## THE SOUTH AFRICAN ARCHITECTURAL RECORD

THE JOURNAL OF THE ASSOCIATION OF TRANSVAAL ARCHITECTS, THE NATAL INSTITUTE OF ARCHITECTS AND THE SOUTH AFRICAN INSTITUTE OF QUANTITY SURVEYORS

Vol. X1. No. 44.

DECEMBER, 1926

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THE BUILDING OF A FAIRY CITY. THE TRIUMPHAL ARCH. W. M. Timlin.

The work of W. M Timlin is well known to all readers of this Record. His wonderful draughtsmanship and imagination have given him a world wide reputation. His architectural work has been illustrated in the past and these illustrations show his capacity as an artist.

# THE SOUTH AFRICAN ARCHITECTURAL RECORD

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# THE ARCHITECT, PAST, PRESENT AND FUTURE. Part I.

## G. E. PEARSE.

The following paper was read before the Architectural Students' Society, University of the Witwatersrand.

Architecture has been a slow but steady process of evolution, ideas being handed on from age to age and buildings erected to suit the social, political and religious requirements of each period. Materials and climate have played a great part in the design of these buildings in each country. Few names of the designers of these structures are known to us prior to the 14th century. In many cases the authorship has been claimed by the rulers for whom they were built, which reminds one of the words of a well known architectural student's song :

"Ours is a curious profession, Begun when the world was first made For who built the Ark and the Tower Of Babel save one of our trade. We read of no public ovation,

We don't know his title or name,

He probably died of starvation

And to-day its exactly the same."

Little or nothing is known of prehistoric work although some degree of skill may have been required to erect the cromlechs and dolmens, but they hardly come under the category of Architecture.

#### EGYPT.

Recent excavations have thrown a good deal of light on the conditions under which the monuments of Egypt were built and several names have been mentioned in connection with their design, but the personality of the Architect is by no means clear.

The tombs and pyramids show evidence of great skill in building, but the Kings, for whom they were built, have taken the credit for their design. Occasionally references are made to officials who are termed the Chief Architect or Chief of all works of the King, during the old Kingdom, and one in particular, Imhotep, about B.C. 2980, had a temple erected in his honour. He is referred to again centuries later when the priests who conducted the rebuilding of the temple at Edfou, under the Ptolemies, claimed to be reproducing the structure formerly erected there from the plans of Imhotep.

In 1557 B.C., Thutmose I. set to work to restore the temples of his predecessors at Thebes. His chief architect is instructed to erect gateways, obelisks and a hall with cedar roof supported on cedar wood columns, the timber being brought from Lebanon. This architect, Ineni, records his deeds and after assuring us that he was "a really first class engineer and immensely popular" continues. "I became great beyond words: I will tell you about it, ye people: listen and do the good that I did—just like me. I continued powerful and met with no misfortune: my years were spent in gladness. I was neither traitor nor sneak, and I did no wrong whatever. I was foreman of the foremen and did not fail."

In the reign of Queen Hatsheput, 1500-1477 B.C. we find an architect Senmut was employed to erect obelisks and carry on with the building of the magnificent terrace temple against the western cliffs at Thebes. He was permitted to depict himself in the relief carvings, praying to the Goddess Hathor. He describes himself as the greatest of the great in the whole land, one to whom the affairs of Egypt were reported and states: "There was nothing which I did not know concerning what had happened since the beginning."

Thutmose III. B.C. 1447, employed one Menkheperre-Seneb to restore the temples at Karnak, replacing the cedar columns with sandstone and erecting great obelisks, one of which stands in Constantinople to-day.

In the reign of Amenhotep, B.C. 1411-1375, records show that he employed many architects, one in particular being referred to having the same name as the king, and building a new form of temple which later architects considered to be the prototype of the Greek peripteral temple. His son Amenhotep IV. or Ikhnaton, B.C. 1375-1358, employed an architect Bek to build a new city Akhetaton, known to-day as Tel el Amarna. In Seti I. reign, 1313-1292 B.C., we have records of an Architect Beknekhonsu, who gives us an outline of his professional career as follows: "I passed four years as an infant. I passed twelve years as a youth, being chief of the training stable of the king, I acted as priest of Ammon for four years. I acted as Divine Father for 12 years. I acted as second prophet of Ammon for 15 years. I acted as second prophet of Ammon for 12 years. In this period many of the great temples at Thebes and Luxor were erected by Seti and the Rameses, but no records of the Architects appear to exist. It is clear from these few records that the Egyptian architect was closely connected both with the temple and the court.

Education was entirely in the hands of the priesthood and Egyptian architecture from the Pyramids onwards is based on a profound knowledge of geometry. In the Turin Museum is a plan drawn on papyrus which makes one suppose that architects drew such plans and used them as we do nowadays.

#### BABYLONIA.

Some considerable degree of skill must have been required in the great buildings of this country, but only the names of the Kings, who erected them, have come down to us. It is interesting, however, to mention that the famous code of laws of King Hammurabi, 3500 B.C., lays down that "If a builder has built a house for a man and his work is not strong and if the house he has built falls in and kills the householder, that builder shall be slain," etc. It is quite evident therefore that the skilled architect or craftsman was protected from the jerry builder in those days.

#### PALESTINE.

Of the Temple at Jerusalem, little is known, but various conjectural restorations have been made and, from the description, the Temple appears to have been a combination of Egyptian and Babylonian structures. In Kings I., Chapter 7, 13., we read of King Solomon engaging Hiram of Tyre, a cunning worker in brass, and employing him to make the great pillars at the entrance to the Temple.

Milizia and other writers have seen in the craftsmen employed by Moses to build the Tabernacle the counterpart of the modern architect :--Exodus XXXV. (30-35).

(30-35). "The Lord hath called by name Bezalel—and he hath filled him with the spirit of God, in wisdom, in understanding and in knowledge and in all manner of workmanship and to devise cunning works, and in cutting of stones for setting, and in carving of wood, to work in all manner of cunning workmanship.

"And he hath put in his heart that he may teach, both he and Oholiab."

#### GREECE.

We know nothing of the status or functions of the architect in the legendary history of Crete.

In early Greek writings, however, there are indications of the architect's existence. Six times at least in the Iliad and twice in the Odyssey, Homer mentions the craftsmen from whom the architect or master craftsman derived his name in later years (I, a craftsman, rule)  $\alpha \phi \phi \tau \epsilon \kappa \tau \phi \nu$ . Among those mentioned are Daedalus, who is credited with the invention of the saw and other tools and Euryalus, who is said to have introduced the making of bricks and the construction of dwelling houses into Greece for the first time.

These two were claimed as architects by later Greek writers.

It appears that the  $\tau \epsilon \kappa \tau o \nu \epsilon \delta$  were not masons, but rather workers in wood or metal (i.e., carpenters and smiths) on buildings and on ships, and that the architect was a master carpenter or a master smith rather than a master mason.

From Vitruvius, Strabo, Pausanius and other historians, we have a number of names of architects who flourished between the legendary periods and Periclean period. Thus Hermogenes getting into trouble with the triglyphs of the Doric order, when the temple was well under way, changed his mind and adopted the Ionic, though the stone was already cut and waiting on the site. Callimachus, who became famous for his legendary discovery of the Corinthian Capital from a basket set on an acanthus plant. Ctesiphon and Metagenes were responsible for the Temple of Diana at Ephesus, where they used many mechanical devices to surmount constructional difficulties.

Curion designed the first Parthenon and the Temple of Theseus, Athens.

We know nothing of their training, remuneration and methods of work.

Of the architects of the Periclean age we again know little or nothing. The work at Athens was under the control of Phidias, a sculptor, and it was probably to him that the architects Ictinus, Callicrates and Mnesicles looked for guidance.

The professional status of the architect (now definitely labelled as  $a\phi_{\mu\nu\tau\kappa\tau\omega\nu}$  chief craftsman, was generally recognised, although he was not always accorded full credit for his work.

Pausanias states that in most Greek towns the authorship was ascribed to the gods, to mythical heroes or to local worthies.

Valerius Maximus writes that Athens was rightly proud of its Arsenal, an admirable work and that Philo its architect gave so eloquent a description of its merits that the most enlightened community in the world applauded him no less for his oratory than for his talent as an architect.

Philo built the portico of the Hall of Mysteries Eleusis.

The nature of an architect's duties at that time appear to have been vague. Thus Scopas combined the functions of sculptor and architect, while Philo carried out what to-day we call civil engineering. Callimachus was described as a contractor. Hippodamus, of Miletus, laid out the City of Rhodes, hence we may number the functions of a town planner among the attributes of an architect in the days of Pericles. The architect was also called upon to design theatrical properties and scenery or the paraphernalia for public festivals.

It is fairly well established, however, that he was almost always a well known and well educated professional man occupying a recognised position in society and he had to possess considerable business acumen for Vitruvius states that at Ephesus there was a law under which if an architect's "extras" exceeded the contract amount by more than 25 per cent he was held liable to them personally.

It is also evident from the high standard of design in buildings in overseas colonies that architects accompanied civil and religious leaders. Vitruvius gives a long list of Greek architectural writers proving that in those days literature and art went hand in hand.

Documents of the 4th century state that an architect's pay was approximately 10 times that of a workman. It is certain from the refinements in the Greek temples that such results could only have been achieved after long and patient study. For the last chapter of the story of the Greek architect we look to Egypt, where we hear of Dinocrates, a skilful and ingenious architect of Macedonia employed by Alexander to lay out his wonderful new city. The means by which he attracted royal notice are worthy of the attention of every aspiring professional man. The usual letters of recommendation having proved futile, he had recourse to his own efforts. He was of very lofty stature and pleasing countenance, finely formed and extremely dignified. Trusting, therefore, to these natural gifts he undressed himself in his inn. anointed his body with oil, set a chaplet of poplar leaves on his head, draped his left shoulder with a lion's skin and holding a club in his right hand stalked forth to a place in front of the tribunal where the King was administering justice.

To cut the story short, as soon as the King noticed him and asked his identity, Dinocrates put forward a scheme for shaping Mount Athos into the statue of a man in whose left hand is represented a very spacious fortified city, and in his right a bowl to receive the water of all the streams which are in that mountain so that it may pour from the bowl into the sea.

Substitute horn spectacles and side whiskers, says Briggs, for Dinocrates disguise and you have *mutatis mutandis*—a very accurate portrait of the pushful architect of to-day.

But Dinocrates was a man of real ability and the plan that he drew for the new city, still commemorated by some of the streets of Alexandria of to-day, was perhaps the greatest achievement of ancient town planning.

Sostratos designed one of the seven wonders of the ancient world, the Pharos, at Alexandria. We know that he was an architect from Cnidus and had some reputation there. When the huge monument was completed it bore on a panel a complimentary inscription in honour of Ptolemy, but after a few years of Mediterranean gales had done their work, the cement surface of the panel peeled away, revealing in bold letters carved in the stone and filled with lead the words: Sostratos of Cnidus, son of Dexiphanes, to the Gods, the saviours, for the benefit of mariners. Surely, says Briggs, there is a professional grievance behind this story.

