

A TOWER HOUSE AT YENİ FOÇA İZMİR

The small town of Yeni Foça lies on the Aegean coast of Turkey, about an hour's drive N.N.W. of İzmir.

Approaching Yeni Foça from inland, the first signs of the existence of the town are two ruined windmill towers which stand together on a hill just to the south of the town.

During the first week of a recent vacation in Yeni Foça I spent some time measuring and recording the two mid-nineteenth century mills and walking around the district studying the local architecture.

It was soon apparent that one of the most interesting building-types in this region is the 'tower house' or 'kule' as it is known locally. Those who have travelled in this province of western Turkey will probably be familiar with the stone built tower houses whose square ruins still stand solidly in the midst of many of the deserted hamlets lying by the small bays and inlets along this coast.

The example studied in this article is the most complete that I have seen. It is decorated to a far greater degree than most, and as will be seen below, I believe that it gives us some strong hints as to the nature of its ancestry. It also bears a silent, but clear testimony to the troubled life of this region more than a hundred years ago.

Location, owner, and use

The tower house that I finally studied in detail, stands on a walled plot of land just beyond the western edge of Yeni Foça, in the Vilayet of İzmir. (See fig. 1).

The plot lies to the south of the coastal road, about two hundred metres from the sea. (Pl. I, a) A metal plate bearing the number 746 is fixed to the east wall of the tower to the left of the door. This number would appear to be the only 'address' that the tower has.

The present owners of the house are Bay Hüseyin Ören of Değirmenler Mah. No. 21. Yeni Foça, and his sister.

Although the house has been used in recent years as a holiday residence, the woodwork (especially that of the floors, ceilings, and roof) is now so ex-

tensively damaged by wood-boring beetles and their larvae, that it can only safely be used as a store for agricultural tools and equipment.

General description

The tower has an almost square plan (north and south walls 5.37 metres long. West and east walls respectively 5.35 and 5.33 metres long). The tower is capped with a tiled pyramidal roof.

From the inscription over the door (see fig. 9 and Pl. I, b) we can read the builder's name and the date 20 IOYNIOY 1850. The bottom line of the inscription reads: ΑΝΑΓΑC ΜΑΝΟΥΙΛ ΧΗΤΤΟΡ (XHTHTOP) ἀνάγας: n. from the Greek verb, ἀνάγω: to lift up, erect or raise. Μανουήλ is a shortened form of the common Greek first name Ἐμμανουήλ: or Emmanuel. Χτήτωρ: n. is a variation of Κτήτωρ: n. formed from the verb κτίζω or κτήζω: to found, build, or create in an artistic sense. Thus we may say that Emmanuel Anagas (or Emmanuel the Builder) built this house in 1850, presumably finishing it on June 20.

The house has three basic storeys. The ground floor is entered via an iron door which is the only door in the building. (Fig. 2) On entering one turns to the right and passes along a passageway between the east wall of the house and a wooden platform which has storage space beneath it for agricultural produce. The platform, which might be termed a mezzanine floor, is mounted by means of a wooden stair of three treads at the north end of the above mentioned passageway.

To gain the first floor, or main living room, one has to cross the mezzanine platform to the south wall, and ascend a wooden stair of nine treads. The living room is then identifiable by its large fireplace, two fitted cupboards, and a small sink which has been cunningly contrived in the sill of a window embrasure. (Fig. 3).

If one then examines the wooden ceiling of the living room, a hatch may be observed which lies directly over the staircase. The loft, which one enters via this hatch, once had a boarded floor which has now disappeared. (I was only able to get into the loft by using a borrowed three metre ladder. The original means of access must have been by a similar ladder or perhaps even a rope. The large hand-wrought iron nail which is driven into the wall adjacent to, and above the hatch, may have been for the purpose of attaching such a rope. See below).

Sufficient floor joists remain in-situ to show us the original level of the loft floor. The floorboard thickness is given by some remaining fragments immediately adjacent to the hatch.

Once in the loft, a number of tapered embrasures immediately suggest the subject of fortification. (See fig. 4).

The fortified nature of the house is not immediately apparent from the exterior, apart from the fact that all the window shutters and the door are constructed of iron plates and bars.¹

Two high level projections on the east and west walls might at first be mistaken for cantilevered chimney flues, because at first glance there is no other sign of a chimney. However, if one stands beneath the projections and looks upwards, it is immediately clear that they have different types of openings in their undersides and that they have no apparent holes in their tops.

It is not until one enters the loft that the function of the projections becomes clear. After cleaning away an accumulation of guano, bird's nests and mud mortar and plaster debris, I was able to confirm that these two projections have different purposes.

The western one (the larger of the two) is in fact a latrine with an unmistakeable recess for a wooden seat cut into its perforated stone base slab. (See Pl. IV, a). The nail driven into the wall on the left hand side of this recess has already been suggested as an anchor point for a rope. It is possible that it served as a hand grip to assist anyone trying to get out of this restricted space after having first managed to back into it. (The nail has an 8 mm. square shank and protrudes some 7 cm. or more from the wall face).

The eastern projection is almost certainly a machicolation allowing a defender the chance of a good pistol shot at the head of anyone unwise enough to try a direct attack upon the door immediately below. The presence of this

1. The stone jambs of the first floor windows have the remains of iron 'rides' still set into them. It would thus appear that the present iron shutters are not the originals. Because the tower is so close to the sea, the unprotected ironwork must suffer from the corrosive effects of the chlorides in the sea air.

I assume that at some time the shutters had to be replaced and that the opportunity was taken to renew the iron 'hook and ride' hinges. The remains of the original hinges were presumably left in-situ because it was too much trouble to dig them out of their lead settings.

There are also signs that the door is not in its original state. A timber beam remains embedded in the wall above, and to the south of the door. This beam has a vertical hole in it which was obviously once intended for a door pivot. On the north jamb of the door frame there is a substantial wrought iron 'staple' which would take a large bolt or bar. Although this 'staple' is now disused it could have received the bolt from a lock which is now missing from the door. A large sheet iron patch has been crudely rivetted to the old plate in order to cover the hole left when a lock was torn out. The jagged nature of the hole strongly suggests that the old lock was blown off with explosives.

defensive position has not prevented someone from firing two .45 calibre bullets at the outside of the iron door. One of the bullets penetrated the 3 mm. iron plate, the other made a deep dent. (See figs. 7 and 8). I have not been able to discover any further traces of the bullet which penetrated the door.²

The identification of the pistol loop machicolation is supported by the existence of the four embrasures mentioned above. These are more likely to be for muskets or rifles although a pistol might be used with its attendant loss of accuracy.

The embrasures pierce the west, north, and east walls of the loft, and are only visible from the outside as small slots about 5 cms. wide and just under 20 cms. high, positioned immediately below the stucco cornice. (See Pl. III, a and fig. 5).

There are but two windows to the ground floor, each having an iron grille outside the inward-opening iron shutters which are mounted on the inner face of the stone window-jambs.

The first floor living room has more generously proportioned windows. Five of the seven windows to this room have semi-circular arched embrasures. The remaining two, on the fireplace wall, have flat wooden soffits. The window embrasure between the head of the staircase and the fireplace, contains the shallow stone sink which is drained via a hole beneath the window frame. Water from the sink runs through the hole and is then discharged into a ditch below by means of a roughly shaped stone water spout.

2. At this point one might speculate on the subject of the weapon which fired these bullets, and when it was fired. Without one of the bullets themselves I can only make some general deductions. The difficulty of being certain as to whether the hole was caused by a .44 calibre bullet as opposed to a .45, is the first problem.

The .45 calibre tended to be more common in the pin-fire, rim-fire, and centre-fire guns of the later years of the nineteenth century. One point which may be significant is that the unjacketed lead bullets of the mid-nineteenth century would be likely to flatten themselves on the iron plate of the door. The fact that the bullet actually penetrated may indicate that it was fired from a large or powerful weapon, such as a carbine. One possible candidate may be the British Martini Henry rifle which was used by the British Army in the Sudan in the 1880's. The heavy .45 calibre version of this rifle was specially designed to stop fanatical enemies, and its bullet was famous for its 'punch.' This gun was available in Turkey in the 1880's.

