

to cause a steady stream to pour over the lip of the basket. As it fell the breeze carried away the light chaff and the grain dropped straight down into a pile.

GREENHILL BANK BARN, NEWMILL (figs. 7 and 8).

This barn, cut out of Greenhill Bank, is almost hidden from view, merging as it does into the hillside itself. It is a delightful example of a small four-bayed, cruck-trussed barn, almost identical in plan with Upper Oldfield. Its cruck trusses are of the same type but the tie-beam height and roof pitch differ considerably from those in the preceding table. The tie-beam is high, 9ft 5ins. above ground level, but the roof pitch is at the relatively steep angle of 45 degrees. Normally this would result in either a very narrow outshut or a low outshut wall, but this is not the case where the cruck trusses are lifted on to high stone stylobats, so increasing the height of the ridge-tree and of every part of the structure (fig. 7).

At Greenhill Bank the cruck feet rest on stone stylobats 5ft. 2ins. above ground level, thus raising the ridge-tree a corresponding amount higher than in the cottages at Far Field Head and Carr House Farm. The practice of standing the cruck trusses on wooden blocks or single stone slabs no doubt originated to prevent the feet from decaying. Where stylobats several blocks high are used their function seems to have been not only to preserve the crucks but also to make the best use of timber; for the length of a cruck was limited by the size of the trees available and the only method of increasing the height of the ridge-tree beyond this limit was by raising the crucks on stylobats, as was done at Greenhill Bank.

Greenhill Bank barn is set at right angles to the contours; this necessitated cutting back the hillside at the upper end and building a high wall at the lower end to keep the ridge-tree level. Such buildings, with their lower gables looking on to the valley, are common in hilly and mountainous countries such as the Lake District, Wales and particularly Switzerland and Scandinavia. Invariably in such cases the livestock are housed at the lower end of the building underneath the floor of the barn itself; such is the case at Greenhill Bank.

In plan Greenhill Bank is similar to Upper Oldfield except that it lacks its symmetry, having two bays above the threshing-stand and one below (fig. 8.). The main entrance is recessed and is flanked by outshuts accommodating the mistals and stables. The upper outshut does not extend to the end of the building, presumably owing to the nature of the site. The lower end is also occupied by a mistal, reached by doorways from the field at the rear and the road, as well as by two steps from the threshing-stand. The hay "moo" was stored on a raised floor above this end mistal.

