distinction to the subjects which he sketched for his earlier finished drawings, is their comparative simplicity; there is no more elaborate flamboyant detail; he delights much more in pure constructive masonry, or in the framing of simple open-timber roofs. Of both kinds there are numerous examples, such as the roof over one aisle of Leominster Church; the bell-framing in Rustington Church; the roof of the kitchen in the Bishop's Palace at Chichester—a marvellous drawing right across two pages; the roof in the George and Dragon at Speldhurst, in Kent; the roof of Cuddesden, or, again, the half-timber work at Warwick, of Upperfolk, Fernhurst; the old hall, Sandbach, Cheshire, which he repaired; or the old house at Conway, since pulled down; or, again, in hanging tile-work, as at Rusthall Common, the shop, Speldhurst, or the Red Lion, Lower Green, near Tunbridge—the latter one of the most beautiful drawings in the book. Whilst in earlier days no subject could be too elaborate for him, now he delights in the greatest simplicity—Climping Church, or Merton College Library, or Bampton porch, or Broughton Castle; the drawings of the old chests at Winchester, showing the framing and construction; of the settle at the George and Dragon Inn, Speldhurst; of the Jacobean pulpits at Tortington and Edburton Churches, and St. Lawrence's, Reading; of the chair at Warwick, the bench and the chair in the Lady-chapel of Winchester Cathedral. The drawings are of the most admirable kind, with full notes as to dimensions, framing, and covering. Every page, indeed, has its interest; but I must limit my description, and draw attention to three subjects: I. (pages 33 to 36) figures taken from Japanese books in 1862—the first books, perhaps, which came over from Japan, Nesfield having at once seized on the vigour in the drawing and the designs on the covers; II. (page 138) a sketch of the hall at Conway Castle, and (page 139) a suggested restoration of the same drawn in ink; and III. (page 143) a minute pen-and-ink drawing of Caernarvon Castle in the old times, with ships of the period grouped and drawn in perspective in the most marvellous way.

NOTES UPON THE SMALLER "TREASURIES" AT MYCENÆ.

By William Simpson [*H.A.*], R.I.

THE term "treasuries" is not here used in ignorance of the real character of these monuments which still remain on the site of the ancient city of Mycenæ. Under this name they have been known from the time of Pausanias, and such a lengthened use of the word would in itself almost justify its continuation; but my main reason for its employment is, that it serves to distinguish this particular class of tombs from those of a different kind in Mycenæ as well as in other parts of Greece. Monsieur Perrot calls them "Domed Tombs" and Schliemann "Beehive Tombs," fairly good names as descriptive of those at Mycenæ; but I should prefer to apply the words "Tumulus Tombs," believing that their true character would be thus expressed. Such nomenclature would not be limited to Greece, but would include a very wide range of monuments extending over a large portion of the globe. The cells of tumuli are not all circular in plan, nor domed in their roofs. Some of the Kertch tumulus tombs are square; and I give illustrations [figs. 2, 3] of one of the Bin Tepé, or the Thousand Tumuli, near Sardis, which is square in plan, with a flat roof formed of three stone slabs.

My visit to Mycenæ occurred in March 1877, shortly after Schliemann had closed the first explorations at that place.* Before then I was familiar with the so-called Treasury of Atreus from drawings, though they did not in the least prepare me for the surprise I experienced

* My mission there was to make, for the *Illustrated London News*, sketches of the explorations that had taken place. After that I visited the Troad, and made illustrations of Hissarlik, and other sites there; and as Wood had shortly before finished his work at Ephesus, I went on to that place also.—W. S.

on first entering the monument itself. I had not realised the great size of the beautiful dome, which, in the dim light that is permitted to enter by the doorway, may have helped perhaps

