

also as to allow of a much steeper slope upwards from the ground than would have been possible if the whole had been in one and the same straight line. From this point of curvature, however, the rafters are straight all the way to the ridge-piece, and with the old tie-beam would form an almost equilateral triangle. The deflection thus noticed would allow for more available space within than if the rafters had reached the ground in a straight line unbroken from the ridge".

The second method, most common in our district, consisted of extending the tie-beam on each side until the ends were vertically above the outside of the cruck feet (fig. 2). The wall-plates were carried on the free ends of the extended tie-beams thus allowing vertical walls to be constructed between the wall-plates and the sills. In the third method the feet of the wall-posts rested in notches cut out of the crucks and higher up they were held to the crucks by short spurs. The two cruck-trussed buildings at Thorpe, Almond-bury (figs. 14 and 15), and Linthwaite Hall Barn (figs. 11, 12 and 13) represent developments of this method combined with the extended tie-beam of the second method.

Early timbered buildings of  
the Huddersfield District  
J. Walton, 1955.  
(Tollan Hall Museum)

## I. CRUCK-TRUSSED BUILDINGS

### COTTAGES OF ONE BAY

#### CARR HOUSE FARM COTTAGE, HEPWORTH (fig. 2).

The simplest cruck framework in the Huddersfield district is to be found in a tiny disused cottage in the yard of Carr House Farm at Hepworth (fig. 2). The relatively recent stone walls afford no indication of the early cruck timbers hidden within, for one truss (fig. 2) represents the earliest type of cruck construction. It consists of a pair of curved crucks, crossing at the apex and pegged together to form a fork in which the ridge-tree rests. The two crucks are held together by a horizontal tie-beam, halved and pegged to the crucks, the ends of which extend to the walls in which they are embedded. In the original timbered dwelling the free ends of the tie-beam carried the wall-plate from which rafters extended to the ridge-tree on each side. In the seventeenth century, when the wattle walls were replaced by the present stone walls, the wall-plates were raised to rest on the stone walls. This resulted in a flattening of the roof-pitch and a corresponding lifting of the purlins which carry the rafters, thus accounting for the complicated system of purlins now in use.

The cruck framework was constructed on the ground by the village carpenter who adzed the stout timbers from the local oak trees. When complete it was carried to the site where the entire village turned out to "rear" it into position and enjoy the food and drink provided. A Sheffield householder in 1575 paid £2 6s. 8d. "for meat and drink that day the house was reared" and Vicar Dytton, of Kirkby Malham, in 1454 paid 8d. "for expenses on services rendered at the erection of the said house in Ayrton".

In some parts of Yorkshire the cruck feet rested either directly on the ground or on flat stone slabs but in the Huddersfield district they were supported on stone footings or "stylobats". Vicar Dytton provides us with an early reference to this practice when he includes in his account an item of 4d. "for drink given to the carpenters and for basyng the said houses, that is to say, for laying great stones under the foot of the Crokk". In order to facilitate lifting the crucks on to the footings the crucks at Carr House Farm, in common with others in the Huddersfield district, were pierced a few inches above the base with rectangular holes about 5ins. by

