

## PAINTED PLASTER DECORATION AT KNOSSOS.

WITH SPECIAL REFERENCE TO THE ARCHITECTURAL SCHEMES.

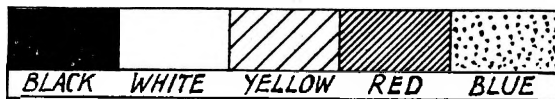
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ARCHITECT TO DR. EVANS'S EXCAVATIONS AT KNOSSOS.

## PREFATORY NOTE.

THE following remarks are based on three years' acquaintance with the excavations carried on at Knossos in 1900-01-02. Their object is to illustrate the chief detail forms of Knossian decoration, by selection from numerous examples; to record the chief decorative motives that exist in the palace, *in situ*; and to compare these with the many important fragments of "picture" fresco which have distinct reference to architecture.

Most of the illustrations have been made from tracings of the actual fragments; but many are naturally diagrammatic when reduced to black and white, as certain forms can only be represented by brushwork. Scales of 3, 5, 7, or 10 centimetres are appended to almost every diagram, and in some cases a scale of inches as well. The colours of the fresco are represented in the black and white drawings by the annexed code, which holds good throughout, except where otherwise stated.



Code of colours used in illustrations, except where otherwise stated.

## SECTION I.

The finds of coloured stucco at Knossos constitute one of the most important artistic results of the excavations. Apart from the masterly full-size figure-work, and the fragments showing natural forms generally, there is a wealth of material which can be called decorative in a narrower sense, and which is important, especially on its architectural side. At Dr. Evans's request, therefore, I have prepared the following paper. It cannot be regarded as final, because much of the palace material is yet unpublished; but it will give some indication of the subject.

At the outset we must notice the distinction between *large-scale ornament*, much of which was found *in situ*, forming controlling lines of decoration, and *small-scale ornament*, which formed a setting for the "picture" fresco proper. This distinction is not always easy to realise, and, unfortunately, no piece of painted plaster showing small-scale work was found large enough to exhibit the exact relation such work had to the rest of a large wall surface.

Many examples, however, show this small-scale ornament in connection with *picture* fresco, which latter forms an important class by itself. As illustrating undoubted architectural forms, certain fragments of this will be found very relevant to the subject in hand, and it will be useful to illustrate them along with the actual construction of the palace; always bearing in mind that in the smallest or "miniature" style of this picture-work, the representations

are often very conventional, from the necessity of illustrating various planes in juxtaposition on the flat. An astonishing variety of scale was indeed probable on the Knossian walls—like Egyptian work, which in all its periods seems to have abolished perspective, as we know it, and to have made that art quite arbitrary, perhaps subservient, to a fixed code, in which religion may have played some part. From the way in which the Knossian fragments were found, it seems probable that the parallel to Egyptian work holds throughout, and that small and large pictures were placed side by side.

#### TREATMENT OF MATERIAL.

For the most part the plaster found had a flat surface; but there are some interesting fragments which show an original and peculiar method of modelling. This method considers only certain broad facts of the design, and gives a general “wavy” appearance to the plaster surface; it makes no attempt to particularise the detail, which is chiefly painted on (see fig. 38, p. 117). The best examples of this method represent naturalistic forms, and, as such, do not concern us here; but the very general use of it must have considerably affected the appearance of the palace decoration. The remaining surface treatment to be considered is the definite moulded work, of which there are some interesting examples, and which, taken in combination with similar work found in stone, give a fair idea of the prevalent mouldings employed.

As a plaster finish was chiefly applied to rough rubble walls, largely composed of clay, the backing to the finer plaster is often very thick; the total thickness being sometimes  $2\frac{1}{2}$  or 3 inches (6-8 centimetres), of which the usual  $\frac{3}{4}$  inch (2 centimetres) is taken up by the finish. In certain thin clay walls, however, corresponding to our  $1\frac{1}{2}$ -inch partitions, the plaster is applied very thin, having a total thickness of about 1 centimetre (or less than  $\frac{1}{2}$  inch). The finish has often almost separated itself from the backing, especially where the latter is chiefly composed of clay, with little or no gypsum.

In general, plaster thicknesses are very variable, from the necessity of making up the inequalities of rough wall-surface. As gypsum was largely used all over the site, and was evidently readily obtainable, an excellent composition of plaster could be obtained. Large surfaces of clay backing exist *in situ*, with scored lines to form a key for the finish.

The colours next deserve consideration. Their permanence is noticeable, and some fragments show a surface more resembling marble than plaster. The colours can usually be scrubbed with a hard brush, and even scraped with a knife. The term *fresco* could almost be applied to this painted plaster. It is nearly certain that the large surfaces were laid on in coats when the plaster was wet, and the details painted on before the ground was dry. At present the colours scale off like enamel when a knife is used; the reds run when too much water is applied.

Regarding the composition of the colours, I may quote from Professor Church's book\* certain colours found by Professor Petrie in the Hawara graves of the Fayûm, which must equally apply to Knossos.

“White, mainly gypsum.

“Yellow ochre, having, however, almost precise hue of true antimony yellow.

“Red lead.

“Dark red, due to ferric oxide.

“Pink, probably derived from madder; and a blue cupreous glass.”

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\* *The Chemistry of Paints and Painting*, by A. H. Church, F.R.S., 1901 (p. 303).

To these we must add *black*, which is readily obtainable from many sources; *grey*, derived from the same; *brown*, probably umber; and a *dull green*, resembling *terre verte*. It would be interesting to know if the Knossians were acquainted with this fine and exceedingly

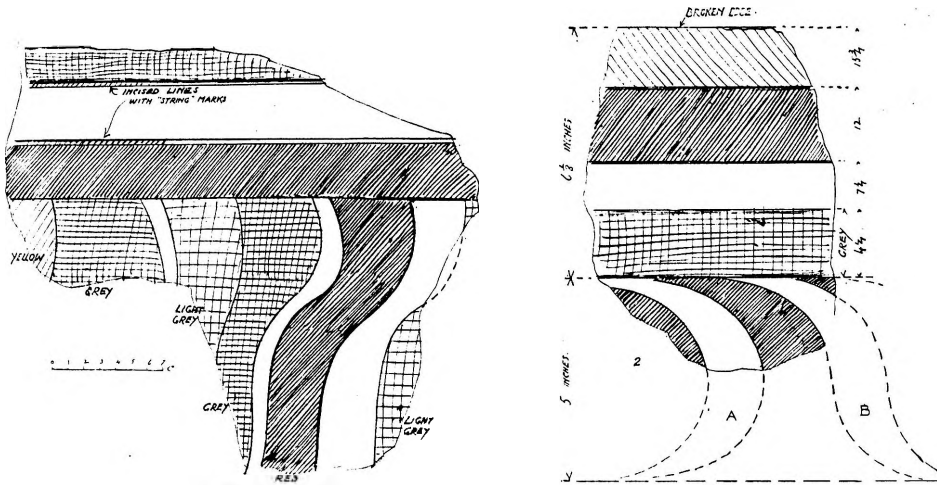


FIG. 1.

EARLIEST PALACE FRESCO.

FIG. 2

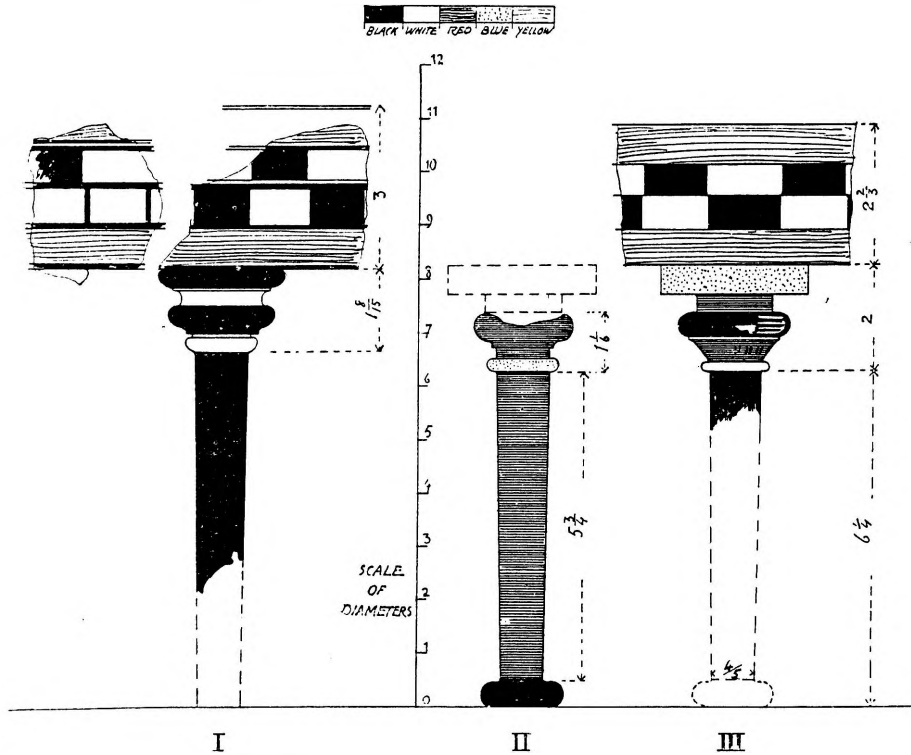


FIG. 3.—THE MYCENAEAN ORDER. FROM THE "TEMPLE" FRESCO.

permanent colour. Various intermediate shades of the above colours are also found, such as an *orange* and a *blue-green*, readily obtainable from copper, or by mixing with yellow, &c.

A note may be added about certain proprieties observed in using colours. Red and yellow usually go together, similarly blue and black; in a border these combinations are invariably observed.

#### EXISTING PALACE DECORATION *in situ*.

It is necessary to give some idea of the general wall-treatment of the rooms in the palace. Throughout it is noticeable that the value of the horizontal line was appreciated, that line forming an important feature of the Mycenaean method of wood-construction. Even the strongest walls at Knossos were partly constructed of wood: stone was chiefly a decorative material, and, otherwise, was almost exclusively used in courts which might have been open to the weather.

In a wall of four metres (or, roughly, 13 feet) in height, the two lowest metres are appropriated to the dado, the top of which also marks the height of the door. At this height, therefore, a strong horizontal constructive line is employed, which takes in the window and door lintels, and forms a division between the upper and lower walls of the room. The ends of wooden cross-beams, going through the wall, appeared in this horizontal line. The cross-beams acted as stiffeners in rubble-walls, and as supports for the upper part in stone walls (see fig. 26, p. 115). They evidently gave rise to a most important motive in decoration, a motive constantly met with in the horizontal bands of recurring circles decorated as rosettes. The lower part of the wall is, usually in the better rooms, finished with large gypsum slabs, which formed a handsome dado. Above the line the plaster-work begins, and is divided into horizontal strips according to the nature of the design. In one of the east-slope halls, a large fragment of frieze was found in position immediately above the line (see fig. 43, p. 119).

Where the entire wall was plastered, the decoration of the lower part sometimes took the form of an imitation of marble or fine-grained stone panelling, and one important example, in particular, found on the east slope, shows such a scheme (see fig. 13) with the panels probably 2 metres high, and the "graining" very completely represented. This dado may have been the later form of finishing in a grand hall, while the gypsum panel dado was the earlier.

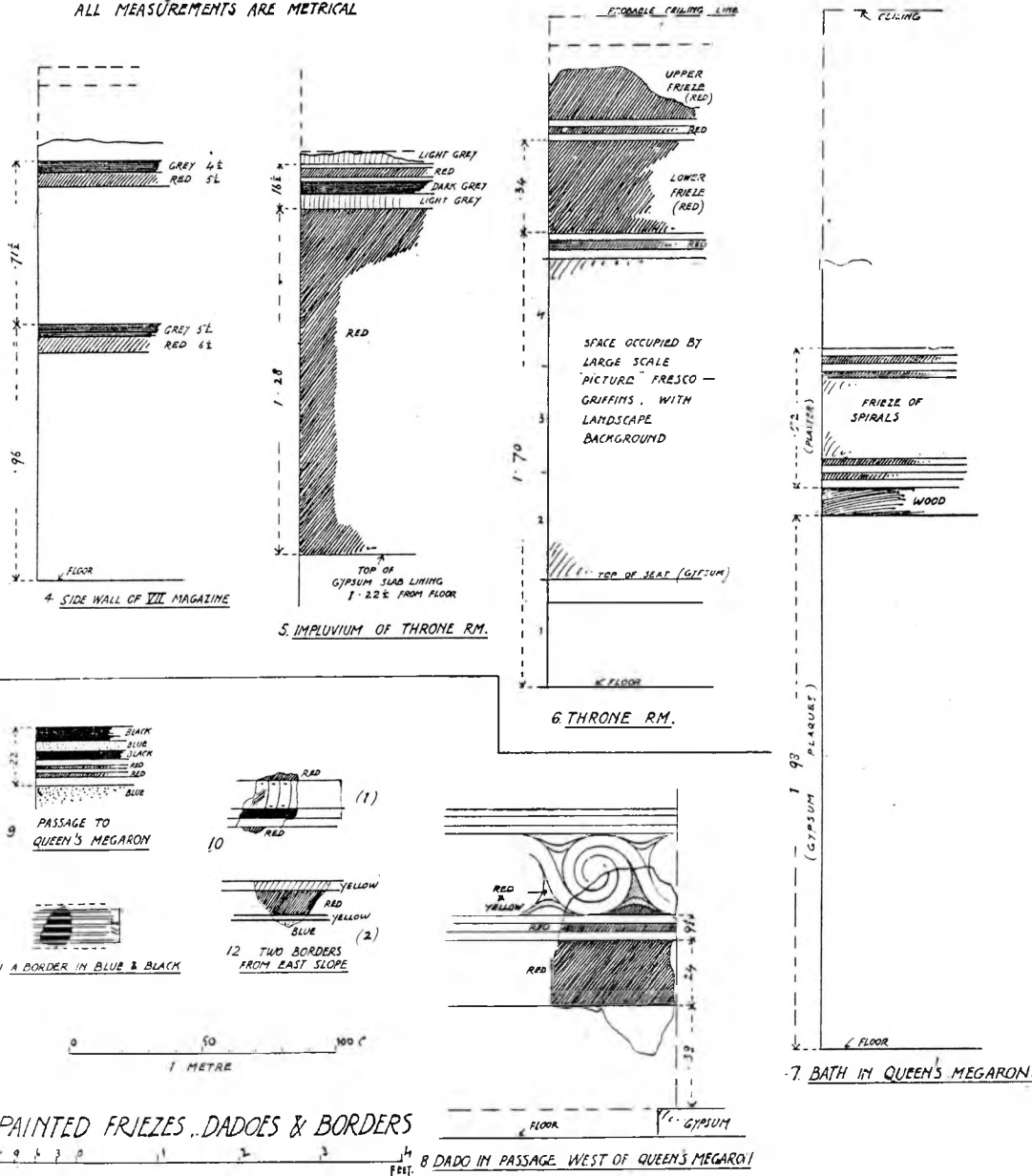
Fig. 8 shows an important variation from the above arrangements, in the passage leading west from the "Queen's Megaron." Here, a large band of running spiral was found, but forming the top of a dado, much lower than the same motive in fig. 7. A convenient field for "picture" fresco seems to be afforded by the space above this dado; the corresponding space in fig. 7 being too high up.

