



# BUILDING.



THE JOURNAL OF THE ASSOCIATION OF TRANSVAAL ARCHITECTS  
AND OF THE NATAL INSTITUTE OF ARCHITECTS.

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### *After Two Years.*

With this issue, this *Journal* completes its second year of publication. We venture to hope that the magazine has been of use to the many engaged in the work of rearing buildings in this country. It has throughout been a labour of love as, so far, the strong support it has received from architects has not rendered any other course necessary, and, in any case, had such been forced upon us, the *Journal* would not have proceeded on its voyage, as the costs of production only are covered by its income. We take this opportunity of heartily thanking our contributors and artists for their generous work, and to our many advertisers we extend our appreciation of their support which has been so freely given. The *Journal* is now much more than twice the size of its first number, and as its income has grown so has the paper been enlarged. The *Journal* Committee of the Association of Transvaal Architects have throughout maintained the policy of improving the *Journal* from its own earnings.

The production of a special journal in South Africa is an expensive one, particularly in these war times, and it is a matter for congratulation to have been so successful. To have so large a field as that of architecture without proper journalistic representation in South Africa would be a great mistake, for there is no better means of advancing the cause of true art as well as showing the latest phases of construction and sanitation. Never before has an architectural journal been issued in this country on the lines of this one, that is, for the sheer love of the cause and for no other. We say this without disparagement to any former or present organs. That the appeal such a policy makes is a high one is beyond question. It calls for self-sacrifice, and the result has been more gratifying in its spirit than any other policy could have produced.

As the festive season now gives us the opportunity, we extend to our members, readers and advertisers the old, old wish

A MERRY CHRISTMAS AND A HAPPY NEW YEAR.

THE EDITOR.



## A NATIONAL NECESSITY.

By D. M., Burton, M.S.A.

In the last issue I dealt at length the subject of afforestation, pointing out how necessary it was that efforts should be made by the Government to take up the subject in earnest.

I now propose to add a few further remarks on the same subject, hoping that sooner or later those who control the Union may awaken from their lethargy and realise that other countries have taken steps in the direction indicated by me, while South Africa has been asleep.

I make no apology for quoting the following paragraph from an English paper:—

“Owing to the national need of timber the trees on Penrith beacon, a well-known beauty spot, are to be felled.”

To those acquainted with the Penrith district I need hardly say that the removal of these trees will be little less than a tragedy. The existence of such beauty spots in England in these strenuous days, when everything seems to have been exploited for commercial purposes, is something to be truly grateful for.

However, the national necessity for timber is to cause Cumberland to be robbed of one of her glories. Great Britain having in her time of stress and trial found herself lamentably short of one of the prime necessities of military and civilian progress and development. Is not this regrettable position instructive with regard to past neglect of afforestation in the Motherland? Should it not prove a salutary lesson to us in this part of the world?

Let us turn for a moment and examine some figures showing the proportions of the area of different countries covered by woods and forests. The following percentages are worth serious thought and study by the Union Afforestation Department and still more serious consideration at the hands of our Government:

Great Britain (including the Isle of Man and the Channel Islands)	...	...	3.92
Russia in Europe	...	...	42.38
Prussia, Baden and Wurtemberg	...	...	90.47
Austria-Hungary	...	...	59.63
France	...	...	15.79
Belgium	...	...	14.82
Italy	...	...	12.34

It is becoming more and more certain each day that the timber denudation in Europe during this terrible war will make it impossible for this country to obtain timber supplies at pre-war prices for many years after the termination of the struggle. It will not mean two or three years of peace to restore ordinary prices in this part of the world; it will mean ten, fifteen or even twenty years for a return to normal figures and even then, owing to the ever increasing world demand for timber, such normal prices will, in future years, show a substantial advance on past cost.

Can we in South Africa show any really substantial afforestation advance since the late South African War, whether due to private or Governmental efforts? The negative answer, which must needs follow such a query, does not lend one much hope for the future.

Only a few days ago we saw a member of the Provincial Council seriously suggesting, in connection with his proposal for the formation of Divisional Councils in the Transvaal, that such Councils should be placed in charge of afforestation in their respective jurisdictions.

It is pleasant to see that word “Afforestation” even occasionally leaving the lips of Provincial Councillors and Members of Parliament. But, what a suggestion! Picture the pettiness of view with regard to this all-important industry disclosed by such an idea! Here is one of the biggest questions a modern

Government can handle, one which is doubly important to this country, one which should involve a Government expenditure of at least a million or two pounds per annum for some years if anything worth doing for our future is to be undertaken; and it is suggested, seriously—not humourously—that Divisional Councils should control it and afforestation should be subject to the whims and fancies, the niggardly doles, the parsimonious aid of an hundred and one different little bodies of parish pump politicians. It would be laughable were it not so pitiable. Let me emphasise again and again that afforestation is a matter which should be dealt with by the Government of a country, and one which will in the future not merely prove most profitable, but absolutely essential in this treesless land.

It is very interesting to read the news that our Government has decided to provide openings for young men who decide to take up forestry as a career, and has arranged for the training at Tokai of such as, at the time of examination for entrance, may not be under seventeen nor over twenty-five years of age. I believe that every candidate will be required to prove that he is able to speak both English and Dutch, and to satisfactorily pass a test in composition, spelling, writing, etc., the measure of efficiency required being equivalent to Standard VII. These students will serve an apprenticeship for one year, during which they will receive an honorarium sufficient to cover their board. When they have passed their final examinations they will be eligible for appointments in the subordinated grades of Forestry service; should there prove to be no vacancy at the moment, they will be provided with temporary employment as overseers and foremen until openings can be found.

The rate of pay is to be from £96 per annum for a fourth grade Forester to £140 for a first grade man, with free quarters. Provision is also being made for the education in forestry of farmers' sons who desire to acquire a knowledge of the subject.

All this is clearly a step in the right direction and goes, perhaps, to show that the Government is partially awakening to its responsibilities at last, but even this advance falls very short of our requirements.

Can a student really learn afforestation and make himself competent by a single year's tuition and training in the essentials of what is a most technical and difficult science in which to attain anything approaching perfection?

In Great Britain the Royal Agricultural College, holding sessions at Edinburgh, Cirencester, Glasnevin, Dublin and other places, grants certificates of proficiency in the theory and practice of forestry by examination, the courses, including instruction in surveying, botany, chemistry, geology and collateral subjects.

Prussia requires her students in forestry to go through a Government school of the first class; then calls on them to give one year to primary training under a higher forester, after which they may enter for an examination as forestry pupils. If a candidate is successful in that test he has to spend two years at a forestry academy and pass an examination in scientific forestry, land surveying, etc. Even then the student has not completed his instruction, but has to give another two years to practical study, during the last nine months of which he must actually perform the duties of a forester, and qualify finally by means of another examination, the main difference between this and the preceding test being that the latter gauges the candidate's knowledge on the theoretical side, whilst the last examination proves whether he is able to practically apply his knowledge and is fit for employment as a general forester and in the higher grades.

If it is worth our while in this country to train students for forestry work—and, I take it, we are all agreed that such is desirable—then surely the training should be an amply sufficient one. The aphorism “What is worth while doing is worth



while doing well" applies to this subject just as much as to any other.

One of the needs of this country is young men who thoroughly understand forestry. No doubt in the Public Service we have a few who have acquired a very high standard of efficiency, but the initiative of these men has been gradually destroyed or counteracted owing to the Government, on the score of expense, failing to use their abilities in the right direction.

Afforestation should be carried on with energy and on a basis of progressive development, and the Forestry Department should have surveillance over all private forests.

For years the world's demand for timber has been steadily advancing, while the forest areas have been diminishing. Naturally a steady rise in the price of all forest products has been taking place and the rise is likely to be unpleasantly accentuated as a consequence of the war.

In this country afforestation has been most sadly neglected, and unless the public can be aroused to take an active and intelligent interest in the subject we will never progress towards making the Union independent of outside sources of supply.

Without the interest of the public it will be well nigh impossible to bring the authorities to realise that by carrying out a well laid and clearly defined scheme of afforestation they will be creating a great national asset and be accomplishing something grand in the field of practical politics.

Successful forestry means the provision of "paying" forests, and for such it is essential that the afforestation scheme should only involve the planting of such classes of trees as are certain to prove profitable and are sure to be required for the future needs of the country.

No doubt we all hope that it may prove that the present needs of the country are but small compared to the necessities of the big population of the near future. Will it not be a disgrace to the Government and to everyone of us if we have to practically entirely depend on importations from other lands? Factories are expected to spring up everywhere; do we wish to see them relying on imported timber for their requirements? The supply of cheap timber has often a far-reaching effect on the establishment of factories, and schemes for many of such will have to be abandoned so long as we are dependent on expensive importation for the necessary supply of this all-important article.

When one thinks of the careless neglect of the Government of full and proper afforestation one wonders what would have happened with regard to the mines in the Transvaal had they been forced to rely on the Union forests for a supply of props. However, it serves no good purpose to wail over past errors, but it may be useful to expose them in the hope that the Government will really take steps to prevent a recurrence in the future of the present unfortunate state of affairs.

Of course, I do not suggest that land which is suitable for agriculture should be used for afforestation, but I do say, and say most emphatically, that in this country there is an abundance of ground which is eminently suited for a aboriculture but is of little practical use for agriculture. These areas—they cover a very large acreage—should become permanent forest areas.

One must, however, give the Government credit for assisting to some extent private individuals to go in for tree-planting. No doubt many have gone into the matter with care and energy and have planted large numbers of suitable trees with a view to creating a provision for future needs while at the same time utilising land, which would otherwise have been lying idle, for the production of a profitable return.

It must not, however, be forgotten that tree-planting is not mealie-planting or sowing, and the average farmer cannot afford

to wait until a plantation matures. This fact often obliges him to leave tree-planting severely alone, except as far as it becomes essential for the provision of windbreaks or for the ornamentation and comfort of the homestead.

Forestry can be profitably undertaken by corporations, and it is pleasing to recollect that we owe to their enterprise most of that which has been done in the past, including the planting of some of the splendid plantations existing to-day.

However, as I have before said, afforestation really should be a national undertaking, and a wise, far-seeking Government will not hesitate to embark on a broad policy which will secure for the future an ample supply of those timbers must suitable for the country's requirements.

Areas for afforestation should be selected within reasonably close proximity to the railways already existing or those contemplated in the immediate future, freight being such an important item in determining the cost of timber at the market site.