#### ROME.

Thanks to our possession of Vitruvius' famous treatise we know a little more of the Roman architect than of the Greek. Vitruvius is generally supposed to have lived in the brilliant age of Augustus and to have been able to devote his time to literary work owing to being in receipt of a pension.

His work is divided into 10 books, dealing with the education of the architect, sites, building materials, planning, decoration, water supply, astronomy and its application and various mechanical appliances. He acknowledges in a preface his indebtedness to the numerous architects whose writings he has consulted.

He does not, however, give us any information on how this knowledge was acquired. Lampridius, in his "Life of Alexander Severus" (A.D. 222-235), states that the Emperor established professors of architecture to whose classes poor people could send their children in return for payment in kind.

It is known that building by-laws existed both in Rome and elsewhere.

The scope of an architects' duties appears to have been wide from town planning to the designing of the trappings of triumphal progresses. Both Cicero and Vitruvius agree that architecture is one of the learned professions for which men of good birth and good education are best suited. We know of at least one architect who was a consul, another a senator.

The names of rather more than a score of Roman architects prior to Constantine's day have been preserved, but we are told little more than their names and the titles of their principal buildings, little of their personalities or methods of work. On the whole Rome seems to have honoured her architects, but occasionally they were forbidden to "sign" their buildings, and Pliny, the Elder recites a case of Saurus and Batracus, who retaliated by carving a lizard and frog on a temple they had built.

Perhaps, says Briggs, some modern architects possess a name that can be readily translated into an appropriate emblem.

Professional etiquette too was not unknown, for Vitruvius says, "other architects go about and ask for opportunities to practice their profession, but I have been taught by my instructors that it is the proper thing to undertake a charge only after being asked and not to ask for it, since a gentleman will blush with shame at petitioning for a thing that arouses suspicion."

The forum of Trajan, with its Basilica and Temple was built by Apollodorus of Damascus, who designed many buildings for Trajan and Hadrian. We read in Spartian that "after enjoying an extensive and varied practice under Trajan he was imprudent enough to offend Hadrian by criticising a temple which that versatile monarch had designed. The architect pointed out that if the seated deities were to stand up they would bump their heads against the roof. This tactless remark, unworthy, says Briggs of a professional man cost Apollodorus his head.

Zeno built the theatre of Aspendus, Asia Minor, A.D. 138-61. The great temple of Jupiter Olympius, Athens, was built by Cossutius, on the site of an earlier Doric temple founded by Pisistratus.

There is evidence that Roman architects drew plans of their buildings on parchment and also that models were frequently submitted.

The instruments they used are sometimes found illustrated on early bas reliefs and frescoes.

The foundation of Constantinople led to an important event in the history of the architectural profession for according to Gibbon: "The impatience of Constantine soon discovered that, in the decline of the arts, the skill as well as numbers of his architects bore a very unequal proportion to the greatness of his designs. The magistrates of the most distant provinces were therefore directed to institute schools, appoint professors and by the hopes of rewards and privileges to engage in the practice and study of architecture a sufficient number of ingenious youths who had received a liberal education. In a later edict the age of these youths is given as 22. Two further edicts refer to the training of architects and craftsmen."

The names of Constantine's architects have not come down to us.

Later we have references in Cassiodorus to a letter written by King Theodoric (A.D. 455-526), to Aloisius, his architect, referring to restorations and additions to the buildings at Ravenna. A portion of this is as follows: "Much do we delight in seeing the greatness of our kingdom imaged forth in the splendour of our palaces. Take then for this indiction the care of our palace, thus receiving the power of transmitting your fame to a remote posterity which shall admire your workmanship. See that your work harmonises well with the old. Study Euclid—get his diagrams well into your mind; study Archimedes and Metrobius.

When we are thinking of rebuilding a city or of founding a fort or a general's quarters, we shall rely on you to express your ideas on paper. The builder of walls, the carver of marbles, the caster of brass, the vaulter of arches, the plasterer, the worker in mosaic all come to you for orders and you are expected to have a wise answer for each. But then if you direct them rightly while theirs is the work yours is all the glory.

Above all things dispense honestly what we give you for the workmen's wages, for the labourer who is at ease about his victuals works all the better.

As a mark of your high dignity you bear a golden wand, and amidst the numerous throng of servants walk first before the royal footsteps that even by your nearness to our person it may be seen that you are the man to whom we have entrusted the care of our palaces."

Other architects of this later period were Cyriades, expert in architecture and mechanics who became a Consul, and was employed by Theodosius to build bridges, Entinopius, of Candia, who was concerned in the foundation of Venice, and the two famous architects of Asia Minor, Anthemius, of Tralles, and Isidorus, of Miletus, who designed and built for Justinian, 532 A.D., the great church of S. Sophia.

Our knowledge of their work is derived from a book of Procopius, De Aedificiis. Anthemius, we are informed, was an engineer and sculptor as well as an architect and wrote a book on machines and invented various methods of militating earthquakes, thunder and lightning.

The credit for the conception of the design of S. Sophia is generally given to him, who deserves to rank equally high with the architect of the Parthenon.

The praises of the interior of S. Sophia have been deservedly sung by many writers from Chaucer, who wrote: "So fair a church hath Venice none," to Fergusson, who says: "it is the most perfect and beautiful church which has yet been erected by any Christian people.

#### THE MIDDLE AGES.

The personality of the architect of the Middle Ages is somewhat obscure.

He is frequently described as a layman and the monkish scribes who acted as chroniclers preferred to commemorate the abbot or bishop who corresponded to the modern chairman of a building committee. Their concern was with the glorification of their Church or order more than with the perpetuation of a mere artist's name.

When an inscription states that an ecclesiastic built a church, it usually means that he ordered it and paid for it, though in some cases we know definitely that the architect was a bishop.

It appears, however, that whatever his training was there was an architect for every mediaeval building of importance, although the title of architect was seldom applied to him. The name occurs in its Latin form as early as the 12th century, when it is applied to the designer of the castle at Ivry; but its use is not general until Renaissance times when the personality of the architect becomes definite in all civilised countries.

During the Middle Ages the architect is described as ingeniator, aedificator, cementarius and lathomus in Latin; as capo maestro, in Italian; as masson or maistre, in old French; as master mason or simply master in English. There is abundant evidence that the master mason often attained a good social position and was paid much more than an ordinary mason. It is easy to surmise why, in the Middle Ages, the directing personage on a building was a mason and even why his training was so largely concerned with masonry, for a mediaeval building of any size consisted chiefly of masonry work. Plumbing slating, glazing and even carpentry were only accessory to the main structure. The architect had to master masonry above all the crafts, and it was by far the most difficult of them to understand, for every important structural problem involved in the building-the thrust of the vault, the counterpoise of the buttresses, the design of the tracery, etc-was a masonry problem. In an age, when there were no textbooks to speak of, knowledge of such intricate questions of mechanics and geometry could only be acquired from experience based on the experiments of others.

It has been said that another difference between ancient and modern practice lay in the fact that the master mason and the master carpenter each prepared plans for their respective parts of the work. It would seem more reasonable to suppose that the master mason (or architect), after making the main design for the building himself, assigned the detail drawings for the roof and other wooden features to the master carpenter.

But the functions of the master mason or architect varied in different countries and circumstances. It is noteworthy that all of the nine mediaeval architects mentioned by Vasari are also described as sculptors, two as architect, painter and sculptor, and one adding poetry to his repertoire.

Lorenzo Maitani (1275-1330), the capo maestro of Orvieto Cathedral, also designed the fortifications of Todi.

Louis IX. took an architect with him to Palestine to fortify Jaffa, and afterwards entrusted him with the building of a number of Churches in Paris.

From other records we read of many architects undertaking military engineering, a common practice with the Italian architects of the Renaissance. It

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may be remarked here that building in the Middle Ages was marred by many of the difficulties that beset us to-day. The craftsmen indeed worked very long hours and they may have had fewer causes for grumbling because their horizon was perforce narrow, but they worked to contract, being summoned to work by a church bell instead of a foreman's whistle or hooter, they were fined for being late, idlying, losing tools or obstructing other workmen.

Wyclif says of certain masons: "they conspire together that no man shall take less for a day than they fix, though they should by good conscience take much less, that none of them shall do good steady work which might interfere with other men of the craft, and that none of them shall do anything but cut stone, though he might profit his master twenty pounds by one day's work in laying a wall, without harm to himself."

Rules were made to regulate working conditions and apprenticeship lasted seven years.

Several plans of buildings have been preserved to this day.

These and detail drawings were prepared in the architects office known as the trasour or tracying house adjoining the building in progress. The architect also prepared estimates of the cost and a detailed specification on which the contract was based.

We have a record of a contract based on a preliminary design in 1450, in which the architect Maestro Giorgio Orsini covenanted to "make in the fashion shown on his drawing the statues carved life size, with the horse great and fine, and with the arms of the commune in the places drawn on the said paper." The plan of the church at Caudebec, is engraved on its architect's tombstone. Models were used as well.

The fallacy that design was purely traditional and that ideas were never borrowed from abroad, is disproved by a whole host of authenticated instances.

The mediaeval architect certainly did not reproduce bygone styles from copybooks as we do and as architects have done from the 16th century onwards, but the sketchbook of Villard d'Honnecourt (13th century) proves conclusively that this remarkable man travelled abroad in search of "inspiration," and that he sketched the plans and details of Rheims Cathedral with a view to reproducing them in the then unfinished church in his native town of Cambrai. Under a sketch of one of the windows of Rheims Cathedral he has written: "Here is one of the windows of Rheims Cathedral such as are placed in each bay of the nave—I was proceeding to Hungary on professional business when I drew this because it pleased me best of all the windows.

D'Honnecourt's sketch book preserved in the National Library, Paris, is one of the most valuable relics of the Middle Ages. It proves without doubt that the only mediaeval architect of whom we have so full a record was an accomplished draughtsman, a traveller, a student and a man of wide artistic sympathies in addition to being a competent master of stonecraft. It also establishes the fact that the master mason of the Middle Ages was the counter part of the professsional architect of to-day. There are many instances of men who undertook several commissions and were called in to advise, although it is a popular fallacy with many writers that the mediaeval architect was one of a group of craftsmen who worked on only one job at a time and resided on or near the building until it was completed.

Thus the architects of the fan vaults at Windsor and Westminster were appointed because of the reputation they had acquired at Bath.

Maitani was appointed master builder at Orvieto, 1310, but remained at Siena, his native town during part of the construction and carried out work at Perugia and Todi.

In 1398 the Italian masters at work on Milan Cathedral summoned Master Jean Mignot from Paris and it is interesting to give an extract from the records at Milan. In answer to his criticisms of the construction, the Italian artists said "that the science of geometry was of no importance here because science is one thing, art another." To which the Frenchman answered, "Art without science is nothing."

