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1925

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The South African ARCHITECTVRAL RECORD

The Journal of the Association of Transvaal Architects, the Natal Institute of Architects and the South African Institute of Quantity Surveyors.

No 38. Vol. X. JUNE, 1925. Price 1/-

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EDITORIAL NOTE.

The Editor will be glad to consider any MSS., Photographs or Sketches submitted to him, but they should be accompanied by stamped addressed envelopes for return if unsuitable. In case of loss or injury he cannot hold himself responsible for MSS., Photographs or Sketches, and publication in the Journal can alone be taken as evidence of acceptance. The name and address of the owner should be placed on the back of all Pictures and MSS.

The Association does not hold itself responsible for the opinions expressed by individual contributors.

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PROFESSIONAL TAXATION.

For the information of members the Council desire to state that following publication of the intention to levy a Union Professional Tax on Architects and Quantity Surveyors they addressed the following letter to the Hon. N. C. Havenga, Minister for Finance, and have received the subjoined reply. This matter is receiving further attention and members will be advised in due course :—

"By direction of the Council of this Association I have the honour to state that from Press Report it appears that under the Budget the profession of Architecture will in future be taxed at the rate of £10 per annum in lieu, in the case of the Transvaal of the hitherto Provincial Tax of £5 per annum. It is further noted that the profession of Quantity Surveying will be similarly taxed."

The following questions present themselves :—

1. "In the majority of cases practising architects prepare Bill of Quantities relating to

their own works and this is regarded as an integral part of the architects' profession, some times under the style 'Architect and Surveyor,' but more ordinarily 'Architect' only.

"It is presumed that architects carrying on their complete practice as above indicated will be taxed in one sum of £10 only, and that the Quantity Surveyors tax will be levied upon those persons who specialise in the preparation of quantities as apart from architecture.

2. "In the case of the Transvaal Provincial Professional Tax, hitherto partnerships of two or more persons have been taxed singly as a firm and not in respect of the individual partners. It is presumed that this precedent will continue under Union Taxation.

3. "Hitherto in the case of the Transvaal Province, the Official Receiver of Revenue has applied to this Association for a list of its members registered under the Architects' Private Act 1909, and upon this basis the tax has been levied.

"In view of the fact that under this Act all practising architects are required to be registered, this method of levy would seem to be complete and satisfactory; but in actual fact and from statistics supplied by the Municipalities of the Transvaal it is apparent that this system is open to grave abuse and injustice—inasmuch as unregistered persons performing the functions of architects for remuneration, but under other styles and titles regularly escape taxation. How greatly this abuse obtains is indicated by the Municipal Official returns which show that over 70 per cent. of the number of plans submitted for Municipal approval in this Province is the work of unregistered persons.

"It seems clear that in this circumstance the onus of the tax bears wholly upon the registered qualified practitioner who is already obliged to pay an annual subscription of membership to his Association.

"It is felt that it is not the intention of the Minister to allow the tax to be thus unevenly levied without affording some means of protection to the profession.

4. "It is respectfully suggested that the prevention of leakage of revenue and the desired protection may be secured by a minor amendment to the Local Government Ordinances regulating the submission of building plans to Local Authorities so that such will be accepted only when prepared and signed by persons taxed for the purpose including all bona-fide members of the following architectural bodies within the Union:—

"In the Cape Province—The Cape Institute of Architects and the Port Elizabeth Society of Architects.

"In the O.F.S. Province—The O.F.S. Institute of Architects.

"In the Natal Province—The Natal Institute of Architects.

"In the Transvaal—The Association of Transvaal Architects.

"and bona-fide members of the following Engineering bodies within the Union:—

"Institute of Municipal and County Engineers. South African Institute of Civil Engineers. South African Institution of Engineers.

"Alternatively the Association will be pleased if the Minister will indicate by what means the proper payment of the tax and the implied protection to the profession will be secured."

To the foregoing the Secretary for Finance replied as folows:—

"In reply to your letter of the 22nd ult. on the subject of the licences to be imposed upon Architects and Quantity Surveyors, I have the honour to inform you in regard to the points raised as follows:—

1. "Architects who prepare Bills of Quantities in connection with any work or building of which they are architects will not require to be separately licensed as Quantity Surveyors.

2. "If, however, they prepare Bills of Quantities independently of any works of which they are the architects they will be required to be licensed both as Architects and Quantity Surveyors.

3. "These licenses will be required by every person so practising. If a firm or partnership carries on the profession each individual partner must be separately licensed. This alters the law as

it presently exists in the Transvaal, and brings it into line with that now existing in the Cape and Orange Free State

4. "With regard to your suggestion that registered Architects should be protected against competition by unregistered persons, I am instructed to inform you that it is considered that this is hardly a matter for inclusion in a Licensing Bill, under which any person, whether registered or unregistered, who actually carries on business as an architect will be liable to the license duty imposed."

Competition.

The Government of Southern Rhodesia have called for competitive designs for a High School at Bulawayo, the amount available for the work including Architect's and Quantity Surveyor's fees and Clerk of Works charges being £42,000. Designs are to be delivered at the office of the Director of Public Works, Salisbury, Southern Rhodesia, on or before the 15th July, 1925.

The Government have appointed Mr. Ernest M. Powers, F.R.I.B.A., Assessor.

A copy of the conditions of competition together with site plan and particulars of accommodation required may be inspected at the office of the Association.

Mr. A. Oakley Coltman, formerly of the Town Engineer's Department, Johannesburg, has resigned his post as Building Surveyor to the East London Municipality and has accepted an advantageous engagement with the firm of Booty and Edwards, Architects and Engineers, of Singapore and Colombo. He arrived in Johannesburg on June 12th, on his way via East Coast and Bombay, Madras, North Ceylon and Colombo for Singapore, which will take him about four weeks to reach. We regret losing him from South Africa and extend our best wishes for his future.

The British Engineering Standards Association.

The South African Branch of this Association have intimated the appointment of a fully representative Sectional Committee of the Association to consider the standardisation of building materials. Also the appointment of Sub-Committees to draft specifications for asphalte roofing, asbestos, cement sheeting and expanded metal lathing. To these recommendations the Association has added bricks, steel window frames, concrete pipes, stoneware fittings, roofing slates and tiles, paving tiles, water tanks wood scantlings, wood doors and windows, eaves, gutters, down pipes, and bends as building materials for which it is thought that standard specifications are both necessary and desirable.

Members are invited to submit any additions which they consider desirable.

All communications on this matter should be addressed to the Registrar.

Uganda Railways.

In the open Competition for new Offices for the Uganda Railways at Nairobi, Kenya Colony, Mr. Gordon McIntosh, of Pretoria, was placed first and we understand he has been instructed to proceed with the work.

MUNICIPALITY OF PRETORIA.

COMPETITIVE DESIGNS, NEW TOWN HALL.

The Council invite Architects residing in South Africa to submit designs for a proposed Town Hall and other buildings to be erected on Pretorius Square, Pretoria.

Premiums of £250 and £100 will be awarded for the first and second premiated designs respectively.

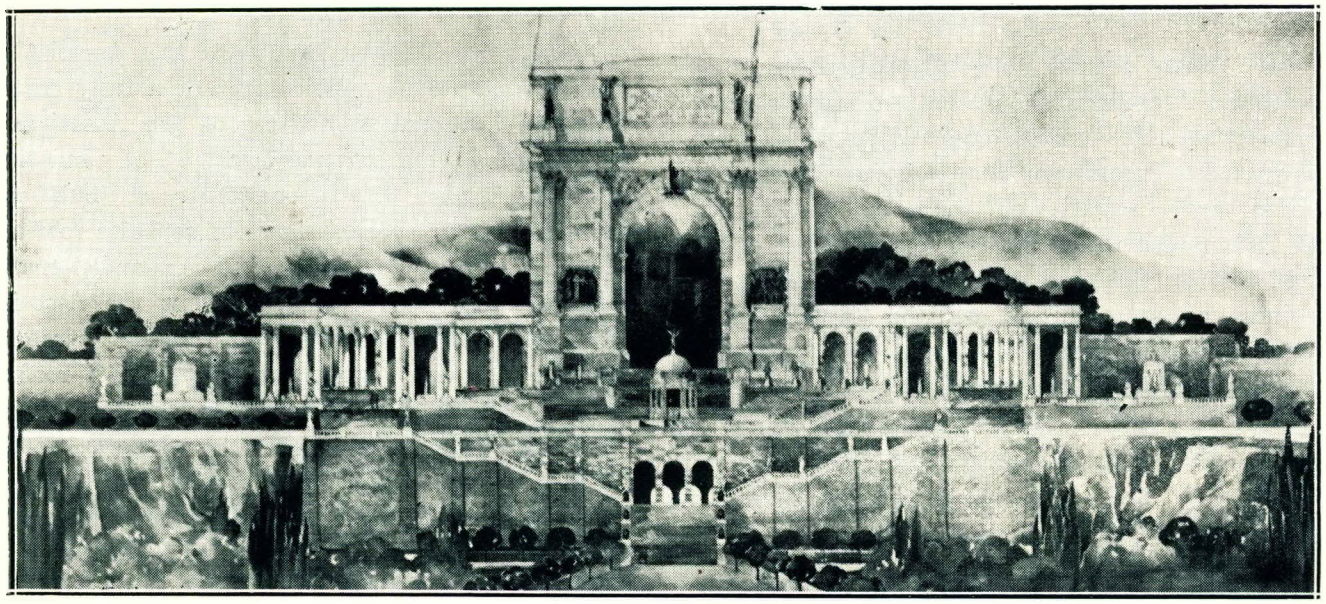
Conditions of competition, plan of site, etc., may be obtained on application to the undersigned on payment of a deposit of £2 2s. (Two guineas), which will be refunded on receipt of a bona fide design.

All designs and documents necessary for the competition must reach the undersigned on or before MONDAY, 14th SEPTEMBER, 1925, at 12 o'clock noon.

M. G. NICOLSON,
Town Clerk,

Notice No. 65 of 1925; 27.5.25.

THE HERBERT BAKER ARCHITECTURAL SCHOLARSHIP, 1925.



DESIGN PLACED FIRST AND AWARDED THE SCHOLARSHIP.
BY H. G. WARD, PRETORIA.

This Trust Fund was established in 1910 and since that date some six South Africans have benefited thereby. The Scholarship is open to any person who is a British subject of not more than 33 years of age, and who has spent a period of not less than six years in the study or practice of architecture, of which period not less than four years shall have been spent in South Africa.

The Scholarship which is of the approximate value of £250, is awarded at intervals decided by the Trustees.

Every holder of the Scholarship is required to spend not less than seven months at Rome as his principal headquarters acting under the direction of the British School at Rome. A portion of such period, may, with the approval of the Governing bodies of the British School at Rome, be spent at Athens under the direction of the British School at Athens. During the remaining portion of the Scholarship period, the scholar shall make his headquarters at London for a period of at least three months and shall continue his work under the supervision of the President of the Royal Institute of British Architects. On completion of the period of Scholarship, the scholar will be required to exhibit the results of his studies in such manner as may be prescribed by the President of the Royal Institute of British Architects. He will also be required to hold a similar exhibition in South Africa when and where the Trustees may appoint. He shall also submit to the Trustees at the completion of his Scholarship, a Thesis on a subject chosen by the Trustees.

The Examination this year was based upon the following subject set by Mr. Herbert Baker, A.R.A., F.R.I.B.A. :—

"A Propylaeum or Monumental Entrance built as a War Memorial for the passage of people on foot only, through a great retaining wall about 25 feet high on the face of a cliff surrounding a town on a kopje.

The great retaining wall is to be an integral part of the design. An open view from the top through the Entrance is to be maintained.

The ground approaching below can be considered as having an incline to the wall of about one in twelve.

Special consideration is to be given to the placing of sculpture in relation to the architecture.

Drawings to 1/8th scale with a typical portion drawn to a scale of half an inch to a foot. Special details may be drawn to any other convenient scale, and a perspective (if desired) to illustrate the design.

