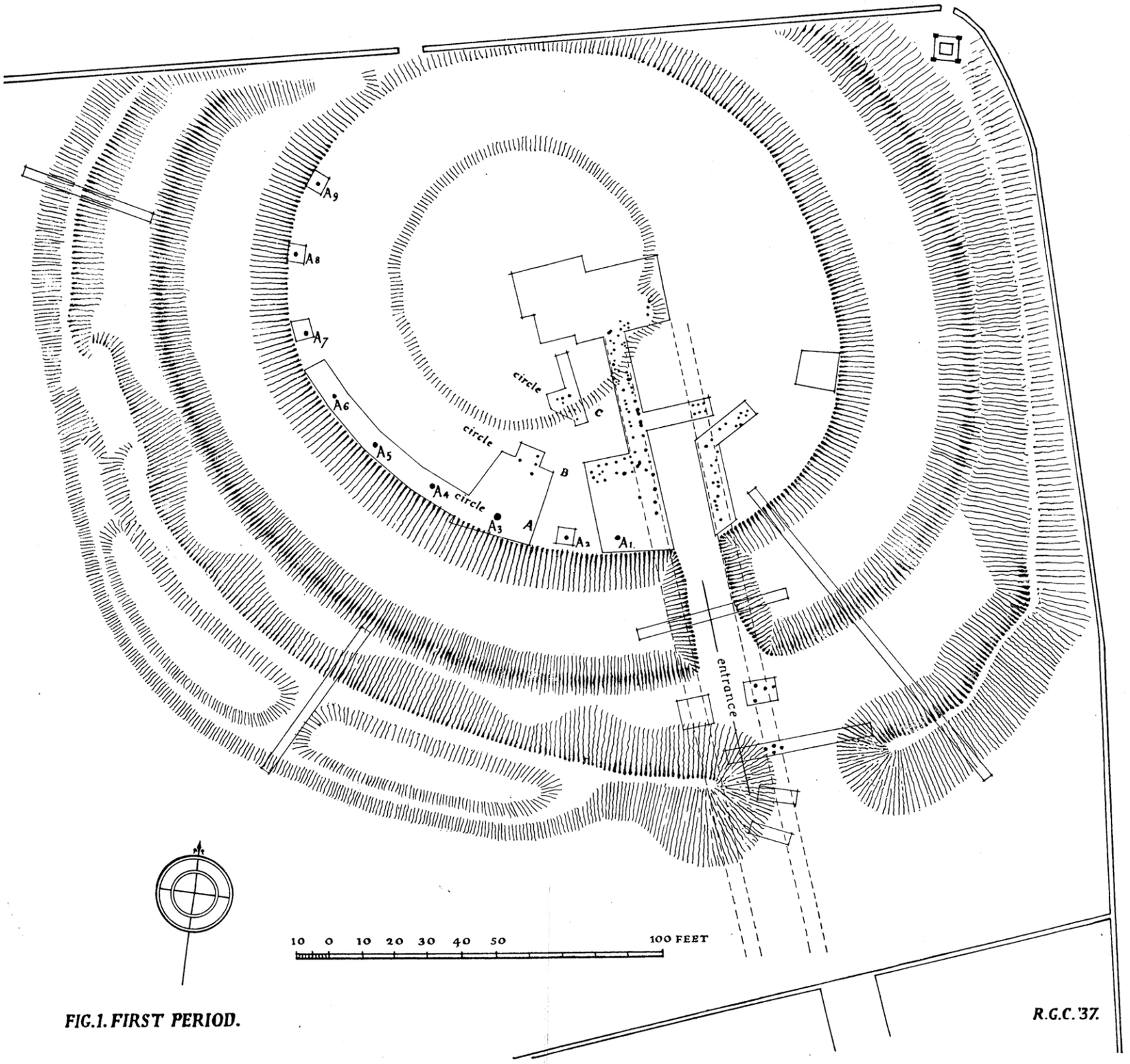

FIG. 1. FIRST PERIOD.

R.G.C. '37.

facing p. 1.

ART. I.—*King Arthur's Round Table. Interim Report on the Excavations of* 1937.* By R. G. COLLINGWOOD.

Read at Kendal, September, 1937.

I. THE SITE BEFORE EXCAVATION.

KING ARTHUR'S ROUND TABLE, as visible before the excavations of 1937 began, was an earthwork consisting of a roughly circular ditch surrounded by a ring-mound and itself surrounding a level platform of the same roughly circular shape. The site lies 1¼ mile S.S.E. of Penrith, less than ¼ mile south of Eamont Bridge and therefore by the same distance within the boundaries of Westmorland, in a level grass field that rises in an abrupt bank along its western edge and is bounded to eastward by the London-Carlisle road and to northward by the road from Eamont Bridge village to Tirril and Pooley Bridge. The river Lowther runs northwards 150 yards east of the site.

In the adjoining field to the south, and about 150 yards away, is another round earthwork, its northern part now barely visible and its southern part obscured by the plantation immediately west of the Lowther park gate. This was known as the Little Round Table. It is said to have been a ring-mound with a ditch outside it.

On the other side of the Tirril road, 400 yards west by north from the Round Table, lies Mayburgh, another circular monument consisting of a ring-mound of water-worn cobbles with no ditch. In its centre is one large

* It has been the custom of this Society in the past to publish a complete report of all excavations season by season as they proceed. On this occasion it has been thought right to adopt a different procedure: namely a series of interim reports, followed by a single complete report when the excavations are over.

standing stone; there were once four, disposed in a quadrilateral measuring about 50 feet each way, and four others flanked the entrance.

These three monuments may or may not form a single group. The writer's attention was directed to the Round Table in particular, without prejudice to its relations with the other two monuments, by the fact that, simply considered as an earthwork, it showed a very close degree of resemblance to the earthwork at certain other sites, notably Arbor Low, where earthworks of this same type are combined with stone circles. The question therefore naturally suggested itself, whether the Round Table had originally possessed a similar circle, but made of timber instead of stone. It was proposed to excavate the Round Table in order to answer this question.

Before describing the excavations it is necessary to give a more detailed description of the monument as it appeared on the surface, and to enumerate the most obvious parallels.

Until the 18th century, the Round Table had two entrances, one to S.E. and the other to N.W., each consisting of a causeway across the ditch and a gap in the mound. The northern entrance (as I shall call it) has been destroyed by the building of the inn, the adjacent farm, and the Tirril road; but its position is no doubt marked by the gate leading from that road into the field where the Round Table is. The other entrance is intact.

On either side of the northern entrance, a sketch of the site by Dugdale (copy in the Heralds' College; I am indebted to Mr. Stuart Piggott, F.S.A., for knowledge of its existence and for a photograph of it) shows that in the seventeenth century there stood a large pillar-like stone. These two are the only standing stones recorded as having ever belonged to the Round Table; but we were able to prove that there were others, and to assign them to a definite period in the history of the monument.

