wethersfield church.<sup>54</sup> The next in succession in the service wing at Tiptoft's which is floored in a more sophisticated way. In this example half the joists are lodged, simply laid across the side-girths, and the other half were tenoned into the last one, in order that they might be longitudinally aligned—and project. Their jointing was the unrefined mortise-and-tenon, quite unadapted to the weight-bearing purpose inherent in flooring. Priory Place, the flooring of which is shown to scale in Fig. 19, is closely similar, being little more than the multiplication by two of the longitudinal floor joists; with the same joint used. With these two examples, Tiptoft's service and Priory Place, the idea of mortising a floor joist and tenoning others into it is firmly accepted; and from these beginnings bridging joists of greater strength could be, and were, developed.

The first floor at Baythorne Hall which is shown in Fig. 30, is greatly improved, if compared with the previous specimens: it had bridging joists of heavier section than the common joists, and the joint used to frame the commons into the bridgers was mechanically superior, the barefaced soffit-tenon. This last was the first of a very long progression of refinements which, c. 1510, was to culminate in the perfect joint for flooring—the diminished haunch-tenon.<sup>55</sup> One structural archaism was retained: samson-posts to carry the bridging joists. These posts had therefore moved from the centres of floors (Chesterford c. 1225) and had been placed in the walls. The floor-frame was, in effect, still considered as an addition, and a separate frame that was independent of the structure's whole carcass. It was being fitted in after the carcassing was almost complete. The actual jetty at Baythorne was contrived in the direct manner which became almost ubiquitous for centuries. Hereafter, only narrow widths together with numerous hanging-knees beneath the joists, is indicative of fourteenth-century jettying.

The writer has already published his views on the serial development of joists for flooring purposes,<sup>56</sup> and examples of each type do not occur in this sample. There is, for instance, a wide gap between the last named example and the ultimate one—at Jacobe's Hall, shown in Fig. 53 (bottom right). The joint used there is the central tenon with housed soffit-shoulder, and

face-shoulder cut back to profile; this is the same as the joint used for Paycocke's House, Coggeshall, Essex, *c.* 1500. The sophisticated framing of timber floors was to develop from these beginnings, and culminate in such methods as were advocated by Serlio, for covering even larger areas by the use of relatively short timbers. The aim was constant, to produce timber floors of the largest possible areas, that were both stable and inert — since large floors of timber become virtual spring-boards, if their design and jointing are inadequate.

#### *The Notched Lap-joints Involved*

Several buildings in this sample incorporate notched laps, and these merit consideration together. Abbas Hall has "open" notched laps, now disused; Sandonbury barn has some "secret" notched laps, also now disused, obviously in consequence of a re-roofing; Fyfield Hall has "open" notched laps, still in use. Thorley Hall has "secret" notched laps also in use. The writer has already published the distinction between these two types of the joint,<sup>57</sup> and all that needs to be added is any fresh information concerning the actual date of transition from one to the other, in Essex or anywhere else. At Wells Cathedral it is now known within the relatively fine limit of a single decade. The "break" in the building of the nave, which, in the view of L. S. Colchester, Chapter Clerk,<sup>58</sup> covered the years 1209–13 A.D., is visible not only in the masonry but in the original timber roofs to both nave and aisles. In the roofs it is indicated by the use of "secret" notched laps after work was resumed in 1213. The questions remain, how far this is relevant to major buildings at a considerable distance from Somerset, and how far to lesser structures at less remove?

In the well-known cases of the two barns at Cressing, Essex, the carbon dates confirm the evidence at Wells: the earlier barn, assigned to *c.* 1200 ± 30 years, has "open" joints; the second, assigned to *c.* 1255 ± 30, has "secret" ones. Other examples are fairly plentiful and are increasing with the wider recognition of varieties of joint, but often in buildings of high quality, sometimes connected with great religious houses; for instance, the "secret" notched laps at Old Court Cottage, Limpsfield, Surrey, a property of Battle Abbey.<sup>59</sup> The tendency is to show that the same change can be observed in manor houses, superior

barns and richer churches, over a wide area, and that religious and other lordly patrons followed all developments closely.