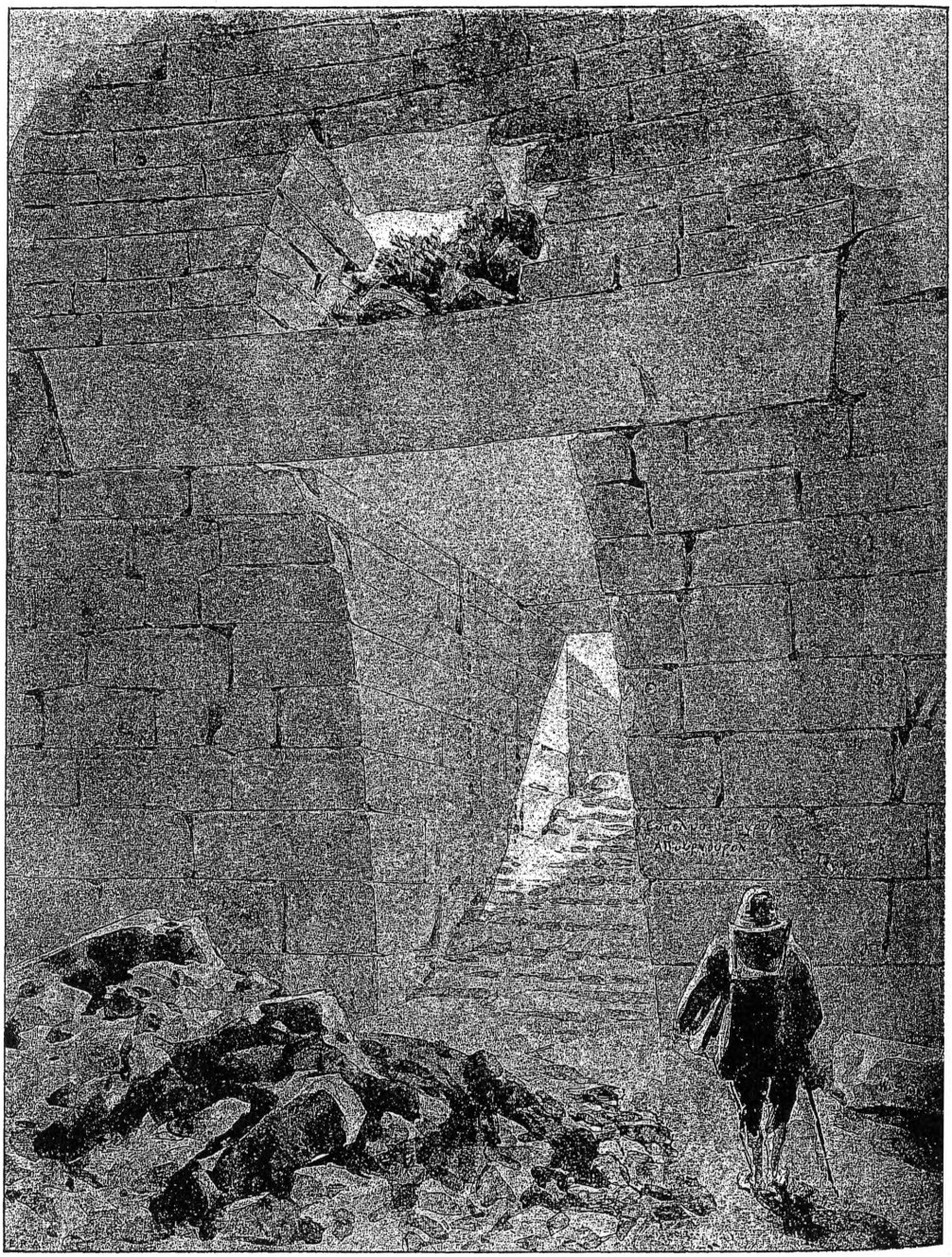

FIG. 1.—THE SO-CALLED "TREASURY OF ATREUS" AS IT WAS IN 1877.

to make it look higher and grander than it really is. A walk along the dromos, and a glance round the interior, were sufficient to convince me that I was in the sepulchral cell of a tumulus, and I naturally asked myself the question, Why does this place pass for a treasury? I was

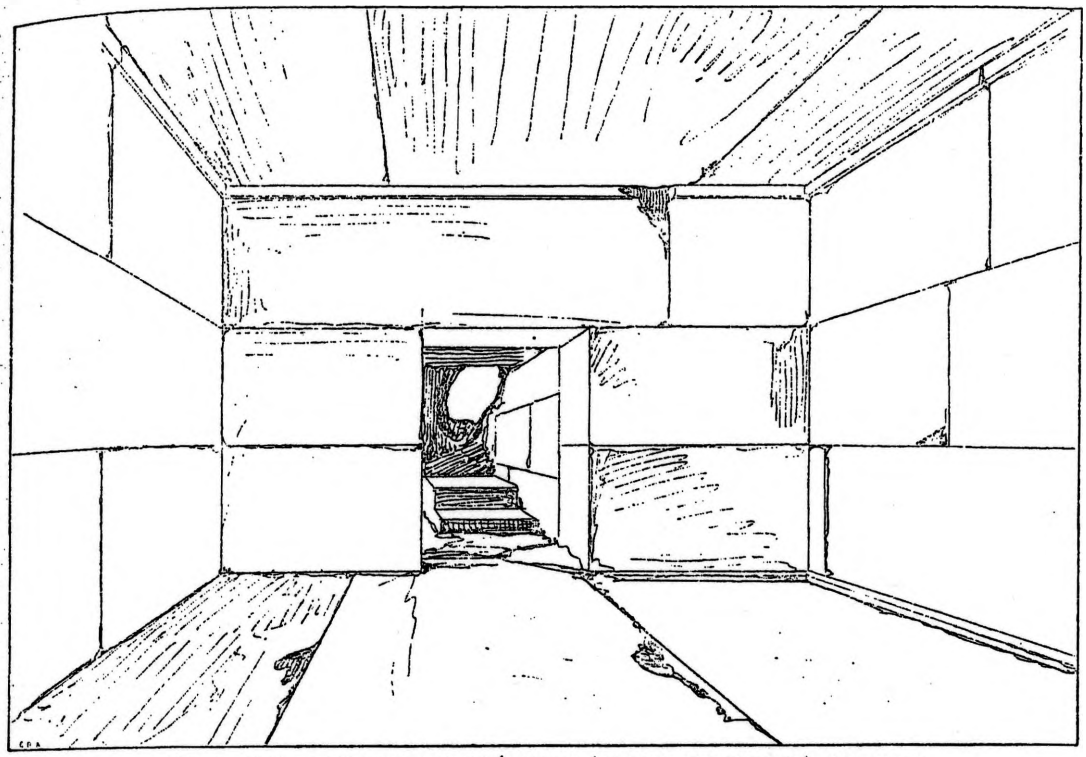

FIG. 2.— CELL OF TUMULUS, BIN TEPÉ, SARDIS (ON THE HERMUS RIVER) ASIA MINOR.