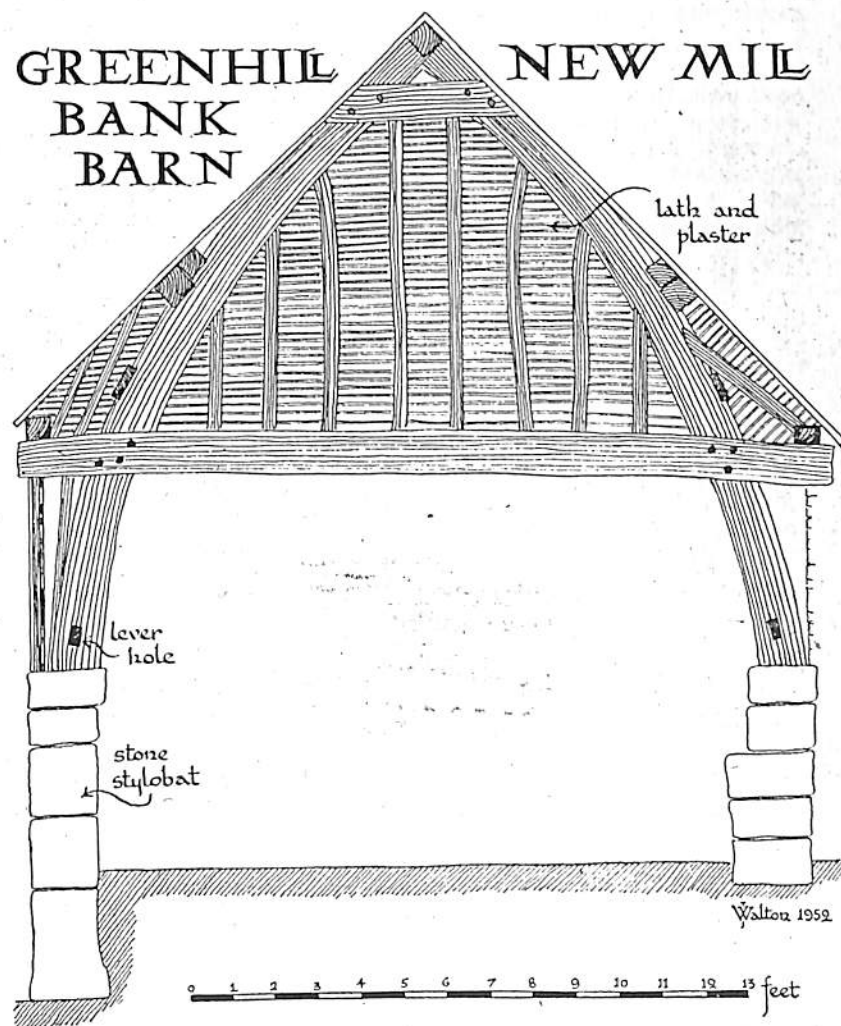


Fig. 7
Cruck truss at Greenhill Bank Barn, New Mill

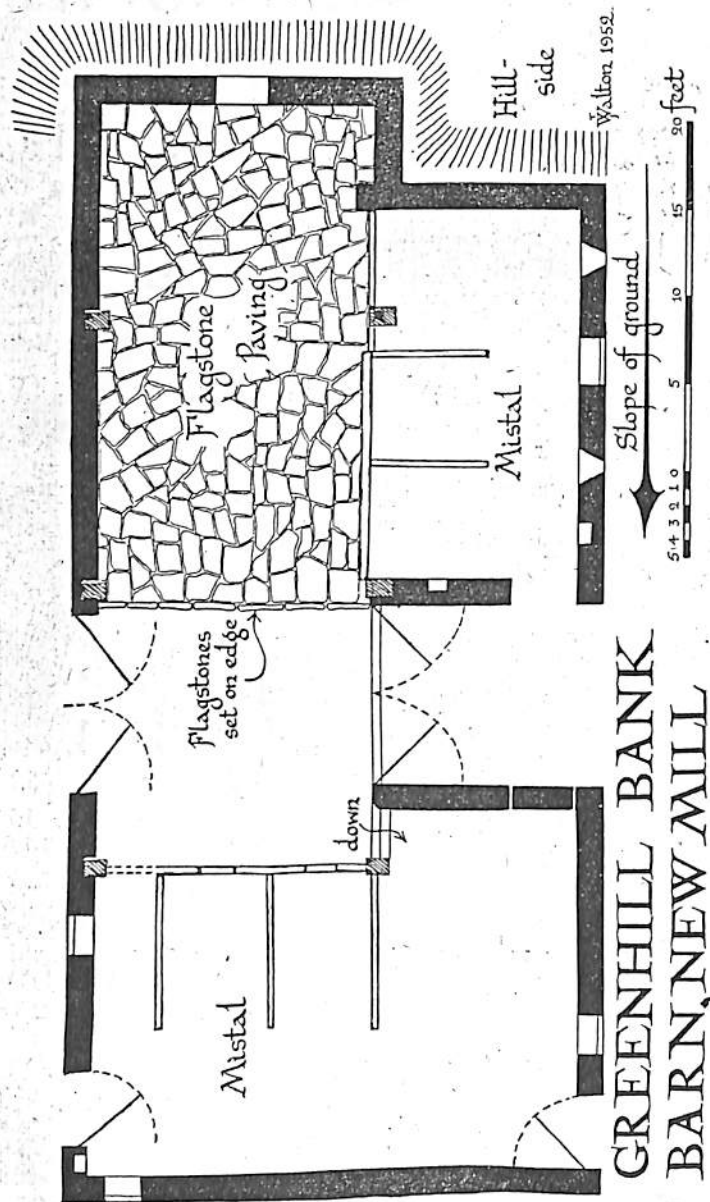


Fig. 8
Plan of Greenhill Bank Barn, New Mill

A peculiar feature of this building is the flagstone paving of the two upper bays which are clearly marked off from the threshing-stead by a line of flagstones set on edge. Connected with this is the fact that the part of the central cruck truss between the tie-beam and the collar-beam is filled with a riven oak lath and plaster screen nailed to a number of upright oak rods (fig. 7). This screen coupled with the paved floor, suggests that the two upper bays may at one period have been used as a dwelling but the absence of hearth or windows indicates that such occupation must have been early — before either of these amenities was considered necessary. Such an arrangement of upper dwelling and lower mistals is general in mountain areas where the gables face the valleys but definite proof of this at Greenhill Bank is lacking. There may be some other explanation for the flagged floor and the lath and plaster partition.

SNOWGATE HEAD BARN, NEW MILL (fig. 9).

This barn has three cruck trusses each with an extended tie-beam and a single collar-beam. The crucks are much more angular than any others in the Huddersfield district, but they were never employed as true elbow crucks in the sense that the more vertical portion carried the wall whilst the roof rested on the upper sloping part. At the base they measure 1ft. 5ins. by 7½ins., indicating that each pair of crucks was sawn from the same tree. This probably represents a later tradition, replacing the use of separate trees for each cruck, although it may also simply indicate that larger trees were available in the district. When the stone walls were built the ends of the tie-beams were embedded in the walls and the wall-plates were raised about two feet on to the tops of the walls themselves, thus necessitating considerable alterations which have made any interpretation of the framework difficult.