I do not believe that it is any exaggeration to say that, if the Government will set about afforestation on a fitting scale, this country will be in a position to free itself from debt out of the profits therefrom.

Australia has realised the profit making aspect of afforestation; the Government there is setting about planting sufficient trees to ensure that in a comparatively few years it will be raking into the Exchequer very substantial profits, profits which they hope will enable them to pay off all or at least the greater part of their huge war loans.

Why should we lag behind Australia? The excuse relative to shortage of funds is insufficient and entirely unjustified.

We are wasting time in South Africa. The war does not interfere with afforestation schemes; on the contrary, the fact of the war should prove an extra incentive, for hundreds of partially incapacitated soldiers have returned from the Front, and thousands more will be following them, and here to hand lies the solution of the problem of employment for these men.

Utilise these returned soldiers and the poor whites for afforestation purposes, and we will have solved two difficult problems, while ensuring to this wonderful country a vast and most profitable industry for the future.

## PAST PLEASURES.

There is always enjoyment in calling to memory the pleasures of the past, and more often than not such pleasures are connected with business employment. At all events that was the experience of the writer in connection with the work he did "drawing on the wood."

Wood engraving is not much noticed by the general public now. The mechanical processes reproducing photography have pushed it somewhat aside, although no doubt wood engraving is still a flourishing business. Like the sailing ship, it is overshadowed by substitutes more calculated to satisfy enormous expansion of the fields of its labours.

But we seldom supersede anything without at the same time making a loss. The very energy and interest necessary to develop the advantages and characteristics of the new thing—the substitute—too completely obliterate the old; probably because the new is not capable of carrying the essence of the past with its own genius. The two methods of illustration or reproduction of illustration are singularly appropriate as illustrating this.

The old woodcut had many good qualities. Even its limitations assisted its appeal and made it more definite. It was not sufficiently comprehensive to represent the complexity as well as the beauty of its subject. On the other hand, its conditions



and limitations permitted that selection of and particular expression and representation of the special point of interest, and the work of two artists on the single production (though not always) was often singularly felicitous: the draughtsman aiming at the strong points of the engraver, and the engraver returning the compliment.

Occasionally there were unfortunate happenings for want of sympathetic relation or want of any knowledge of one another, as, for instance, on an occasion when the usual engraver was not available. On one such a tower in the Gothic manner was rusticated from top to bottom! But such annoyances were rare.

The early woodcuts, such as those of great masters, Titian and Durer, though much more noble in simplicity of aim and perfect achievement, excluded any delicacy capable of expressing subtle detail, and the same may be noted of our own Bewick. But a later and less painstaking time less learned in matters of art could not tolerate the severe and simple line—the moderate aim in method with which the greater men of earlier times were content. Gradually the woodcut approached the steel engraving, and in doing so lost its own distinctive character.

In America wood-cutting was developed with great assiduity, and the work produced made almost as great a stir in their time as the recent photographic reproductions have made. Methods were devised for imitating all kinds of line work, the wood, the copper, and the steel, and even mezzotint, and carried into the work a delicacy and finish as attractive as it was remarkable. But to the present writer the individuality of the engraver seemed to fade out of sight and the work only of the draughtsman to remain. In the earlier work if any disappeared, it was that of the draughtsman.

Though probably comparatively few interest themselves in this work, many woodcuts of the second half of the nineteenth century will repay study and probably awaken interests which only lie dormant because other types of work come more readily to hand.

The writer was drawn into the work by the well known H. W. Brewer, for many years one of the most eminent as well as most prolific among artists who worked chiefly on the wood. Under his friendly instruction he learned something of the business and subsequently worked for the "Builder" and occasionally for the "Illustrated London News," and became so interested as to seriously contemplate devoting his whole time to it.

The technical part of the work so far as appliances are concerned is very simple, the boxwood block, if small, is in one piece perhaps up to about six inches by four, and then in two, four and many pieces, all slotted at the back and screwed together with brass screws and nuts; the joints so nicely made that no trace of them was seen in the print even if the block was taken to pieces and separate engravers worked on different parts of it. The face to be used was polished so smooth that many artists used to rub fine grit over it as a first preparation to give it "tooth." The necessary preparation is to get a moderately white face to facilitate drawing. Some such medium as Chinese white, which was Mr. Brewer's practice, answers the purpose. Applied with the hand and worked, somewhat after the manner of applying plaster to a wall, it gradually becomes a uniform coat thin enough not to interfere with the use of the graver nor yet to flake off before it, yet completely hiding the wood and having a very near resemblance to ivory—smooth and delicious to work upon.

Upon this the drawing was made with the lead pencil either alone or supported as was customary at the time referred to with dexterously applied washes: so that in this work there are

three distinct methods of drawing—the plain line, which strictly limits the work of the engraver, the combined line and wash that leaves him free within the limits of the line indications, and the wash and hair pencil drawing without any indications as to line, in dealing with which he proceeded just as the steel engraver proceeds with a painting.

When the block is cut a proof is pulled off and the draughtsman has the opportunity of a limited final correction of anything he is not satisfied with before the printing, but where things have gone quite wrong they can only be partially remedied; the rustication referred to, for instance, was amended by cutting the dark line of the rustication out either wholly or in part, but the block satisfied a close inspection—something was evidently wrong. The engraver probably knew "some thing" about architecture, but not enough.

The woodcut as a work of art may at any time reappear under the hand of some enthusiast, but it will be in its own special character and for the purpose of setting forth its special characteristics, and form the object of a society like the Painter Etchers. In such an event the artists will no doubt draw and cut the block as well and perhaps cut freely without drawing, or with partial drawing only.

Very valuable work might be done in this way, but presumably only for those interested in art for its own sake. As this is a section of the public daily increasing, however, there is no reason to think there would be any lack of support.

To those who are attracted by the woodcut such a move would be very acceptable, and their number is no doubt much greater than is generally supposed.

G. W. NICOLAY.

#### HARRY ARCHER ADAMS.

The death of Harry Archer Adams at the early age of 35 has taken from South Africa one of its best known and respected quantity surveyors and from the South African Institute of Quantity Surveyors a foundation member and Past President. Born and educated in London, he was articled to and trained in his profession by Mr. G. Westmoreland and Mr. A. H. Kinder, Quantity Surveyors, of London, and afterwards was employed in the Surveyors' Department of the London County Council. In 1902 he joined the Quantity Surveying staff of the Public Works Department, and in 1908 was appointed Chief Quantity Surveyor. He will be greatly missed in that Department, where his knowledge and ability in all matters concerning his profession and his invariable tact in difficult cases were greatly valued. He was a member (by examination) of the Quantity Surveyors' Association of London and a member of the Royal Sanitary Institute.

As a foundation member of the South African Institute of Quantity Surveyors he was keenly interested in its activities, and became its President in 1909 and was unanimously re-elected for the two following years. In his official capacity he was brought into contact with members of the architectural profession and of the building and allied trades, by whom he was much respected for his fairness and much liked for his bright and genial disposition.

His death occurred at Pretoria on the 29th September, after a long and painful illness borne with great fortitude, sustaining with an indomitable spirit until the end those dependent upon him. The funeral service in Arcadia Church and the interment at the New Cemetery, Pretoria, was attended by his many friends and colleagues. He has left a widow and two sons, with whom much sympathy is felt.



## What the Association has Been Doing.

### "WHEN THE SLEEPER WAKES."

On arriving at the entrance, a glance sufficed to show that the interior of the building was in darkness, and I re-traced my steps to where the light of a neighbouring cafe enabled re-perusal of the Registrar's circular. Yes, there could be no doubt about it, the Association's Special General Meeting had been convened for October 30th, and this was the night. Returning, and having ascended the flight of steps leading up from the entrance, there was an impressive view of Mr. Stucke's fine architecture in the interior court yard, its verandahs rising storey upon storey in the gloom, the vague outlines gaining somewhat in mystery and grandeur with the obscuring of detail; momentarily I was transported centuries into the future, living one of the chapters in Mr. H. G. Wells' imaginative book, "When the Sleeper Wakes." But stay! on the right there, a body of men cautiously groping their way up the staircase, headed by Mr. A. H. Gibbs—he of the swarthy visage, looking the handsome stage pirate more than ever, and carrying a lighted candle—most evidently this was the Exploration Building! Joining the ascending group I learned that the native watchman had testified to having seen a "big boss" cut off the lights. Had the Prince of Darkness heard of the A.T.A.? But there was a big muster of members in the Board Room, which was illuminated—in parts—by candles, and President McCubbin's genial blond face beaming over all seemed to say, "This Association's got the devil beat" and to dispel the rest of the gloom. We afterwards heard that the electric lights in the building had been fused that night.

Registrar Beulke having reported that the attendance constituted considerably more than the necessary quorum, the President opened the Meeting. He prefaced his remarks by stating that the object of this meeting was to receive an interim report of the Council's activities, with a view to an exchange of opinion with the general body of members. Such an exchange of opinion would either confirm the Council in what it was doing, or would possibly modify or extend those activities, and would thus be of service in assuring a closer touch as between the wish of the members and the action of their representatives. What the Council had been doing occupied seventy closely foot-scrap pages of proceedings, greatly abbreviated and summarised, in the Minutes; and the work undertaken had been such as to necessitate the appointment of five standing committees, to say nothing of sundry temporary committees which had been appointed at various times for special purposes.

*Finance.*—Dealing first with the work of the Finance Committee, the President said that upon assuming office they found that some £1,200 was due to the Association for arrear subscriptions. The Committee had formed the opinion that if past policy were allowed to continue, it would mean suicide to the Association, and upon their recommendation steps for recovery were resolved and acted upon. In all cases letters had been addressed to the delinquents by the Association's Solicitor; as a result they found that there were some members who could not pay, and who would receive consideration, in other cases payments had been made—some by instalments, which would soon clear off the individual's liability—and in various ways no less than £267 had already been collected in respect of these arrears. He was confident that a steady adherence to the present policy would result in the recovery of a considerable proportion of the outstandings, and, moreover, would suffice to assure the Association's future.