I have assumed that the bullets were fired during the nineteenth century. It is quite possible that I am incorrect and that they may even date from the troubles of the 1920's. Even so, if one considers the corroded nature of the ironwork around the bullet hole, it is still possible to say that the hole may date to the 1880's. It might be better to say that it is unlikely that the hole was made before this period.

Only the window over the sink retains a complete unglazed wooden, window frame in addition to its externally hung shutters. The frame has a single transom, and one muntin in the lower half of the opening. There is also a single leaf inward opening wooden shutter. (See Pl. V, b). All the windows retain their external iron shutters, and most of them still have parts of their subframes of timber. Apart from the window over the door, the windows lack further evidence for opening lights. The window over the door has sufficient woodwork left for the marks of hinges to be seen. These suggest that each window once had casements (The marks indicate that the hinges were of the 'butt' type). The bars of the fixed light over the sink have no rebates for the insertion of glass, nor are there any traces of beads or battens which might have served the same purpose. I have therefore assumed that oiled paper or cloth may have been used in lieu of glass. There is a strong possibility that the casements only had muslin stretched across them, with the idea of keeping out the mosquitoes rather than the elements. (The house stands on low ground which is subject to flooding. Having slept in a nearby house I can testify to the voracious appetite of the mosquitoes from the adjacent stagnant water.)³ The loft has no windows or light openings other than the musket or pistol loops mentioned above. The latrine hole admits some light, and a very slight amount is admitted by some terracotta water-pipes which are set into the south wall.

It is very difficult to decide what the original function of these pipes was. Each consists of two individual pipes fitted end to end.

One pair of pipes lie at right angles to the wall faces; the other pair are arranged at an angle. Both pairs are set approximately level in the wall, and

3. Jules Verne's novel *Michael Strogoff, Courier of the Czar*, contains an interesting nineteenth century reference to the use of protection against mosquitoes. The novel was written in 1876 and in it Verne gives many detailed descriptions of the geography and peoples of Siberia. In the book, Strogoff's mission to Irkutsk takes him through the dismal, mosquito infested swamp region of Baraba which lies in a clay basin between Omsk and Tomsk. Verne describes the inhabitants' use of bonfires of green wood, the pungent smoke of which afforded some protection to their miserable flocks of sheep. He also notes that travellers in the area have to protect themselves with horsehair masks and fine wire mesh coats. Verne had never visited Russia, but, as when writing his scientific tales, he undertook extensive research upon his subject, so that *Michael Strogoff* is filled with much accurate factual background information. Thus we almost certainly have here actual ethnographical data culled from mid-nineteenth century travellers' accounts. It would be of considerable interest to discover how widespread such protective measures were at this period. It would seem to be most likely that screens were fitted to houses.

both reach the outer face of the wall at the level of the stucco cornice. (See Pl. III b, and fig. 5). At present the cornice stuccowork does not cover the ends of the pipes although at one time it may have done so.

Because the internal diameter of the pipes is so small (circa. 10 cms.), and since it would be almost impossible to sight and fire a gun through them with much hope of hitting anything (the field of fire is naturally very restricted) I must assume that they were intended for some other purpose. Possibly they were supposed to improve the ventilation of the loft by introducing a cross draught.

The pipes might just conceivably be for observation purposes, because the loft has no other openings in this south wall. However, the restricted view from the openings thus provided must indicate that the ventilation hypothesis is the most likely.⁴

4. I have come across quite a number of examples of water pipes and earthenware jars buried in rubble stone walls in Asia Minor. I have noted single jars set into the vaults of the seventeenth century Ottoman Sulu Han in Ankara, in the pendentives beneath the dome of the tepidarium of a hamam adjacent to the Ephesos museum at Selcuk, in the squinches beneath the dome of the Ilyas Bey Camii at Milet or Miletos (the building dates to the first decade of the fifteenth century A.D.) and in the walls of a medieval Armenian church at Til near Pertek in the Vilayet of Tunceli. My colleague Dr Ömür Bakirer has informed me that there are also examples set into the squinches of the fourteenth century Yelli Cami in Peçin, Milas. In every case the jars or pipes are set with their long axes at right angles to the face of the wall and there is no possibility that they were for lighting purposes. One is reminded of the use of fictile tubes by the Romans and the Byzantines, to lighten domes and vaults. It is quite clear that the use of one jar or the odd water pipe here and there, does not serve this purpose. The jars and pipes are not used systematically enough to serve in this way. I have considered the somewhat unlikely possibility that they are in some way connected with scaffolding 'putlogs.' At present I am inclined to believe that they were set into the walls to assist in the initial 'drying-out' of the structure. If a porous earthenware pipe or jar is set into a newly built lime mortar and rubble stone wall, water is attracted from the surrounding masonry and the strength gain of the structure may thus be speeded up. The fact that many of these jars are placed just above the springing point of vaults may support this hypothesis. (This same principle is used today when what are known as 'high capilarity tubes' are inserted to dry out damp walls). In the case of the tower house at Yeni Foça my suggestion offers an explanation not only for the two pipes in the south wall but for the other pipes set at a somewhat lower level in the other walls. If one wished to place a roof structure straight on top of very recently built rubble walls, it would be extremely necessary to be sure that the mortar was no longer sufficiently plastic to permit any deformation. If the roof was of a type that developed lateral thrusts—and we have reason to believe that the roof here was of this type—structural stability in the wall becomes even more necessary.

It is even remotely possible that the draughts passing through the pipes may have allowed more CO₂ to reach the lime mortar and the setting time may thus have been speeded up.

The walls of the tower are built of what appears to be rhyolite rubble in lime and mud mortars. On the exterior the walls are faced with random rubble work, with the quoins executed in larger and more carefully worked blocks of the same volcanic rock.

With the exception of the windows to the ground floor and the two west windows to the first floor, all the other windows and the door have large flat 'rhyolite' lintols surmounted by blank semi-circular arches. The voussoirs of the arches are alternately arranged blocks of white 'rhyolite' and red tuff. The tympana appear to be formed from single undecorated blocks of 'rhyolite.'

A further feature of the north, east, and south facades, is the use of tile slips, bricks, and red stone to produce decorative panels and coloured bands. (See Pl. I b, Pl. II b, Pl. III a, b). Triangular panels filled with diagonal and horizontal lattices executed with tile fragments and slips of stone are set into the north, east, and south walls above the level of the first floor windows. Tile and stone 'roundels' also decorate the same walls above the level of the triangular panels. These 'roundels' are formed by setting a terracotta waterpipe into the wall and then arranging a series of tile and stone slips to radiate spokelike from the circular hub thus formed.

In places a slightly decorative effect is obtained by the use of small flat fragments of 'rhyolite' to pack the gaps between the larger stones. This technique may be seen to advantage in the dry stone constructions of this region. The two mills mentioned above contain examples of the work. (The technique is slightly similar to the 'galleting' used with Kentish rag in southern England. The English technique uses pebbles whereas the examples that I have seen in western Asia Minor tend to have small stone chips or less frequently sherds of pottery pressed into the mortar joints.)

The building has a stucco cornice of a debased classical profile. (See Pl. IV b, and fig. 6).

(Technically this is explained by the following equation—calcium hydroxide plus carbon dioxide equals calcium carbonate plus water. $(\text{Ca}(\text{OH})_2 + \text{CO}_2 = \text{CaCO}_3 + \text{H}_2\text{O})$. In this process the slaked lime or calcium hydroxide is converted to calcium carbonate by the action of CO_2 in the atmosphere. Ventilation would help to circulate the CO_2 and to remove the water produced by the reaction as well as the original water used in the slaking.) The triangular 'vents' in the walls of the Cypriot and Ancient Greek buildings referred to in the text, are always placed just under the eaves and in some cases it is certain that they are associated with 'couple' roofs. The inclined principal rafters of this type of roof are not restrained by tie beams and thus certainly require a very stable wall to rest upon and thrust against. This fact might support the idea that the triangular 'vents' were used to dry out the top of the wall and thus to strengthen it against the thrust of the rafters.

The pyramidal roof is covered with red 'over and under' tiles, laid with each cover tile of the lowest course set up on a pad of lime mortar to produce an effect not unlike that of a series of antefixa.