CROFT HOUSE FARM BARN, SCHOLES

This barn has two cruck trusses of the same pattern as Upper Oldfield, Greenhill Bank and the other barns so far discussed. Presumably one truss decayed and then the tops were sawn off and replaced by a queen-post truss. Insufficient evidence remains to attempt any reconstruction of the original building.

WOOLDALE HALL BARN

Only part of one cruck truss now remains. When the barn was demolished the date 1593 was found carved on the ridge-tree. The very fact that the date was carved on the ridge-tree, and not in a more conspicuous position, suggests that it was the date when the ridge-tree was replaced and not the date of the original building.

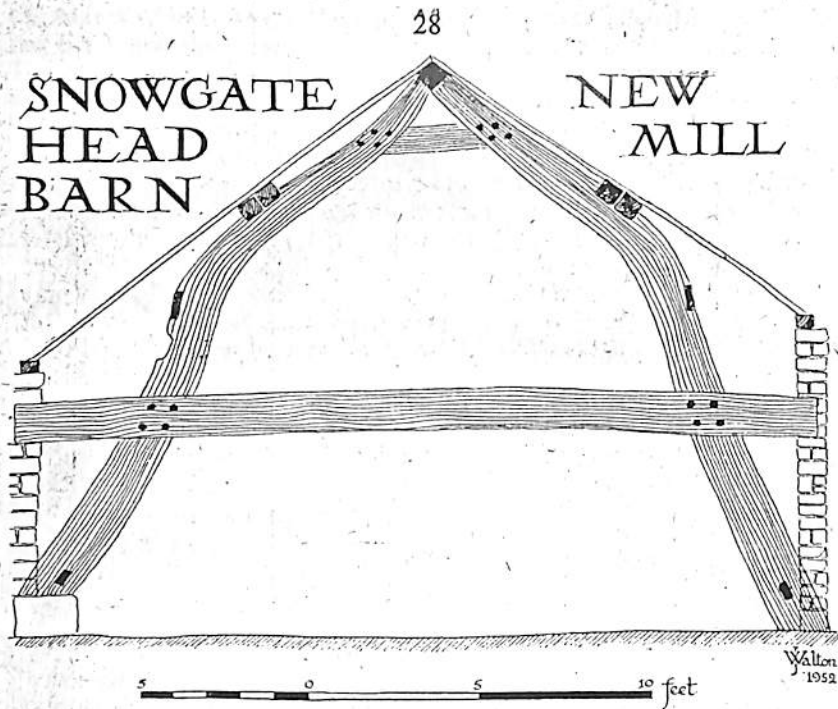


Fig. 9
Cruck truss at Snowgate Head Barn, New Mill

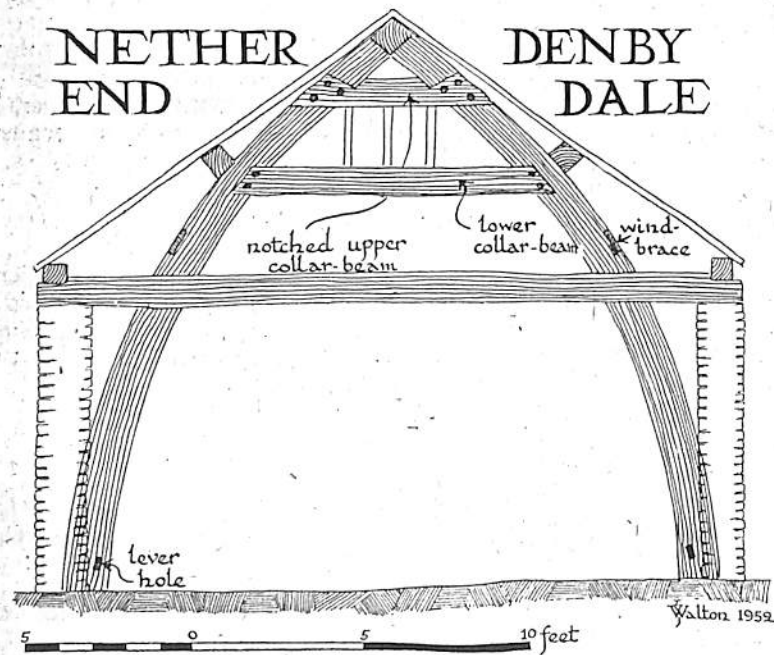


Fig. 10

NETHER END, DENBY DALE (fig. 10).

The building at Nether End Farm, now used as a mistal, is a simple rectangular structure of four bays with four cruck trusses. One gable, as so often happens, has no truss. Whether this was due to the fact that one gable truss decayed or whether another bay was added when the stone wall was built it is impossible to determine. The cruck trusses themselves have extended tie-beams carrying the wall-plates and two collar-beams, the upper collar being notched in a manner similar to the one at Dean Head. Three holes underneath the collar-beam, provided to take the upright rods of the wattle walling as at Far Field Head, afford the only evidence of the nature of the early walling. The present stone walls were built in 1663, assuming that the date on the gable is the date when the change took place.