*Practice.*—The Practice Committee had a large sphere of work: it was concerned with considering and recommending upon all questions affecting the architect's practice. Under this heading came questions affecting builders' contracts, and the Master Builders' Federation had raised such matters as a desired stipulation in architects' specifications for a standard rate of wages, the forbidding of piece work, the interpretation of the discount clauses on P.C. and Provisional items in contracts, the question of Bills of Quantities being guaranteed or else becoming part of the contract, etc. This Committee was also concerned in watching litigation in the Courts for any precedent which might be established affecting the architect's status and work, and had also been responsible for tracing several cases where unqualified men had infringed the Act by holding themselves out as architects. These cases seemed to have been of frequent occurrence in the country districts; they had just successfully conducted a prosecution at Lichtenburg, and two other cases were then pending. On the suggestion of this Committee, the Council had sent a letter to all Building Societies, and Loan Corporations, suggesting that where building loans exceeded, say, £400 in amount, the Societies would best serve their own and public interests by insisting that an architect shall design and supervise the building: replies had been received in every case, mostly expressing sympathy with the request, but in no case was there a definite promise to accept the recommendation. A great deal still had to be done in the way of educating public opinion before such representations could be made obligatory on these public and semi-public bodies. At the instance of the same Committee, the Council had asked, and was now receiving, from the various Transvaal Municipalities returns showing the number of plans submitted for new buildings, and what number of those plans were signed by architects. A regrettably large proportion were not architects' plans. The Pretoria Branch of the Practice Committee had taken up this matter with some success, the Pretoria Municipality having recently adopted a Bye-Law that all plans submitted for new buildings must be signed by a registered architect; the Provincial Council's ratification of that Bye-Law was now awaited. Mr. Sinclair, who was Chairman of the Practice Committee could be congratulated upon the extent and satisfactory nature of the work his Committee was undertaking.

*Bye-laws.*—The Bye-laws Revision Committee was concerned with Municipal Bye-laws affecting building construction, and had commenced its work by considering the regulations of the Johannesburg Municipality, which so many Transvaal towns took as a model for their own Bye-laws. This Committee had compiled a schedule of suggested revisions, and had met the Town Engineer with a view to securing his support, and he (the President) thought that the result would be of benefit to public and profession.

*Registration.*—The Registration Committee was not appointed by this Council, being a body whose personnel was permanent. It had continued its duties satisfactorily, reporting and recommending upon developments with regard to the projected Architects' Act for South Africa. All that had happened during this Council's existence was that correspondence had been re-opened with the Cape Institute, whose views continued to vary from those formed by this Association. As our Registration Committee was sticking to its guns, the position was that there was no progress to report—or, at best, it was a slow progress.

*Municipal Electric Supply to New Buildings.*—A Special Committee had been formed a few months ago, on the serious position which had arisen in regard to a decision



by the Municipality to refuse electric light connection to new buildings. Owing to the war it was impossible to import machinery, etc., and the electric plant at the Power Station was greatly overtaxed by the extent and constant increase of the demand for current. The Municipality's decision seemed likely to restrict building enterprise, and the Committee, having joined with a deputation from the Electrical Engineers and the Master Builders, were able to devise acceptable suggestions in regard to rationing the current, and thus to induce the Municipality to modify considerably the restrictive decision.

*Competitions.*—A Competition Committee had also been instituted, and had framed a series of recommendations regarding the conduct of architectural competitions. These recommendations the Council had adopted, printed, and distributed to all Municipalities and other public bodies who might at some future time have an architectural competition in project. If members knew of any other public body likely to be interested, the Council had sufficient copies remaining for further distribution, upon request. The Practice Committee, during its short existence, had already dealt with the following competitions:—Bloemfontein Tram Shelters and Market Square Layout, Innesdale Town Hall, Riverside Hotel (Vereeniging), Port Elizabeth Bathing House, the Wesleyan Central Hall at Johannesburg, and the Ladysmith Town Hall. Further there had been the question of the new Cape University Buildings; the Council considered these a national undertaking for which a public architectural competition should have been held. The Council had been very much alive on this question of competitions. One fact in this connection had been regrettable—there was not that united loyalty which made for strength in these matters. Thus, in the Riverside Hotel competition, the conditions of which were quite contrary to professional usage, and in which members had been advised not to enter, certain members had nevertheless competed. The results had been unsatisfactory, as anticipated; it was rumoured that an hotel-keeper had been appointed as Assessor, and they had not heard that the winning architect would be appointed to carry out his design. The Council had done its best, and they looked to the members for more loyal support.

*The "Journal."*—Though mentioned last, the Journal Committee was certainly far from being the least important of the Committees. Under Mr. Waugh's Editorship and Chairmanship, the Journal had made rapid strides, and to it they owed the fact that members of the profession were kept more closely in touch with professional movements than had hitherto been the case. They could not too fully express their gratitude to the Journal Committee, and he proposed to call upon Mr. Waugh to address them further on this subject immediately his own report was ended.

*Enemy Members.*—The President next referred to the resolution adopted by the last Annual General Meeting, under which the Council was instructed to take steps for the removal of enemy subjects from the membership roll. The Council had taken these steps, and had found that there was one enemy member, and that he was at present interned in the Alien Enemy Camp at the Isle of Man. The Commandant of that Camp had informed the Association that at the earliest possible opportunity that enemy member will be repatriated to Germany. As they were governed by an Act of Parliament, it became a matter of legal procedure, and legal opinion had been taken from counsel as to the necessary steps. But here a surprise awaited them, for one lawyer gave it as his opinion that an enemy subject could not be removed; further opinion was sought, and had been to the effect that there might be a possibility. Thereupon the Association wrote to the Minister of the

Interior asking his authority for the removal: he had replied asking under what clause of the Act such removal was permitted: a reply had been sent that the Association relied upon the resolution of its Annual General Meeting, and upon the common law: that was where the matter now stood.

That, he thought, covered the ground of the Council's activities since its appointment, with the exception that he felt he had not done full justice in any one particular. Especially was this the case with reference to the Journal, in regard to which, as he had previously promised, he would now call upon Mr. Waugh to further address them. (Loud applause.)

Mr. Waugh said that members, when specifying for building work, should make a point of examining the advertisement columns of the Journal, and thus serve their own best interests. Members should also remember that the Journal was always looking for contributions of literary matter and artistic work, and that the Journal Committee was ever ready to co-opt new workers to join that Committee. He had great pleasure in acknowledging the excellent work of the Journal Committee, and of the Journal's Hon. Business Manager, M. D. M. Sinclair, with all of whose continued corporation they could look forward to a steady improvement in the Journal, both financial and literary. Each quarterly issue cost them £72; previously, when there were less advertisements and less literary matter, the cost had been £37. He thought the members would hardly need his personal appeal for their loyal support in endeavouring to increase the circulation of the Journal, and to do all they could to improve its finance and influence. (Applause.)

The Meeting then settled down to the Agenda, and the following resolutions were adopted:—

In reference to P.C. and Provisional items in contract agreements, it was resolved that the opinion of the Public Works' Department, and of the S.A. Railways be sought before deciding whether to recognise the trade custom of allowing 10 per cent. builders' discount, or to adhere to the present conditions of contract.

In reference to the suggested clauses to be inserted in contracts, demanding the payment of the standard rate of wages, and the forbidding of piece work, it was resolved that this Association support the action of the Council in approving the suggested clauses, and that all members of the Association be circularised accordingly.

On the question of Bills of Quantities in building contracts, it was resolved that members of this Association be asked to advise their clients that Bills of Quantities should be issued wherever building work exceeds £1,000 in value.

The Meeting terminated at a late hour, with a very hearty vote of thanks to the President, and the members succeeded in groping their way down the dark staircase without casualty. All's well with the Association!

M. J. H.

## PROFESSIONAL CHARGES AND ASSOCIATION BY-LAWS.

Members are notified that it is now possible to obtain copies of Architects' Professional Charges, 6d. each, and Association By-laws, 1s. each, from the Acting Registrar, P.O. Box 2266, or Room 95, Municipal Offices, Johannesburg.



people who secured it has disappeared more than two thousand years ago. On this peninsula and within the period of 510 B.C., to 405 B.C., a very brief period in the life of a nation, were wrought almost all the achievements in arms, politics, arts and philosophy which conferred a never dying lustre on the Athenian name.

The Athens of Themistocles, Aristides, Pericles and Cimon was also the Athens of Aeschylus, Sophocles, Euripides and Aristophanes of Anaxagoras and Socrates of Ictinus and Phidias and the other architects and sculptors who under their guidance beautified the city with those magnificent structures, which, even in their ruin and decay, are the admiration of the world. Such an efflorescence of almost every form of genius is without parallel in the history of mankind. Greek architecture, while the fruit of all the civilizations which preceded the great period of Greek culture did not live for itself alone, for it is the fountain head whence flows the main stream of European culture.

The first inhabitants of Greece were called the Pelasgi. They were a swarm of Aryans, who probably crossed over from

No attempt is made in this article to sketch the origin or follow the development of Greek architecture as several volumes of this journal would be filled by a mere outline. I only give a few meditations on the above subjects.

It is not, at first, easy to realize the extent of the influence exercised on the history and progress of mankind by the handful of people who dwelled in a tiny corner of South-Eastern Europe. The bearing of the past upon the present is part of the nature of things in which we live and move, but rarely, if ever, in the world's history have past forms, principles and ideals exercised so potent an influence on subsequent art and learning, as those of the vigorous rarely dowered race which settled, perhaps three thousand years before Christ, on the shores and islands of the Eastern Mediterranean. Attica, the centre of Greek culture, is the most eastern portion of Continental Greece, but taking into account the islands and Greek Colonies in Asia Minor, it is, more literally, the