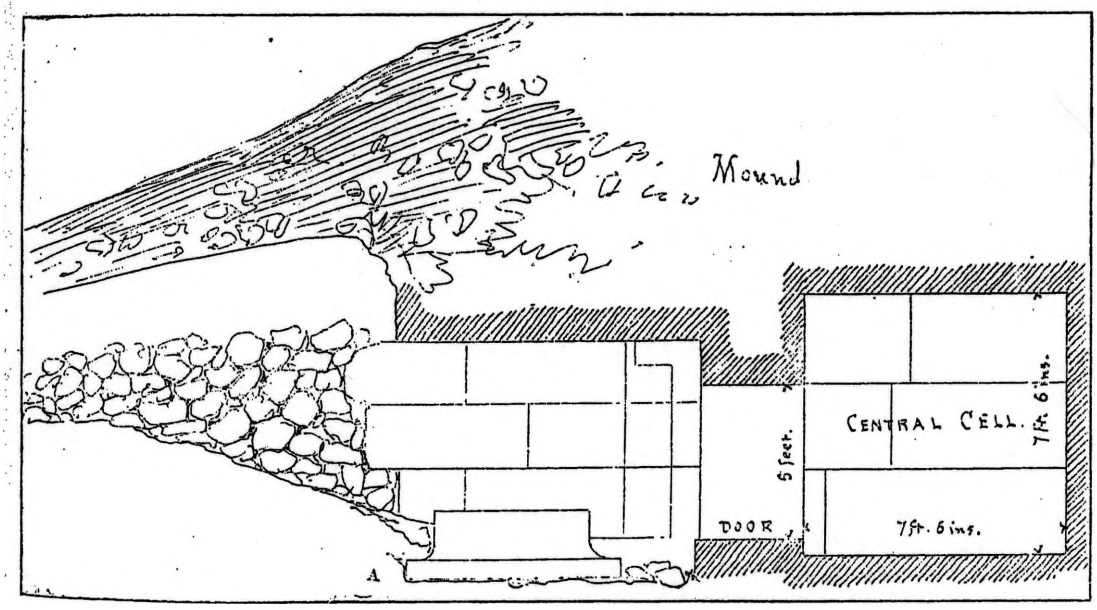

FIG. 3.—SECTION OF CELL OF TUMULUS, BIN TEPÉ.

A, block of stone that closed the doorway.

with the troops who, in May 1855, occupied Kertch, in the Crimea, at the entrance to the Sea of Azof, and had seen the tumuli around that town. They have the same dromos with walls rising in height towards the doorway— a form resulting from the lower slope of the mound, and

found in the Bin Tepé tumuli at Sardis. At the end of this dromos is the doorway leading into the constructed cell—here, at Mycenæ, in the so-called treasury, I found the very same arrangement in every part. The details of masonry and construction differ in many ways, but the general design of the monuments preserves a similarity that cannot be mistaken. Feeling confident in this, it was a slight surprise to find on my return home that archæologists were still doubtful as to what the building had been originally. Dr. A. S. Murray, who, it turned out, had realised their sepulchral character, told me of a German writer who had published a work in which he treated these treasuries as tombs. Curtius, I understand, has also written about them from the same point of view. At the present day, so far as I know, there is no difference of opinion regarding them.*

It was after seeing the Treasury of Atreus that I chanced to come upon two of the smaller "treasuries." My first impression was that they belonged to what are now termed "rude stone monuments," and that they were dolmens. It was with this idea in my head

