

PART ONE
THE EARLY IRON AGE

"On St. Katharine's hill juxta Winton is a Campe : single
work and single graff : neither round nor square : but according
to the ground of the Hill."

JOHN AUBREY (1626 - 1697).

MSS. in the Bodleian Library.

PART ONE

THE EARLY IRON AGE

A BRIEF sketch of the nature and importance of the occupation of the hill in this period has already been given; there is nothing to shew that it was inhabited at any earlier date, and the remains discovered attest the presence of people of Iron Age culture for an estimated period of some four centuries from late Hallstatt times to a date in the middle La Tène period.

The remains of the settlement will be described in the following order:—

1. The Defensive Earthwork encircling the hill.
2. The Entrance through these on the north-east side.

This section is followed by Notes on the use of timber in Early Iron Age fortifications, and on the development of British Hill Forts of the period and their defended Entrances.

4. The Pits and other traces of habitation within the defences.

5. The Pottery and Objects found in the excavation of the above and elsewhere on the hill.

An endeavour will be made, in the essays which conclude this part of the Report, to bring the evidence obtained by these excavations into relation with that from other sites of the period, and to fix, as far as is at present possible, its position in the pre-history of the country, with special reference to the origin of the City of Winchester.

THE DEFENSIVE EARTHWORK

The earthwork forms a complete ring (see fig. 1), properly broken only on the north-east by the original Entrance, which is flanked by the inturned ends of the rampart. The smaller breaches which in six places have been made by modern paths do not seriously interrupt the continuity of the work. It encloses a roughly oval area of some 23 acres, of which the highest point of the hill lies rather north of the centre. On the north-east side the hill slopes gently down to the saddle

which connects it with the main chalk plateau to the eastward, and across this slope the earthwork runs in a broad curve some little distance above the 300 ft. contour line. The rampart is here at its highest, and effectively commands the only practicable approach over the saddle and up the slope to the Entrance. The latter lies in the middle of this part of the earthwork's course, on the crest of the natural camber of the slope, and from here the rampart curves away to lower levels on either side, so as to follow the true brow of the hill all round. It thus lies rather nearer the 200 ft. than the 300 ft. contour line on the south and west, and in fact it passes round the larger part of the hill very considerably below the summit, the lowest point on its course being at the south-west. This is due to the shape of the hill; the earthwork was evidently planned to take the line from which the contours allow most control of the ground beneath. Its builders clearly knew and guarded against the danger of 'dead ground.' It thus falls into Class B of the Earthworks Committee's Scheme of Classification: "Fortresses on hill-tops with artificial defences, following the natural line of the hill."¹

It has been described by T. W. Shore in his list of ancient camps in Hampshire,² in which the height of the summit of the hill above the mean level of the earthwork is noted, and by Dr. J. P. Williams Freeman in his classified list of Hampshire Earthworks,³ as well as by the same author in his book *Field Archaeology as Illustrated by Hampshire* (1915),⁴ where he gives the most complete summary of the surface features of the hill prior to the present publication.

The fortification consists of three parts, the Rampart, the Ditch immediately outside it, and on the outer edge of the ditch a low bank, sometimes entirely absent, and on either side of the Entrance double, which will here be referred to as the Counterscarp bank. The term "counterscarp" belongs to the classical vocabulary of the military engineering of a more recent age, in which it properly means the outer *slope* of the ditch, but such a usage as is here employed has been often adopted

1. *Scheme for recording Ancient Defensive Earthworks and Fortified Enclosures*, Congress of Archaeological Societies 1910, p. 7. Cf. the observation of Aubrey quoted above (p. 10), paraphrased by Gough, *Camden's Britannia* (1789), I, p. 137.

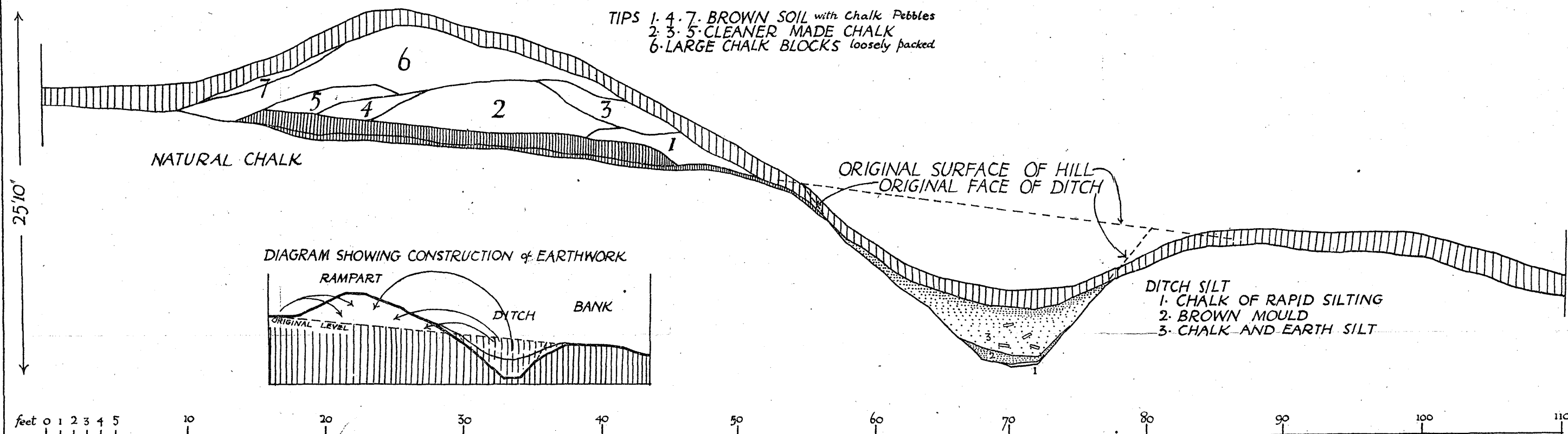
2. *H.F.C.* I, Part 1, p. 22 ff.

3. *Ibid.* VI, p. 343 ff.

4. Pp. 251-254; Plan and concise description, p. 403. Under Class B in list according to the above classification, p. 335: under Class A ("Fortresses surrounded by treeless country suitable for a pastoral people"), in list of Earthworks classified according to use, p. 340.

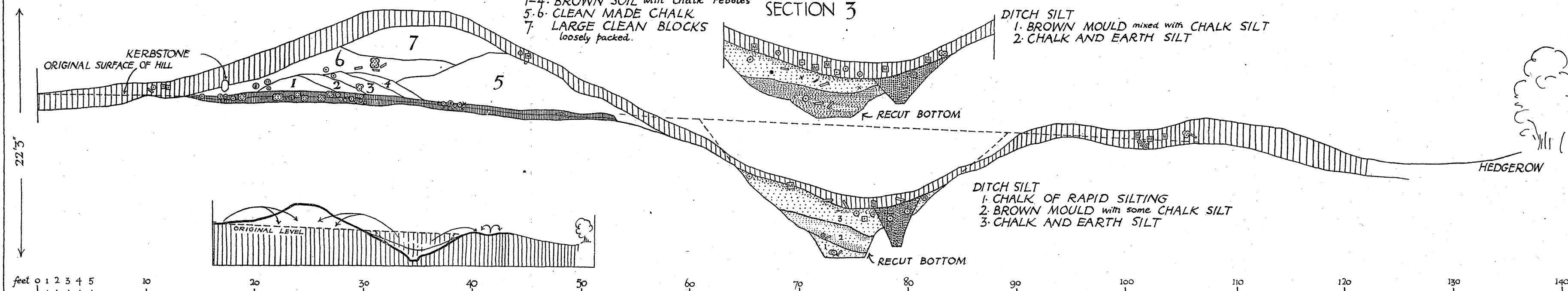
CROSS SECTIONS OF RAMPART AND DITCH

SECTION 1



- MODERN TURF and SUBSOIL
 - OLD TURF and SUBSOIL
 - MADE CHALK
 - CLEAN CHALK SILT
 - BROWN MOULD
 - SILT OF SECONDARY DITCH
 - FRAGMENTS of
 - GROUPS of fragments
 - FRAGMENTS illustrated
 - COIN
 - ROMANO-BRITISH POTTERY
 - MODERN or MEDIAEVAL POTTERY
 - BONES Animal
 - SAWN BONES
 - CHARCOAL
 - IRON
 - PEBBLE - ? SLING BULLET
- EARLY IRON AGE POTTERY

SECTION 2



CROSS SECTION OF ENTRANCE

SECTION 4

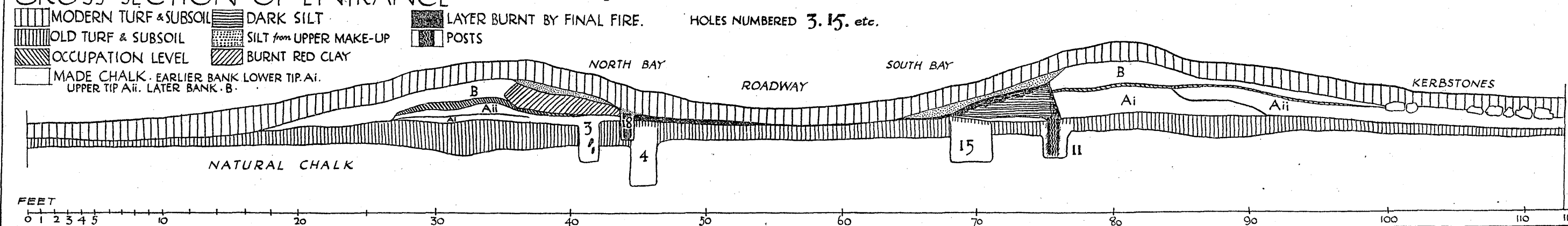
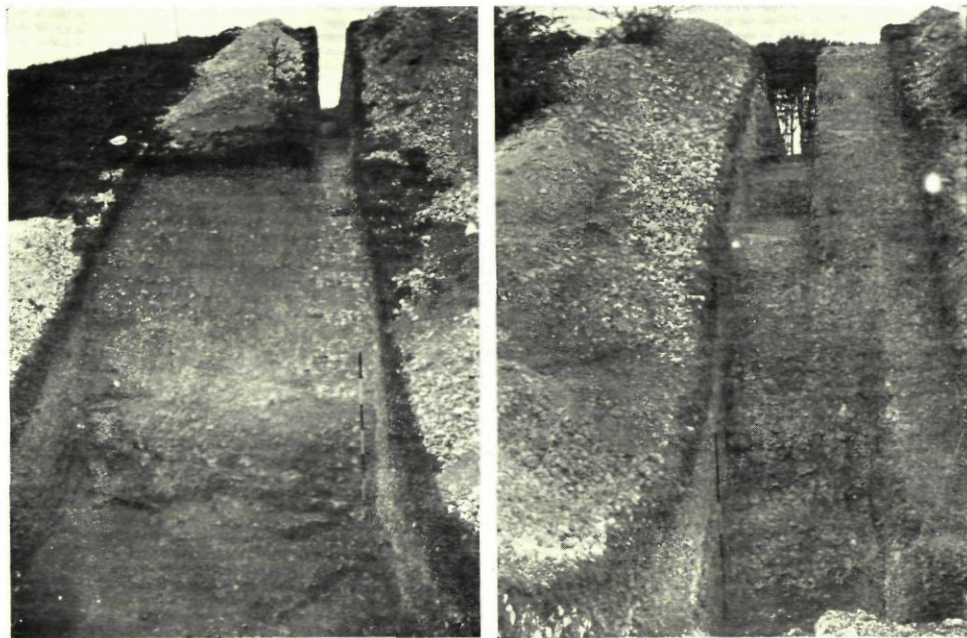


Fig. 4, Sections 1-4.

For the position of Sections 3 and 4
see Fig. 5, p 29.

PLATE II



1. Face of Rampart and Ditch in Section 1, seen from East.
2. Face of Rampart and Ditch in Section 2, seen from East.

by modern archaeologists,¹ and is not too loose to be permissible, the term "glacis," which strictly means the slope outside the ditch, being obviously inappropriate to a prehistoric work of this character.

Two sections were cut through the whole earthwork; Section 1, cut in 1928, being set at right angles across its line from a point 530 ft. S. 40° E. of the summit of the hill, and Section 2, cut in 1927, similarly set from a point 415 ft. E. 15° N. of the summit of the hill, 540 ft. N. 8° E. of the setting-out point of Section 1, and immediately south of the entrance.

SECTION 1 (Fig. 4, No. 1).

Section 1 was 4 ft. wide and 110 ft. long. The natural slope of the ground to the S.E. is here about 1 in 9. The top of the existing rampart is 5 ft. 6 ins. above the ground-level at the inner end of the section, and 20 ft. 3 ins. above the modern ground-level in the ditch. There is no counterscarp bank here, as the slope of the hill provided sufficient strength without one, and the outer lip of the ditch, which must originally have been a sharp angle some 1 ft. 6 ins. above the present ground-level, has been eroded to a gentle slope by drainage into the ditch.

The Rampart. (Plates II, 1, and III, 1.)

The cutting through the rampart disclosed most interesting features, which enable the method of its construction to be clearly appreciated.

The old turf-line, a band of dark soil 1 ft. in average thickness, was discovered to run under the make-up of the rampart from a point 14 ft. to a point 46 ft. from the inner end of the section. Outside the latter point the excavation for the ditch had evidently begun, while inside the former point it was no less clear that the surface soil had been scraped away for some distance to provide material for the rampart in addition to that obtained from the ditch. The slight hollow in the surface formed by this scraping can be seen almost all round its course, its size varying in proportion to that of the rampart: it is only absent where, owing to the steepness of the slope, the inner face of the rampart is relatively low, as on the South and West (see p. 19).

1. e.g. A. Keiller, in *Wessex from the Air*, p. 89.

The rampart was found to be composed of no less than seven different tips or shoots, each easily distinguishable from the others by the quality of its material. These tips were separated from each other by thin sharp lines of demarcation, unlike such lines as would separate chalky strata of different periods, but affording unmistakable evidence that while the construction of the rampart took place at a single period, it was carried out by the successive dumping of tips of material of different qualities and from different sources, the superposition of which was easily traceable.

It is well to stress the fact that the lines of demarcation between these tips were not thick seams of dark mould representing laid turf, but shewed merely as sharp surface-lines, here and there emphasized by a thin streak of brown soil. Each tip had evidently been piled to an even surface before being overlaid by the next.

Evidence has been found on other sites for the covering of such successive tips of rampart-material by layers of turf, to give them stability and to prevent slipping; the seams of dark mould so formed have the appearance of occupied surface strata, and in these cases independent evidence has been required to prove that the rampart was all of one date. Such seams were noted by Pitt-Rivers in the Wansdyke¹ and by Mr. and Mrs. Cunnington in the rampart of Oliver's Camp,² and apparently also in the first addition to that of Figsbury Rings,³ though in the last case they seem to have been notably thinner than the bands of turf-mould separating the additions to the rampart-material dating from distinct periods. At Cissbury, while the lowest stratum of the rampart-material consists of turf clearly from the line of the ditch, the later heightening of the earthwork on either side of the entrances consists of alternate layers of chalk rubble and turf, forming exactly analogous seams.⁴

At St. Catharine's Hill we have evidence of the same method of constructing the rampart in successive tips, but clearly no facing of turf was laid down on each as in the cases cited: the work was considered stable enough without. That the tipping

1. *Excavations*, III, p. 252.

2. *W.A.M.* XL, pp. 429-30 and 432-3.

3. *W.A.M.* XLIII, pp. 56-7, with fig. II.