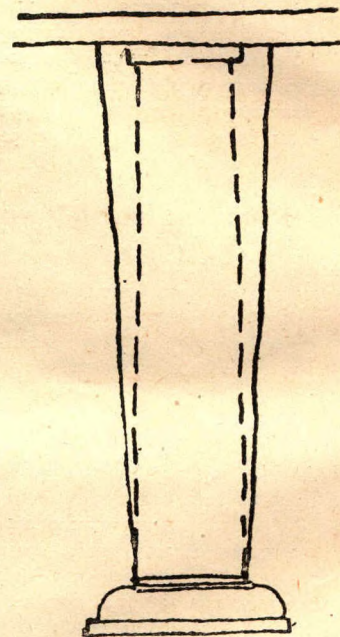


Fig. 1

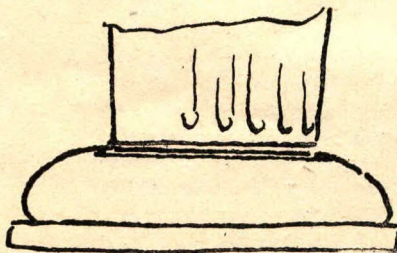


Fig. 2

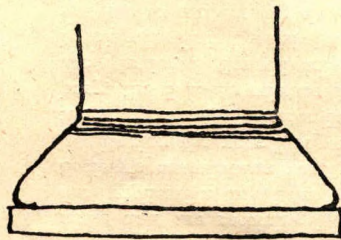


Fig. 3

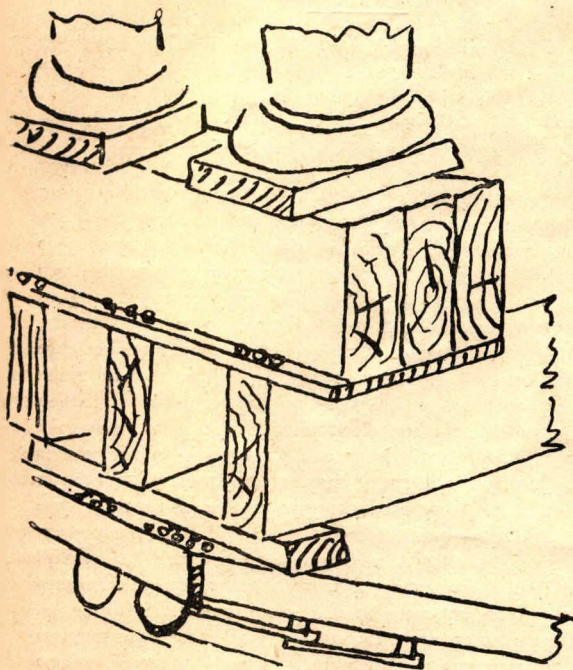


Fig. 4

centre of the countries peopled by the Hellenic race than any other portion of the ancient Hellas. In the days of its greatest power the population of Attica was not greater than the population of the Reef is to-day, and then three-quarters of the inhabitants were slaves. The size is approximately 50 miles by 25. Yet from this inconsiderable fraction of the earth's surface there emanated an influence, that brought the greater part of the world under its sway. Here uprose a civilization far stronger and more lasting than that of Rome. No race more gifted or brilliant than the members of this comparatively tiny community have ever yet played a part in history. The Romans built up a mighty empire, but how petty in extent and how brief was the duration of their domain when compared with that established by the philosophers, the poets, the sculptors, the architects and the politicians of Athens. It was an intellectual supremacy which has grown stronger instead of weaker, although the political independence of the

WHEN SPECIFYING, DON'T FORGET TO LOOK UP OUR ADVERTISING COLUMNS.

Asia Minor. They were an artistic race, delighting in jewelry, ivory, pottery and in beautiful household appliances. When these people already possessed a fairly advanced civilization they were overrun by the rude Dorians and other hardy tribes from the North. Then a period of blending ensues, obscure in history and barren in art. Gradually the threads of culture are picked up again, and we see the culmination, in the time of Pericles, some 500 years later. Apart from the recently discovered palace at Knossos, and the palace about which I do not know much, the oldest Pelasgic relic which has direct bearing on subsequent architecture in the Treasury of Atreus dating about 1100 B.C. The principal chamber is 48 feet in diameter, and is dome shaped. It is formed of horizontal rings each of which projects over the one beneath, forming a parabolic curve 45 feet in extreme height. The entrance to this dome is the most interesting part, it is set up and can be seen in the British Museum. The half columns that flanked



the doorway taper downwards—the upper diameter is  $22\frac{1}{2}$  inches, the lower being  $20\frac{1}{2}$  inches. Instead of being fluted the shaft is covered with zig-zag bands of ornaments. Near to this Treasury is also the famous Lions' gate, very similar to but more complete than the entrance to the Treasury. According to Mr. Phene Spiers, the columns at Mycenae point to a wooden origin; exchange to stone possibly accounting not only for the reversal of the tapering, but also for the absence of base in the Doric column.

The upper diameter was fixed by the original capital; if the stone column had tapered downwards like the wooden one, the lower drums would have been crushed, so the obvious solution was to reverse the tapering.

The Temple at Heraeum, one of the earliest peripteral temples, of which remains have been found sufficient to determine its restoration, actually had some oak columns left: the others had gradually been replaced by stone ones. The intercolumniation shows that the epistyle or architrave must have been in wood. Of the stone columns some were monolithic, others built of drums. The upper diameter of the stone columns was three feet two inches: the lower diameter of the wooden column was about two feet ten inches. But the lower diameter of the stone column is four feet two inches, so, to give it an even bed, it was necessary to work off the old base.

Other temples have also been found with wooden columns and bases *in situ*. In addition to this, the temples in Crete afford sufficient evidence that the Doric column in its early stages was of wood, that the diameter diminished downwards, and that the echinus formed from the first an essential feature between the abacus and the shaft, and that the abacus was of much greater width than the diameter of the column. This difference between the size of the abacus and the diameter of the shaft determined the shape of the echinus, and it is largely by this shape that the period of the temple is known. In the early examples, as in the temples at Paestum (illustrated) the echinus is very large, and the curve pronounced thus

Gradually the size and curve is reduced, until we find the most perfect example of the echinus in the Parthenon at Athens.

With the exception of tiles no roof structure of an older temple has been found. It is, therefore, necessary to trust to the earlier reproductions in stone of what were originally wooden features. Thus the triglyphs in the frieze reproduces the ends of the beams, as in accompanying sketch.

#### SOCIETY OF ARCHITECTS (S.A. BRANCH).

The Annual General Meeting of the Society was held at Johannesburg on November 5th. 1917.

Several apologies for non-attendance were received.

The Hon. Secretary reported that the Chief Secretary to the Society had duly confirmed the alteration of rules to the effect that the Branch had now the right to elect three Vice-Presidents instead of two as formerly.

The Hon. Treasurer presented the Annual Financial Statements, from which it appeared that the total expenses during the year had been £34 15s. 9d., and the bank balance at October 31st had been £136 5s. 3d. as against £130 10s. 4d. in the preceding year. The annual accounts were adopted with thanks to the Hon. Treasurer and the Hon. Auditor.

#### VALEDICTORY ADDRESS.

Mr. Burton, retiring President, delivered a valedictory address as follows:—

Gentlemen,—I should like to begin my address to you this evening by saying how much I appreciate the untiring work our Hon. Secretary, Mr. M. J. Harris, has devoted to this Branch of the Society of Architects during the past year, my

office as President has been made very smooth on account of his valuable assistance.

I also desire to thank Mr. D. M. Sinclair for his services as Hon. Treasurer, and the other members of the Council who have given their valuable time to the interests of the Branch, and I will always look back with pleasure on my term of office as President, and I feel sure that if the members of the Society of Architects maintain the devotion, enthusiasm, and good fellowship which at present exists, lasting results for the betterment of the profession is bound to obtain.

The great European War is still raging, and as a result the work of this Branch of The Society of Architects has been restricted. We cannot hazard as to when this terrible carnage will end, but we have every confidence in the success of the Allies and the final and complete overthrow of the root power which brought the conflict about. I would like to specially mention here the debt of gratitude we all owe to those who have braved the storm of shot and shell and made the supreme sacrifice, and also those who are at the present time suffering untold hardships and privations in order that humanity might for future generations reap a rich harvest of peace. Our best thanks are due to those of our members who are endeavouring to do their bit against an enemy who counts lives as mere cannon fodder, and such monuments as are dear to the hearts of all true architects as targets for destruction.

The following members of this Branch are now or have been on active service:—James A. Cope Christie, Sydney Charles Dowsett, Robert Howden, C. T. Mitchell, Harry Clayton, J. W. H. Farrow, G. T. Hurst, Ernest Rose, and the following students:—Horace Fyvie, Robert Clasky van der Schyff, David Joseph Parr.

Owing to the absence of Mr. D. Ivor Lewis, who is at present in England engaged on war work, Mr. J. S. Donaldson was co-opted as a member of the Council until Mr. Lewis returns.

During the year two applications for membership have been made and are receiving the attention of the Committee, and one application has been made for permission to sit for the Society's examination next year.

During the year I represented this Branch as a delegate to the Federation of Master Builders' Congress held in Johannesburg, the S.A. Association for the Advancement of Science, and the Municipal Council in connection with the curtailment of lighting facilities within the Municipal area, and as visiting member to the evening classes, held at the School of Mines and Technology.

**The Financial Position of the Branch.**—From the Hon. Treasurer's financial statement it will be seen that there is a credit balance at the bank of £136 5s. 3d., of this amount your Committee had agreed that the sum of £140 be paid to the Cape Institute of Architects on the fulfilment of certain conditions as laid down by your Committee.

The sum of ten guineas was paid during the year to the Transvaal Architects Benevolent Fund and a donation of ten guineas to the Committee of the Johannesburg University, and the hope was unanimously expressed that the future Councils of this Branch would continue to make a similar donation each year, at least until the University received due and proper recognition by the Government.

The sum of £1 11s. was paid during the year for book prizes to students at the School of Mines and Technology during the 1916-17 session.

**Registration.**—Year after year the Society of Architects has studied this question and given every assistance possible for its promotion. At the present time the Transvaal has "limited" protection. Much labour and patience has been spent by representatives of the Association of Transvaal Archi-



fects, on the Council of which several members of the S.A. Branch of the Society of Architects have rendered valuable service from time to time in an attempt to promote a Registration Bill which, in their opinion, and the opinion of the vast majority of members, after experience gained from the present Registration Act, would be more practicable and beneficial to the profession and art generally, and with a view to drawing up a Registration Act suitable to all the provinces in the Union of South Africa.

Up to the present time, however, very little progress has been made. The Cape Institute of Architects are apparently very desirous of obtaining protection by Registration, but they fail to fall into line with the wishes of the Transvaal, inasmuch as they do not appear to fully recognize the experience gained here from the working of the Transvaal Act. In this connection, I think it reasonable for us to suggest that we should be consulted and our consent first had and obtained with regard to the provisions of any proposed new Act, should this Society be expected to grant monetary assistance at any time under its terms.

Johannesburg is now passing through a transitional stage from the corrugated iron buildings of a few years ago. If our buildings of to-day are the result of only a few years' national development, we may reasonably expect something particularly good in the near future.

This city can no longer be looked upon as the mining camp of a few years ago, and I am of opinion that if it were governed by broader minded Councillors, less inclined to study the political point of view, we would find this city of ours rapidly growing as an industrial centre.