In the western part of the palace, where the existing rooms are not so high, different arrangements prevail. The throne room shows the best example of the finish of the top part of a wall (see figs. 5 and 6). Here, the entire wall surface above the stone seats was finished in plaster; the lower part devoted to picture fresco (griffins with landscape background) and the upper part plain; two sets of frieze lines were found in position. The magazines, and the rooms to the east of the long gallery (which really formed a basement), were probably all decorated with plain plaster and frieze and dado lines; as is clearly shown in the case of the magazines by many complete examples. One of these is shown in fig. 4.

The examples found *in situ* show that dark red was the prevailing tone of plain painted plaster. A dead white is rarely used in connection with it, except to render certain natural forms. A yellowish white and a grey are the usual relieving tones used along with red for borders.

Whether in relief or on the flat, it is certain that at Knossos, as in Egypt, all the plaster-work was finished in colour, forming a complete system of colour decoration, which included the walls, the ceiling, and possibly even the gypsum-slab dadoses. This last, however, is not quite clear, and a contrast between the handsome alabaster and the coloured plaster may have been aimed at. The same may also be true of the beautiful fragments of stone, architrave

ALL MEASUREMENTS ARE METRICAL



PAINTED FRIEZES, DADOES & BORDERS

FIGS. 4 TO 12.

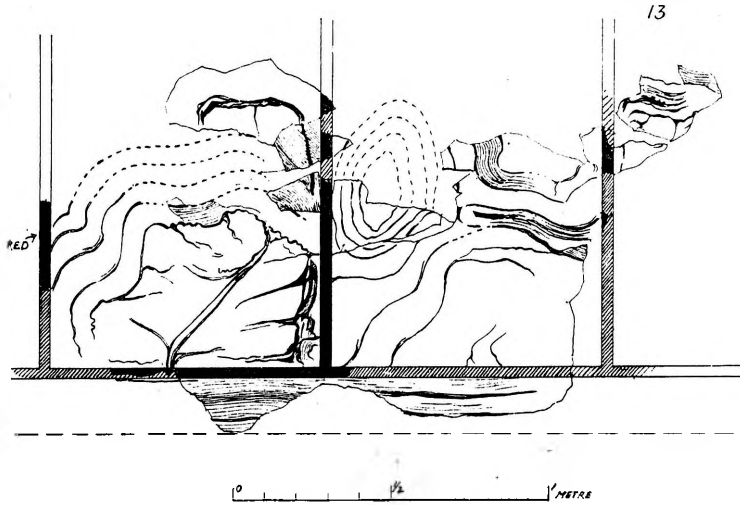


FIG. 13.—PAINTED PLASTER, REPRESENTING IMITATION MARBLE PANNELLING. In dark red on a light yellow ground, with shadings in darker yellow and orange and some black lines.

or frieze, that were found.\* It is probable that these, at least, were painted, from the evidence of certain faint traces of colour found on them.

The finishing of door-jamb, on the ingoing, affords a proof of the partiality for striped decoration among the Knossians. The constant method is to alternate strips of plaster with posts of wood vertically (see fig. 14); the edges of the plaster being splayed back at an acute angle, to give the wood a catch, and not splayed at an obtuse

angle, to give the plaster a hold on the wood, as is done nowadays. The number of plaster strips varies according to the depth of the door—as many as five being sometimes found.

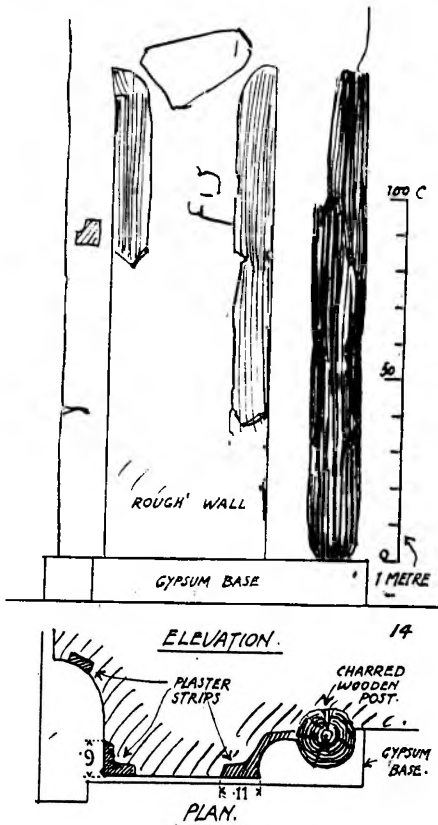


FIG. 14.—A DOOR-JAMB.

The subject of door-finishing leads us to consider what place vertical lines had generally in Mycenaean schemes of decoration. Their system of wood-construction obviously entailed vertical posts as well as horizontal beams, and many of the rough walls have been found very completely divided into vertical sections, by wooden posts or the spaces for them. These run from the floor up to the main horizontal line. Above that, the ruination has in every case been too great to enable us to determine the construction. In any case, it is doubtful if the vertical constructive lines were always made to appear in the decoration. Sometimes they almost certainly did appear, and the wood was probably painted and left flush, or almost flush, with the surface of the plaster. The fondness of the Mycenaean for dentil decoration, and the existence of the marble-grained plaster, in panels, go far to prove this; as also do several architectural details from the "miniature" fresco. It is probable that vertical division was not confined to the lower walls,

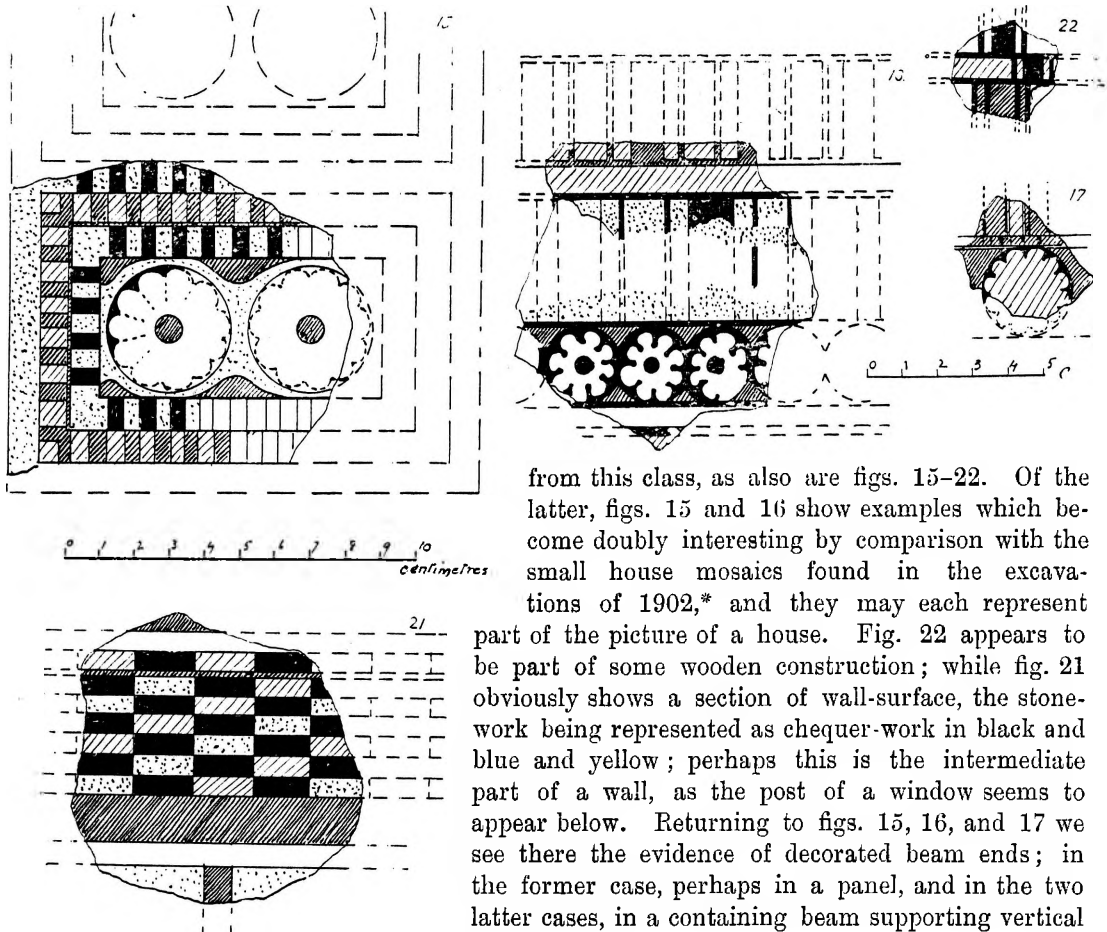
\* See in *The Annual of the British School at Athens* (No. VII. 1900-1901. Macmillan & Co.) "The Palace of Knossos," by Dr. Arthur J. Evans, F.R.S. (p. 55). Dr. Evans believes that the breastwork of the stone seats in the Throne-Room was painted with a scheme of triglyphs and metopes, an idea suggested by the interesting parallel at Phæstos, where similar seats have carved triglyphs. Minute traces of colour do indeed exist on the Knossian seats.

but also occurred in the "picture" frescoes above. Wherever fragments of these were found, borders are apparent, and in one important example of a picture scheme—the so-called "cow-girl" fresco—the vertical divisions are strongly marked by the same elaborate borders as the horizontal ones.

Another fact concerning the method of applying plaster deserves to be noticed. In some cases edges were found, marking the end of a motive, but not necessarily the end of a plastered surface. This seems to indicate that, when practicable, the plaster was prepared in strips, and painted before being applied to the wall. A good example is the fragment of spiral frieze before-mentioned (see fig. 43, p. 120).

PICTURE FRESCO RELATING TO ARCHITECTURE.

An important class of picture fresco in the so-called "miniature" style throws much interesting light on Knossian architecture. Fig. 3, which shows the Mycenæan order, is taken



FIGS. 15-22.—ARCHITECTURAL FRAGMENTS OF "MINIATURE" FRESCO.

from this class, as also are figs. 15-22. Of the latter, figs. 15 and 16 show examples which become doubly interesting by comparison with the small house mosaics found in the excavations of 1902,\* and they may each represent part of the picture of a house. Fig. 22 appears to be part of some wooden construction; while fig. 21 obviously shows a section of wall-surface, the stonework being represented as chequer-work in black and blue and yellow; perhaps this is the intermediate part of a wall, as the post of a window seems to appear below. Returning to figs. 15, 16, and 17 we see there the evidence of decorated beam ends; in the former case, perhaps in a panel, and in the two latter cases, in a containing beam supporting vertical construction.

To the same class of work—found, in fact, in the

\* For the publication of two of these, see the forthcoming number of the *Annual of the British School at Athens*, Vol. VIII. (Macmillan & Co.)

same deposit as all the foregoing—belongs the so-called “Temple” fresco\* (see coloured plate II.) which has given us a better idea of the Mycenaean Order than anything else that was found (see also fig. 3). We see in this fresco what appears to be a miniature representation of a temple front, constructed chiefly of wood, with wooden painted columns. There appears to be stonework in the entablatures, and in the podium of the central portion; while the stylobate appears to be of large gypsum blocks, such as were found in the west wall of the palace. The ornamental “triglyph” feature under the central columns may be of alabaster; it will be more fully discussed in a following section (the “triglyph” motive).