4. Toms in *Suss. Arch. Coll.* LXVII, p. 55 ff., embodying Lane-Fox (Pitt-Rivers) in *Arch.* 42, p. 53 ff., and *J.R.A.I.* V, p. 357 ff.

method of construction was thus practised without binding-layers of turf has not apparently been so far attested in chalk country.

On a different subsoil the rampart of the fort at Lydney Park, Gloucestershire, now being excavated by Dr. R. E. M. Wheeler, seems to have consisted originally of two stony tips surmounted by an earthy one, though of course continuous demarcation-lines are here not to be expected owing to the nature of the former; a closer parallel is afforded by the mass of gravel supporting the seats of the audience in the Roman Amphitheatre at Caerleon,¹ where many successive tips could be recognised, demarcated analogously to those composing the St. Catharine's Hill rampart.

It is evident that no covering of turf or soil was laid on the latter, for where such thick seams of dark mould occur in the composition of the rampart where it flanks the entrance (see below, p. 33) there was abundant proof that they represented an occupied surface-level separating work of two different periods. The distinction between these seams and the thin lines demarcating successive tips of the same construction-period will be emphasized in describing the sections there cut in which both appeared together.

To return to the composition of the rampart in Section 1, the first tip, on the edge of the ditch, consisted of brown soil mixed with chalk pebbles, and represents the removal of the surface from the site of the ditch. Next, there is a second tip of cleaner chalky material, a good deal larger, deposited inside and partly overlapping the first: this is the subsoil which lay under the surface of the ditch site and above the hard chalk rock. A third and smaller tip of similar quality lay over these two on the outer slope. The fourth and fifth tips were dumped from the inside: the former consists of the scrapings of the soil inside the rampart already noticed, the fifth of chalky subsoil from the same area. These five tips compose a broad, low mound in which the material is loose chalk, mingled to a greater or less degree with soil, and containing no blocks larger than pebbles. On this foundation the rampart was raised to its full height by a loosely compacted mass of large blocks of clean white chalk, the result of the digging of the ditch deep into the natural rock. This covers all the five former tips, and extends

1. *Archaeologia*, 78, p. 115.

inwards some four feet further, giving the rampart, if modern surface soil be disregarded, a total width at the base of some 40 ft., which may be held to be a reasonable approximation to the original measurement. Finally a slight cavity in the inner slope was filled with a small seventh tip of more surface scrapings from inside the earthwork. A vertical height of 7 ft. above the old turf-line is thus altogether accounted for: above this the modern soil and turf have a thickness of 1 ft. to 1 ft. 6 ins., which in this position must represent disintegration rather than accumulation; if normal spread and the volume of silt in the ditch are also considered, it will appear probable that the original height was at least 8 ft. vertically above the old turf-line.

The Ditch. (Plate IV, 1.)

The level of the present summit of the rampart is 25 ft. 10 ins. above the true bottom of the ditch in this section; the ditch was further cleared of silt for a distance of 10 ft. southwards, and the bottom was found to be rather uneven.

Nothing was found to confirm the theory that in such hill-forts as this a wooden palisade ran along the bottom of the ditch. (See below, p. 67.)

The ditch presents an asymmetrically V-shaped section, with the bottom angle rounded to an irregular curve. Its deepest point in this section lies 11 ft. 9 ins. vertically below the estimated level of the former natural chalk shewn by a broken line in Section 1 (fig. 4, no. 1). Allowing for the effect of erosion as here indicated, the original width of the ditch from lip to lip must have been some 27 ft.

It was filled with silt to a maximum depth of 4 ft. 6 ins. At the bottom was a scanty deposit of chalk pebbles due to the initial 'rapid silting,' and above this a band of brown mould 6 ins. and more thick, representing the first formation of vegetation in the ditch. Chalky silt accounts for the next 3 ft. or so, clean white at the bottom, and more and more mingled with soil towards the top, where it merged imperceptibly into the modern surface soil, which with the turf was well over 1 ft. thick.

There was here no evidence for the cleaning-out of the ditch by the occupants of the site after it had once been made: for though the silt in the ditch was entirely barren of pottery fragments or other remains of the period of occupation, another inference is to be drawn from this. Not only were such remains

also wholly absent from the make-up of the rampart here, but none were found either in the depression due to the scraping of the surface soil inside the rampart, or in either of two trial excavations made respectively 40 ft. and 90 ft. north of the inner end of the section in slight hollows which looked likely sites for pits, but were not. The lack of remains here is in marked contrast to their abundance in the neighbourhood of Section 2 and of the entrance, and indicates that the portion of the site bounded by this stretch of the earthwork was not intensively occupied, if indeed it was occupied at all. Thus no secondary cleaning-out of the ditch need here be adduced to explain the absence of remains in the silt.

SECTION 2. (Fig. 4, No. 2.)

Section 2 was 8 ft. wide and 126 ft. long. The top of the existing rampart is here 7 ft. 9 ins. above the ground-level at the inner end of the section, and 16 ft. 9 ins. above the modern ground-level in the ditch. The disparity of these figures with those for Section 1 is largely due to the fact that the natural slope of the ground, here roughly to the east, is very appreciably less.

The Rampart. (Plate II, 2.)

The evidence obtained from the cutting through the rampart agrees perfectly with that from Section 1, but is considerably ampler. The old turf-line was found as a band of dark soil, usually rather under 6 ins. thick, running beneath the make-up of the rampart from a point 15 ft. to a point 54 ft. 6 ins. from the inner end of the section. Its absence on either side of these points is as before to be explained by the excavation on the outer side for the ditch, and on the inner by the scraping away of surface soil to furnish additional material for the rampart. The latter was found here too to be composed of seven distinct tips of differentiated material, the nature of the narrow demarcating lines of darker soil being the same as in Section 1. The tips were, however, somewhat differently disposed, as the work had evidently begun here with the scraping of surface soil from inside the site chosen for the Earthwork. The first tip so formed was a small mound under 10 ft. wide at the base, and only 1 ft. 6 ins. high at the crest, which was 24 ft. from the inner end of the section. Against the further side of this,

three more tips were piled, of which the uppermost at least was probably obtained from the surface soil on the site of the ditch. All these first four tips, though plainly marked off from each other, consisted of the same quality of brownish earth mixed with chalk pebbles. The fifth tip, which partly covered the fourth, was of different composition, corresponding to the second and third tips in Section 1, and of greater size, rising to a height at the crest of 5 ft. Its rather loosely-packed chalk, without any admixture of earth, and its position on the outer side of the rampart, shew it to be made of the subsoil excavated for the ditch, while its considerable bulk and the presence in it of many blocks of appreciable size indicate the beginning of the excavation of the chalk rock beneath. But before this can have been carried down to any great depth, further activity on the inside of the rampart produced a sixth tip, which, while of no great height, extended at least from a point 14 ft. from the inner end of the section to half-way up the inner slope of the preceding fifth tip, entirely covering the first four. This consisted of fairly fine clean chalk, and must have been derived not only from the subsoil below the surface earth previously stripped from inside the rampart, but also from an appreciable scraping of the underlying chalk rock, which in fact towards the inner end of the section presents a distinctly hollowed face. The crest of this tip was roughly equal in height to that of the fifth, and the intervening hollow, some 14 ft. across, was last of all filled with a mass of large clean blocks obtained from the deep digging of the ditch in the solid chalk rock, forming the seventh and final tip. The extreme looseness of its packing was even more striking than that of the corresponding tip (the sixth) in Section 1: the hollows between the irregularly piled inner blocks were often quite large. However, this is no source of weakness, as the state of the rampart's preservation shews and as its builders must well have known, for frost and rain coagulate the outer surface of a chalk bank so built into a hard crust, beneath which such cavities between loose blocks of inner material remain harmless.

Above the height of 6 ft. 6 ins. from the old ground-level to which the crest of this culminating tip can be measured, chalky soil covered by the modern turf lies roughly 1 ft. 6 ins. thick, representing the former chalk crust disintegrated by weather, grass, and worms. The marked flattening of the summit is no doubt partly due to its use as a modern pathway,

and the original height vertically above the old turf-line may thus be reasonably estimated at 8 ft., the same figure as that proposed in considering Section 1. Similarly the width of the rampart at the base established for Section 1, namely 40 ft., holds good here also, if the same margin of error be allowed for the effects of spread and of surface disintegration, and we may conclude that the builders of the earthwork proportioned height to width of base roughly in the ratio of 1 to 5, at least where the natural slope of the ground was no greater than in either of the two sections excavated. At no point in its circuit does the profile of the rampart differ more from this pattern than can be accounted for by the varying steepness of the slope on which it is built, though where this is very sharp, as on the W. and S.W. sides, the rampart lies well back against the face of the slope, and is not made up to any very great vertical height, being in fact in places scarcely perceptible.

No trace was found of a wooden palisade, or other additional defences, though it is conceivable that a light palisade ran along the top of the rampart, with only a shallow bedding of which the disintegration of the upper 1 ft. 6 ins. of the Earthwork has obliterated the traces.¹ The large chalk block marked 'Kerbstone' in Section 2, 17 ft. 6 ins. from its inner end, will be considered when the entrance is dealt with (pp. 37-8), as it is with a phase in the history of the entrance defences that it is to be connected.

Finds in and under the Rampart.

Attention must now be directed to the objects found in and under the rampart in this section, which, unlike Section 1, was moderately prolific. The accurate recording on the spot of the position of every find has made it possible to project the discoveries throughout the whole 8 ft. width of the section on to fig. 4, no. 2, so as to illustrate these paragraphs.

The objects will be considered in three classes according to position: firstly, those found under or in the old turf-line beneath the rampart; secondly, those found in the make-up of the rampart, and thirdly, surface finds.

The bulk of this material is not large, and it consists for the most part of small fragments of pottery; nevertheless, it is of some importance as evidence concerning the earthwork and the occupation of the site generally.

1. See the Note on this whole matter below, pp. 67-71.

Below the old turf-line in the shallow chalky subsoil were found eleven fragments of the hand-made coarse, gritty pottery characteristic of the early period of the Iron Age: the colour varies from red to black and the clay is of coarse quality freely mixed with pounded flint grit. One fragment had a fairly well smoothed surface, and was of an angular shape suggesting that it had belonged to a carinated bowl (see examples in fig. 12). Of the two fragments illustrated below, one (E. 1, fig. 11) bears a row of tiny punch marks by way of decoration, and the other (E. 4, fig. 11) is part of the irregular and slightly projecting rim of a pot with a very faintly swelling shoulder below it: the rim is decorated on the top with a row of finger-prints.

Some pieces of ox and sheep bone, one of which had been sawn for extracting the marrow, and a little unidentifiable charcoal were also found on this level: all these must have been cast-away rubbish which had worked its way well below the turf before the earthwork was made. With them we may consider the finds from the old turf-line itself, *i.e.* objects lying loose on the surface at the erection of the earthwork. Some 25 pottery fragments, mostly of the same quality, were found: one shews the base-angle of a pot similar to A 5, fig. 10, with a reddish surface which seems to have been roughly finished with a wisp of grass before firing, and four have been illustrated, these are E 2 (fig. 12), shewing the sharp carination of a bowl; E 14 (fig. 12), shewing the neck-and-shoulder angle of a smooth-faced black pot; E 15 (fig. 11), a small piece bearing seven parallel grooves, and lastly E 13 (fig. 14), which is of a different type. The other pieces so far described belong unquestionably to a class of ware which is typical of the Hallstatt period in Britain (whatever may be the precise date of its beginning), and lasts for some time into the period of La Tène. It was called Class A at Hengistbury Head, and is the characteristic coarse ware of the All Cannings Cross Village. E 13, however, has a smooth black surface with a low cordon running across it, and strongly suggests Class B of the Hengistbury Head series, which is assigned to the La Tène I Period, or the 4th or 3rd century B.C. Pieces of bone (ox, sheep or goat, and perhaps red deer) and a little charcoal were also found.

Here, then, we have evidence for an upper limit to the date of the earthwork. (1) The coarse ware of All Cannings Cross type had been in use for a considerable time when it was erected, and fragments had had time to work down well under

the turf. (2) This ware was still in use, or had been in use recently enough for numerous fragments to be still on the surface at the date of erection, and further the same is true of a piece of La Tène I date. The provisional conclusion is that the earthwork was not put up before the 4th century B.C., and anyhow the settlement must have been for some time already in existence.

It will be noted that *most of the finds in or under the old turf-line lay beneath the inner half of the rampart, and that only a few fragments of bone came from below its outer slope.* This suggests that the limit of occupation in this area before the erection of the rampart was roughly the line subsequently marked by its crest. Such an inference is supported by the distribution of finds in the various tips composing the make-up of the bank. Of the first four tips, the fourth alone, which is the most likely to have come from the surface soil of the ditch site, was sterile, and while the fifth and seventh, consisting of chalk dug from the ditch, naturally produced next to nothing, the tips derived from the soil and subsoil inside the rampart yielded 13 pottery fragments. These were all of the coarse, gritty type, and include E 8 (fig. 11) bearing shallow finger-print decoration, and E 17 (fig. 12), a rather smooth black sherd rounded like a counter. As these were not in the first tips of surface earth, but in the lower part of the sixth tip of subsoil chalk, it may be guessed that they were lying below the turf somewhere near the inner end of this section before the earthwork was put up, and this applies to over half the pottery fragments in these tips, as well as to two pieces of sawn red deer bone found in the sixth tip.

No extravagant conclusion can be based on a section only 8 ft. wide, but it seems acceptable so far to judge that the earthwork was erected at some time in La Tène I period to fortify an existing settlement, here more or less along the line of the edge of its effective occupation-area.

The possibility that the period of the coarse gritty pottery had already ended, and that the earthwork was due to newcomers, perhaps to conquerors, can only be rejected in view of the almost complete absence from the whole site of pottery of the later Iron Age culture of the neighbourhood, and by the presence in the Entrance of the typical coarse gritty ware in stratified groups, proving beyond a doubt its association with the occupation of the defences.

The nature of the surface finds in the section here under review points in the same direction: they consist of two typical small Iron Age potsherds, and for the rest of a modern Chinese coin, a French 25-centime piece, 1923, a piece of mediaeval pottery, and two pieces of Romano-British pottery from the inner foot of the rampart, one the rim of a bulged beaker of early 2nd century A.D. type, and the other a flanged rim of a 2nd-3rd century type not unlike RB 10, fig. 17. Thus there is nothing subsequent to the occupation characterized by the coarse gritty pottery except what must be later than any effective occupation of the fortifications in the Early Iron Age.

Evidence for dating the lower limit of such occupation will appear later; meanwhile that obtained from this section has provisionally fixed an upper limit, and there is now the ditch to be considered.

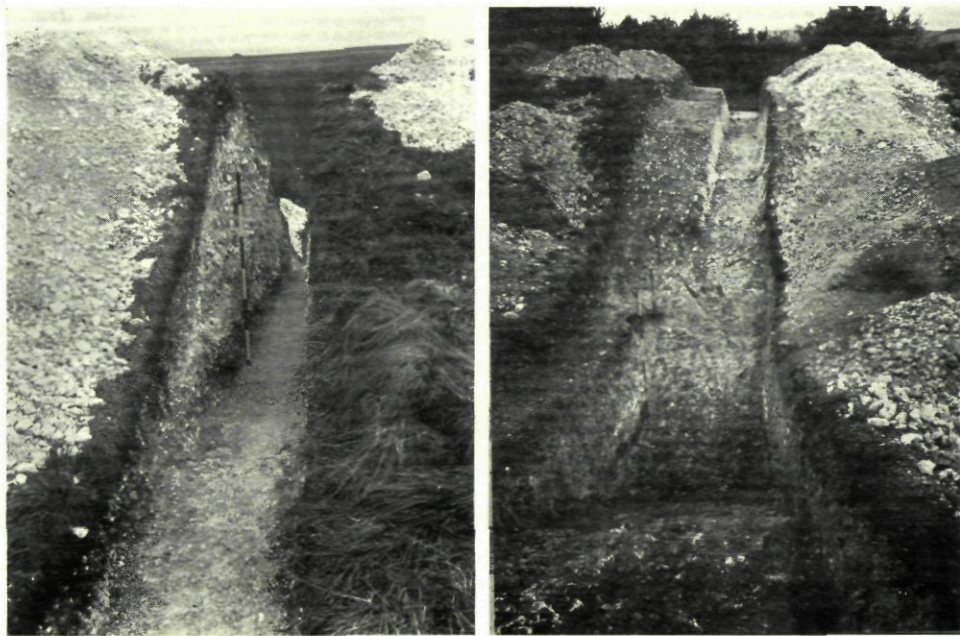
The Ditch. (Plate III, 2.)