At the present time there is not the slightest encouragement given to any citizen desiring to commence an industry in Johannesburg by the Town Council, but rather it would appear that an effort is made to prevent such development.

Take, for instance, a case in point:—

A factory is in course of erection, and an application is made for electric current to be supplied by the Municipality. The applicant is informed that the cost of carrying the mains to the particular site will be approximately £175, and this for alternating current, as the existing mains are not for direct current such as is required for the proper working of the factory in question. Should direct current be installed the cost would be about £350 extra. For the same factory a very large supply of water was required, and on enquiries being made it appeared that the Municipal mains were 1.100 ft. distant from this new factory, and that to carry the mains this footage along the Council's road would cost £230, which would have to be done by owners of the factory, who would then be called upon to pay the sum of 5s. per 1,000 gallons for the water supplied. Other taxes of a similar nature but of a lesser degree, are levied against this particular factory and any other factories within the Municipal area. Now, until these are removed or relieved it is doubtful whether any great progress as regards new industries can be expected. The writer knows of one city, which only a few years ago, was in a most parlous plight financially, and property owners were in a great number of instances prepared to let their property for no other consideration than the payment of an amount sufficient to cover the cost of rates. It was clear that ruin was imminent, but a body of wise Councillors hit upon the plan of offering to supply any new factory that was started with free water and an abatement of all rates for a period of five years. As a result of that mandate a large number of factories were erected, and commenced doing business, thus giving hundreds and presently thousands of people employment and fresh money was pouring in to the city. The result is that Toronto is a city of huge dimensions.

The opportunity for industrial development in Johannesburg

was never better than it is to-day, and if we seize it, the future is assured, and incidentally, we could tackle the slum question with full confidence.

If we can feel that we have done our best to help our fellow beings in less fortunate circumstances than we ourselves are placed, we have conferred a benefit upon humanity, no been. To this end I trust that members of the The S.A. Branch matter how small the nett benefit to the individual may have of the Society of Architects will use their best endeavours to bring about a more general closing of uninhabitable hovels by the Municipal authorities of Johannesburg. In a country such as this, gifted with an abundance of sunshine and the knowledge of what is necessary for the health of all, there should be no slums.

In conclusion, I again wish to thank all officers and members of the Council for the support given me during the year of my office as President.

The new year, with Mr. D. M. Sinclair as President, promises to be a most successful one, and I feel sure that every member will agree with me when I state that no member has devoted more loyal service to the profession of architecture than Mr. Sinclair.

On the election of officers for the ensuing year the Hon. Secretary reported that no nominations had been received further to those issued by the Council. The resident thereupon declared the following gentlemen as duly elected office-bearers of the Branch for the ensuing year:—

President: Mr. D. M. Sinclair.

Vice-Presidents: Messrs. W. J. McWilliam and H. G. Veale.

Hon. Secretary: Mr. M. J. Harris.

Hon. Treasurer: Mr. D. M. Burton.

Council: Messrs. J. S. Donaldson, Robert Howden and E. H. Waugh.

Auditor: Mr. S. C. Dowsett.

Mr. D. M. Sinclair expressed his thanks to the Branch for the honour of his election as President. In the course of his inaugural address, he said that no officer of this Society could forget that the main object of its having been established was "Registration." He hoped that, during his year, they would be able to keep that object to the fore, and in doing so they would not make the mistake of seeking registration for the title "Architect," without protecting the interests of architectural practice. Many difficulties had yet to be faced, the worst of them in our own profession; but these difficulties must be tackled and overcome in the interests both of professional and public. In his opinion the time had arrived for architects as a collective body to tackle the big public questions. Architects' interests were generally lost sight of by the public, if architects were thought of at all, it was too often with the idea that they were men who were interested only in their five per cent.; but if architects were more to the fore, the profession generally would gain. There was, for instance, the question of slums, which was to be tackled very soon; a public committee had been formed, and he thought architects should make it their business to get in touch with that committee, and from their expert knowledge give both advice and influence. There was also the question of afforestation, which this Society's Branch had already tackled. The Government had excused its slackness by pointing to the War, but it was a very bad excuse in his opinion, and they should keep pegging away until the authorities announced an adoption of a proper scheme which should be of far-reaching benefit to this country. Going back to purely professional interests, the President said that the subject of architectural competitions was one that the Branch should consider, the Council should be prepared to advise members to avoid unfair competitions. Grievances were continually arising



owing to competitions being badly assessed, and they should consider whether assessing could not be placed on a better basis. Various suggestions had been made, one scheme was for a vote by the competitors themselves, but whether any scheme so far suggested was practicable, it was not for him to say. Some might say that there would always be grievances, but as a non-competitor in many instances he had formed the opinion that the grievances were very real. He hoped that during his year the Branch would obtain many new members. When it was considered that this was an Empire Society of which we in South Africa had constituted the only Branch, that the Society had corresponding secretaries in all other British Colonies, architects could surely not fail to see the advantage of joining for the advancement of their collective interests. Architects were beginning to learn that they all belonged, willy nilly, to a big body, and that when that body was hurt every member suffered with it. So far the body had still to rouse itself to get rid of certain parasites—estate agents, speculative builders, and such like—who preyed on the architects' province. The ordinary layman and client was so easily convinced that he could "save architect's fees" by accepting the services of such people; but they got commission on the purchases of the land, commission for all insurances, commission on the materials and so on; so that while the owner "saved architect's fees," his bliss was a fool's paradise for—although ignorantly—he was really paying more for his building and getting a poorer building besides. The Society was further interested in the advance of architectural education, and he hoped they would continue the policy of past years in that respect, and there was also the question of educating people in outside districts as to the meaning of an architect. In country towns such as Carolina, where the carpenter is the local architect, there were large fields which should be opened up for skilled architectural work in country and farm buildings. In all these interests the Branch would be strengthened in direct proportion to the strength of its membership; he therefore hoped that more members would enrol, and thus strengthen the entire body to enable advance in the directions he had indicated. Let them never mind the War in the sense of doing nothing here! When members came back from the fighting lines it was the duty of those who had stayed behind to see that all machinery should be in perfect order to enable a new start on a better footing than ever. Concluding, the President moved a vote of thanks to the retiring President and Council, and putting same to the meeting, declared the vote carried by acclamation.

Messrs. Dowsett and Burton referred to the subject of afforestation and after a short discussion it was resolved that this question be recommended for attention by the incoming Council, together with other matters contained in the two addresses heard that afternoon.

This concluded the business.

#### LEGAL.

##### MAGISTRATE'S COURT.

The Witwatersrand Township and Estate Corp. v. Johannesburg Municipality. Subject: Valuation of stand licence interests in Fordsburg, Jeppestown, Bellevue, Bellevue East. Spes Bona, North Doornfontein and Malvern.

Mr. McFie, the Chief Magistrate, delivered a lengthy judgment, of which the following is a synopsis:—This case is an appeal from the Valuation Court of last August and refers to the valuation of the freehold interest in these townships. As most of the stands or lots are held under very lengthy leases the reversion of the right of occupation by the freeholder is too remote to be at present of value. The freeholder, however, receives from the lessee of each stand a monthly sum of 10/-, the right to collect this ground rent is the subject of the valuation.

The Town Valuer, assisted by Mr. Arthur Meikle, a local auctioneer, entered figures in the Roll which would allow a return of 5½ per cent. nett (clear of collecting 5 per cent. and rates, but not deducting income tax). The appellant Corporation asked for a reduction to a sum of little more than one-half of that of the Town Valuer. Mr. R. Currie, an auctioneer of long experience, said that the income was only worth 8 per cent. nett, but if the reversion of the buildings came to the freeholder he thought an investor would want 7 per cent. on his purchase price. Decided, that all buildings fixed to the soil reverted to the freeholder at end of the lease, that this was a well established principle of South African Law (Roman-Dutch). Consequently, no sinking fund was required in the calculations except where the Corporation themselves only held a leasehold title and collected rents from a sub-lessee standholder. Also decided that rates were not to be deducted from calculation if lease gave Corporation right to collect same from standholders; also that the rate of valuation should be on a 5½ per cent. basis instead of 5¼ as appealed against. (This gives a reduction of less than 5 per cent. on the original valuation.) Costs to be paid by the Town Council if the sum total reduction proved to be substantial (figures not yet fixed), if not then each party to pay their own costs.

#### The Hume Pipe.

The discussion in the Capetown City Council as to the proposal to use this pipe for waterworks has brought into the public eye this clever new method of making water-piping. The process is the discovery of the Hume Brothers, steel fence and gate makers, of Adelaide, Australia. They found that the ordinary painting of finished fencing before delivery was too slow and dipping too wasteful of paint, and they devised a centrifugal process by which the steel palings were placed in a hollow cylinder and the surplus paint was thus thrown off. They observed that, in time, much of the paint remained in a hard mass evenly around the cylinder, forming a kind of pipe. This gave the clue to using the process for making cement concrete pipes.

The process is very adaptable as the plant for making can be moved about from place to place, so that all that is wanted from a distance would be the re-inforcement. The pipes are smooth and true in fire, and the price is more favourable than for cast iron or steel pipes were on a pre-war basis.