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1952
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CRUCK - TRUSSED BUILDINGS WITH FRAMED WALLS

All the cruck-trussed buildings so far discussed have extended tie-beams carrying the wall-plates and originally supporting flimsy wattle-and-daub screen walls. A group of three cruck-trussed buildings, Thorpe House Farm barn, Little Thorpe cottages and Linthwaite Hall barn, represent a very different tradition. In these cases stout timber-framed walls are secured to the cruck trusses by mortising the extended tie-beam into sturdy upright wall-posts which are further held in position by one or more spurs. Similar constructions have been noted by Fox and Raglan in Monmouthshire which, they conclude, represent the intrusion of the framed-truss construction into the earlier cruck tradition. This appears to be the case also in these three local examples for in other features too they represent a more advanced construction. They may not, however, in actual date be later than the buildings already discussed. Being in more lowland areas and consequently nearer to framed-truss buildings it is natural that they would absorb new ideas whilst in the more remote moorland margins above New Mill and Hepworth the older methods would continue until much later.

LINTHWAITE HALL BARN (figs. 11, 12 and 13)

Linthwaite Hall barn, which was unfortunately damaged by fire a few years ago, was undoubtedly the finest cruck-trussed barn in the district and one of the best in the country. It was a complete timbered building encased in stone but preserving all its original features. It is a five-bayed structure with six almost identical cruck-trusses, each of which had two collar-beams. Normally the wall-plates were carried on the free ends of the tie-beams; here, however, they were supported by stout upright wall-posts, measuring 11ins. by 4ins. in cross-section, into the tops of which the ends of the tie-beams were mortised. This construction

the rafters slightly and a blocking - piece had to be inserted between the cruck and the rafter in order to carry the lower purlin (fig. 11). The same feature is noticeable in the cottage at Carr House Farm where it was inserted when the walls were raised.

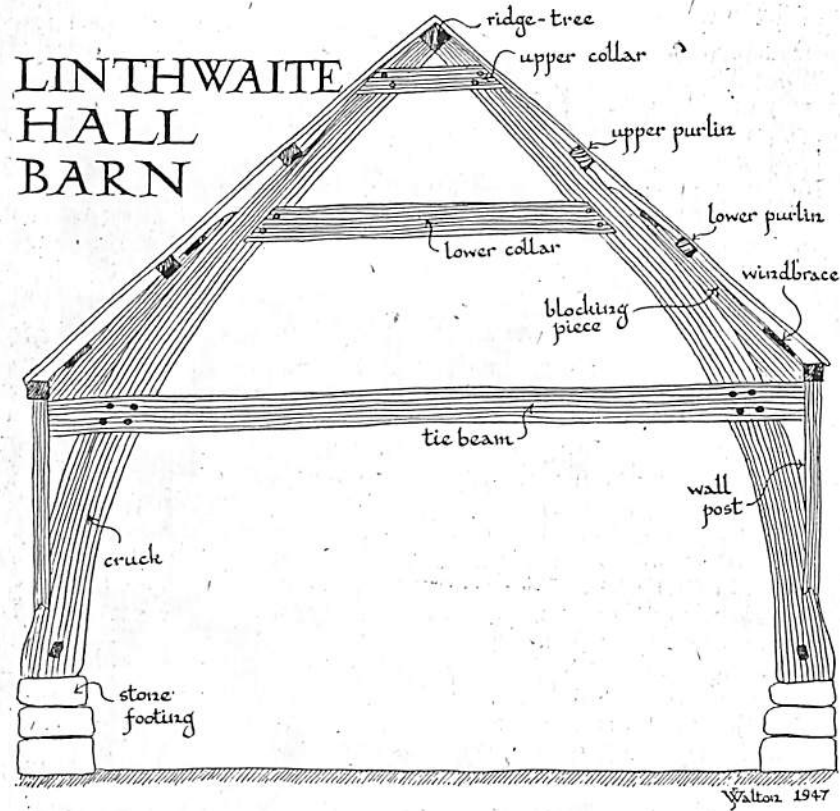
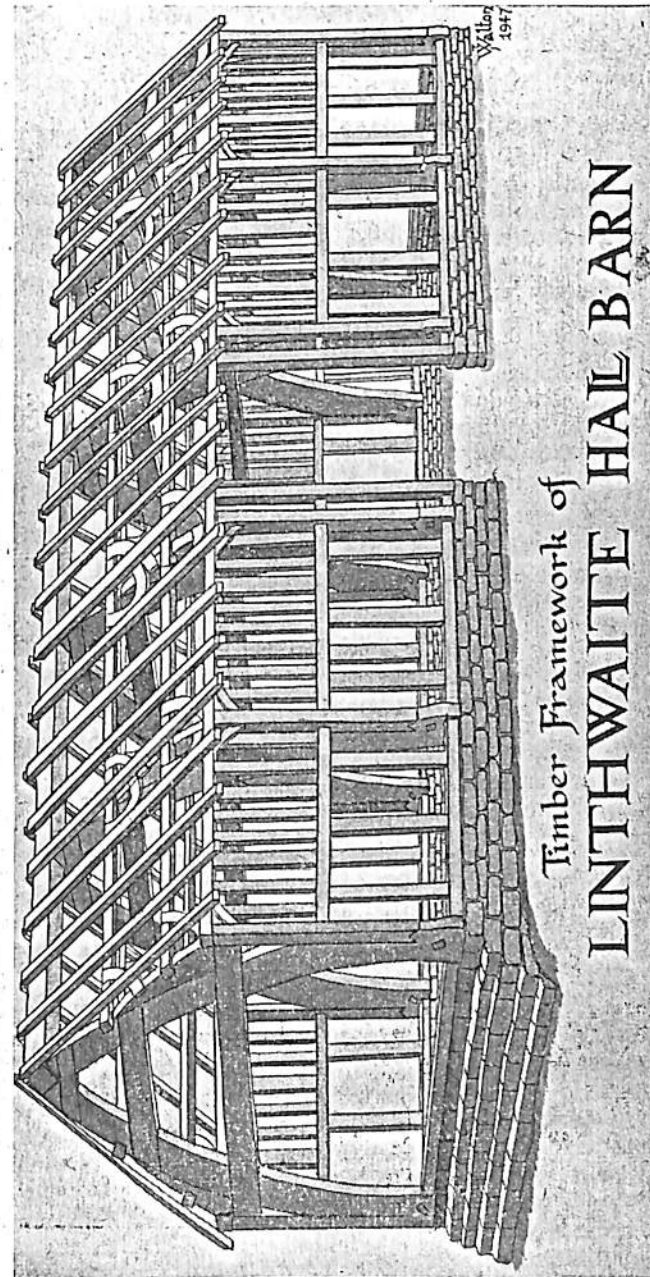