In this section, the lowest level of the ditch bottom lies 22 ft. 3 ins. below the present top of the rampart. It bore no traces of having held a wooden palisade.

The sloping sides of the ditch are splayed at the top owing to erosion: if allowance be made for this, and the estimated original surface line of the natural chalk be restored, the width of the ditch from lip to lip as designed works out at 27 ft., as in Section 1. The vertical depth of its bottom-level below this presumed former surface-line is here 11 ft. 6 ins. This figure differs by only 3 ins. from the corresponding one for Section 1, but it is evident that there has been a re-cutting of the ditch-bottom at this place. Its floor is practically flat, and the last 2 ft. 6 ins. or so of the sides are cut down at a much steeper angle than the average of the slopes above, their batter being only 20° — 25° . The profile thus formed is in marked contrast to the irregularly curved outline seen in Section 1.

We shall find conclusive evidence for the re-cutting of this section of the ditch-bottom; adjoining the entrance, in Section 3 and in the whole excavation of the entrance fortifications, for the strengthening of which the chalk so obtained was plainly used, and it will be strongly suggested that this took place at a date nearer to the end than to the beginning of the occupation. Meanwhile this conclusion is here already suggested by the contents of the silt in the ditch.

PLATE III.



1. Rampart in Section 1 seen from West. The old turf-line shews as a dark band by the foot of the measuring pole
2. Ditch and Counterscarp Bank in Section 2, seen from West. The measuring pole stands in the original ditch, the shovel in the secondary ditch.

This silt has been formed chiefly from the rampart, and to a small degree only from the counterscarp bank, as is clearly shewn by the slope of its bedding. Three distinct strata can be observed; the lowest (1), composed of clean chalk rubble, represents the 'rapid silting' from the upper slopes immediately after the re-cutting (when the ditch must have been completely cleaned out), and prior to the first appearance of vegetation. It contained a few ox-bone fragments and two small sherds of coarse pottery. Above this was a band of brown mould (2), some 2 ft. thick, containing near its lower limit a single small potsherd, the jawbone of a pig, and a little fragmentary bone. This represents vegetation; it was covered by another layer of cleaner chalk silt, but for a few inches in the middle there was a fair proportion of chalky silt in it (presumably derived from the lip of the ditch), in and above which no finds were made. Over this a third deposit of more recent white chalk silt (3), increasingly earthy towards the top, filled the ditch almost to the modern surface-level. At a comparatively modern date, when the surface of the ditch was at its lowest point only 1 ft. below what it is to-day, a secondary ditch was cut in it, with a centre-line 5 ft. nearer the counterscarp bank than the centre of the original ditch bottom. It is almost 4 ft. wide at the top, and was cut down to a depth of 4 ft. through the silt already existing into the natural chalk rock, its section being of V-shape almost perfect but for a flat bottom some 9 ins. broad. The course of this ditch northward and southward of this section will be described below (pp. 230-1); all that concerns the present context is that it is of modern date, and has caused disturbance in the silt previously deposited. A small portion of the third stratum of this remained between the side of the secondary ditch and the outer slope of the original ditch, in which was found a piece of the everted plain rim of an Iron Age pot (E 52, fig. 12), but the whole of this stratum contained, as well as a few other sherds of similar ware, a certain amount of later material, mostly in the upper part of it. This includes a Romano-British flanged rim of the common 2nd - 3rd century type resembling RB 10, fig. 17, and a number of modern glazed pot and tile fragments and bones, especially round the area of disturbance caused by the secondary ditch. The latter seems to have been deliberately refilled with the material that had been dug from it, moderately clean loose chalk, containing a little modern rubbish and two Iron Age potsherds. Its date

must be mediaeval or later : it will be further discussed below with the other minor earthworks.

Modern turf and soil, 1 ft. in average thickness and containing a little rubbish, complete the filling of the ditch, which has thus risen to a minimum height of 5 ft. 6 ins. above the true bottom : the effect of its bedding and of the intrusion of the secondary ditch has been that the lowest point of the present surface is rather nearer the counterscarp bank than that of the true ditch bottom.

The evidence that can be gleaned from the finds in the ditch is not much ; but the paucity of Iron Age material there points to a date for the re-cutting fairly near the end of the occupation, a conclusion which agrees with the evidence to be considered hereafter from Section 3 and from the entrance, as has been already indicated. The fact that the Romano-British pot-rim was found as high in the silt as 3 ft. 6 ins. from the bottom may suggest a fairly long interval between the period of effective Iron Age occupation and the 2nd century A.D. ; however, such evidence from a single fragment can in these circumstances hardly be pressed, though this is in fact the conclusion which will be reached on more adequate grounds.

The Counterscarp Bank. (Plate III, 2.)

The counterscarp bank in this section presents some curious features ; it consists of two low mounds with an intervening hollow. Beyond a point of 60 ft. south of this section the bank is single ; the depression separating it into two members begins to appear at about that point ; in the section itself the distance between the crests of the two mounds has increased to 11 ft. 6 ins., and further northward, as will be seen later (see below, p. 28) it increases still more, till the entrance is reached. The point to be noticed here is that this central depression is reproduced below the surface of the bank in the face of the natural chalk rock, in which this section disclosed a hollow some 12 ft. wide and 1 ft. deep in the centre. It seems permissible to believe that this hollow is likely to be partly natural, and that it was increased to its present dimensions by scraping to form a shallow tapering trench between the two limbs into which it was resolved to divide the counterscarp bank for 100 ft. or so on either side of the entrance. For indeed the bank is similarly divided on the north side of the entrance, though complete symmetry cannot be proved owing to the modern Sewage Farm

hedge. The material so obtained would be used to supplement the allowance spared for the counterscarp bank from the ditch excavation, and at the same time the effectiveness of the obstacle flanking the entrance created by a double counterscarp bank would be increased by a trench, shallow though it were, between its two members. It must, however, be admitted that even so the obstacle cannot have been very formidable without additional defences of wood, as the height of the twin mounds is so low. They were found in this section to be 1 ft. 3 ins. and 1 ft. 7 ins. high respectively, though silting on both sides and into the central depression must be allowed for, the silt in the middle of the latter being 1 ft. 10 ins. deep. One foot down at this point were found two small sherds of Iron Age coarse pottery, and in the inner slope of the eastern limb of the bank three more : fragments of bone were associated with both these finds. The material of the counterscarp bank is throughout rather loose chalk rubble, with some little admixture of earth : its slope is everywhere gentle, and there must have been a certain amount of spread, especially on the outside, where the natural level begins to slope rather more steeply.

Except for a little modern rubbish in the surface soil of the central depression, there were no other discoveries in or outside the counterscarp bank, traces of any additional defences such as wooden palisading being wholly absent, and thus the evidence obtained from the rampart and ditch remains unaffected by the results, such as they are, of this portion of the section.

SECTION 3. (Fig. 4.) In the Ditch.

Section 3 was cut in 1927 in the ditch only. The first cutting, 25 ft. long and 4 ft. wide, which crossed the ditch at right angles 34 ft. south of the centre of the Entrance causeway, was afterwards enlarged by the complete clearance of the ditch for a distance of 22 ft. up to its termination against this causeway. The line of the ditch has here a distinct inward curve towards the Entrance. The original cutting will be described first.

The contour of the ditch is here distinctly more concave than in Section 2. The same re-cutting as was there noticed was apparent, but its outline was wider, and the sides more splayed, being 3 ft. 3 ins. apart across the flat bottom, and 7 ft. 6 ins. between the angles formed with the face of the ditch as originally cut.

The secondary ditch found in Section 2 was again present, but of this too the sides were more splayed than they were there, the angle being here some 50°. The bottom was 9 ins. wide, and none of the silt of the original ditch had been left against its outer slope.

The filling of the secondary ditch, in which a little modern rubbish only was found, was similar to that in Section 2, and its depth in the centre was 3 ft. 9 ins. vertically below the present surface. Where it had not disturbed the silt of the original ditch, the latter was found to be bedded in two strata only; there was no appreciable 'rapid silting,' and brown mould (1), with some admixture of cleaner chalk silt, filled the ditch to a vertical height of just over 2 ft. above the centre of the bottom, and extended 7 ft. 6 ins. up the inner slope, its extent up the outer slope being now interrupted by the secondary ditch. Considering the size of this stratum, its yield of remains was surprisingly small. A single small Iron Age potsherd and two fragments of ox and pig bone were all that was found, and this paucity is the more remarkable at so short a distance from the Entrance causeway, for a larger amount of rubbish might be expected in its near neighbourhood.

This provides a negative argument for a comparatively short lapse of time only between the re-cutting of the ditch, at which all rubbish already lying there must have been removed, and the end of the occupation.

Above this brownish deposit, which corresponds to stratum 2 in Section 2, lay a thick stratum (2) of whitish chalk silt, earthier towards the top, corresponding to the fifth in that section. It contained one small Iron Age sherd, a little fragment of iron, some unidentifiable charcoal here and there, and a few pieces of bone (sheep or goat): in addition to this scanty yield, a Roman coin was found in it at a depth of 2 ft. 6 ins., 4 ft. 9 ins. inwards from the centre-line of the ditch. It was a badly worn and clipped bronze coin of Carausius (A.D. 286-293) of the *Pax Aug.* type (see below, p. 139), and if, as is likely, it found its way into the ditch during the 4th century A.D., it shows what a large amount of silt had then already formed. In fact, it had probably sunk below the contemporary surface-level, as coins will. The modern surface soil contained four Iron Age, two Romano-British, and about half a dozen mediaeval pottery fragments; its average thickness was 1 ft. 6 ins., and the total depth of silt vertically above the centre of the ditch bottom was just over 5 ft.

PLATE IV.



1. Ditch in Section 1, seen from West.
2. End of Ditch in Section 3, seen from N.W. The Causeway flank forming the original square end is seen in the foreground: the measuring pole stands in the bottom as re-cut with rounded end. The secondary ditch is seen beyond.

The End of the Ditch and the Entrance Causeway.

(Plate IV, 2; plan and sections in fig. 5.)

For the extension of the excavation of this section so as to clear the ditch right up to the Entrance causeway, an area roughly semi-circular was cleared of turf, but the termination of the ditch was found not to have this form. At a distance of 10 ft. north of the southern face of the section it ended off almost square, with a sharp turn of roughly a right angle between its inner lip at the foot of the rampart and the edge of the causeway which formed its end. It will be noticed that the secondary ditch does not stop here, but runs straight on across the causeway, more or less following its present contour; but for this modern interruption the causeway is a solid mass of untouched natural chalk rock, which must originally have been nearly level across the top, but now slopes slightly towards the edges owing to denudation into the ditch on either side.

Its flank, forming the termination of the ditch, is cut at an average angle of 50° , but the bottom of this slant is not quite parallel with the top, and the angle decreases slightly towards the east, where the cutting of the secondary ditch has destroyed the original outer corner.

The re-cutting of the first bottom is clearly displayed in the shape of its end. It has already been noticed that its sides are distinguished from the original cut of the ditch by their much sharper slope, and the photograph (Plate IV, 2) clearly shews how they curve to meet each other at the foot of the straight causeway flank, forming a roughly semi-circular end to the re-cut bottom which is in marked contrast to the original square termination of the ditch above it.

The lower stratum of earthy silt in the end of the ditch was disappointingly barren, and though the chalky silt above it contained 21 fragments of Iron Age pottery, they can be of no significance in view of the Roman coin and pottery, and other later material found in this stratum in the original cut of this section and in Section 2. Beyond a little charcoal and some pieces of bone (ox, horse, pig, sheep or goat, and dog), there were no other discoveries here, and such conclusions as have already been provisionally reached from the consideration of the ditch silt can accordingly remain undisturbed.

FURTHER EXCAVATIONS IN THE COUNTERSCARP BANK

In 1928 the original line of Section 3 was prolonged across the Counterscarp bank for a distance of 16 ft., by a cutting 2 ft. wide. The object of this piece of excavation was further to investigate the curious splitting of the counterscarp bank into two members already observed in Section 2: it was thought that a section across it nearer the Entrance-way, where the intervening hollow was wider, might throw some light on the purpose of the division, and would in particular test the theory of Dr. Williams Freeman that these hollows were 'pear-shaped guard-houses,' and were to be classified with the more pronounced outworks visible in a corresponding position, for instance, outside the fortress-entrance at Beacon Hill, Burghclere.¹

The result was disappointing. The crests of the two limbs of the bank were found to be 18 ft. 6 ins. apart, but the hollow, of the same depth as observed in Section 2, was entirely sterile, as indeed was the whole section. A similar fruitless result attended the digging of an L-shaped excavation at the termination of the inner member of the bank on the south Entrance causeway.

As no remains of any sort were met with in either of these excavations, and as there was no trace of an occupation 'floor' in the hollow, the use of the term 'guard-house' must be regarded as unjustifiable, and although the duplication of the counterscarp bank cannot be anything but defensive in intention, the absence of traces of any such additional defences as would increase the effectiveness of these curiously low and insignificant banks is remarkable.

The surface soil is so thin that any timber palisading that might have stood here must have had a strangely shallow bedding, if all traces of it can have been obliterated by surface disintegration. (See further below, pp. 70-1.)

No excavations were undertaken on the north side of the Entrance-way: the field of operations is there more restricted by the near neighbourhood of the Sewage Farm hedge, and the surface indications gave no promise of any features materially different from those already recorded on the south side.

Assuming that its northern and southern flanks are similar, the width of the causeway may be given as some 40 ft.

1. *Field Archaeology*, pp. 21-2, 252: cf. p. 356. See further below, pp. 82, 84.