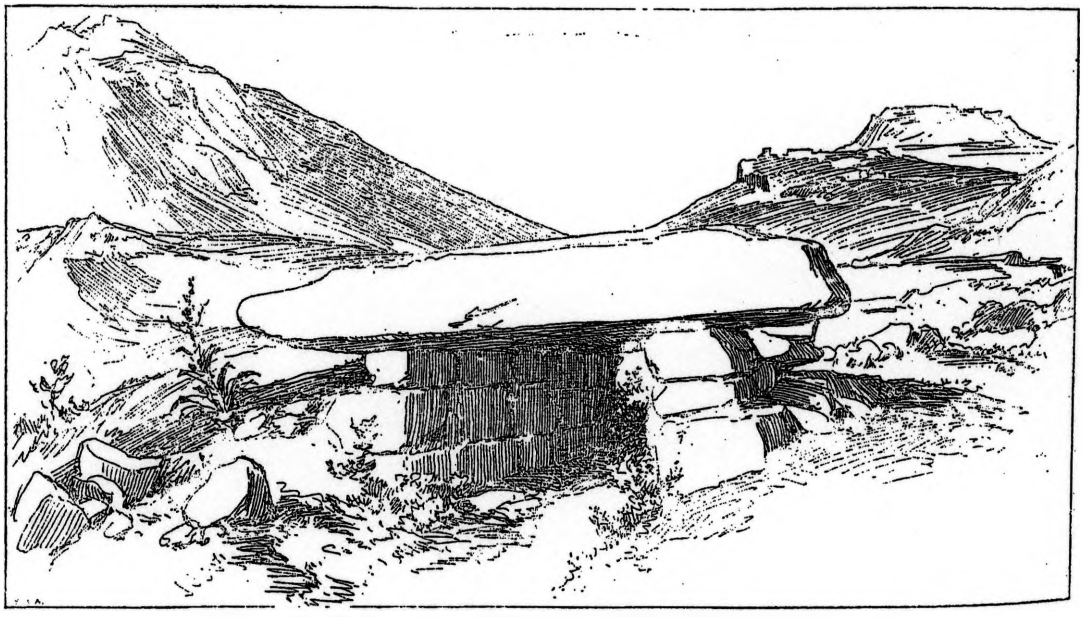

FIG. 4.—THE THIRD TREASURY, MYCENÆ. (From a sketch by Wm. Simpson, R.I.)

that I sketched one of them, and it was only when making a plan of it—which has been my custom with such monuments—that I discovered the remains of the circular cell: there is not much of it left, but still quite enough to show its real character. On carefully inspecting the other, a portion of the circular outline in it also became visible. It then dawned upon me that, although smaller and ruder in construction, these remains belonged to the same class of structures as the Treasury of Atreus and Madame Schliemann's Treasury.† There are three more of these smaller treasuries, making seven in all at Mycenæ. I did not see the three others, and I have seen no description of them, but I give drawings of the third and fourth treasuries [figs. 4, 5], as they are called, from which their character can be understood.

These rude erections could not have been decorated as we know the Treasury of Atreus was. In the third treasury it will be seen that the upper stones rest upon two walls of roughly dressed blocks, of which three courses are visible above ground; most probably

* Schliemann, in his *Mycenæ and Tiryns*, ignores their character as tombs, and deals with them alone as treasuries.—W. S.

† So called from Madame Schliemann having superintended its excavation while her husband was engaged at the explorations within the Gate of Lions.—W. S.

there are more courses now covered up. These walls slope inwards towards the top, and correspond to the sloping walls in the doorway of the Treasury of Atreus; in which, again, it will be noticed [in the illustration of the doorway, fig. 1] that the roof is covered by two large lintels, the inner one of them being the larger. This is a magnificent block of stone; its length on the lower surface is 27½ feet, and on the upper 29 feet; it is 17 feet in width and 3 feet 9 inches in thickness, and is calculated to be about 130 tons in weight. The inner edge is curved to harmonise it with the curve of the circular dome. In the plan of the third treasury [fig. 6] is a similar arrangement; there are three lintel stones, but the largest is the inner one, and its edge is curved to run with the circular plan of the dome. The fourth treasury is so very rude that the slope of the walls cannot be affirmed as a certainty; the roofing stones are also very rude and fragmentary; there appears to be five of them, and the inner and also the largest of them has been trimmed to follow the curve of the dome. There is a

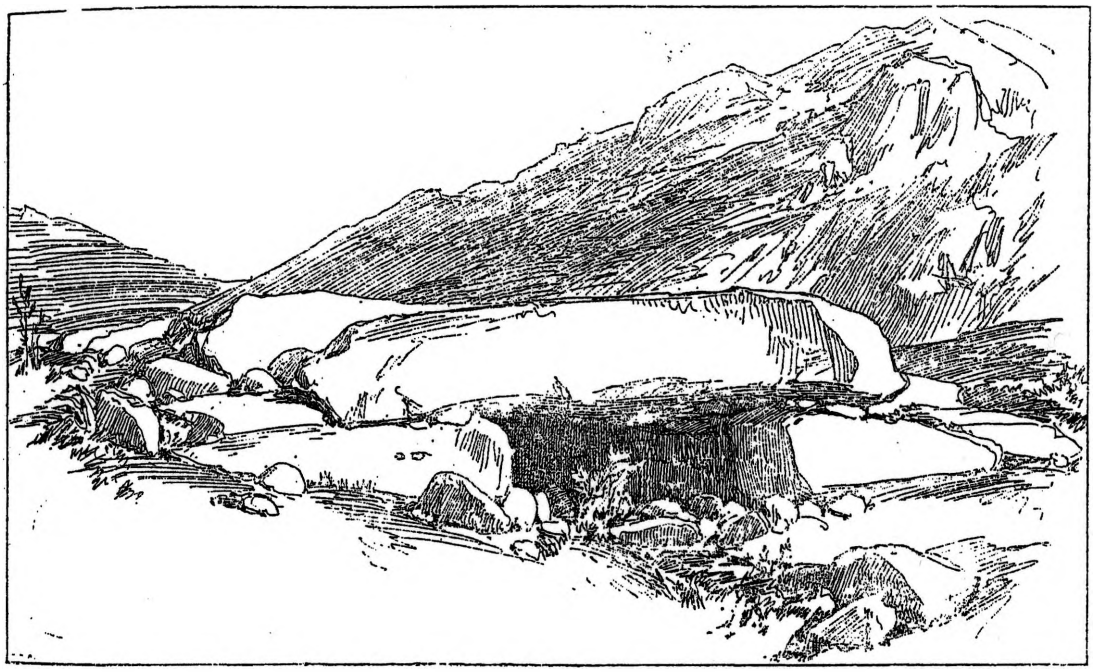

FIG. 5.—THE FOURTH TREASURY, MYCENÆ. (From a sketch by Wm. Simpson, R.I.)