Turning to the Order, it is noticeable that the capital in No. I. (like that above the Lion Gate at Mycenæ) † strongly resembles an inverted attic-base. The capitals in Nos. II. and III. both resemble what has always been regarded as the standard example of a Mycenaean capital—that originally in front of the Treasury of Atreus, at Mycenæ ‡; but No. III. is the most distinctively Knossian in design, judging from various stone lamps that have been found. It was upon this example that the restoration of the columns in the Throne-Room at Knossos was based. The shaft of No. II. column, being complete to its base, is the most useful of the three examples for ascertaining the height in diameters; and it is interesting to note that the Mycenaean column is more attenuated than the Greek Doric, though the capital (which varies considerably) is higher in proportion.

The colours are interesting, and may be conventional, but for the shafts, at least, seem to be appropriate: the black suggesting old and seasoned wood, and the orange of the central columns resembling the usual yellow colour of wood in fresco.

The wooden posts in the fresco are interesting, as showing another constructive detail which has been made decorative; as there can be little doubt that the black pieces recurring at intervals represent the ends of mortised cross-beams socketed into the posts. The same principle has been found in the palace construction, in large gypsum corner-blocks having grooves or mortises into which the rubble wall gets a firm hold.

#### SOME PROBABLE RESTORATIONS OF THE PALACE—BASED CHIEFLY ON THE MINIATURE FRESCO.

Fig. 25 shows an elevation of the west wall of the palace at its junction with the “procession” corridor, with a suggested restoration of the upper wall. This is one of the most interesting parts of the palace, as it shows three different methods of finishing a wall-surface, placed side by side.

There is much probability in all that has been shown new. In the outer (left-hand) section the base is represented by large gypsum blocks standing on a projecting base-course; in the central section by an imitation marble skirting in squares, with a plain band over, all in plaster; in the inner (right-hand) section there is no base, except the border at the floor-line of the large picture-frescoes over.

The probable position of the upper floor at this point is made to appear in the decoration, and is represented on the left of the drawing by a band of recurring rosettes, or decorated beam-ends. This line might also form the top-finish of the lower motive of the right-hand section (life-size figures in procession); but would allow too little room for the large bull-fresco of the central section, if carried across. So that an upper line has been suggested at this point, forming also a line of window-sill on the left. Some vertical constructive decoration is shown above and below the band of rosettes (*cf.* fig. 16).

\* Illustrated in colours and black and white, and fully described by Dr. Arthur J. Evans in his “Mycenaean Tree and Pillar Cult” (*Journal of Hellenic Studies*, xx. 1900).

† See Perrot et Chipiez. *L'Art*, etc., T. vi., pl. xiv.

‡ *Ibid.* Pl. vi., and pp. 523 *et seq.*, 630, 631.



Fig. 26 shows a restored section of the Light Well and the "Hall of Double Axes," on the east slope. The stonework of the upper wall exists, but has slightly given way at this point, owing to the destruction of the woodwork beneath. There can be no doubt that the lower wall shown was occupied by a window; the evidence being very clear. The existence and width of the band above the lintel is also quite clear, though the rosettes are problematical.\* The beginning of the decoration of the hall itself is shown on the right, and a band of

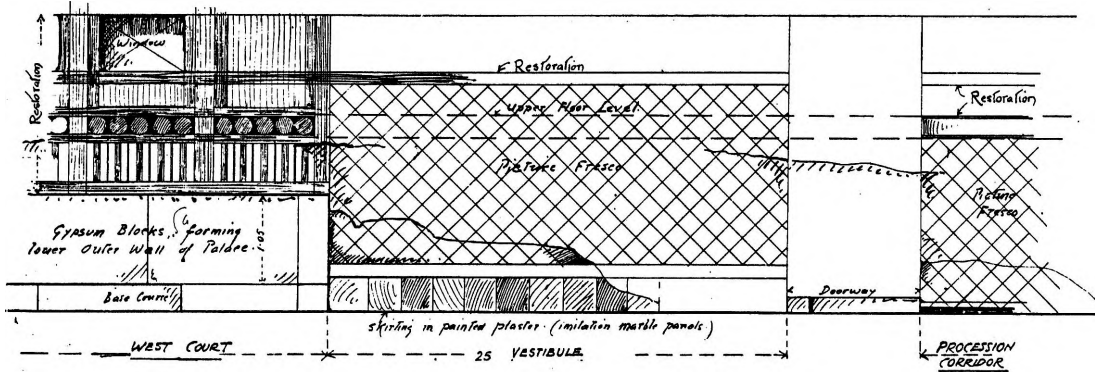


FIG. 25.

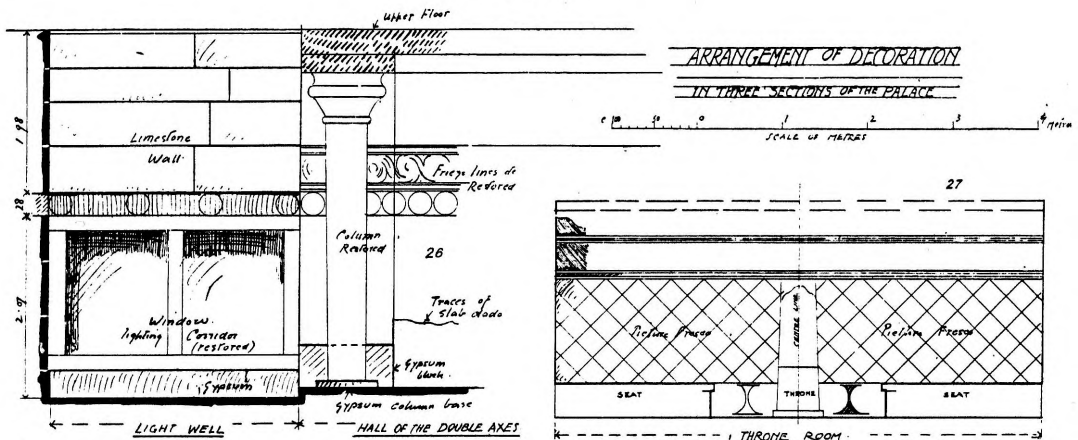


FIG. 26.

FIG. 27.

running spirals has been assumed over the main horizontal line, the height of which is fixed. The gypsum slabs below have been partially restored, and a column has been shown, standing on one of the existing gypsum bases. The height of this column can be nearly ascertained from our knowledge of the level of the upper floor.

Fig. 27 shows nothing that has not been clearly ascertained, but it will serve to show the proportions of the north wall of the Throne-Room. The throne is in the centre; on each side the best part of the wall is occupied by the remains of picture-fresco; above are the frieze lines in their correct positions, and below are seats in stone, with a deep skirting in plaster to make up their height where they do not exist.

In figs. 25 and 27 the parts of the wall occupied by picture fresco are shown by crossed lines.

\* See *Annual of the British School at Athens*, vii., "The Palace of Knossos," p. 112.

SECTION II.—ORNAMENT IN DETAIL.

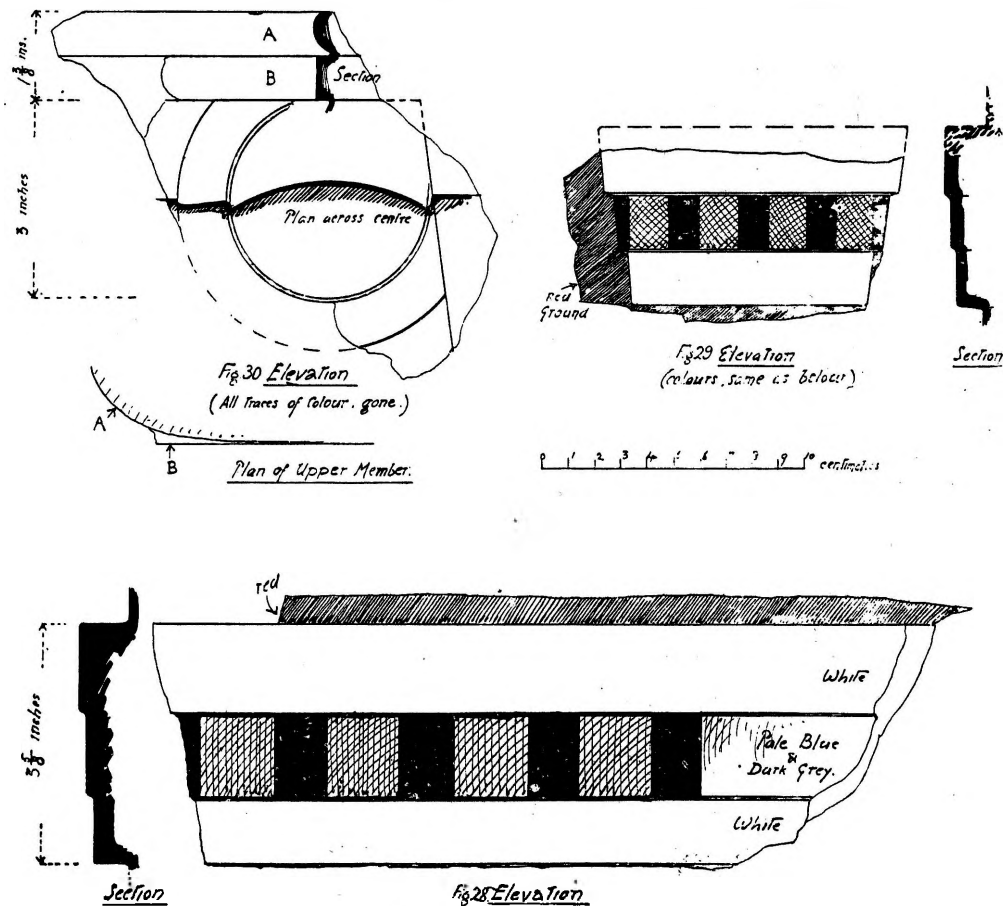
THE EARLIEST PALACE FRESCO.

In what appears to be the earliest fresco, if indeed it is not before the date of the existing palace, a simple scheme of colour is observed. Grey or black, red, white and yellow are found, but not blue.

Figs. 1 and 2 [p. 109] show borders in this style, and indicate the delicacy and boldness of the lines. From the evidence of the drawing alone, it seems probable that this fresco belongs to the (perhaps late) period of *Kamareos* ware, which is distinctively Cretan, and the finest of all Mycenaean pottery. The lower part of each border is unfortunately incomplete, so that the finish of the motives is not clear. Two different schemes for the restoration of the border in fig. 2 are marked A and B.

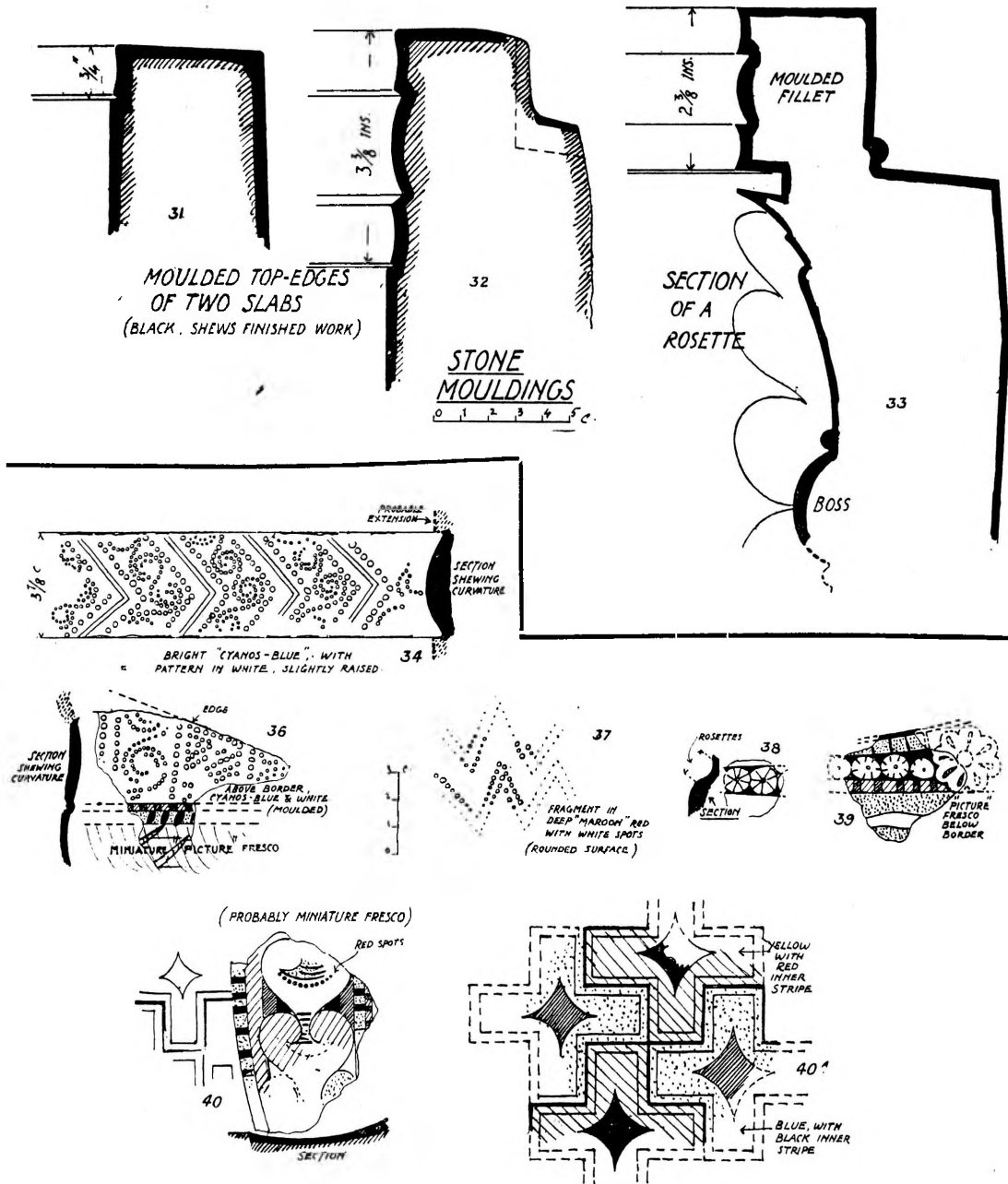
MOULDED WORK.