In 1499, Martin de Chambiges was called to Paris as a consultant by Jean de Soissons, who paid him **a** fee for advice on the facade of the Cathedral at Troyes.

The anonymity of the mediaeval artist, according to Briggs, is due chiefly to the jealousy of the mediaeval scribe, but there are several hundred instances in documentary records in which his identity is revealed, as also in inscriptions on carvings and tombstones. Time does not permit me to refer to all these men, but I will deal with a few of those in England prior to the Renaissance.

One of the earliest recorded is Gundulf, Bishop of Rochester, 1078, who is stated to have been appointed surveyor and overseer of the works connected with the erection of the Tower of London, by William I. Peter of Colechurch is the next. He is said to have first repaired, then rebuilt London Bridge in timber, A.D. 1163, and it is established that he erected the first stone bridge 13 years later. He died 1205, and was buried in the crypt of the Chapel which stood in the centre of the bridge. Two other architects who came over with the Conqueror were William of Sens, who built the choir of Canterbury, and Helias de Berham who worked for 25 years on Salisbury Cathedral and is mentioned in a record of 1209, as having been employed in superintending work at Westminster; also Edward Fitzodo, who was surveyor under Henry III., of the work at Westminster.

In the Cotton Manuscript there is a letter from a monk which contains a minute account of the original Canterbury Cathedral and its restorations. In this it is stated that the work was carried out by William of Sens, and William the Englishman, the latter being mentioned later as the chief architect or master mason, a native of this country, and one who boldly attempted to work the ribbed and vaulted ceiling in stone.

In the Lady Chapel at Worcester Cathedral there are two bas reliefs representing an architect in the act

of presenting a plan to the superior of a monastery. This is dated about the middle of the 13th century. Walter de Weston is stated, by a patent dated 1331, to have been employed on the work at S. Stephens Chapel, Westminster.

Alan of Walsingham, is known to have been responsible for the design of Ely Cathedral, notably the octagon, which occupied 20 years in building and cost the great sum in those days of £2,400. We now come to William of Wykeham, and his contemporaries, William Winford, who assisted him at Winchester, and William Rede, who is said to have been the best mathematician of his time and is credited with the Castle of Amberley and the Library of Merton College, Oxford. William of Wykeham was born at Wickham, Hampshire, 1324, and educated at Winchester, where among other things he paid particular attention to geometry, the science of which is called masonry. By 1356 he had been created Surveyor of the Royal Works His personal allowance was fixed at at Windsor. one shilling a day as long as he remained at Windsor, and two shilling a day when his duties called him elsewhere, a salary that was doubled later.

He had carte blanche from the King and proceeded to pull down existing buildings and build a palace in its place.

The greater part of the existing wonderful pile is either Wykeham's work or restorations of the same. There is a well known story told of how Wykeham had caused to be cut the words "Hoc fecit Wykeham," and the King, thinking perhaps that they denoted too much vain glory in the architect, complained to him of the circumstances. Whereupon Wykeham replied that the words were not intended to indicate that Wykeham made this, but that this made Wykeham. Time does not permit me to mention all his works, but he carried out innumerable schemes for the betterment of life and education. Three of the most important being the institution of Winchester School, on its present basis, the restoration of Winchester Cathedral and the founding of New College, Oxford.

At Winchester he is responsible for the nave and west front, the work of which began in 1394, Winford being resident architect and Simon Membury Surveyor.

At Oxford Wykeham's agents had purchased sufficient ground in 1378, for the site of the New College, as it was then called. The College was opened in 1386, and just a year later the first stone of Winchester School was laid.

From the reign of Henry IV. to the commencement of that of Henry VII., there is no record of any great architect in England.

This is due mainly to the unsettled conditions prevailing and the Wars of the Roses.

Under the Tudors many fine chapels and private houses were erected and the names of a few architects appear, notably Jerome de Trevise and John of Padua, generally thought to be John Thorpe, who studied at Padua and designed Kirby Hall. He is known to have worked for Henry VIII., 1544, and in his work the first germs of the Renaissance appear.

I intend to deal with the Architects of the Renaissance and modern times in another paper.

For the greater part of this paper I am indebted to Mr. Martin S. Briggs, whose paper "The Architect in History," which appeared in the R.I.B.A. journal, I have quoted at considerable length. I am also indebted to Breasted's "History of Egypt," and Beresford Chancellor's "Lives of British Architects."

## PRETORIA TECHNICAL COLLEGE COMPETITION.

## A. STANLEY FURNER.

"The looker-on sees most of the game," is a well worn proverb and, like most proverbs, contains a germ of essential truth hidden under a mountain of The spectator can certainly get a clearer falsehood. general view of the game uninfluenced by the excitement of the struggle, but he can never appreciate the detail and the knowledge which experience gained in the game itself can alone give. This applies most definitely to all architectural criticism and the critic must "tread delicately" as Agag of old, lest he be unjust to those whose knowledge of the subject is more complete than his can ever be, even after the most careful examination of the drawings before him. But in spite of this a fresh eye and an untrained mind may perhaps view the design as a whole from a slightly different standpoint to that of the competitor and may thus help to discover what may be learned from a competition such as the one recently held for the New Technical School in Pretoria.

The winning design is undoubtedly the most striking of those submitted. So noticeable is this that one seeks to find out the reason for it. It is undoubtedly due to the fact that this scheme has been designed very definitely from its inception as an aesthetic composition. The general grouping of the main elements of the design is extremely imaginative and effective and from this point of view compares very favourably with its competitors. Many of the schemes indeed appear to be considered only from the point of view of function, with, it would seem, a pious hope that good mouldings and fine detail would make up for lack of essential design.

If there is one thing to learn from the tendency of modern planning, and indeed of the planning of any period, it is surely this, that architectural design depends, firstly, foremostly and almost entirely upon the essential form of the building True, good detail is essential to good architecture, but it is only the

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FIRST PREMIATED DESIGN

Gordon Leith.

final dressing and has never and can never cover up defects in the general conception.

That a building must be convenient, must be economical in space without being cramped, must be structurally sound, must, in fact, answer every detail in its programme as completely and perfectly as is humanly possible is, of course, a platitude to every architect, but more than this is required from him if he is to be worthy of the name of artist. In fact one cannot help wondering at times whether the general idea of the man in the street, that an architect is the man who puts in the "pretty bits" after the design is made, is entirely without foundation.

In practice one finds generally that one man tends to concentrate on what he fondly calls "Practical Design," while the other frequently sacrifices the comfort and well being of his client for the sake of his soul. Great architecture only results from a complete fulfilment of these two essential factors, if either fail the result is a fiasco.

In examining the designs submitted one feels quite strongly that the "Practical Man" has ruled the

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day, the schemes generally are complicated and lack simplicity of expression and unity of idea. Many appear to be rather a jumble of offices, class rooms and workshops, arranged more or less conveniently around two, four or more courtyards, than an architectural composition. It is in this that the winning design stands so far above the others.

But one cannot help feeling that many of the designs, including the one placed first, suffer from congestion and from lack of light and air. A multitude of tiny courts, long winding corridors with rooms on either side of them and very little light, are far too numerous. A school more than almost any other type of building calls for light and air. It may be argued that the site was restricted, but this argument can be met by a glance at several plans which although defective in other points are very Adequate cross efficiently lighted and ventilated ventilation to all teaching rooms is surely an essential even in a trade school, and a feature not to be lightly cast aside as impossible. Well lighted class rooms on a second floor would appear to me infinitely preferable to inadequately illuminated rooms on the ground and first floors only.

Undoubtedly one of the greatest problems in this programme was the placing of the workshops in relation to the rest of the building. The noise and vibration from these workshops will be very considerable and those competitors who isolated more or less completely their main block of class rooms from them would seem to have achieved a considerable One is rather surprised that in the advantage. winning design this point has been less successfully As can be seen solved than in many of the others. from the plans the shops are grouped round the building, partially separated from it, it is true, by narrow courtyards, but rather questionably placed with reference to sound and vibration, while from the point of view of circulation and convenience the grouping of the various sections appears to be rather muddled.

For the easy and convenient working of a school, such as this, a definite grouping of the various branches would appear to be essential, as it facilitates control. Several of the designs submitted are excellently arranged in this respect.

In elevational treatment the variety of design is rather remarkable and gives one furiously to think.

The sources of inspiration are numerous and easy to detect, the New Clare building at Cambridge, Wren, the Cape Dutch tradition, San Michele, the competition style of the early days of the twentieth century and other familiar friends are all present—original ideas are few and far between.

One cannot help wondering if the broken pediments and applied columns designed as a background to powdered wigs and velvet coats are altogether suitable as a setting for the bowler or the beret, and whether heavy rustications designed for the thick stone walls of the fortress palace of the quatrocento are a sincere expression of the economical fourteen or eighteen inch walling of a modern town building? If only the attempts at innovation were more uniformly pleasant, our decision would be a simpler one. Our upbringing on the "styles" makes a new architecture difficult for us, perhaps the next generation will give us "some new thing" which will reflect modern life more accurately and more faithfully than the present haphazard eclecticism.

To pick out individual designs for special notice is unnecessary as the very careful and complete report, which is printed below, prepared by the assessor includes a short criticism of each scheme—a criticism based upon a deeper knowledge of the subject and a far more careful study of the designs than is possible to one who can only vaguely realise the difficulties of a scheme upon which he has done no work.

#### The following is the Assessor's report :--

I have the honour to state that the twenty competitive designs submitted for the above, together with the accompanying reports have been carefully examined and after full consideration of the various points of detail of each design, I beg to advise that I place the designs in order of merit as follows:—

First Design	 	No. 19
Second Design	 	No. 12
Third Design	 	No. 1

First Design No. 19 is clearly conceived and a well balanced scheme and I have no hesitation in placing this first. The plan is on good, sound lines, with a three storied central block for the Commercial, Arts and Crafts, Domestic Science and Technical Sections, and single storied corner wing buildings for the trades Sections, and is well arranged for convenience of Administration and the general working of the College.

Large forecourts are provided for on the Church Street front some 166 feet by 39 feet, at the ends and at the rear as a wagon yard, with this arrangement excellent air space is provided round the buildings and the Lecture and Class rooms are away from the street traffic noises.

The main entrance is from Church Street with goods and students entrance from du Toit Street. The Assembly Hall is certainly situated on the ground floor and is a fine shaped and dignified Hall, open courts in the centre of the building light this Hall as well as other portions of the buildings.

The offices, Council Chamber, Restaurant, rooms generally, staircases and lavatories are suitably and conveniently arranged.

The Architectural treatment for the fronts is simple and distinctive in character and the Author's proposals for materials and finish for the building are generally sound and practical.

The lighting and ventilation throughout is good. Future extension has been suggested as an

additional floor to the central block, but it would be more desirable to build the front portion of the building full height and leave the back portion and Assembly Hall (Competitor does not include for this to be erected now although coloured) for future erection. Further future extension is suggested over the single storied corner wings. The particulars given in regard to cost are reasonably satisfactory.