curious and at the same time what appears to be an exceptional projection in the form of this stone, which, although rough, appears to be too regular in shape to be accidental; but what its purpose may have been I can form no notion. It must have formed a sort of shelf above the doorway [fig. 7].*

These details are sufficient to show that the smaller treasuries belong to the same class of structures as the larger ones, and that the Treasury of Atreus is only a more highly

* The plans of these smaller treasuries here given only pretend to be sketch plans, and the measurements had better be taken as approximate; however, they are accurate enough for the purpose of what is here written about them. It is now so long since I made these sketches that I quite forget on what authority the enumeration of "third" and "fourth" was taken. The only illustration of these treasuries that I have noticed is in Dodwell's *Views and Descriptions of Cyclopian, or Pelasgic Remains in Greece and Italy*, published in 1834. Even MM. Perrot and Chipiez, in their *La Grèce Primitive, L'Art Mycénien*, which appeared only last year, although they give numerous illustrations of the Treasury of Atreus and the second treasury, have not, if the English translation of that work is full and correct, given a scrap of illustration of these smaller treasuries. The size, stated above, of the large stone lintel in the Treasury of Atreus is not from my measurement; it may be assumed as correct.—W. S.

developed example. Owing to its having been constructed on a slope, its tumulus character is not apparent. The position of the smaller treasuries is upon more level ground—this is the case with at least the two I made sketches of—and when their domes were covered with earth they must have had the appearance of mounds. As their constructive character, although far inferior in every way, is the same as that of the larger treasuries, it is clear, in my opinion, that the latter were also tumulus tombs.

In the illustration of the Treasury of Atreus which shows the doorway, two perpendicular lines of small holes are visible; these are supposed to have held the bronze pins by means of which the frame of the bronze door was fixed to the wall. At the time of my visit I did not notice whether any indications of a door existed or not in the smaller treasuries; and my sketches, unfortunately, fail to give any information.

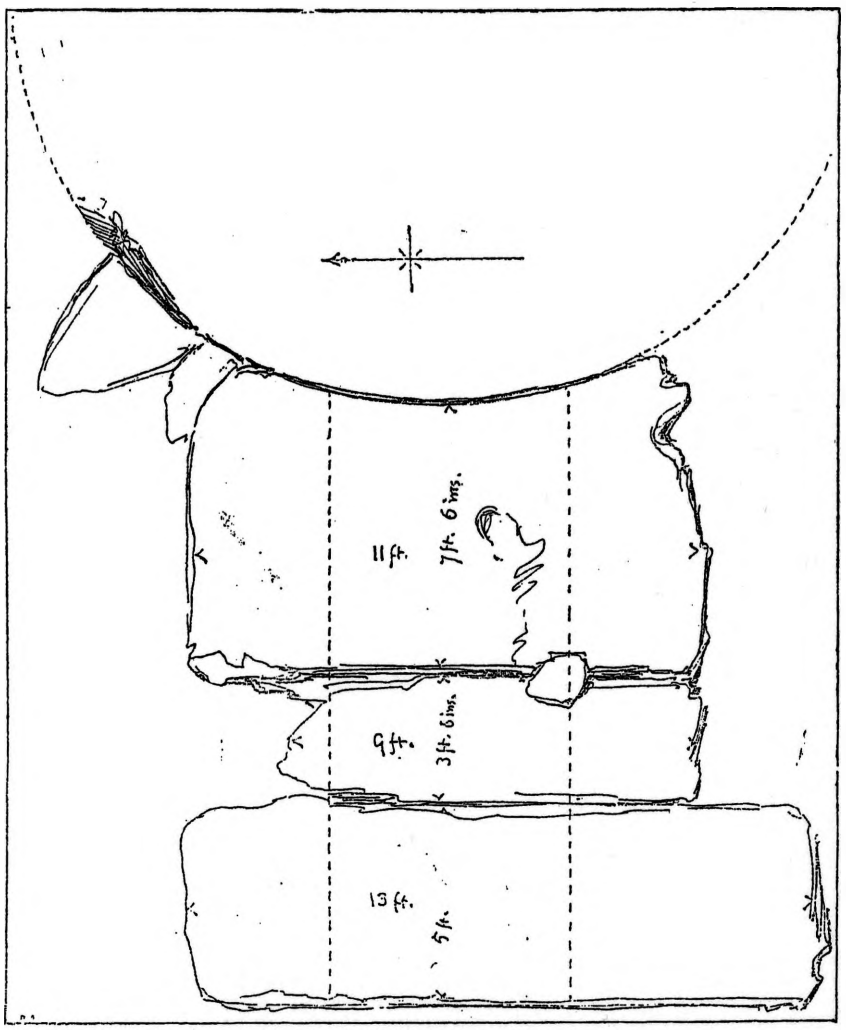

FIG. 6.—SKETCH PLAN OF THE THIRD TREASURY, MYCENÆ.