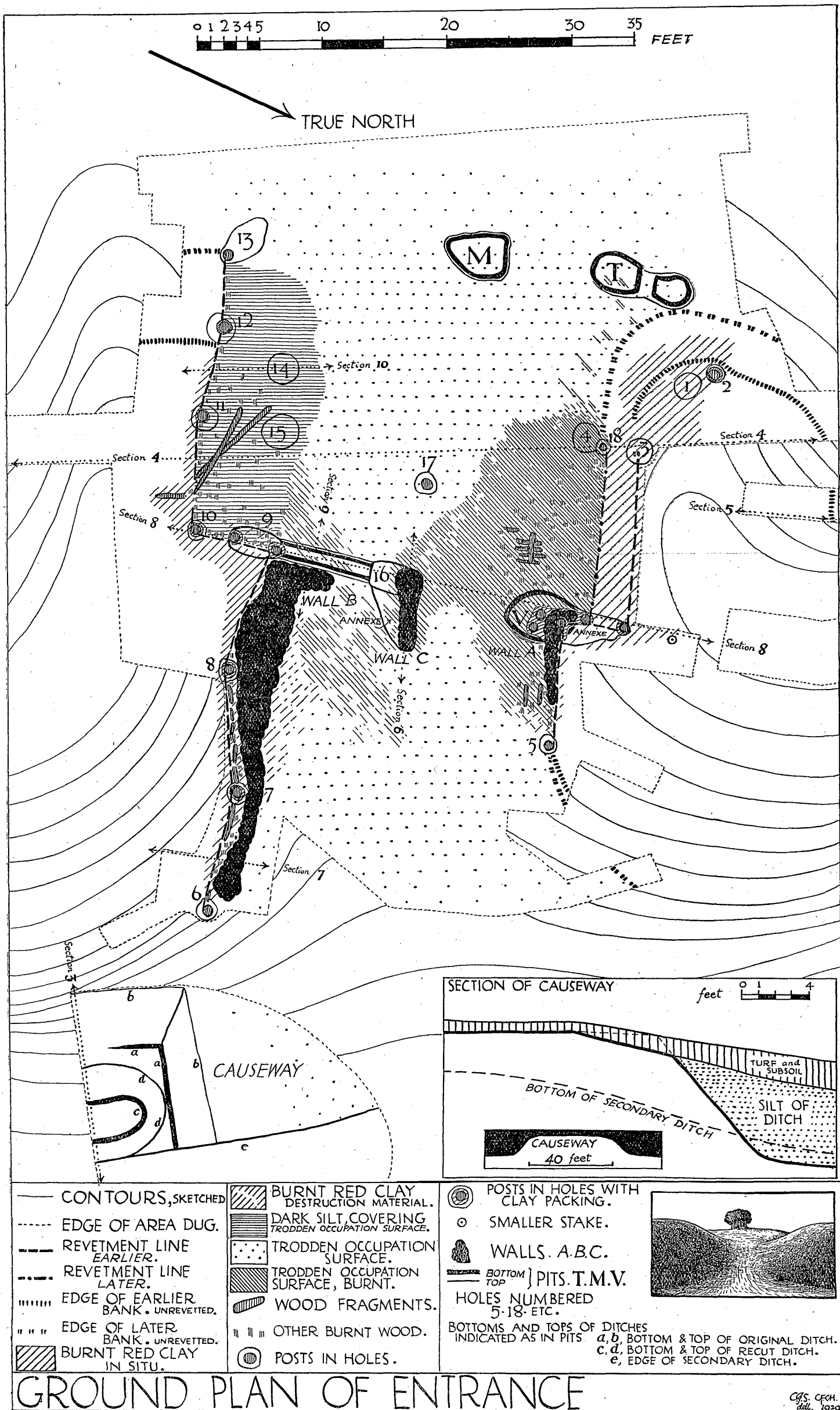


FIG. 5. The positions of sections 3-10 (figs. 4 and 6, pp. 13, 32) are shown here.

THE ENTRANCE

(General views, Plate V; photographs of detail, Plates VI - VII; plan, fig. 5, with index numbers to Sections 4-10, figs. 4 and 6.)

A chalky band, as has already been said, is visible running W. S.W. across the Sewage Farm; and it can hardly be doubted that this represents an old way leading up the hill to the Entrance, connected with the prehistoric ridgeway which runs across Hampshire to the Sussex Downs, as partly shown in the map, fig. 3 (see also the note to this map, p. 5). Hollow tracks which certainly represent this ridgeway are visible not far east of the hill on the north of the modern Morestead road, and from near this point the way up to the Entrance may be presumed to have led westward across ground since cut by Roman and later roadways, and over the modern Sewage Farm area which still bears its traces. It thus passed between the splayed double ends of the counterscarp bank, where the width is some 25 ft., and the causeway between the ends of the ditch brings it up to a passage, originally 25 ft. across at its narrowest, formed by a gap in the rampart, the ends of which are inturned so as to flank the roadway for a distance of some 60 ft. on the south and rather under 50 ft. on the north.

This passage between the inturned ends of the rampart is appreciably askew with the causeway over the gap in the ditch, and as will be seen below, this may very possibly be intentional.

The Entrance so formed belongs to a type widely recognized among early Iron Age fortresses, general consideration of which will be found below (pp. 72 - 84), but excavation here revealed features hitherto without parallel in any structure of the kind. The ends of the rampart were revetted with timber, inside which they were faced with clay, and these revetments turned at right angles about half-way along the passage, so as to form a pronounced bay on either side of it. Further, the timber-work had been supported, evidently at some later period of the occupation, with walls of large chalk lumps, and extensive works had been at one time carried out with a view to blocking the southern half of the roadway. The surface of the latter was found to consist of the ordinary chalk subsoil of the hill, trodden down to a hard crust a good 6 ins. thick, below which the natural chalk rock lay at a depth of not more than another 6 ins. This crust was over a large area blackened by fire, and

the traces of burning all over the entrance were so pronounced as to make it clear that the whole complex of defences had perished in a violent conflagration, presumably at the hands of an enemy who put an effective end to the whole occupation.

THE PITS PROBABLY OR CERTAINLY EARLIER THAN THE ENTRANCE

(Plans and sections on fig. 10.)

Before proceeding to describe the remains in detail, there is evidence to be reviewed, agreeing with that already obtained from the sections through the rampart, that no defences at all existed in the earlier period of the occupation. In their absence, it is obvious that there would be no delimitation of the way of approach, and it can hardly be surprising that three dwelling or storage pits were found in the entrance area which require to be dated to the period of unfortified habitation, when they would have afforded no obstacle to passage.

They were lettered respectively Pits V, M, and T.

Pit V.

Pit V, which lies at the middle of the northern flank of the Entrance, had been filled in to allow of the construction of defences over it. It will therefore be described in detail below (pp. 41-4), but the fact of its early date may here be noted as thus established.

Pit M.

Pit M was in plan an irregular quadrilateral with rounded angles: at the top, its greatest length was 6 ft. 3 ins. and its breadth 4 ft. Its bottom was flat and just 5 ft. below the modern surface-level, and its sides were slightly splayed from the vertical. No evidence concerning its purpose could be secured, for it had been emptied of any remains it may once have contained, and entirely filled with clean, white chalk: its sides were not appreciably eroded at the top, perhaps indicating that it was not in use for long. Its similarity in type to the known Early Iron Age pits elsewhere on the hill leaves no reasonable doubt that it is of that period, but it is clearly independent of the fortifications, for had it been intended to break the rush of a hostile storming party trying to force the

entrance it would either be larger or else placed at the narrowest part of the passage. Not only its barrenness, but its remoteness from the arrangements actually made for guarding the Entrance, make it unlikely to have been a guard-room, or rather a shelter for the guardian in bad weather (a doubtful suggestion made concerning the pit in the entrance at Casterley Camp).¹ In fact, it is situated nearly in the middle of the roadway between the tails of the rampart, where it could have been nothing but a hindrance had it lain open after the fortifications had delimited the way of approach, and considering the obviously artificial nature of its homogeneous filling it must be presumed to have been earlier than the defences and filled in at the time of their erection.

Pit T. (Plate VIII, 2.)

Pit T, situated 7 ft. north of Pit M, was peculiar in being double. Its southern portion, roughly oval in shape, 4 ft. long by 3 ft. broad and with a level bottom 6 ft. below the modern turf, was connected over a flat intervening shelf, 2 ft. wide and 1 ft. 3 ins. across, at a level 1 ft. 6 ins. higher, with the northern portion, which was a smaller oval 3 ft. 9 ins. long by 2 ft. 6 ins. broad, in depth 5 ft. 6 ins. below the modern mean turf-level and 6 ins. below the shelf. The whole pit is thus of hour-glass form, of which other examples, to be presumed contemporary, have been found at the All Cannings Cross² and Fifield Bavant Villages.³

Its sides are generally almost vertical, though slightly recessed at the north end, and had not been eroded at the top. Like Pit M, it was barren of remains, and had been similarly filled in. It is actually further from the defended neck of the Entrance than Pit M, and is as unlikely to have been concerned with the guarding arrangements. However, as it is adjacent to the northern tail of the rampart, it cannot definitely be said to be necessarily independent of the fortifications altogether, but at least it must have been filled before their final ruin, as traces of fire were absent from the chalk filling, which only contained four small potsherds, and a few ox, pig, and sheep or goat bones, though some occurred above it under the modern turf.

1. *W.A.M.*, XXXVIII, p. 69, and pt. XII; see below, p. 82 and fig. 8.

2. Pits 57-8; but without intervening shelf. *All Cannings Cross*, p. 73 and plate 5, nos. 6-7.

3. Pits 25-6, 36-7, 46-7 (of which 46, the shallower, was a grain-store), 74-5, 83-4, 86-7; only the last two pairs with intervening shelf. *W.A.M.*, XLII, pp. 469-71 and plates II-III.

On the whole it is reasonable to believe that all these three pits existed before the defences and were filled when they were constructed; this is unquestionably true for Pit V, highly probable for Pit M, and little less so for Pit T.

THE INTURNED ENDS OF THE RAMPART

The composition of the inturned ends of the rampart flanking the Entrance will now be described. While, as has been seen, the rampart at the points where Sections 1 and 2 were cut was evidently all erected at one time, yet it was found that on either side of the Entrance it consisted of a lower and an upper

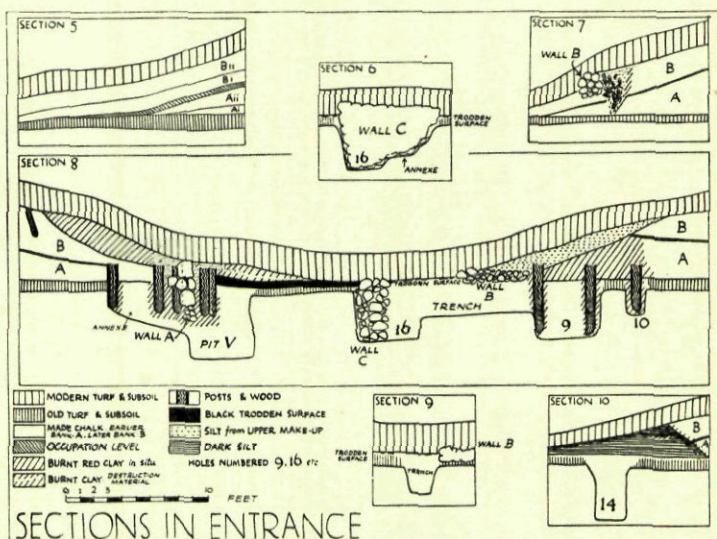


FIG. 6. SECTIONS 5-10. For their positions see fig. 5, p. 29.

section marked A and B in Sections 4, 5, and 8 (figs. 4 and 6), belonging to two different periods. The addition of the latter increased the height, which rises nearly to 10 ft. opposite the narrowest part of the Entrance passage, the upward slope of the crest beginning on the south almost from the northern edge of Section 2, and at a corresponding distance from the centre of the roadway (*i.e.* some 60 ft.) on the north. But the rampart-ends as originally constructed sloped downwards as they neared the Entrance, though the southern one was the

higher of the two : on their inward turn they were only 1 ft. 9 ins. high on the north and 2 ft. 3 ins. on the south where Section 4 was cut, and only 6 to 8 ft. beyond this section they ended on both sides flush with the ground. The surface of these early banks yielded considerable evidence of occupation, especially on the north where in Section 4 it was marked by a burnt stratum as much as 6 ins. thick, containing ash-wood charcoal, and on both sides the layer which it formed presented an unmistakable contrast to the tenuous lines of demarcation between the successive tips of material of which the single-period rampart in Sections 1 and 2 was found to be composed. This contrast is strikingly shown in Section 5, cut in the north side of the northern rampart-end, where the thick band of dark soil representing the original surface of the earthwork slopes from the old ground-level to a height of 2 ft. 3 ins., and below it the make-up of the first bank is seen to consist of two tips of material (A i and ii), separated similarly to those found to demarcate the various tips already described in Sections 1 and 2. The lower tip is of brownish earthy material evidently as before derived from surface soil, while the upper one, clearly upcast from the ditch, consists of clean white chalk. The make-up of the later period lying above the surface-stratum of the original bank is similarly subdivided into two tips, as will be seen in due course.

Section 4 shews the early bank on the north side composed of the same two tips (also marked A. i and ii), but on the south it revealed a different procedure. The white chalk upcast from the ditch was deposited first (marked A. i), and the earthier material obtained by surface scraping was employed to widen the bank so formed by being piled against it on the inside (marked A ii). We need not expect the method of construction to have been everywhere uniform, as the differences of tipping in Sections 1 and 2 warn us.

Of the pottery here found nearly all was featureless, but of the eleven fragments found in the unsoiled chalk upcast and therefore to be regarded as not later than the date of its deposit, two are noticeable. One had an irregular, rather projecting, rim with broad finger-markings, and the other (E 28, fig. 12) was very thin and noticeably smooth, with a shallow groove just below a rather rounded rim. Such an 'incipient bead-rim' is not characteristic of the earlier types of this class of ware, and this find supports the fairly late date in the occupation which has already been indicated for the erection of the earth-

work. Fragments of bone (ox and sheep or goat) were also found.

The surface-stratum of this original bank was easily recognisable in all the sections cut into the rampart in the Entrance area. On the north, as has been said, it appeared in Section 4 at least as a burnt layer, which was covered by the unburnt chalk of the later addition to the rampart, and therefore can be dissociated from the fire which finally ruined the works: this layer yielded, besides bone fragments (horse), numerous sherds of the typical coarse pottery, of no particular character, while on the south, where it consisted of dark but unburnt soil, two of the eleven pieces found satisfactorily stratified have been illustrated: E 67, a plain black rim-fragment of a gritty and rather thick pot, and E 77, part of the side of a carinated bowl of All Cannings Cross type. (See fig. 12.) Some pig and dog bones also occurred.

These finds are important as shewing that the same kind of pottery was in use after the first construction of the rampart as has been already seen to have been current previously, though early examples more usually have a flat rim than a rounded one like E. 67, which approximates rather to the 'incipient bead-rim' type noticed as exemplified by E. 28. This find tends to strengthen the argument for the construction of the earthwork at a comparatively late date, while a *terminus ante quem* is provided by the pottery found on the Area scraped for rampart-material immediately S. of the Entrance, which is mostly of early La Tène II type, and belongs to the late period of the settlement. (See below, p. 92.)

The Revetment and the Clay Facing.

This original rampart was supported, where its incurved ends flanked the entrances, with a stout timber revetment, which may be guessed to have been carried up to form a fence or palisade edging the earthwork, considering that this was here, as has been seen, of no very great height. (See further below, pp. 60 and 69.)

It consisted of upright posts standing at irregular intervals, behind which horizontal beams held back the make-up of the bank, forming vertical walls on either side of the roadway. All its remains were heavily charred by the final fire, but fortunately were extensive enough to enable its plan to be almost completely restored. The timber employed seems to have

been both oak and ash (see Report on the Charcoal below, p. 137); as far as could be judged from what was left of them, the posts had measured from 9 ins. to 1 ft. across, and seemed to retain their natural rounded section. The holes in which they stood were, except in special cases, of roughly circular form, seldom less than 2 ft. and sometimes nearly 3 ft. in diameter. Such an excess of the breadth of the hole over that of the post seems to be fairly regular in prehistoric timber-work, a narrower hole of sufficient depth being difficult to dig, at least in hard chalk rock. Accordingly, each post was surrounded by a solid packing of chalk pebbles and earth mixed with clay. The holes varied somewhat in depth, for, in order to bring the tops of the posts to a uniform height, it must have seemed less trouble to dig to different levels, according to the lengths as first cut, than to reduce all the timbers to the same size. The average depth below the old surface level was 3 ft. 6 ins. to 4 ft., the maximum being 5 ft. and the minimum 2 ft. A shallow bank of chalk was found in Section 7, near the outer end of the southern revetment, to have been piled as an additional support against the foot of the timber-work.