Second Design No. 12. The plan is on good sensible lines with the front partly set back with noise buffer corridors. The Assembly Hall is a suitable shape and the workshops are kept together away from the Science and Class room sections. The proposals for

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SECOND PREMIATED DESIGN



extension are satisfactory, and the lighting and ventilation throughout is good with possibly the exception of the Restaurant.

The Architectural treatment is good and the materials proposed satisfactory.

It is not considered that all the accommodation indicated to be proceeded with now could be provided for under the amount available.

*Third* Design No. 1. The plan is on good lines and the workshops have been kept together and away from the Science and Class Room section. The proposals for extension are satisfactory and lighting and ventilation throughout is good.

The Architectural treatment is sound and the particulars of cost satisfactory.

The problem set before the Competitors was no easy one and many competitors have not realised how important it is to keep the noisy workshops away from the quiet class-rooms and Science Rooms such as the Advanced Physics Room where balances are used, and in some cases these latter rooms are actually placed over the Boiler Making and Machine Rooms.

In the design placed first the problem has been more satisfactorily dealt with than in any of the other designs and I have found it extremely difficult to decide the second and third places.

Of these other designs :--

No. 2. Provides for the Main Entrance on the corner at the upper ground floor level with the Assembly Hall at the rear at an angle of  $45^{\circ}$  with Church Street. The arrangement breaks up the site badly and the centre of Administration is some considerable distance from some of the Sections.

The elevation treatment is sound.

No. 3. A sound plan for arrangement of Entrance, Assembly Hall and Courts, but scheme provides for the machine and other shops in such a manner that Science and Class Rooms come immediately over them. The Assembly Hall Entrance from the main staircase is not good.

The elevation is of S.A. character, but I hardly think white plastered finish would be the most suitable for this site. I would like to have seen some similar treatment designed for brick finish.

No. 4. A good plan with part set back from Church Street, but the open Courts badly broken up and the same objection of Class and Science Rooms over the noisy workshops. The elevation treatment is fair.

No. 5. A very fair plan but the Administrative Offices are on the upper ground floor away from Entrance and the Restaurant is on the top floor and some of the Class Rooms come over Machine Shops.

The elevation treatment is fair.

No. 6. Plan is on good lines but the Assembly Hall is on the second floor. Certain of the Lecture and Science Rooms come over the workshops.

The elevation treatment is fair.

No. 7. The plan is good but there are a lot of corridors.

Elevation treatment is fair.

No. 8. This is a very broken up scheme and many of the rooms are a bad shape for lighting and on the right wing with long corridor with rooms on either side, ventilation would not be good.

No. 9. This scheme provides for the main entrance set back from Church Street with a large Forecourt, and has many good points with a refined and dignified Architectural treatment, but a number of Class, Lecture and Science Rooms are placed immediately over the workshops.

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No. 10. A well balanced scheme with a refined and dignified Architectural treatment, but again the Science Rooms are placed over workshops and the long ranges of lavatories would not conduce to the best of ventilation for the Class Rooms at these points.

No. 11. This design provides for the main stores right on the main entrance and for the Assembly Hall on 1st Floor and Restaurant on 2nd Floor with the workshops along the back line with access from a large central yard. The elevation treatment is fair but rather loaded up with small narrow windows.

No. 13. A fair plan but access to Assembly Hall across the open. Long Corridors with rooms on either side not good and certain Science and Lecture Rooms over workshops.

Certain of the Cloaks and Lavatories not well lighted.

No. 14. Well balanced plan and good elevations but access to certain shops through other shops not good.

No. 15. Good all round plan with main entrance from du Toit Street, but many rooms over workshops, Architectural treatment good. No. 16. A very broken up and discon-

nected plan.

No. 17. A fairly well balanced plan, the main feature being a very large and central open court on ground floor which is somewhat wasteful. Some of the rooms are not suitable shape for lighting, and lighting of the lower ground floor corridor round central store would not be good.

Elevation treatment is refined and dignified.

No. 18. Sound plan in many respects, but Assembly Hall on top floor and staircases not conveniently placed from main Entrance. Certain of the Science, Class and Lecture Rooms come over workshops. Elevation treatment good.

No. 20. Well balanced plan with workshops kept together at back of site. Certain of the rooms round the small court are, however, badly lighted.

Elevation treatment is simple.

(Signed) J. S. CLELAND, F.R.I.B.A.

Assessor:

## W. M. TIMLIN.

D. LEFEBVRE.



A CAPE HOMESTEAD

W. M. Timlin.

It is a curious fact that many of our artists find their highest inspiration in places altogether remote from that in which they live. Timlin appears to find his in a Dream City which does not even remotely resemble Kimberley. And so it often happens. Sordid, unsympathetic surroundings compel some artists to express the hidden thoughts that might otherwise lie dormant in their minds for years, perhaps a life-time.

In his fairy architecture, Timlin combines his art and his profession. These delicate drawings, pervaded by a sense of the grotesque, may not represent the highest art, but form a very intimate rendering of his talent. From the trail blazed by Rackham and Dulac, he has found a phase of interpretation that, slight as it may appear, is a considerable acquisition to our art, partly because of its qualities of colour and drawing, but mainly in its suggestion of a sensitive artistic soul.

In pastel, especially in some of his Cape scenes, he gives a very spirited interpretation of South African colour and atmosphere. He shows the warmth of the sunlight and the rich crude hues of the soil. Some of his water-colours are distinguished by a most charming restraint and delicacy, others again border on the common-place. I think Timlin is strongest in pastel and water-colour. Oils necessitate strong handling and sometimes, in using them, the artist loses quality and composition in trying to carry out a bold conception. Perhaps, as with other artists, the danger to Timlin's art is his output. It is hard for the popular artist, and such he has now become, to paint fewer pictures—and yet even Sergeant grew weary.

It is almost as if, like one of his own fantastic creations, Timlin had left his fairy City of art and architecture and had wandered into a primeval forest where, here and there, a gnome or prehistoric monster peeped out at him from behind strange twisted trees and bushes, and where, sometimes, he found a pot of gold, or, it might be, a brackish pool. And the further he went, the more the memory of his fairy city faded, the more the strange creatures multiplied and dragons and huge misshapen creatures-men and beasts, leered out at him. But he went on, though his hands grew scratched a little, looking for the fairy gold, while his feet sometimes became sore and blistered. And because he still loved the quest, and moreover had a stout heart, he kept on with his journey, and in time, the sack he carried grew heavier. Still he travelled, getting further and deeper into the forest and farther and farther from the Fairy City which began at last to seem to him only a long dreamt Dream-and then he awoke?

Which is all by way of being an allegory concerning an architect whose hobby is painting and a painter whose hobby is architecture.

And these twain are one flesh.

## **VERGELEGEN.**

C. P. WALGATE.



THE NEW GABLE

The romantic history of Vergelegen is so well known that no account of it is needed here, but there are two questions about which some doubt has existed, until during the recent work of restoration when a certain amount of direct evidence has been brought to light.

The first is the plan of the original house. At a time when the country residences of the Cape adhered so closely to type, what was the novelty or variation adopted at Vergelegen by William Adrian van der

Stel, which gave his enemies material for their attack? To the usual I plan he added a T so that his central Hall had three wings on either side instead of two. Then against the gable walls at each side of the house he put additional rooms under lean-to roofs. These rooms are shown on the drawing made to substantiate the accusation and also on the drawing made for the Defence. Their extent was clearly indicated in the foundations opened up. Beyond this moderate increase in the accommodation of his house, there are no evidences of lordliness, save that his kraals were so built that they enclosed a spacious octagon which was laid out as an orangery.



THE BEDROOM WING

The second question is whether the destruction ordered by the Directors of the East India Company was actually carried out, or whether the buildings were merely defaced.

Evidence for almost total destruction was found in the fact that the present Homestead is largely composed of debris. There is hardly a whole brick in some of the walls. The Farm House has disappeared entirely and the line of many of the kraal walls cannot be traced.





Three plans are presented to illustrate the vicissitudes through which this interesting group of buildings has passed.

No. 1. The plan of van der Stel's Vergelegen is compiled from various sources; an old map kindly lent by Lady Phillips, the diagrams accompanying the Accusation and the Defence, and notes taken during the work of restoration, but many minor points are purely conjectural.

No. 2. Shows the building when Sir Lionel Phillips acquired the property and will serve to

disarm any criticism on antiquarian grounds, as to the extent of the alterations which have now been effected. The House had reverted to the I type with its back facing upon out buildings which embodied the remains of the old back wings. Some of the old octagon remained but more wall had been built without regard to geometrical plan. The old Wine Cellar had sometime received a very picturesque extension, and subsequently been converted into a cow-shed and barn.

No. 3. Is the plan of the buildings as they stand to-day. The old Homestead has been carefully repaired and restored, the only material alterations being the making of fireplaces, a stair leading to the loft and the flat roofs of the bedroom wing, and lastly the development at the back of a worthy elevation facing the garden, where small casements of irregular shape have been replaced by large sash windows designed after traditional models, and a plain gable has given way to a new one inspired by records of the gable of the Oud Pastorie, at Paarl, now destroyed. The Wine Cellar has been converted to house Sir Lionels magnificent library and organ. and the famous Bayeux Tapestries. All

buildings have been planned on the lines of the old lay-out, and designed with the greatest reticence in subordination to the old Homestead.

Lady Phillip's good taste and wide experience have made their mark on the buildings and her genius for garden-making has already created for them a worthy setting.

## C.P.W.

(The photographs illustrated show the alterations and additions to Vergelegen so ably carried out by Messrs. Walgate and Elsworth, A.A.R.I.B.A., of Capetown.—Editor.)



## VAULTED HOUSES.

GORDON LEITH, M.C., A.R.I.B.A.



The little house here illustrated is the result of an attempt to comply with local conditions and conform with the limitations imposed by Nature on the Building Industry in the Transvaal. It is only the germ, the first and original expression of an idea which it is hoped others will assist in bringing to its rightful place among the truly national styles of architecture.

The honour of being the first to construct a vaulted house in the Transvaal falls to a young bricklayer by the name of Goodrum. Owing to the scarcity of timber during the War, he boldly conceived of the idea, drew his own plans, and actually built two vaulted houses in Johannesburg. In these examples, as in the writer's own early attempts, the necessity of resisting the lateral thrust of the vault constituted a great drawback to the economy of this method of construction. Statically, the thickness of wall required to resist the thrust of a 14 foot span semi-circular vault built half a brick thick is about This meant that the saving effected in 2ft. 3in. roofing timber was expended on the increased wall Consequently, when the War ended and thickness. the price of timber returned to normal, the vaulted house no longer commanded the recognition it deserved.