The length of the doorway is a marked peculiarity of these monuments. There is no constructive requirement that seems to demand it. If any special reason for it existed, which there no doubt was, no suggestion of its purpose has as yet appeared. The plan of the fourth treasury curiously enough recalls the "allées couvertes" found in France, where they form part of the construction of dolmens and mound tombs; but their purpose, if they had any, is also as yet unexplained. The only guess I can make is that at some early date, when it was customary to close up the cell, the funeral rites would be performed at the entrance, and that in course of time the walls were extended and the space enlarged for this purpose. This would mean that it was the funeral chapel. In the section of the Bin Tepé tumulus it will be seen that the large squared stones are continued for some distance outside the door of the cell: this forms in reality a second chamber. I find strong support for my guess in the tomb discovered by M. Tsoundas at Vaphio, in the plain of Sparta, where what M. Perrot designates a "sacrificial pit" is formed

in the ground, and in the doorway leading to the cell.* Offerings to the Chthonian or infernal deities were poured or placed in pits, or in the ground, and these rites would be appropriate for the dead.† This sacrificial pit, or altar, shows that, in some cases at least, the doorway

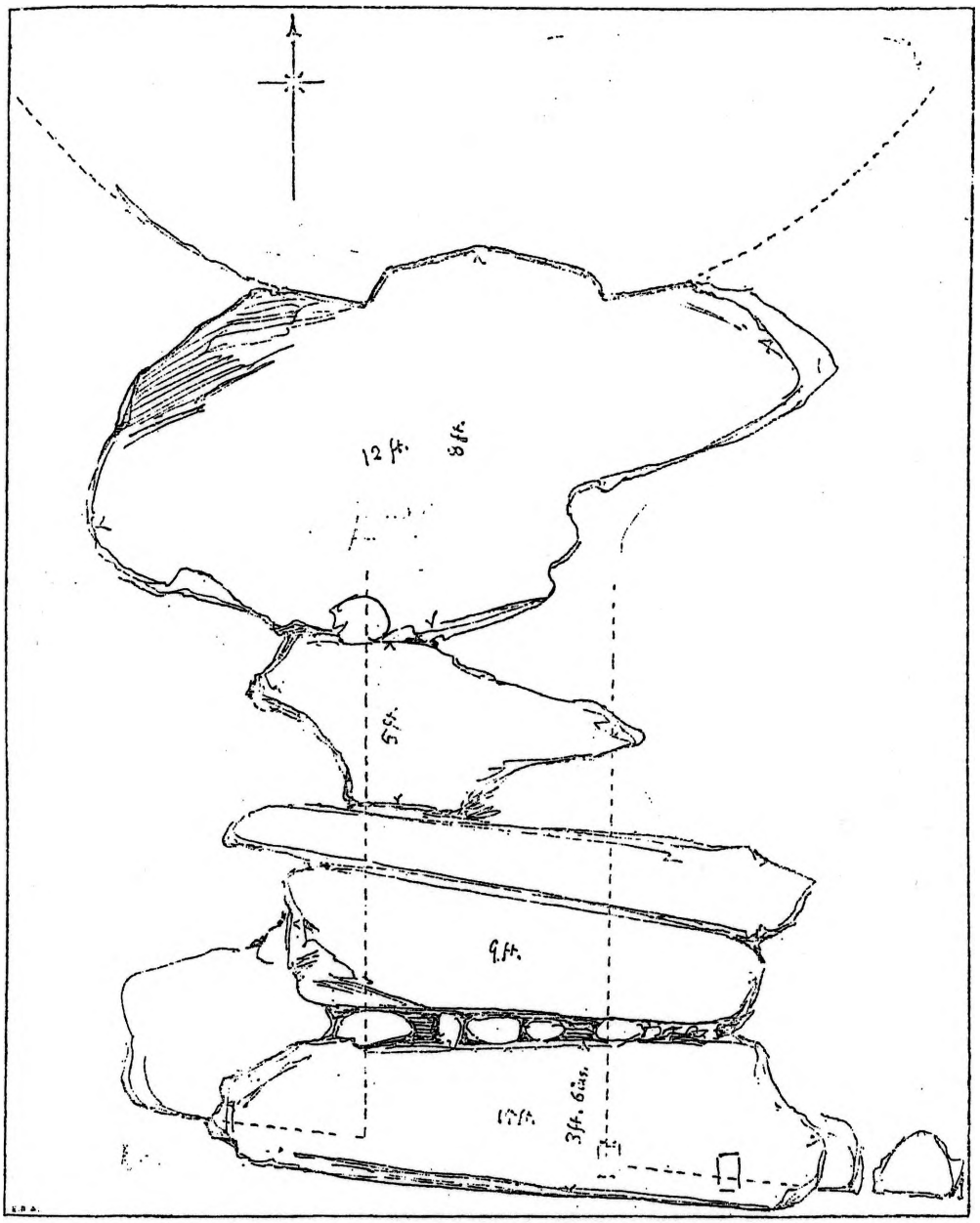

FIG. 7.—SKETCH PLAN OF THE FOURTH TREASURY, MYCENÆ.

of tumulus tombs served the purpose of a chapel for funeral rites. I doubt if this explanation would apply to the "allées couvertes"; it might perhaps to some, but from what I recollect

* See MM. Perrot and Chipiez's *La Grèce Primitive, L'Art Mycénien*, in the English translation of which [vol. i. p. 393] there are plan and section, showing the sacrificial pit, of the Vaphio tomb.—W. S.