The Assessors, Prof. G. E. Pearse, A.R.I.B.A., F. Williamson, A.R.I.B.A., and Gordon Leith, A.R.I.B.A., reported to the Trustees as follows :—We have examined the four sets of drawings submitted to us under the above scholarship conditions. The

subject set called for a great deal of imagination on the part of candidates, and on the whole the standard of work submitted is fairly high. After careful consideration we have unanimously agreed to place the authors of the designs in the following order of merit:—

1. H. G. Ward.
2. C. S. Merrifield.
3. L. T. Obel.
4. G. E. Le Sueur.

Following the placing of the competitors, we considered it advisable to interview the first placed candidate. At that interview Mr. Ward satisfactorily answered all questions put to him, and we have no hesitancy in recommending him as a highly promising student and one who would unquestionably take the fullest advantage of the facilities for study and research offered under this scholarship.

The following is our general criticism of the designs submitted.

(1) Mr. Ward has approached the subject with a full appreciation of the possibilities of the site and its environs. His conception while not original shows considerable imagination, and is full of life and dignity. The monumental Arch is treated with a good sense of proportion and is dignified, but could have evinced a more definite monumental character.

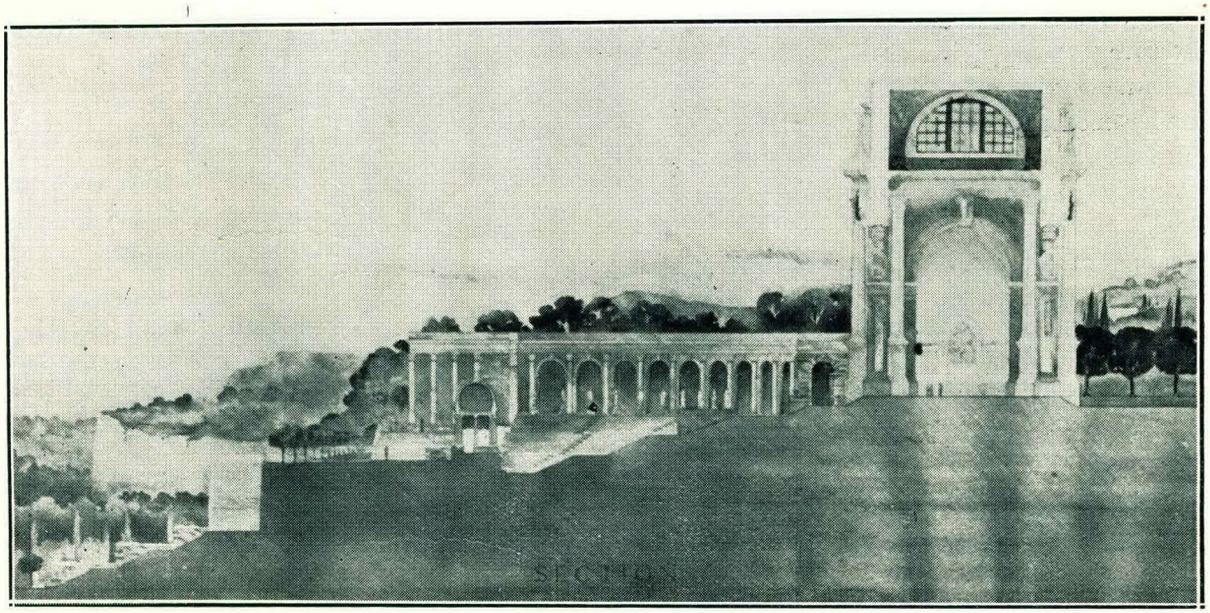
The colonade surrounding the theatre is weak and should have been treated with simplicity and as a continuation of the podium of the great Propylem. The amphi-theatre and the drive at right angles to the main axis are not necessary adjuncts, and the approach would have been better if the stairway had receded into the terrace, and not projected The draftsmanship rendering and general presentation are excellent.

(2) The scheme submitted by Mr. Merrifield is a simple straightforward design, solemn and restrained in character. The conditions and possibilities of the site have not received sufficient consideration. The elevation to the town has been very well considered, and the memorial character well expressed. The approach-parts of which are distinctly pleasing suggests a water frontage rather than an approach to the monumental entrance on the face of a cliff. On the whole a very creditable scheme showing originality, but hardly suitable for the site conditions indicated by the subject.

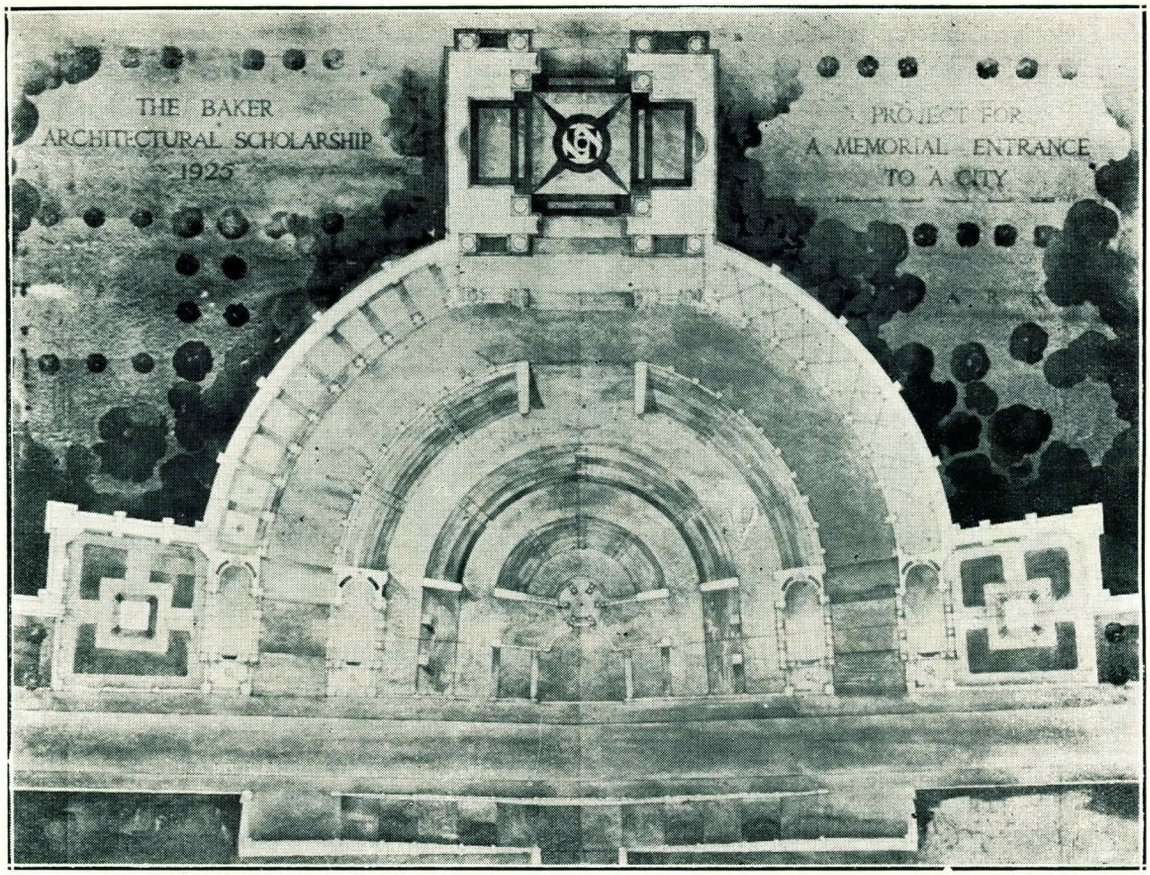
(3) In Mr. Obel's scheme, the site conditions have received little or no consideration. The drawings, which show an enormous amount of earnest work, are hard and mechanical. The nature and general character of the design suggest a great civic enterprise rather than a monumental entrance built as a war memorial.

(4) Mr. Le Sueur's scheme is a somewhat elementary attempt in no way approaching the standard required for consideration under the scholarship conditions.

The following description accompanied the first placed design:—



H. G. WARD, PRETORIA.



H. G. WARD, PRETORIA.

The subject for the Baker Scholarship this year presented great scope for an imaginative treatment.

The fact that the requirements were so briefly described, and that competitors were not bound to any fixed dimensions, locality, or particular style of architecture, suggested to me that a very imaginative treatment was called for.

Under modern conditions it is unnecessary to design a city wall for defence against invasion as in the periods when battlements, moats, etc., were required.

Taking into consideration the natural features of the site, I concluded that the ideal solution of the problem would be found in the adoption of a Triumphal Arch and an Amphi-theatre upon the rocky cliffs of a city facing the Sea.

Consequently I turned to the Roman Monuments for inspiration.

The Architectural Treatment.

A road between an avenue of trees on the main axial line leads to the steps at the base of the cliff, these are flanked by pylons on which bronze lions are placed.

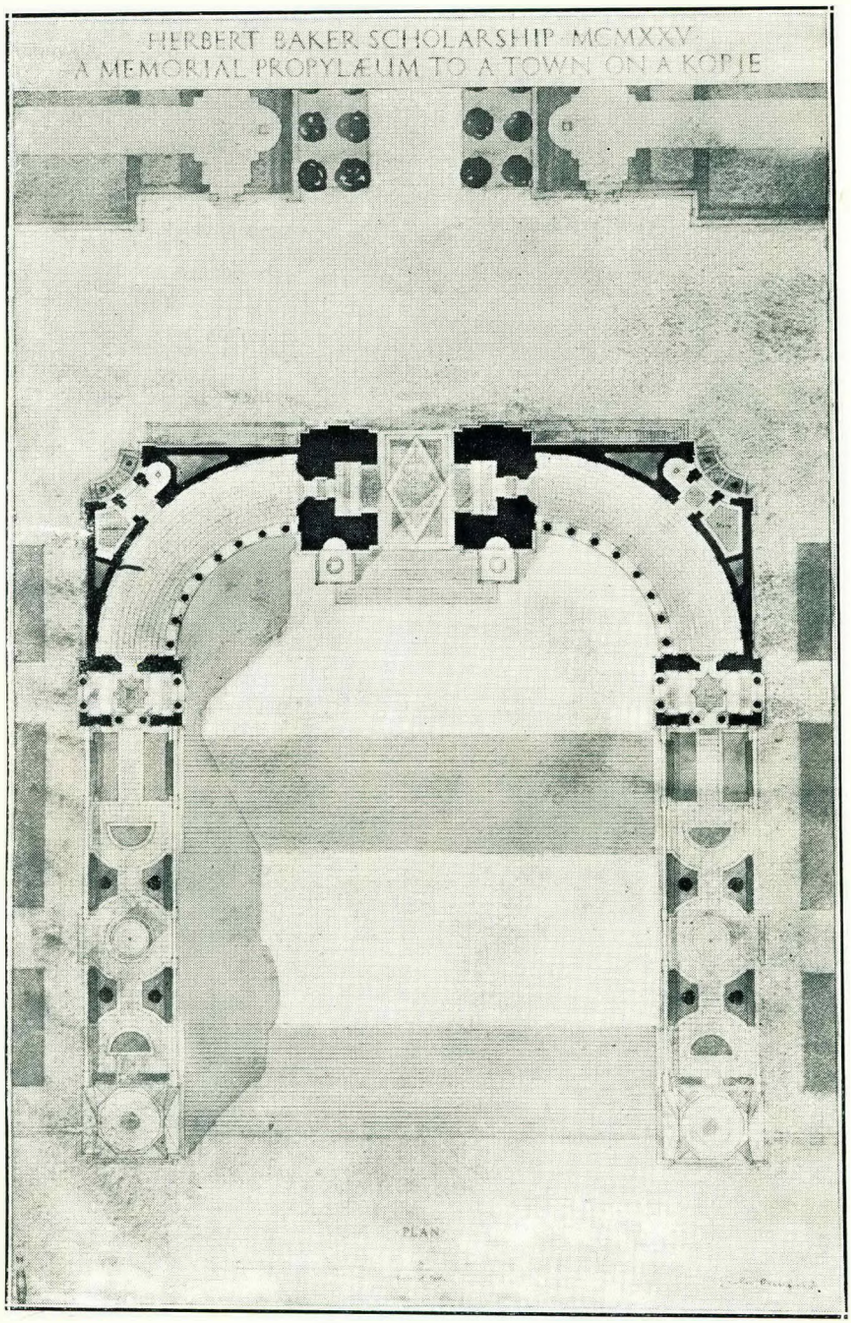
A shelter is planned on the third landing treated with three arches, and a cartouche, over the centre keystone, forming a pleasant feature from the road below. On either side of this landing steps lead to the top of the cliff.