The chimney pot (there is no stack) just protrudes through the western slope of the roof and would appear to be a large diameter terracotta water pipe (circa. 21 cms. internally).

The roof structure now consists of a couple-close 'truss' combined with a collar and a pair of 'bird's mouthed' collar braces. The couple-close truss consists of two inclined 15 x 7 cm. principal rafters halved and spiked together at their tops, and a 17 x 9 cm. tie beam which connects the feet of the rafters. The whole assembly thus forms a triangle. (See fig. 5).

The main truss then supports four hip rafters (16 x 9 cm.) and two further principal rafters (16 x 8 cm.) which are centrally placed at right angles to the truss. All these in their turn support a number of purlin poles of approximately 7 cm. diameter. The tiling is carried on 2 cm. thick boarding which lies directly on the purlin poles.

The absence of a timber wall plate may be suggested by the six 7 cm. diameter poles which radiate from the centre of the tie beam to the feet of the hips and the principal rafters. The poles are spiked at each end and would thus prevent any tendency for the roof to spread at its base and push the top of the wall off.

In the north west corner of the loft it is possible to see part of a timber angle-tie embedded in the top of the rubble walls. Such a tie usually joins two timber wall-plates together where they meet at the corner of a building. In view of the fact that the absence of a wall plate has been suggested, the tie may have been used by itself to spread the load from the foot of the hip rafter, instead of being used in its usual way to join the plates and prevent the hip rafter from pushing the corner out.

If, as I suspect, the collar and braces are later additions made necessary by a failure of the main truss joints, the lack of a wall plate would have aggravated the situation by allowing the rafter ends to push their way out through the tops of the walls. Like the ties to the rafters' feet, the two braces are round section poles with traces of bark still adhering to them. (The reason for my interest in the presence or absence of wall plates lies in the fact that further research into regional styles, origins etc. may well hinge upon such points). The collar is roughly spiked to the side of the principal rafters of the 'truss', without any attempt at proper halving or tenoning.

Inscriptions and carvings

Apart from the date and the name of the builder, the incised lintol over the door (see Pl. I b, and fig. 9) also bears the following details carved in intaglio.

At each end of the stone is a roughly carved six-pointed star. The πεντάλφα or pentacle of the Pythagoreans is still regarded as a good luck sign in modern Greece (a five pointed star enclosing a pentagram) but I have not been able to attach any special importance to the use of six pointed stars. On a carved wooden panel of the 'Sultan's box' in the early thirteenth century Ulu Çami at Divriği, a chain of these stars is used to form the border enclosing a carved arabesque. I have also noted the use of this six pointed 'Star of David' or 'Muhr-i Solaiman' as it is known to the Moslems, as a decorative motif in a number of early Ottoman mosques in western Turkey. In Tire for example I have seen it used to decorate the side panels of a marble 'mimber.'

Next to each star and nearer to the centre of the stone is a flower motif. The left hand motif has four bifurcated petals, the right hand motif has six plain petals.

In the centre of the stone is cut a cross fleury with rays coming from its centre, the whole standing on a mound or base.

In the spaces between the arms of the cross is cut the familiar legend: ΙΕ ΧΣ ΝΙ ΚΑ: Jesus Christ Conquers.

Three birds are depicted flying singly towards the left of the stone (southwards in this case — has this any significance?)

The spacers between the words ΑΝΑΓΑC, ΜΑΝΟΥΙΑ and ΧΤΗΤΟΡ are in fact pairs of dolphins (again regarded as good luck symbols in modern Greece). Finally the device at the bottom right hand corner may represent a knot or an infinity symbol, both of which would presumably signify 'permanence.'

At the southern edge of the east wall at a height of over four metres from the ground there is another cross fleury also carved in intaglio into a quoin-block. (See Pl. I c).

The only other carving or inscription on the whole building, is a carpenter's mark cut into the south face of the principal rafter supporting the western slope of the roof. This mark is in the form of an italicised 'N' with two square dots, each dot being enclosed between an upright and the cross stroke.

Discoveries within the building

When measuring the iron door I chanced to look up and noticed a piece of red thread in a crack between the soffit boards over the door. After some careful work with a thin piece of wood, I was able to remove a small folded paper six-pointed star. The star consists of two '45°, 45°, 90°' triangles, bound together with red thread to form a good luck charm.⁵

5. I have examined the object in my laboratory and some of my findings are given below:

I first made a drawing of the object and then cut the thread and unwrapped the paper. The paper has been extensively damaged by 'silver fish' insects (genus *LEPISMA* order *THYSANURA*). The two folded triangular pieces of paper, when unwrapped, proved to be two strips 22.4 cm. long by 4.7 cm. wide. The paper is a fairly good quality machine made white writing paper. The paper has apparently no filler or loading (Cold HNO_3 produces no effervescence which indicates that no chalk filler is present. A sodium alizarin sulfonate test for aluminium also gave negative results thus ruling out a kaolin or kaolinite filler). Examination with transmitted light revealed a diagonal lattice pattern but no water-marks were visible.

Examination under ultra violet light revealed the presence of a small number of fibres which exhibited a far greater degree of fluorescence than the rest of the paper. These proved on examination to be cotton. The general level of fluorescence of the paper fibres is identical to that of standard 'white band' laboratory 'S-S' filter paper. Prompted by this observation I made a microscopic comparison of the fibres from the sample with those from some German filter paper. With the exception of the above mentioned cotton fibres, the two were identical. (According to the standard German Chemical Lexicon these S-S Brand, white band, filter papers are made from 'cellulosenfasern'- cellulose fibres-). The two strips each have a red crayon inscription on them in arabic script. The inscription appears to consist of a series of individual letters without any apparent sense.

The thread was examined under a microscope and consists of two yarns of red dyed cotton. The thread is spun with a S-twist, the yarns being Z-twist.

This type of charm or talisman would appear to be related to the Turkish 'muska' which can frequently be seen pinned to the clothes of small children in Turkey.

The fact that the charm has been placed over the door may indicate that it represents an attempt to apply the 'evil eye,' rather than to avert it as the 'muska' is supposed to do.

Such attempts to bewitch or charm people by concealing charms over or under the threshold of their house are well known in primitive societies in Europe.

Actually dating the paper is a task beyond my resources. However I would say that going by the appearance of the paper alone, the charm is unlikely to be more than about fifty years old.

A further point of considerable interest is that the 'six pointed star' may also be seen in the Samanid art of the tenth century A.D. in Iran. A fine series of examples exist on a plaster panel excavated at Nishapur, Khorasan, Iran. Ernst Grube states that fragments of wall paintings from Nishapur... "are largely ornamental and also possess unusual quasi-magical qualities of an apotropaic (evil averting) nature, it would appear..." (Vide. *The World of Islam* Paul Hamlyn. London. 1966. The above panel, which is now in the Metropolitan

A second discovery was made during the process of measuring the fireplace. Whilst a search was being made for signs of hooks and other traces of cooking apparatus in the lower part of the chimney, a recess was discovered at about the level of the mantelshef, in the left hand wall of the chimney. Further investigation of the recess proved that it leads to the neck of a small

Museum of Art. New York., is illustrated in this work Fig. 22. Page. 45.) If the Samanids were generally interested in apotropaic symbolism in art, the 'six pointed star' may have been used for this purpose and it is highly probable that the later Seljuks borrowed some of the Samanid symbols complete with their meanings.

Ernst Kühnel has stated that—"both the prelude and the post-lude of the Seljuk epoch are to be sought in Muslim India. In the empire set up by Mahmud of Ghazna (997-1028 A.D.) at the turn of the millenium in what was previously Bactria, and which he extended towards Persia and Hindustan, art was already leaning towards a style which signified the transition from the post Sasanian tradition to the trend adopted by the Seljuks. The Ghaznavids were Turks, but it was rather the Persian civilization that they cultivated"... "The period of Mahmud of Ghazna is important for its influence on Seljuk style"... (Vide: *Islamic Art and Architecture* translated edition. London, G. Bell & Sons Ltd. 1966., pp. 95-98). The doors from the tomb of Mahmud of Ghazna still exist at Agra and in the context of the present study it is extremely interesting to note that these doors are decorated with large six pointed stars. (For illustration, vide: Strzygowski, Josef. *Asiens Bildende Kunst* Augsburg, 1930, Fig. 461). Thus we find the six pointed star in a context which is not only Turkish but which is described by a leading authority as having a significant influence on the Seljuks.