† Achilles, at the funeral rites of Patrocles, poured wine upon the ground to the manes (*Iliad*, xxiii. 120).—W. S.

of one or two of these constructions at Locmariaker, in Brittany, my impression is that they were narrow and too contracted to permit of rites being performed in them. However that may be, the guess might explain the purpose of the long passage in such tumulus tombs as the one at Gâvr Innis (Brittany), the Maes-Howe in the Orkneys, or New Grange in Ireland, as well as many others.

In the two smaller treasuries I could perceive no remains of the passage or dromos leading to what may be assumed to have been the doorway. This passage is generally formed of smaller stones than those in the doorway leading into the vault, and if their walls existed they have either fallen in or been removed. The Treasury of Atreus has a dromos 20 feet wide and at least 60 feet in length, the wall rising in height towards the doorway from following the slope of the ground. This wall on each side of the approach, increasing in height as you enter, is a marked feature of almost all chambered tumuli, and is not limited to the Mycenæ examples. In the section of the Bin Tepé tumulus the wall is shown as built with unwrought stones. The Kertch tumuli that I have seen have also this characteristic feature. As already explained, it was the sloping wall of the approach which helped to produce the impression in my mind that the Treasury of Atreus was a tumulus tomb. This in itself would not have been conclusive evidence; but, with other conditions which were visible, it turned out to be correct enough.

The block of stone that closed the entrance to the Bin Tepé tumulus, which was not a door in the usual acceptance of the word, now lies on the ground where it fell when the cell was entered. It is merely a stone plug, and never could have been intended for opening and shutting. This would imply that whatever the ceremonies may have been which took place at the tomb, they were performed on the outside of the cell. M. Spiegelthal explored some of the Bin Tepé tumuli in 1854, and in one he found a stone couch, which would imply that the body was not coffined, but lay on the couch as if resting in the same manner as the person might be supposed to do when alive. The bronze bier found in the Regulini-Galassi tomb at Cervetri indicates the same idea of treatment of the dead by the Etruscans.* The rules in relation to the dead varied very much in each locality, and even in the same locality there were marked differences, owing probably to rank, or to sects, or perhaps to tribes that may have been living together; we must not, consequently, infer that the dead would be dealt with at Mycenæ as in Italy or in Asia Minor.

There appears to be considerable doubt regarding what Veli Pasha found in the Treasury of Atreus. It is most probable that rumour exaggerated every detail.† Schliemann states that he found some old men at Charvati—the village close to Mycenæ—who remembered the exploration, and they at least confirmed one part of the story: the finding of a marble table. If this was not the couch on which the body was originally placed, it goes far to prove that the chamber was fitted up like a house or a palace; and that the corpse would not be in a coffin, but repose in state surrounded by the articles that its dignity may have been supposed to require. If thus uncovered any ritual that had to be performed could scarcely be gone through in its presence. Such a thing would be most incongruous, particularly after decay in the corpse had begun to show itself.

* There are two fine Etruscan sarcophagi in the British Museum, with figures resting on the top. Although in these cases the body would be below in the coffin, the suggestion of placing figures of the deceased as resting on a couch above was probably derived from the older practice of placing the corpse on a couch or bier. If this was the case, it gives us the starting-point of a style of funeral monument that has been followed down to the present day.—W. S.

† In 1879, when I explored the Ahin Posh Tope at Jellalabad, and found a gold relic holder and twenty gold coins in the central cell, the news spread rapidly about the locality. Shortly afterward a friendly Khan made an official visit to the late Major Cavagnari, who was political officer with the army; the Khan inquired if it was true that a golden chest full of gold coins had been found in the Tope. The incident forms a good example of the power of rumour among country folk.—W. S.

The pit-graves that Schliemann discovered underneath "the circle of the Agora," within the Acropolis of Mycenæ, tell of a very different manner of disposing of the dead, for those buried there must have been very important, if not royal, personages; and it is difficult to account for such widely separated modes of interment, and that too in the same town. Time would account for such variations in the mode of burial, and a considerable space of time might be required to explain the great changes that took place; but this is a subject on which I do not feel myself competent to give an opinion. MM. Perrot and Chipiez, the translation of whose work I have been lately reading, state [vol. ii. p. 365] with regard to the treasuries, "It is agreed on all sides that they are later in time than the shaft-graves of the stone circle" —meaning those found by Schliemann in the Agora.

On first seeing the smaller treasuries my impression was that they were the earlier and ruder forms which in time developed into the more elaborate and finished structures. I am still inclined to this idea; but it is not impossible that the very opposite theory may be the correct one, and that they are only the degenerate descendants of the style. There is, however, another supposition equally probable. These smaller treasuries, perhaps, were not the tombs of royal personages, and the rude form of their construction may imply that less wealth was expended upon them; and they may not be either earlier or later in point of time than the larger treasuries. A more extended study of the other tumulus tombs in Greece may assist in the determination of this point.