Of the horizontal beams, the lowest course was found intermittently *in situ* (e.g. on the north side between Holes 7 and 8, where they were of ash wood), and the discovery of substantial portions of timbers which had fallen from above will be recorded in due course.

Where thus revetted, the chalk and earthy material of the rampart was faced with clay. For the lower or original banks it appeared to have been fairly thin, and on the south side it was only barely traceable at the outer and absent altogether towards the inner end of the revetments. The facing of the later super-imposed material was generally much thicker, as will be seen, but for the earlier work no exact measurements could be taken, chiefly because the fire that had ruined the timber-work had everywhere reduced this clay to a bright brick-red powder which was found most inconveniently loose. It is the same clay as has been mentioned as present in the packing of the post-holes, where it appeared in a like powdery condition.

This facing seems to be unparalleled elsewhere, and must have been adopted as a waterproofing device to prevent the rotting of the timbers by drainage from the banks and into the post-holes.

A cap of Clay-with-Flints covers much of the chalk upland of Eastern Hants, and 'pipes' of such clay are often found in natural chalk: in fact, one of these was discovered close to the west end of the Chapel here (p. 230), so the required material was to be found near at hand.

The southern revetment began 20 ft. from the edge of the ditch and ran as far as the tail of the bank some 53 ft. beyond: the northern was much shorter. Beginning about 35 ft. from the edge of the ditch, it apparently only extended to a point 57 ft. from it, but there is some doubt about its inner termination.

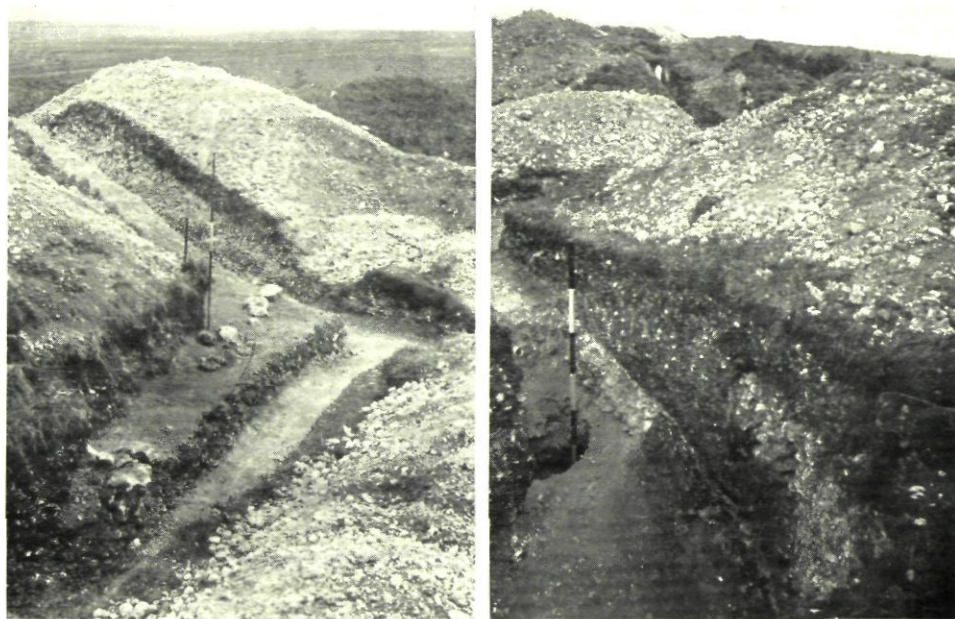
A round hole (Hole 1), 2 ft. 3 ins. across and 3 ft. 6 ins. deep, resembling a post-hole, was found under the north side of the northern rampart-end, some 6 ft. north-east of Pit T, but as it was not only wholly filled with clean chalk, but also entirely covered by the make-up of the earthwork without any trace of a post, it is not possible to connect it with the revetment. Its purpose is uncertain, but it may have had something to do with Pit T.

The case is not quite the same with Hole 2, which was discovered just to the north-west of it. This hole was a little smaller, and contained, in the usual packing of chalk pebbles and of clay found burnt to powder, the charred stump of a post, which could be traced up through both the lower and the upper layers of the rampart material, and was thus presumably in existence throughout the occupation. It is natural to try to connect it with the revetment, but it is on the wrong side of the bank, and careful search failed to reveal any traces of timber-work round the intervening curve of the earthwork or along its northern foot, where the final fire had left no heavy deposit of charcoal as might have been expected. Consequently, though this post gives cause for presuming that there was some wooden structure on this side of the Entrance in addition to the comparatively short stretch of revetment which was found flanking the roadway, no more definite conclusion can be reached, and the matter must be left in doubt.

The Heightening of the Rampart.

The next feature of the defences to be considered is the heightening of the rampart, the extent of which on either side of the Entrance has already been indicated. On the north, the section (5) above noticed as showing two distinct tips of material composing the original bank (A. i and ii), testified to a similar

PLATE VI.



1. Junction of Sections 2 and 4, shewing line of Kerbstones, seen from N.W.
2. Section 10 in S. Bay of Entrance seen from South: the measuring pole stands in Hole 14, to the right of which the floor-line of the bay shews as a white streak, with the dark silt deposit above.

demarcation in the new addition between a lower tip, in which some little brownish soil was mingled with the chalk (B. i), and an upper one of cleaner chalk (B. ii) containing fairly large lumps.

Elsewhere, the new addition seems to consist of a homogeneous deposit of fairly clean chalk.

The re-cutting of the ditch, which has been so unmistakably attested, provides this large mass of added rampart material with an origin which may be regarded as certain. The correlation is as clear as between the initial digging of the ditch and erection of the rampart; in fact, we may safely pronounce the deepening of the ditch and the heightening of the earthwork on either side of the Entrance to have been complementary parts of a single scheme of reconditioning the defences on the north-east, the only really vulnerable side of the fortress. It is true that the depth of the new cutting in the ditch-bottom was not great, but the excavations did not establish how far along from the entrance in either direction it was carried, and as the natural slope on the hill might be considered dangerously gentle for some 70 yards on the north and 200 on the south of the Entrance, there may have been re-cutting over most if not all of this distance. We only know that there was none in Section 1, but there the slope has become a good deal steeper, and if, say, 250 yards were re-cut ample material would be provided for the heightening, which, as we have seen, did not extend more than 60 ft. each side of the centre of the Entrance roadway.

The new material was carefully disposed along the in-turned ends of the rampart in a curve which followed that of the original earthwork, but ended flush with the ground 5 to 6 ft. further inwards from the ditch.

The Kerbstones. (Plate VI, 1; Sections 2 and 4, fig. 4.)

It has already been noticed that the increase in height on the south begins from the north side of Section 2. Now in digging this section a large irregular block of chalk was found embedded in the original inner foot of the rampart. It was suspected that the earthwork might be continuously edged with such blocks, and search was accordingly made along it in both directions. On the south, no satisfactory discovery was made, but it was in the northern face of the section that the block was found, and on this side when the foot of the rampart was followed along four more such blocks were found. The whole row,

over 6 ft. long, of five contiguous blocks lay firmly bedded in the original rampart-material, in a curve corresponding to the inward bend which it makes in order to flank the Entrance. 3 ft. 9 ins. further along the same curve two more were found, lying right across Section 4, and it was seen that the line of all seven blocks was the boundary of the new white chalk deposit forming the heightening of the rampart, as Section 4 clearly shews. No further blocks were found which could be brought into satisfactory relation with these, but as they were embedded in the original rampart-material, and as their line bounded the curving edge of the later addition to it, it is natural to regard them as kerbstones forming a setting-out line for the piling of the new material, which would also serve to counteract spread. If this view be right, no doubt the line originally ran much further, and was repeated on the north side, but the displacement or disintegration of the blocks would be only natural, and the discovery of seven so significantly placed must be considered fortunate. The blocks are to be considered as a kerb-line only, and except in strict connexion with the timber-work flanking the Entrance, no part of the excavations yielded traces of anything like a retaining-wall to the rampart. In stony country, for instance in Wales,¹ this device seems to have been regularly employed, while its multiplication produced the *murus duplex* probably mentioned by Caesar² in Gaul, and exemplified on many sites;³ but where the material was chalk there is nothing to attest any attempt at such construction, except that in regions where sarsen stone was available it may have been so used—evidence for this at Uffington Castle and Alfred's Castle on the Berkshire Downs has been observed by Mr. O. G. S. Crawford and Mr. Stuart Pigott.⁴

The Material of the Heightening of the Rampart and Finds in it.

This camp has already been noticed as having yielded no traces of a stockade crowning the rampart; in all the cuttings through the St. Catharine's Hill earthwork only one discovery was made which might indicate a similar feature. This was at

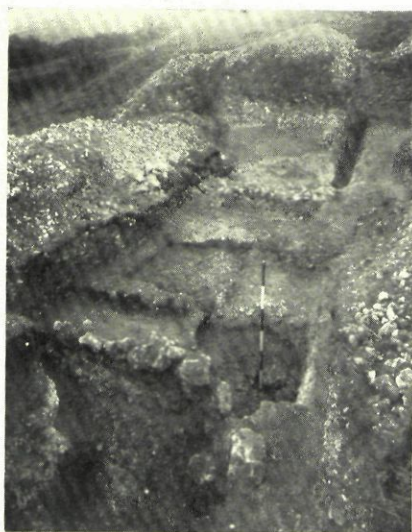
1. e.g. at Pen Dinas near Hengwm, *Arch. Cambr.*, Jan.—April, 1920, p. 116 ff; and Treir Ceiri and Dinas Penmaenmawr, *Arch. Cambr.*, Dec. 1926, pp. 221-282 especially fig. 20, p. 257.

2. *B.G.* II, 29, 3.

3. Déchelette, *Manuel* III, p. 191: Worlebury (Somerset) is a good British example.

4. *Ant. Journ.* II, no. i, p. 54: *Antiquity*, vol. III, no. 11, p. 352. See further below, p. 68).

PLATE V.



- 1 View across Entrance from North, shewing in foreground Wall A and Pit V (in which measuring pole stands), and Walls C and B and trench beyond.
2. View across Entrance from South, shewing trench and Hole 16 with Wall C, and further, Pit V (containing measuring pole), and Wall A.

the northern end of Section 8, where the remains of the stump of a stake some 5 ins. thick and 2 ft. long were found penetrating the additional rampart-material at a slant to a depth of nearly 4 ft. below the present ground-surface. The stake was quite isolated, but a thorough search was made for further evidence by means of a trench 4 ft. deep, 6 ft. wide, and 25 ft. long running northwards from the end of Section 8 along the crest of the rampart. Absolutely no trace of a stockade was found, and it must be concluded that if there was any such thing, it can have been bedded no deeper than the layer of surface disintegration which could alone account for the disappearance of its traces, and the isolated stake in Section 8, whatever it was, cannot have formed part of it. (See further below, pp. 67-71).

Where the new deposit of rampart-material abutted on the timber revetment, a facing of clay was found like that employed for the original works, but on the whole it was very much thicker, especially at the inner end of the north side, where it ran back as far as the crest of the bank, and incidentally contained the radius of an ox. However, like the facing of the primary rampart, it was narrower at the outer end on both sides, being there represented by traces only a few inches thick, while at the inner end it was again entirely absent on the south side.

The powder to which the final fire had reduced this clay was so loose that it was found for the most part mixed with destruction-rubbish, silting, and intrusive material generally; consequently such finds of pottery, etc., as were made in it cannot safely be regarded as stratified. However, a fair amount of pottery, as well as bones of horse, sheep or goat, and red deer, came from the clean chalk of the new make-up of the rampart, which must be at latest of the period of its deposit, but may be largely earlier, as much of it must have been lying as rubbish in the ditch when the re-cutting of its bottom was undertaken to provide the material required for heightening the rampart. On the north side the finds included E 118 (fig. 12), a fairly smooth piece of an angular bowl, as well as another piece with similar carination; there were also three pieces of coarse pots with sharp shoulder angles decorated with finger-nail ornament, of which two are illustrated, E 119 and E 121 (fig. 11). The finds were rather more frequent on the south side, but only two pieces were of any character: one, E 24 (fig. 11), has an ornament of parallel grooves, and the other, which closely resembles E 136 (fig. 12), shewing a more

than faintly beaded rim, which finds parallels in the examples found in Pit R, the latest on the whole site. This 'incipient bead-rim,' more pronounced than E 28 noticed above from the original rampart-material, seems to be a late type, and this is in conformity with the conclusions already formed concerning the chronology of the earthwork. The presence here of the angular bowl and the sharp-shouldered finger-printed pot, which are typologically earlier, need not surprise when we remember that the whole deposit comes from the ditch and would certainly contain earlier rubbish.

It is a common-place of archaeology that the objects must of necessity be very rarely found in the make-up of an earthwork, unless previously present in its material before erection. This rule is well borne out by all the cuttings in this rampart, and here there is a further important point to be noticed. The considerable amount of pottery and bones found in the addition to the rampart may be safely taken as coming nearly all from the ditch, where it represents the accumulation of rubbish between its first digging and its re-cutting. Its bulk is in marked contrast to the scanty finds made in the ditch itself, which represent the accumulation between the re-cutting and the end of the occupation. The inference is that the reconditioning took place considerably nearer the end than the beginning of the occupation of the defences.

THE WALLS

The ends of the rampart, thus heightened, were greatly increased in weight, and the timber revetment was evidently considered inadequate alone to stand the strain. It was therefore reinforced by walls, consisting of large irregular blocks of chalk, with the interstices fitted with smaller pebbles and earth.

Wall A.

Of the northern wall (Wall A) not quite all was found *in situ*, about half of it being composed of a single row of blocks only, which stood to an average height of 1 ft. 6 ins., but the numerous tumbled lumps which lay near it shew it to have been originally higher, and the breadth of 2 ft. recorded in Section 8 was probably uniform along its whole length. It very possibly extended as far as the outer terminal post-hole (Hole 5) of the revetment which it was designed to support, but for 3 ft. inwards from this post-hole the final destruction had evidently caused

a general collapse, and there had been a big fall of blocks, timber and clay from the rampart-facing out into the roadway, where two pieces evidently of the horizontal beams (oak) were found charred but unbroken, respectively 1 ft. 8 ins. and 1 ft. 9 ins. long, lying among the débris of the remainder.

Wall B. (Plate VII, 1.)

The southern wall (Wall B) had suffered much less. There was a number of tumbled blocks round its outer end, one having fallen in upon the ruined woodwork, but the bulk of it was undisturbed as near as 1 ft. 6 ins. to the terminal post-hole (Hole 6) of the revetment, and though between this and the next (Hole 7) its average breadth *in situ* was little more than 1 ft., opposite Hole 8 it is 3 ft. across, and 3 ft. further 4 ft. Its average height is 2 ft., and as numerous fallen blocks attest must originally have been a good deal more. It is well seen in Plate VII, No. 1. That this wall at least was contemporary with the heightening of the rampart, not with its original construction and that of the revetment, is well shown by Section 7, cut 3 ft. 6 ins. from Hole 6, where on the small bank of chalk piled against the foot of the revetting-timbers, plainly of the original construction-period, as has been noted above (p. 35), a foundation of chalky material was banked up, which is clearly to be correlated with the heightening of the rampart behind: in this foundation the wall, just over 1 ft. 6 ins. wide, is bedded. A similar section could not be obtained on the north, but it is only reasonable to ascribe both walls to the same date.

At a distance of 10 ft. on the north and 29 ft. on the south from the outer ends of the revetments, the walls cease by the post-holes which mark the right-angle turns made by the revetment to form on each side a bay in the flanking of the roadway, 7 ft. deep on the south and originally rather over 5 ft. on the north. The corners so formed present features of no little complexity.