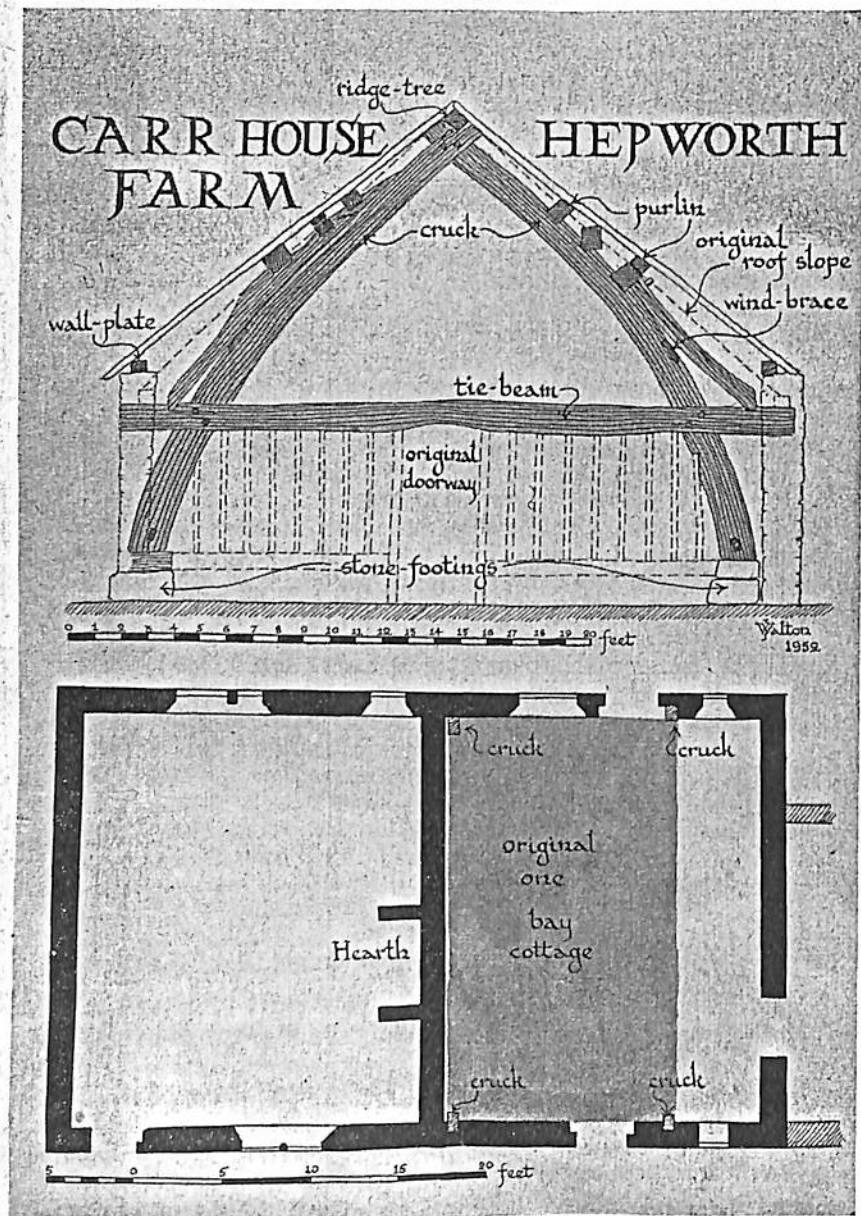


Fig. 2

Plan and cruck truss of Carr House Farm Cottage, Hepworth

2½ ins. Through these stout beams were passed which could be grasped by several men on each side who lifted the framework whilst other helpers steadied it with ropes. Occasionally the lever became wedged in the hole and could not be withdrawn, with the result that it had to be sawn off on each side. Such fragments of wedged levers can still be seen at Linthwaite Hall barn and elsewhere in the district.

The space between the two pairs of crucks is known as a "bay" and the distance between one cruck-truss and the next is fairly constant throughout the country. In the Huddersfield district, apart from the cottage at Far Field Head, Hepworth, this distance ranges from 13ft. to 16ft. 9ins. as is indicated by the following table:—

|   | Length of Bay               |
|---|-----------------------------|
| FAR FIELD HEAD COTTAGE, HEPWORTH              | 10ft. 4ins.                 |
| NETHER END, DENBY DALE .. .. .                | 12ft. 9ins. to 13ft. 10ins. |
| CARR HOUSE FARM COTTAGE, HEPWORTH             | 13ft. 5ins.                 |
| THORPE HOUSE FARM BARN,<br>ALMONDBURY .. .. . | 13ft. 6ins. to 15ft.        |
| LITTLE THORPE COTTAGES, ALMONDBURY            | 14ft. 4ins. to 15ft. 2ins.  |
| CROFT HOUSE FARM BARN, SCHOLES ..             | 14ft. 4ins.                 |
| GREENHILL BANK BARN, NEW MILL ..              | 14ft. 10ins. to 16ft. 9ins. |
| LINTHWAITE HALL BARN .. .. .                  | 15ft. 5ins. to 15ft. 10ins. |
| OLDFIELD BARN, HONLEY .. .. .                 | 16ft. 7ins.                 |

