

or 11th century at Hungate, York.¹⁴ The Canterbury flute with only three finger-holes falls into the large class of bone pipes of all periods with this number, occasionally augmented by a thumb-hole on the reverse side. I have previously commented on this prevalence of three holes on pipes as being the maximum number which may be utilized while holding the instrument in one hand.¹⁵

As was done for the White Castle pipe, the missing block or fipple was reconstructed in plasticine and the potential range of the pipe estimated by calibration against tuning forks. The following notes were obtained:

b'', d''', e''', f#''''¹⁶

This, in contrast with the diatonic range of White Castle (b♭''', c''', e♭''', f''', g''', b♭'''' and—with an alternative fingering—f''', g''', a''', b♭''', c''', d'''), appears to follow a pentatonic pattern considered by some authorities to be universal in primitive musical systems.¹⁷ Most recently a fragmentary bone-pipe made like White Castle from a deer metatarsal and probably also of the late 13th century has been published from the site of Keynsham Abbey, Somerset.¹⁸ The Somerset pipe, again like White Castle, has five finger-holes, but only one rear thumb-hole. With skilful reconstruction and use of cross-fingering a range of an octave and a half can be obtained, although there is considerable distortion at the upper limit. The scale is diatonic, the lowest note being d♭'''. Examination, however, of the tonal range of the largest series of early bone pipes in Europe—those from the *terpen* sites of the northern Netherlands, usually assumed to date from the 5th or 6th to the 12th century—has failed to prove the priority of one system over the other.¹⁹ Although, as noted in discussing the music of the White Castle pipe,²⁰ the 12th and 13th centuries in Britain were times of comparative musical sophistication and continental influence, sophistication should not be expected amongst such simple and, in the true sense, 'folk' instruments as the Canterbury pipe.

J. V. S. MEGAW

THE FARMHOUSE, THORPEACRE, LOUGHBOROUGH, LEICS. (PL. XXIII, A, B; FIG. 40)

During 1964 a search for cruck-framed structures in north Leicestershire led to an examination of a group of derelict farm-buildings known as 19, Thorpeacre, Loughborough (SK 516282). A small cruck cow-shed adjoined the W. end-wall of the red-bricked farmhouse (PL. XXIII, A). In this end-wall could be seen a post, 11 by 10 in. in section, resting on a stone slab. The wood appeared much more weathered than that in the cow-shed; it stood 14¼ ft. high and supported what appeared to be the wall-plate of the farmhouse. Two braces from its upper portion, secured with notched lap-joints, rose to tie-beam level. During the next three years the farmhouse was examined in detail, revealing extensive remains of a timber frame, which comparison with similar structures recorded elsewhere showed to have belonged to a much earlier building than the cruck cow-shed. A drawing (FIG. 40) made in 1967 incorporates all the details of this fragmentary frame that were noted.

The remaining timbers suggested that it was an aisled building of three bays, lying east-west, about 42 ft. long and 32 ft. wide. Between the W. and the central bays was a

¹⁴ K. M. Richardson in *Archaeol. J.*, cxvi (1959), 63, fig. 19, no. 20.

¹⁵ Megaw, 1960 (*op. cit.* in note 13), p. 12, and *id.*, 1963 (*op. cit.* in note 10), p. 87.