Fig. 11
Cruck truss at Linthwaite Hall Barn

Wind-braces—curved braces stretching from the crucks to the purlins—may be seen in almost all our cruck-trussed buildings but they are particularly well developed at Linthwaite. There they stretch from the blocking-pieces to both the upper and lower purlins (fig. 13).

The crucks themselves are more massive than those noted previously, measuring 1ft. 10ins. by 11ins. at the base. Each pair with its tie-beam is marked with a figure to indicate its position, the marks being on the same side as the tie-beam. The cuts are usually made on the tie-beam near the halving and on the cruck nearby, but similar marks are also made on the cruck, collar-beam and blocking-piece (fig. 13).



Timber Framework of
LINTHWAITE HALL BARN

Fig. 12
Timber framework of Linthwaite Hall Barn

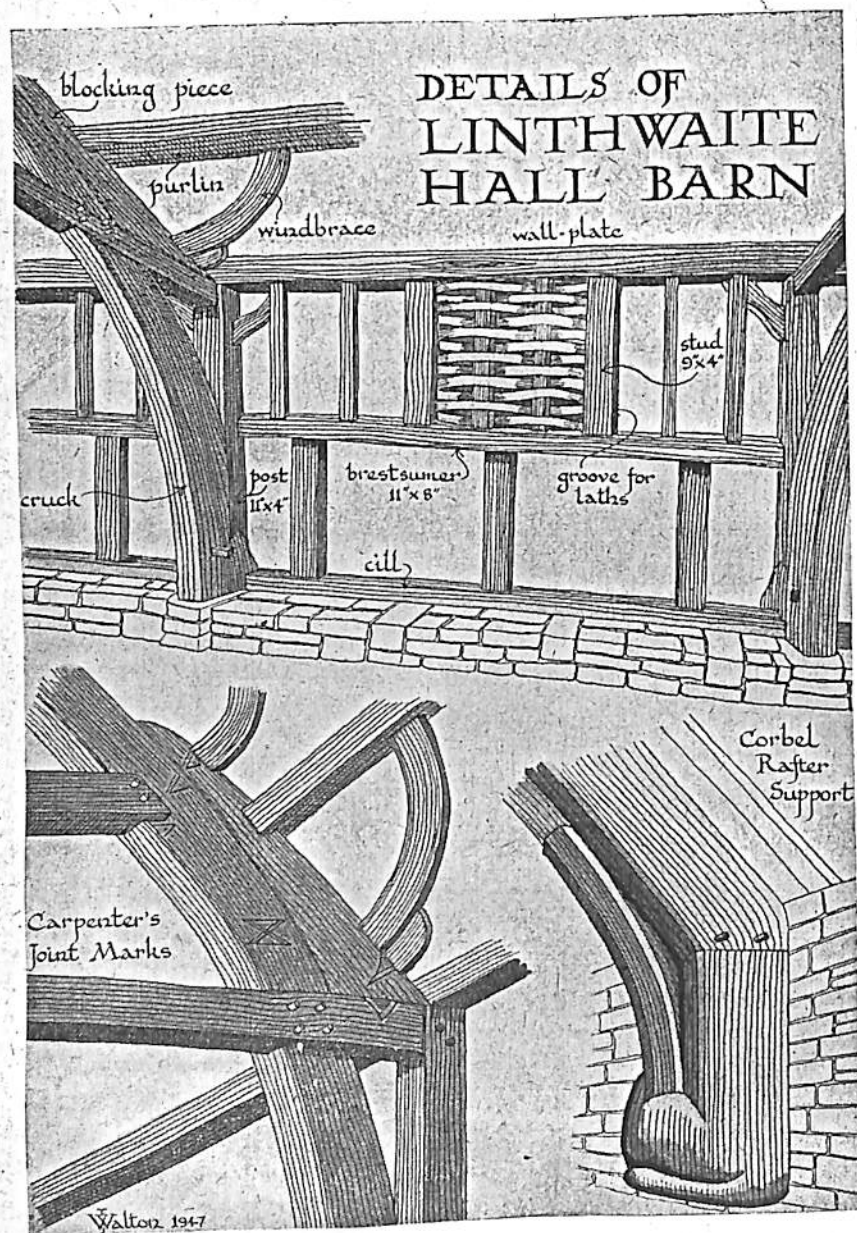


Fig. 13
Details of Linthwaite Hall Barn

The crucks, which all show lever holes, were notched a foot or so above the base to accommodate the feet of the stout upright wall - posts. At a height of 7ft. 8ins. above ground level a brestsumer, 11ins. by 8ins., is mortised at its ends into the wall - posts; thus dividing the wall into an upper and lower part. The space between the brestsumer and wall - plate is divided into three roughly equal panels by a pair of upright posts, 9ins. by 4ins., producing the characteristic "post - and - pan" wall - filling of the timber - framed building. Each panel was further subdivided by upright studs into three parts, measuring 18ins. from the centre of one stud to the centre of the next. These studs, which have been removed, were mortised into the underside of the wall - plate and slotted into a groove in the top of the brestsumer.

The main studs were grooved at the sides; oak laths were sprung into these grooves and interwoven through the secondary studs, thus forming a wattle panel infilling which was smeared with daub or plaster. A reconstruction of such a panel is shown in fig. 13. The mortise holes of these early frameworks were bored at each end with an auger and the wood between was chopped away with a twivil.

The space below the brestsumer was similarly divided into panels by three posts which were probably mortised into a sill resting on a low ground - wall. Such ground - walls were a common feature of most timbered buildings and the north gable at Linthwaite rests on a sturdy stepped buttress of dressed stone (fig. 12).

When the timbered walls were encased in stone an outshut was added by extending the principal rafters; these are curved at the ends and scarfed to wooden corbels springing out from near the top of the wall (fig. 13).

THORPE HOUSE FARM BARN, ALMONDBURY (fig. 14 and plate 4).

The original fifteenth century barn at Thorpe House Farm was a simple rectangular structure of five bays with six cruck trusses very similar in type to those of Linthwaite Hall barn. The main difference lies in the fact that the lower collar - beam is notched, and the massive crucks are chamfered and held to the wall - posts by notched spurs as well as by the tie - beams (fig. 14). All this is evidence of a stage of carpentry far in advance of that indicated by the primitive trusses of the cottages at Carr House Farm and Far Field Head. The barn at Thorpe House Farm represents the highest development of cruck carpentry in the district but it is one which is particularly wasteful of timber. The framed walls were of the "post - and - pan" type with posts and panels of approximately the same width and they were very similar to those of the adjoining Little Thorpe cottages which are better preserved.