The boards are left in lengths which may be longer than the compartment for which they are serving, thereby saving a considerable amount of waste. As for the thrust, this is taken by steel reinforcement, the vault being treated as a square dome, each room being circumscribed by a concrete collar in which steel rods are embedded. The end beams act as transverse ties, the steel being linked over the reinforcement in the haunches, which is so disposed as to enable it to take a vertical bending moment as well as the lateral thrust of the vault.

By changing the method of construction, one naturally changes also its outward expression, and although these elevations may be adversely criticised, it should be borne in mind that the whole idea is in its infancy, and that by experience, more picturesque results could be obtained.



In order to reduce the thrust, and with a view to producing a type of vault that could be erected without centering, a hollow interlocking concrete block, (which was 33 per cent. lighter than a solid one of corresponding size), was patented in the Transvaal about five years ago, and was successfully used in a Johannesburg building.

Owing to the lack of capital, and on account of the difficulty of overcoming the prejudices which accompany a new development of this kind, the patent was never properly introduced, although there is every possibility of it re-appearing in the near future.

The third and latest development of the vault confines it to a shallow elliptic, or four ceptred curve the extrados of which is straightened out and screeded for the roof tiles, which are bedded on to the concrete in cement mortar, making a permanent covering immune from damage by hail, etc. The walls in this instance are no longer 2ft. 3in. thick but are the same 11in. cavity walls that one associates with any economic cottage to-day. The usual form of centering is used, the shuttering being fixed lightly to the centres, to enable them to be removed, and transferred to another part of the building for re-use.

If we look into the question more fully, we shall find that not only vaults, but domes, groins and coves of all shapes and of every description could be employed, and the cost considerably lessened by the establishment of a depot, to be maintained solely for the storage of centres which could be hired out for a nominal fee to builders and returned to the depot on completion.

When we realise that our sparsely populated country with all its need of protection and support of local industries, expends no less than four million pounds sterling a year on imported timber, we conclude that it is necessary for us all to do something towards finding means of reducing this national outlay. For the sake of our own architectural destiny as well as that of the community as a whole, we are entitled by virtue of results obtained to invite our legislators to impose a heavy duty upon all soft woods imported, except such as are essential to the mining and other vital industries.

## PROFESSIONAL NEWS.

## Obituary.

F. G. McINTOSH.



The death occurred somewhat suddenly on the 16th of September, of Mr. Frank Gordon McIntosh, at his residence "Whitecrook," Schoeman Street, Pretoria. Mr. McIntosh, who was 63 years of age, succumbed to paralysis of the throat by which he was attacked some four or five months prior to his death.

Born in Keith, Scotland, in 1862, he was educated at Keith Grammar School and Gordon's College, Aberdeen. Coming to South Africa in 1889, he joined Mr. Campbell, Architect of Pretoria, in 1890, leaving him to commence practice about 1892, designing and erecting "Durban House," Pretoria, for Mr. Robert Hamilton. In 1895 he became a partner with Mr. Carter, under the style of Carter and McIntosh, of Johannesburg and Pretoria.

On the death of Mr. Carter, just after the Boer War, he took into partnership Mr. J. A. Moffat, and the firm designed and carried out numerous buildings for prominent firms in both Johannesburg and Pretoria. The latter partnership was dissolved in 1908, since which time Mr. McIntosh has practised on his own account in Pretoria, carrying out further numerous buildings for Mr. Robert Hamilton, the Bourke Trust, and the Transvaal Permanent Building Society and other firms.

Recently he was successful, in conjunction with myself, in gaining the 1st position for the Railway Headquarters in Nairobi and the Pretoria Town Hall.

He was of a most engaging disposition, quiet and unassuming and it may be said of him that no man was his enemy. A sound planner, every detail in a building received the most scrupulous care and attention, he insisted on the employment of the best materials and workmanship that the means at his disposal allowed.

He worthily maintained the dignity of his profession and in his quiet way was always to the fore with those who strive to uphold the standard of its aims and achievements.

J. LOCKWOOD HALL.

## LEGAL.

In an action for recovery of architectural fees, in the Magistrate's Court, Pretoria, Mr. G. E. Fitzgerald, A.R.I.B.A., was given judgment against Mr. J. Kirschner.

Subsequently the defendant appealed against this decision and the appeal was heard before Justice J. Stratford and Justice Gey van Pittius, in the Transvaal Provincial Division of the Supreme Court of South Africa, in October, 1926.

The appeal was dismissed in the following written judgment delivered by Justice Stratford :--

The plaintiff, an architect, sued for the recovery of £32 0s. 6d., being remuneration which he alleged he was entitled to for services rendered as architect to the defendant. It appears that the plaintiff was asked by the defendant to inspect certain work which a man called Rudolph had been employed to do to That work was principally painting his building. and renovations of a certain hotel owned by the The work the plaintiff did was the defendant. He first inspected the work that was following: being done by Rudolph, reported upon the adequacy and correctness of the work to the defendant, and finally advised defendant to submit the disputes he had with Rudolph to arbitration. The whole dispute was accordingly submitted to the arbitrament of the Master Builders' Association, and the plaintiff formed one of the arbitration board. That work involved a sitting of something like five hours. The award was given and bound the defendant and Rudolph; it formed the basis upon which Rudolph had then to work, and was treated as being specifications for the work he had to do. The plaintiff had then to supervise the work done on that specification, and he also had to measure up certain extra work for which defendant had to pay Rudolph over and above his contract price. For all his services he charged the defendant the sum of £32 and sought to recover it by action.

The magistrate, after hearing evidence, gave judgment for the plaintiff for the sum of £21 1s. 0d. As £10 had already been paid, the amount of the actual judgment was £11 1s. 0d. This appeal is now brought by the defendant on the ground that the judgment is bad in law. The argument of the appellant proceeded on the lines, firstly, that the work fell within the tariff laid down by the Architects Association under Act 39 of 1909, and that the charges there laid down were the only charges that could, in the absence of agreement, be recovered by the architect. The appellant supported the finding of the magistrate that 14 per cent. was the right amount to allow on the total sum of £427 for supervision and superintendence of the work, but contended that the magistrate was wrong in allowing any amount over and above four guineas for the work done in connection with the arbitration.

The argument involves the necessity of inquiring whether the architects' tariff, framed under Act 39 of 1909, is a tariff that is binding between the parties to a contract of this nature, independently of an agreement as to special remuneration. That contention has never been asserted in a court of law up to the present time, although the question of architects remuneration has frequently come before the Courts. As far back as 1903, in the case of de Zwaan v. Nourse (1903, T.S. 814)-which it is true was decided before the Act of 1909, or any tariff framed thereunder-it was laid down that remuneration of architects was independent of any private tariff arrangements they might have under their constitution. Since then, this traiff has been framed under the Act of 1909, and two cases that we have been referred to more or less raise In the case of Lubke v. Kegel (1913, this point. W.L.D. 91), the question was the basis of remuneration an architect was entitled to for work and labour It was contended by neither counsel in that done. case that the remuneration was absolutely fixed by the tariff, although the tariff was then in existence: it was accepted by both sides that the tariff was not The most that was urged in that case for binding.

the pertinence of the tariff was that it was some evidence of the reasonableness of the amounts there The Court in that case came to the conlaid down. clusion that the tariff was no guide whatsoever as to what was reasonable, and adopted the principle that the amount of remuneration should be reasonable and that reasonableness was an issue which the Court had to decide on the special circumstances of the case and the nature of the work that had been done. Again, in 1923, in the case of *Power v. Simonsen* (1923, T.P.D. 77), the headnote reads: "Under section 27 T.P.D. 77), the headnote reads: (h) and section 29 of Act 39 of 1909, the Society of Architects may fix a tariff prescribing the remunera-tion of architects for their services. Held, that the tariff was *prima facie* evidence of the reasonableness of the remuneration prescribed." Therefore, that case is no authority for the proposition that the tariff of charges, framed in the way this has been framed, is binding between an architect and the person for It is true there are certain words whom he acts. by GREGOROWSKI, J., which rather tend in that direction, but which were unnecessary for the decision and opposed to the remarks of the presiding Judge. Thus, we have no decided case that supports the proposition that the tariff amounts are binding between an architect and his employer; and, in my opinion, they are not binding. By-law 49 reads as follows: "Where an architect is engaged otherwise than under a fixed salary the remuneration which he shall be entitled to charge for his services shall be as follows, Now does that mean and then the tariff follows that the tariff fixes amounts beyond which he must not charge or below which he cannot go? In my opinion, there is no reason to assume that either of There is no penalty, those things is intended .. either in the Act or the regulations, for charging an amount above the tariff amounts or for charging an amount under the tariff amounts. It seems to me that what really was intended was that this was a tariff simply formulated as a guide for architects, and no more. And that is really the way similar tariffs have been treated in English law. If reference is made to the various provisions of the tariff, it will be seen that it is quite permissible for an architect to charge a sum larger than the tariff amounts. If that is so, it shows, at all events, that these sums are not the maximum charges; he can charge more if he likes. Then as regards a minimum charge, it is nowhere stated that they are minimum charges ; and it seems to me hardly arguable that if an architect did arrange with an employer to charge less than tariff rates the employer could not hold him to that bargain. If. in that case, there were a penalty for his having undercut his profession, that penalty might no doubt be enforced, but it could not affect the rights of the employer with whom he had made his contract to work at a lower rate; that appears to me to be And, as I have said, there is no penalty obvious. provided.

Thus, I come to the conclusion, both upon the absence of authority for the proposition now advanced and from a reading of the Act and the regulations framed thereunder, that the tariff charges are not binding as between employer and architect, in the absence of any special agreement. If that is so, we are driven back to inquiring what is a reasonable

amount to allow for the remuneration which is being But, if I am wrong in that view, I have sued for. also come to the conclusion that the work done in this case was not work falling within the specific provisions in the tariff to which we have been It was urged by the appellant that the referred. amount charged for the work done by the architect in the arbitration fell under (j), which reads; "The charge per day depends upon an architect's professional position; a minimum charge may be reckoned at four guineas per day of six hours." It is said that there is no evidence here that the professional position of the plaintiff was of a degree which entitled him to charge more than this amount. Tt. will be observed that the amount is a minimum We are also referred to the fact that not charge. more than five hours were occupied over this arbitra-Of course there is something to be said for tion. the view that four guineas would have been adequate remuneration for that particular work, and there is something to be said for the view that that particular' kind of work does fall under this provision. But, as will be seen, the provision does leave an opening to charge beyond that amount, which would depende upon the kind of work that was done and the professional standing of the architect. In this particular case antecedent work was done, occupying five hours of the architect's time, and that was inspection of the work already done by Rudolph, negotiating with him in regard to what he should do, and giving consequent advice to the employer, culminating in the submission to arbitration, and for all that preliminary work there is no doubt the tariff does not Then with regard to the supervision work provide. after the arbitrators had given their award, which award was treated as specifications for new work, that work, in my opinion, does not fall within the provisions of the tariff. It is said by the appellant that it falls under (d) (iv) of the tariff; "For general supervision and superintendence, exclusive of clerk of works, a further  $1\frac{1}{4}$  per cent." It may be right to say that that tariff does refer to any one of the items of work there enumerated, even if done independently of the others. But it certainly presupposes a type of work for which all the other works are done, and therefore it does presuppose that the other work is of a kind and magnitude which involves the doing of all the work mentioned in all the items. That is to say, it presupposes that there are drawings, plans, elevations, etc., with specifications. There-fore, it seems to me that this provision (d) is dealing with work of a character sufficiently grandiose to necessitate the preparation of plans and the subsequent supervision of a building of some magnitude. It does not seem to me to cover a case like the present, which is merely work of renovation and paint-It will be seen that that kind of work is to ing. some extent dealt with under provision (b), which reads; "... and in cases of alterations and additions to buildings, 5 per cent. may not be remunerative . . .," thus this clearly refers to work on existing buildings, which have already had plans and specifications-work more or less of the character with which we are dealing here—and it indicates that a remuneration at higher rate than five per cent. is permissible, and it does not fix it. Then it is said that this particular work falls under provision (k), which, it is urged, clearly refers to work where the