THE CORNER OF THE NORTH BAY

Pit V and its Annexe.

The north side will be described first (see Section 8). It was here that the large pit (Pit V) was found which has been already mentioned. It was dug for occupation or other use before any fortifications were put up, and was subsequently

utilized in the construction of the Entrance defences. The flat bottom was 6 ft. below the original surface, and has an average breadth of over 4 ft. 3 ins., the measurement across the top being a little smaller, as it tends rather to beehive form, though not so much as Pit R (see p. 91). Its sides are not appreciably eroded at the top, perhaps shewing that, like Pit M, where the same feature was noticed, its period of use was short.

On the north it had a sloping annexe or adit nearly 6 ft. long, 4 ft. 3 ins. deep and 3 ft. wide where it runs into the pit, which here has a perpendicular side, and 2 ft. deep and just over 1 ft. wide at its narrow extremity, at which, standing upright against the vertical face of its end, the charred stump of a revetment-post was found, enclosed in a packing a few inches thick of chalk pebbles and clay (burnt to powder as usual). Its end thus formed a socket for the post, and from here along towards the pit it was filled with clean chalk, over which lay the original make-up of the rampart. Another post stood in the chalk filling some 3 ft. nearer the pit and 1 ft. beyond it a third, which was of ash. This stood just inside the pit itself, and was in fact the corner-post, already mentioned, of the bay, the eastern side of which was revetted by all these timbers in a line at right angles to the roadway. The chalk blocks of the end of Wall A were set all round this post, and the lowest of them were bedded round its bottom 4 ft. deep in the pit. South of these, and just free of them, two more posts stood close together in the pit, apparently unconnected structurally with the revetment: these may well have formed a double gatepost. While the post at the far end of the annexe stood in a packing to itself, the lower courses of the wall and all the four other posts described were enclosed together in a similar packing of their own, 4 ft. deep: this does not extend horizontally across the rest of the pit or annexe, or vertically below the bottoms of the posts and the lowest course of the wall. The remainder of the pit was occupied by an entirely distinct clean chalk filling, continuous with that mentioned above in the annexe. This filling contained many good-sized lumps, of which indeed in the bottom of the pit it was wholly composed. Among these, 1 ft. above the pit floor, and remote from the packing of the wall and posts, was found a fragment (V 1, fig. 12), of a small red bowl, with finger-tip ornament outside the rim, which can hardly be a very late type; near it occurred four other tiny potsherds without character and also a burnt flint pot-boiler,

with one or two bits of ox-bone. These must date at the latest from the time when the filling was put in, for it was definitely sealed, where not interrupted by the wall and posts, by the trodden surface of the roadway (here blackened by fire), as Section 8 shews.

The wall and posts, with their packing, broke the continuity of this surface layer, but though since their destruction a little charcoal and burnt clay powder had penetrated downwards between the chalk lumps in the low levels of the original filling, the latter was quite distinct, both in the pit itself and in the annexe.

Now the relationship of the annexe to the posts standing in it is peculiar; it is much too big to have been dug merely to contain them, but they evidently stand in it by design and not by accident. It is inconceivable that a pit previously filled up and forgotten, with an annexe of exactly suitable length and position to hold the revetment-posts of the proposed bay, was pitched upon in sheer good fortune by the builders of the Entrance, and equally so that the pit alone lay open and that they provided for the posts they wanted by cutting an annexe of such disproportionate size, and then filling it up again along with the pit. The only explanation is that both pit and annexe existed before the Entrance was contemplated and were seen to be adaptable to its construction; they were filled with clean chalk in which posts were planted where required for the revetments, the annexe proving convenient for the supports of the side of the bay, and then the rampart was erected as on virgin soil.

Such annexes to Early Iron Age pits are not unknown: Pit 89 at Swallowcliffe Down had one 7 ft. wide and 21 ft. long; ¹ they may be considered either as enlarged specimens of the steps or seats exemplified in Pit A here (p. 88), as in Pit 34 at Fifield Bavant, ² or alternatively and perhaps better as entrances, as in Pit 45 at All Cannings Cross, ³ where the slope up to the level ground surface corresponds to the level passage of Pit 51 there, which leads out to a sloping surface. The name annexe will be retained for convenience.

It is necessary of course to presume that the packing in which stood the posts at the corner of the bay was reconditioned

1. *W.A.M.* XLIII, pp. 59-93, pl. II.

2. *W.A.M.* XLII, p. 469 and pl. II.

3. *All Cannings Cross*, p. 73 and pl. 5.

at the time of the heightening of the rampart, to allow of the insertion of the lower courses of Wall A, since the analogy of Wall B assigns it to this date: in fact, there is nothing against the view that the two posts standing free of the revetment were inserted at the same time, if they really formed a double gate-post. The clay of the packing was found burnt to so loose a powder that it could not be determined whether it was formerly homogeneous or not, and in the absence of evidence from this source it is less difficult to believe that such a reconditioning took place than to suppose Walls A and B to be of wholly different dates. In any case there need have been no disturbance to the clean filling of the rest of the pit and annexe, and in fact important repairs to the northern revetment, connected with the heightening of the rampart, are attested in a manner now to be considered.

The Collapse of the Northern Revetment.

No traces of horizontal revetment beams were found along the side of the bay between the group of four posts surrounding the end of the wall and the other post at the extremity of the annexe, though the latter had evidently stood at the inner corner of the bay. The remains of a good deal of this inner corner-post were clearly to be seen above the old floor level, but this portion of it was entirely surrounded by the original make-up of the rampart, and completely covered by the additional material above. It did not penetrate upwards through the latter at all, and had obviously broken off flush with the surface of the former, which had fallen forward round its stump. With this peculiarity those encountered at the other end of this bay as shown in Section 4 are to be compared. Here the revetment had evidently been supported by a post standing in Hole 3, which was 3 ft. deep below the old turf-line, 1 ft. 6 ins. wide, and of the usual post-hole character; however, the post had been removed, leaving only two fragments of decayed wood. The hole was filled with white chalk continuous with the make-up of the original rampart above it, which has in fact fallen forward right over the hole and has been subsequently covered by the additional material, which was here only distinguished from it by the fact of being clay and not chalk, the well-marked surface stratum of the original make-up being here absent, though just beyond the hole it was unmistakable.

From here to the post previously considered the line which the revetment must have taken was not marked by any traces of horizontal beams, though these were plentiful elsewhere.

Clearly what happened in the northern bay was this. The weight of the rampart when heightened by the additional material proved too much for the strength of both these posts; they snapped, and both the old and the new make-up fell forward into the bay. It was not thought worth while to shovel this back and erect new posts in the same sockets: the horizontal beams (which may also have been broken) were pulled out, as was nearly all the stump of the western post, but the fallen material, along with the other post-stump, was allowed to remain, and a new revetment was made some 3 ft. further south, which had the effect of flattening out the bay almost entirely.

This new revetment was supported at the western end by a new post standing in a fresh hole (Hole 18), which was 1 ft. wide and only half the depth of Hole 3, and thus far smaller than all the others; in fact, it might on this ground alone have been guessed to be of a different date. From this hole the new line of timber-work was traceable by appreciable remains of horizontal beams, along a line almost parallel to what the old one must have been, to the post already described as standing in the annexe to Pit V some 3 ft. from its broken predecessor. This, then, became the new inner corner-post of the north bay. It is even possible that it did not exist before, and was actually erected for this purpose: but this is less likely, as a post was found in a corresponding position on the south bay which must have been present from the first.

At a time when the effect of the heightening of the rampart necessitated such important repairs, and when walling was being put up to support the revetment, there is nothing incongruous in the reconditioning of the packing at the corner of the bay to include such a new strengthening of chalk blocks, especially if, as has been suggested, new gate-posts were inserted, as is more than likely, in view of evidence to be discussed below concerning the gates. Anyhow the packing at this point cannot safely be considered to belong, in the form in which it was found, to a period earlier than the heightening of the bank, though whatever form it may previously have had, it must always have been distinct from the chalk filling of the rest of Pit V and its annexe.

No stratified finds were discovered which could amplify the evidence from the north side of the entrance now reviewed, and the corresponding corner of the bay on the south side will next be described.

THE CORNER OF THE SOUTH BAY AND THE BLOCKING OF THE ENTRANCE

Sections 8, 6 and 9 (fig. 6).

Here there was no large underlying pit clearly earlier than the fortifications: the corner post of the bay shared a hole, evidently dug specially for the purpose, with its neighbour, which stood in the middle of the return of the revetment forming the east wall of the bay. This is Hole 9, which was of oval shape, 4 ft. 6 ins. long by 2 ft. 9 ins. wide by 4 ft. 6 ins. deep below the old surface level; its eastern half lay under the original make-up of the bank, which sealed its white chalk filling, and the two posts, each enclosed in the usual clay and pebble packing, occupied either end of it.

The end of Wall B did not encircle the corner-post like Wall A, but stopped abruptly and turned northwards to follow the edge of a narrow regular trench, which ran at right angles across the southern half of the Entrance-way and connected Hole 9 with another hole of exactly similar dimensions (Hole 16) in the middle of the roadway. The trench was 11 ft. long, 3 ft. 6 ins. deep, 1 ft. 9 ins. wide at the top and just over 1 ft. wide at the bottom (*v.* Sections 8 and 9). The trodden surface of the roadway, here and there bearing traces of fire, covered its filling, which was of clean loose chalk, containing no large blocks and indistinguishable at the edges from the chalky sub-soil underlying the rest of the road-surface.

This filling contained one fragment of coarse pottery, not exactly datable, and certain small splinters of decayed (not burnt) wood; it was continuous with the filling of the southern half of Hole 16, which, like Hole 9, was some 1 ft. 6 ins. deeper than the trench. A tapering annexe, resembling that of Pit V in form, extended for 3 ft. 6 ins. north-east of Hole 16, sloping irregularly from its narrow extremity to a depth where it entered the hole itself of 3 ft. below the roadway (see Section 6). The filling of the southern half of this annexe was continuous with that of the southern half of the hole, but the northern half of both was occupied from the bottom upwards by a wall of large

PLATE VII.



1. Wall B and the line of the S. revetment, seen from West. The measuring pole stands in Hole 8, and Hole 7 is visible beyond.
2. Hole 16 and Annexe, with Wall C, seen from South.

chalk blocks (Wall C) similar in construction to Walls A and B, about 2 ft. 3 ins. broad, and some 7 ft. in total length. (Plate VII, 2.) Presumably it originally stood to an appreciable height, though as found it rose a few inches only above the road-surface level.

Hole 16 itself, if trench and annexe be disregarded, exactly resembled Hole 9, and as the latter was obviously intended for the two posts found standing in it, the original purpose of the former may be presumed to have been the same. Two or more posts standing in such a socket in the centre of the Entrance-way can only have been gate-posts, and though no trace of any such was discovered, testimony to their former existence is provided by the presence 8 ft. to the south-west of this hole of another (Hole 17), 2 ft. across and 3 ft. 6 ins. deep, of the ordinary post-hole type, and in fact containing the stump of a post. This post, isolated in the middle of the roadway, can hardly itself have been a gatepost: if the entrance was spanned by gates at all, they can only have been between Pit V and Hole 9, as a glance at the plan will shew. But any structural connection between the post in Hole 17 and the sides of the Entrance is inconceivable, unless it be assumed that the whole Entrance was roofed. A simpler explanation seems to be that the post was put there as a stopper to prevent the swing of the opening gates exceeding 90°. But this theory is only applicable for gates pivoted on posts in Hole 16, and as no such posts formed part of the complex connected there with Wall C, the inevitable conclusion is that they must have existed before the latter was built, and have been removed to make room for it, the stump of the now functionless post in Hole 17 being covered up, as indeed it was found.

If these early gates were succeeded by others, these must have been pivoted at the sides, not the centre, of the Entrance, as is strongly suggested by the two posts already described in Pit V as probably gateposts, and they seem to have been unprovided with posts for stoppers.

A hole very similar to Hole 16 has been found in the middle of the S.W. entrance of the doubtless contemporary fort of The Trundle, near Goodwood; it contained a post-hole at either end, in which wooden uprights must have stood to support either gates or perhaps a wooden gate-tower.¹

1. Curwen in *Suss. Arch. Coll.* LXX, pp. 42-4.

This provides an exact analogy to the presumed original function of Hole 16, to which we must now return.

The annexe is clearly not part of its original form, and is a later addition, being thus not comparable in function to that of Pit V. The digging of this and of the trench, and the erection of Wall C in one half only of the annexe and hole, must have been parts of a single plan, which involved the diverting of the hole from its presumed original use; but the existing remains by themselves furnish no adequate explanation of what this plan was. Something has evidently disappeared which once occupied the remainder of the hole and annexe and also the trench. Alone, these form no obstacle to passage, but their situation precludes the idea of any other purpose.

Now the filling of the space under consideration was not subsequent to the end of the occupation, for the violent fire which finally ruined the defences has left abundant traces elsewhere, but none in this filling, which must therefore have been put in and trodden down before the conflagration. The L-shaped excavation formed by the trench, hole and annexe, contiguous at one end with the corner-post of the south bay, and at the other end abutting on Wall C, should be explained by positing some obstacle, not yet present at the date of the first fortification, and already removed before the whole Entrance was wrecked: something, further, which by its presence caused Wall B to cease on the edge of the trench and to turn along it, without continuing to support the corner-post of the south bay, as Wall A did that of the north bay, in spite of the especial strain to which this post was subjected.

Only one conclusion seems permissible. The missing feature is a stockade, which must have been erected to block the southern half of the roadway, exactly comparable to the masonry blocking some of the fort-gateways on the Roman Wall, e.g. at Rutchester.¹ The otherwise inexplicable Wall C, built right down in the hole, thus falls into place as a support for the exposed angle of the stockade where its northern end turned north-east, socketed in the annexe, to form a solid central *spina* projecting outwards towards the enemy: the abrupt cessation of Wall B is also explained, as is its turning to run along the edge of the trench. In fact it seems likely that though only a few stones on ground level were allowed to remain after the stockade was removed, the wall originally fronted it along

1. *Archaeologia Aeliana*, 1925, p. 93 ff.

its entire length, and while at its northern corner it would have the support of the deeply-bedded Wall C, at its southern end it would itself support the important corner-post of the south bay.

It is believed, then, that after Hole 16 had, since the first construction of the defences, existed as the emplacement of a gatepost structure, this was at some time or other superseded: the annexe and the trench were dug, and along the whole excavation so formed a timber stockade was erected to block the southern half of the roadway, perhaps fronted by chalk stones forming a tail to Wall B, and supported by Wall C where at its northern end it turned outwards to form a *spina*, Hole 16 and its annexe containing the foundations of both. The stockade may be conceived as consisting of contiguous upright timbers braced by horizontal beams behind.

There seems to be no record of a similarly blocked entrance in any British fort which has been excavated, but such a precaution would be a natural one at a time of danger, and Caesar mentions its employment by the Britons in Kent in 54 B.C. Driven back by his cavalry from a river, apparently the Great Stour, they retreated to a stronghold on high wooded ground, which must be Bigbury Camp on the line of the Pilgrims' Way about $1\frac{1}{2}$ miles west of Canterbury. It appeared to Caesar that this fortress had previously been prepared for a local tribal war by the blocking of all the entrances with tree-trunks.¹ There is no reason, of course, to suppose that these were set in an excavation in the ground, and the blockage seems to have been total, not partial as at St. Catharine's Hill; but the parallel is close enough to attract attention, particularly as Caesar understood the blockages to have been made for the purposes of tribal warfare, as must have been the case with our presumed stockade, to which we may now return.