The retaining wall of the steps has a rockfaced granite base with triliphon stones at the corners as in the Roman manner (at Baalbec).

The superstructure is strengthened by buttresses which give a feeling of verticality and form pedestals to the Corinthian balustrade.

At the top of the cliff, off the two landings, is planned a high level road (owing to the limited size of the paper the road and steps are not shewn their full width), for the convenience of visitors to memorial services, also affording a pleasant drive around the city. Two entrances are planned opposite with memorials, shelters, ponds and fountains.

This treatment when viewed from the top of the steps, suggests a feeling of quietness and solemnity.



DESIGN PLACED SECOND. C. T. MERRIFIELD, CAPETOWN.

The memorials flanking the entrance are symbolical of sacrifice and form a suitable junction between the normal city wall and the shelters.

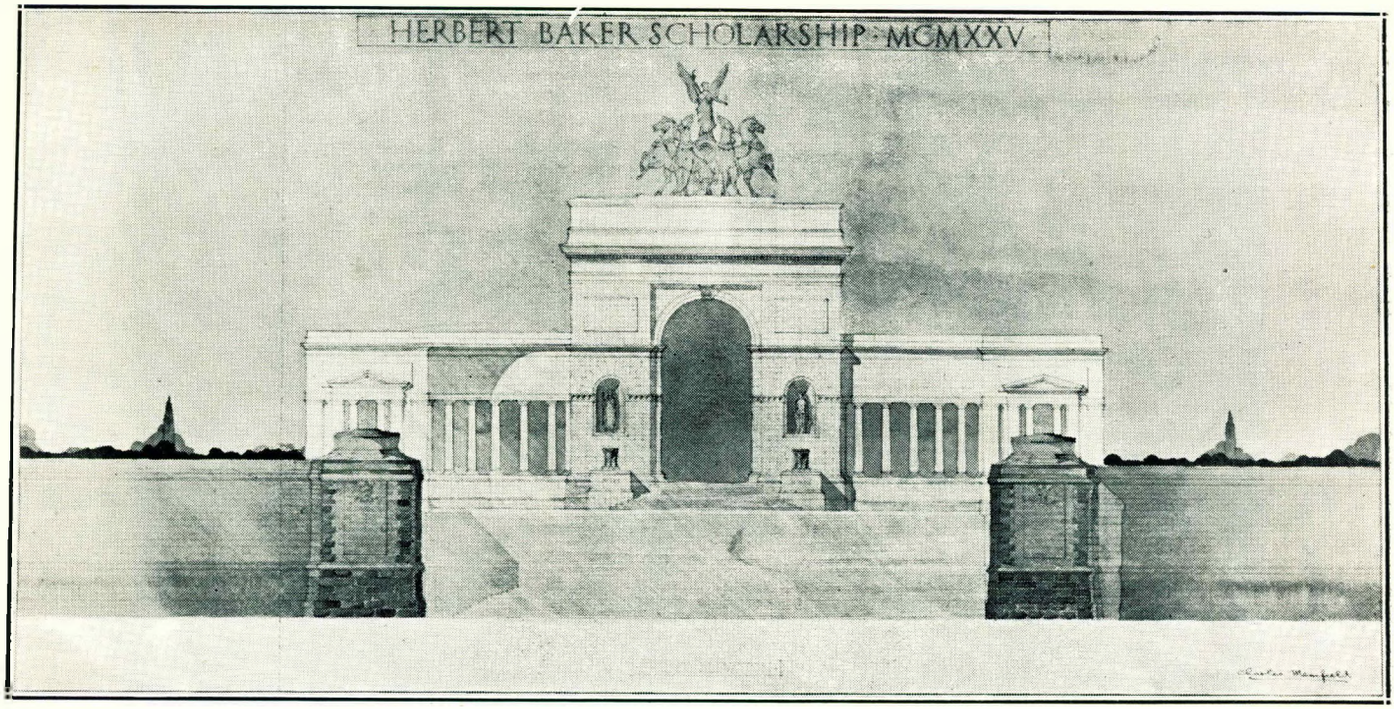
The shelters are planned on an axial line with seats and drinking fountains, and form a shady resting place; they also form a suitable terminal treatment to the Cloisters on the upper promenade of the Amphi-theatre.

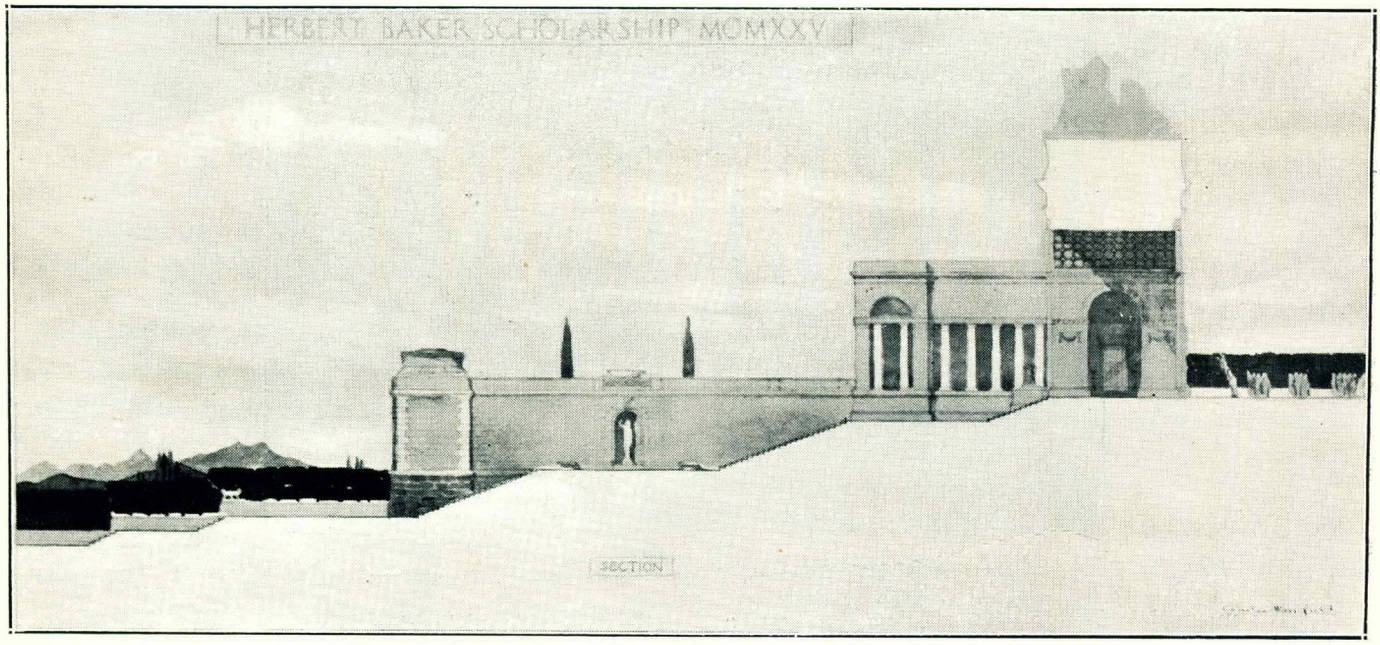
The Cloisters serve the primary purpose of giving shelter to the people during a storm and also give the required continuity of line and a certain amount of severity.

The Amphi-theatre is planned with a Rostrum, and three tiers of seats easily accessible to the public from all points.

The treatment of the Amphi-theatre with its perspective, curves of the seats, and shadows, tend to give warmth and vigour to the general scheme.

The Amphi-theatre is planned in the shade of the Memorial Arch, and provides an ideal place for memorial services, being semi-circular on plan it would inspire a mutual feeling of unity and solemnity to the occasion.





DESIGN PLACED SECOND. C. T. MERRIFIELD. CAPETOWN.

The Memorial Entrance proper is modelled on the Triumphal arch.

Having studied the finest Roman arches I elected to be governed by the proportion and composition of the facades of the Arch of Titus, Rome; and the Arch of Peace, Milan.

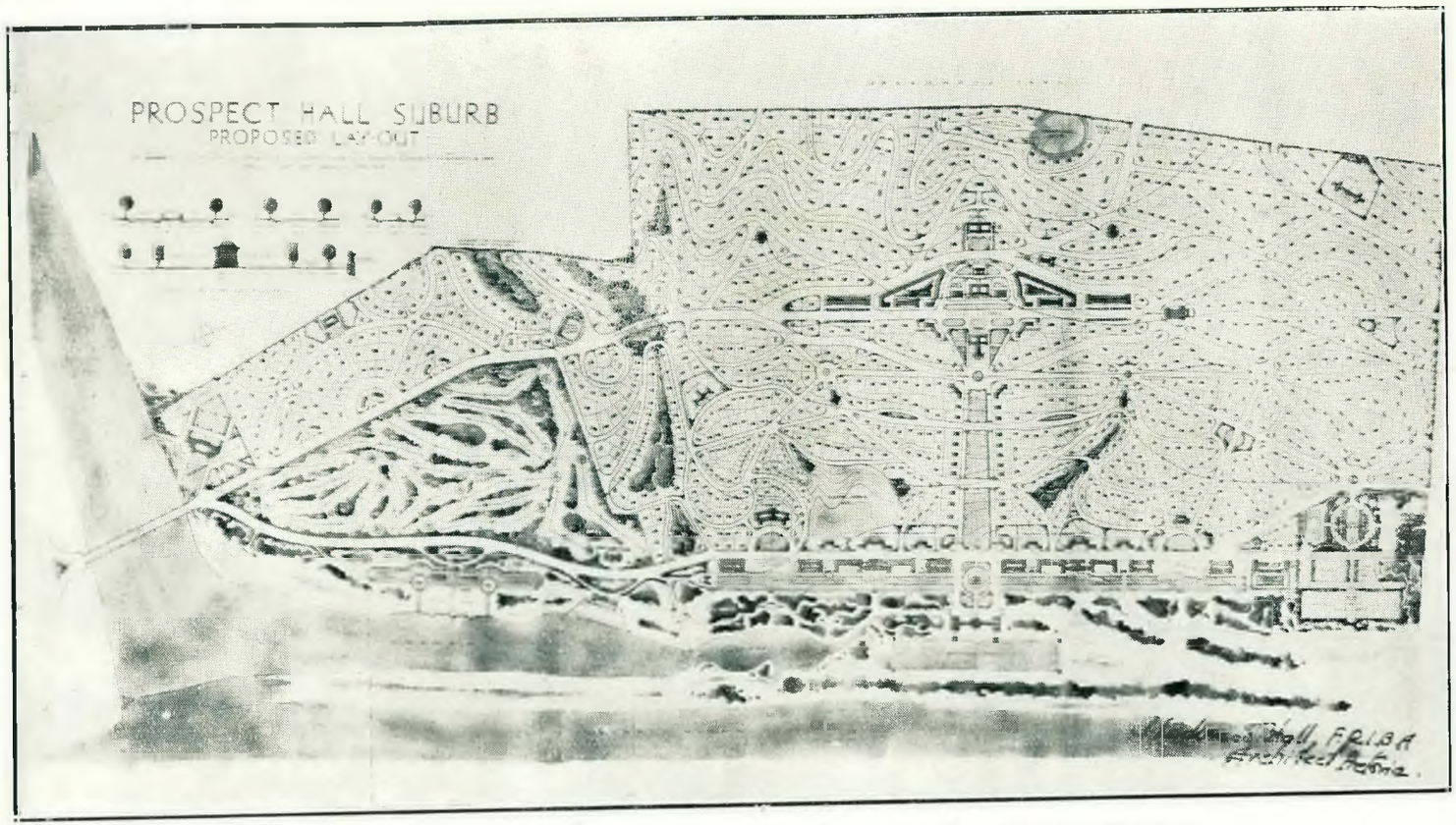
The Trilithon stone base is of dark granite, the superstructure up to the springing of the arch is of finely dressed light grey granite.