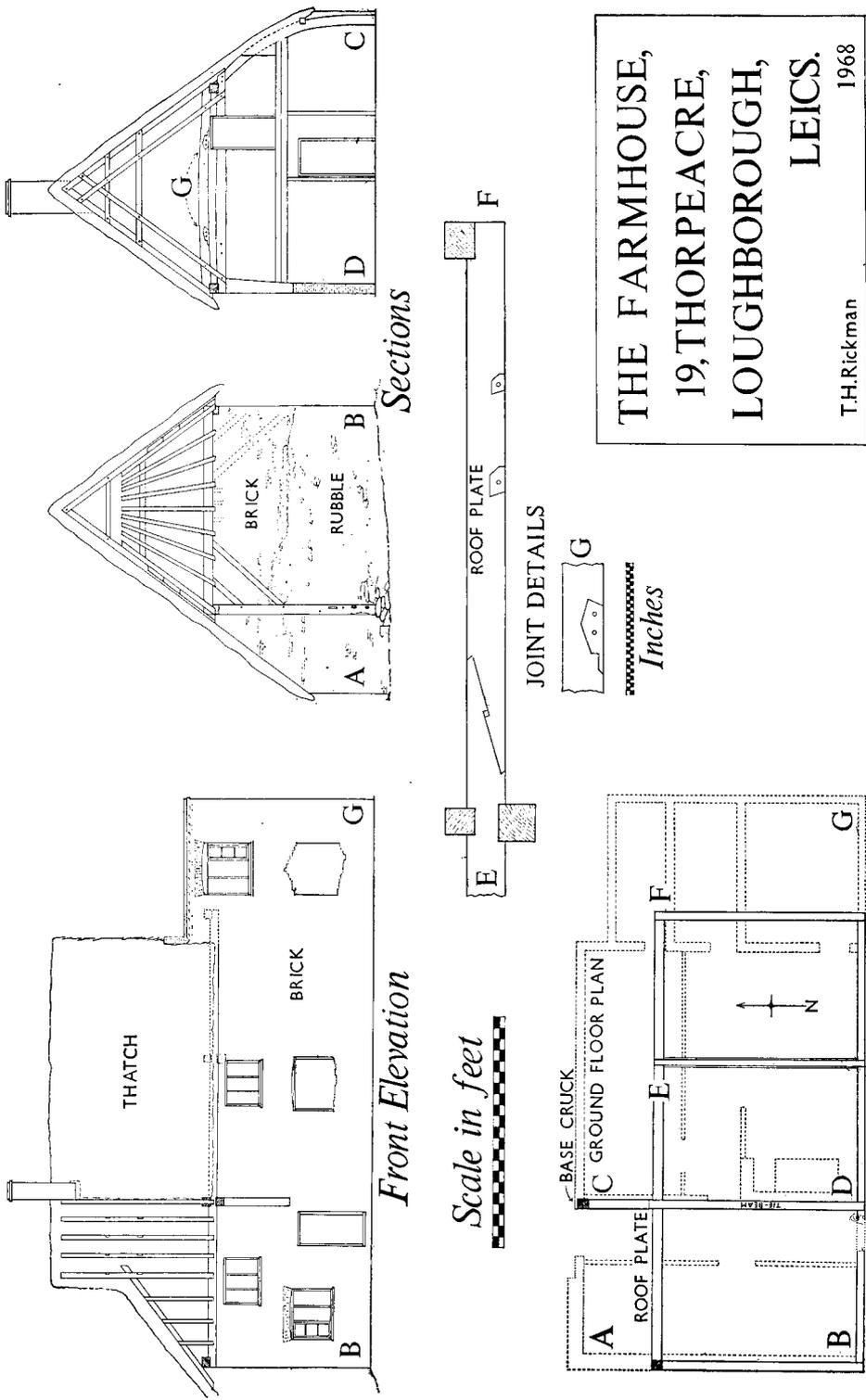
¹⁶ a' = 440 c.p.s.: the notes for which values are given here were obtained by covering all finger-holes and progressively exposing them; no account, of course, has been taken of variations in pitch obtainable by partial covering and over-blowing.

¹⁷ E.g., B. Nettl, *Music in Primitive Culture* (Cambridge, Mass., 1956), p. 48.

¹⁸ J. H. Barrett in *Galpin Soc. J.*, xxii (1969), 47-50.

¹⁹ Megaw in J. M. Coles and D. D. A. Simpson (ed.), *Studies in Ancient Europe: Essays presented to Stuart Piggott* (Leicester, 1968), pp. 335-9.

²⁰ Megaw, 1961 (*op. cit.* in note 10), p. 180.