employment takes place only at the stage of supervision. It reads: "For approving plans submitted and for inspecting buildings during construction, so far as may be necessary to ensure the conditions of contract or mortgage being fulfilled, and certifying for same, the charge is 11 per cent. up to £5,000 . . . It is said that that clearly emphasizes the case of plans being prepared by somebody else, quantities having been worked out by somebody else, and nothing more to be be done than inspection by the architect, to see that the work is done in accordance with the plans already submitted, and certifying That is true. But there again the remarks I same. made in regard to provision (d) apply equally here. It presupposes work of a character and scale requiring plans to be made. Nothing of that kind exists in regard to the work that we have here to deal with. I therefore conclude that this particular work, but for the work involved in the arbitration, is work which is not specifically covered by the tariff, and it is work for which the architect is entitled to reasonable remuneration.

Having come, therefore, to the conclusion on both points that the proper measure of remuneration is what would be reasonable for the amount of work done, we now have to turn to the case to see whether the magistrate's judgment is justified by the evidence.

The evidence on this point is all one way. It is true the magistrate has allowed only 14 per cent. for certain work and allowed the balance for what he calls the really important work. But if I am right in saying that the architect's remuneration is not governed by the tariff we must look to his services as a whole, to see whether the remuneration awarded by the magistrate is a just and reasonable amount. And looking at the work as a whole, we find that the architect in this case visited the premises twenty-five to thirty times and was occupied about fifty hours, and for that he has been allowed a sum of twenty guineas. Other architects say that the remuneration for the work he did, as a whole, would be reasonably paid for by allowing 71 per cent. on £427, which is larger than the amount which has been allowed. There is nothing in the evidence of the defendant to contradict the evidence that that is a reasonable remuneration to award. That being so, the cross appeal not being insisted upon, we have come to the conclusion that the magistrate's judgment was right, and that the appeal should be dismissed with costs.

## DURBAN NOTES.

An Architectural lecture to the Durban Library Group was given recently by Mr. E M. Powers, F.R.I.B.A., his address on the evolution of South African domestic architecture proving of absorbing interest.

The lecturer traced the growth of architectural style through the development of the English home from the early Baronial castle—and later Manor houses—showing the continental influence during the Renaissance period to the early Dutch work of the Cape and so up to our present day. A series of excellent lantern slides served to illustrate the historical periods of domestic architecture, and some of South Africa's most famous houses almost entirely in the Dutch style were shown. The influence of Sir Herbert Baker's work on South African architecture was illustrated by views of domestic work near Cape Town, and in the rebuilding of Groote Schuur, where was born a blending of the Dutch and Italian styles, of which our architecture to-day is chiefly composed.



This building recently completed for Messrs. H. W. and G. A. Payne, in West Street, marks the progress that is being made in the Commercial Architecture of Durban. Hitherto Durban's Street architecture has mainly comprised single and double storey buildings with an occasional three storey block here and there, but latterly with the erection of modern business premises such as Anstey's Buildings and Stuttaford's Chambers a new standard has been set, viz., the six and seven storey blocks of steel frame construction.

The site of this building was formerly a pond fed by a running stream known as Cato Creek where duck shooting could be had by the old Colonists, the creek is now an underground culvert discharging into Durban Bay near the South African Railways and Harbour Board offices.

The nature of the site necessitated carrying the foundations down through about 10 feet of black silt to a good foundation of hard white sand.

The height of the building above the pavement is 100 feet, it is a steel framed structure with reinforced concrete floors, and the external walls are brick panels filled in between the framing.

The Ground and First floors are occupied by Messrs Arthurs, Ltd., Drapery Store and Showrooms, the upper floors are designed and let as office suites.



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The building is equipped with three passenger and one goods lift and is protected from fire by a sprinkler installation. Messrs. Payne & Payne, A.A.R.I.B.A., of Durban, are the Architects, and the general contractors Messrs. Dougall & Munro, Ltd., the total cost of the building being £44,000.

## THE ART SCHOOL AND ITS MISSION.

## A. WINTER MOORE.

In common with all forms of education the teaching in English Art Schools has seen many changes during the past few years, not only have new methods been introduced and old ones discarded, but the mental outlook of both student and master has been fundamentally revised.

Gone are the days when a student would be content to spend weeks carefully producing highly finished stump and chalk drawings of such uninspiring objects as geometrical solids or plaster casts, or would meekly submit to a protracted course of antique drawing before being permitted to enter the Life Class. Modern impatience, tempered with modern good sense, have eliminated much of the tedium that formed the major part of study under the old systems and it is now the aim of most head masters to devise a syllabus that will not only prove interesting to students and assistants alike, but that will produce the maximum result for the minimum expenditure of effort.

Space would fail were we to trace the development of the English Art School through its many vicissitudes from the early forties when it first became a State responsibility under the title of Government Schools of Design up to the present year of grace. Suffice to say that even the geometrical-solidcum-antique days, of living memory, were a decided advance over the preceding dark ages when the flat copy reigned supreme and that the emancipation of the modern art student was not effected without considerable opposition from those art teachers who received their training under the old regime.

The control exercised by the English Board of Education has been such that it allowed considerable latitude to the headmasters of each Art School in framing their syllabus, with the result that many and varied have been the systems adopted in the different schools, systems where the imagination of the student was permitted to have the fullest play or systems where the beginning and end of the training consisted in the study of the art 'of bygone days. The policy in force at the Royal College of Art at the time I was a student there, may be of interest, since it was based upon the truth that Architecture is, or was, the Mother of the Arts.

Every student, no matter in what direction his aspirations lay, was compelled during his first year at college to make a comprehensive study of the various styles of Architecture, it being held that, not only was a knowledge of the subject essential for future painters, designers, or sculptors, but also that the type of draughtsmanship called for was calculated to act as a restraining and sobering influence on the somewhat unruly temperament of the average young art student.

As may well be expected many of the students chafed under this restraint and at the best regarded the study as a somewhat unpalatable form of medicine, on the other hand, not only did many commence with indifference, and finish with enthusiasm for the subject, but there were isolated instances of students joining the college to train as sculptors or painters finding their true bent during their enforced architectural labours and ultimately taking up architecture as a profession.

Of all the many changes and improvements that have been introduced into the Art Schools in recent years perhaps no department has been so much affected as that of design.

For many years this was regarded as a most abstract form of study, a subject the successful practice of which depended entirely upon the assimilation of certain laws that were supposed to control all good design, and it was always very much a matter of chance whether a student would be set to apply these laws to a design, say for wall-paper or to such concrete forms as a metal tea pot or jug.

These were the days before the crafts had entered into the Art School curriculum, days when it was quite exceptional to find any student who possessed even the most elementary knowledge concerning the technical processes entering into the manufacture of the articles they had designed, small wonder was it that manufacturers complained that the Art Schools were producing designs for articles it was impossible to put on the market either for technical reasons or for reasons of cost-designs for lace patterns no manufacturer could possibly adapt to his machines or for vases no sane potter would endeavour to throw. In the modern Art School design as an abstract study has almost disappeared and although a certain knowledge of general laws is still regarded as necessary, the utmost importance is attached to the actual production of the objects designed so that a school specialising in the teaching of pottery or metalwork design and yet holding no craft classes in these subjects is no longer to be found.

The old method of attempting to teach design apart from the practice of the crafts was about as impossible as endeavouring to train a singer by teaching him nothing but the theory of harmony in music. While on the subject of design too much stress cannot be placed upon the importance of students having access for the purposes of study to the best examples of both ancient and modern work. This principle is recognised in the case of the designer of mechanical appliances, such as aircraft or motor cars, but there is a general impression abroad that the art designer does not need such inspiration as the study of other peoples work brings, but that, informed concerning general laws, he can produce designs out of thin air so to speak.

As was recently stated by a leading furniture manufacturer, almost all the inspiration for modern English furniture design is obtained in the woodwork section of the Victoria and Albert Museum, London, and although the present craze for period furniture may be a somewhat extreme instance of the influence exerted by the historic styles, the same influence is manifest to a lesser degree in all forms of applied art.

The lack of Art Museums in South Africa is sure to prove a very severe handicap on the teaching of design in the Art Schools, for even such help as can be obtained from reproductions or photographs of art objects is not to be compared with the advantages of direct reference to the objects themselves.

When considering the difficulties of art teaching in the Union, it must be admitted that the most formidable obstacle is the lack of art training in the primary and secondary schools. In England students on entering the Art School have invariably received some previous education in art and so thorough and complete has this been, that in most cases they can pass at once into the intermediate stage of their Art School work.

The worst feature of this neglect to provide art instruction for the South African child is that the best opportunity of imparting such knowledge is lost, for it is a well known fact that the ability to express themselves by means of pictures is inherent in every child and taken in its early stages this natural aptitude can be developed with very little difficulty, but on the other hand if art education be neglected in these critical years of infancy the headway lost can only be regained with the greatest expenditure of time and effort.

If we were to plot out the curve of the child's natural capacity for drawing we should find that, starting at three or four years of age it reaches its peak about the age of seven or eight, and, unless cultivated by some form of art training, rapidly declines from that age and returns to zero in three or four years time, the natural desire for expression by means of pictures entirely giving place to the more universally adopted method of expression through the medium of writing.

Of course it must not be assumed that in England every child is so inspired with the art work they do in day school as to become imbued with a desire to continue to study at the Art School—actually the percentage who do follow up the subject is as low as .7 —but what I do wish to stress is the fact that facilities for tuition in art invariably exist, both in the Elementary and the Secondary School, therefore such pupils as intend to continue their art studies naturally make the most of their opportunities to acquire preliminary training.

There are fortunately decided indications that the authorities in South Africa are awakening to the truth that the lack of art classes in the day schools is a serious defect in their education system, and efforts will no doubt shortly be made to remedy this deficiency by the provision of more adequate facilities.