Strzygowski (*op. cit.*) also illustrates two further items decorated with six pointed stars. A large bronze plate from Cairo (Fig. 460) and a silver bowl (Fig. 276) which was purchased in the bazar in Smyrna (Izmir). The latter was exhibited in the Kaiser Friedrich Museum in Berlin and since it comes from Izmir we might take a closer look at it. (I have no idea whether the bowl still exists and I here refer only to Strzygowski's illustration). The central motif is a six pointed star with a Greek letter enclosed in each of the six outer triangles. The central hexagon contains a flower with two concentric rows of petals. Each row contains ten petals. The letters do not appear to begin or end at any particular point but they may form an acrostic. The letters are as follows (running clockwise): C: sigma (probably) a or : 'alpha' or 'gamma' (if read the same way up as the other letters it is a 'gamma') K: 'kappa'. Y: 'ypsilon'. Y: 'ou' or 'omega'. C: 'sigma' (probably).

The stars of the Yeni Foça lintol and 'muska' may represent the last stage in this long chain of descent in primitive 'quasi magical' practices. The Christian Greeks and presumably a later Moslem Turk (on the evidence of the Arabic letters on the 'muska') are here the somewhat unlikely fellow users of a very ancient device. The Jewish use of the same device, the Star of David, is also apparently related to apotropaic practices. The Jews believe that the Star of David was the device upon David's shield. Thus what may have started as an identifying mark or tribal or family totem, easily evolves into a protective symbol because of its use on shields. In the text I have noted that the six pointed star is known to the Moslems as the 'muhr-i Sulaiman.' The Dervishes with their considerable interest in numerology and symbolism, occasionally used the six pointed star both decoratively and as a symbolic device.

earthenware jug or jar buried in the wall. (See Pl. V a). The recess was clearly once blocked with a small stone which was plastered over.

On examination, the jar proved to contain only a small quantity of soot and gravel.

According to conversations with the local inhabitants, such jars are known to have been used as safe hiding places for valuables in the event of local troubles.

Conclusion

In my introduction to this paper I suggested that the tower house may give us some strong hints as to the nature of its ancestry.

Certain aspects of Byzantine domestic architecture are as yet not fully studied or understood. Krautheimer⁶ informs us of the lack of material on Byzantine domestic architecture in Asia Minor. In attempting to 'reconstruct' these buildings, much use is made of parallel material gathered elsewhere. In this process fourth and sixth century rural houses and farms are reckoned to be similar to the surviving examples in Syria.⁷ Similarly tenth and twelfth century material is sparse and much of the evidence that we have comes from a few excavations of cities in Greece and from the related field of monastic architecture.

I would suggest that the medieval Byzantine building traditions survived to a surprisingly large extent right into the second half of the nineteenth century. The couple-close 'truss' used at Yeni Foça may tell us of at least one type of timber roof used by the Byzantines in their medieval domestic architecture.

The decorations at Yeni Foça may certainly be paralleled by known examples. I should like to draw the reader's attention to an example of the use of the couple-close 'truss' in conjunction with the decorative 'cloisonné' tile or brick work—including the use of the 'spoked roundel' motif—at Kastoria in northern Greece in the Church of the Anargyroi. This church is apparently dated by its use of cufic motifs, to the first half of the eleventh century.⁸

Archaeologia. Vol. 28, 1928, contains an interesting paper by George Jeffery who was then Curator of Ancient Monuments in the Island of Cyprus. In the

6. Krautheimer, Richard, *Early Christian and Byzantine Architecture*, Penguin Books. 1965. p. 248. et seq.

7. Tchalenko, G. *Les villages de la Syrie du Nord*, Paris, 1953-58.

8. Krautheimer. *op. cit.* p. 270. and Plate. 134a.

paper which is entitled "Notes on the Origin of the Doric Style of Architecture", Jeffery draws attention to the possibility that certain features of timber roof constructions still visible in small Greek orthodox churches and houses in Cyprus, might give us clues to the nature of the timber roofs of Doric Temples such as that of the Temple of Concord at Agrigentum. The roofs to which Jeffery was drawing attention are sometimes carried on couple-close 'trusses' and are sometimes pure 'couple' roofs in which the principal rafters are stood against one another whilst the thrust from their feet is taken by a number of wall plates—in nearly all cases four wall plates are used and these are sometimes interconnected by short wall plate ties which lie between two pairs of plates and run transversely across the wall.⁹ The wall plates on one side of the building are tied at intervals to the plates on the opposite side by means of a substantial tie beam. This use of tie beams prevents the loaded wall plates from being thrust outwards by the forces from the principal rafters.

A further feature of some of the houses of central Cyprus are the vents built into the tops of their walls just below eaves level. Similar vents may be seen in ancient ceramic house or temple models from Perachora and from the Heraeum at Argos.

In both the ancient Greek and the Cypriot examples, the vents seemed to be formed from three slabs of stone, terracotta, or mud brick, arranged to form a triangular 'tube.' The ancient models are in the form of megara and I believe that there is still some doubt as to whether they represent houses or small temples. Function apart, it is fascinating to speculate whether these features represent a 2500 year continuity in the use of building construction features.

In the extreme south west of Turkey, I have seen a slightly different type of tower house. Some of the best examples of this south western type can be seen at Ortakent near Bodrum in the Vilayet of Muğla. These tower houses have flat earth roofs and have finials or acroteria surmounting each corner of the roof. The finials strongly resemble Minoan 'horns of consecration' in form (they sometimes occur with a single 'horn', sometimes with a pair like the Minoan examples, and more rarely with two pairs merged at the corner to give three 'horns'). These houses have a single door on the ground floor, and two windows in each wall of the first floor 'living room'. The chimney is usually an attached cantilevered shaft positioned between the windows of

9. This grouping and tying of wall plates is exactly matched in the construction of the round windmill towers at Yeni Foça.

one of the first floor walls. I have not had an opportunity to examine these houses closely and I am therefore not sure whether any provisions have been made for fortifying them. I shall avoid the temptation of concluding that a Minoan house type has survived for three millenia in this region. (The little Minoan house facade models found at Knossos do bear an uncomfortably close resemblance to the tower houses with their symetrically placed pairs of windows in two and three storey facades). I must however draw attention to the recent connections between this area and Crete. Bodrum still has a 'Cretan district' or 'Girit Mahallesi' so called because of the large number of Turks from Crete who moved there in the nineteenth and twentieth century resettlement movements. I shall leave to my prehistorian colleagues, the task of establishing whether the well known Achaean settlement of this region has led to any survivals of second millenium B.C. architectural styles. Let it suffice to say that there are many indications that the history of the tower house and its construction appear to go further into the past than the Byzantine period.

Postscript

As a result of recent conversations with colleagues I can now add two further points which are relevant to this study.

In Yugoslavian Macedonia fortified tower houses exist which are of similar design to the Yeni Foça example. The Serbo-Croat name for a tower house is 'prg'. This word is obviously derived from the ancient Greek—*πύργος*: a tower (especially a fortified tower). It thus seems likely that these tower houses were a Byzantine feature and that the Byzantines inherited the tower houses as well as their name from the ancient Greeks.

The ancient Greeks certainly had isolated square towers which served a number of purposes. They were used as lighthouses, beacon or signal towers, fortified residences, watchtowers, and refuges in case of pirate attack. When these towers were near the sea, the presence of a pirate vessel or other suspicious vessel off the coast could be rapidly signalled and the coastal population could be warned to make themselves and their belongings secure. Some discussion on this point may be found in Henry A. Ormerod's *Piracy in the Ancient World*, Hodder and Stoughton Ltd., London 1924 pp. 1-45 et seq.