THORPE HOUSE FARM BARN, ALMONDBURY

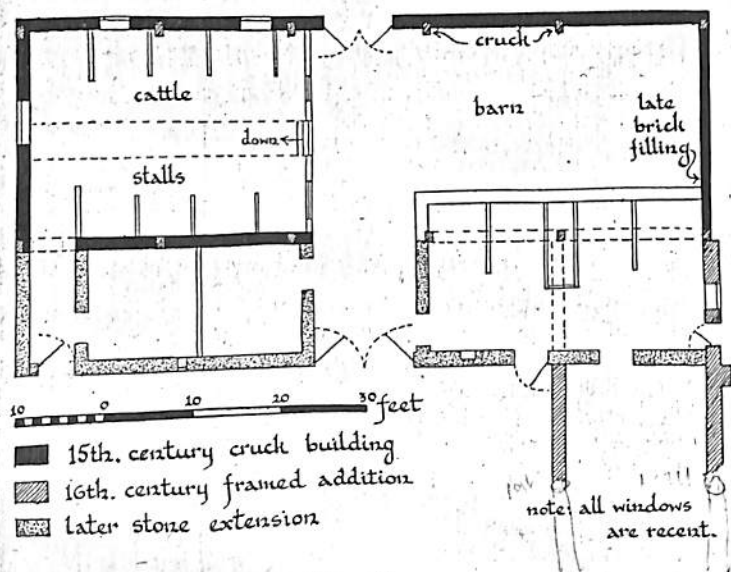
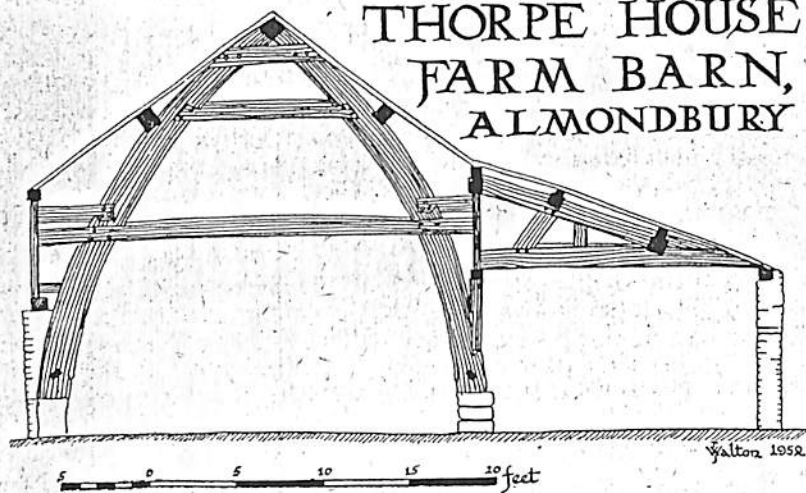


Fig. 14
Plan and cruck truss of Thorpe House Farm Barn, Almondbury

In the sixteenth century a wing was added at the west end of the building, at right angles to the earlier cruck-trussed framework, to give a \perp -shaped plan. The king-post trusses of this later addition are well displayed in the upper storey of the wing. At a much later date, probably even in the eighteenth century, two outshuts of stone were added on the north side and the other walls on the east and south, up to brestsummer level, were also built of flat, thin slabs of sandstone. Even later still the west gable and the upper part of the south wall were filled in with brick. A particularly clumsy timbered truss was used to support the outshut (fig. 14).

LITTLE THORPE COTTAGES, ALMONDBURY (fig. 15).

I have referred to this building, which adjoins Thorpe House Farm barn, as a row of "cottages," for which purpose it last served. It is very doubtful, however, whether this was its original function. It is a long rectangular building of four bays, each a one-roomed cottage, with one gable cruck truss, three inner cruck trusses and a framed gable truss at the east end. The crucks are as massive as those in the neighbouring barn, measuring 1ft. 7ins. by 9ins., and, like those of the barns at Linthwaite Hall and Thorpe House Farm, they were sawn rather than adzed.

The timber-framed walls are similar to those of Thorpe House Farm barn and differ slightly from those of Linthwaite Hall barn. The wall-posts rest in V-shaped notches and the ends of the tie-beams are mortised into them. Further support for the wall-posts is afforded by spurs which are notched, halved and pegged to the crucks (fig. 15). The space between each pair of crucks is divided into two parts by another wall-post stretching from the ground up to the wall-plate, into which it is mortised. From the wall-posts curved brackets stretch to the wall-plates. A brestsummer divides the walling horizontally into two parts; the panels were originally filled with evenly-spaced studs which supported a filling of wattle-and-daub or lath and plaster.

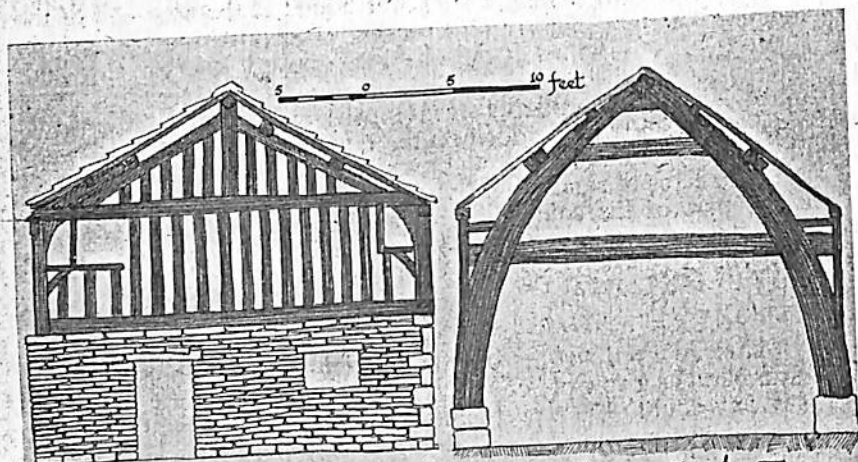
THE DEVELOPMENT OF CRUCK-TRUSSED BUILDINGS IN THE HUDDERSFIELD DISTRICT

Group 1. Wall-plates supported on the extended ends of tie-beams.