The first step towards this very desirable consummation will be the supply of efficiently trained art teachers for this work, and the most important mission of the South African Art Schools for some time to come will be the training of teachers for these new art posts that will be created in the Primary and High Schools up and down the country.

Many changes have been made in England of late years in the qualifications required in an art teacher and so high has the standard become that art teaching is one of the few professions where the demand exceeds the supply.

The new English graduate qualification in Art is open only to matriculated students and none but a graduate may hold the position of head of a State aided Art School, though a non-graduate (i.e., a teacher possessing art qualifications only) may fill the position of assistant.

The scales of pay, both for graduates and nongraduates, have been standardised by a commission appointed by the Government and pensions are available for all art teachers.

One sometimes hears people commenting adversely upon the length of art school holidays, but they fail, to realise that to be successful an art student must practice outside the school, hence the need for long breaks in the summer when conditions are favourable for work out of doors, then it is that the wise students make the most of their opportunities to study yet another phase of nature—nature as seen in the far flung veld or the deep open sky.

Just as art students may be divided into two classes—those that work out of school hours and those that do not—so the sheep and the goats among art teachers may well be defined as those that keep up their practice of Art—and the rest. A short time ago I was privileged to hear one of the greatest art teachers of our time—Professor Rothenstein—deliver an address welcoming the "freshers" at the Royal College of Art and was much impressed by his opening words of greeting "fellow students."

The adage (Ars longa vita brevis est) is no idle saying for it expresses the truth that for the artist be he ever so accomplished—there is always something more to learn. Here lies the great distinction between the art teacher and the teacher of almost every other subject.

The primary school teacher, for example, is more or less equipped for life by the knowledge he acquires at College and, providing he does not forget his multiplication table and such like details, can continue to instruct the rising generation until the time comes for him to retire, but should the art teacher fail to keep in touch with the practical side of his work immediately his value as a teacher becomes impaired, while continued neglect must ultimately result in his opinions and criticsms becoming jaundiced and his inspiration sterile.

It would, of course, be foolish to carry this argument to extremes and to contend that the art teacher should excel as an artist or that the best painter or sculptor must of necessity be the best teachers of these subjects, for experience proves that the reverse is often the case and that the artistic genius is seldom blessed with the power of imparting the secret of his genius to others. What can be reasonably demanded from the art master is a moderate degree of accomplishment in all branches of art that he professes and also that this standard be maintained by constant Fortunately even education authorities are practice. beginning to realise the wisdom of this as instanced by the headship of an important London Art School that was recently filled as a part-time post, it being officially stated that the Council making the appointment were of the opinion that the headmaster should be allowed ample time to keep up his art practice.

With regard to the type of work to be taught in the South African Art Schools, there is no doubt much useful work to be done in the development of certain crafts and industries, on the other hand it would be foolish to imagine that by the training of craftsmen it will be possible to meet all the Union's needs in artistic wares and thus render the country independent of imports of such goods from Europe. This very desirable consummation, if ever it is to be realised, is certainly a very remote possibility at the present time and those who argue its probability shut their eyes to economic facts.

The total value of motor cars imported into the Union far exceeds that of all artistic wares yet there is little talk of manufacturing them here instead of paying America or Europe to do so for us, for with our limited population such manufacture is at present an economical impossibility. For the same reason the training of craftsmen to supply South Africa's artistic requirements will be limited to such branches as furniture manufacture or the arts dependent upon architecture, i.e., plastering, wrought iron work, mural decorations, etc.

The possibility of competing with firmly established and complicated European industries such as Ceramics or Textiles is too remote to be worthy of serious thought. A consideration of Ceramics shows the difficulties in the way of developing this as an industry of any importance. At first sight the conditions appear to be very favourable indeed. There are, in South Africa, districts where good deposits of clay have been found suitable for the manufacture of pottery and further the cost of importing this class of ware from Europe certainly favours the development of the industry in the Union and, providing the South African public would be satisfied with few patterns, simple shapes, and plain glazes, there would be very little difficulty in the way of supplying all its requirements by the establishment of one or two factories here.

What renders the project quite impracticable is that the South African public is not satisfied with the elementary types of pottery, as can easily be proved by the inspection of any display of such wares in the shop windows here, and therefore it still continues, and will continue, to purchase from countries that can supply its varied though restricted wants from their own abundant stocks.

Leaving out of account the possibility of founding new industries, there are many directions in which the art school classes can do useful work in providing the necessary training for apprentices to the various existing trades dependent to a greater or lesser degree upon art.

In addition to the ones already enumerated, all branches of commercial art, including sign writing, lithography. and printing, should prove a very fruitful field for development, but if this work is to be done efficiently the art school must have full control of all craft classes connected with the training of these apprentices as is invariably the case in England.

It would appear to be superfluous to refer to the necessity of the art school being permitted to control its own affairs so that an artistic standard is maintained in everything that emanates from its walls. One is sometimes shocked to find a school professing to teach typography and printing and yet issuing its own syllabus produced in the most execrable taste, though further investigation may prove that this is due to no neglect on the part of the headmaster.

Reverting to the question of crafts, I am of the opinion that South Africa's requirements in this direction will, in the main, be of the most elementary. There are many crafts such as leatherwork, stencilling or lino printing, crafts the average English art schools consider beneath their dignity to teach, but crafts that will admirably meet the requirements of many students here, in that they can be practised in the home even though that home be some isolated farm or situated in a dorp far removed from the shops where elaborate equipment or material can be purchased.

By means of these crafts the gospel of art can be spread—even though its language be simple—into districts where the more serious efforts could never hope to penetrate.

In conclusion let us admit it fairly that the mission of the art school in South Africa will for many years to come be rather to sow the seed than to nourish the full-grown plant and although in this land of mushroom growths many pleasant surprises may yet await the patient and painstaking husbandman, he must be prepared for small results at first or perhaps—though "tell it not in Gath"—for no results at all.

# CONTEMPORARY ARCHITECTURAL MAGAZINES.

## THE EDITOR.

In a short article under the title of "Imitations," in the *American Architect*, Mr. Harry F. Cunningham makes some very interesting points.

"ALL ART," he says, "as everyone knows, is imitation. Sometimes the imitation can reach to such heights of beauty or technique, or both, that it becomes idealization. But it is always, and always must be to be true, an imitation of life, Nature, something that is living—something that is *felt* and understood by men.

Unfortunately, ever since the dawn of the Renaissance, art has been imitation—not of life, not of Nature, not of something that is living—but of a previous imitation. Now an imitation of an imitation is a pretty poor excuse for anything at all. And, yet, that is all that the people of the Western World have had offered to them for some six centuries, more or less. And the dose—or rather the exaggeration of the dose has been growing just about twice as rapidly as the production of books and the spread of "knowledge."

Printing, of course, in most ways, has been one of the very greatest of all mankind's blessings. But, in so far as art is concerned, printing has been one of mankind's most dire and dreadful curses. And that is, indeed, too bad, for printing itself can be, and often is, one of the very beautiful arts. And the fault is not with the printing which spreads the "knowledge" and unwittingly invites the fraud, but with the men who imitate the printed imitations and practise the fraud. Some fault must also be laid at the door of the men who gather "culture" from the printed page and call themselves "civilized," and satisfied with imitations of imitations.

Now those artists who began the Renaissance—the Revolutionaries if you will—discovered some Classic ruins, some "original" imitations. (As a matter of fact these "originals" were not so very orginal themselves, for they were imitations made for a conqueror, by the conquered, on alien soil in unfamiliar surroundings, of a previous imitation that originally meant something). Culture, as such, had reached its apogee—Civilization was setting in. Men were looking for something "new." These newly discovered imitations were different—therefore new. It became quite the thing for the Princes (both temporal and spiritual) to send "promising young men" to Rome to dig about in the ruins and bring home recollections of the ancient imitations to satisfy the waning Culture that was being metamorphosed into Civilization.

The thing spread like wildfire. Promising young men came and went from and to other places, and carried about with them the recollections of the ancient imitations, and they imitated (the imitations) to their patrons' great content, and were themselves imitated—and have been ever since. The very worst imitations of the imitations that the world has ever known are being perpetrated to-day, and especially in the United States. The information concerning

the ancient imitations and the Renaissance imitations of the ancient imitations is so very complete and so very accurate, and its teaching in the Schools is so systematically and so carefully done, that it has become almost impossible for the artist to "go wrong." And thus it is quite impossible for him to ever be right—by which, of course, one means to actually imitate life or Nature or something that is living. There is too much "teaching" of art, and not enough practice of it. There is too much training of memory and not enough encouragement of thought. There are too many "critics" who do not—and could not practice the Arts they criticise and who mould "taste" to suit their own illusions. Artists are the real historians of mankind, for what the artist makes-be he Architect, painter, sculptor, musician. litterateur-is just his own heart's interpretation of the ways and the doings and the aspirations (or the imitations) of the men of his time and place. The artist must learn to think, to study his fellowmen of his own day-not the imitations of his grandfathers and their twentytimes-great-grandfathers. The Art Societies must stop trying to make the world safe for Art-and give a bit of attention to the greater matter of making Art safe for the world. And lastly-and most important of all-the man who pays must work his way out of this "Civilization" back to Culture and refuse to be bamboozled (and satisfied) with imitations of imitations of imitations of antiquity.'

That this article should be written by an American in an American Architectural magazine is a portent of considerable moment and is worthy of more than a passing thought.

Here quite clearly stated is the creed of the modernist and although it may be criticised, it cannot be ignored.

The desire for new and more logical expression is once again illustrated in the journals of the past few months. In the Cairo industrial exhibition a definite attempt has been made to catch the spirit of the time and place and new forms appear which faintly reflect the recent exhibition in Paris, side by side with copies of old Egyptian architecture, and it is a curious fact that the two types blend in a most convincing way-largely due to the plainness of surface common to each and similarity in grouping. Germany, in spite of the difficulties created by the war, is one of the leading spirits in the new development, and the recent work there is fully illustrated and described in the Journal of the Royal Insitute of British Architects, by Dr. Hermann Muthesius. The examples given merit close study and show the varied types of design being carried out to-day by Germany, from the almost Victorian house, at Charlottenburg, to the very modern Theatre at Berlin, or the Wire-less Exhibition Hall in the same city.

In Denmark, however, the tendency is different. Here there is growing a school of Neo-classicism, another "ism," with which to load our groaning intelligentzia, and in the Architect's Journal an interesting account of this work is given by L. Marnus. "In appearance," he says, "the newer buildings seem to be less bulky and more refined." These qualities probably are due to the use of the lighter forms of building construction in use at the present time. At first sight this tendency would seem to be the exact opposite to the modern development, but all paths lead to Rome and a *logical* use of classic forms will lead just as surely as the more drastic path to ultimate success.

This change in outlook, however, can only be made with considerable sadness. A terribly efficient all steel barn has been designed, so adequate, economical and convenient that its use is bound to become general—and one must admit rightly so—yet this would appear to herald the death of the old mediaeval tradition of stone and timber, a loss difficult to justify.