Although much has been written about these treasuries, or tumulus tombs, it still appears to me that they have not yet had full justice done to them as a most important style in the classification of the architecture of Greece. They have always been written about as exceptional; as structures outside the recognised Orders. When Greek architecture is mentioned, the mind limits its conception of the phrase to what is conveyed by the words "Doric," "Ionic," or "Corinthian." Unluckily, almost nothing remains but fragments of the earlier architecture; there is no witness left to proclaim its former glory, like the Parthenon standing on high. We have to search and burrow into holes and corners to find the few relics of it that still exist; and the best of these can only be seen in a defaced condition, completely despoiled of all outward beauty, which may perhaps explain why this style has been left out of its true position and rank. That these tumulus tombs were numerous in Greece, we have the testimony of Athenæus, who says: "You may see everywhere in the "Peloponnesus, but particularly at Lacedæmon, large heaps of earth, which they call the "Tombs of the Phrygians." The so-called "Treasury of Minyas," at Orchomenus, shows that they were not confined to any one part of Greece. Many have been discovered and some explored lately by M. Tsoundas, showing to what extent these monuments existed, that they were not exceptional, and that in at least one part of Greece they were seen "everywhere."* We now know the high perfection the style reached in the Treasury of Atreus, which was covered with alabaster, porphyry, and other fine stones of varied colours, all most elaborately ornamented. The few fragments found, of which some may be seen in the British Museum, show how good and effective the decorative work must have been. Bronze was also largely used, and we know that the interior was covered with this metal, and no doubt richly ornamented, recalling Homer's description of the brazen abode that Hephæstus, the divine architect, made for himself [*Iliad*, xviii. 370].

The origin of this "treasury" style is interesting as a contrast to the other forms of Greek architecture, which were almost wholly wooden in their first state of existence, while

* The description of Athenæus reminds me of the district round Kertch, where in many places the tumuli are so numerous that they give a serrated outline to the heights; in the neighbourhood of Kertch one might truly repeat the words that the large heaps are seen "everywhere."—W. S.

this has always been lithic. Its constructive forms could not have been produced except from building in stone. It has always been intimately connected with what we understand under the rather vague term "cyclopean masonry"; in fact, cyclopean building may be considered as forming a part of the style, particularly as they are both associated with the name and the race of Pelops.* In a former Paper of mine it was shown that mud or crude brick, as a building material, produced walls, and that where wood was scarce the roofing was accomplished by means of barrel-roofs and domes; the same material also produced the arch. We have here a striking contrast with the forms evolved from the wooden or trabeate construction. Now the "cyclopean" or "treasury" style began with stone walls, and it produced the arch, the barrel-roof, and the dome. The Treasury of Atreus still remains with at least its constructive parts intact, and its splendid dome is there as a witness for one of these forms; the galleries in the walls of Tiryns contain what may be accepted as a rude form of the barrel-roof; and the triangular space over the doorway of the Treasury of Atreus, and the Gate of Lions, at Mycenæ, is only a straight-lined arch. That these are all on the corbel, not the keystone, principle, is a detail that does not touch the point under consideration. Walls could be made to support such works upon them, but wooden posts could not. I am aware that in later times domes have been erected on columns; but such designs did not belong to the early developments of wooden architecture. The two styles were thus perfectly distinct; the perpendiculars were different; and the result was that the covering over of spaces, both in form and principle, was widely separated. The lintel was common to both styles; the magnificent stone over the doorway of the Treasury of Atreus, as well as the covering stones in the smaller treasuries, are sufficient evidence.

One feature appears to have been common to both: that was the large employment of metal. It is generally understood that the palace in ancient Greece was constructed of wood; and we have Homer's description of the palaces of Menelaus and Alcinous, in which one is inclined to suspect that there may exist a slight touch of the poet's licence; but still there must have been some basis on which he founds his account. In the palace of Menelaus there was not only "the shining of brass throughout the resounding house," but there were also gold, amber, silver, and ivory [*Odysscy*, iv. 73]. The palace of Alcinous had "brazen walls," which were "firmly built each way"; and it had a "brazen threshold," on which stood "silver pillars," with "golden doors" [*ib.* vii. 87]. In the Treasury of Atreus we know that metal had been used to a considerable extent, and that almost the whole of the interior was covered with bronze. The use of metal in the "treasury" style may have been borrowed from the wooden style, in which it probably originated, for where wood is employed metal is often used for the purpose of clasping or binding; and when wealth exists and ornament is desired, this material becomes decorative.

In conclusion, I may refer to the existence in India of domes similar to that of the Treasury of Atreus; and to structures bearing some resemblance found in other parts of the world. Not long ago there appeared a short article of mine upon "A Primitive Mode of "Construction still practised in the South of Italy" [JOURNAL, Vol. I. Third Series (1894), p. 313]. It referred to a rude kind of dwellings, called "truddhi," still built with stones in fields, with round vaulted domes, the continuation of a very old form of construction showing that such domes had existed long ago in Italy. These structures are allied to the Nûraghs of Sardinia and Majorca. The brochs of the north also bear some points of resemblance; the Maes-howe in the Orkneys, and other chambered tumuli of a similar kind, have all touches of the same family likeness.

* I use the word "treasury" here because it will be easily understood. The style has been called "Pelasgic," but traditionally it is "Pelopian," which might perhaps be the best name to distinguish it by.—W. S.