Addy has put forward the suggestion that the length of a bay was determined by the space required by a team of four oxen when housed in the mistal. In support of this he quotes Palladius who, in giving directions concerning the building of a Roman ox-house in 210 A.D., says that "eight feet are more than sufficient standing room for each pair of oxen", and also the Welsh Laws which state that oxen were eight feet in the field yoke and sixteen feet in the long yoke, that is in a team of four abreast. Eventually hay and corn were sold by the "bay" and gradually the unit was extended to the house itself. The number of bays which a householder was allowed was determined by his holding in the common fields.

We have little direct evidence of the original nature of the walling at Carr House Farm cottage, but one cruck rests on a wooden block which appears to have been sawn off and was probably a wooden cill resting on a low ground-wall. The underside of the tie-beam is grooved which indicates that thin upright stakes were sprung into position between the sill and the tie-beam, their ends being held in the grooves (fig. 2). Pliant wattles were then interwoven between the stakes and the whole smeared inside and out with daub, a mixture of clay and chopped straw.



It was enlarged in the seventeenth century by the addition of stone-walled rooms at each end and a new entrance was made at the side which bears no relationship to the cruck framework. The original entrance, the existence of which is only betrayed by a rounded door-head cut out of the centre of one tie-beam (fig. 2), was apparently a low opening in one cruck gable.

FAR FIELD HEAD COTTAGE, HEPWORTH (figs. 3 and 4 and plate 1).

The next stage in the development of the cruck truss is best represented by a tiny cottage, now used as a poultry house, in the yard of Far Field Head Farm, near Hepworth. This too appears to have been a primitive dwelling of one bay, measuring only 20ft. 4ins. by 12ft. 6ins., and with walls of wattle and daub (fig. 3). Later stone walls were added and then, probably in the late eighteenth century, an additional part was built on twice as long as the original cottage. The line of demarcation between the two parts is clearly indicated by the break in walling and roofing and by the sagging of the ridge-tree over the newer portion (plate 1). The crucks themselves mark an advance over those of the Carr House Farm cottage, for instead of crossing at the apex they are sawn off to form a V-shaped hollow in which the ridge-tree rests. Such a construction allowed the crucks to move apart at the apex and to prevent this a collar-beam was pegged and jointed to the crucks high up near the ridge (fig. 4). The present wall-plates show no indication of stud holes or grooves and are probably a later replacement. Underneath the collar-beam, however, are three holes corresponding to three similar holes in the top of the tie-beam into which rough vertical timbers were inserted. These formed the central part of a wattle and daub wall, reconstructed in fig. 4, but all other traces of such a wall have disappeared. A similar group of three holes may be seen underneath the upper collar-beam of the mistal at Nether End Farm, Denby Dale (fig. 10). The stone-walled cottage has a narrow doorway and a tiny window-opening which was literally a "wind-eye" to admit air rather than light.

DEAN HEAD FARM, HEPWORTH (plate 2).

The Far Field Head type of cruck truss, consisting of a pair of curved crucks meeting at the apex and joined by a collar-beam and tie-beam which is extended to carry the wall-plates on its free ends, is common throughout our district. Remnants of another similar one-bay cottage are visible at the nearby farm of Dean Head where a cruck truss can be seen in the gable of a store-room attached to the house itself (plate 2). The other truss was removed when the house was added in stone but the outbuilding undoubtedly represents a one-bay dwelling similar to those at Carr House Farm and Far Field Head. The collar-beam is, however, more advanced than that at Far Field Head for it is not only halved and pegged to the crucks but it is also notched to give added strength.