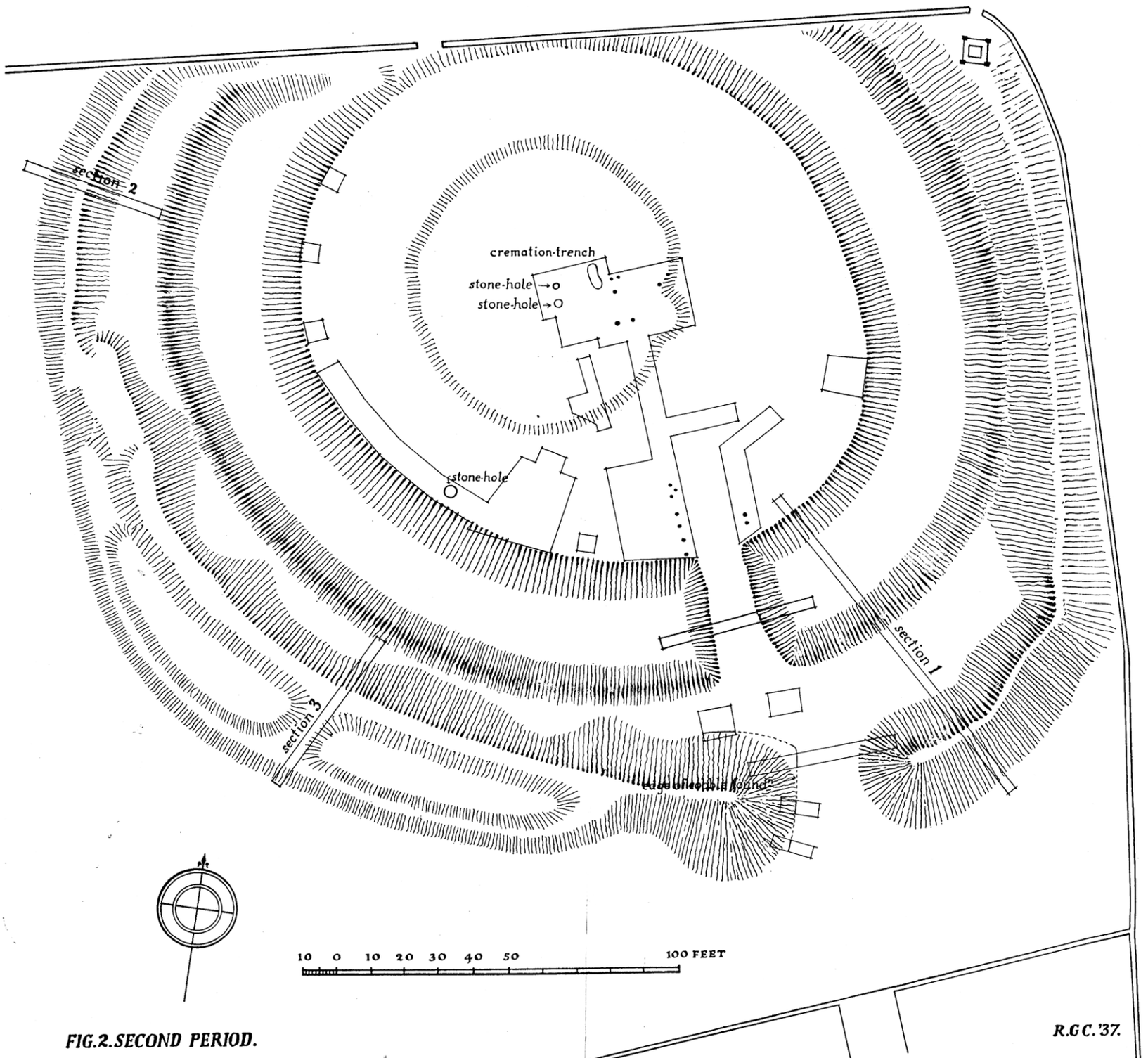

FIG. 2. SECOND PERIOD.

R.G.C. '37.

facing p. 2.

The central platform is in shape nearer to an ellipse than to a circle. A tolerable approximation to its outline can be constructed by drawing an ellipse with foci 100 feet apart, whose major axis measures 172 feet and its minor axis 145. The intersection of these two axes I shall call the "centre" of the platform. The major axis bears roughly E.S.E.; to be precise, 114° (true). The line joining the centres of the causeways where they spring from the central platform (the position of the northern causeway being conjectural)bears 141° or roughly S.E. These two bearings* thus differ by 25°. A similar though smaller difference exists at Woodhenge between the bearing of the entrance, in this case a single entrance, and that of the major axis of the approximately elliptical monument; the difference in this case being apparently about 10°.

The central line of the existing causeway is not easy to determine, but it bears about 160° (roughly S.S.E.). This line does not pass through the gap in the mound which is meant to be opposite to it, but through the slope of the mound west of that.

These irregularities in measurement and lay-out were still further accentuated of the features that came to light on excavation.

The only feature which is at all regular is the ditch. This is uniformly about 40 feet wide (it never shrinks to below 40, nor expands to above 43) and is, to its present turf bottom, between four and five feet deep. This bottom is flat and about 20 feet wide. The two sides differ in appearance. The outer side slopes comparatively gently, the angles at top and bottom being smooth and rounded, as one would expect in prehistoric earthwork. The inner side is comparatively steep, and its angles are sharp, especially that at the top. The

* It will be noted that neither of these lines can possibly be regarded as pointing to the place of midsummer sunrise,

form of this angle has long been a cause of perplexity to careful observers; we are now at last in a position to explain it. The sides of the causeway show in this respect the same features as the inner side of the ditch.

The bank in its present form is very irregular. On either side of the south entrance it is from six to seven feet high and from 35 to 40 feet broad, and is separated from the ditch by a berm of some 12 to 20 feet. Elsewhere it does not rise to a height of more than four feet. All along the north side it has been completely destroyed; all along the east it has been seriously encroached upon by the London-Carlisle road; and for about 200 feet on the south and south-west it has been mutilated by robbing material from it for making two long narrow enclosures against its outside.

But this does not exhaust the tale of mutilations. From the N.E. corner of the site, travelling clockwise, there is no berm at all for the first 180 feet. The bank, which is very low and has been encroached upon from the outside by the road, sinks on the inside evenly and gently to the lip of the ditch. Then comes a sudden change, and for the next 80 feet the bank is high and there is a well-marked berm. Careful study of the inner side of the bank near its summit shows that it has here been robbed; the turf is dimpled by hollows which have evidently been made by quarrying. Beyond the entrance, the same features are at first to be seen; then, as the berm narrows, the marks of quarrying in the inner side of the bank die away.

These observations convinced us, even before we had begun to dig, that the Round Table (like similar earthworks at Arbor Low, Avebury and elsewhere) had originally no berm at all or at most a very slight one; and that the intermittent berm now visible was due to the carting away of material from the inner side of the bank. This was fully confirmed by excavation.*

* It is also confirmed by the text and drawing of Stukeley. In his *Iter*

One surface feature remains to be described. Placed eccentrically on the central platform is a raised disk, 75 feet in diameter and about eight inches above the general level of the platform. We are now able to say that this had nothing to do with the monument itself in its original shape.

II. PARALLELS.

In searching for parallels, I shall therefore ignore the last-mentioned feature, the raised disk, and consider the Round Table as a roughly circular earthwork consisting of a central platform surrounded by a ditch, with a mound outside the ditch: mound and ditch being penetrated by two opposed entrances.

This type of earthwork is known elsewhere. There is a group of three, the so-called THORNBOROUGH RINGS, situated on low ground by a river (as the Round Table is), on the north bank of the Ure, five or six miles N.N.W. of Ripon. Their entrances, nearly like those of the Round Table, face N.N.W. and S.S.E., and the three of them are sited in an almost straight line similarly orientated. Their chief difference from the Round Table is in their greater size; instead of being about 100 yards overall in diameter, they are nearly twice that. They have never been dug, and nothing is known about their age or purpose.*

Two others of the same kind are situated on HUTTON MOOR, six or seven miles S.E. of the Thornborough group Both groups are shown, and described in gothic lettering

Boreale, p. 43, he says " the *vallum* on the outside lies sloping inward with a very gradual declivity . . . The outside of the vallum is pretty steep." His plate shows the mound as sloping gently and uniformly to the lip of the ditch, with no berm anywhere. This dates the scarping of the inner side of the bank, and the partial creation of a berm, to some time later than the first quarter of the 18th century.

* The best description is by our honorary member, O. G. S. Crawford, *The Thornborough Circles*, in the Excursions Handbooks of the British Association at Leeds in 1927.

as " camps," in the ordnance maps down to the half-inch scale. Near each group are barrows with cremated burials (see sketch-plan in Elgee's *Archæology of Yorkshire*, p. 77); but there is no ground for speaking of an " association " between these and the circular monuments.