Fig. 28 shows the fragment of a moulded architrave or frieze, which suggests an important system of architectural decoration in this line. It obviously takes the place of a painted border, and probably represents an older and better method of finishing in connection



FIGS. 28, 29, 30.—DECORATED MOULDINGS IN STUCCO.

with a system of painted reliefs, which, in the grandest style of the palace, took the place of flat painted decoration. Another fragment found, of a sphinx or griffin in relief, standing on a system of frieze-lines also in relief, proves this very clearly.



SIX EXAMPLES FROM THE MINIATURE FRESCO

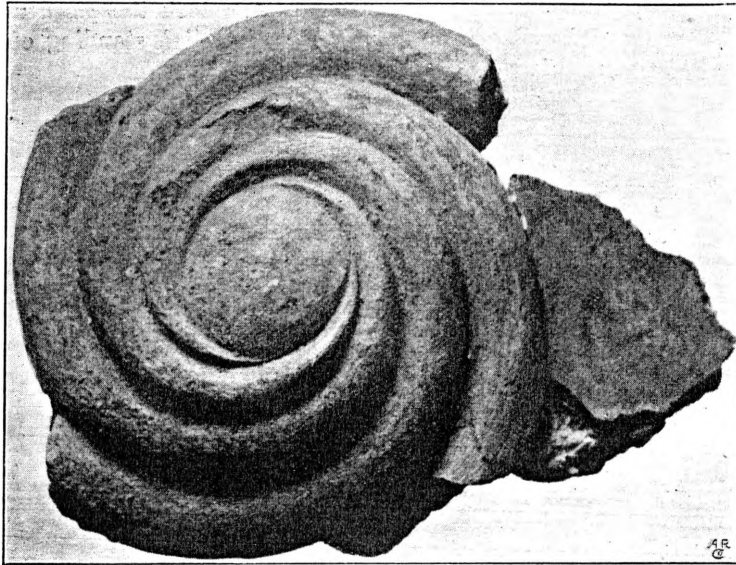


FIG. 41.—A SPIRAL FRAGMENT.

Fig. 29 resembles the foregoing, but from its shortness becomes a "respond," rather than a band.

Fig. 30, an interesting detail, is however so fragmentary that its meaning is obscure. It distantly suggests the classic "egg-and-dart" enrichment; but it might just as easily be the corner-piece of a large continuous pattern.

In connection with these mouldings, which belong to large-scale architectural decoration, should be mentioned the various stone mouldings which have been found, and which

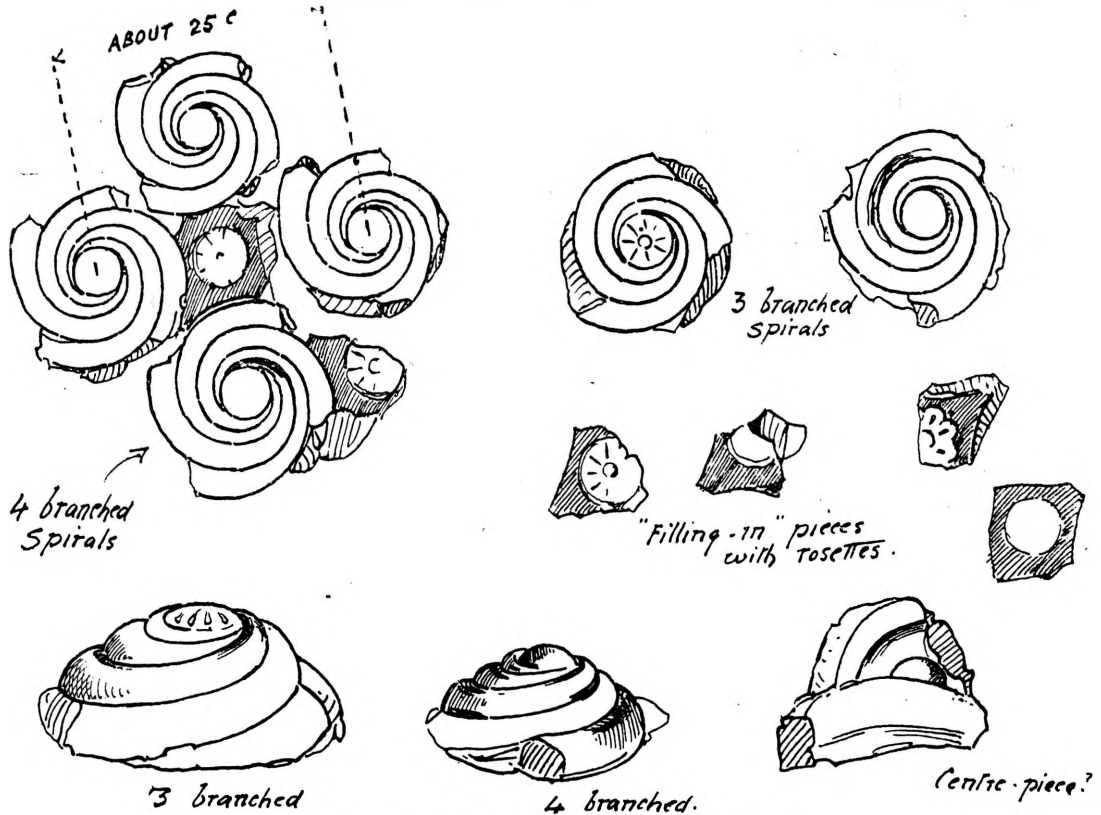


FIG. 42.—FRAGMENTS IN PLASTER RELIEF (PROBABLY PARTS OF A CEILING).

belong to the same (or perhaps a superior) class of work. A few sections are shown in figs. 31-33, which will serve to show the refinement of the lines.\*

Of smaller mouldings, which perhaps helped to subdivide the walls into pictures, there are several in the "miniature" class. The most interesting form a group which shows spiral decoration in minute white spots on a brilliant blue ground. (See figs. 34 and 36.)

The connection shown on fig. 36 between geometric-design and picture-work is important. Fig. 36 evidently represents part of a moulding, perhaps the same as the centre-part of the stone moulding in fig. 33. Fig. 38 is a good example of the modelled work, which takes no account of detail, already mentioned.

#### A CEILING IN MODELLED PLASTER.

Very few of the plaster fragments found can be definitely put down as ceiling decoration. One highly important lot is, however, almost certain: a system of raised spirals in relief which formed a continuous pattern, the interstices being filled in with flat plaster, perhaps slightly hollowed.†

The coloured plate (No. I.) shows a probable restoration of a part of this ceiling; fig. 41 shows a photograph of one spiral, and fig. 42 sketches of all the existing fragments.

The design is of necessity subservient to certain rules. Some of the spirals have four and others three branches; it follows that each variety can only fit into certain places in the design. The chief puzzle is to work the spirals conveniently round the "quatrefoils" which recur at intervals.

It is by no means certain that the original form was exactly as here restored, but some such continuous design forming a rich scheme of decoration must have existed. Such a form of decoration also is obviously more suitable for a ceiling than for a wall.

It is probable that plaster ceilings were the rule and not the exception at Knossos.

#### VARIOUS SPIRAL FORMS.

From the many forms of geometric detail employed, one must select certain typical ones, and investigate their constructive meaning and scope. The most important is *the spiral*, which, in a variety of ways, is common to all Mycenaean art, and is treated at Knossos in a most masterly manner. It is used as a running frieze ornament (see figs. 43 and 44), and in similar, but smaller, forms in the details of borders (see figs. 50 to 57). Also, as a continuous pattern, which may have covered a large field or have been limited to a comparatively narrow strip with borders on each side, as in figs. 45 and 46. In these two figures the same design is depicted. The latter shows the fragments as found, with what appears to be an interesting break in the main design, round a black triangular motive. The former shows a restoration of the pattern, but limited to a narrow strip, since it is certain that the borders at top and bottom must have been as shown, whatever may have been between.

A more complicated form—perhaps a development of the last, as it was found in the same deposit—is shown in figs. 47 and 48, in which dots alternate with lines to form spiral branches.

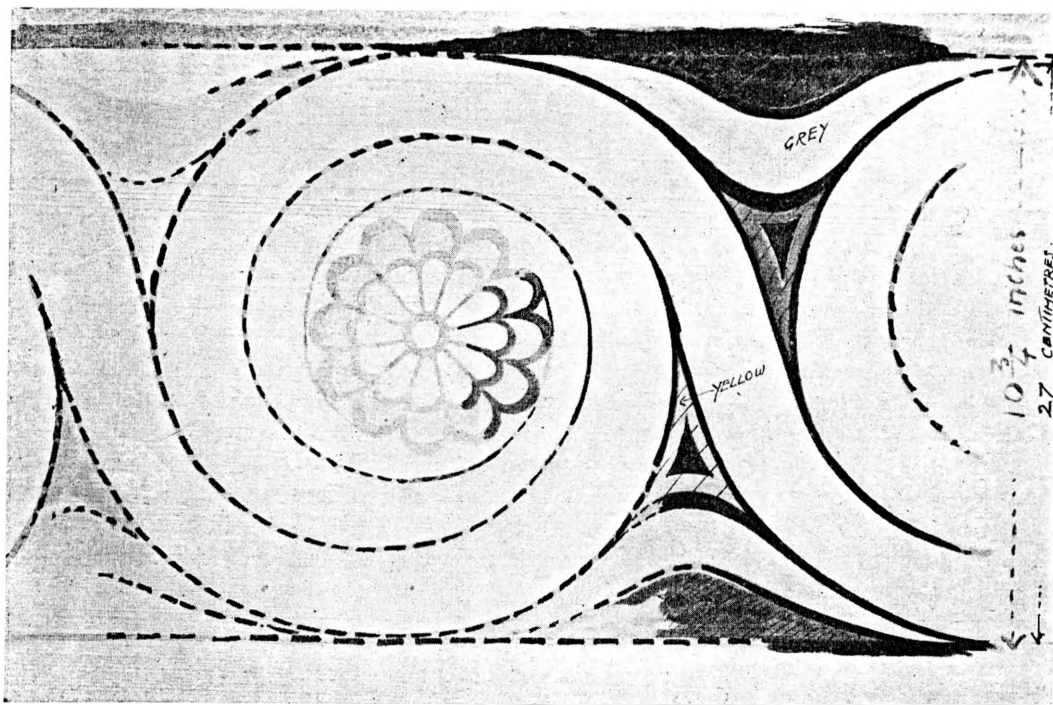
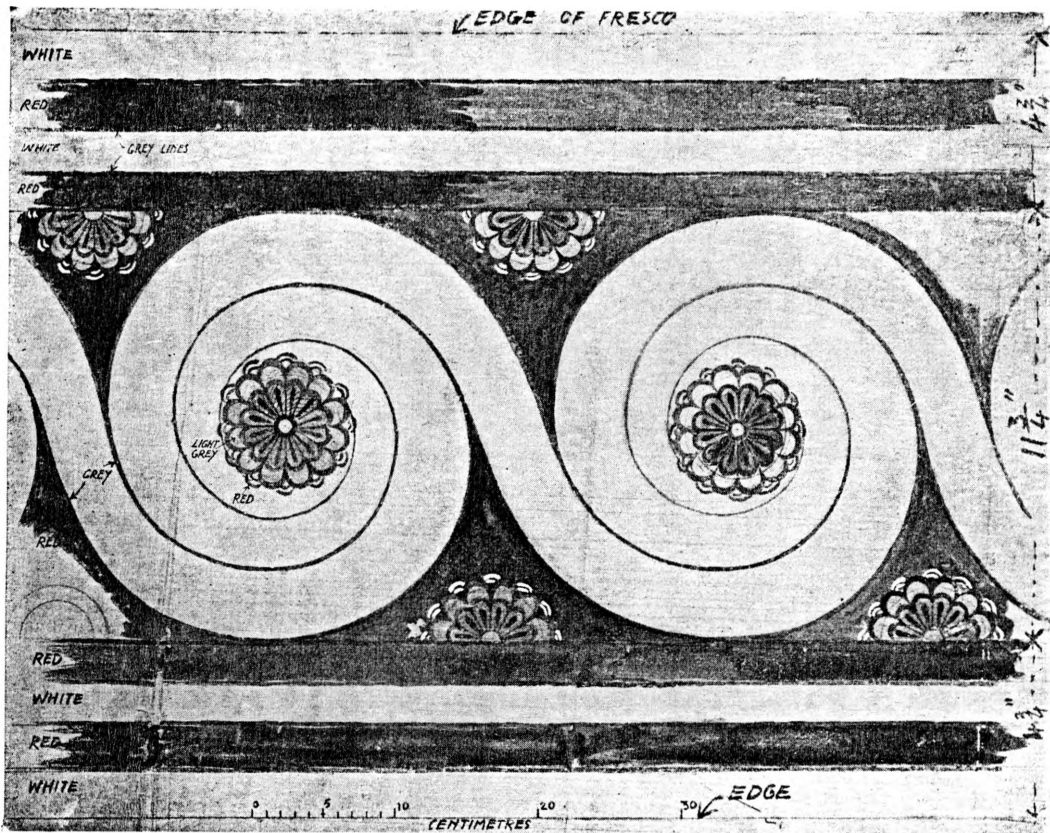
Fig. 49 shows what is probably part of a very large spiral motive.‡ All these examples form full-size palace decoration.