Two buildings in this series are affected, Abbas Hall and Fyfield Hall, and in both of them the "open" notched laps indicate a date earlier than has usually been entertained on archaeological grounds. The available documentation does not affect the question, since Abbas Hall had belonged to Malling Abbey since the eleventh century and Fyfield is a Domesday manor, and no closer internal documents are known. The mouldings on both are relatively early, but hardly suggest the very beginning of the thirteenth century. These must be taken in combination with the joints as the fine instruments required for accurate dating.

The strongest support for the acceptance of early dates in the two cases cited, comes from the absolute absence of such open lap-joints in all later examples. Both Sandonbury barn and Thorley Hall have "secret" examples, and both date tolerably well in the light of all their structural details, to times well after the Wells "break"; and embody the last specimens of the category of joints in this series.

#### *The Inception of the "Jowl"*

The jowl, or thickened termination of a timber, which provides the maximum of jointing-volume, and thereby maximum rigidity in the resultant joint, is a conspicuous feature in medieval carpentry, but one which, like the jetty, has received little attention. This device, though associated with and facilitated by the practice of reversing the trunk, root uppermost, obviously had to be invented, and like other carpenters' techniques, must have undergone a development and decline. The jowl constitutes a "joint-complex", being a method whereby each of three component timbers either penetrates or is trapped by the other two; this was an invaluable aid to the builder of stable land structures, and possibly constitutes the most important single advance in timber building method during the Middle Ages.

The evidence presented here for the introduction of this technique is in the two barns at Cressing, discussed above, which are sufficiently closely dated by carbon 14 to sustain very close comparisons with other buildings. The older barn, known as

the Barley Barn, is dated to 1200  $\pm$  30 years; and it is built without jowls to its main-posts, which taper from the ground up, as in a growing tree. The younger, the Wheat Barn, is dated to 1255  $\pm$  30 years; and whilst it has no jowls it does have "upstands", evidently the feature from which jowls evolved, illustrated in *The Development of Carpentry*.<sup>60</sup> These barns were expensive and important works of carpentry, financed by the Knights Templars, and must be assumed up-to-date in technique. This being accepted, we can accept that the complex joint of the jowl was unknown in Essex *c.* 1200, and that the upstand without decorative profile from which the jowl developed, was actually in use there in *c.* 1255. This is, unfortunately, less exact than the documentation Wells Cathedral furnishes for secret notched-laps, but it is equally reliable.

The buildings provisionally dated in this series endorse the evidence provided by the Crossing barns and, to some extent, extend it. Most significantly each building attributed to the first half of the thirteenth century (Bricett, Kersey, Abbas Hall, Sandonbury barn) lacks jowls or upstands, as does the Cogan hall, Canterbury, whose early attribution is well documented.<sup>61</sup> Tiptoft's service wing has spurious jowls. This was probably the work of a craftsman who had seen jowls, failed to understand their principles fully, and attempted to reproduce them himself, tending to suggest a date in the third quarter of the thirteenth-century. At Wynter's Armourie the rafter supporting the hall top-plate (?purlin) has an upstand which is cut across the grain. This is another case of "keeping-up" with others, but not understanding why. An early date is again confirmed by this phenomenon.

The perfected jowl appears at Priory Place: whether or not this is as early as the final decade of the thirteenth century, the perfected jowl had been achieved by that date.<sup>62</sup> In the succeeding houses of this sample it is refined and strengthened, as, for example, it appears at Baythorne Hall, in a form evidently determined by experience of riven jowls—split asunder from their posts by a roof's outward spreading. From this point the use of jowls occasionally became excessive, the barn at Netteswell, Essex, having jowls at both ends of horizontal wall-girths. It finally becomes debased when in the sixteenth and seventeenth centuries jowls were carved into highly complex but structurally

weak, profiles. The more sober, vernacular carpenters, during the seventeenth century produced the very long "swelling-jowl"—which normally was obtained from the natural swell of a tree bole, the trunk being inverted. The eighteenth century generally dispensed with jowls in Essex (but not everywhere), retaining them apparently for the top-rails of five-barred gates, where their name persists until today.