They are not confined to northern England. At KNOWLTON in Dorset there are, or were, four such circles. The largest, about 1,320 feet in diameter, has the ditch inside the bank still visible at its west side. The next largest, about 660 feet in diameter, has a wide internal ditch and opposed entrances. The other two are now effaced (Heywood Sumner, *Earthworks of Cranborne Chase*, pp. 46-7). He gives the diameters as 20 and 10 chains respectively. Grahame Clark in the valuable appendix to his paper on " The Timber Monument at Arminghall and its Affinities " (*Proceedings of the Prehistoric Society*, vol. ii, 1936, part 1) seems to have made a slip of the pen in converting these chains into 7-800 feet and 200 feet respectively).

Another large example is DURRINGTON WALLS, two miles N.E. of Stongehenge. Internally this measures 1,300 feet from E. to W. and 1,160 from N. to S. It has a ditch 40 feet wide, and entrances to E. and W. Its date is during or after the Beaker period (O. G. S. Crawford, " Durrington Walls," in *Antiquity*, iii (1929), pp. 49 seqq.).

So far I have mentioned only exact parallels: that is to say, roughly circular monuments consisting of nothing visible except a ditch and external mound with two opposed entrances. Since none of these has ever been excavated, they do not tell us very much about the Round Table. But a second class of monuments calls for attention, namely those consisting of these same features, plus a complex of standing stones.

The most remarkable monument in this class is

AVEBURY. Here the average internal diameter is about 1,130 feet. There were opposed entrances to S.S.E. and N.N.W., and in addition to a ring of about 100 standing stones surrounding the central platform there were two other such circles standing side by side in the interior, each containing a smaller circle and having a single stone or structure of stones at its centre. From the southern entrance an avenue of standing stones led away south-eastwards. The monument was erected in the Beaker period (H. St. George Gray, "The Avebury Excavations 1908-1922" in *Archæologia*, 84 (1935), pp. 99-162; and A. Keiller's paper on the avenue in the forthcoming volume (86) of the same publication).

ARBOR LOW in Derbyshire has a central platform measuring about 125 by 165 feet, a ditch 22 feet wide, and a mound whose summit-line describes almost a true circle 250 feet in diameter. The entrances are to S.S.E. and N.N.W. On the platform is a circle of large limestones, once evidently erect, now fallen (doubts as to whether they ever stood erect, entertained by some of the older antiquaries, are unjustified). Other stones, now fallen, have flanked the entrances; and in the centre are the fallen remains of a dolmen-like erection recalling the so-called "cove" in the centre of the northern internal circle at Avebury.

Apart from the stones, the resemblance between Arbor Low and the Round Table is very close indeed. The general plan is the same; the size is the same (the Round Table being a trifle larger in every feature except the ditch, which is much larger, being 40 feet wide at the Round Table as against 22 at Arbor Low); and the orientation is nearly the same.

A little excavation, chiefly devoted to trenching across the ditch, was done here in 1901-2 by H. St. George Gray (see his report in *Archæologia*, 58 (1903), pp. 461-498). Flint implements were found, the most important being

a barbed and tanged arrowhead on the ditch-bottom, giving a Bronze Age date to the monument. A skeleton found on the centre of the platform, buried fully extended on its back, was obviously an intrusion not earlier than the Romano-British period.

A similar monument, whose stones have now been removed, exists 10 miles N.W. of Arbor Low and three and a half N.N.E. of Buxton. It is known as the BULL RING. Its central platform measures 150 by 190 feet (inaccurate account by W. J. Andrew in J. C. Cox, *Memorials of Old Derbyshire* (1907), p. 78).

Another lies on Bodmin Moor, seven miles N.E. of Bodmin, and is called the STRIPPLE STONES. The diameter of the stone circle is 146½ feet, and there is a fallen stone in the centre. One entrance is to W.S.W.; the other, if it ever existed, seems to have become obscured (I have not seen the monument myself). Digging by Mr. Gray in 1908 resulted in the discovery of flint flakes but no burial (*Archæologia*, 61 (1908), p. 1 seqq.).

Other parallels could be quoted, but these are the closest and therefore the most instructive. With these, and especially Arbor Low, in mind, the present writer suggested at this Society's meeting on the site in 1936 (*Trans.* N.S. xxxvii, p. 191) that the Round Table might have been a wooden monument related to Arbor Low somewhat as Woodhenge is related to Stonehenge. WOODHENGE, close to Durrington Walls, was discovered by air photography in 1925, and the results of its excavation published by Mrs. Cunnington (*Woodhenge*; Devizes, 1929). It consisted of a central platform about 160 feet in diameter, surrounded by a ditch 30-40 feet wide and external mound, with a single entrance to N.N.E. On the platform were 6 concentric rings of post-holes which had held wooden uprights; their diameter varied from about 30 to about 60 inches, their depth from nearly three feet to nearly six feet. Near the centre was the

crouched skeleton of a child three years old, killed by cleaving its skull.

Since the discovery of Woodhenge, increasing attention has been given to the use of timber in prehistoric monuments, which had already been recorded for example by J. R. Mortimer in barrow number 23 on Calais Wold, Yorkshire (*Forty Years' Digging*, pp. 153-155; a barrow containing a ring of post-holes 21½ feet in diameter internally; in the centre a crouched inhumation with food-vessel and axe-hammer) and by S. Jackson at Bleasdale near Garstang in 1898 (Boyd Dawkins in *Lancs. and Ches. Arch. Soc.*, xviii, a very curious and complicated structure, essentially a barrow with Bronze Age pottery).

It seemed to the writer, accordingly, that the similarity between the Round Table and Arbor Low in respect of their earthworks might point to a further similarity, masked by the fact (if it was a fact) that the structures at the Round Table, being of wood instead of stone, had decayed and left no trace above ground. They would, however, have left recognizable post-holes below ground; and, in order to search for these, excavations were planned to be carried out in 1937.

III. The Excavations.

1. *Preliminaries.*—A committee was formed, including as local member Mr. R. Morton Rigg, whose services were most valuable, including as they did the engaging of labour, the procuring of tools, which were most generously lent by the Penrith Urban District Council, the lending of a Dumpy level, and so forth. Permission to excavate was obtained from the Lowther Estates through Captain Anthony Lowther and from the tenant, Mr. W. Bainbridge of the Home Farm, and also from H.M. Office of Works. To the friendly interest and

co-operation of these and others the excavators were throughout deeply indebted.

The present writer was appointed director. It was obviously desirable to obtain assistance from persons with experience of excavation at similar sites; but as no site of the same type had ever been dug before, this was strictly speaking impossible. The purpose of the work, however, was to test the generally accepted hypothesis that the Round Table was a prehistoric monument, and more particularly to test the writer's conjecture that it had carried a wooden structure. The assistance required, therefore, was in general that of persons accustomed to digging prehistoric sites in our district, and more particularly that of persons skilled in searching for post-holes under local soil-conditions. We accordingly imported as foreman Mr. W. Cruddas of Greenhead, whose experience on Hadrian's Wall had familiarized him with modern digging technique in soils of the kind in which we expected to be working, and in particular with the study of post-hole sites in such soils. He brought with him another man who had enjoyed a similar training; and four local labourers were engaged. Miss K. S. Hodgson and Dr. and Mrs. Spence, all of whom had done a good deal of prehistoric excavation in our district, joined the staff; Miss Hodgson for the whole period of the excavation, Dr. and Mrs. Spence for the first week. Many other members of the Society, including a large proportion of those whose chief interest lies in prehistory, came to help at various times; and Mrs. Collingwood, whose indefatigable work contributed much to the success of the season, was present throughout.