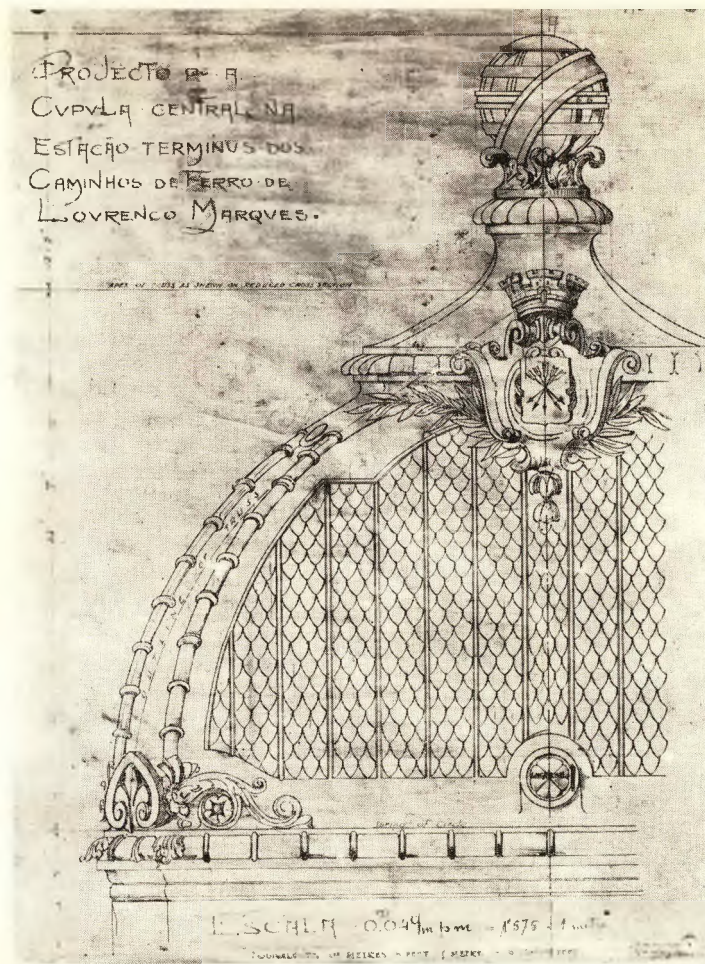
The concrete pipe will carry bursting pressure up to 500 lbs. per square inch, and it has the peculiarity that it does not really burst like an iron pipe. A tested pipe showed sweating at 300 lbs. pressure; as the pressure increased a fine spray was observed gradually increasing in volume. A pipe overstrained "takes up" after the pressure is reduced and again becomes tight. Many of the pipes have been working for years under pressures of over 200 lbs. per square inch. Apparently the manufacture compacts the concrete in a way not obtainable by older methods of ramming. The pressure limits can be raised by an increase of concrete and reinforcement. At Tanundor, in West Australia, a 12 inch pipe was under a head for months of 400 feet and improving with age. Canberra, the new Australian capital, is being supplied with these pipes for water mains, drainage and sewers, from 4 inches to 36 inches diameter. It is said that no iron piping is being used.

The invention is solving a lot of problems during the war period, and it would be interesting to learn if it would resist electrolysis, which has caused so much trouble in Johannesburg.

It is said that an ordinary 4 inch diameter pipe, 8 ft. long, can be turned out in one minute; a 48 inch diameter, 8 ft. long, in 20 minutes. The centrifugal action throws out the surplus water, and the new pipe can be opened in its mould for drying and setting immediately it is made.

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DETAIL DOME —Railway Station, Lourenco Marques.



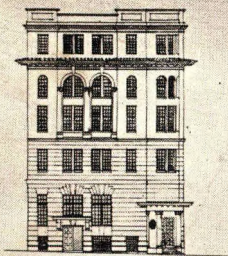
NEW RAILWAY STATION, LOURENÇO MARQUES, P.E.A.  
Major C. de Sa Carniero, Director of Railways. Senhor Ferreira de Costa, Architect.





Perspective.—Proposed new Standard Bank Competition, Eloff St., Johannesburg,  
Mr. Allen Wilson, Architect.

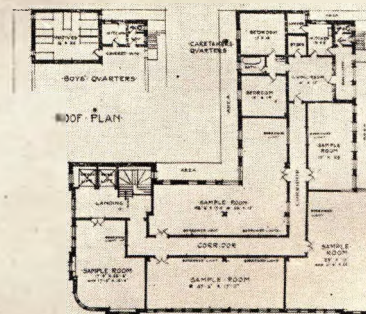
THE STANDARD BANK OF S. AFRICA LTD.  
ELOFF STREET.



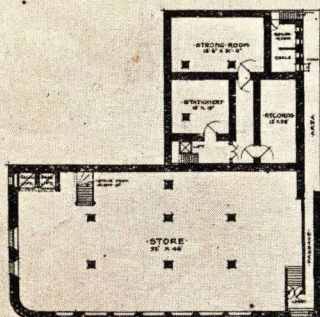
ELEVATION TO ELOFF ST.



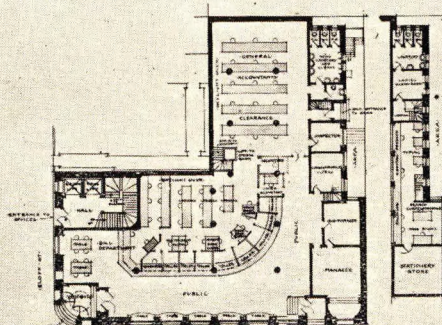
ELEVATION TO MARKET ST.



PLAN OF FOURTH FLOOR



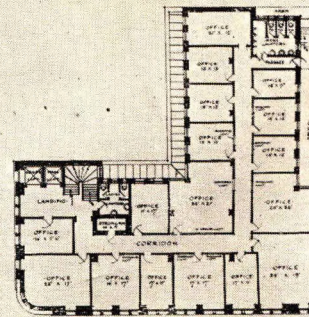
PLAN OF BASEMENT FLOOR.



PLAN OF GROUND FLOOR.



MEZZANINE FLOOR.

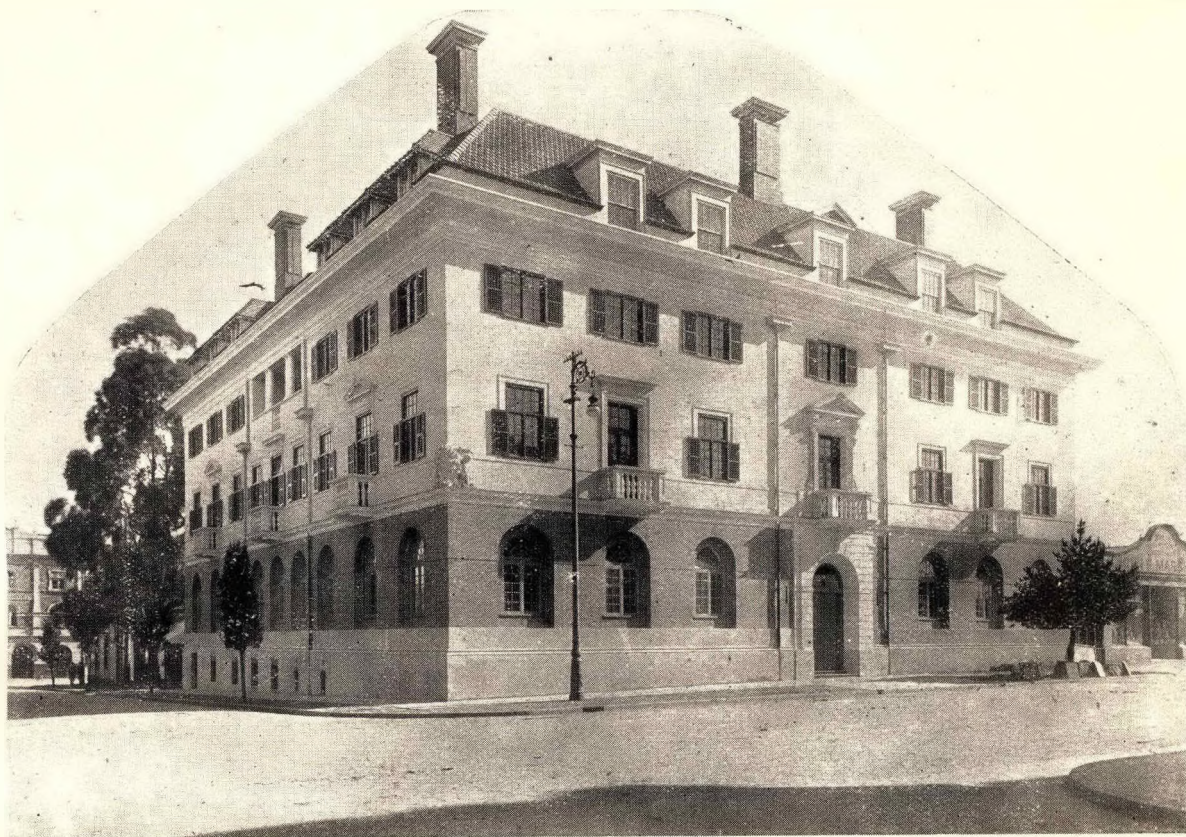


PLAN OF FIRST SECOND & THIRD FLOORS.

SCALE 1/4" TO 1'

SHEET NO.





NEW Y.W.C.A., JOHANNESBURG.  
Messrs. J. M. Solomon & Marshall, Architects



REMAINS OF TEMPLE AT PAESTUM,  
Drawing by Mr. Gerard Moerdijk.



## A MEMBER IN THE MIDDLE EAST.

## EXTRACTS FROM G. E. PEARSE'S LETTERS TO HIS MOTHER.

71st Field Coy., R.E.,  
13th Division, Mesopotamia.

May 30th, 1917

The weather has been a little cooler this week, and the nights (full moon) lovely.

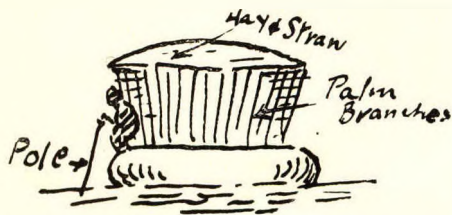
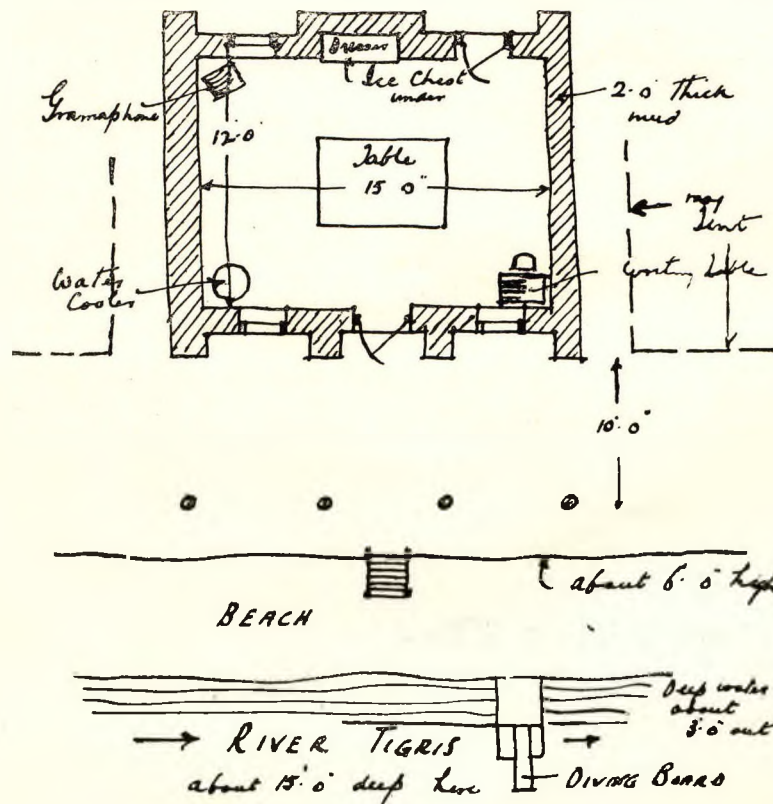
A few days ago we had a visit from Gen. Maude, who decorated a number of officers and men. I had to take a party of men over to the parade, but not feeling very fit Douglas took them instead. One of our men got the Military Medal, though we hoped several others who had been recommended would have

by having bacon and eggs for breakfast. We also managed to get half a dozen bottles of whiskey, which is another boon.