The Corinthian columns are of marble and give refinement and dignity to the general masses of plain surfaces.

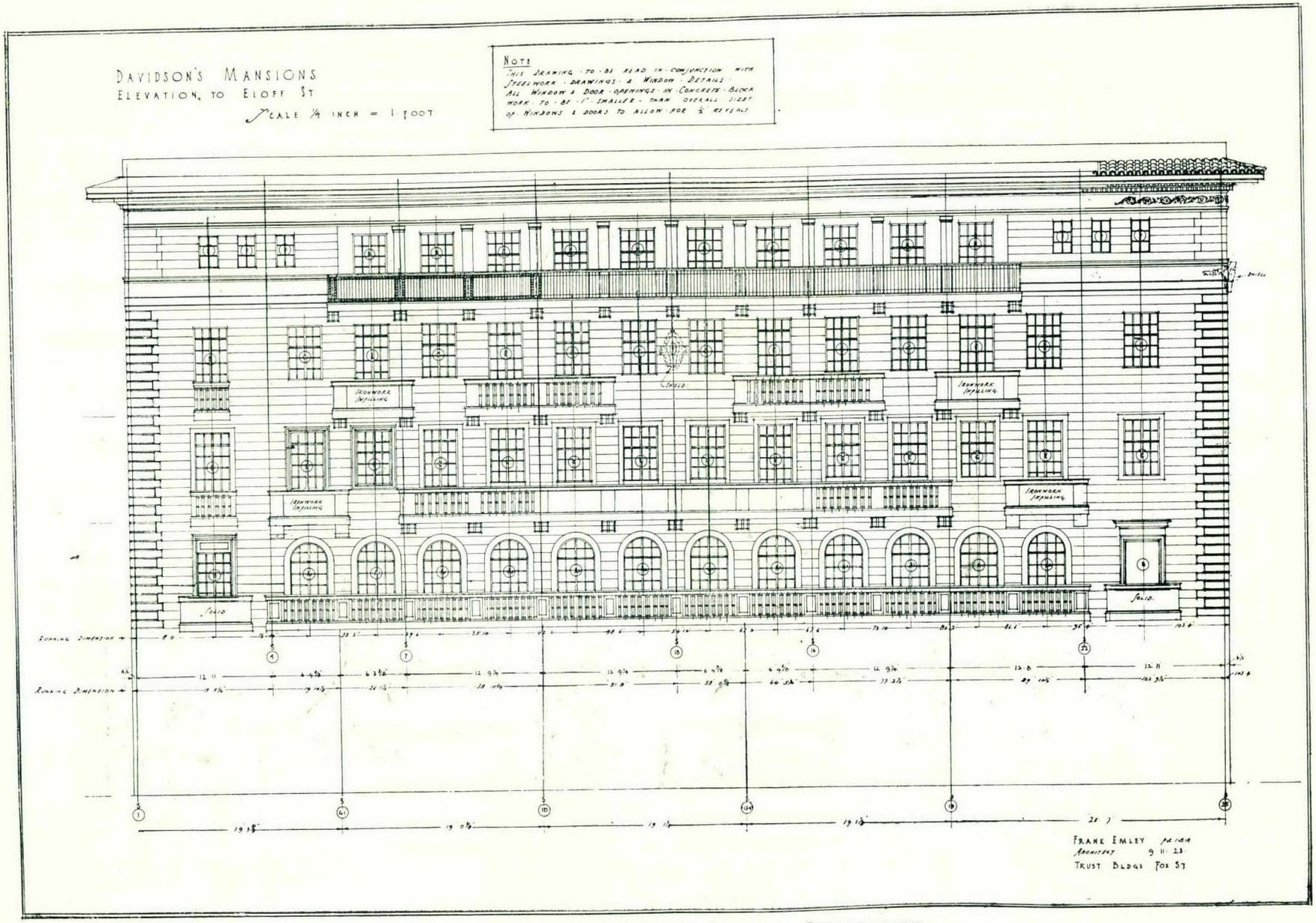
Above the granite base the whole of the facade is faced with marble.

In the centre of the attic is a memorial panel.

The inscription in Roman lettering shows how truly decorative lettering may be, if suitably applied to architecture.



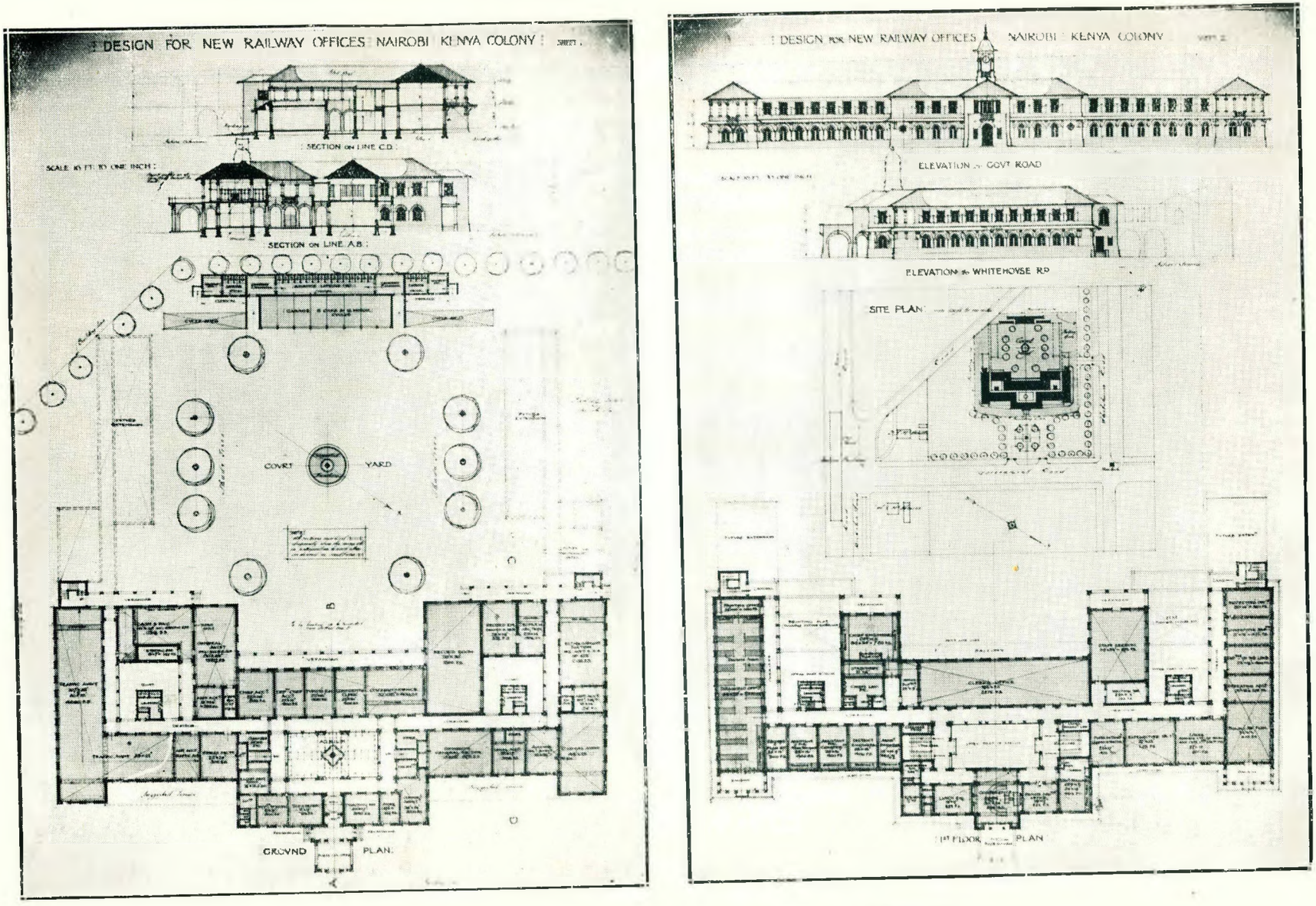
First premiated Design for the lay-out of Prospect Hall Suburb, Durban.
By J. LOCKWOOD HALL, F.R.I.B.A. Pretoria.



A WORKING DRAWING, DAVIDSON'S MANSIONS, JOHANNESBURG.
F. EMLEY & F. WILLIAMSON, F. & A.R.I.B.A. ARCHITECTS.



DAVIDSON'S MANSIONS, ELOFF STREET, JOHANNESBURG.
F. EMLEY & F. WILLIAMSON, F. & A.R.I.B.A. ARCHITECTS.



NEW RAILWAY OFFICES, NAIROBI, KENYA COLONY.

FIRST PREMIATED DESIGN. F. GORDON McINTOSH, ARCHITECT, PRETORIA.

The internal treatment of the Memorial Arch takes the form of a small Sculpture Hall. The centre area is square with a groined cross vaulted ceiling. The weight of the vault is concentrated on the massive piers. In front of these piers are detached Corinthian columns. The columns although hardly necessary as structural features appear to support the vault.

The entablature is continuous round the whole area. The common and questionable practice of the Romans of stopping the entablature against the wall, has not been blindly followed as it was in the later Renaissance.

The floor is paved with black and white marble designed in conformity with the vault over. The recesses flanking the central area form fitting places for sculpture, and provide massive piers for the support of the superstructure. The ceilings to these recesses are barrel vaulted, deeply coffered with large octagons and small lozenges.

The whole of the interior is lighted by two clearstorey windows, which throw a myriad of rays of diffused light on the sculpture in the recesses. These windows are of bronze and enriched by moulded architraves as in the Roman Baths, and they add to the splendour of the interior.

Notes on the Sculpture.

The central feature of the Grand Staircase is a cartouche flanked on both sides by the steps up the cliff, on each buttress is set a piece of sculpture, starting with a small group on the first pedestal and continuing up the steps with single figures of white marble which add to the splendour of the staircase. The corner figures are slightly larger and more imposing than the others.

On the pedestal to the balustrades of the small retaining walls in front of the Memorials and Shelters are marble figures. These figures viewed in conjunction with their respective back grounds lend quiet dignity to the Main Entrances.

The triangular composition of the two small groups and the urns on the memorials, strengthened by the terminal figures, binds the junction of the walls and shelters together.

The pedestals to the balustrades in front of the Rostrum are not enriched with sculpture, the plain balustrades accentuate the perspective of the Amphi-theatre.

On the upper promenade surrounding the Amphi-theatre are placed figures of valour and historical interest.

Viewed from the Rostrum the figures will appear in the centre of the Cloister Arches and vaults.

The dome of the Rostrum is crowned by a winged figure in bronze which is a feature of the Amphi-theatre and will be seen from all points.

On the raised dais at the foot of the Memorial Arch are four large bronze lions, symbolical of strength and courage.

On both facades of the Arch between the columns are placed bronze groups depicting the news of war and of peace respectively.

These groups give relief to the plain surfaces of the masonry, and tend to strengthen the base. The spandrels are enriched with marble figures in high relief, of Heralds proclaiming victory. On the keystone is placed a bronze figure of Victory over the Eagle with her sword piercing its wing. Above the cornice, on pedestals, are two marble figures of peace flanked by figures representing Prudence and Resignation. This sculpture gives verticality to the horizontal mass of masonry of the lofty attic.

In the Hall is placed appropriate groups of sculpture such as "National Pride" and "Resistance" (illustrated on the half inch detail). The walls are enriched by frescoes.

The vault is modelled in low relief symbolical of the League of Nations, depicting Justice and Arbitration as opposed to Force.

The Drawings.

The project consists of a plan, elevation, a Section and $\frac{1}{2}$" detail. The drawings are accurately prepared, rendered and suitably illustrated without the aid of a perspective.