\* Concerning fig. 33, cf. the moulding below the frieze of a temple at Selinunte in Sicily. (Perrot et Chipiez, *L'Art*, etc., pp. 709 and 721.)

† For an Egyptian parallel to this design see an Eighteenth

Dynasty ceiling pattern in Wilkinson's *Manners and Customs of the Ancient Egyptians*, Vol. I., pl. viii.

‡ Cf. Schliemann's *Tiryns*, Plate IX.



FIGS. 43 AND 44.—FRIEZES OF SPIRALS AND ROSETTES.

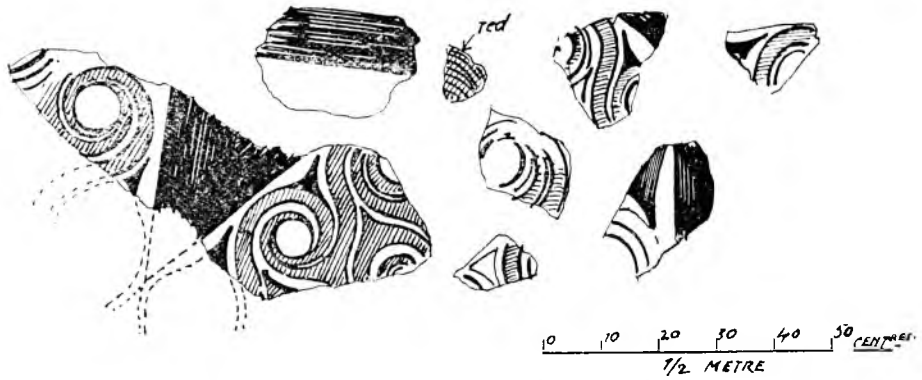


FIG. 46.—FRAGMENTS IN PAINTED PLASTER (WALL DECORATION).

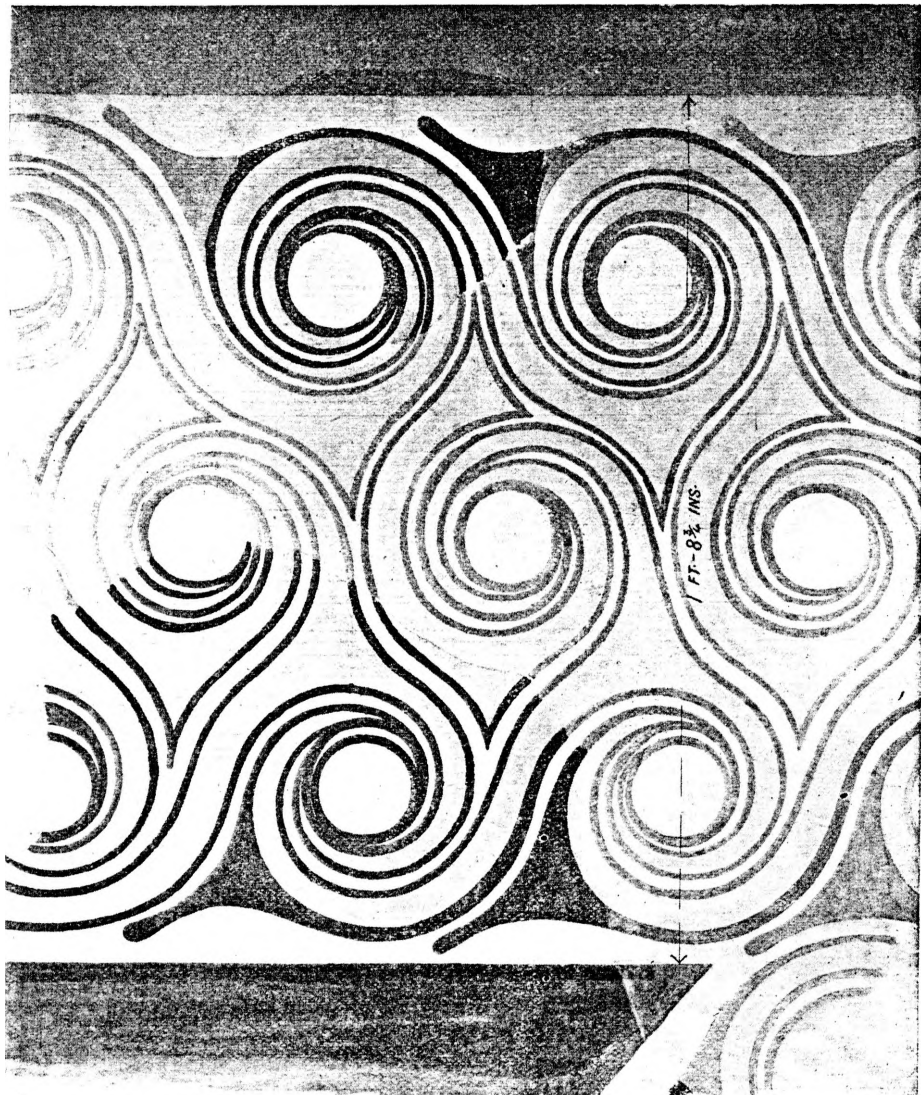


FIG. 45.—RESTORATION FROM THE ABOVE FRAGMENTS.

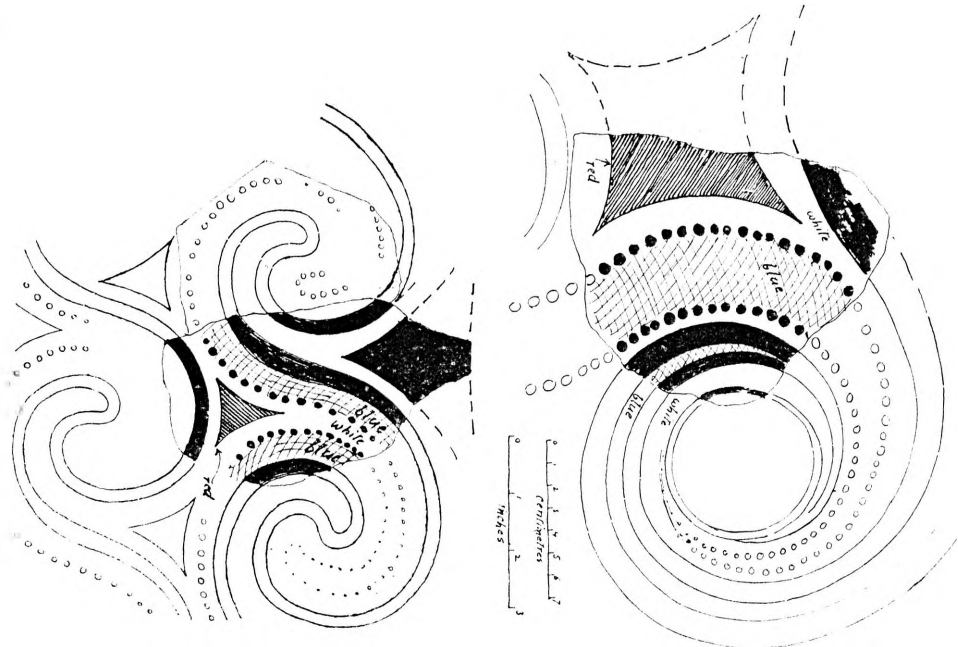


FIG. 47.

SPIRAL RUNNING PATTERNS.

FIG. 48.

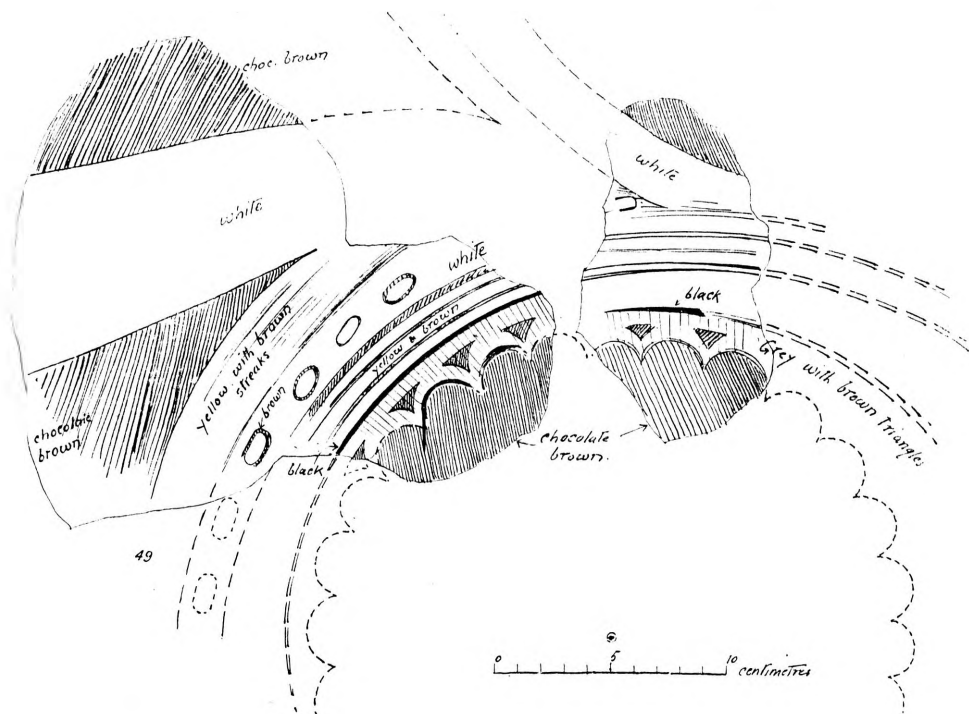
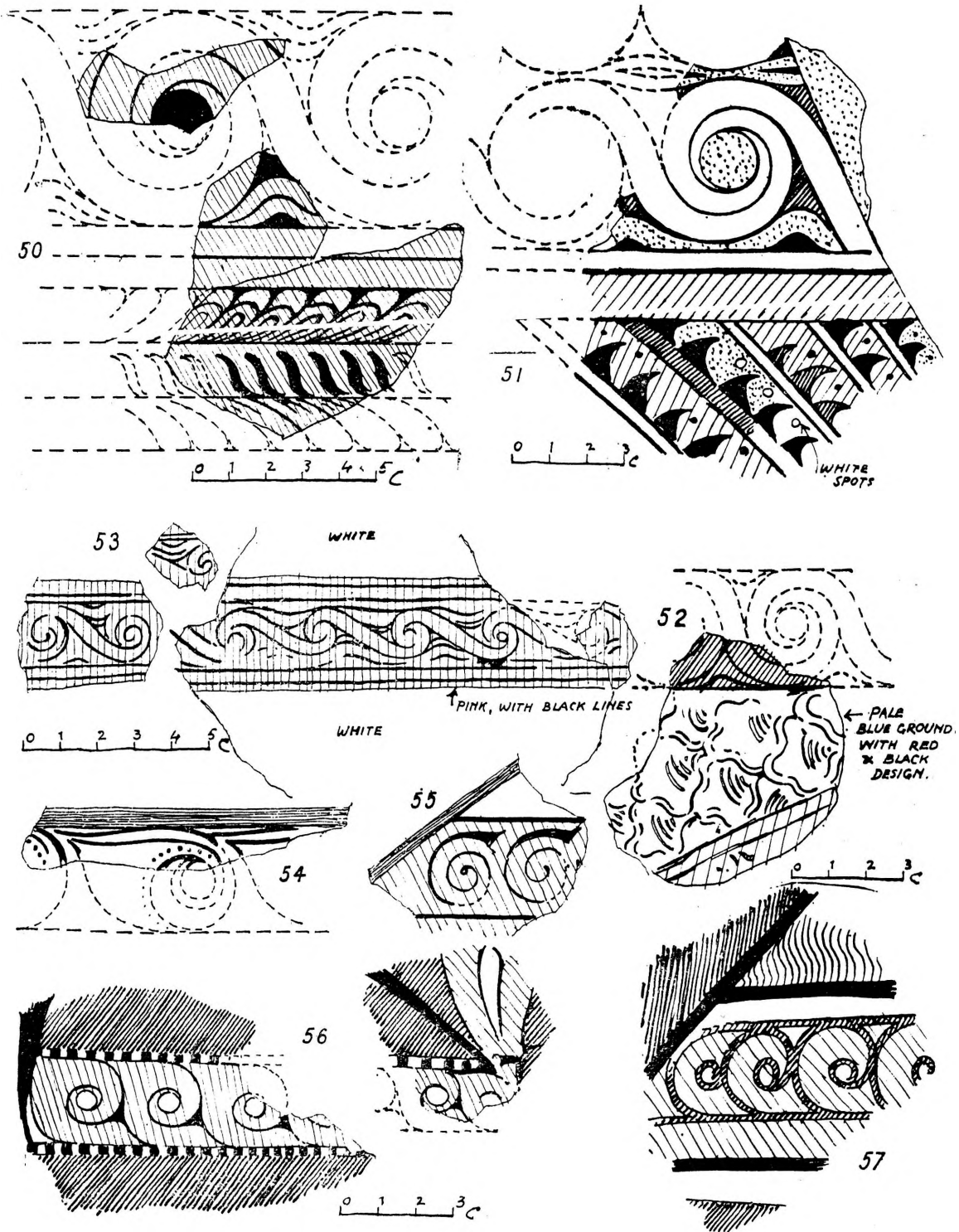


FIG. 49.—PROBABLE SPIRAL MOTIVE.