#### Notes and references

<sup>1</sup> C. A. Hewett, *The Development of Carpentry, 1200-1700*, Newton Abbot, 1969.

<sup>2</sup> *Victoria County History* (hereinafter *V.C.H.*), *Suffolk* II, (1907), 107.

<sup>3</sup> *Op. cit.* in note 1, 22-32.

<sup>4</sup> *V.C.H.*, *Suffolk*, II, 107.

<sup>5</sup> *V.C.H.*, *Essex*, IV (1956), 46-7.

<sup>6</sup> *J. Howe's MS, 1582* (on the Royal Hospitals), ed. S. Morgan and W. Lemprière, 1904.

<sup>7</sup> E. M. Hunt, *The History of Ware*, Hertford, 1949, 10.

<sup>8</sup> *V.C.H.*, *Herts.*, III (1912), 388; cf. H. Forrester, *Timber-framed Building in Hertford and Ware*, 1965, 30.

<sup>9</sup> *V.C.H.*, *Herts.*, IV (1914), 455.

<sup>10</sup> As Clutterbuck, *History and Antiquities of the County of Hertford*, 298, and others do. The Greyfriars of London, on whose site Christ's Hospital was established, had no power over their brethren in Ware and the lands did not pass together.

<sup>11</sup> Trinity College acquired the entire interests of Sheen in Ware.

<sup>12</sup> See note 9, and *op. cit.* in note 7, 75.

<sup>13</sup> *Trans. East Herts. Archaeol. Soc.*, III (1906), 119-32.

<sup>14</sup> *Op. cit.* in note 7, 77.

<sup>15</sup> *V.C.H.*, *Herts.*, III, 387.

<sup>16</sup> *V.C.H.*, *Kent*, II (1926), 146-8.

<sup>17</sup> *Ibid.*

<sup>18</sup> A new quire, cf. *Antiq. Journ.*, XXXIV (1954), 55-63, and an ornate "undershot" cloister, part of which remains.

<sup>19</sup> *The Domesday of St. Pauls*, ed. W. M. Hale, Camden Soc., No. 69 (1857), and more particularly the twelfth-century leases printed with it, show that early farms of religious property could be fully furnished and precisely inventorised. There is much circumstantial evidence that the practice continued and that religious houses, during and after a building campaign, looked to their capital for cash revenue. If well run they put their landed funds in order to this end, as Christ Church, Canterbury, did from the 1360s to 1380s; if badly run they desperately tried to raise more revenue from corrodies, etc.

<sup>20</sup> *Feet of Fines for Essex* (publ. by Essex Archaeol. Soc.), II, 1272–1326 (1913–28), 112. (Giles de Lenham and Alice his wife, def., on acknowledgement of Alice's right, grant to Thomas de Staunton and Mabel his wife, pl., 1 messuage, 1 carucate of land, 6 ac. of wood, 4 ac. of meadow, in Black and White Nettle.)

<sup>21</sup> *V.C.H., Essex*, IV, 103.

<sup>22</sup> *Op. cit.* in note 19, 14, 134.

<sup>23</sup> P. Morant, *The History and Antiquities of Essex*, II (1768), 558; *Trans. Essex Arch. Soc.*, N.S., XVI (1923), 218–19.

<sup>24</sup> Information kindly provided by N. Scarfe of the Suffolk Record Society: the grant (Sfk. R.O: HAI/CA/1/3) is to John Adgor, senior, of Combs, his wife Asselina and son Henry. Field-names make it clear that the lands held by John and Richard Atgor in a rental of 1347 include what is now called Edgar's Farm.

<sup>25</sup> *V.C.H., Herts.*, III, 373.

<sup>26</sup> It is described at length, but before the recent repairs and alterations, by G. and S. Colman in *Proc. Suffolk. Inst. Arch.*, XXX (1964–6), 149–65.

<sup>27</sup> *V.C.H., Essex*, II (1907), 150–4.

<sup>28</sup> *Op. cit.*, in note 1, 67–75.

<sup>29</sup> Morant, *op. cit.* in note 23, II, 556–7.

<sup>30</sup> *Ibid.*, I, part 2, 298.