WHAT IS ARCHITECTURE?

BY R. D. MARTIENSSEN.

"Beauty is truth, truth beauty that is all ye know on earth and all ye need to know."

Keats.

Throughout the history of the human race, Architecture, the mother of all arts, has supplied shrines for religion, homes for the living, and monuments for the dead.

Primeval man felt a need to express his joy in song and dance, he felt a need to explain himself by those hieroglyphics, which gradually diverging ultimately developed into Painting and Literature. Writing was the outcome of his desire to record his actions, music was pleasing to his

senses, he appreciated beauty. These satisfied his spiritual wants and provided food for his senses. His physical needs were of more vital importance. Food and shelter were essential, and shelter was the primary function of architecture; hence architecture arose from man's need and is of paramount importance in his earthly existence. To trace the development of man's building is the work of the historian, but the critic should consider the influences which moulded the plastic material at man's disposal from the Egyptian mastabas of 5,000 years ago to the cathedrals of to-day.

To find a satisfactory definition for an art so complex, composed as it is of so many minor arts and sciences, is no light task. Professor Lethaby has said that architecture is building touched with emotion. This is not a definition in the strict sense of the word, yet it serves to show us that architecture is more than mere building. Architecture is the expression in concrete form of an ideal. The statement that architecture is frozen music does not satisfy the logician, yet a definite relationship does subsist between music and architecture. Although in one sense they are the most separated of the arts, in another they are the most closely related.

For music being purely in time, and architecture being purely in space, each is convertible into the other, and that which in music is expressed by means of harmonious intervals of time and pitch, successfully may be translated into corresponding intervals of architectural void and solid, height and width. Again, they alone of all the arts are purely creative since in them is presented not a likeness of some known idea, but a "thing-in-itself" brought to a complete and distinct expression of its nature. Music is subjective, mental, of one dimension, it is abstract speaking directly to the soul of the listener in a simple and universal language. "Music alone of all the arts," says Balzac, "has power to make us live within ourselves." Architecture is objective, physical of three dimensions. It exists primarily for the uses of the body, and attains to aesthetic expression only in the reconciliation and fulfilment of many conflicting practical requirements.

Architecture is the most useful of the fine arts, and the noblest of the useful arts, it is the art which seeks to harmonise in a building the requirements of utility and beauty. Buildings in which strength and stability alone are sought are properly works of engineering, and it is only when such construction is accompanied by the idea of aesthetic delight that the building takes its place among works of architecture. Architecture naturally falls under two main divisions, the material and the aesthetic. It is in the material needs of man that we find the function of a building expressed. It is the material requirements of a building which is the primary consideration, it is the material factor which governs the plan, the treatment and the entire expression of the edifice. The embodiment of purpose or functional expressiveness, then, is of vital moment in every building which is true architecture.

The popular conception seems to be that architecture is mere building, protection for man dictated purely by utilitarian requirements, and garnished with applied and meaningless ornament. For an engineering student recently remarked "The design of buildings should be left to the engineer, and the architect employed afterwards to stick on his bunches of fruit and flowers." Nothing is farther from the truth, for the underlying expression of a beautiful building is one of unity. It must express without hesitation its function, and without the complete feeling of oneness in its composition that expression would be weak and faltering.

The function of the pyramids was protective. Was there ever a fuller, a nobler expression of truth than in those colossal tombs? Thus in the expression of purpose is the spirit of the age embodied in man's erections. The Greek temple similarly reflects, in its restraint, in its perfect proportions, and in its unsurpassed detail, the culture of its builders.

"The day is coming," wrote Ruskin, "when we shall confess that we have learnt more of Greece out of the crumbled fragments of her sculpture than even from her sweet singers or soldier historians."

The expression of the typical Roman building is aggressive—it is bombastic, not convincing. For example, the Arch of Constantine is splendid, but not beautiful. The truth, which was expressed in terms so simple and so sincere in the Egyptian pyramid and in the Greek temple, is lost in the striving for grandeur, it is hidden by the ornament which is applied without feeling or function. In this triumphal arch the columns are superfluous. In an attempt to justify their existence, a statue has been placed above each one, but the columns

are totally unnecessary and therefore their application is illogical. What is illogical is never permanently pleasing, and Constantine's arch would have been no less triumphal, but more truthful, and therefore more beautiful, had the columns been omitted. The columns may be justified to a very small extent as purely decorative features, for Sir Christopher Wren, philosopher and architect, once attributed man's delight in columns to a pre-natal disposition acquired from ancestors who worshipped in the groves of the forests.

The desire to produce something novel, has, throughout the ages, resulted in attempts to overturn what tradition has established. but these attempts are usually repulsive to the average mind, and are the inevitable appendices to any particular period of architectural history For example if a column taper at all, it should taper upwards as a tree. To make a column taper downwards is a reversal of nature, and as such is abhorrent to all normal people. An exaggeration of nature is permissible in art, there may be beauty in exaggeration, but there never can be anything but ugliness in reversal It was the passion for Rightness that enabled the Greeks to produce the perfection of Beauty, for as Ruskin says, "The Greek rules over the arts to this day, and will for ever, because he sought not for beauty, not first for passion, or for invention, but for Rightness." The attainment of beauty is unconscious, it is a corollary to the endeavour to express truth, but beauty is susceptible of mathematical analysis, and obeys mathematical laws. although the artist has "followed the rules without knowing them." As Helmholtz says, "No doubt is now entertained that beauty is subject to laws and rules dependent on the nature of human intelligence. The difficulty consists in the fact that these laws and rules, on whose fulfilment beauty depends, are not consciously present in the mind of the artist who creates the work, or of the observer who contemplates it."

Regarding architecture in its broadest sense, the writer considers the following definition, deduced from his foregoing remarks, to be a reasonable solution.

"Architecture is building which attempts to satisfy, completely and at once, the practical and aesthetic needs of man." It is summed up in Longfellow's words:

" . . . Ah, to build, to build!
That is the noblest art of all the arts.
Painting and Sculpture are but images,
Are merely shadows cast by outward things
On stone or canvas, having in themselves
No separate existence, Architecture,
Existing in itself, and not in seeming
A something it is not, surpasses them
As substance shadow."

SOUTH AFRICAN INSTITUTE OF QUANTITY SURVEYORS.

Minutes of the Second Council Meeting (1925 Session), held at the Scientific and Technical Club, Johannesburg, on Friday, 1st May, 1925. at 3 p.m.

Present—Messrs. F. D. Hickman (President), W. E. Puntis (Vice-President), E. B. Farrow, G. E. Howgrave-Graham, D. J. Laing, T. Moore, H. Rowe-Rowe, A. W. Springthorpe, S. Waters and A. Loots (Secretary).

Minutes of Previous Council Meeting.—Read by Secretary. Proposed by Mr. Moore, seconded by Mr. Rowe-Rowe, that these be confirmed with following amendment. "Include the name of Mr. T. Moore with those of Messrs. Hickman and Farrow as constituting the Sub-Committee for the preparation of a booklet on Quantity Fees."

Col. Puntis stated that whilst at Durban recently he was asked by Mr. W. G. Thompson to convey to the Council his appreciation for the Council's prompt action in connection with the Pietermaritzburg Housing Scheme.

Affiliation with Surveyors Institution.—Decided to send letter of acceptance to Surveyors' Institution as drafted by Secretary with additional clause asking that a Syllabus of examination be sent which the Institution consider should be set by the S.A.I.Q.S. for admission to membership. Also to suggest that the feeling of the Council is that the examination for the P.A.S.I. in England would meet the case here.

Further to state that the second portion of Condition 5 (re Non-admittance to membership unless employed in a professional capacity) of the Institution's letter of the 11th November last has always been adopted by this Institute in connection with the election of members.

The President and Secretary were empowered to draft and forward this letter.

Architects' Act.—Mr. Cowling's letter having reference to the extra copies of the revised draft Act and the President's reply were read and discussed.

The Secretary was instructed to write the Registrar, A.T.A., asking for an approximate estimate of the cost of these before placing the order.

Revision of Standard System.—The Secretary's letter to Mr. Cowling, dated 9th April, 1925, was read, and it was decided to await Mr. Cowling's reply.

Conditions of Contract.—Mr. Moore's letter of the 20th March, 1925. was read and discussed, and it was decided to obtain copies of the New Conditions of Contract and circulate them amongst the Council for attention.

A vote of thanks was proposed and passed to Mr. Moore by the President for the time and attention he had devoted to this matter.

Surveyors Fees.—This matter was left in abeyance as the Sub-Committee, owing to pressure of other work, had not yet had time to deal with the matter.

Newspaper Article on Quantity Surveying.—Mr. Hickman stated he had not yet had time to attend to this, and the matter was left in abeyance.

General.—(a) A letter had been received from the Secretary of the A.S. & T.S. re Grants in aid of Research.

Decided to reply the matter did not apply to this Institute.

(b) Further donations in response to the President's appeal for funds were acknowledged and a vote of thanks passed to the donors. A full list of donations received to date are appended.

(c) The question of the Professional Tax was brought up and discussed; decided to leave the matter in abeyance pending the Governments' action.

(d) A letter dated March 25th, from Mr. W. Langton to the President tendering his thanks and appreciation of the work carried out by the Council of recent years was read and duly acknowledged.

Donations received in response to the Presidents Appeal for Funds.

N. T. Cowin, 10 -; J. C. Cowling, £5; E. B. Farrow, £3 12s.; N. Foulds, £1 1s.; G. E. Howgrave-Graham, £1 1s.; W. Rhodes-Harrison, £2 2s.; F. D. Hickman, £1 10s.; E. Hustwick, £2 2s.; H. G. Labdon, £1 1s.; D. J. Laing, £1 10s; W. Langton, £2 2s.; D. A. McCubbin, £2 2s.; T. Moore, £15; W. H. Priestly, £2 2s.; W. E. Puntis, £2 2s.; H. Rowe-Rowe, £1 1s.; A. W. Springthorpe, £1; W. G. Thompson, £5 5s.; G. E. Turner, £4 3s.; S. Waters, £1 1s.

R.I.B.A. Diploma in Town Planning.

The Council of the R.I.B.A., on the recommendation of the Board of Architectural Education, have resolved to accept a modified examination in the case of approved candidates from the Dominions until it is possible to make arrangements to hold the whole examination overseas.

The Council have decided:—

(1) That the Thesis required under Section 2 of the regulations (see form of application) shall be dispensed with and that the modified examination shall consist of the written examination; the candidates being required to make application in the usual way, namely, by submitting in support of their applications:—

(a) An original study illustrated by sketches of an existing town or part of a town.

(b) An original scheme for site planning, town planning or town development with a description.

(c) A written thesis on a subject appertaining to town planning, accompanied by a plan or plans.

(2) That the written examination shall be held under the auspices of the local Dominion Allied Society. The question papers to be sent from the R.I.B.A. and to be practically the same as those used for the examination held in London.

(3) That the examination work of the candidates shall be sent to London for adjudication by the Examiners.

(4) That the R.I.B.A. Town Planning Examiners shall be empowered to require candidates to submit, with their examination work, complete drawings of a scheme.

There would not, of course, be time to hold the examination under this scheme this year, i.e., 1925, as it will be necessary, in view of the fact

that the same examination questions will be used, to hold the examination overseas and in England as far as possible at the same time of the year.

I shall be glad if you will let me know whether you wish to conduct the examination on these lines. If you desire to do so, I would suggest that an announcement be made drawing attention to the fact that the examination on the lines indicated above will be held in 1926. Candidates would, of course, in the first instance be required to send their application to be allowed to sit, to England.

R.I.B.A. Prizes.

As a result of the R.I.B.A. Conference on Prizes, the regulations for the Prizes and Studentships have been largely revised. For example the competition for the Tite Prize and the Soame Medallion or the Victory Scholarship are held in two stages; there are preliminary and final *en loge* competitions to be held in London and in the provinces in England where necessary. This will at present make it impossible for South African students to compete for these particular Prizes. The same difficulty arises in the case of the Owen Jones Studentship. From the regulations, it is noted, it would be possible for South African Students to enter for the competitions for the following Prizes, provided that they have the necessary qualifications:—

The R.I.B.A. Measured Drawings Prize and the Pugin Studentship (awarded in alternate years).