FIGS. 50 TO 57.—VARIOUS SMALL SPIRAL FORMS.

Reference has already been made to the spirals on the "miniature" moulded-frescoes (figs. 34 and 36) and to the modelled spiral ceiling. Smaller spiral patterns can be seen in figs. 50-57, mostly used in combination with other forms of ornament. Fig. 50, carefully drawn in black and yellow, is probably the dado, or some such border, of a small room on the east slope. Figs. 51 and 52 suggest fields of continuous pattern, in small scale ornament. Fig. 53 is a refined example of a small pink border, isolated on a white ground. The form shown on fig. 54 is apparently the same as that which decorates the palmettes of the alabaster "triglyphs" at Tiryns (see note § to p. 126).

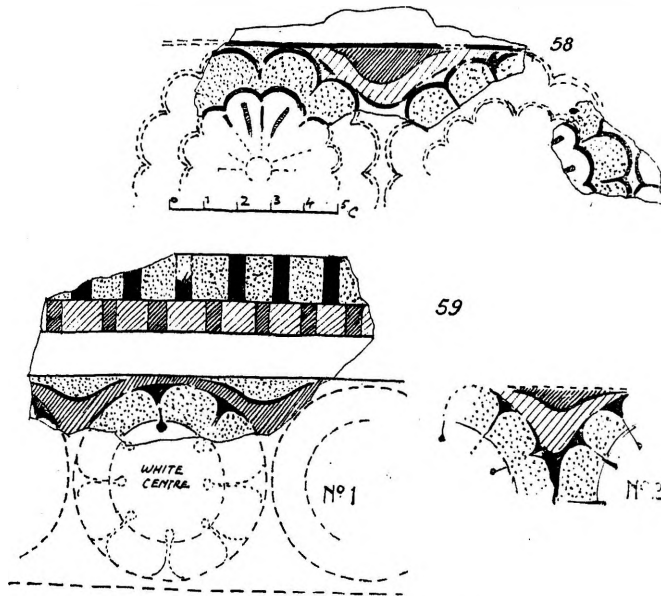
It should be noted, concerning Mycenaean spiral forms generally,\* that, as a rule, they are not true spirals in the sense that the ammonite shell and the Greek Ionic volute are. The evolution of a curved line from a central eye produces of necessity only one outlet, as in the above-mentioned cases.† Mycenaean spirals have nearly always two, three, or even four outlets or branches. This is very apparent in the spiral forms of the modelled ceiling, before mentioned. In these, imagine the central eye, having four pliable attachments in the shape of the spiral branches, to spin rapidly on a fixed centre; the result would be the complete spiral shown in fig. 41.

#### THE ROSETTE.

The rosette is another typical form of ornament, usually occurring in constant progression or at regular intervals in horizontal bands, a form of decoration that was probably suggested

by the beam-ends appearing in the construction. The rosette also occurs in the eyes of the larger spirals, and very appropriately is used as a complement to spiral forms generally, either in half-form, as in fig. 43, or completely, as in Plate I. We know that the Knossians thoroughly understood the treatment of rosettes in relief, from the splendid fragments of stone carving which represent, evidently, a series of these forms.‡

Fig. 61 represents part of what may be an enormous rosette, though it more probably belongs to the ornament which will be treated in the next section. Figs. 58 and 59 are borders in small-scale ornament, precisely the same scale of work as fig. 50. They



FIGS. 58, 59.—SMALL ROSETTE-BANDS.

\* See Perrot et Chipiez, *L'Art, &c.*, pp. 540 *et seq.* and Plate XVII. Also Schliemann's *Excavations* (Schuchhardt—trans. by E. Sellers), p. 171. Also Schliemann's *Tiryns*, Plates VIII., IX.

† In complicated Greek Ionic examples, such as the north portico of the Erechtheum at Athens, the initial form is the same, only the branch has been doubled to get more richness of effect. No doubt, as Mr. Penrose has

said, all simple Mycenaean spirals were constructed on the principle of the involute scroll, theoretically; but there can also be no doubt that the Knossians could draw more beautiful spirals borrowed from shell-forms. (See the learned disquisition of Mr. Penrose on the Ionic volute, *JOURNAL R.I.B.A.*, Vol. X., 3rd series, 1902, p. 21.)

‡ Found in 1900 in the western part of the palace. They have not yet been published.

FRAGMENTS OF PAINTED TRIGLYPH ETC  
IN YELLOW & BROWN.

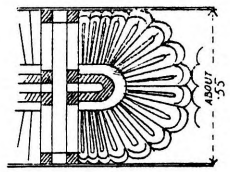
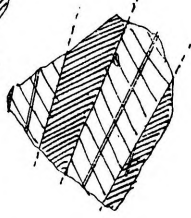
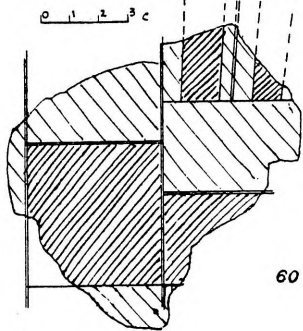
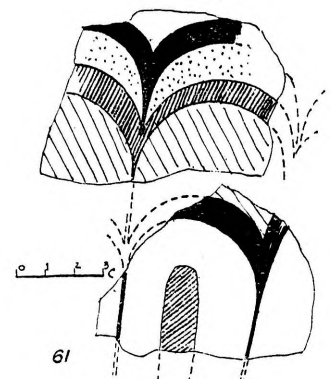
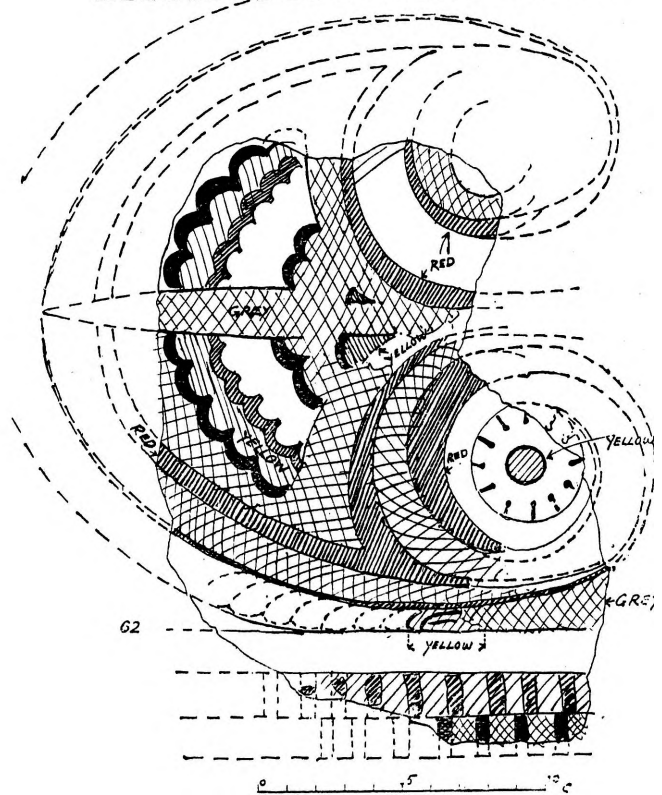
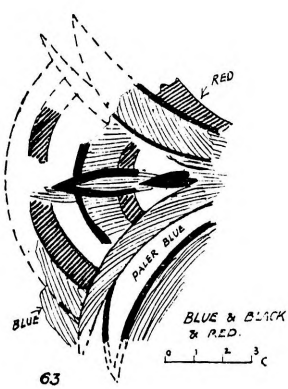


DIAGRAM SHEWING RESTORATION



FRAGMENTS OF ROSETTE, OR  
"TRIGLYPH" ORNAMENT.



FIGS. 60 TO 63.

may be taken as typical types of (1) the "flower" rosette represented by fig. 58, which has two series of petals, having distinctly rounded outer fringes; (2) the "beam-end" rosette (fig. 59), which does not lose its distinct circular form, and has only a suggestion of lines running to the centre. Of these two kinds, the first is the purely ornamental form, used in the eyes of spirals, &c. (see fig. 43, &c.); the second is the more constructive, and occurs constantly in the "miniature" fresco \* (see figs. 15, 16, 17, p. 113).

Other smaller rosettes may be seen in figs. 38 and 39 [p. 117]. The former is an interesting specimen of small moulded work. The latter, on the flat, is quite as interesting; a tantalising fragment which shows a curious border and the beginning of some picture-work.

#### THE "TRIGLYPH" MOTIVE.

We now come to a combination which forms the most distinctive architectural ornament of the Mycenæans; and which here chiefly forms the subject of a coloured plate (Plate II.). It consists of a succession of long elliptical forms, placed side by side in a horizontal line; each ellipse divided by a vertical member in the centre. The half-ellipses that are thus formed are decorated like rosettes (or palmettes), by petal-like forms springing from a core. The vertical members are decorated in a variety of ways.

The special interest of this motive consists in the fact that it has been called the prototype of the Doric triglyph.† It has been found in the following forms: (1) at Mycenæ, in front of the "Treasury of Atreus," on carved stone bands of pure ornament (26 c. and 17·5 c. in width); forming a combination with other decorated stone bands‡; (2) at Tiryns, as a built-up combination of alabaster slabs, decorated with blue glass; found on the floor as a skirting, but, probably, originally forming a frieze.§ This example is the largest extant (55 c., inside width); (3) at Knossos, as follows: *a*, a carved stone band, resembling those at Mycenæ, but in better preservation, and of finer workmanship (see note to p. 112); *b*, various plaster fragments, showing the motive as large and small decoration (see Plate II. and fig. 60); *c*, in the "Temple" fresco, where its *raison d'être* may best of all be studied (see Plate II., fig. 1).

Besides the above forms, which represent architectural decoration, the motive has been found on a small ivory plaque at Mycenæ, and as a small ornament in glass-paste at Menidi, in Attica.||

The last example is important; it represents the motive as an oblong, with the vertical member in the centre, and a half ellipse on each side; it entirely altered Dr. Dörpfeld's view of the construction of the motive. Discussing the Tiryns example he says: "There are indeed sundry external resemblances between this frieze and the triglyph of a Doric edifice, but the form of the ornament does not allow us to regard the frieze of Tiryns as a proto-Doric triglyph."¶

In the "Temple" fresco this motive is shown as a panel, with the vertical member in the centre; as in the Menidi example. But from the point of view of *construction*, the Knossian fresco is illuminating; not only is the vertical member evidently of wood, but the entire panel framed in the same material (see fig. 1, Plate II.), so that the vertical members seem to become the determinants of the motive; and the half-ellipses a filling-in of pure ornament.

\* Cf. Perrot et Chipiez, *L'Art*, &c., pp. 535-540. Also Schliemann's *Tiryns*, Plate IX.

† Perrot et Chipiez, *L'Art*, &c., pp. 710 *et seq.* A. J. Evans, "Mycenian Tree and Pillar Cult" (*J. H. S.* xx. 1900), pp. 194 *et seq.*

‡ See Perrot et Chipiez, *L'Art*, &c. T., vi., p. 547 and Pl. IV.

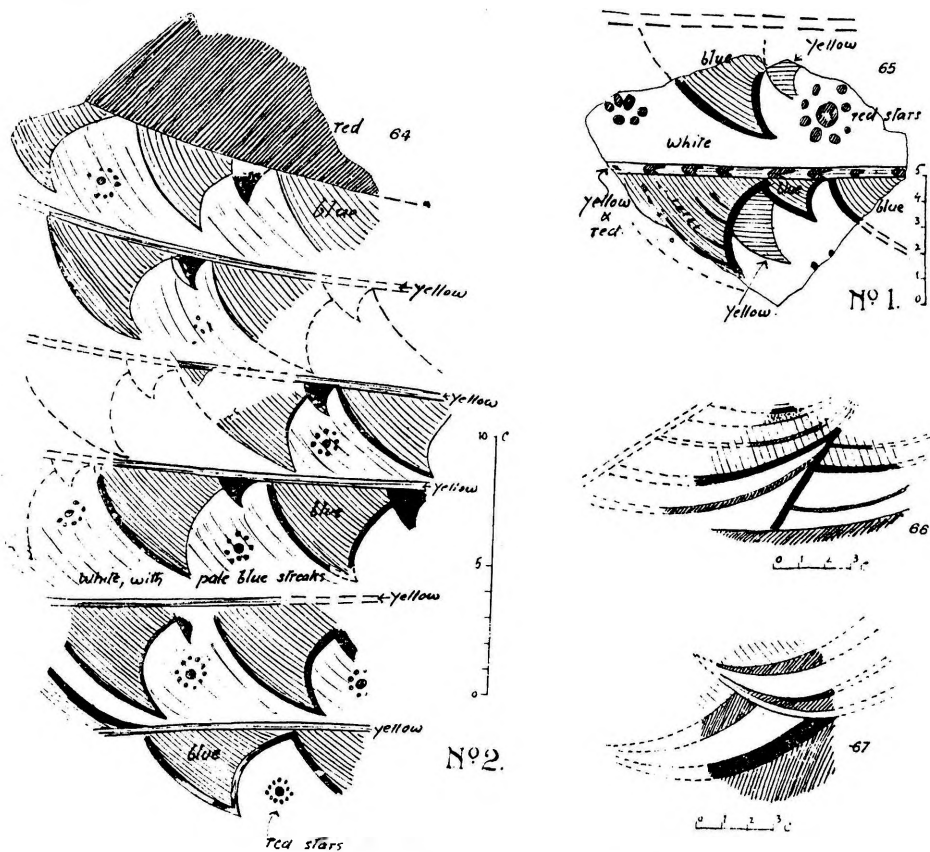
§ See Dörpfeld in Schliemann's *Tiryns*, pp. 284 *et seq.* and Plate IV.

|| *Ibid.*

¶ *Ibid.*

All this rests on the supposition that the parts coloured yellow in the "Temple" fresco invariably represent woodwork. Granted that this is the case, we are brought to another point, namely, that this motive was originally used in places framed for strength, requiring ornament; and if we turn to the entablature of the Temple (see fig. 3, p. 109) we see that there, where no weight exists above, the decoration is suited to the occasion, and consists of chequer-work; perhaps representing ornamental masonry.