THE FARMHOUSE,
 19, THORPEACRE,
 LOUGHBOROUGH,
 LEICS.
 T.H. Rickman 1968

FIG. 40
 DERELICT FARMHOUSE, 19, THORPEACRE, LOUGHBOROUGH, LEICS. (pp. 150, 152 f.)
 Plan, elevation, sections, and details of joints. Sc. 16 ft. = 1 in.

base-cruck truss, immediately west of which was the cross-passage of the hall, 5½ ft. wide, leaving the rest of the W. bay as a service-space, and flanking a stone fire-reredos (containing a late chimney) immediately under the base-cruck truss. This may not be the original arrangement, but it certainly dates back to the early 17th century; it is possible that the original cross-passage, and reredos (if any), lay farther west (compare certain aisled halls in the Halifax area).

Entering the farmhouse through the doorway on the S. front, and looking along the passage, the lower portion of the one remaining base-cruck could be seen to the right of the rear door-frame. Upstairs the top of the base-cruck could be seen tenoned into a tie-beam, 11 by 10 in. in section, and the arcade-plate was clasped between this and a second tie-beam, 11 by 8 in., immediately above it. These tie-beams spanned 19 feet. On the inner face and lower edge of the upper beam, spaced 3¾ ft. either side of its centre, were two notched lap-joint seatings that formerly housed braces that must have been at least 18 in. wide and set at an angle of about 45 degrees. Peg-holes in the lower tie-beam indicated where these braces had formerly been secured to it, without trenching: part of the tie-beam had been cut away to form a later doorway. The braces formerly connected the tie-beams with the base-crucks, though any trace of the actual junction with the crucks was concealed by an inserted upper floor and a lath-and-plaster wall. The symmetrical spacing and inclination of the seatings show that the building was aisled on both sides.

The arcade-plate was 11 by 10 in. in section and another set of doubled tie-beams, 12 ft. from the first pair, terminated the centre bay. The upper member of these two was much smaller in section and lacked the 18-in. notched lap-joints found in the other upper tie-beam, possibly because it was a replacement. Just beyond this pair of tie-beams the arcade-plate had a splayed-and-tabled scarf-joint, the normal method of extending timbers employed in buildings up to the early 14th century, e.g. in the Crossing Temple wheat-barn, Essex.²¹ The ends of the roof-plate were resting on tie-beams that no doubt had formerly been supported by the arcade-posts of the 'closed frames' at the upper and lower ends;²² only one arcade-post remained, in the W. end-wall at A (PL. XXIII, B; FIG. 40). The aisle section of this and every 'closed frame' had totally disappeared, but something of its form may be deduced from the peg-hole on the aisle side of this post: the aisle-tie entered the post below the level of the wall-plate of the aisles, indicating that the aisles had the archaic 'reversed assembly'—that is to say, the plates ran over the aisle-ties. Pairs of notched lap-joints at each end of the terminal tie-beams, as well as at each end of the arcade-plates, identical with those joining the braces to the W.-end arcade-post, confirm the reconstruction. Lap-jointed longitudinal, as distinct from transverse, braces are particularly remarkable. The terminal tie-beams were not doubled.

Only two-thirds of the roof remained, its W. end being hipped, with a gablet. It had coupled rafters, halved together at their apex, and principal rafters, 5 by 4 in. in section, above the doubled tie-beams. Two collars, 5 in. wide, further strengthened the principal rafters, the lower one being 5 ft. above the tie-beam and the other 28 in. above this. A collar similar to the upper one formed the gablet in the hipped end. Parallel with the principals were passing braces, similar to those recorded at Fyfield Hall, Essex, dated by J. T. Smith *c.* 1300 or earlier.²³

The original plan appears to have comprised a two-bay open hall with (assuming that the passage was always at the west) an inner room or parlour, with chamber over, in the E. bay, that was remarkably well developed for the date—not later than the early 14th century—that the structural details demand. When the floor was inserted, the passage was probably shifted eastwards, right up to the base-cruck truss, reducing

²¹ *Med. Archaeol.*, VI-VII (1962-3), 254 f., fig. 82, b.