The Henry Saxon Snell Prize.

The R.I.B.A. (Alfred Bossom) Travelling Studentship.

The Grissell Gold Medal.

The Godwin Bursary and Wimperis Bequest.

It is proposed to hold an Intermediate Examination and a Final Examination on behalf of the Royal Institute of British Architects at a date to be decided upon towards the end of the current year, providing sufficient candidates offer themselves. Persons intending to sit for either of the foregoing examinations are requested to communicate immediately with Mr. Ernest M. Powers, F.R.I.B.A., Hon. Secretary for the Royal Institute of British Architects in South Africa, Southern Life Buildings, Smith Street, Durban.

It is published for general information that all communications on matters concerning the Royal Institute of British Architects in South Africa should henceforth be addressed as above.

In the open competition for the lay-out of Prospect Hall Suburb of Durban, the Assessors, Messrs. Chick and Bartholomew, have placed first the design submitted by Mr. J. Lockwood Hall, F.R.I.B.A., Assistant Architect, Public Works Department, Pretoria The winning design is illustrated in this issue.

In the open Architectural competition for new offices, etc., for the Uganda Railways at Nairobi, Kenya Colony, the design submitted by Mr. F. G. McIntosh, of Pretoria, was placed first. In another part of this issue we have pleasure in illustrating the winning design, and have to regret that the promoters so far have not seen fit to provide a copy of the Assessor's Award.

Speaking at the Association Dinner on the 13th inst,, the President, Mr. G. S. Burt Andrews, facetiously referred to a new order in architecture namely, that a competitor who submitted first premiated designs in two successive competitions was known as a "Plus two" Architect.

The following letter from Mr. J. Moore, 20, Provident Buildings, Fox Street, Johannesburg, Secretary to the Master Builders and Allied Trades Association, Witwatersrand, has been addressed to the Association and by direction of Council is published for the information of members:—

"I have to inform you that cases are constantly occurring where Architects are not discouraging the tendency of clients to carry out work without quantities above the agreed amount of £1,000, with the 10 per cent. margin.

"Our members have a real grievance, in that they find after refusing to tender for the work indicated without quantities, that contractors outside the Association are carrying out the work.

"It has also been brought to my notice that when our members have refused to tender through certain Architects because of this rule regarding quantities, they have been told as an inducement to tender that other Master Builders of this Association were tendering for the work, which was not the case.

"I shall be glad if you will bring this matter to the notice of your members, as my Association feels that they will realise the difficulties of conforming to standards within our organisations if certain Architects do not give us the support we expect in upholding the principles observed in the trade."

RECENT PRACTICE IN COLD STORAGE CONSTRUCTION.

PART IV.

By E. H. WAUGH, A.R.I.B.A.

In the last article the system of blowing the chilled air past the expansion pipes was very fully described. It was seen that the brine spray falling over the expansion pipes dropped over the latter down into the brine tray on tank at the bottom whence it is pumped up to the top into the sparge pipe for re-use. This sparge pipe is about 2in. diameter and is simply slotted right along the top, and the brine overflows over the slot. The air which is forced through by a fan comes through at a great velocity and in practice it is found that a small quantity of the brine is blown beyond the expansion pipes into the air duct, which conveys the air to the room. Now, this brine is not wanted in the duct and still less in the room. To prevent this as much as posible sloping boards are arranged which get thoroughly wetted with the brine spray. As some of the spray will pass even the sloping board and get into the duct, it may be necessary to arrange a second sloping board. This even may not suffice and so it is desirable to make the *bottom* of the duct to act as a gutter and so make it that the spray collected on the surfaces of the duct will run down to the bottom and should be conveyed back to the brine tank.

These wet surfaces on the duct while giving rise to certain removable difficulties are in themselves of great cleansing effect on the air. It has been shewn that microscopical impurities, particles of meat or fruit, bacteria, moisture from workmens' breath, etc., are given off in the storage room. These wet surfaces make fine arresters for these microcosmo and catch them and the sloping boards and drains carry them back to the tank. The writers own observation shows that the sloping boards become a dirty brownish red in time in meat rooms, which indicates that there is a distinct cleansing effect. This cleansing is of real value and is particular to the forced air system advocated in these articles. The older systems already referred to crib this and the meat from a forced air room with brine shows a very much brighter and fresher appearance than otherwise obtained. In the older systems there is a tendency for the impurities to be caught by the surface of the meat and while it is infinitesimally thin it takes off from its appearance and when meat is thawed it is apt to show as a dirty scum. This is avoided in the forced air cum brine system.

The fan which delivers the air to the cooler battery of pipes runs at a high velocity. In small chambers, up to say 10,000 cubic feet, this fan may be of the well known propeller type with fan of eight blades often dished to help the discharge. Any fan used for refrigerating on this system must deliver at an air velocity of from 1,200 to 1,500 lineal feet per minute or about 12 to 15 miles per hour. The reason for this is to push the air past the expansion pipes and the baffle plates in the cooler chamber and along the air ducts. The pipes and the baffles present great obstruction, when the chamber is larger than about 10,000 cubic feet the ordinary propeller type of ventilating fan is not equal to the task. It also has to be run at a high speed to obtain the discharge per minute and this high speed is a detriment, and it generates friction and therefore heating of the air, while this may not be noticed it is worth consideration. Propeller fans are only suitable for use also against a given resistance in the air ducts. This resistance increases with the length of the duct. It is not desirable to use propeller fans for a greater resistance than ·4 inch Water Gauge. (It must be noticed that the resistance is measured by the pressure caused which is capable of holding up water in a tube to a certain height—in the case mentioned less than half an inch in height). Where the resistance is greater, which is likely to be in a larger room, the Water Gauge pressure will rise to ·7 inch to one inch or even more. In such a case another type of ventilation fan is required.

As the power required for driving a fan increases as the square of the speed a slow and larger fan of another type is desirable. That is, a fan of a given speed may take 2 Horse Power Motor; if the speed be doubled the H.P. will be 2^2 or 4 H.P., if it be doubled again the H.P. will be 4^2 16 H.P. or 8 times the H.P. for four times the speed. Thus it becomes uneconomical to run at high speeds let alone the extra heat arising from friction which throws more work on the compressor, though often ignored by construction engineers.

The best fan for refrigerating currents in undoubtedly the peripheral or centrifugal type designed somewhat on the lines of a steamers paddle wheel. The best of these is the multi-blade type, i.e., one with very many blades and the blades a short space apart. This fan should be of what is

known as the "light duty" type, viz.: one with light parts and not of the heavy duty type requiring much greater horse power. The peripheral fan "pushes" the air on with a minimum of friction and there is no "chopping" action on the air as with a propeller type. The mouth or discharge of a peripheral fan may be partly closed, thus reducing the discharge and the motor is at once relieved of part of the load with a reduced consumption of current for which the motor must be specially designed and arranged.

This change of speed in the fan is of great advantage for it enables the refrigerating engineer to adjust the flow of air to a nicety suitable for different products. He can also get a quick refrigeration or slow it down as he wishes.

The only drawback of the peripheral or centrifugal fan is its size. For a room of about 20,000 feet the fan with case will be about 6 feet high and about 3ft 6ins. wide. but the loss of area comparatively is not great. With the propeller fan the fan can be put in the wall of cooler chamber and it takes up much less room than the centrifugal type.

It will be found that to give a maximum change of air it will be necessary to change the air once a minute. Thus in a room 20,000 cubic feet capacity, the fan must deliver 20,000 cubic feet of air. The good effect of this circulation on the goods is most potent. In the old systems, especially with fruit on board ship, it is often weeks before the fruit is "brought down" to the required temperature. In conversing with ship engineers bringing fruit from Tasmania, I have been told that they have known the temperature required not to have been reached till the ship was off the coast of Spain. This means fully 5 weeks and is highly detrimental to the fruit. With the forced air system and "dunnage" between the fruit boxes (Note—dunnage is thin slips of wood about 2in. or 3in. x ½in. separating the boxes to allow the air through) the power of the engineer over his cargo is enormously increased, and he could bring the storage down easily in a week or less though too quick refrigeration is not good.

The sizes of the air ducts must be accurately worked out so as to avoid any increased resistances due to improperly throttling the duct, and so that the air can be delivered. In a long run, the area of the duct will gradually diminish. All along the duct should be placed sliding trap doors which, when open, will allow the air to enter the room. This allows the operator to deliver air at different points in the room and shut off other parts.

(To be continued).

PIETERSBURG TOWN HALL.

In the competition for a new Town Hall and Municipal Offices at Pietersburg, Transvaal, Mr. A. J. Marshall, the Assessor, placed the design submitted by Mr. G. E. Fitzgerald, A.R.I.B.A., of Pretoria, first, and Mr. Allen Wilson, F.R.I.B.A., or Johannesburg, second. We understand that Mr. Fitzgerald is to be instructed to proceed with the work immediately and there is every likelihood of the amount available for this scheme being increased by approximately fifty per cent.

The following is the Assessor's report upon the designs submitted:—

Accommodation and Cost. In my opinion, the accommodation asked for cannot possibly be provided anywhere in South Africa, under existing conditions, even in the most simply designed buildings (which require to contain approximately 325,000 to 400,000 cubic feet) that could be erected, in an appropriate and sound form of construction, within the limits of the sum of money available, but particularly so in Pietersburg, on account of the high cost of building there.

The total expenditure fixed by the Council is £12,000.

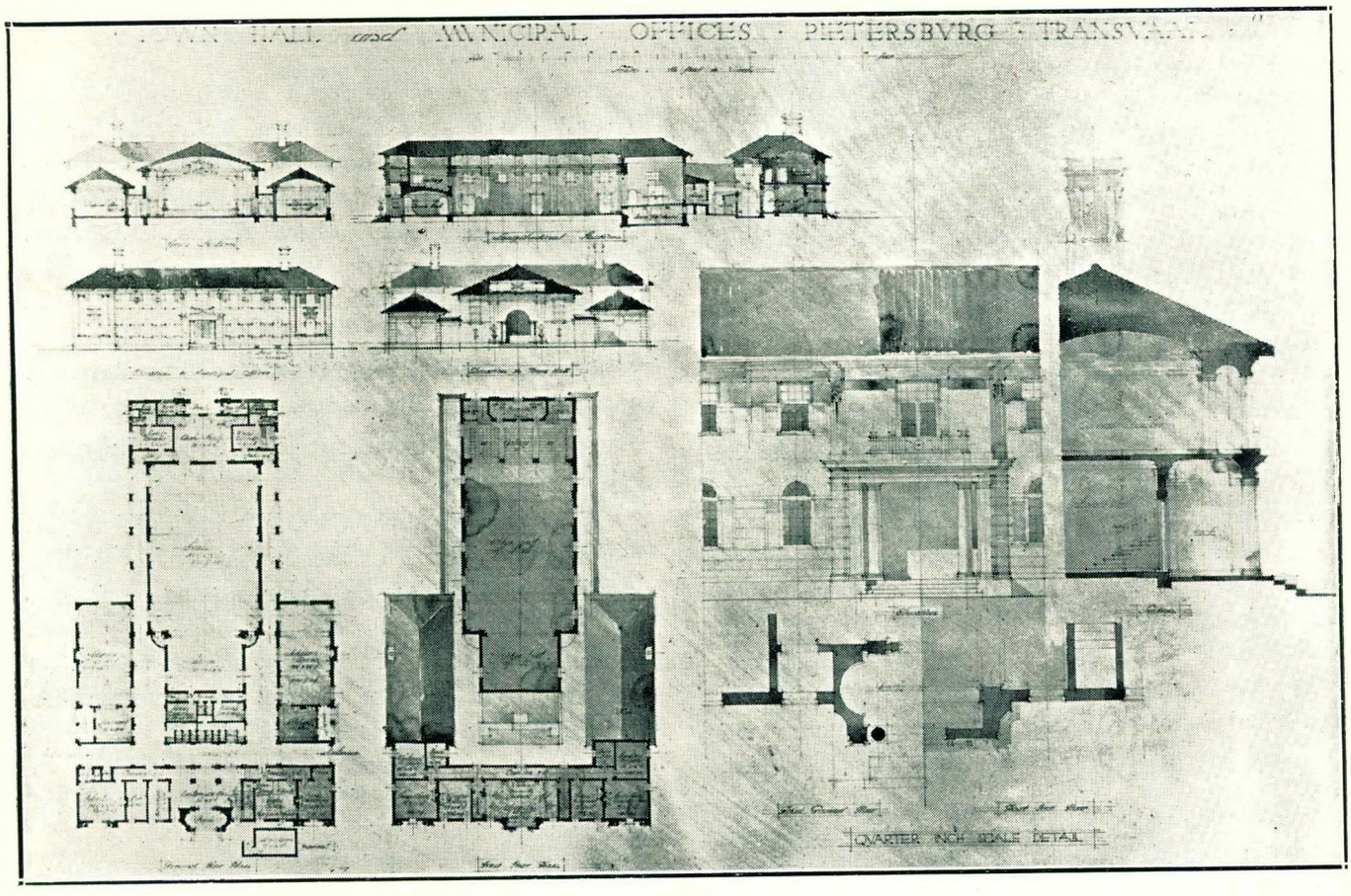
Less Architect's fees (£401) at ..		3¾%
Supervision (usually 1¼% but say at)		¾%
Contingencies at		7½%
		12%
On	£10,714 0 0	
Amounts to ..	1,286 0 0	
Which together totals	£12,000 0 0	

The sum of £10,714 is therefore the amount available, and none of the designs are estimated by their authors to come within this figure.