(a) Crucks crossing at apex. No collar-beam.
CARR HOUSE FARM COTTAGE, HEPWORTH.

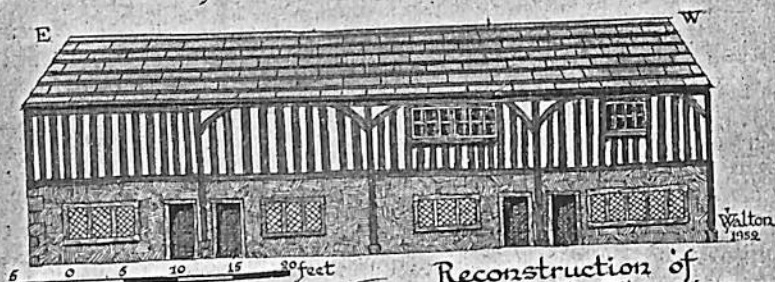
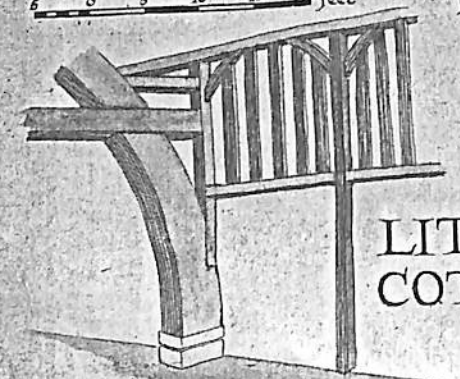
(b) (i) Crucks meeting at apex. One collar-beam, not notched.

FAR FIELD HEAD COTTAGE, HEPWORTH.
UPPER OLDFIELD BARN, HONLEY.
GREENHILL BANK BARN, NEW MILL.
SNOWGATE HEAD BARN, NEW MILL.



Reconstruction of East Gable

Inner Cruck Truss

Reconstruction of
North ElevationRemains of
South Wall Studding

LITTLE THORPE COTTAGES

Almondbury

- (ii) Crucks meeting at apex. One notched collar - beam.
DEAN HEAD, HEPWORTH.
 - (c) (i) Crucks meeting at apex. Two collar beams, not notched.
BLAKESTONES, SLAITHWAITE.
 - (ii) Crucks meeting at apex. Two collar - beams, upper one notched.
NETHER END, DENBY DALE.
- Group 2. Cruck - trussed frameworks with framed walls.
- (a) (i) Crucks meeting at apex. Two collar beams, un-notched. No spurs.
LINTHWAITE HALL BARN.
 - (ii) Crucks meeting at apex. Two collar beams, lower one notched. Spurs and chamfered crucks.
THORPE HOUSE FARM BARN, ALMONDBURY.
LITTLE THORPE COTTAGES, ALMONDBURY.

DATE OF CRUCK - TRUSSED BUILDINGS IN THE HUDDERSFIELD DISTRICT

As the cruck - trussed buildings in the Huddersfield district are either barns or small cottages of no importance it is impossible to date them accurately in the absence of diagnostic features. The custom of building in stone, which became wide - spread only towards the end of the sixteenth century, suggests that none of the cruck - trussed buildings are later than 1600 although such an inference may be doubted on the grounds that obsolete methods often persisted in minor buildings long after they had been abandoned for more important dwellings.

Carr House Farm cottage and the cottage at Blakestones were certainly stone - walled early in the seventeenth century as is proved by the nature of the mullions. A number of buildings were in such a bad state when the stone walls were added that one or more gable crucks were removed. Nether End, dated 1663, is a case in point. Such disintegration could hardly have taken place in less than a century so that this building must be earlier than 1560.

Thorpe House Farm barn was originally a cruck - trussed structure on to which a framed - truss wing was built. This addition must have taken place in the sixteenth century, otherwise it would have been built in stone. The cruck trusses at Thorpe House Farm barn and Little Thorpe cottages are almost identical and were certainly constructed at the same time. But the gable truss at Little Thorpe cottages was replaced by a framed truss, indicating that by the sixteenth century the original cruck truss had decayed. Again assuming that this could not have taken place in less than a century cannot be later than the fifteenth century.