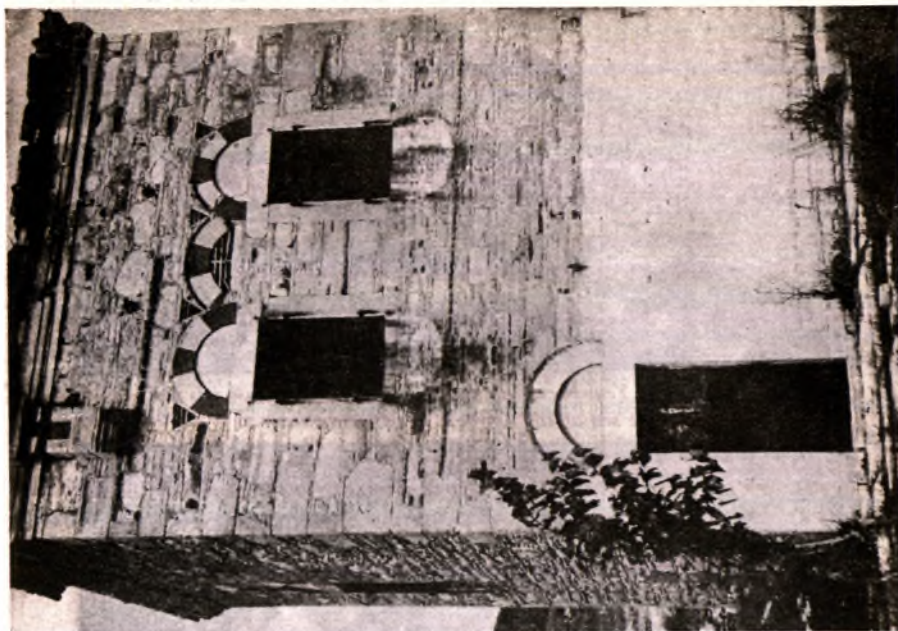
a. The town of Yeni Foça from the south. The tower house lies close to the sea at the extreme left of the picture.



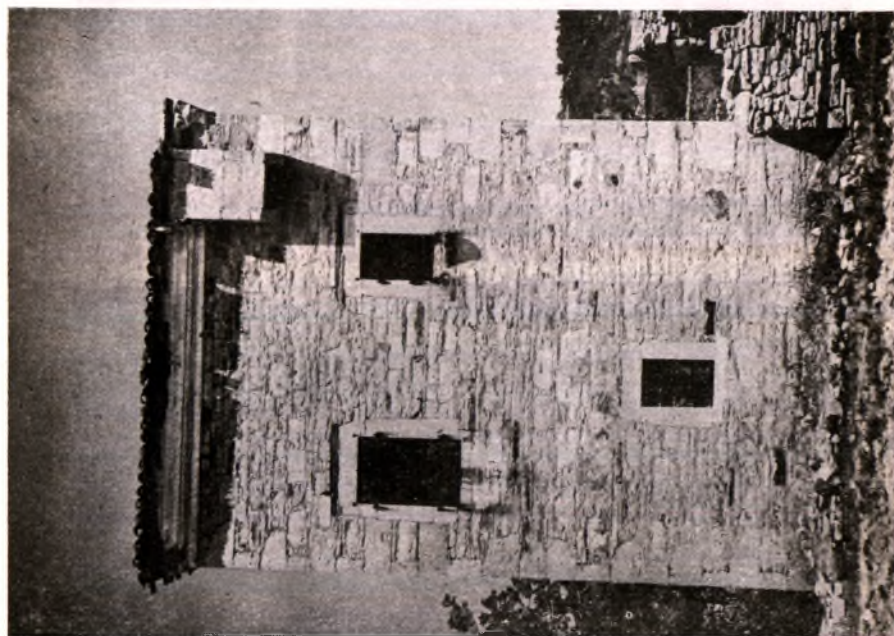
b. Lintel and arch over the door.



c. Cross carved in quoin block at southern edge of east wall.



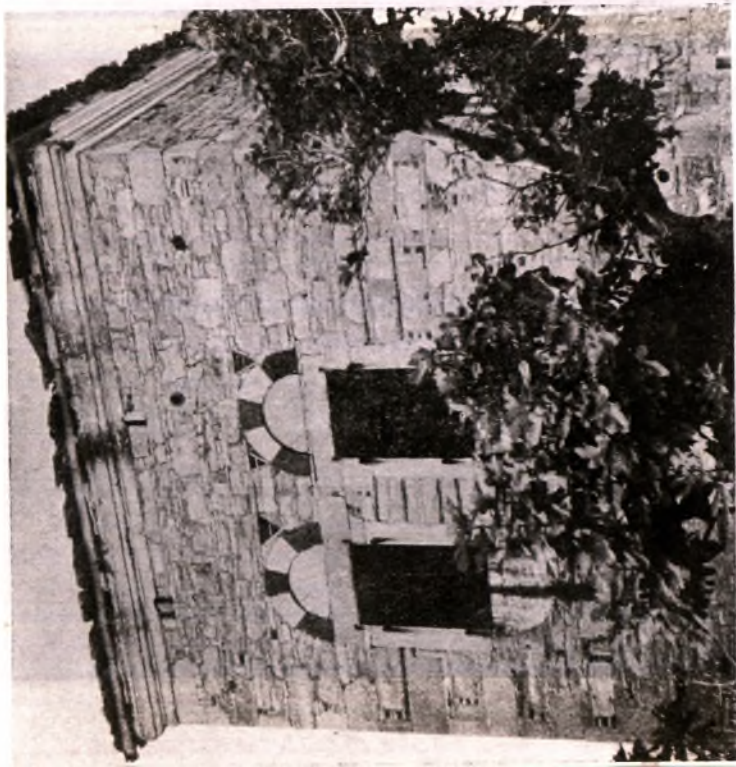
b. East elevation



a. West elevation

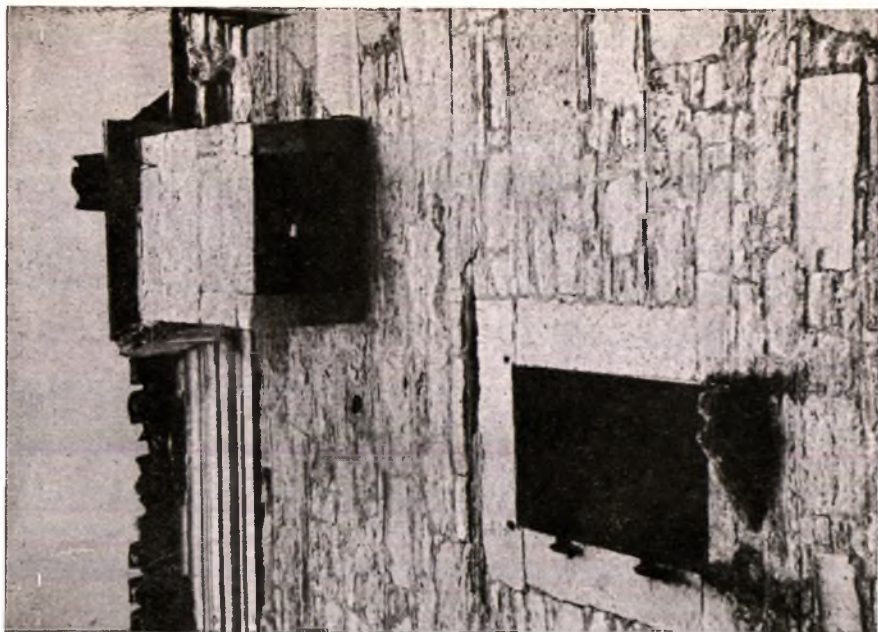


b. South elevation



a. North elevation

Plate IV



b. West elevation: looking up at the underside of the latrine and the water spout which drains the sink.



a. Latrine in loft after cleaning



a. Interior of the first floor room looking towards the head of the staircase. The entrance to the loft may be seen in the upper left hand corner of the picture. The leading to the pot hidden in the chimney is just out of view above the arch over the fireplace.



b. The sink in the window embrasure.