I have a family of puppies to look after at present. When Bell went to India he left the mother in my care. She had nine, so we drowned four, and the others are getting on famously. I am to have first pick. It is absolutely necessary to have a dog when in camp, as the Arabs are such awful thieves, and pass sentries and barbed wire without any difficulty.

May 21st, 1917.

Since I last wrote we had another beastly march up the river we bridged, and on our return, as we had driven the enemy back for miles, it was decided to get back to our advanced defence line for the hot weather. We had a busy time taking the bridge to pieces, in fact, worked all night as



Coracle (How the man with the pole hangs on I don't know)

got something. I am enclosing a cutting from the London "Times" of the crossing of the Dialah. It doesn't say anything about our Sappers, but they did all the rowing and we were there each night. However, the Lancashire lads deserve the greatest praise and were truly wonderful.

We are living quite well at present, as we have been able to buy a lot of fowls from surrounding villages and have them penned here. They give us a few eggs every day, so we swank

the boats had to be taken down stream to the Tigris, which was a long job. Our Coy. is at present very weak through sickness and men on leave. Douglas spent the night taking the boats down, whilst I took all the superstructure overland on carts. We were the last to leave, and were thankful the enemy didn't attempt to stop us, though we had a small force protecting us.

At present I am building magazines for the artillery, ovens and furniture for the hospitals, and putting in water supplies, tanks, etc., for the other units. We work from 4.30 to 8.30 a.m. and 4 to 6 p.m., and take cover during the heat of the day.

We all bathe just before 7, so are enjoying life. I expect we shall soon have heaps of trenches and wiring to do as material is arriving daily.

Last week we were in a wretched camp for a day or two alive with spiders and scorpions. The former we are quite used to, but the latter I don't like. I found one in my helmet the other morning, and we killed nine at dinner one night.



The flies are the biggest curse, so we have our midday meal sitting on our beds under a mosquito net. As the "Alphabet of Mesopotamia" says:—

"S is Seasoning we feel every day  
To get back to Blighty and blooming well stay  
Till we're sent out to France, which is Heaven they say  
After fighting in Mesopotamia."

Yesterday we sent foraging parties out and got 80 eggs for the mess, so we are making beasts of ourselves. The Arabs won't part with them under two annas (2d.) each, but we are only too glad to get them.

A couple of days ago we had a dust storm, the most wonderful thing I have seen. It came across the desert with an advance guard of huge whirlwinds, between which the dust looked almost pitch black. The air was charged with electricity and the whole thing most marvellous, though of course beastly.

My clothes are in a very bad state, and as I cannot trace my kit (everyone loses all their kit here once it has to be left behind) I have taken to darning, and am getting fairly good at it. I have only one change of clothing with me, and no soap, so with a fair daily supply of dust you can imagine our position! At present I am shut up tight in my tent with buckets of water to keep the floor damp, and very little on, so am comparatively luxurious.

There are plenty of marauding Arabs around here after rifles, etc., but I hope in time we shall effectively deal with them. Poor Tommy is occasionally scuppered by them, but he is very quickly avenged.

Though life is not a bed of roses, we are all happy, and have actually got an old gramophone and a dozen records, so can have music with our meals.

June 12th, 1917.

Well, we are all very happy and contented now as we are not worried by the sound of guns. It is much too hot to fight, so we are making our camp as comfy as possible. Of course the R.E.'s are having the busiest time, as we have to do all the constructive work. We have a soda-water factory—a field one going strong, also a good field bakery and ice factory, so we get ice, fresh bread and soda water with our rations.

We are also building a mess, using Arab labour, as the tents are unbearable for meals. It is being constructed with mud walls 2ft. thick, and a verandah on the water edge 5ft. about it. We have a bathing pier in front, and all go in as soon as the sun goes down. Our mess room has tiny windows covered with fly wire gauze and similarly the doors. We are covering the walls with strips of khaki pugaree cloth to hide the mud and are having wee red curtains to the windows. The floor is mud covered with rush mats and I have had a semblance of a dresser built into a recess and constructed of ration boxes. The roof is rough round timber covered with mats and about a foot of mud. We hope to have a dado of pictures from "La Vie Parisienne" in lieu of Japanese prints. The other units here are all constructing messes, either dug-outs or semi-dug-outs with tents forming the roof.

The men are all very happy, as most of them are working at their trades. We have a carpenters', Blacksmiths', painters and tinsmiths' shop going strong. But, oh! the heat. Even horses die of sunstroke.

Well now I must tell you of my trip to Baghdad. We left on Wednesday afternoon about 3 p.m. in a Ford car and had a most interesting trip, as we went via Bakubah, a lovely spot on the Dialah River. From there, there is an excellent road to Baghdad as flat as a pancake and not a vestige of vegetation. We spun along, but it was mighty warm as a hot wind was blowing. We reached the city about 8 p.m. and drove to the

Y.M.C.A., who have taken over a large hostel. There was not a room to be had, so we went on to the Imperial Hotel and managed to get a room. The place was chock full of officers, and I met a crowd of pals. Needless to say we much appreciated a course dinner off china plates and a tablecloth. There is a scarcity of drink, but we managed to get beer.

After dinner I went with some friends to the Hotel Maude, the show place, and met another crowd. This hotel is on the river front and has a fine terrace planted with trees, a host of small boats or bellums are moored to the terrace wall, so we spent a little time on the river. We were waked early by the noise of donkey bells and looked out on the busiest scene. The street was crowded with people—Arabs in their flowing robes, Armenians in white, ladies galore in beautiful silk draperies, soldiers, native police, and heaps of little park donkeys bringing in produce. The streets are kept well watered and consequently the town looks fresh and clean. About 9, after an excellent breakfast, the car came round, a bit later for my liking, and I drove across the river over the only bridge, a pontoon one, others are now being constructed, as the Turks destroyed them all. I saw the railway and wireless stations and various other big works, instances of the outlay of German capital.

Next morning I spent about 2½ hours in the bazaars, really one of the most interesting sights I have seen. The main bazaar is about 1½ miles long, the roof being completely roofed over. Off this are numerous small roofed streets devoted to the various industries, as metal-workers, shoe-makers, basket-makers, etc. I bought a number of things and then went to the Red Cross Society's depot to get comforts for our men.

I had tiffin with Damant and we afterwards went to the metal shops, where I got a fine samavar, brass condlesticks, antique chafing dish and coffee grinder, a couple of jugs, and a bell all for 25 rupees—real bargains. It was only lack of time and money prevented me visiting the silversmiths, and as it was I had an awful rush to get back to the hotel, pack and get away at 3 p.m. We had another hot run back, and I had a great welcome home. The only disappointing part of the trip was I couldn't see any of the buildings, though I did just visit the Citadel to see if I could get some clothing.

17th June, 1917.

I haven't much to say this week as we are jogging on in the same old way, keeping indoors during the heat of the day and working in the cool. On Friday I had to reconnoitre one or two villages to see if a new road could be made. I left with an escort at 3 a.m. by moonlight and reached my destination about 6.30. We breakfasted and gave the animals a rest and started back at 7.30, reaching camp at mid-day, as owing to the heat we couldn't go very fast back. It was a lovely ride, and I did it again yesterday and made a day of it, as I saw the Sheiks of the villages and arranged with them to supply the labour for the work. I had an interpreter with me and quite enjoyed myself.

At the first village the Sheik asked me to have coffee with him, so as I was curious to see their horses I went. He insisted on taking my horse himself and led it in through the front door into a courtyard with a portion set apart for horses. At the other end of the courtyard the ground was covered with carpets and cushions and the old man fetched a seat for me so that I shouldn't sit on the ground. All the headmen of the village came in and squatted down, carefully kicking off their slippers before doing so. They gave me the most delicious coffee and fruit and sent off to get me some eggs and chickens to take back with me. The old chap then accompanied me on an Arab steed round the village, and I pointed out the work to him. At the next village I had a similar time and had some sherbet and Turkish delight. There were no women to be seen,

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but I saw the stairs leading to the upper floors where, no doubt, the harems are situated.

We moved into our one-roomed bungalow to-day, and have been busy lining the walls with khaki cloth and putting small red curtains and valences to the windows. The dresser is covered with brass and looks quite smart, though the beer and whisky bottles hide a lot.

71st Field Coy., R.E.,

Mesopotamia, June 18, 1917.

Dear Mr. Ellis,

We are all very cheerful and happy here now, as both we and the enemy find it rather too hot to fight. The R.E.'s are probably having the busiest time, as we have such things as soda-water and ice factories, sentry-boxes, sun-shelters and water supplies to put up. We also have to deal with the water question for troops away from the river, which means pumping water into canals to keep them going. Most of the big canals here are supplied from sources which are in the enemy's hands and which of course they have stopped.

We have built ourselves a topping little one-roomed bungalow for a mess, and are very cool and comfy in it after tents. I must sketch the plan here for Gordon's edification. The walls are lined with khaki cloth and the windows have small red curtains and valences. We managed to get some wire gauze, so have made it fly-proof and mosquito ditto.

We bathe every evening and generally have a crowd of visitors owing to our swanky diving platform. The fishing here is most excellent, one man landed one weighing 59 lbs. They are rather like salmon, so are known as Tigris salmon.

About a quarter of a mile up stream we have erected a concert platform on a sand-bank in the river, as we anticipate having a number of concert parties during the summer and perhaps a few bands. There is one here now which discourses sweet music twice a week.