A more peaceful period must have ensued when it could be removed and its emplacement filled in. This step is in harmony with the conclusions, which will be suggested when all the Entrance remains have been considered, concerning the nature

1. Caesar *B.G.* V, 9, 4: 'repulsi ab equitatu se in silvis abdiderunt, locum nacti egregie et natura et opere munitum, quem domestici belli, ut videbatur, causa iam ante praeparaverant; nam crebris arboribus succisis omnes introitus erant praecclusi.' cf. Rice Holmes, *Ancient Britain and the Invasions of Julius Caesar*, p. 337, and p. 685 with the references there given.

of the defensive warfare contemplated by the builders of the defences. The small splinters of wood in the filling of the trench, hole, and annexe, which were especially numerous towards the bottom, would seem perhaps to owe their existence to the extraction of the timbers. It may be added that there was no trace of clay packing here.

The chronology of this portion of the work cannot be exactly determined, but as Walls A and B have been assigned to the period of the heightening of the rampart, it is natural to do the same with the very similar Wall C, and consequently with the whole stockade complex. Indeed, there is nothing against the very reasonable supposition that the deepening of the ditch, the heightening of the rampart, the building of the walls, and the erection of the stockade half blocking the Entrance, were all parts of a single scheme of reconditioning, undertaken presumably at a time of emergency. How long the stockade remained in existence it is impossible to say, but the absence of traces of clay packing suggests that it was only a temporary structure, unlike the other features of the work of reconditioning.

Certainly such an obstacle in the Entrance, however admirable in time of war, would be very inconvenient in time of peace, and its speedy removal when danger no longer threatened might reasonably be expected. Of course, there was every reason why the lower courses of Wall C should be left in the hole and its annexe where they were, when it was resolved to remove the stockade and fill in the whole excavation, and considering the nature of the traffic which must have used the roadway, there is nothing surprising in the slight projection above the surface of the uppermost remaining blocks, nor in the few left embedded in it from the former tail of Wall B close to its southern side.

THE BAYS

We have now to consider the bays themselves on either side of the inner half of the Entrance. It has been seen that their eastern ends were formed by returns of the revetment, 7 ft. deep on the south, and on the north 5 ft. before and 2 ft. after the collapse of the timbers due to the heightening of the bank. There were no corresponding returns at their western ends, and thus the revetment only enclosed them on two sides. The remains of its timbers, charred and ruined in the final disaster, were nevertheless considerable. All the posts on the

northern side have already been described, and as has been seen, it was not possible to bring them into relation with the apparently isolated post standing in Hole 2 on the other side of the rampart-end. A little to the south-west of Pit V, however, the discovery was made on the burnt floor-level of four big pieces of charred oak timber, 2 ft. in average length, lying side by side north and south, with another piece slightly longer lying over them at right angles. Another smaller piece lay just to the south-west of these, and the whole floor was covered with the remains of others burnt to smaller fragments and charcoal powder: clearly the whole revetment had fallen forward when its supporting posts gave way in the final conflagration.

On the south side the revetment-posts were the two already described in Hole 9, the inner corner-post standing in Hole 10, and three more aligned in Holes 11, 12 and 13 between this and the tail of the bank 23 ft. to the south-west. That in Hole 11 was of ash: all were packed in the usual chalk pebbles and clay, save in Hole 12 where there were only vestiges of clay, and in Hole 13 where it was altogether absent. It will be recalled that at this end of the revetment the rampart has no clay facing, though between Holes 10 and 11 it has a fairly thick one, especially where some 2 ft. 6 ins. south-west of Hole 10 a big beam was found running directly into the original make-up of the bank about 1 ft. 6 ins. above the floor of the bay. It had been about 4 ins. in diameter, and penetrated horizontally just 3 ft. inwards from the line of the revetment, the hole being well faced with clay. The purpose of this timber, the only one of the kind found, is obscure. Lying diagonally to the west of it were found the remains of two oak beams which could each be traced to a length of about 8 ft. They were evidently fallen horizontal beams from the revetment, but neither they nor the smaller fragments of the ruined woodwork (oak and ash) were found on the floor of the bay, from which the whole burnt layer representing the final fire was separated by a thick stratum of dark brown silt, in the body of which traces of burning were wholly absent, while below it the floor of the bay appeared as a clean unburnt layer of white chalk, as seen in Plate VI, no. 2.

As this photograph and the corresponding Section 10 shew, and Section 4 shews better, this silt sloped from a height of 2 ft. 6 ins. above the original floor where the revetment had stood down to ground level about 8 ft. further north, and the chalk material of the rampart had sagged forward against it

to an angle of some 20° from the original vertical as the result of the destruction of the revetment.

Except where the destruction-rubbish had penetrated its upper six inches or so, this deposit of silt was barren of remains, save for some bone fragments (ox, pig, and sheep or goat), and thus it affords striking evidence of the complete disuse of the southern bay for a long time before the final disaster. Effective occupation anterior to this period of neglect was represented by a good deal of broken pottery stratified at the old floor-level underneath it, as well as by fragments of ox and sheep or goat bones. Of the 42 sherds found, none were of the late types recognised in Pit R, and all were coarse work, very often with finger-print decoration; three have been illustrated—E 124 (fig. 12), shewing the heavy flattened-out rim of a big coarse pot: E 126 (fig. 11), a rim with finger-print decoration along the top, and E 129 (fig. 11), similar but with larger finger-prints. Plain flat rims were well represented, as were angular pot-shoulders, but rounded rims shewing any tendency to the beaded type were absent. This absence of late types of pottery supports the major argument from the volume of the silt itself for the cessation at an early period in the history of the defences of effective use of the south bay. There is nothing to mark the reconditioning period here, and everything goes to shew that the period of neglect, so early begun, lasted without interruption till the end.

The absence of a corresponding deposit in the north bay is easily explained by the events of the reconditioning period. The reconstruction of the revetment here already described would mean the clearing away of accumulations already present, while its result was to make the bay so narrow as hardly to be a bay at all. Further, on this side the roadway was not blocked, whereas the south bay was put entirely out of the neighbourhood of traffic while the stockade was in existence.

However, the bays must have been in effective occupation to begin with, and further evidence concerning this early period is provided by the peculiar holes discovered in their area.

The small post-hole 18 has already been accounted for in connection with the reconstruction of the northern revetment after its collapse; immediately south of it (see Section 4) was found a much larger and deeper hole (Hole 4) of circular shape, 2 ft. across and with vertical sides 5 ft. deep below the old surface level. This hole had been filled with entirely clean

chalk, slightly mingled with soil only near the top, and the surface stratum covered this filling without interruption. It was thus obvious that the hole had been deliberately filled up before the end of the occupation, and further, before the re-conditioning period, because Hole 18, which has been seen to belong to that period, impinges on the filling. Though deeper than its neighbour Hole 3, it is of the average size of the original Entrance post-holes, and this at once suggests that it originally held a similar post, which had been subsequently removed, and the hole carefully filled up. Two coarse featureless potsherds were found in it.

In the south bay there are two analogous holes: Hole 14, 2 ft. 3 ins. in diameter and 5 ft. deep, and Hole 15 (see Section 4), 3 ft. in diameter and 3 ft. deep below the old surface stratum. Both were filled with quite clean chalk: the latter was straight-sided and only contained a little ox, pig, and sheep or goat bone, but the former (Section 10 and Plate VI, no. 2) was somewhat splayed towards the top, where its diameter was thus increased almost to 4 ft., its mouth being sealed by the surface stratum, which, here underlying the deposit of dark silt, was of clean chalk. Three coarse potsherds were found in its filling: one was E 106 (fig. 12), belonging to the neck and shoulder of a pot with a fairly curved outline, and the other two shewed the base-angles of pots, one being E 107 (fig. 10), in which there is a clearly visible joint between the base and the built-up wall. No precise chronology can be inferred here.

Along with these holes the peculiar Hole 13 must be considered. It contained the last post of the revetment at its inner end almost at the tail of the bank, but this post stood only at the extreme eastern end of the hole, which is an irregular oval nearly 5 ft. long and 3 ft. broad at its widest, with fairly straight sides some 3 ft. deep. As with Hole 16 above, the analogy of Hole 9 naturally suggests that it once held two posts, one at each end, of which the eastern alone was found remaining, the rest of the hole containing the usual clean chalk filling. It may thus be supposed that a post originally occupied its western end also.

Here, then, we have reason to presume the former existence of three posts aligned across the south bay so as to form a continuation of the line of the outer half of the revetment from Hole 6 to Hole 9. This naturally suggests a period when no

bays had as yet been cut back, and the revetment extended without interruption from Hole 6 to Hole 9 and so straight on to Hole 13.

Similarly on the north side Hole 4 lies on a continuation of the line on which the revetment runs from Hole 5 to the corner-post in Pit V, suggesting the possibility of a similar period of continuous revetment along this line before the cutting back of the bay. We should then be able to argue a natural development from a simple revetted Entrance-passage to one with bays.

However, this theory, though indeed attractive, cannot be maintained. In the first place, Hole 9 would on this hypothesis have been originally cut only to the size required for one post, the northerly one, and its extension to include the other, which supported the side wall of the south bay, would belong to the supposed secondary period at which the wall was cut back. But this extension is so wide that it runs right under the make-up of the rampart which was *ex hypothesi* already long in position. It looks, then, as if this hole was excavated to its present size before the rampart was erected: that is, that it belongs like the rest of the holes to the original construction-period, the holes being dug and the revetment set up first, and the rampart-material being then piled against it.

Secondly, on the north side, the conclusions reached above concerning the annexe to Pit V must on this theory be discarded.

In their stead, we are left with two equally unsatisfactory alternatives; one, that the annexe was dug to hold the posts of the bay-revetment at the supposed secondary date of its cutting back, and the other, that a pre-existing annexe, buried and presumably forgotten, was then stumbled upon by sheer good fortune in the right place for the proposed new posts. The latter needs no refutation; the former falls before the same argument used concerning Hole 9—the width of the annexe is absurdly disproportionate, and as most of it underlies the rampart it cannot have been dug once that was in position.

The theory of an original Entrance without bays is then untenable: a more satisfactory hypothesis is wanted to explain Holes 4, 13, 14 and 15.

It is possible that the Entrance was first designed without bays, and that the plan was altered during the progress of the work, after the holes for the initial scheme had been dug; but except in special cases this type of theory is never convincing,

and there is no evidence here which would force us to have recourse to it.

The conjecture here to be adopted, while it cannot be conclusively proved, avoids any of the objections up to now entertained. It is that the bays were original features of the Entrance and remained throughout, but that at first each was provided with a roof, supported by posts standing in the holes under consideration, which was afterwards dismantled, and the post-holes filled up. The bays as originally designed may thus truly be termed *Guard-Houses*, being roughly oblong structures enclosed on two sides by the rampart-revetment, and on the other two by a timber wall. The extent of the northern guard-house is thus marked by the posts in Pit V and its annexe and by Holes 3 and 4 (with a possible extension in the uncertain area west of the latter, perhaps as far as, or even including, Pit T), while the southern one is bounded by Holes 9 and 10 and the revetment along to Hole 13, which contained at either end the two posts forming the limit of the structure in this direction. Between here and Hole 9 the wall facing the roadway was supported by posts in Holes 14 and 15, which are curiously close together in a manner suggesting the jamb-posts of a doorway.

While this theory may be thought so far to admit of acceptance only by default of other explanations of the evidence, it gains positive support from the resemblance of the quadrilateral plans of the conjectured guard-houses to the known outlines of timber buildings of the Early Iron Age both in Britain and on the Continent. The Hallstatt—La Tène I period settlement at Park Brow near Cissbury shewed hut-sites of angular form, in marked contrast to the circular Bronze Age dwellings near by, and one of them was marked by a set of post-holes which had evidently supported the roof and which resembles in plan those here attributed to the guard-houses.¹ A striking parallel to the Park Brow remains was brought forward by Mr. Reginald Smith² from Württemberg, where at the mountain-site of the Lochenstein, near Balingen, a house of the Hallstatt D period has been excavated which had its post-holes arranged on a similar though rather more developed plan. It is notable here

1. *Archaeologia* 76, pp. 1-39, especially pp. 30-36.

2. *ibid.* pp. 26-29, quoting *Fundberichte aus Schwaben*, Neue Folge, ii (1924), p. 73, especially taf. III.

also that, whereas no stonework of this date was found, the later settlers of the La Tène period made a partial use of dry stone walling in conjunction with timber uprights in a manner which recalls the association of Walls A and B with the timber revetment in the St. Catharine's Hill Entrance, which we have seen to have been effected as part of the reconditioning of the works at a date which must fall well into the same La Tène period.

The roughly rectangular timber buildings of the Hallstatt culture have been fully recognised in Germany, and their distinction from the improved work of La Tène times, in which stone begins to play a part, has been pointed out.¹ Though the development must be rather later in Britain, the parallel with Germany is interesting and important, especially in view of the connexion which will be urged below between the British Iron Age culture and that of the Rhine area.

At St. Catharine's Hill no hut-sites were found inside the defences comparable to German examples in the same way as those at Park Brow, for the only habitations discovered were pit-dwellings; but since this type of timber construction is so fully attested for this period, the theory that the Entrance was flanked by guard-houses thus built, set back from the roadway on either side in bays in the rampart-ends, has a good deal to commend it. It is in fact difficult to see otherwise why the bays should have been devised at all. Further, the fact that Hole 13 lies some little distance beyond the tail of the original rampart is most naturally explained if it be considered to have held the uprights of timber-work that served not only torevet the rampart but also as the wall of a guard-house that extended rather further west than the earthwork.

However, in the light of the evidence already reviewed of the thick deposit of barren dark silt in the south bay, it is obvious that, if this was originally the site of a guard-house, it was disused quite early in the history of the defences. Though, as has been said, an appreciable amount of pottery was found stratified on the floor-level under the silt, yet this level consisted of a stratum of trodden chalk in fairly clean condition (see Sections 4 and 10 and the photograph Plate VI, 2, corresponding to the latter, where the floor-level shews well as a white streak),

1. e.g. Schumacher, *Siedlungs- und Kulturgeschichte der Rheinlande*, I, pp. 110-11 and 157-8, with taf. 15; also Behn, *Beiträge zur Urgeschichte des Hauses*, in *P.Z.* XI (1919); p. 70 ff.

and was not foul or blackened by fire as one might have expected after a long-continued occupation.

These Sections 4 and 10 have a further interest from the fact that they shew this floor running over the clean chalk filling of Holes 15 and 14 respectively, which we can now attribute with some confidence to the date of the removal of the roof; in fact, the floor-material and the filling of the holes are indistinguishable, and evidently when the guard-house was dismantled there was no thick occupation-layer on its floor to which the chalk filling of the disused post-holes would afford a contrast. The chalk of the floor was clean enough to present a surface indistinguishable from that of the post-hole fillings when both were trodden down together, and evidently silting from the top of the bank above began immediately, entirely sealing the old floor-level.

The filling of Hole 4 on the north side has already been described, and the fact there noticed that the later Hole 18 impinges upon it is now seen to have a great importance, in dissociating the dismantling of the presumed guard-house roofs, which involved the filling of Hole 4, from the period of general reconditioning, which involved the digging of Hole 18; for the latter was evidently dug in ignorance of the existence of the former.

What the chronological sequence was may be inferred from the following considerations.

A comparison of the finds in the ditch with those from the material added to the rampart at the reconditioning period has already shewn us that the latter is likely to be a good deal nearer the end than the beginning of the occupation of the defences, while the appearance of the floor of the south bay has been seen to suggest an early date for the dismantling of the guard-houses. It follows that a comparatively long period must have elapsed between these two events, and that this was a period of neglect has already been pointed out. No doubt it was during this that much of the dark silt in the south bay formed—there would be no necessity to remove it at the reconditioning period, as there was evidently no question then of renewing the guard-houses in their original form, and anyhow there was space for defenders behind the new stockade across half the old roadway. On the north side affairs took a different course owing to the collapse of the revetment at this date, as has already been sufficiently emphasized.