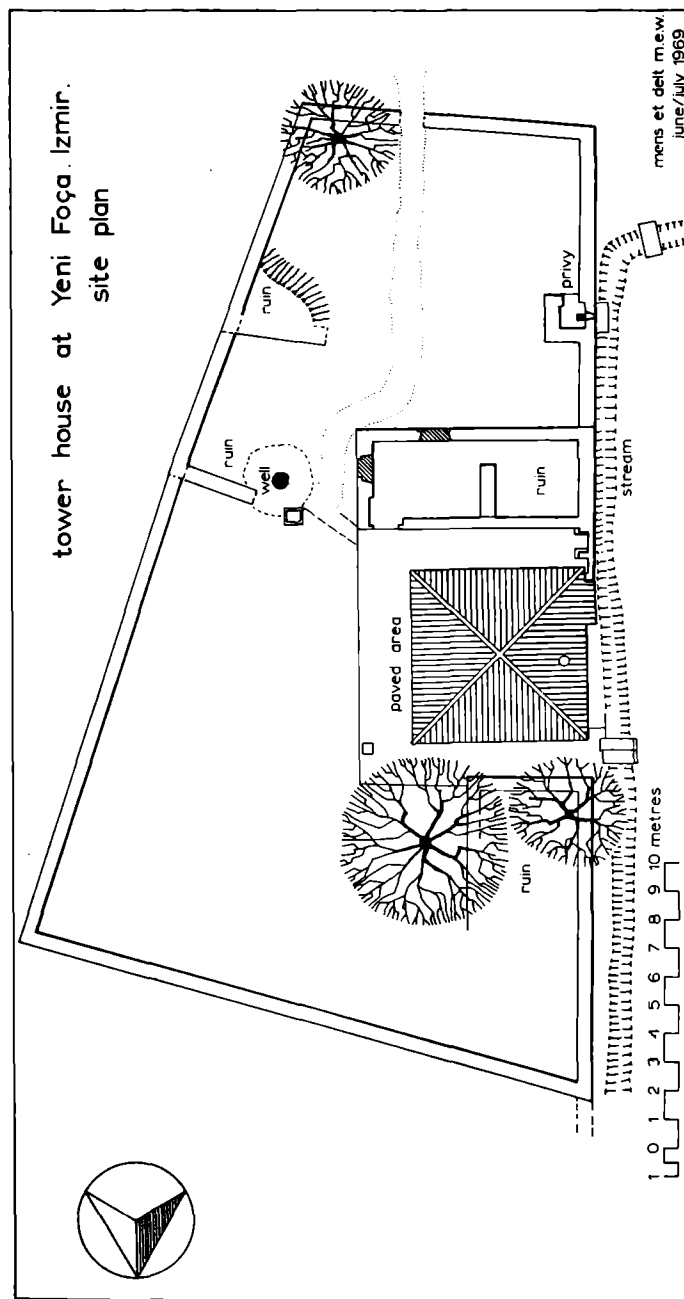
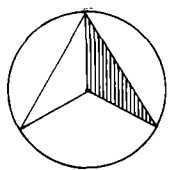


Fig. 1 Site plan.



tower house at Yeni Foça. İzmir.
ground floor plan.

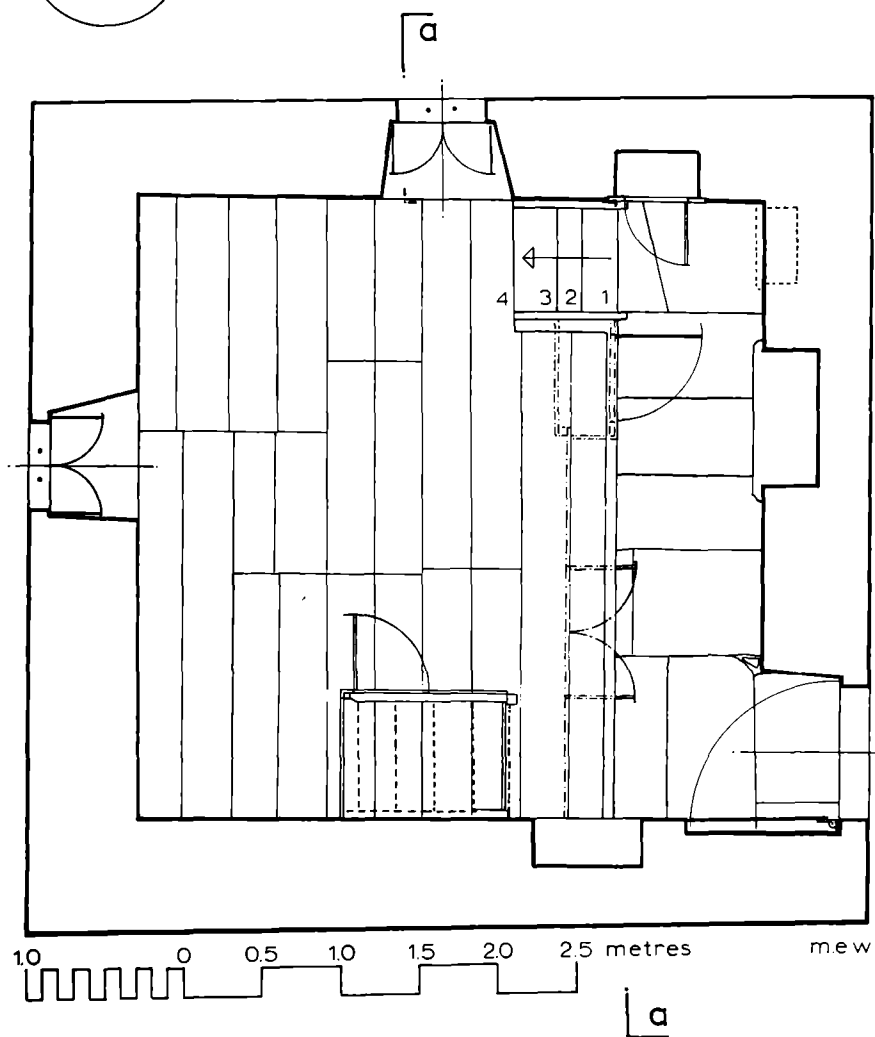


Fig. 2 Ground floor plan.



tower house at Yeni Foça, Izmir.
first floor plan.

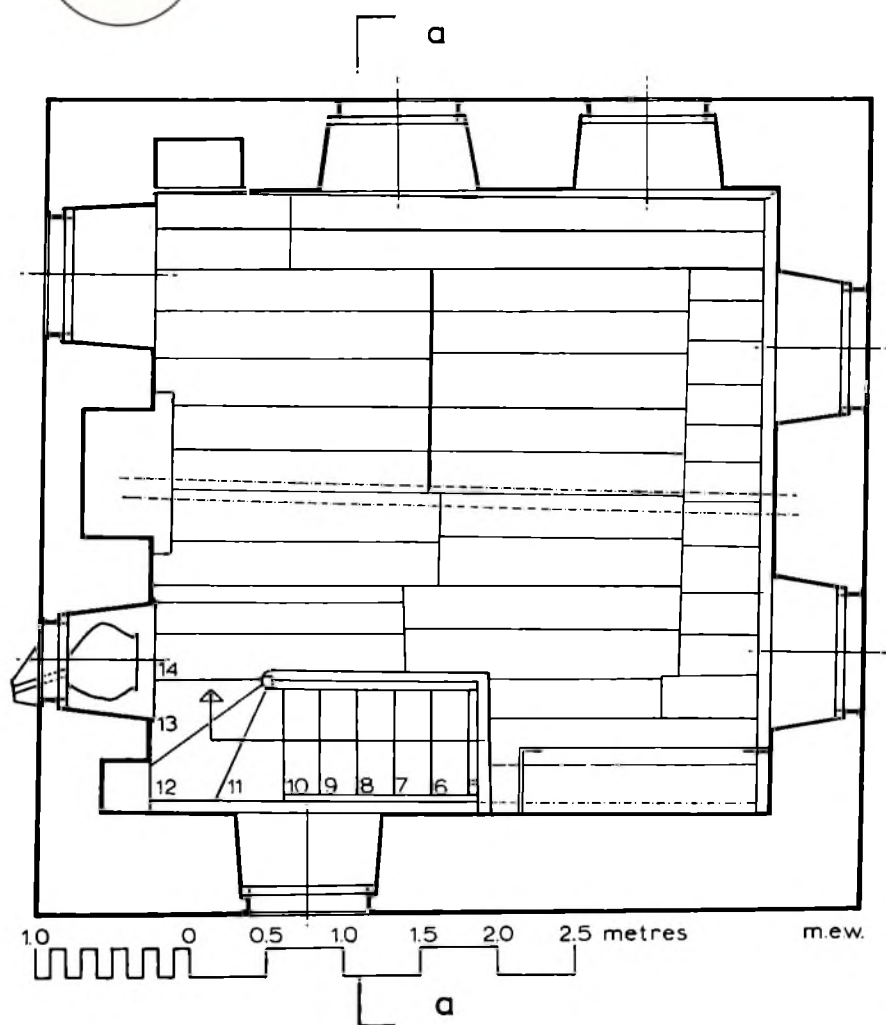


Fig. 3 First floor plan.