2. *The Central Platform*: *Entrance.*—Digging began on 5th July and continued for three weeks. We began by opening an area about 20 feet square immediately west of the surviving entrance. Directly below the turf, we came upon large water-worn cobbles, among which

were sherds of modern pottery and numerous fragments of mineral coal, with cinders derived from the same. Removing these cobbles, we found both them and the modern potsherds (mostly of the dark brown glazed ware characteristic of kitchen vessels of the 18th and 19th centuries) and scraps of coal continuing to a depth of about two feet. Subsequent digging showed that the whole of the central platform had been in this way covered with a two-foot layer of water-worn cobbles of various sizes (none too large for a man to lift, though often approaching that limit) mixed with gravel and containing abundant though small sherds of pottery, all of which might belong to the 18th century; most of it coarse kitchen ware, but including scraps of china. All over the platform, the prehistoric strata were completely sealed by this cobble layer, which made our excavation expensive and laborious.

Below the cobble layer we found a level floor of the hard clayey gravel locally known as sammel. This is the kind of material which is still used for paving footpaths or other surfaces exposed to the weather. It sets very hard and resists weathering almost as well as concrete. Sammel is not natural to the site of the Round Table, where the subsoil is a river-washed gravel, doubtless deposited by the Lowther, lying upon a stratum of clay. It must have been brought from a deposit of boulder-clay and laid artificially on the site. The bluffs immediately to the west of the site are composed of boulder-clay, and might have been the source of this material.

This sammel floor was found to be dirty with a brown muddy trample, and to contain numerous shallow pockets of dark soft material. These were carefully emptied with trowel and knife, but they had neither the shape nor the structure of post-holes; they were merely unevennesses in the floor, and the dark material in them was partly trodden mud and partly vegetable roots penetrating to

that level and there stopping. Their colour was due to the decomposition of this vegetable matter, not to combustion.

Along the eastern edge of this opening, however, we found seven post-holes in the sammel floor, forming a row parallel to the edge of the causeway. The intervals between them were 6, 3, 4, 4, 2, 2½ feet; their diameters varied from 4 to 12 inches, and their depth below the floor level (with one exception to be mentioned below) from 5 to 10 inches. Each had its packing of small water-worn pebbles still in place, indicating the diameter of the posts that had stood in them as, on average, six inches. In each of them we found a filling of rain-washed sand, among which and below which a little brown powdery matter represented the decayed wood.

After clearing this whole area down to the sammel floor, without finding any relics of any sort, or any structural remains except the aforesaid post-holes, we dug below it and found, about six inches lower, another floor. This was not made of sammel; it was a soft clay floor, with soft gravel patches here and there; and it was not trodden into a muddy condition but was quite clean. Almost all the post-holes of the upper floor had penetrated into it; but we soon found that it had post-holes of its own. They became visible only when the upper floor had been removed; in several cases we began by locating one edge, and scooped out the entire hole by hand from the side, leaving the hard upper floor unbroken over the top. We found five making a row almost coincident with the row of second-period holes described above; their sizes and intervals were about the same, and one of them actually coincided with a second-period hole (mentioned in the preceding paragraph). As in the second-period holes, packing-stones and the remains of decayed wood were invariably found.

Having thus discovered a row of post-holes, belonging

PLATE I.—Double row of post-holes on W. side of entrance, looking ESE. First double post-hole at bottom left-hand corner. See p. 13.

To face p. 12.

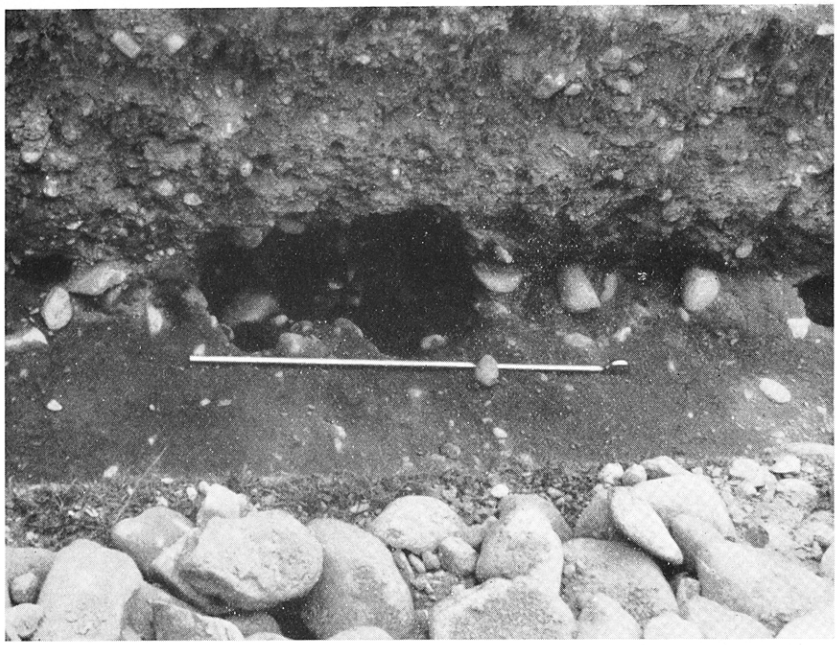

PLATE II, A.—First double post-hole (p. 13).

PLATE II, B.—Second double post-hole (p. 13).

To face p. 13.

to two periods, running radially into the central platform from the western edge of the causeway, we pursued it inwards. At a point about 25 feet from the edge of the platform it became double, and at the same place the second-period post-holes ceased to appear. We now had two rows, about two and a half feet apart, of first-period holes, the holes in each row being about three feet apart. At 36 feet from the edge of the platform we found a double post-hole in the eastern row. Each post had been about 10 inches in diameter, and they had been divided only by a septum of packing-stones two inches thick. Separated from this by a two-foot interval was another double post-hole in the same row, the posts being respectively 14 and 18 inches in diameter. After this the post-holes became single again but tended to be smaller than before; here and there they were grouped, as if two or three small posts, each no more than two to four inches in diameter, had been made to do the work of one larger unit. This belt of post-holes continued for 67 feet, bearing 338° (N.N.W.) from where we first found it on the edge of the platform.

At the same time we looked for a parallel system of post-holes standing in a similar relation to the eastern side of the causeway. These were soon found. They varied from six to 15 inches in diameter and formed a belt parallel to the first and separated from it by an interval of about 18 feet. Two of them, near the southern end, belonged to the second period; all the rest to the first. The second-period floor was here extremely hard and could only be penetrated by means of violent picking. This range of holes was pursued for 28 feet, then found again at 35-40 feet, and then again at 65 feet. It began on the south, like its western neighbour, as a single, though irregular and straggling, range; later it seemed to become double. The strip of ground between these two ranges, where trenched across, was barren of post-holes;

it was a plain strip of floor, soft gravel or soft clay in the first period, hard sammel in the second.

This entrance, to give that name to the complex of post-holes described above, is curiously orientated. Its central line, if produced to the north side of the platform, would divide it so unequally that the part falling on the east of the line would be only one-third of the whole (eastern portion, 650,000 square feet; western portion, 1,300,000 square feet); this line passing at a distance of over 20 feet from the point described above as the 'centre' of the monument. On the other hand, the orientation of the entrance (338° or in the reverse direction 158°) corresponds almost exactly with that given above for the causeway connected with it (160°).

3. *The Central Platform*: *Outermost Circle.*—Working clockwise along the edge of the central platform from our first cutting, and opening up a considerable area of the second-period floor, we found nothing at all, either in the nature of post-holes or of small objects. At a place 50 feet west of the causeway and five feet in from the edge of the platform, however, we came to a place where this floor had given way; and digging down here we found a post-hole (A3) two feet six inches in diameter and the same in depth below the first-period floor, to which it structurally belonged. It was lined with packing-stones and had held a round post two feet thick, which had been cut off square at its butt-end and had rested on a bed of large stones set in clay at the bottom of the post-hole. No inclined ramp had been cut to facilitate the erection of this post. At Woodhenge there is no ramp in the holes for posts as small as this.