If we *assume* that any of the designs submitted could be reduced *in cost* or by 10 per cent. and therefore increase the available sum of £10,714 0 0
by 10 per cent. .. 1,071 0 0

and compare this sum of .. £11,785 0 0

with the estimates submitted by the authors of the eleven designs, the only estimated cost which is below this figure is that of design No. 1, whose rates per cubic foot of 5d. and 10½d. are much too low to be sufficient for the most primitive buildings, and could certainly *not* be reduced. Very few of the other estimates come approximately near this figure.



FIRST PREMIATED DESIGN. G. E. FITZGERALD, A.R.I.B.A. PRETORIA.

In my opinion none of the designs could be reduced in cost to the sum of £10,714 (or by 10 per cent.), for in almost every instance the rates given per cubic foot are not sufficient for the purpose.

According to Clause 2 of the Conditions of the Competition, the Council could, under these circumstances withhold the award of the premiums, but in my opinion it would certainly not be justified in doing so, as both the Accommodation required, and a Limit of the Cost are fixed by the conditions, and they are incompatible, and not reconcilable.

The Council would have been better advised to have appointed an Assessor *before* framing the conditions, and under his guidance in respect to the *probable* cost, determined the extent of the Accommodation, and thus have avoided one of the chief reasons why architectural competitions generally, are seldom effective to the Promotors, or satisfactory to the Competitors. It is obvious that the Promotors cannot determine an estimate of the cost of a particular design for a building before it is designed.

Although it is the custom to fix the cost in the Conditions, it would be a much better practice *not to;* beyond mentioning the probable estimate arrived at by the Assessor; and the fact that cost would be considered a supreme factor in determining the selection from the designs submitted.

By this arrangement of the Conditions, the Promotors of a Competition would obtain the best results, as the object of an Architectural Competition is to obtain the most suitable design for the proposed building, which it is estimated can be erected for the least possible amount; and this is the supreme test of an architect's capabilities.

Disposition on the Site, and E.C. Conveniences. The necessity for providing conveniences of the E.C. type is the most important factor affecting the designs for these buildings, as it influences not only the arrangement of the accommodation, but the disposition of the buildings upon the site. Most of the competitors seem to have found it a very difficult problem to solve in any satisfactory manner.

Design No. 7 indicates water borne sewage to be removed by Vacuum Tank. Design No. 8 also makes the same suggestion, but says the plan provides for ordinary pail service, for which, however, the arrangement is *not* suitable.

It would not be fair to the other competitors to accept this evasion of the most important problem which is set by the conditions, as a solution

of it. Nevertheless, I think the suggestion of a water borne sewage, to a septic tank, should be seriously considered by the Council, because the E.C. pail system is inconsistent with the dignity of a Town Hall.

Had a water borne sewage system not been expressly debarred in the Conditions, I should still have turned down Design No. 7 for general reasons, and Design No. 8 on account of its lean-to roofs, and unconventional elevations, but with W.C.'s. the plan of the latter would have been a very suitable one. Under the same supposition Design No. 3, but with W.C.'s. instead of E.C.'s would have been the best and cheapest plan to recommend, as the rather poor elevations could have been improved under capable direction. An Assessor, however, cannot ignore any of the conditions, which are binding; and should also be adhered to by all competitors.

Design No. 11. There is no reason why the localisation of the E.C. conveniences as indicated in Design No. 11, should not be equally well situate for W.C.'s. to which they could in after years be readily converted.

This, to my mind, is the solution of this problem, which Competitors should have strived for, because fundamentally the position and arrangement of the conveniences as E.C.'s. is attained as suitably as it could be for W.C.'s., without adverse influence upon the relationship or planning of the other accommodation, and is only dependent upon the disposition of the buildings on the site; which, in this case admits of very convenient access for the removal service from Market Street; probably the one "back street" of the four surrounding the site.

No other design solves this important problem with even half of the same measure of success, although the planning of the E.C.'s. themselves could be improved upon what is shown.

I should unquestionably have selected this plan for 1st Place, had the quality of the design not been so deficient in other respects. As it stands I am prepared to recommend that it be awarded the *2nd Premium*.

Design No. 10. Except by the correction of the two serious defects, if given effect to as suggested in my criticism (one of which is consequent upon the other), this design fails to solve the important problem of the E.C. conveniences more efficiently than any others, which have not shirked the difficulty, have done, with the sole exception of Design No. 11. For which reason, the design does not deserve 1st Place, but that in every other respect it is superior to the rest, and immeasurably so to No. 11.

The conception of the design is a clever arrangement (several instances of which exist in Eastern monastic architecture), of grouping a number of *almost* completely isolated buildings to form, in effect, a single unit, with many advantages in respect to access, lighting, shade, and ventilation, particularly suited to warm climates.

The arrangement also makes it possible to erect each block of buildings separately, which may have distinct advantages in view of the conclusions arrived at, and the results disclosed by this Competition, that the Council will be compelled to reconsider its requirements, and reconcile these with the cost.

I have therefore no hesitation in recommending to the Building Committee that this design, No. 10, be awarded the *1st Premium*.

Construction and Materials. It is not my duty as Assessor to make any suggestions in regard to construction and materials, but the decision in respect to these becomes most vital in view of the cost, and as the Council have asked for my general advice and direction in regard to these, I advise the Council to consider the following suggestions; (1) The local bricks are poor, but the quality could be sufficiently improved under the stimulus of a contract for this building, to be used for all interior walls (and even backing up) which are not subject to heavy loading. (2) Cement is relatively the cheapest obtainable material which is not procured locally, and therefore I should use this in the form of concrete, with an aggregate of Hillside quartz for all foundations and rough work, and as extensively as possible by adopting pre-cast sand faced ashlar blocks for the greater part (if not all), of the facings required for the external walls and so eliminate the necessity to import facing bricks at £5 10s. per 1,000 which in appearance are not so satisfactory (being too hot in effect) and no more durable in quality. Also in cast blocks for paving.

Both the colour, and the cost of dressing the local granite, are against its use, except for steps and thresholds, and such like requirements as are subject to hard wear and tear.

(3) Flat roofs, particularly of concrete, would be unsuitable to the climatic conditions, but even corrugated iron when *efficiently* ventilated *over* an insulated ceiling, has many advantages when handled with due regard to external appearance.

I also suggest that the Council consult the author of the winning design in regard to the disposition of the buildings upon the site. In my opinion, if E.C. conveniences are installed, even temporarily, then it would be much wiser to place the back end of the Town Hall facing Market Street, as indicated upon the enclosed rough diagram, which I consider fundamentally to be the best solution of the problem, and which I used as a basis of comparison in adjudicating the merits of the various designs submitted.

THE ORIENT.

SKETCH No. 5.

G. W. NICOLAY, F.S.A.I.C.

Wi-hi accompanied his visitor on his journey southward as far as the boundary of the neighbouring country that had in times past been so hostile, though now fast friends because of the timely support given when their other neighbours would have taken advantage of their defeat, and peace with most cordial relations had continued ever since.

Lucas Tudril was surprised, and at first displeased to find what he thought must be a military display on the part of the hill men, in the form of a plump of spears, as he would have called it, drawn up near one of the border forts already mentioned. He was unaware of the cause, and for that reason evinced nothing particular concerning it.

On a nearer approach, when Tudril expressed some admiration of the men on their shaggy but hardy and useful horses, and fine equipment, Wi-hi, in his usual frank and courteous manner, said that the officer who was walking leisurely towards them would soon be to him a reliable friend.

The officer greeted Wi-hi with a military salute which acknowledged his rank and claimed his intimate friendship. It was done with that perfect formality, but easy and graceful movement, which marks the man of culture. Turning to Tudril as Wi-hi introduced him, he repeated the salute and immediately explained that the border of his country near which lay the road by which they would travel, was always more or less disturbed, that the guard he thought proper to bring would be no inconvenience as it would never be near enough for that, but would, under its usual command, keep their journey free from the least interruption. While speaking he raised his hand, and as the rather formal leave taking with Wi-hi proceeded he watched the soldiers move off, the rearward half wheeling to their left, crossed the road and turning somewhat to their left rode at a brisk trot towards trees and brush wood on their right and the leading half wheeling to the right, proceeded similarly into the open country on the left of the road. They parted at length with cordial good wishes on either side, Wi-hi returning to Fu-san-su and Tudril with his new acquaintance riding towards the hills, which formed a picturesque limit to the prospect though at no great distance from them. The troopers who brought their horses followed them about an hundred yards behind, and the two parties of their escort, the one passing through the scrub and scattered trees, and the other on the open ground walking their horses until the travellers should come up with them.

Ever since leaving his own country Lucas Tudril had been speaking the language of the countries through which he passed, but as soon as Wi-hi had left them his new acquaintance addressed him in his own. His companion had been named to him only by his rank, "Captain General of the Forces," but now announced himself Hugh de Bruille and his guest's country man.

For the best part of a twelve month, Tudril had not heard his native tongue, and the change was more welcome than he perhaps would have cared to admit, familiar as he was with those he had been using. Being indebted to Wi-hi for the introduction, because he had altered his route on Wi-hi's advice and partly on their joint account, he thought of the sage, old silk merchant with even warmer feelings than before. His was more of the suave and studiously polite phrases that had given the impression of insincerity, and looked forward with increased interest to the time when, about six months later they had arranged to meet again.

The Captain General was evidently no talker and the march was continued in silence, which rather pleased the traveller who was fully capable of enjoying the fine country through which they were passing all the better, but when the sun was high enough to show that the morning was almost gone, he began to wonder when and where they would halt, if at all.

Just as he had resigned himself to contented view of the splendid scenery which changed with every turn as they passed onwards among the hills,

when the C.G. suddenly broke his long silence, saying that he expected to halt for rest and refreshment, for horse and man, about two miles further on, and that their resting place commanded a view that he was sure his guest would much appreciate, adding that he himself never came upon it without fresh and increased delight. "This time," he said, "you may have it all to yourself, after we have fed, when I have to interview a man who has been giving us some trouble lately."

When they reached their resting place, Tudril sat motionless with his eyes fixed upon the landscape. Before him was a gap in the hills, just as the road sloped down to a sharp turn to the right. About five hundred feet below was a shallow valley from two to three miles wide, with low hills on the further side, standing out below like a vast terrace on the mountain side, fully cultivated and inviting to the sight had nothing more appeared in sight, but fifty miles away a range of lofty mountains relieved the sense of vacancy, and with flash of snow capped heights, closed the scene with a band of pale but bright and beautiful colour.