It may also be questioned if architectural decoration should be judged from the standpoint of similar motives on tiny ornaments, and I think that from the evidence at Knossos it



FIGS. 64 TO 67.—VARIETIES OF TOOTH-ORNAMENT.

does indeed appear probable that this motive might have formed a basis for the Doric triglyph.\* The stone bands at Knossos and Mycenæ which represent the ornament are out of court in the argument; they are made up of long pieces, and show the oft-repeated transition from constructive wood to decorative stone.

To come to a detailed consideration of the various forms shown on Plate II., we note first a general resemblance of colour in them all. Fig. 3 is the most complete specimen—it is

\* Phæstos, the other great Cretan site, has what one might call a duplicated triglyph on the breastwork of stone seats, which resemble those at Knossos. Thus, the broad, simple triglyph motive is decorated with vertical strips in

relief, which are plain and grooved alternately. See L. Pernier, *Scavi della Missione Italiana a Phaestos. Rapporto Preliminare* (Roma. Acad. Lincei. 1902).

strongly resembled by fig. 5—which, however, has yellow instead of white in the inner petals of the palmette. Fig. 2 represents a variation; but apparently belongs to this style of ornament. Fig. 4 is, however, the most curious example; the palmettes in this case being superseded by a motive which suggests a wheel, a sun, or a star. The variation of ornament on the vertical member is also noticeable. If the fragment above the triglyph in fig. 5 really

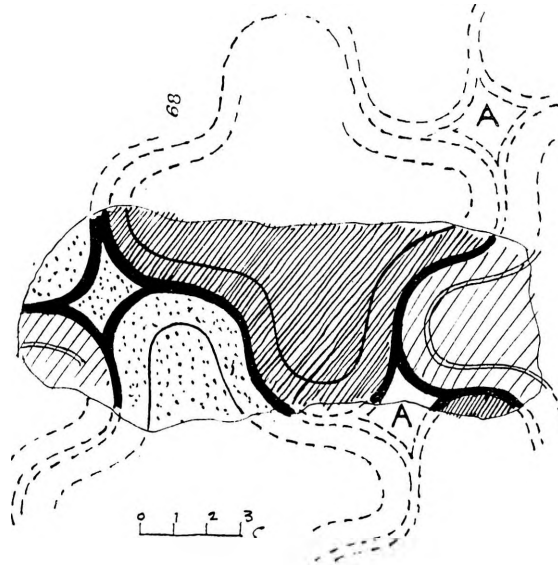


FIG. 68.

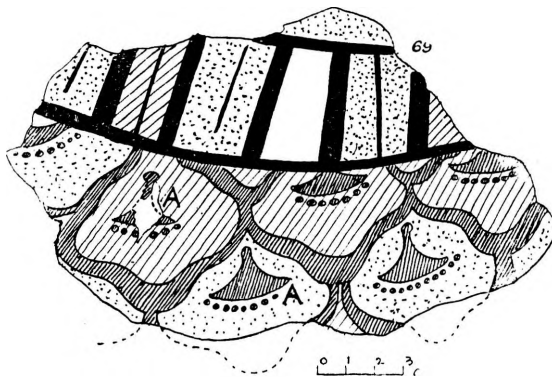


FIG. 69.

These fragments may well have formed part of an important continuous decoration of wall or ceiling.

represents a "horn of consecration," as suggested in the drawing, it would show that the "triglyph" motive was used there, either on a parapet or coping, or on a podium, as in the "Temple" fresco (fig. 1, Pl. II.). The example on fig. 5, when complete, would approximate in size to the stone examples, and therefore almost certainly formed part of the main palace decoration. Figs. 2, 3, and 4 also probably formed palace decoration of a smaller sort.

Fig. 60 shows some fragments which apparently belong to this ornament, though it is difficult to arrive at a definite size for it. A suggested restoration has been appended which shows a probable inside width of 55 centimetres. This example would thus have been the same size as the Tiryns one in alabaster.

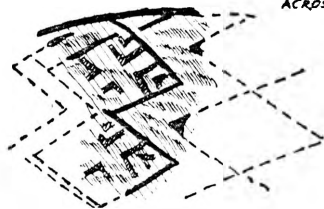
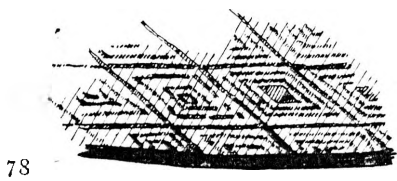
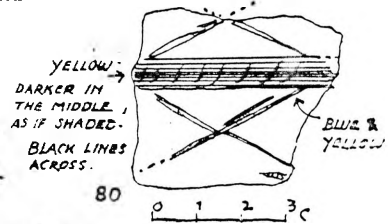
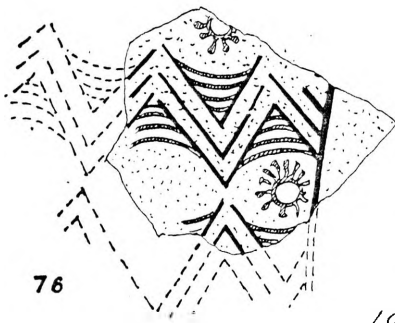
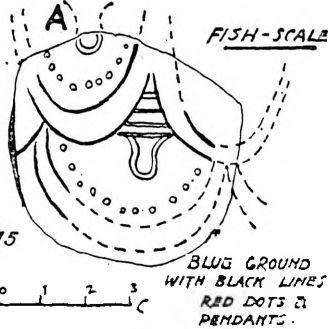
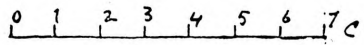
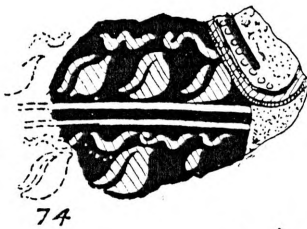
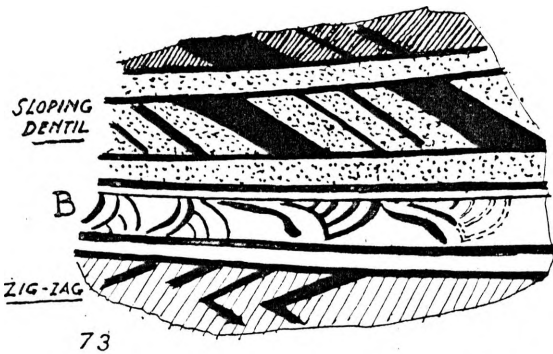
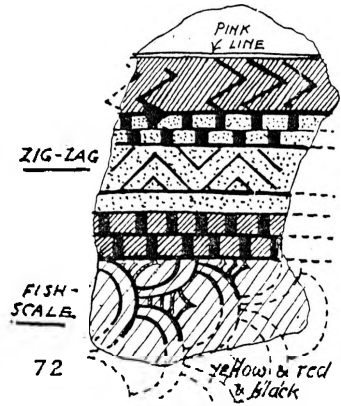
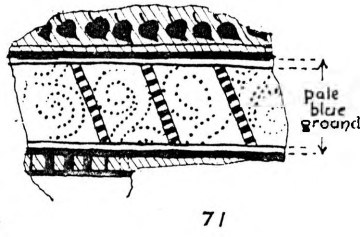
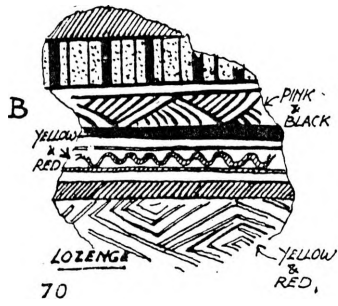
Reference must also be made to fig. 61, which shows three series of petals in the palmettes. It will be seen how closely the palmette part of the "triglyph" motive resembles the rosette.

Two interesting fragments may conveniently be taken here as suggesting in some degree the form of ornament just mentioned. They are shown in figs. 62 and 63. The "sword-point" detail in both at once suggests the large ceiling ornament of the Orchomenos tomb, in Bœotia,\* while the character of the widening flower is very distinctly Egyptian,† especially in the more naturalistic example given here (fig. 63).

\* *Exploration of the Bœotian Orchomenos*, by H. Schliemann. *Journal of Hellenic Studies*, vol. ii. pp. 146, *et seq.* and Pl. XII. and XIII. Also see Perrot et Chipiez, *L'Art*, &c., pp. 504, 543-4. And cf. Schliemann's *Tiryns*, Plate V.

† Certain tombs at Thebes, now being excavated by Mr. Percy Newbery, throw much interesting light on Mycenaean

and Egyptian relations. In one there is a ceiling in painted plaster, certainly not later than the twelfth century B.C., which distinctly resembles the one at Orchomenos. The palace of Ahmenhotep III. at Thebes, now being re-excavated by Mr. Newbery, also shows prospect of being interesting from the Knossian standpoint.



FIGS. 70 TO 80.—VARIOUS DETAILS.

## VARIOUS SMALLER FORMS OF ORNAMENT.

There remain to be treated certain other types of ornament which occur in borders and decorated surfaces. Many of these are familiar to the student of Mycenaean art, especially on pottery. In stucco they are often puzzling: (1) in the haphazard way in which different motives are joined, and in the apparent difference of scale in adjoining motives; (2) in the oddity of angle into which some of the ornament works, as judged from the sloping character of its lines (see figs. 46, 51, 52).

The existence of these features makes it all the more regrettable that no large surface of pure ornament was found intact.

The *dentil* motive, already alluded to, is a very common ornament in small-scale borders. Fig. 5 on coloured Plate II. shows one of its largest uses (*cf.* scale); and fig. 3 of the same also shows it in colour.

Another simple example can be seen in fig. 59. Figs. 71 and 72 show it to smaller scale, and figs. 36, 39 and 40 very small in connection with miniature fresco. Fig. 6 on coloured Plate II. shows the smallest dentil-work that has been found.

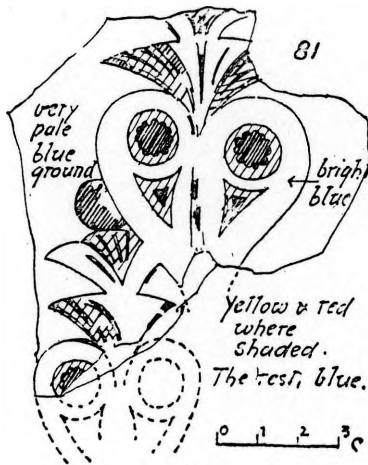


FIG. 81.

Another form of dentil is shown in fig. 70, but more completely in the architectural miniature fresco (figs. 16 and 17). This form is obviously borrowed from wood-construction, as probably are all the forms.

The *tooth* ornament, represented in brilliant blue, would be most appropriate as a robe decoration (see figs. 64 and 65), and was found as such (in a subsidiary form) on a figure in the "Procession" fresco.

Fig. 51 shows it in connection with the spiral, suggesting a similar motive found at Tiryns, which is thought to be part of a wing.\*

Figs. 66 and 67 show two examples which may be regarded as varieties of this ornament. Fig. 66 suggests the stretching of cloth.

A very pretty form of repeating ornament (see fig. 68), which is peculiarly Mycenaean, has also been found as robe decoration in the "Cup-bearer" fresco.

A variation of the same motive is shown in fig. 40 (in connection with miniature fresco), which also shows an isolated piece which may belong to a larger motive. The squared form in fig. 40a abolishes the little vacancies, marked  $\Delta$ , in the design of fig. 68; but curiously enough recovers them again in the centre of each cross.† It would be interesting to know which was the older form—the squared or the rounded.

The *fish-scale* ornament is found in a variety of forms, from the simple, fig. 75, to the more complicated, figs. 52 and 69. As found at Tiryns,‡ this ornament suggests overlapping cloth fringes, while the part marked  $\Delta$  in fig. 75 resembles a pendant in metal.

The *lozenge* is also a common form of ornament. It is shown as chequer-work in figs. 70 and 78.

\* See Schliemann's *Tiryns*, pp. 290, *et seq.*, and Pl. VI.-VII.

† A form that has also been found as inlaid crystal in

the "draught-board." See *Annual of the British School at Athens*, vii. 1900-01, Ill. p. 79.

‡ Schliemann's *Tiryns*, Pl. XI.



The filling-in of the pattern is probably suggested by the graining of wood in section. This ornament is often formed by a combination of *zigzags*, as in figs. 76 and 79.

For the zigzag form proper see figs. 72 and 77.

The borders shown in figs. 70, 71 and 72 have a variety of ornament. A form of tooth-ornament is shown at *b* in fig. 70. Fig. 71 shows a border with sloping motive, as in the *sloping dentil* of fig. 73. Fig. 73 is hardly a border, but it shows at *b* a tooth-ornament resembling that of fig. 70.