Continuing westward, we found another sunk place in the second-period floor at a distance of 21 feet from the first (centre to centre). This however proved to be not a collapse but a bowl-shaped hollow, four feet three inches across and eight inches deep, lined with small cobbles

PLATE III.—Outermost circle: clay-and-cobble bed for standing stone, second period, concealing post-hole A4 of the first period.

To face p. 15.

carefully set in clay. Lying directly on these cobbles we found numerous splinters, large and small, of hard Borrowdale stone. Others lay on the sammel floor up to a foot away from the edge of the hollow. Altogether we found about a hundredweight of them, some as much as 12 inches long. From the way in which they had broken it was evident that they had originally formed part of a very large boulder, presumably ice-borne, which had stood in this artificial bed until it had been broken up by the use of fire and water. The cobble bed belonged structurally to the second floor. On removing it, we found immediately below it a post-hole (A4), 18 inches in diameter, in the first-period floor. This had been completely filled up with small cobbles set edgewise in well-levigated clay, and it was this clay-and-cobble packing which, above the first-floor level, had been expanded into the bowl-shaped structure we had originally found.

In the first period, it was evident, a wooden post had stood here. In the second period, the post had been replaced by a large stone. To provide a firm foundation for this stone over a soft gravel subsoil incapable of carrying a heavy weight concentrated on a small area, an elaborate clay-and-cobble foundation had been constructed, showing a good deal of technical knowledge. Finally the stone had been destroyed; and the discovery of its fragments immediately upon the second-period floor dated its destruction to a time when that floor was not yet overgrown with humus.

At a distance of 21 feet from this, another post-hole (A5) was found in the first-period floor, 13 inches in diameter by 18 deep. There was a soft patch in the second-period floor, about four feet across, not immediately above it but lying to the north of it so that the post-hole came under its southern edge. This soft patch, however, did not seem to have been connected with a second-period

post or stone; it seemed rather to have been caused by drainage of moisture into the soft material filling the post-hole in the floor below it.

The next hole, A6, (19 feet 6 inches away, centre to centre), was 15 inches in diameter at the top, 11 at the bottom, and 18 inches deep. The second-period floor ran unbroken over it, quite smooth and almost as hard as concrete. It was only after picking away a square patch of this second floor to a depth of seven inches that we found the post-hole in the first-period floor beneath it.

The next, A7, again 19 feet 6 inches away, was 18 inches in diameter and 18 inches deep. A8, 24 feet further on, was the same size; but here there was no second-period floor above it. This floor seemed to have been cut away in modern times, in connexion with the remodelling of the site by Bushby of the Crown Inn, further discussed below.

A9 was found 23 feet beyond this. It was a small one, only about nine inches in diameter.

Working back towards the causeway from A3 (this entailed shifting our original dump; I follow the order of discovery) we found A2, a small hole, 18 feet from A3. It was six inches in diameter and nine inches deep. A1 was 18 feet from this; it was 15 inches across and 18 deep.

Beyond A9 we searched no further; but we dug a hole 10 feet square on the east side of the monument, 55-65 feet from the causeway, in the hope of finding a hole corresponding to A3. We found nothing. There was no hard sammel floor of the second-period type; only a very soft gravel, two feet six inches down, not unlike the first-period floor but more like a natural gravel-spread, and containing no post-holes. It will be necessary to search more systematically for the A holes on the east side, next year.

4. *The Central Platform*: *Second Circle.*—It was remarked above that the post-hole range flanking the entrance on the west was single near the ditch, and

became double towards the interior of the platform-area. Further excavation at the place where it became double showed that here a second range of post-holes branched westward from it at right angles. This consisted exclusively of first-period holes, all sealed by the second-period floor, similar in all respects to the holes of the entrance and disposed like them in an irregular belt more or less approximating to a double line. We followed this for 13 feet, finding 17 post-holes; and then on the other

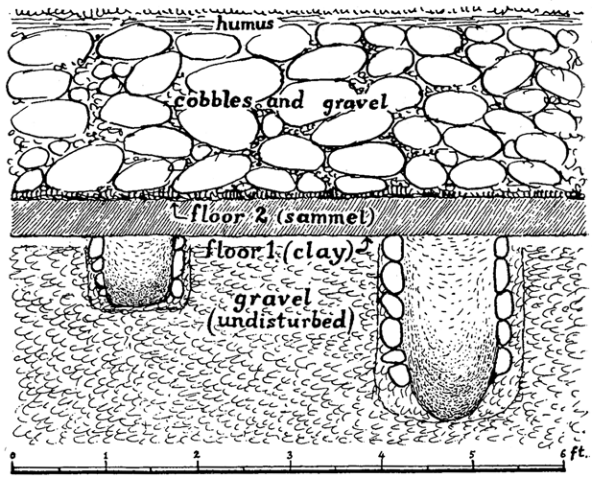

FIG. 3.—Specimen section, taken through post-holes of 'Circle B', west of the entrance, The post-hole on the left is of normal proportions; that on the right is exceptionally deep.

side of our dump picked it up again, cutting through the second-period floor to find it, at the same radial distance from the ditch. We also found eight post-holes of the same series east of the entrance.

This series, so far as we have studied it, appears to indicate a circle, 20 feet in from the outermost circle, and composed not like it of single relatively large posts, but of small posts sprinkled in a somewhat irregular belt, like those which made up the flanking-structures of the

entrance. Such a "circle," if laid out uniformly at 20 feet from the outermost circle, on the principle followed in the lay-out of Woodhenge (where the principle of uniform distance causes the inner "circles" to exhibit an increasing degree of departure from the circular form and a progressive exaggeration of their elliptical character), would be in shape an approximate ellipse with a major axis of 120 feet and a minor axis of 90.

5. *The Central Platform: Third Circle.*—Having found this reason to suspect a second circle, we looked for a third, again at an interval of 20 feet. We searched for this in one place only, by deepening to the first-period level a trench dug at the beginning of our operations into the edge of the central disk. Here we found seven post-holes in the first-period floor, arranged in a manner which would be consistent with the hypothesis that there was a third circle of small posts disposed in a belt like those of the second. If there was such a "circle" its major axis would be about 80 feet, its minor about 50.

6. *The Central Platform: Central Disk.*—As soon as we found that the central platform had been covered in modern times with a two-foot layer of boulders, the significance of the central disk (see above, I) became a matter of interest. Was this a structure earlier in date than the boulder-spread (which in that case would impinge on its edges), or was it contemporary with it, or subsequent to it? And what was its relation to the two prehistoric floors? To answer these questions we cut a trench (mentioned in the preceding paragraph) into its southern edge.

This trench revealed the following facts. Both the prehistoric floors go on uninterruptedly beneath the central disk, which is therefore subsequent to them both and has no connexion with them. But it is not, like the boulder-spread, composed of boulders with gravel in their interstices. It is composed of soil (a red humus

containing a large percentage of sand derived from decomposition of the Penrith red sandstone) in which boulders are here and there embedded, and the boulder-spread stops short on reaching it. This would make it either contemporary with the boulder-spread (though not homogeneous with it) or earlier than the boulder-spread though later than the second of our prehistoric periods. The choice between these alternatives is determined by the fact that Stukeley mentions it. "The *area*," says he (*Iter Boreale*, p. 43), by which word he denotes the central platform, "had a circle within, somewhat higher in elevation than the other" i.e. the remainder of the central platform. The central disk was therefore visible, perhaps more conspicuous than it is to-day (since in its present condition it might have escaped notice), in the first quarter of the 18th century.

The boulder-spread, I am pretty confident, is the work of Bushby; Stukeley's evidence thus proves that the central disk was there at least two generations earlier.

7. *The Central Platform*: *Central Area.*—About 65 feet from the causeway, the western post-hole range of the entrance came to an end, terminating in half-a-dozen holes apparently forming an eastward-turning jamb as if at a doorway. Beyond this we opened out an area measuring 45 by 28 feet.