EVOLUTION AND CHRONOLOGY OF THE ENTRANCE (fig. 7).

All the features encountered in the excavation of the Entrance have now been described, and it is time to gather together the various scattered chronological indications which have been noticed in different places, and to reconstruct a connected history of the Entrance defences, so as to illustrate their evolution and furnish if possible a basis for the understanding of some of the habits of the people who built and used them.

The reconstruction is illustrated by a series of four plans (fig. 7) shewing the works at the four apparent periods of their history, which are lettered A, B, C, and D, and will be briefly described in order.

Period A.

We have seen reason to date the first construction of the defensive works towards the close of the La Tène I period. The site selected for the Entrance was on the N.E. side of the area to be enclosed, facing the middle of the neck of land connecting the hill with the plateau to the east, which must at all times have been the principal approach. Three pits probably already existed on this site: it is probable that two of these (M and T) were now filled in with clean chalk, and certain that the other (V) was. The ditch dug all round the hill was interrupted so as to leave an Entrance causeway some 40 ft. in width, flanked by its square-cut ends. Outside this the low counterscarp bank was strengthened with double-splayed ends. Inside it, the continuation of the Entrance-way was guarded on either side by the gently incurved ends of the rampart, the southern return being rather higher than the northern. It was also rather more extensive, as the roadway between the two was set askew with the line of the causeway flanked by the ends of the ditch, so that anyone entering would have to make a quarter turn to the right. The effect of this would be to expose to a certain extent the shieldless right side of an attacking enemy crossing the causeway to missiles from the rampart on the north, but the skewness is not really sufficiently pronounced to give the defenders a very great advantage in this way, and possibly it is the result of accident, not of design. The chalk material of the ends of the rampart, generally piled in two successive tips, was faced where it flanked

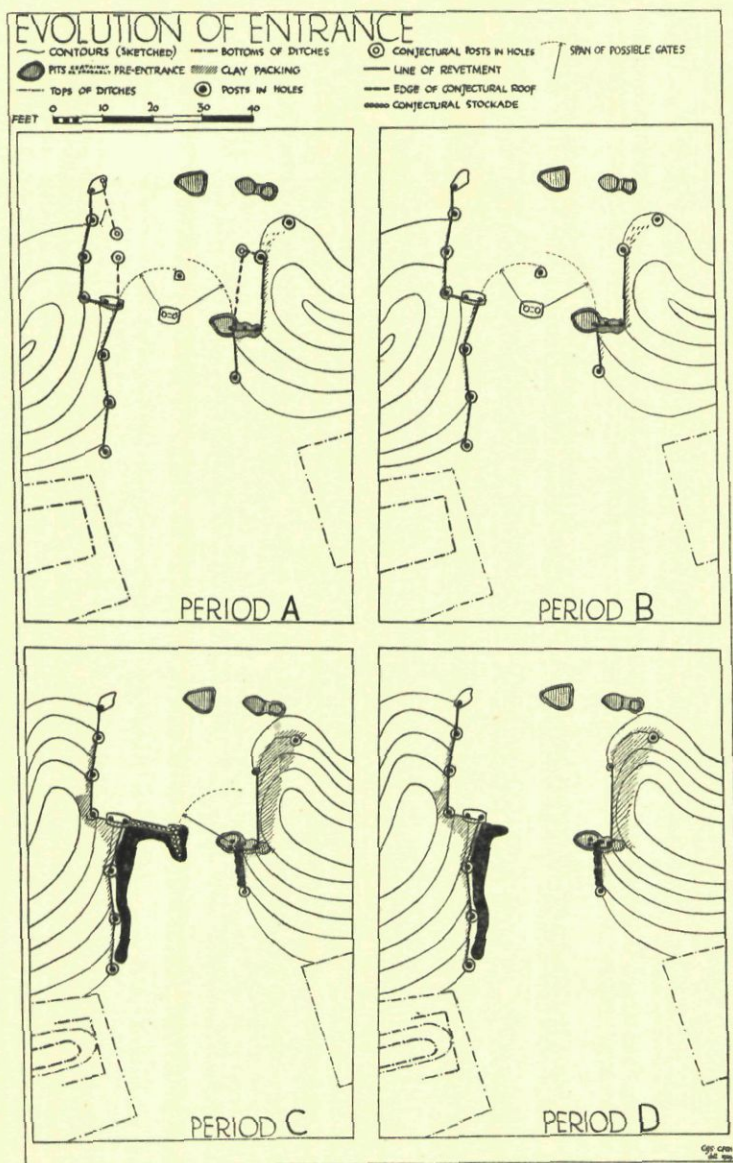


FIG. 7.

the roadway with a thin layer of clay and revetted with a timber fence which probably was high enough to form a breastwork for defenders. It consisted of horizontal beams supported at intervals by vertical posts. At the narrowest point of the passage two or more posts were set in the middle of the roadway on which gates must have been hung, spanning the approach on either side. A post was set up behind as a stopper against which to make the gates fast when open: when closed they could be secured against the posts of the flanking revetment marking on each side the point where the rampart-ends were cut back to form an oblong guard-house, timber-built continuously with the revetment, and backed by the material of the earthwork. These guard-houses were certainly occupied, as finds of pottery show, and must have been roofed: the southern one at least had a central door with stout jamb-posts. The posts supporting all this timberwork were set in holes of varying sizes and packed with chalk and clay, the pre-existing Pit V and its annexe being utilized to hold those at the east end of the northern guard-house.

These works were clearly erected in anticipation of serious danger, and testify to a considerable degree of co-ordinated effort by the inhabitants.

Period B.

How long the defences remained in their original state is not known, but the next step was one not of improvement but of demolition. The guard-houses were dismantled. Their roofs were removed and their back walls, which also formed the revetment of the rampart-ends, were alone left standing. The post-holes which had held the uprights of their front walls were filled up with clean chalk, and thus two open bays were left in the revetment on either side of the roadway. It is quite probable, though not certain, that the gates and their central supporting timbers were left, but from now onwards the bays where the guard-houses had been were allowed to become filled with silt, and it is evident that for a comparatively long time the defences were neglected. There was clearly no danger which required the fortifications to be kept seriously in commission.

Period C.

This peaceful time ceased abruptly early in the La Tène II period, not very long before the final destruction. There was presumably a "war scare," and the impending peril aroused the inhabitants to recondition their obsolete defences. The ditch was cleaned of its accumulated silt for a considerable distance on either side of the Entrance causeway, and a new and deeper bottom to it was cut, with rounded ends below the causeway flanks. The material so obtained was used to heighten the ends of the rampart and to prolong and accentuate their inward turn guarding the Entrance-way. This additional earthwork was edged on the outside by a kerb-line of rough chalk blocks, and on the inside behind the revetment was given a waterproofing face of clay, for the most part of great thickness. Its weight, however, proved too much for the revetment of the north bay—its supporting uprights snapped, and a mass of chalk fell forward into the bay. Perhaps because the danger of attack was so pressing, the labour of shovelling it back was not undertaken—instead, the prompter course was adopted of leaving it where it was and making a new revetment some three feet further forward, thus almost nullifying the now functionless bay. It is perhaps significant of the haste in which the work was done that the new post-hole dug for this purpose was allowed to be dangerously small.

Whether or no the former gates were still in existence, they were now superseded, for the Entrance, 25 ft. across, was thought too wide to be safely defensible, and it was decided to block its southern half. The old central gate-post socket was connected with the southern revetment by a trench in which a stout timber stockade was bedded, spanning the south half of the roadway from the outer corner post of the southern bay right out into the middle, where it turned outwards to form a sort of central *spina*, for which an extension of the former gate-post hole formed a socket. The north side of this *spina* was supported by a wall of chalk blocks, bedded right down in the excavation so formed, and this wall was probably continued on the surface right round the front of the stockade across to the southern rampart-revetment, against which a similar chalk wall was built right out to its end. The northern revetment was also given a supporting wall for the short distance between its further end and the outer corner post of the north bay, the bedding of which was reconditioned to allow the lower courses

of the wall to be set all round its bottom end to a depth of 4 ft. At the same time a double gatepost adjacent to this seems to have been inserted for a new gate spanning the now greatly reduced width of the roadway.

We have already noted the skewness of the lay-out of the Entrance; even if this was not originally intentional, it was skilfully turned to account in this period, for the stockade with its projecting *spina* turned the whole southern half of the Entrance into a trap into which, owing to the skewness of the approach, a straight rush across the causeway would precipitate a storming-party. The assailants would have to bear to the right to reach the gate, and this was a narrow bottle-neck exposed to close-range fire from three sides.

But while admitting the skill shewn in designing the improved defences, we must note that no attempt was made at the same time to rebuild the guard-houses: the northern bay practically disappeared in the rebuild described above, and the southern one was left choked with silt as before.

The general effect of a review of the activities of this period is to give an idea of drastic measures taken in a hurry at a time of emergency. From whatever quarter it was that the danger threatened, it seems to have been safely surmounted. The effect of the renewal of peace-time conditions is strikingly shewn in the sequel.

Period D.

This is nothing less than the complete dismantling of all the timber defences put up in Period C. The stockade was removed, the trench which had held it filled up, and its northern supporting wall levelled to the ground. In fact, the chalk walling was only retained along the flanking revetments, a mere stump of the facing of the stockade remaining on the south.

Though of course the ditch was now permanently deeper and the rampart higher than before, the defences were reduced to a state closely resembling that of Period B, or even one less effective still, for while the original gate may well have been then still in existence, in this period there can have been no gates at all: while the two posts by the outer corner of the north bay still remained, there is nothing in the centre to correspond with them, and a single-span gate across the whole Entrance would be impracticable.

This concluding period seems to have been of no very long duration, and to have ended before the middle of La Tène II; but before considering the destruction which supervened, it is desirable to see what inferences can be drawn from this review of the history of the entrance defences.

EVIDENCE FOR WAR AND PEACE

First of all, the settlement on the hill existed for some considerable time without any defensive works whatever. It is probable, as will be seen in a later chapter, that the immigrations which brought the settlers to the spot were sporadic and the reverse of organised. Such small bands of immigrants settling here and there over southern and eastern Britain are not likely to have possessed the social organisation, capacity for co-ordinated effort, or command of resources necessary for undertaking large works of fortification. By degrees, however, their evolution reached a higher level. Hill-top fortresses were previously not unknown on the Continent from which they had come, and the gradual aggregation of tribal units would both make occasional warfare inevitable and afford the means for taking effective war measures.

After perhaps as much as two centuries, then, the inhabitants of St. Catharine's Hill fortified their natural stronghold with a rampart and ditch. They knew how to take advantage of natural contours, and in constructing the Entrance they employed the device of curving the ends of the rampart which flanked it inwards and perhaps also of setting its axis askew, the better to control the approach. The stout timber revetment, the effective gates, and the carefully placed guard-houses make the work one of no mean order, and it must have been a very adequate defence against the dangers of warfare which it was designed to withstand.

However, it would seem that peace was normal and war exceptional; for a period, evidently of some length, next ensued when the works were neglected and partly dismantled. There was no need to compel picquets to garrison the guard-houses: there was some value in their timbers, and they were taken down, no doubt to be used elsewhere.

But when at last war conditions were again threatened, vigorous efforts were made to make the Entrance, naturally the weakest point in the fortifications, impregnable. It was greatly

strengthened, and partially blocked by the method later observed by Caesar to have been elsewhere adopted in a similar emergency.

And again when peace was restored it was the same story. If no serious warfare was on hand, all that was wanted in the Entrance was uninterrupted passage, and it was accordingly cleared of its obstructions, and shorn of much of its military value.

That intermittent raiding in the countryside went on in the periods here called times of peace is more than likely, but clearly there was seldom any question of serious hostilities between tribe and tribe—in this case only twice in a total period of perhaps four centuries. The two plans, therefore, on the left of Fig. 7 (Periods A and C) belong to abnormal war conditions, and the two on the right (Periods B and D) to normal peace conditions.

It will remain to be seen how far future excavations on other sites will bear out this estimate of the conditions of life in Southern Britain in the Early Iron Age.

THE FINAL DESTRUCTION

It is somewhat surprising, after considering the foregoing evidence, to find that though the defences were clearly finally destroyed by a conquering enemy, no steps seem to have been taken after the neglect of Period D to put them in repair to meet the fatal onset. One can only suppose that the inhabitants were taken by surprise.

The disaster seems to have occurred during and not after the middle of the La Tène II period—the middle of the 2nd century B.C. is a date more likely to be too late than too early. Who the destroyers were must remain a matter for conjecture (see p. 175 below), but from whatever quarter they came, they did their work with ruthless thoroughness. There is no trace of effective occupation on the hill after this until the Middle Ages, and the intensity of the conflagration which they effected in the Entrance may well provoke astonishment. The extent of the abundant traces of the fire has been noted in detail above; not only was the timberwork ruined, spreading as a black charcoal layer over the bays and across and along the roadway as shewn in Fig. 5, but the material of the earthworks themselves was penetrated to a remarkable depth. Thick as was the clay facing, especially on the north

side, no portion of it was found which was not reduced to a light brick-red powder, and the chalk behind it was in several places burnt grey. The fire had clearly had a more ruinous effect on the north than on the south, and it is easy to see that the prevalent south-west wind was blowing at the time. The flames thus fanned accomplished a very effective destruction. Silt from the upper part of the banks slid down over the charred rubbish (*v.* Sections 4 and 8 especially), and the turf which grew over it has remained undisturbed until the excavations began.

The phenomena of the destruction seem to invite comparison with the "vitrified forts" of Western and Central Europe and Scotland, the stone ramparts of which have been subjected to so high a temperature that their internal material has become fused into a solid calcined mass of vitrified rock.

It is hard to see how heat of such intensity could be produced —e.g. at Lourdon near Roanne, rock has been found thus vitrified which does not fuse under 1000° centigrade. But here, at the Stromberg in Silesia, and elsewhere, the vitrified walls can be shewn to have been of the half-timber construction of the *murus gallicus* described by Caesar (*B.G.* VII, 23) at Avaricum, and constantly met with in the Celtic area of Europe, in which the stonework was interlaced with a stout timber framing. The vitrification can thus be accounted for by the argument that, if once such a wall got really alight, the timbers penetrating the stonework would, as they gradually burned out, create flues, along which the heat would permeate the structure by a forced draught and vitrify the stone as in a furnace.¹

The intensely burnt condition of the ramparts flanking the Entrance, more especially of the thick clay facing, suggested that they might have been built, and consequently at last ruined, in a similar manner, and great care was therefore taken to see whether any traces of construction resembling the *murus gallicus* could be found.

But the essential feature of this is that horizontal and transverse timbers should inter-penetrate the rampart, and as has been seen, only one horizontal timber was discovered running back from the revetment into the bank. It will be remembered that this was between holes 10 and 11 in the south bay: it was

1. The whole matter is reviewed by Déchelette, *Manuel* III, pp. 192-201. More recently, however, a vitrified rampart of peculiar construction has been discovered at the *oppidum* of l'Impérial, Lot: this is of Hallstatt date, and differs materially from the stone and timber La Tène rampart which succeeded it: *B.S.P.F.* XX, p. 51 ff.

indeed surrounded by clay burnt to powder, but no such thing was found anywhere else.

The intensive burning of the clay and some of the chalk of the rampart must consequently be put down to the blaze made by the contiguous revetting timbers only. Its effect seems certainly to have been remarkably severe, even allowing for a high south-westerly wind : but the fact, though surprising, appears to be indisputable, and there the matter must be left.