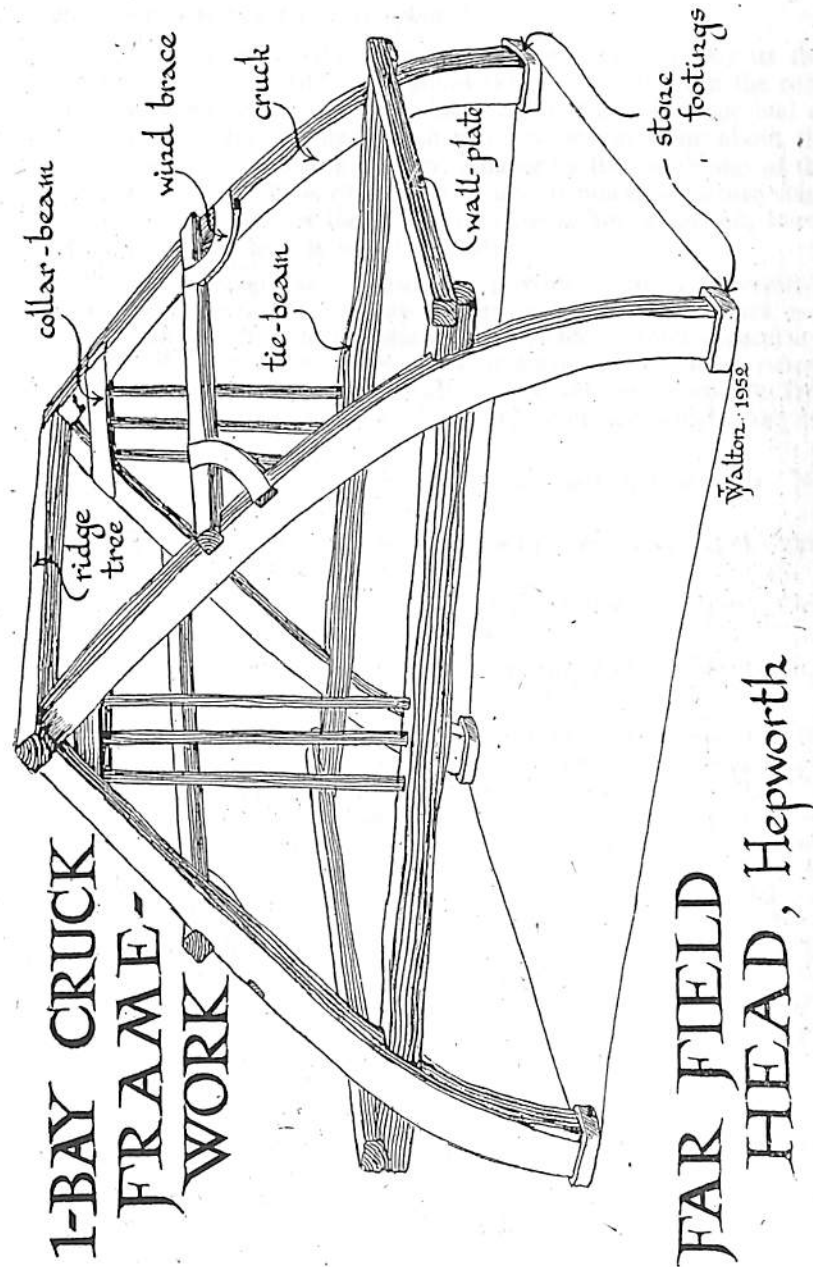


Fig. 3  
One-bay cruck framework of Far Field Head Cottage, Hepworth

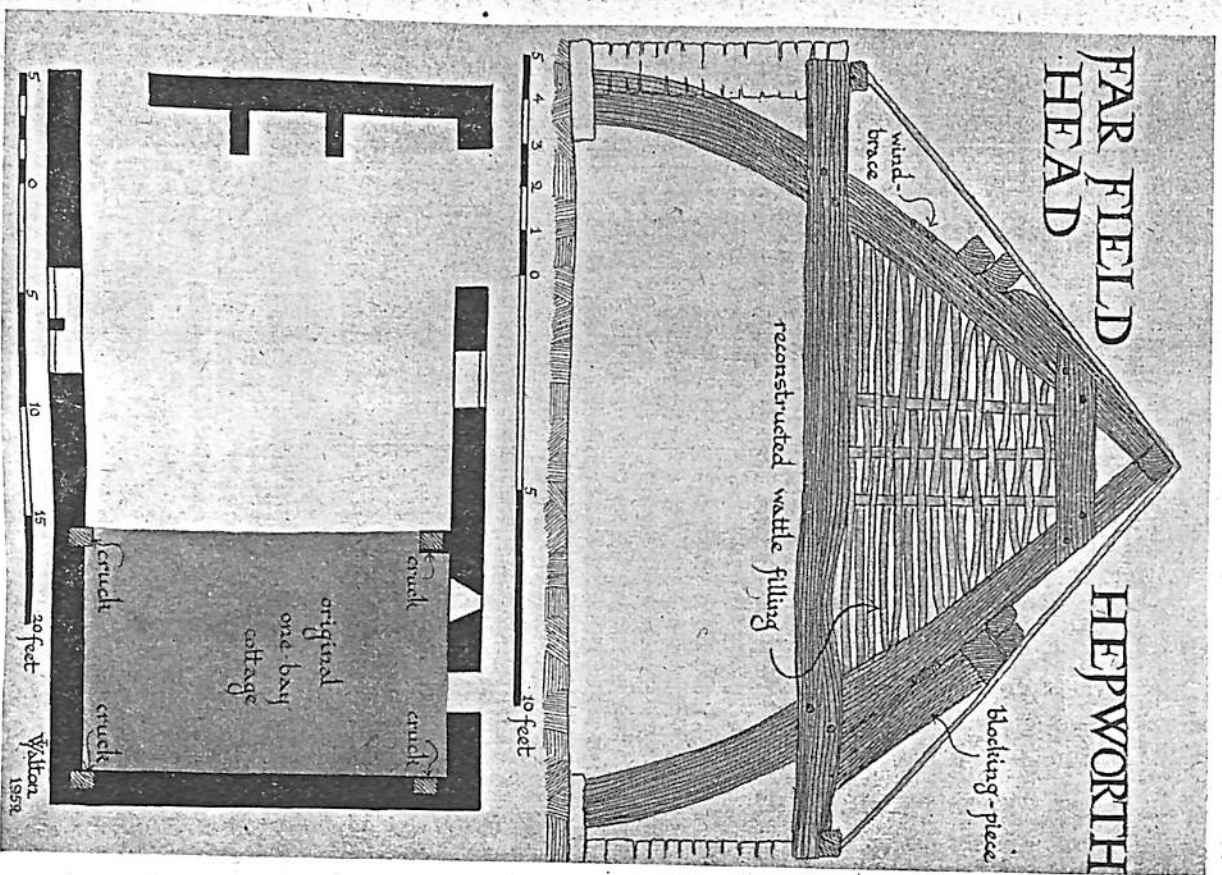


Fig. 4  
Plan and cruck truss of Far Field Head Cottage, Hepworth

### BLAKESTONES, SLAITHWAITE (plate 3).

19

At Blakestones a single cruck truss, held up only by its two purlins, is clearly visible as a gaunt skeleton either from the road or railway leading along the Colne Valley. It also is a survival of an early one-bay cottage which was encased in stone about the middle of the seventeenth century, judging by the mouldings of the window mullions. It is of interest in that it marks a further stage in the development of the cruck truss for it had a second, lower collar-beam to give it added stability.