This central area was first cleared down to the second-period floor. The material above this level was all central disk material, that is red humus with a lot of boulders in it. Among the boulders, a foot below the turf, was a coin of Gallienus (antoninianus). At the western end of this area there was a patch about 10 by 8 feet where it consisted exclusively of boulders, closely packed together and having neither soil nor gravel in their interstices. This was the only place on the whole site where we found such a state of things; and it is noteworthy that the place in question was exactly in the centre of the central disk

and exactly above a curious feature to be described in the next paragraph but one.

The second-period floor was found to be covered with a thin layer of dirty trampled mud, and a few post-holes were found in it. The mud was very carefully removed, but no relics were found in it except one small flint flake (unworked), a few very small fragments of burnt bone, scraps and smudges of charcoal, and some slivers of wood. Sunk in this floor, and structurally belonging to it, was a bed-like hollow, eight feet three inches long by three feet wide by 10 inches deep, with rounded bottom and rounded ends. It was made of stones and well lined with clay, whose surface was burnt and blackened. It was full of fragments of stones that had been split up by heat into the size of large road-metal; these were mixed with a great deal of oak charcoal and unctuous blackened earth. It was evidently the site of a cremation. The fragments of stone would be explained by suggesting that the trench had been surrounded with a wall built of river-cobbles intended to keep the burning matter together during the process of cremation, and that after the process was complete the cracked remains of these cobbles had been swept into the cremation-trench.

West of this cremation-trench and separated from it by an interval of eight feet was the heap of boulders mentioned above. On removing it, we found it to overlie an oval patch of clean clay belonging to the second-period floor, but sharply contrasting with the sammel elsewhere associated with that floor. The clay was well levigated but mixed with cobbles. In it were four depressions, arranged in a lozenge-shaped pattern. The largest was to the south. It was a neatly-formed circular bowl-shaped hollow, 24 inches in diameter and 15 inches deep, lined with clay and perfectly clean. When we found it, it had been filled up very tidily with large cobbles. When these were removed, it looked rather as if it had served as

PLATE IV, A.—Central area: cremation-trench, looking north, with the second-period floor exposed.

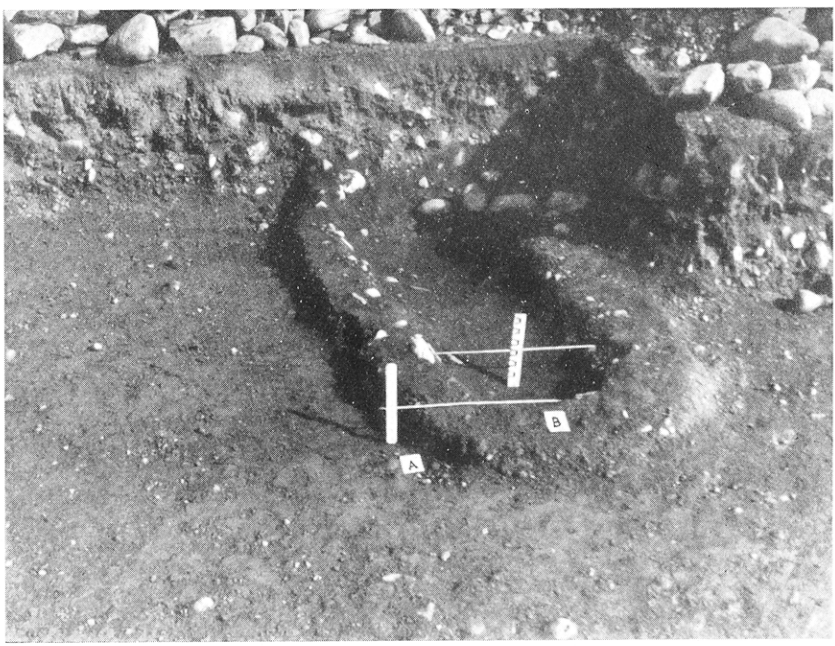

PLATE IV, B.—Cremation-trench, looking north, with the first-period floor exposed round it.

To face p. 20.

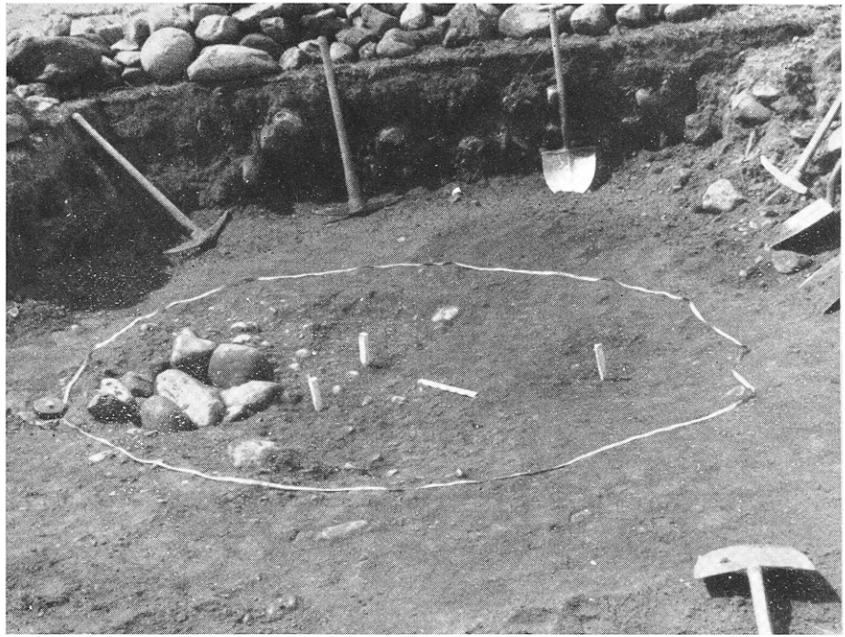

PLATE V.—Central area: oval patch of clean clay (p. 20) with bowl-shaped depression filled with cobbles, and pegs marking the three other depressions. Second-period floor exposed.

To face p. 21.

a socket for a standing stone. The northernmost hole, five feet away from it (centre to centre), had a diameter of only 15 inches and a depth of only six, but was similar to it in character and structure, though it had not been similarly filled up with cobbles. The east and west holes were small and irregular, and were full of blackened earth with scraps of charcoal. Underneath the clay patch containing these holes we found at its edges the first-period floor; but nearer to the centre this floor had been dug away when the clay patch was made.

The expiration of our time prevented us from digging further in the central area. All we could do was to clear the whole* of what we had excavated down to the first-period floor level. The interval between the two floors was only three inches and the work had to be done very cautiously as the weather had now broken; but it proved possible to clear the whole area and to ascertain that the first-period floor was throughout composed of soft levigated clay and was quite clean, showing no traces of a muddy trample like that on the sammel floor of the second-period. The first-period post-holes were not sufficiently numerous to show the plan of the building to which they belonged. But one of them yielded an interesting find. Set in the bottom of it among clay as a support for the post it had contained, and covered by the brown powdery soil derived from the decomposition of this post, was a fire-broken fragment of cobble like those which we found in the cremation-trench. If, like them, it was derived from a cremation, this must have been a cremation that took place before the erection of the first-period building, whereas the cremation-trench belonged to the second period. It is obvious that if our site contained human remains cremated on the spot, the process of cremation must have preceded the erection of a wooden building on the site; especially since (as we shall see) the

* Except the cremation-trench, which we left undisturbed.

building in question was, in the first period at least, roofed. Stones cracked by a first-period cremation would therefore be available for use in the structure of the first-period building, and accordingly I am disposed to regard the stone now under discussion as evidence that the site contained a cremation in the first period, as it certainly did in the second.

8. *The Ditch.*—One section was cut across the ditch on the south-east, about 25 feet east of the causeway. A trench was also cut across the causeway, going down to ditch-bottom on each side.