<sup>31</sup> These, normally the only cruck-like members in a 'box-framed' house, are used to sustain a shortened hip and so give more end-light to an upper chamber. They occur in west Surrey, at Littleton in Artington and Elstead, rising from the ground, and in Kent are widely distributed (Etchinghill, Benover, Stockbury, etc.), always rising from a jetty. The context is usually a much smaller house than Southchurch Hall.

<sup>32</sup> *V.C.H., Essex*, IV, 51.

<sup>33</sup> Morant, *op. cit.* in note 23, I, part 2, 329.

<sup>34</sup> *Ibid.*, II, 344.

<sup>35</sup> *Ibid.*, I, part 2, 459–60.

<sup>36</sup> U.C.L.A., 1097. Probable age of timber sampled: A.D. 1350 ±60 years. By courtesy of Professor R. Berger.

<sup>37</sup> "Grismal Green" on Chapman and André's map, surveyed 1772–4.

<sup>38</sup> Morant, *op. cit.* in note 23, II, 16.

<sup>39</sup> The "false arch-braced collar" roof is fairly common in Kent in domestic contexts but usually late; the example at Starkey's Castle, Wouldham seems, however, to be from the late fourteenth century—cf. *Arch. Cantiana.*, LXXXI (1966), 118–25 and Pl. II, B.

<sup>40</sup> *The Valuation of Norwich*, ed. W. E. Lunt, 1926, 338.

<sup>41</sup> *The Knights Hospitallers in England*, ed. L. Larking, Camden Soc. No. 65, 1855.

<sup>42</sup> I.e. the carbon 14 tests and the *terminus ante quem* of the suppression of the Templars. There is much evidence (cf. *op. cit.* in note 41) that the Hospitallers who took over the lands had neither the will to put them to farm nor the credit to improve them.

<sup>43</sup> N. Drinkwater in *Antiq. Jour.*, XLIV (1964), 41 ff.

<sup>44</sup> Cf. S. E. Rigold in *Arch. Cant.*, LXXXI (1966), 1–30, esp. 6–9.

<sup>45</sup> *Op. cit.* in note 1, 179, Fig. 82.

<sup>46</sup> *Ibid.*, 176, Fig. 78.

<sup>47</sup> There was an example in a barn at Love Lane, Newark, Nt.

<sup>48</sup> C. A. Hewett, "Structural Carpentry in med. Essex", *Med. Arch.*, VI-VII (1962-3), 254, Fig. 82, d.

<sup>49</sup> *Op. cit.* in note 1, 181, Fig. 87.

<sup>50</sup> *Ibid.*, 40-6.

<sup>51</sup> Bracing every alternate joist is a widespread practice of early framing (cf. the doubly jettied early Guesthouse, formerly at Coventry, and Friern Bridge, Salisbury); in the Welsh-March region it lingers well into the fourteenth century (cf. Wigmore Abbey Gatehouse and a house in Leominster).

<sup>52</sup> *Op. cit.* in note 1, 157, Fig. 64.

<sup>53</sup> *Ibid.*, 37-9, Fig. 11.

<sup>54</sup> *Ibid.*, 39.

<sup>55</sup> It is found at Place House Great Bardfield, built for William Bendlowes, dated April 1543 on cornerpost.

<sup>56</sup> *Op. cit.* in note 1, 195-207.

<sup>57</sup> *Ibid.*, 55.

<sup>58</sup> J. Bilson, "Earlier Archit. History of Wells Cathedral", *Arch. J.*, LXXV (1928), 23-68.

<sup>59</sup> R. T. Mason in *Surrey Arch. Coll.*, LXIII (1966), 130-7.

<sup>60</sup> *Op. cit.* in note 1, 189, Fig. 95.

<sup>61</sup> See note 60.

<sup>62</sup> *Op. cit.* in note 44, 9-12, and Pl. VI, A. There are deep and well-developed braces in the earliest known Kentish timber barns, at Frindsbury and Littlebourne, the latter, and perhaps later, of which was probably completed shortly before 1309; see *William Thorne's Chronicle*, ed. and tr. J. H. Davis, 1934, 394.