tower house at Yeni Foça. Izmir.
loft plan

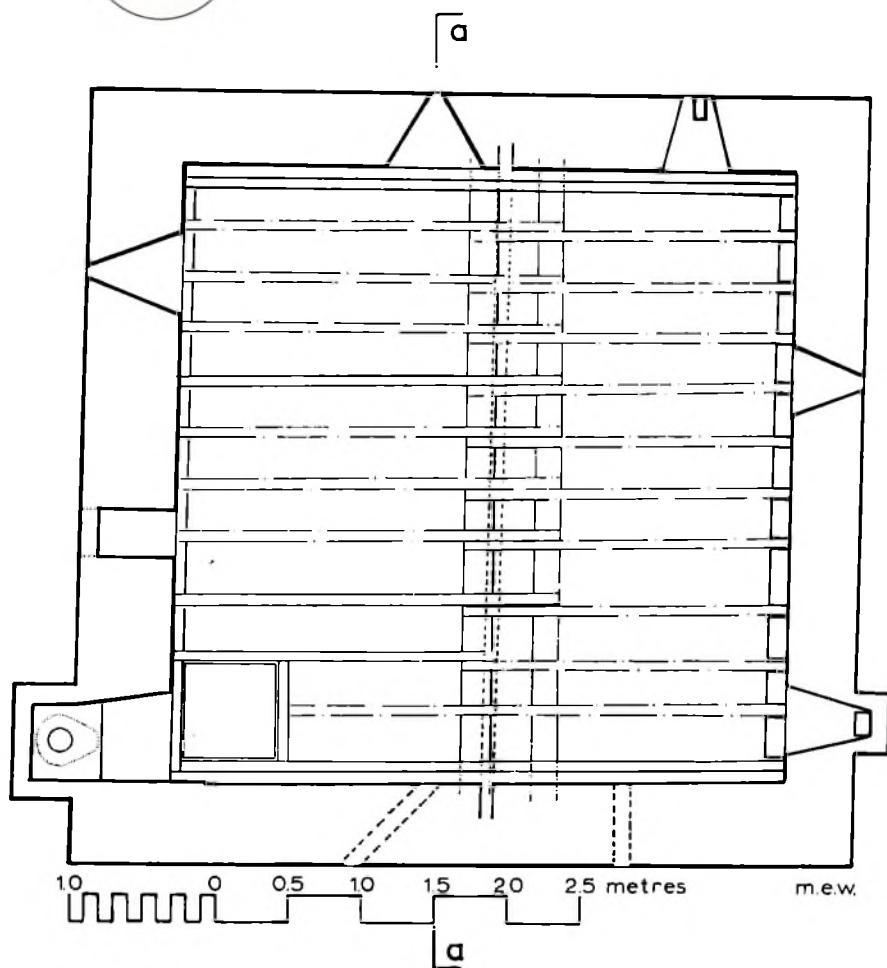
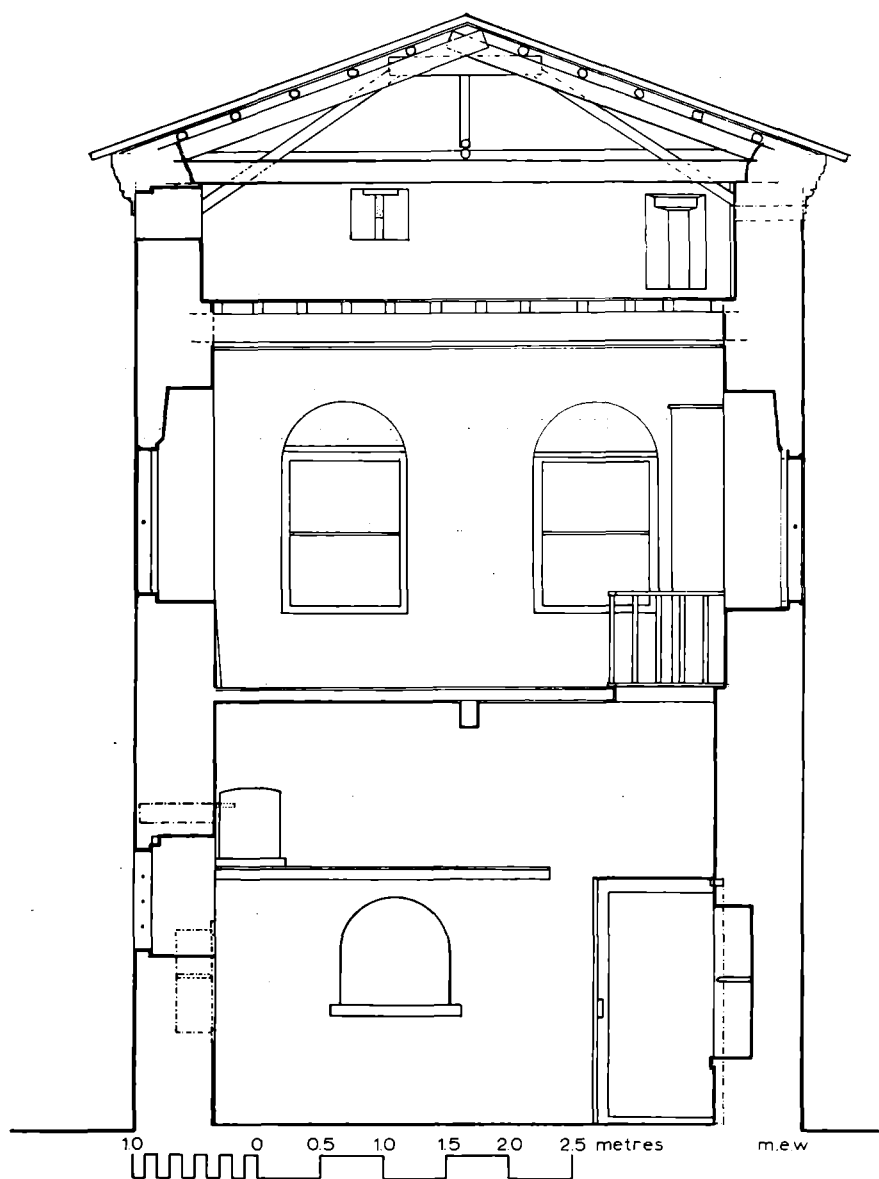


Fig. 4 Loft plan.



tower house at Yeni Foça, Izmir, section looking east. a-a

Fig. 5 Section looking east.