The section revealed an original flat ditch-bottom 17 feet wide, at a level of two feet below the present turf bottom, eight feet below the present surface-level of the central platform and about five feet nine inches below the level of the second-period floor. This ditch-bottom was a natural bed of very hard gravel. It was covered with a thin layer of decomposed vegetable matter. On either side the gravel rose at a slope of about 40 degrees, making a sharp angle with the bottom; in this angle was a thicker accumulation of vegetable matter. No objects were found.

The outer side of the original ditch was found standing to within six inches of the present surface. Assuming that its lip had originally stood at the level of the second-period floor, the alteration in its form is amply accounted for by natural weathering. The inner side was in a very different condition. Except for the lowest two feet it had been broken away, and where we should have been digging behind it and below the original floor we found ourselves in a very loose mixture of gravel and cobbles. It was evident that the inner lip and most of the inner side of the original ditch had been removed, and that the steep inner side of the ditch as at present existing is entirely the result of this operation; the original inner lip having been six feet out from the present lip and two and a half feet lower in level.

PLATE VI.—Central area: bowl-shaped hollow (p. 20) after removal of its cobble filling and with the first-period floor exposed.

To face p. 22.

This explained the suspiciously steep angle and sharp lip everywhere exhibited by the inner side of the ditch as now existing. As these features are uniform all round the monument, I infer that the cutting-back of the inner side of the ditch, proved in the case of this one section, has been uniformly carried out everywhere. The original ditch was 30 feet wide at the surface and five feet nine inches deep.

9. *The Bank.*—Three sections were cut through the bank: no. 1 on the south-east, continuing the section across the ditch; no. 2 on the north-west, close to the Tirril road, and no. 3 to S.S.W. In every case, the bank was found to be composed of gravel and cobbles laid in layers as the material had been carried up from the ditch; and, at the top, the angle at which these lay indicated that the original summit of the bank had been nearer to the ditch than it lies at present, for the layers immediately below the present summit were found to slope downwards towards the outside of the bank.

The bank had been built as follows. First the turf had been stripped from its site. Then a foundation of carefully-laid cobbles had been prepared, extending all over the area to be occupied by the bank and terminating all round in a kerb of larger stones. Upon these cobbles was laid a bed of turves, originally perhaps from one to two feet thick; for as found by us it was still everywhere six inches in thickness, and in some places as much as a foot. Then along the centre-line of the future bank, or perhaps underneath its future summit, a core of large cobbles, set in turves and bound together with turves, was built. Lastly, the upcast from the ditch was heaped against either side of this core and over its top. At either side of the entrance the turf-work was more elaborate. Here we found the well-known striped appearance of laid turfwork rising to a height of two feet, and indicating that the bank had been retained on either side of the entrance by regular walls of turfwork.

Excavation at the entrance also determined the date of the bank relatively to the monument as a whole. Underneath the cobble foundation of the bank, at the west side of the entrance, we found three post-holes in line with the range forming the eastern side of the "entrance" (see 2, above). Their continuity with this range was demonstrated by finding some more directly between them and those on the central platform which have already been described. The inference is that the structures of the bank here overlie and obliterate the timber structures and floor-levels of the first period; and that in consequence both bank and ditch (for the two cannot be separated) are wholly subsequent to the first period and presumably belong to the second period.

Section 3 was designed to throw light on the enclosures lying here against the outside of the mound. We found that they were made of gravel robbed from the mound. and that they yielded potsherds of the 17th century, They must therefore be associated with agricultural operations of that date. These low gravel banks might have supported wooden structures, whether pens or sheds, built on sleepers.

10. *Dating Evidence.*—No potsherds, implements, weapons or other datable objects, belonging to any of the three prehistoric periods, were found. At present, any argument as to the date of those periods must depend on structural features resembling similar features already dated elsewhere.

IV. Conclusions.

1. *First Period.*—The earliest structure on the site was an elliptical wooden building, occupying the entire area of the central platform. On the south and west, its limits coincided with those of the platform; for the north and east this awaits proof. This building was made by erecting concentric rings of posts at intervals of 20 feet.

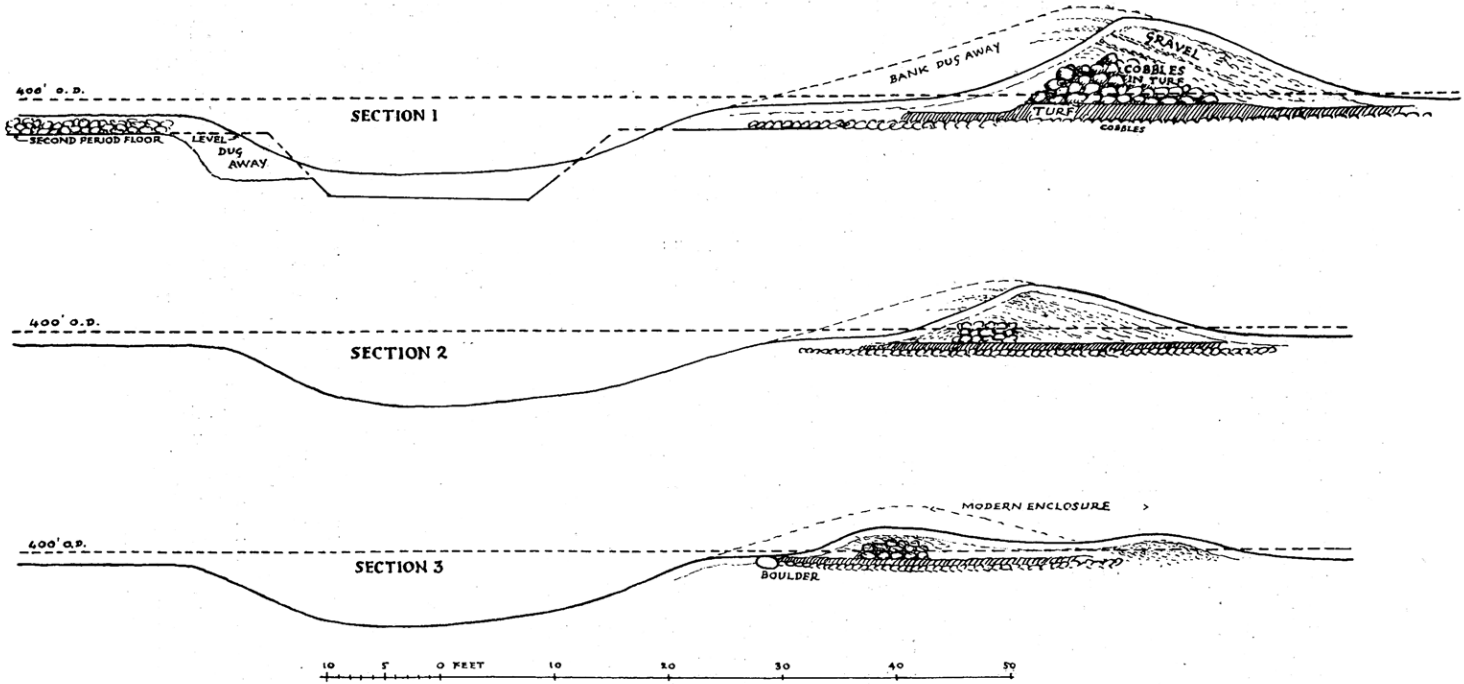

FIG. 4.—Sections across ditch and bank.

The outermost ring consisted of large posts, mostly over a foot in diameter, standing singly; the other posts were on average much smaller (generally about six inches) and were grouped close together in dense belts rather than rows.

This method of planting posts is already familiar in Bronze Age building. For example, the post-holes found by J. R. Mortimer inside the Calais Wold barrow already referred to were disposed in a ring which in some places was double, in others triple: it was in fact a belt of post-holes exactly like those found by us at the Round Table except that the holes were individually somewhat larger; the type of construction implied is the same.

None of our post-holes can have held free-standing uprights. Evidence on this head is of two kinds.