The four cottages so far discussed provide unusually interesting examples of the simple one-bay dwelling of the farm labourers, and even the smaller farmers themselves, prior to the seventeenth century. They also illustrate the three different stages in the development of the cruck truss where the wall-plates are carried on the free ends of the tie-beam, an evolutionary sequence which may be summarized as follows:—

- Stage I. Carr House Farm. Crucks crossing at apex. No collar-beam.
- Stage IIa. Far Field Head. Crucks meeting at apex. One straight collar-beam.
- Stage IIb. Dean House. Crucks meeting at apex. One notched collar-beam.
- Stage III. Blakestones. Crucks meeting at apex. Two collar-beams.

In none of these cottages is there any evidence of substantial "post and pan" walling such as may be seen in Linthwaite Hall Barn (figs. 12 and 13), or at Thorpe, Almondbury (fig. 15). At Carr House Farm the grooved tie-beam could have accommodated no more than a light wattle- and daub wall and the only other evidence of walling is provided by the two sets of three holes at Far Field Head which again could only hold thin untrimmed hazel or oak rods such as may still be seen in Greenhill Bank Barn (fig. 7). Fox and Raglan have suggested "that the walls of cruck-trussed houses in our region (Monmouthshire), once their upright position was attained by the extension of the tie-beams, were originally no more than light protective screens of wattle (oak slats) and daub, fixed top and bottom respectively to the wall-plate and a light sill extending along the ground from cruck to cruck, each screen being perhaps the area of a bay. This 'wall' would be the last work to be done on the house." They further contend that stout wall-posts between sills resting on ground-walls and wall-plates represent the intrusion of the heavy timber-frame tradition into the earlier cruck framework.

The existing evidence at Carr House Farm suggests that such walls of wattle and daub were probably employed here. No evidence could be obtained regarding the original walling of the other three



cottages although the three upright rods at Far Field Head indicate that at least the actual gable between the tie - beams and the collar - beam was filled with wattle - and - daub. The space between the ground and the wall - plates and tie - beams may have been occupied by stone walls from the beginning. On the other hand the existing stone walls are in every case later than the cruck trusses and as stone walls were not in general use, even in the larger "halls", before the seventeenth century, it appears that all these one - bay cottages originally had screen walls of wattle - and - daub.

The picture of an early cruck cottage which these four examples afford is that of a single - bay cruck - trussed dwelling illuminated by a tiny window and filled with smoke from a peat or wood fire burning on an open hearth in the centre of the floor. During the Middle Ages the simple homes could have afforded little comfort for it was a "general complaint that villeins absconding from their manors would knock down their houses and carry off the materials to be erected elsewhere". Bishop Hall's lines aptly describe the miserable conditions which prevailed when he wrote:—

*Of one bay's breadth, God wot! a silly cote,  
Whose thatched sparres are furr'd with sluttish soote  
A whole inch thick, shining like black - moor's brows,  
Through smok that down the head - les barrel blows:  
At his bed's - feete feeden his stalled teme;  
His swine beneath, his pullen oré - the beame:  
A starved tenement, such as I gesse  
Stands stragling in the wasts of Holdernesse;  
Or such as shiver on a Peake - hill side,  
When March's lungs beate on their turfe - clad hide.*

#### CRUCK - TRUSSED BARN BUILDINGS

##### UPPER OLDFIELD BARN, HONLEY (figs. 5 and 6).

No cruck - trussed houses of more than one bay have survived in our district but there are a number of barns of three or four bays. Upper Oldfield, a delightful unspoilt hamlet on the moor edge above Honley, is a veritable museum of local folk architecture ranging from an early cruck - trussed barn, in which the nuns of Kirklees stored their tithes, to the long mullion - windowed houses of the hand loom weavers.

The cruck trusses of the barn are of the type in which the crucks meet at the apex and are joined by a collar - beam and a tie - beam which carries the lower purlins on its free ends (fig. 5). It differs from Far Field Head only in the more massive nature of the crucks themselves, which measure 1ft. 6ins. by 10ins. at the base. Originally there were four cruck trusses dividing the barn into three bays; but one gable truss was replaced by a stone wall at the time when the barn was encased in stone.