The meaning of fig. 74 is obscure; the black ground points to early work, while the yellow ornamentation is a common motive on pottery. The leaf-work at top of fig. 71 is also a pottery motive.

Fig. 80 is curious, as showing what appears to be shading by colour-gradation in the yellow horizontal band. The crossed lines in the figure, resembling lattice-work, are not often met with in fresco.

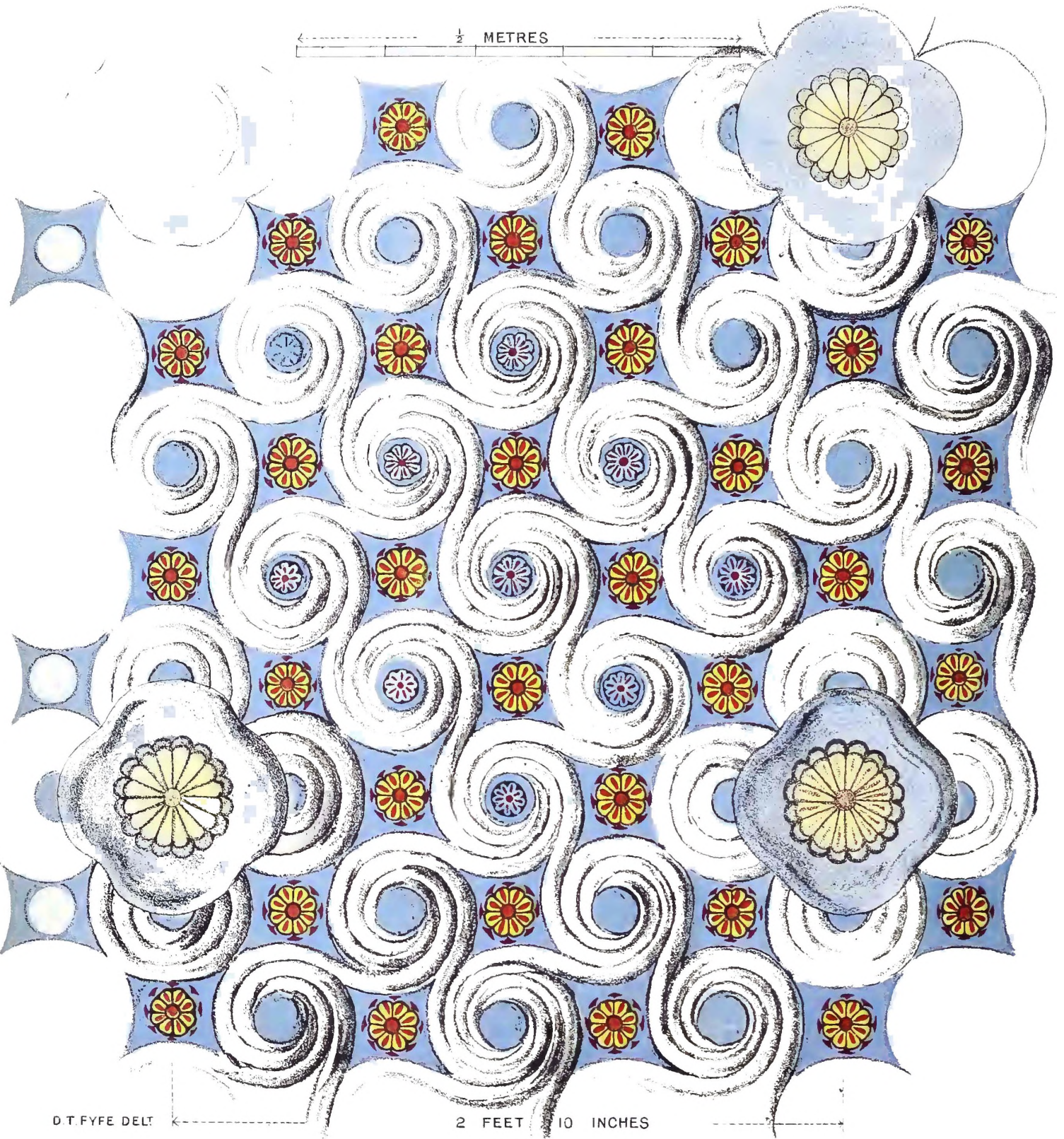
Two forms of ornament, which resemble one another, and which are completely Mycenæan, are shown in fig. 40 and fig. 81. The example in fig. 40 forms the decoration of a moulding. The same motive was found at Tiryns.\* Fig. 81 is more complicated, but was also found in somewhat similar form at Tiryns,† where it appears to be a pendant of obscure meaning. The Knossian example is brilliantly coloured in blue and red and yellow, and is probably a detail (perhaps held by a figure) in some important picture fresco.

The isolated fragment shown in fig. 6 of the coloured Plate II. evidently belongs to the smallest scale of work in the Palace. It is an interesting fragment, but is unfortunately incomplete, to the extent that we do not know if the oval motive is repeated, or gives place to a round. The latter idea, giving shields and double-axes alternately, is suggested by Dr. Evans, and seems to be borne out by the drawing—if one can judge from so small a scale. The sloping yellow part below the border even suggests that this fragment might represent the finial of a pediment; the double-axe having a votive or triumphant look.

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\* Schliemann's *Tiryns*, Pl. VI., IX., XII.

† *Ibid.*



RESTORATION OF A CEILING IN MODELLED AND PAINTED PLASTER.

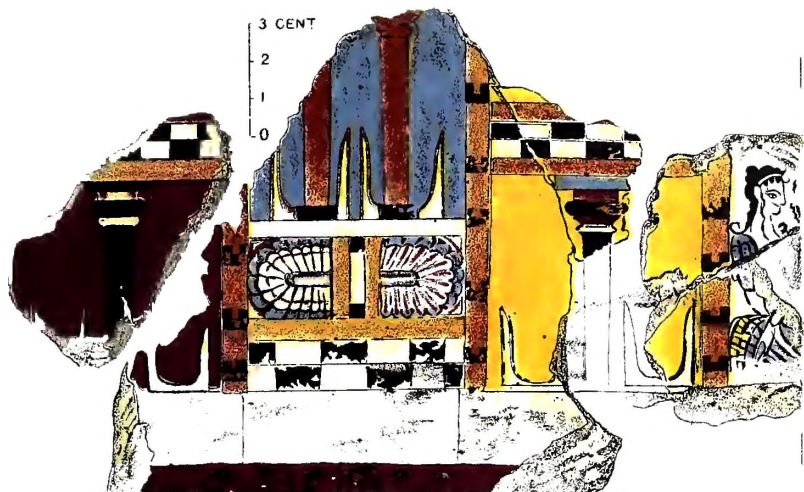


FIG. 1. CENTRAL PART OF THE "TEMPLE" FRESCO.

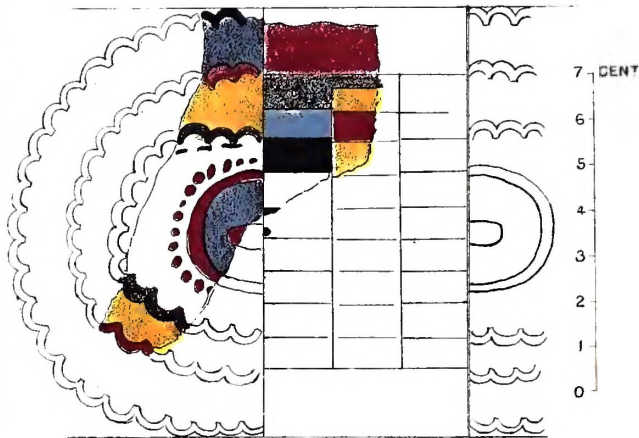


FIG. 2.

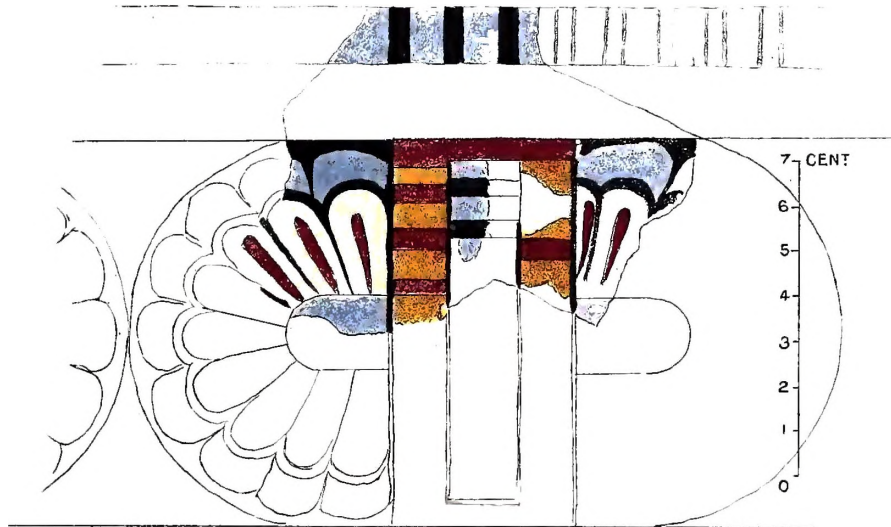


FIG. 3.

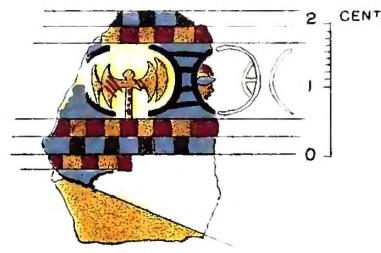


FIG. 6

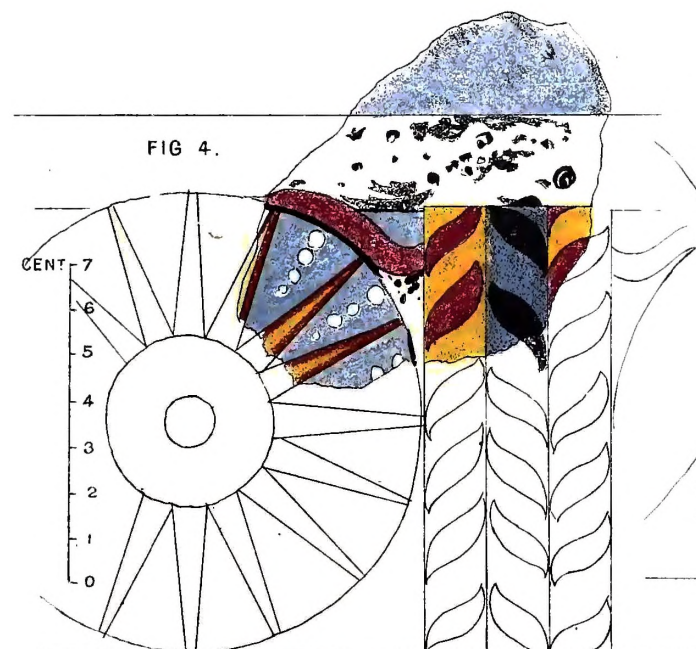


FIG. 4.

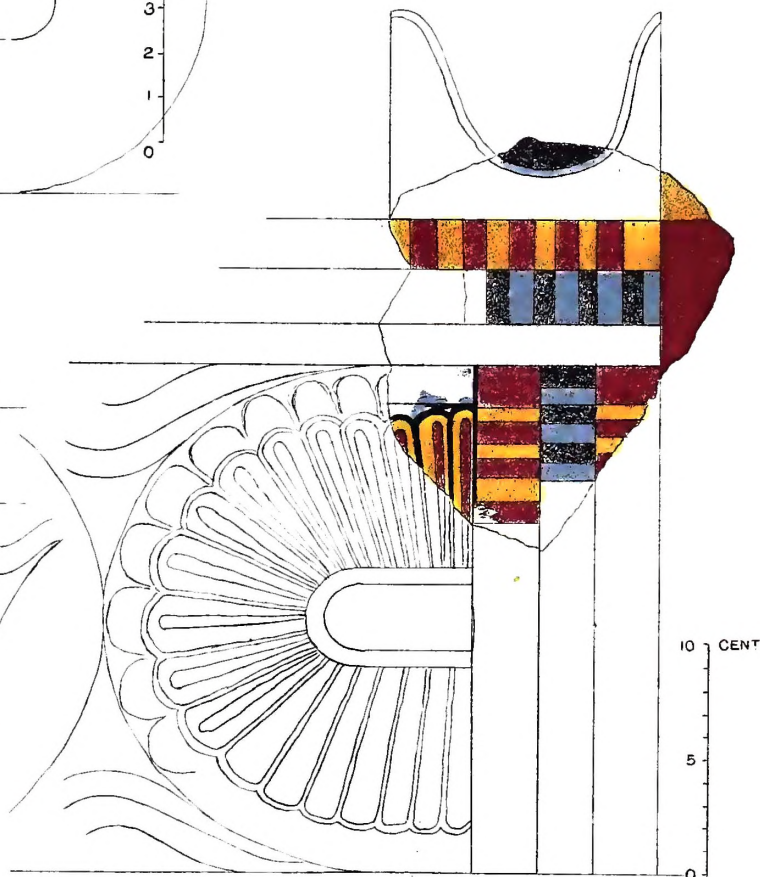


FIG. 5.

VARIOUS "TRIGLYPH" MOTIVES IN PAINTED PLASTER.