(*a*) The ground is a soft gravel, on which a clay floor has been spread. In ground of the same kind, the posts of the Arminghall monument, each about two and a half feet thick, were sunk between six and seven feet into the subsoil. In chalk, the posts of Woodhenge were sunk from three to six feet. Anyone erecting a fence in gravel such as exists at the Round Table would drive his four-inch uprights at least 18 inches to two feet into the ground. Yet the post-holes found by us were seldom over a foot deep, and none of them was deep enough to hold a post of the diameter actually involved against the most ordinary types of strain. Moreover, we did not find a single case in which evidence of such strain appeared, in the shape of distorted post-holes or disturbed packing-stones. These shallow holes in soft gravel are intelligible only on the hypothesis that the posts which stood in them were connected together above ground in such a way that no lateral strain fell on the holes themselves; these holes in fact must have functioned merely as sockets in which rested the projecting feet of a complex and relatively rigid structure.

(*b*) The floor of this building was made of materials which if exposed to the weather would rapidly deteriorate (either soft gravel or soft levigated clay). If a floor of these materials were subjected to any kind of traffic while thus exposed to the weather, it would become extremely dirty and wear into holes and puddles and ruts. As a matter of fact, we found it everywhere quite smooth and perfectly clean. This can only be explained by its having been under cover. In other words the entire building was roofed.

The difference between the lay-out of the various 'circles' gives us further information about the plan of this building. What I have called 'belts' or 'ranges' of small post-holes must represent walls, where the intervals between the uprights were filled up with wattles or other continuous structures. The isolated post-holes of the outermost circle, on the contrary, show that this circle was a veranda or peristyle. If one is justified, at this early stage of the excavation, in imagining the first period building as a huge thatched hut, supported on a timber framework, one must add that its builders knew enough about the design and construction of trusses to prevent the thrust of the roof from forcing the outermost uprights away from the perpendicular.

This building was approached by a long, straight, covered entrance, 20 feet wide, pointing S.S.E. Whether there was also another entrance we do not yet know. This entrance-passage penetrated right into the heart of the building and extended for at least 75 feet outside it; beyond that, no attempt has been made to trace it. If prolonged, it would hit the Little Round Table.

The present earthworks did not exist at this period. There may have been a small ditch and mound encircling the building; if so, all trace of them has been obliterated by the larger earthworks of the second period. Alternatively, there may have been nothing of the kind in existence.

On the evidence of one small fragment of burnt stone, the suggestion has been made, above, that this building was erected over the site of a cremation, in which case it must have been essentially a kind of temple to a dead "hero" or divine king. No direct evidence of dating is to hand, and accordingly I prefer at this stage to offer no opinion as to its date, beyond saying that structural parallels, together with the cremation-rite apparently involved, assign it to the Bronze Age.

The building came to an end by slow decay. It was neither dismantled nor burnt. The posts decayed gradually in position; it is possible that some of the numerous post-holes of the interior structures are due to repairs and reinforcements of the decaying timber-work. How long the process of decay would take, in posts standing in a well-drained gravel soil and completely protected from the weather, it is hard to say; certainly one would expect them to last for some generations.

2. *Second Period.*—At some time when the original building was completely decayed, but its form still clearly visible, the site was re-used and a quite new set of structures created upon it. The whole of the formerly built-upon area was floored afresh with sammel, well rammed and capable of resisting the weather. At points round its periphery (we know only of one such, but there may have been more) great standing stones were set up in sockets carefully prepared on the site of old post-holes. In the centre a cremation-trench was made, and close beside it a pair of standing stones erected. Another "hero" was cremated, and his ashes perhaps buried close by though they have not yet been found. Close to the standing stones, possibly over them, a little hut-like shrine was built. Where the entrance had once penetrated the veranda of the original building a kind of porch, rather like a lych-gate, was erected. Round the whole, a deep ditch was dug and an external mound made

of its upcast. Entrances were left to N.W. and S.E., and the N.W. entrance too may have been provided with a lych-gate. In the jaws of the N.W. entrance two great standing stones were erected; others, possibly, in a similar position at the other entrance.

3. *Third Period.*—That there was a third prehistoric period is proved by the following evidence.

(*a*) The shattered fragments of the stone which, in the second period, stood on the site of the post-hole A4, were found lying right on the sammel floor round its base, as well as right on the cobble paving of its socket. That is to say, this stone had been destroyed while this sammel floor was still in use and therefore during the life of the monument. This proves a remodelling of the monument after the second period but of prehistoric date.

(*b*) The central disk is a mound of soil and cobbles immediately overlying the second-period floor. When it was made, two standing stones were uprooted from their sockets close to the cremation-trench, and one of these sockets, when still quite clean, had been filled with cobble-stones which formed part of the core of this mound. Here too, therefore, we have traces of a third prehistoric period, that is, of a remodelling carried out while the structures of the second-period were still in use.

There is no proof that (*a*) and (*b*) took place at one and the same time. For the present I assume that they did, partly because periods *non sunt multiplicanda praeter necessitatem* and partly because each of them involved similar operations, namely the destruction or dismantling of standing stones.

Assuming, then, that there was a third period, it began by destroying at least one standing stone (possibly others, if there were others) on the edge of the central platform, taking down the central standing stones, and erecting a mound in the centre. The whole was thus converted into something rather like a disk-barrow.

At the same time, the standing stones at the entrances were left in place; at least, those at the north entrance were left, for Dugdale saw them there in the 17th century.

With regard to the date of this remodelling, the only evidence (if it is evidence) is the coin of Gallienus found a foot down in the material of the central disk. If this were taken at its face value, the third period would be a Romano-British period, beginning in the third century A.D.; hardly later than that, because coins of Gallienus did not as a rule remain very long in circulation, and this one is in fresh condition though badly corroded. There is nothing inherently impossible in the hypothesis that a Bronze Age sanctuary might have been remodelled in Roman times, though no example can be quoted; but the evidence is insufficient to support such an hypothesis. Whether through piety or carelessness, Roman coins are often found at prehistoric sanctuaries; and there are many ways in which a coin, once dropped, may work down beneath the surface. It is more probable that all three periods are pre-Roman; though the place was very likely still revered as sacred by the Romanized Britons of the *vicus* at Brougham.

4. *From the Roman age to the Eighteenth Century.*—It is unlikely that anything was done to the site for many centuries after this. In the seventeenth century, Stukeley tells us, the meadow in which the Round Table stands was used as a camping-ground by "the Scots army that accompanied King Charles II on his way to Worcester" (*Iter Boreale*, p. 43). It was during the same century that Dugdale saw the site, with two standing stones still erect at its north entrance; and it was probably during the same century that the enclosures on the S.W. side were made. By the early 18th century the last standing stones had gone; Gibson saw none when preparing his edition of Camden, and Stukeley saw none either.

5. *William Bushby.*—This was the name of the man

who in 1770, as his inscription over its front door still testifies, built the Crown Inn, immediately north of the monument. C. W. Dymond in these *Transactions* (o.s. xi, 201) says that "more than 60 years ago" (that is, some time before 1829) one Bushby, either this man or his son, "deepened the ditch, and threw the earth on the banks," relying for his facts on the memory of an old man called Abraham Rawlinson, 83 years of age in 1889.

Our excavations made it pretty clear what Bushby did. His main object was to raise the level of the central platform. For this purpose he deposited upon it, as I calculate, about 40,000 cubic feet of boulders and gravel. This he obtained partly by robbing the inner side of the mound, thus producing a steeply-scarped inner face and a berm; partly by cutting back the inner edge of the ditch; and partly by carting boulders from the adjacent bed of the river Lowther. He also both narrowed and heightened the south causeway, providing it with a hard gravel road for the passage of his carts, and continuing this road out through the gap in the mound. If, as Rawlinson seems to imply, he did this in the first quarter of the nineteenth century, he did it when the Tirril road had been already built and when, therefore, the northern entrance had been already destroyed.