The C.G. watched the traveller with something not far short of amusement, for perhaps five minutes and then, all trace of a smile banished from his face, walked up to him and by speaking re-established terrestial relations in a double sense, for Tudril was off his horse instantly.

By the side of a quietly running stream which found a devious course among the rocks, upon a plot of soft grass they found their midday meal laid out ready for them, and so that they might converse freely, a servant attended them, but with more the appearance of a sentry.

They talked of many things, persons and places, discovered many common interests and even some family relationships, and L. T. learned that Serra muttra, his present destination would be reached in about three hours.

Resuming their journey they passed down towards the valley, but the sinuous course of the road soon led them out of sight of the splendid view across the open country. They were still about a hundred feet above the valley, when the road, making a turn round the base of a blunt spur of rock, rose steadily towards a much larger one with steep sides upon which the small but important town which was their objective, was built and presently rather suddenly came into full view.

Serra muttra was as picturesque as the place where it was built was romantic, but neither De Bruille nor Tudril seemed particularly to notice it. Fortifications are not particularly interesting to soldiers unless they have either to defend or attack them, so they halted about half a mile from the walls until the soliders came up with them. Almost on the instant the head of the little column was seen as it came round the sharp turn of the road, then turning into the road, De Bruille with his new acquaintance by him led the way up a narrow and steep causeway and across a double drawbridge up to the gate. Here he had to account for a strangers presence and then Tudril went with him to his quarters.

Serra muttra was truly a town, but one of an entirely exclusive kind. There was not that rigid discipline which excluded women as though the place were a monastery, but the regulations were stringent, and but few were allowed to have their wives with them. The ruler of the country, was dual in his office, supreme among religious as well as political leaders, and to this high personage Tudril was commended by Wi-hi, who threw all his influence into Tudril's business.

The space enclosed by the walls was far greater than that at Fu-san-su, quite irregular in form and the defensive works designed on other principles.

The site was like those common along almost every coast line, so often used for military purposes because they were almost inaccessible. Here the end of a spur from the hillside, a great mass of hard rock had become detached and stood alone for more than half its height, and the fortress crowned it, had on all sides a precipitous face of rock below. The neck between the fortress and the other part of the spur was a considerable depression and the road passed over it about half a mile from the walls, and from the road the ground sloped gently upwards for three or four miles and then flattened out into the surrounding country.

The summit of the rock was very irregular as to levels, but these had been taken full advantage of so as to make the town a veritable deathtrap to any force not familiar with it, and L.T., who became very much impressed with the great military strength of the place, made long and detailed notes which, perhaps because he was never allowed to get at the vital points of the scheme declares the capture of the place, except by treachery quite impracticable.

He made a rude plan of the town which showed it in the form of an irregular star of so many points that for the present purpose they need not be counted, and were not expected to be when the plan was made. This form was probably adopted so that the whole face of every wall which was considered safe from escalade should at least be in full sight of the next.

The entrance was approached by a carefully built causeway rising, as has been noted, to the draw bridges in front of the gate. At the first the causeway ended abruptly about fifteen feet from the ground. The first bridge was hung to a timber frame and was only of sufficient strength for ordinary uses, and seems to have been arranged so that it could be pulled back and the outer end allowed to fall, but the second, that bridge to the gate, was very substantial and capable of its self to protect the gate until an approach to it had been successfully built. On either side of the gate was a room with walls parallel to direction of entry, and the space between, had a thick wall on the town side with another gate in it, and each of the gates had been furnished with a port cullis by De Bruille's predecessor. But these gates only gave access to a great open space upon which no encroachment was allowed across which any assault upon the next gate would have to be made, and this was more difficult to force than the outer gate.

This was the entrance to the town. Within it the arrangement of the town was so singular as to appear at first as if it had grown haphazard and much too intricate for any description to be successful without a plan, but in the midst of the uncertainty and the bewildering arrangement of it stood the citadel within which were the palace and temple.

The entrance to the citadel was not easily discoverable on account of the extreme irregularity of the summit of the rock the designer had found a way to make the entrance from below the walls.

The walls of the town were neither high nor thick, except those forming the four points of the star at the entrance only twenty two feet at the highest part. They were double where they enclosed the town, but those surrounding the outer open space were not only single, but had no defensive arrangements. Unless the saddleback coping might be regarded as such, for it left nothing for a man to stand on.

Here the gate was the only place that was fortified. The guard room and that opposite the walls of which formed the entrance, had no access from the outside. Above the entrance way and the two rooms as well, the whole space was occupied by one great room, where was the apparatus for lifting each port cullis, and lowering it, and for pouring many kinds of offensive things on the heads of any adversaries, who might get past the outer gate. In front of this a gallery projected over the entrance, wide enough for archers to work in, and this gallery was extended along the adjacent walls so that the archers could cover both flanks as well as the front of any attack. These galleries reached the point of the star right and left of the gate, and were loopholed on both sides, and the great room was also loopholed along the sides and back so that the open space behind the gate and the front wall of the town would not be crossed without being taken front and rear simultaneously. Steps at the side of each ground floor room gave access to the great upper room and were continued downwards to a basement, from which a narrow passage passed each way along the walls to the space between the outer and inner walls of the boundary wall of the town. The gate-house garrison could retire by these passages unmolested and be reinforced the same way. The external wall was pierced at regular intervals for light and air, and at every change of direction along the zigzag walls strong gates were placed which could not be forced without much delay to little purpose as the passages were but little more than two feet wide.

Between the open space and the town the fortifications were much more formidable. A line of six towers, two at the centre gate, one at the angle formed with each boundary wall, and one between each of these and the gate, and the walls between had at the top a wide platform and battlements with a gallery under it for additional archers, that reminded Tudril of Fu-san-su.

The citadel which enclosed the palace and the Temple of the Rock, which had wartime accommodation for the garrison, was completely isolated from the buildings which surrounded it by a broad open space, in which the soldiers could use their horses. There were two parts of this building, the citadel of the Temple, and the citadel of the Palace. The former was the highest part of the town, the walls enclosing the temple rose high above the town like an enormous round tower. The rock had been brought approximately to the circle required and the rugged face of it was visible to a height of

fifteen feet, and in some parts higher, owing to the irregularity of the rock, and the wall rose to an additional height of nine feet, and was finished with a saddle back coping like that to the outside walls. The only break in this wall was within the walls of the palace. On the inside of the wall, at the foot of it, a path nine feet wide was benched out of the rock and from this point the sloping face of the rock continued, as when the temple was first hewn out under it, a huge rough gradually diminishing mass which at the summit had the appearance of a gigantic quartz crystal. The temple was considered part of the citadel because it could only be approached through it. But there was no attempt made to fortify it, and the entrance was only closed by a light wooden gate which was seldom shut.

The palace occupied a space of about a hundred and fifty feet by a hundred. Between this and the temple a space in the form of a truncated triangle being so shaped by making the walls of the palace site converge upon the centre of the temple.

This great platform was made by removing the solid rock from above it. The platform was about five feet below the base of the wall surrounding the temple, and a slope of rock reached the variable levels of the citadel between six and ten feet below the palace platform.

At the corners of the palace where the walls converge towards the temple stood hexagonal towers of two stages, about fifteen feet wide internally, and from one to the other the enclosing walls swung round the citadel in the same zigzag fashion as the outside walls, which enclosed the whole town, but they were arranged for defence like the wall facing the great open space. The subterraneous approach to the citadel was no secret, it was only schemed so as to be difficult to find and dangerous to leave.

Tudril refers to a drawing which would have made clear many other details, but that is lost.

At the Annual General Meeting of the Cape Institute of Architects, Mr. John Perry was elected President and Mr. C. P. Walgate, Vice-President for 1925-6

Consequent upon the appointment of Mr. H. J. Brownlee to be Principal of the Department of Architecture at the University of Cape Town, the office of Registrar to the Cape Institute has been abolished.

In place thereof Major P. Milne Duncan has been appointed Secretary to the Institute and all communications should, henceforth, be addressed to the Secretary at St. George's House, St. George's Street, Cape Town.

Departure of Mr. E. M. Powers, F.R.I.B.A.

It is with regret we have to announce the early departure, from Johannesburg, to take up permanent residence at Durban, of Mr. E. M. Powers, F.R.I.B.A., past President and member of Council for twelve years and Editor of the Journal for the past eight years. In recognition of the valuable work done by Mr. Powers on behalf of this Association and the profession, the Council entertained him at Dinner on Saturday the 13th inst., at the Scientific Club Johannesburg.

There were present Mr. G. S. Burt Andrews, the following past Presidents:—Mr. E. H. Waugh, Mr. D. A. McCubbin, Mr. Allen Wilson and Mr. D. M. Burton, and a representative gathering of members of the Association and their wives.

Replying to the toast of the evening Mr. E. M. Powers said:—

The amalgamation of the Royal Institute of British Architects and the Society of Architects, London, is now accomplished after many months of negotiations. It gives me, as Hon. Secretary for the R.I.B.A. in South Africa, very great pleasure to take this opportunity of extending a very hearty welcome into the ranks of the R.I.B.A. to the members of the Society in South Africa. I also wish to congratulate the Society on this very important event which marks a further stage towards the fruition of their untiring labours for many years past to obtain statutory registration of architects in Great Britain.

I feel sure that the amalgamation of these two great Architectural Societies into one corporate body will not only be of immense benefit to individual members of the profession but to the progress of the Art of Architecture generally.

This amalgamation will also have a great influence for good to us in this Country as a further incentive to push forward with all expedition the Architects' Act for the Union and the establishment of the South African Institute of Architects which will absorb the separate Societies now working in the various Provinces of the Union.

In the new Charter of the R.I.B.A. provision is made on the Council for four representatives of Architectural Societies of the Overseas Dominions. Among them being the South African Institute of Architects at such time as it is established.

The Executive Committee have the Act revised and ready to submit to the Union Legislature and having put their hands to the plough must carry on to a successful issue. The present time I think is most propitious for, as many of you are aware, it is the Governments intention to increase the professional tax as applied to Architects, which in future will be a Union and not Provincial Tax and under the Budget proposals each individual architect whether practising singly or in partnership will be taxed £10 per Annum and it seems to me only logical that if the architect is to be taxed in order to carry on the work of his profession he should likewise be protected by Legislation against the pirating of his legitimate work by unqualified and unregistered persons.

I would like to refer briefly to the work of the newly constituted Federal Council on Architectural Education which is composed of representatives of the various Architectural and Educational Bodies in the Union. Our Architectural students have been enrolled and registered as students with the Council and the qualifying examination held by the various Architectural Societies have been co-ordinated to a standardised basis thereby enabling a student in any part of the Union to become qualified to practice as an architect under the proposed Union Act in any part of the Union.

The Baker Scholarship has been placed under the control of the Federal Council and the recent examination held for this Scholarship has resulted in the first award going to Mr. H. G. Ward, of Pretoria. I would like to congratulate Mr. Ward upon his success, he is a very young man and still continuing his studies as a student in Architecture. The Trutees of the Scholarship, however, feel that Mr. Ward will derive much greater benefit from the Scholarship, which provides for travel and study in Italy and Southern Europe when he has completed his four years' course of study and will therefore award the Scholarship about two years hence. In the meantime the accumulated funds available for the Scholarship will allow of another examination being held in two years time.

In conclusion I would like to say that my participation in the Council of the Association of Transvaal Architects during the past twelve years has been a labour of pleasure. I can look back with great satisfaction on the progress made in architectural matters in the Transvaal during that time and the influence of the Association in matters of public and civic importance.

I also wish to remind members of the Association that the Council needs their co-operation and support, they should realise that their duty to the Association does not cease after the election of members of Council to carry on the administration of the Association.

I appeal to all members to endeavour, to the best of their ability, to support the official Journal of the Association "The South African Architectural Record" by submission of articles, photographs and putting forward points for discussion of interest to the profession.

Without the active co-operation and support of all members of the Association your Council is unable to bring to their fullest development those ideals of professional ethics we are all so anxious to attain.

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