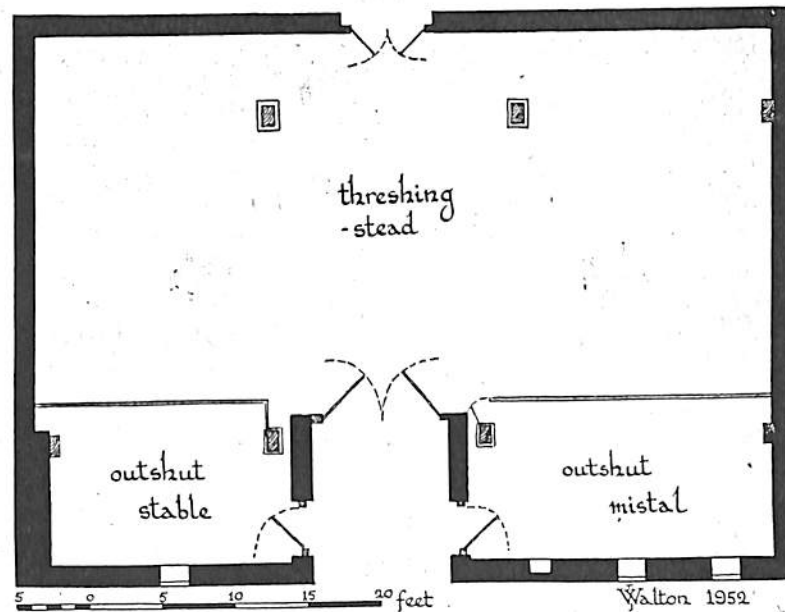
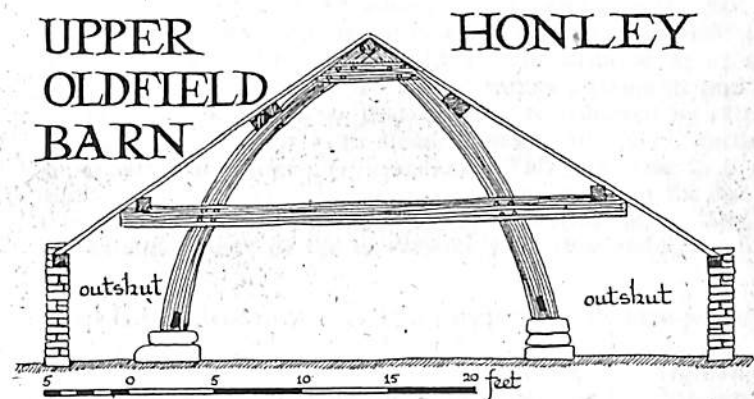