²² F. W. B. Charles, *Medieval Cruck Building and its Derivatives* (Soc. Med. Archaeol., monograph ser., no. 2, London, 1967), p. 33.

²³ J. T. Smith, *Archaeol. J.*, cxii (1955), 77, fig. 5.

the ground-floor hall to one bay. The date of the insertion of the floor is indicated by the beam that spanned the ceiling of the farmhouse hall, or living-room; it was 12 in. wide and 6 in. deep and bore an ovolo moulding characteristic of the period 1575 to 1640. Two beams on either side of the cross-passage ceiling had a similar moulding.

Visible on the S. front of the building to the right of the doorway and above one of the passage-beams was a post, about 9 by 9 in. at its base, that retained the same width to the top but gradually thickened on the inside of the building to form a 16-in. shoulder supporting the first pair of tie-beams at D (FIG. 40). This post was possibly introduced during the alterations made in the early 17th century.

No documentary evidence about the tenure of the building has yet been discovered, but it is a notable addition, a little NE. of the general pattern of distribution, to the growing list of medieval buildings of aisled form, but with a base-cruck truss across the open hall. It was demolished early in December, 1967.²⁴

T. H. RICKMAN

A SINGLE-AISLED HALL AT CONISBROUGH CASTLE, YORKSHIRE

When the nave of a church had been built without aisles it was not uncommon for the N. or S. wall to be broken through for an arcade, so that an aisle could be formed beyond it to provide extra accommodation in the church. Alternatively in the later middle ages one of two aisles might be demolished and the arcade blocked up. In either case the result was a single-aisled building, but one created by growth or contraction; it is a very different matter from one designed from the beginning to have only one aisle. Indeed the only reason for building such a lop-sided structure that suggests itself is that a massive obstacle on one side would overshadow the clerestory or make the construction of an aisle difficult. Such clearly was the reason for omitting a N. aisle in the hall that has come to light against the N. curtain-wall in Conisbrough Castle which it is the purpose of this note briefly to record.

Work by the Ministry of Public Building and Works began in 1967 on the long task of disentangling the visible and covered foundations in the inner bailey. It was soon evident that a long building, measuring 77 by 33 ft., had stood in the NW. corner of the bailey. Its N. side was formed by the curtain-wall which curved round through 90 degrees to form also its W. gable-end; as a result the W. end tapered and was much narrower than the E. end. The arcade divided the building into a S. aisle, roughly 12 ft. wide, and a main nave, 19 ft. wide (at the E. end). The two eastern bays (19 ft. wide) are broader than the two western bays (16 ft.) in the four-bay structure. The western 1½ bays are higher than the rest of the hall and retain a stone column-base for a smaller column; the central and eastern columns were marked by paving (the eastern column-base lying a few feet away has been replaced).²⁵ The base of a central hearth, measuring 11 by 7 ft., adjoins the central column on its N. side, projecting westwards. A series of service-buildings extends eastwards along the inner face of the N. curtain, terminating in the kitchen, close to the famous keep. The range running south at right angles from the W., or upper, end of the hall was two-storied and evidently contained the chamber on its first floor, where remains of a fine fireplace survive in the curtain-wall. This area has not yet been fully explored. The very irregular plan would not have been apparent to the medieval visitor until he entered, since he would have seen only the regular SE. side from the outside. Such slight indications as have been found suggest that the hall was well built and not of very different date from that of the keep, say c. 1200. Fuller descriptions of the work will be available in due course.

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²⁴ I am indebted to Mr. S. E. Rigold and Mr. M. W. Barley for their advice and help with the text of this note.

²⁵ This base, already slightly moved from its original position, is shown in the otherwise misleading plan in G. T. Clark, *Medieval Military Architecture in England* (London, 1884), I, 432.