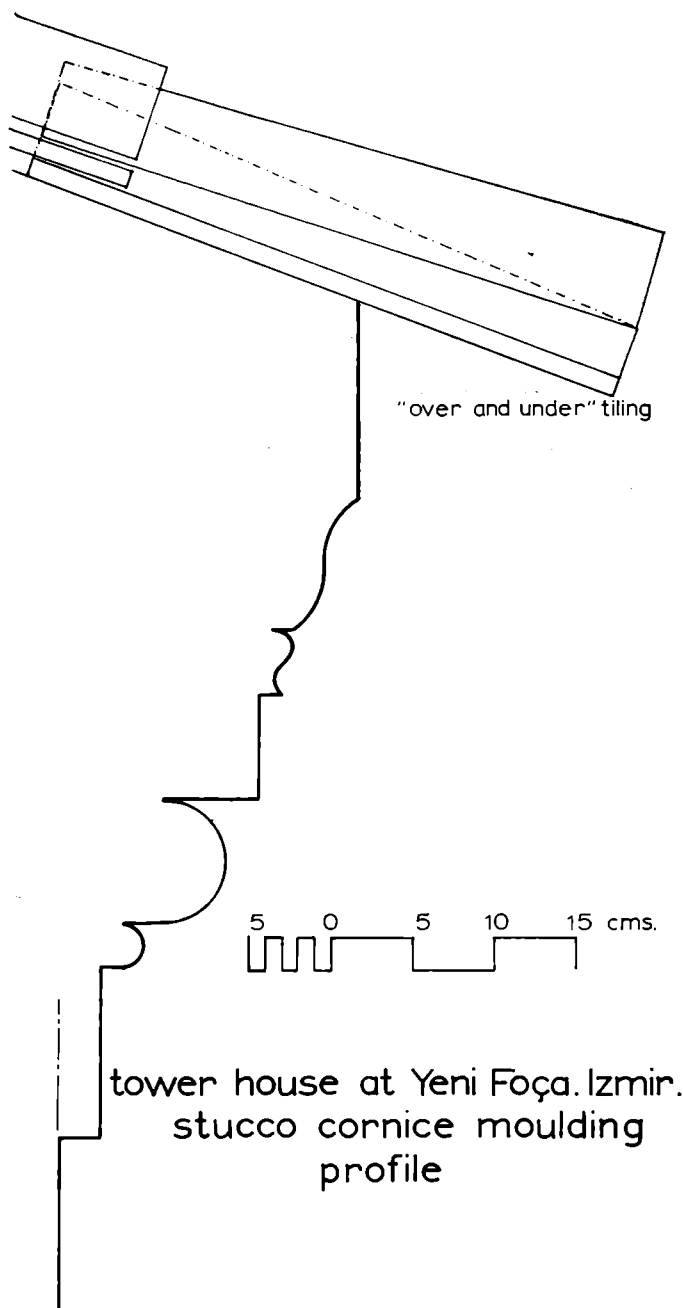


Fig. 6. Stucco cornice moulding profile.

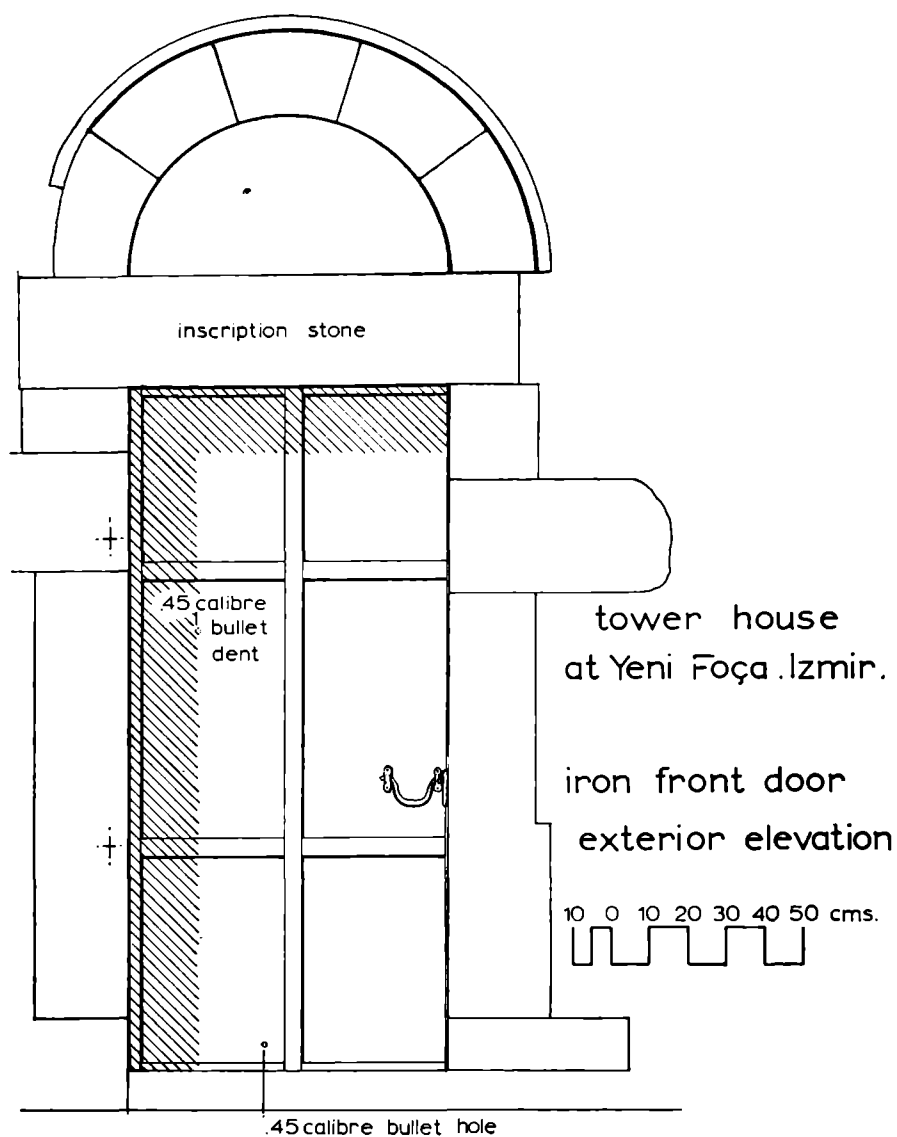


Fig. 7 Iron front door. Exterior.

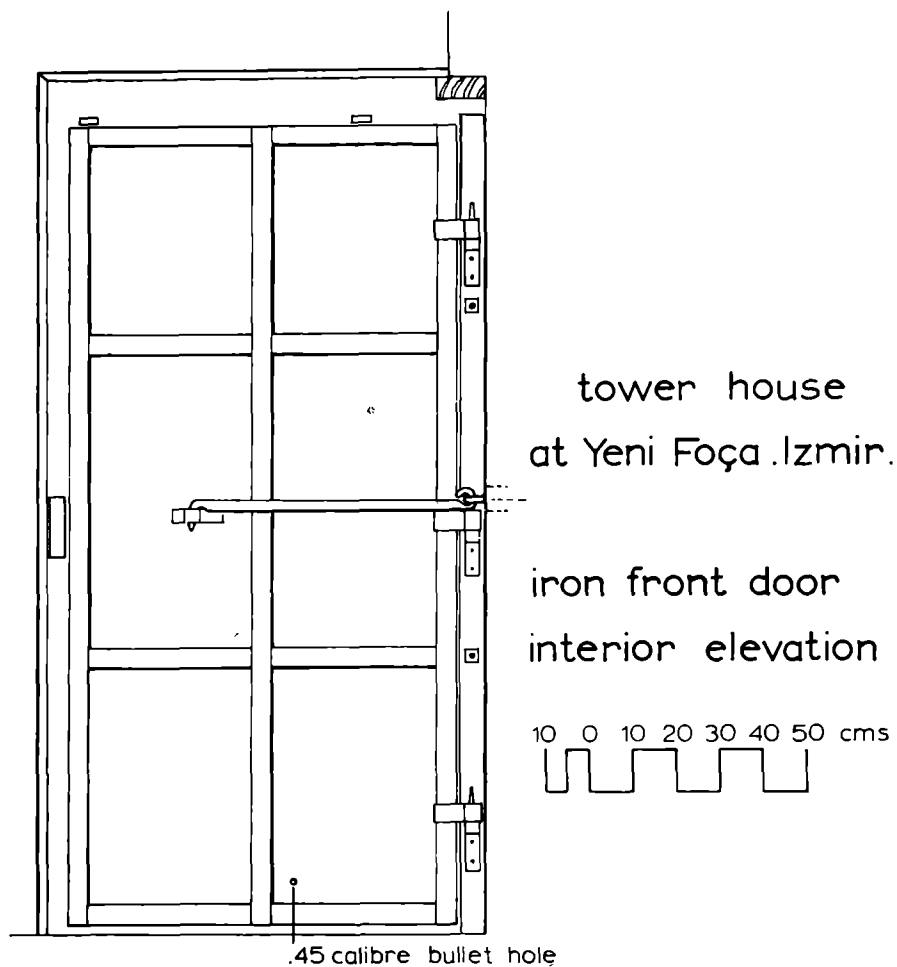


Fig. 8 Iron front door. Interior.