Fig. 5  
Plan and cruck truss of Upper Oldfield Barn, Honley

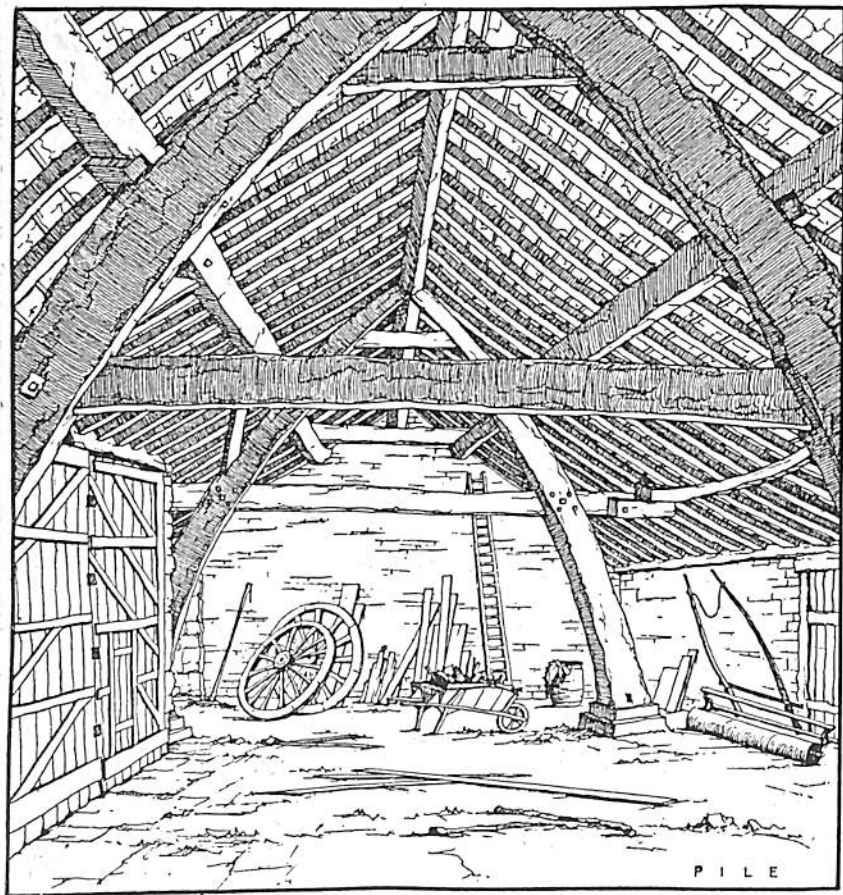


Fig. 6

Interior of Upper Oldfield Barn, Honley—Sketch by Albert T. Pile

Addy has suggested that the number of bays to which a landholder was entitled depended on the size of his holding in the common fields and that he was taxed on this number of bays. If such was the case then the length of his building was fixed and more bays could only be added as his extra wealth and status allowed. There was nothing, however, to prevent a landholder from increasing the width of his building. The distance apart of the cruck feet was limited by the size of timber obtainable and could not be increased. Extra width could only be achieved by extending the rafters on one or both sides to new wall-plates resting on stone walls, so producing "outshuts". This gave rise to a nave- and -aisles plan with the crucks standing freely in the centre of the building to form the nave (fig. 5). The wall-plates carried on the extended ends of the tie-beams were thus reduced to lower purlins.

To have extended the rafters at their original slope would have resulted in extremely low side walls, a state of affairs which was prevented somewhat by raising the tie-beam and decreasing the pitch of the roof. The following figures indicate to what extent the tie-beam was raised and the roof pitch decreased:—

|                                   | Height to tie-beam | Roof pitch |
|-----------------------------------|--------------------|------------|
| <b>Buildings Without Outshuts</b> |                    |            |
| FAR FIELD HEAD . . . . .          | 5ft. 5ins.         | 43 deg.    |
| CARR HOUSE FARM . . . . .         | 4ft. 10ins.        | 42 deg.    |
| <b>Buildings With Outshuts</b>    |                    |            |
| UPPER OLDFIELD . . . . .          | 8ft.               | 35 deg.    |
| SNOWGATE HEAD . . . . .           | 7ft. 5ins.         | 38 deg.    |

The plan of Upper Oldfield barn is typical of early barns throughout the district whether they are cruck-trussed or frame-trussed. One outshut, the narrower of the two, was included in the barn itself. The other outshut served as a mistal for the cattle on one side of the main entrance and as stables on the other (fig. 5). The large barn doors of the main entrance are recessed, thus affording greater height to allow the entry of loaded waggons of hay or corn.

A second door, the "winnowing door", faces the first and the space between the two, the "threshing-stead", was kept clear for threshing and winnowing. Even to-day some small farmers still thresh their corn with a flail and at the beginning of the present century the practice was quite widespread in our district. The corn was spread out on the threshing-stead and beaten with a flail until the grains were dislodged from the ears. The straw was gathered up and so also was the mixture of grain and chaff. Then, on a suitable day, both sets of doors were opened to create a breeze; the mixture of chaff and grain was placed in a basket and gently agitated so as