It is in America where one finds the two extremes of outlook side by side. In many ways eager for innovation America still tends to "imitate imitations" —one must admit frequently with considerable success, particularly in Florida and California. And we must always remember that

"There are nine and sixty ways

Of constructing tribal lays

And every single one of them is right."

The Capitol Theatre, at New York, illustrated in the American Architect, is a most convincing example of the work of the older school and shows a magnificent sense of design and a fine knowledge of Baroque detail.

The Americans are really rather terrifying people with formulae, graphs and statistics with which to convince us of our ignorance, and the amount of space devoted to these statistics in their journals is positively amazing. One article in the American Architect on the "Architect and his Profits," contains the whole table of an architects expenditure and under the heading of "Friend Architect meet the Scaly Old Dragon 'Overhead,'" we find the following "The minute interesting if perhaps obvious advice. you quit working on a salary, you have a little dragon in your home, and if you're not a wise little St. George he will give you a wallop with his old tail that will land you in the bankruptcy court. When you start in business, watch your step George, you have declared war on the old dragon, overhead, and he'll get you if you don't watch out." Certainly a very interesting and illuminating statement in more ways than one! The list of overhead charges is worked out in such careful detail that, towel service, drinking water, charity and (tell it not in Gath) advertising are all included! This last heading is subdivided into exhibitions, publicity, advertising and donations and a note is attached, to the effect that "this item is not really enough." So this is how the American architect builds up his practice, while the British architect hides his blushes!

The American invasion in London, started by the Bush Building, continues and the New Devonshire House, by Mr. Thomas Hasting, introduced by Professor C. H. Reilly, brings New York to our very doors. It certainly appears to be a fine building but it is not old Devonshire House !

The Americans are spending large sums of money on their Stadia and they have most certainly succeeded in producing some very fine schemes. The one recently erected at the Ohio State University, illustrated in the American Architect, is an interesting example, particularly from the structural point of view, each bay of the steelwork being structurally separate from its neighbour to allow for expansion in the metal. Few buildings of importance are illustrated in the English papers, the new buildings, Rangoon Courts, by Mr. T. O. Foster, F.R.I.B.A., being probably the most noteworthy. It is classic in character, but a fine deep Indian Chajja is introduced in the cornice giving a very deep shadow so desirable in a hot country.

The "Architectural Review" contains the craftsmanship supplement and includes further illustrations of very modern French furniture, including two interiors by our old friend M. le Corbusier, in which he carries into practice the theories he expounded in "Vers une Architecture," and "Decoration d'aujourdhui." It is all very interesting but there is a very long road to travel yet before real success is achieved, so much of the work is so essentially artificial.

## THE ARCHITECT AND HIS WORK.

When we mean to build We first survey the plot, then draw the model, And when we see the figure of the house, Then we must rate the cost of the erection, Which if we find outweighs ability, What do we then but draw anew the model In fewer offices ?

Shakespeare. King Henry IV, Part II, Act I. Sc. III.

## THE NEED FOR THE EMPLOYMENT OF AN ARCHITECT.

Many people are at a loss to know when and why they require the services of an Architect, and there is a lack of public knowledge how the fullest advantage may be taken of an Architect's skill and experience when he is employed.

This article is an attempt to enlighten the minds of those proposing to build regarding the duties and functions of Architects and to explain the necessity for the engagement of competent Architects in connection with all building work.

In recent years there has been a very noticeable growth of public interest in, and appreciation of, Architecture. While this is a welcome change from the apathy of the Victorian era, there is still the undercurrent of public opinion which classes the Architect as an artist only. He is an artist, but is also a man of science and of business who is concerned with facts and figures, with Building Law contracts, prices and building materials and a hundred and one practical problems which require practical solution.

For the due and proper erection of any building the essential requisites are the adoption of the most suitable design in association with the best construction and the most economical expenditure. It is the necessity of obtaining these that demands the employment of an Architect.

In other words, the Architect in his various capacities and qualities is the professional means whereby the expenditure on any given building may

receive expert consideration; his function is the organisation of outlay in the interests of his client.

The owner will derive most benefit if, in his consideration of the projected building, the appointment of his adviser be made at an early period, and if possible, before such points as the site and the limit of expenditure are decided upon. There will thus be obtained, as regards these two dominating factors, the experience and knowledge of a consultant and technical adviser.

## THE RELATIONS OF ARCHITECTS AND CLIENTS.

A completed building is the achievement not of one person but of many, and the best results are not obtained until all parties—Client, Architect, and Contractor—have realised their respective functions. A proper understanding and mutual confidence between the Architect and his client are essential to the success of any building enterprise.

The client should consult his Architect from the very outset—if possible before he finally decides upon the building site and upon the amount he proposes to spend upon the building. He should state clearly the requirements which the building is to fulfil. He should realise that building is governed by economic laws and that to fix at the outset a maximum limit of cost together with a minimum limit of size, accommodation and standard of work, may lead to disappointment, for there is no inherent reason why the client's visionary building should coincide with his imaginary expenditure. If the limits of cost and accommedation are found to be incompatible, the client will have to face either an increase of expenditure or a modification in his requirements. The honest Architect will be able to help the client to decide which factor shall give way, the stipulated price or the proposed list of accommedation.

When a building is in course of construction, the Architect is the person in charge of the work, and all instructions from the client should be given to the Architect and not direct to the Contractor or his representatives. This procedure eliminates all risk of conflicting instructions, it tends to a greater confidence, to a mutual appreciation of responsibilities, and the avoidance of unwelcome and unexpected extra cost.

## THE ARCHITECTS SERVICES.

Building is a complex process, involving many different trades and many different interests. It is the Architect's function to guide these trades and interests into their proper channels.

On an Architect being consulted he obtains such information of the client's wishes as is then possible. He then prepares sketch drawings, based on his client's requirements, and works out approximate estimates. This process generally results in revealing many points that did not originally present themselves to the client and would not have done so until the building was in course of erection had an Architect not been consulted. It is a comparatively simple matter to deal with such matters at this early stage. If left until the building is in course of construction expensive alterations may be involved.

The client's requirements, when finally settled, are embodied in working drawings and specifications which show and describe the work to be executed, the method to be adopted, and the materials to be used. It is not possible for builders to estimate accurately from drawings and specifications only, and in all except very small projects it is customary for the work shown on the drawings and described in the specifications to be measured and put in the form of Bills of Quantities.



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The Bills of Quantities give a definite and uniform basis on which competitive tenders from contractors can be obtained. The Architect obtains such tenders and places them before the client, with any comment that his experience leads him to offer, and in due course arranges for the execution of the contract.

When the work is begun the Architect periodically supplies detailed drawings and instructions to supplement the working drawings and specifications. He also gives general supervision to the work. When close and continued superintendence is required, and especially when the work is large, a clerk of works is appointed to act under the Architect's directions.

As instalments of payment become due to the contractor under the terms of the contract, the Architect issues his certificate stating the exact amount due. Where variations from the original plans are required, they are noted by the Architect, so that in the final settlement of accounts the interests of the client are upheld.

It will be seen that a large part of the work of the Architect as designer is done before a brick is laid. But when construction has begun there is still much for him to do in the supervision of the erection of the building and in the safeguarding of his client's position. The presence of an Architect to superintend the process of construction and to secure the proper observance of the Building Contract is essentially in the interests of the Building Public.

#### ARCHITECTURAL COMPETITIONS.

1. In many large and important undertakings and in most cases where the expenditure of public funds is involved it has become customary to invite several Architects to submit designs in competition; such competitions may either be open to all Architects or a limited number may be invited to compete.

2. In either case promoters of an Architectural Competition should always, as the first step, appoint an Architect to advise them on the conduct of the Competition, to draw up the conditions and requirements and to adjudicate on the designs sent in.

This step is essential in the interests of promoters and competitors alike—to promoters it ensures sound advice on many technical problems, such as the best use of the site, the planning and elevational treatment of the building, the cost, and many other matters upon which an expert only can advise; to competitors it ensures a skilled and impartial award.

The President of the Association of Transvaal Architects is always prepared to nominate an Assessor if requested to do so.

Regulations for the conduct of Architectural Competitions have been drawn up by the Association of Transvaal Architects and may be obtained on application to the Secretary.

## THE ARCHITECT'S FEES.

The basis of an Architect's remuneration is as detailed in the Scale of Professional Charges issued by the Association of Transvaal Architects.

According to this scale, payment is calculated by means of a percentage on cost—for new works involving an expenditure of  $\pounds 2,000$  and over, the payment is 5 per cent., and for smaller works payment is on a scale graduated up to 10 per cent. where only  $\pounds 100$  is expended. Where the work involves alterations to existing buildings a higher percentage may be charged not exceeding twice the foregoing percentages.



These charges do not apply to services rendered in connection with negotiations regarding Party Walls, Rights of Light, and Legal matters generally, nor do they apply to work of a purely decorative character-the charges for these services are dependent on the work involved, and are usually settled by arrangement and mutual agreement.

It is often pertinently suggested that since an Architect's duty consists, among other things, in seeing that his client's money is not wasted, it is illogical to remunerate him on a system which makes the fees rise in direct ratio with the outlay. The illogicality is as clearly noticed, and as directly objected to, by Architects as by their paymasters, for it sometimes seems hard to an Architect to be robbed of £50 every time he, by some ingenuity of plan or construction, saves his employer £1,000. But the system prevails because it does rough justice to all parties insomuch as it is reasonable in a general way that the designer of a ten thousand pound building should be paid twice as much as the Architect of one costing five thousand pounds.

When Bills of Quantities are necessary it is customary for the Architect to advise the client on the choice of a Quantity Surveyor. \ The Surveyor's fees are customarily added as a percentage to the bill of each separate trade and paid as part of the payment to the builder. It will generally be found that this apparently additional payment is more than met by the saving effected in the regulation of the accounts which the Surveyor's work affords.

## R.I.B.A.

Members are advised that under the provisions of the Supplemental Charter of 1925, there are two methods by which a Licentiate can become a candidate for nomination as a Fellow of the Royal Institute :---

(a) By passing an Examination (see particulars enclosed). You will observe that it is necessary for the candidate to submit working drawings and photographs of some of his executed works. If the work submitted is considered by the Council to be of sufficient merit, a candidate may be exempted from any further Examination. Examinations are held at the R.I.B.A. periodically and announcements thereof are made in the R.I.B.A. Journal.

(b) A Licentiate of 60 years of age and over, who has been engaged as a principal for at least 7 consecutive years in the practice of architecture or who is or has been in a position of responsibility for the design of architectural work, is eligible to apply to the Council for nomination without passing the Examination above referred to. A candidate who desires to take advantage of this provision of the Charter can obtain the special nomination forms on application to the Secretary of the Royal Institute of British Architects, London.



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## Journal of the SA Architectural Institute

## **PUBLISHER:**

## University of the Witwatersrand, Johannesburg

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