At present we are getting a plentiful supply of fruit, which, except for grapes, has to be stewed, as every precaution is taken against cholera or dysentery. We are all quite accustomed to chlorinated water now, and once used to it one never notices it. The health of all units is excellent compared with last year. This is no doubt owing to our being farther north, consequently cooler.

You would no doubt be very interested in the Arab river transport here. They use coracles and are wonderful at handling them. It is quite a common sight to see one with about six pack donkeys and eight or ten Arabs coming across stream, or to see others piled up with hay in this manner. Weird looking craft, and I suppose the prototype of the British Navy. One often sees camel caravans coming in from the desert, but not so far up as this. I saw a number when at Baghdad.

G. E. PEARSE.

#### VALUATION NOTES

The Witwatersrand suburban municipalities have been the scene of further fighting over the much debated Rating Ordinance and its effects on the value of landed interests. The same issues, originally fought out in Johannesburg, have been carried along the reef, but no points of a new character were disclosed.

The S.A. Institute of Valuers held its eight annual meeting of members at Capetown on November 20th, and the following items of interest occurred in the Council's report:—

At the last Annual Meeting the Roll stood at ... 129  
Admissions during the year have been ... 13

Reduced during the year by:—

(a) Resignations	...	...	...	4
(b) Deaths	...	...	...	4
(c) Unavoidable application of Article 11	...	...	...	4
				— 12

Leaving the Roll on the 30th September at ... 130

being an increase of one during the year as compared with the number as at the close of the previous year.

The Council regret to report the resignation—owing to advancing years and ill-health—of Mr. George Broster, of King William's Town, who has been a member of the Council since its foundation. The vacancy was filled at the Extraordinary General Meeting of Members, held on the 9th day of June, 1917, by the election of Mr. E. L. Acutt, C.M.G., Chairman of the Natal District Committee.

Upon the recommendation of the Annual General Meeting, held in November, 1916, Mr. Broster has been placed on the roll of honorary members.

The Council has, with extreme regret, also to report the resignation of Mr. Harry Gibson. He has been one of the Vice-Presidents of the Institute since its foundation, in connection with which he took a very prominent part. The Council approached him to reconsider his decision, but without success, but is pleased to record that his membership of the Institute will continue.

It will be necessary for members to fill the vacancy by electing another member of the Council and a Vice-President.

The Council places on record the whole-hearted support received from the Natal District Committee in the furtherance of the objects of the Institute, and regrets that members in other centres have not availed themselves of the opportunity afforded by the constitution of the Institute to form similar local organisations.

The Valuation Amendment Ordinance No. 12 of 1917, promulgated on the 7th September, 1917, amends certain sections of Ordinances 7 of 1914, and No. 9 of 1915, and re-constitutes the Valuation Court in the Cape Division. A very useful provision is also made to enable the Court to hear objections as soon as any portion of the Valuation Roll for a Division relating to any property in any Municipality or Ward of the Municipality has been completed by the Valuers.

There are 85 Divisions in the Cape rovince (including Elliot and Maclear, which have Divisional Councils). The present position is as follows:—

45	Divisions.	The Courts have sat to consider the Rolls, or have actually been summoned.
10	Do.	Complete Rolls received, and the Courts about to be summoned.
18	Do.	Field work complete, and the Rolls are being prepared.
11	Do.	Field work practically complete.
1	Do.	Field work still incomplete.

85

The Council has, by the courtesy of the Director of Valuations, been placed in possession of figures showing the results at date of the colossal work undertaken in compliance with the provisions of the Ordinance of 1914, and annexes a resumé of a comparative statement showing former and Provincial Valuations.

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of 41 out of 85 Divisions. The Council hopes to be in a position to furnish full details in respect of all valuation areas in next year's report. Strong evidence in favour of the Provincial system of valuation is afforded by the fact that in the areas in which the work has been completed the values have been increased by nearly twenty and a half million pounds sterling.

The audited accounts accompanying this report again show a satisfactory state of the Institute's financial position as on the 30th September, 1917, the balance in hand being £628 12s. 4d. The revenue was £183 12s. 2d., and the expenditure £140 2s. 10d.

According to the annual statement rendered by the Natal District Committee up to the 30th September last, there is a balance of £35 19s. 11d. to credit of that Committee with the County Permanent Building Society.

These figures indicate the startling difference arising from a properly organised Provincial valuation. Under the old style each Division was a law to itself and carried out its valuations on more or less loose methods. Now the whole Colony is valued under an organised system with a Director of Valuations.

E. W.

The following figures show the total of 41 out of 85 Divisions of the Cape Province since the adoption of new methods under the Valuation Ordinance, 1914.

			Increase.
Provincial Valuation : Urban	...	£16,075,620	
Old Valuation : do.	...	11,291,083	£4,784,537
Provincial Valuation : Rural	...	39,175,492	
Old Valuation : do.	...	23,548,981	15,626,511
Total Provincial Valuation : Urban and Rural	...	55,251,112	
Old Valuation : do.	...	34,840,064	£20,411,048

Provincial Rateable Value : £47,760,699.

### Union Trade Returns.

The figures for the nine months ending 30th September show still continued decrease both in quantity and value. The decrease in the former is even greater than in the latter, as merchandise costs more and more as the war progresses. The total decrease in value of all goods imported is £3,772,185, or well over 12 per cent.

Window glass dropped from £26,308 to £19,861; plate glass from £31,910 to £20,738, and girders and structural steel from £21,184 to £9,803, so that it is no wonder we are all short of rolled steel joists. Plain sheet galvanised iron went from 40,252 cwts. to 13,997 cwts., and the value from £42,252 to £19,237, or only one-third the quantity for half the price. Corrugated iron dropped in quantity from 148,158 cwts. to 93,709 cwts., and the cost from £145,943 to £116,456, showing a sharp rise in price.

Iron and steel dropped from 170,110 cwts. to 95,556, and the value from £158,259 to £106,756, this also showing a sharp rise in costs.

Linseed oil dropped 50 per cent. in quantity, from 305,036 gallons to 156,459 gallons, and the value from £51,984 to £35,663.

The import lists showed a continued increase in importation of Burmah teak, as the quantity in cubic feet rose from 51,913 to 68,787, and the value from £15,403 to £22,010. All

other unmanufactured timber, comprising deals and building and other timber generally dropped from 4,210,243 cubic feet to 3,846,664, and the value from £374,455 to £344,948. This does not exhibit any very sharp change in price during the 12 months. Flooring and ceiling boards were imported to the extent of 650,991 cubic feet as against 921,486, the value only going from £99,008 to £95,964.

As regards countries of origin, the proportion of imports from each to the total imports altered on the main items, as follows:—United Kingdom. 58·2 to 51·2 per cent. of total; India rose, however, from 4·0 to 5·8 per cent.; Australia from 3·6 to 4·3; The Belgian Congo from 2·4 to 3·9; and the U.S.A. from 15·0 to 17·4.

The enormous decrease in quantity as well as in price has reduced the Union income from import duties and led to a continued burden of direct taxes, such as the Income Tax. When the war ends we shall have the pleasure of recording increases; these returns have, however, been dull reading for a long time, and recent informed advice regarding timber from the Baltic is very gloomy, and points to a further early sharp rise in price as well as restriction of quantity.

### OUR ILLUSTRATIONS.

The ancient temple at Paestum is from the brush of Mr. Gerard Moerdijk, and accompanies his article on Greek Architecture.

The new Y.W.C.A. in Johannesburg has just been completed to the designs of Messrs. Solomon & Marshall. The plan of the building is in the form of a hollow square, the centre being open to the sky. The treatment throughout is refined and cultured, and exhibits a quiet restraint, very pleasing in a land of strong sunshine.

The design for the new Standard Bank in Eloff Street, Johannesburg, is from the pen of Mr. Allen Wilson of that city. It obtained the first place in a limited competition arranged by the Bank authorities.

The drawing and photo of the new Railway Station at Lorenzo Marques was carried out for the Portuguese Government under the supervision of Major C. de Sa Carniero, Director of Railways, the architect being Senhor Ferreira de Costa. The dome is, for South Africa, an unique production, as it is covered entirely with sheet copper, and all the ornamental work is beaten into shape in Johannesburg under contract by Messrs. Evans & Plows (D. M. Evans). Mr. Evans was quite unable to get the work done in England owing to the war, but, having secured the copper, had the whole of it made in his workshops. The beating took several months to execute, as the dome is 40 ft. by 37 ft. on plan and consumed nearly 5 tons of copper. It is four sided with bevelled arrises. The main part is covered with copper tiles, and the enrichments comprise a large coronal sphere 9 ft. diameter; under this is a crown of six leaves 6·6 ft. diameter. At the lower corners of the dome are antefixae 4 ft. by 3 ft. 6 in., supported by acanthus scrolls 7 ft. long. On the main front is a large coat of arms 12 ft. by 9 ft. with leaves branching out to a total width of 19 ft. The decorative hammering as well as the plain work was carried out by the firm who secured the services of Mr. Malcolm Norman for the enriched parts.

The design of the building generally is of a Baroque character and in consonance with the national sentiment in architecture. Some might cavil at the dominance of the entrance massing, but, when it is borne in mind that this is a gateway to a large continent, this feeling is somewhat allayed.



**HEALTH NOTES.**

(Communicated.)

The U.S.A. War Minister has approved an order creating a Sanitary Corps under the medical department of the Army, which will include various classes of experts in sanitation, bacteriology, sanitary engineering, and men skilled in the supply, transportation, storage, etc., in connection with medical department work.

The Commissioner of Health of New York has introduced an amendment into the Legislature,—a law which makes it compulsory for every man and woman applying for a marriage license to declare—"I have not to my knowledge been infected with any venereal disease, or if I have been so infected within 5 years, I have had a laboratory test within that period which shows that I am now free from infection."

A recent outbreak of diphtheria in Cornwall has been attributed to the game of "Kiss in the Ring."

The American Red Cross has appropriated £160,000 to aid in controlling sanitary conditions in the civilian areas surrounding Army Cantonments.

At Camp Pike (Arkansas) a two-storey barracks, 43 ft. x 140 ft., was erected in 2 hours and 55 minutes for 200 men. Two hundred carpenters were employed, and in spite of the number of workmen and the high speed at which the work was rushed, not a man received a scratch or a bruise.

At a meeting of the Sanitary Association of Scotland held recently, it was proposed:—

"That no person be appointed to the position of Sanitary Inspector unless he had 3 years' experience as an Assistant Sanitary Inspector; and that no person be appointed as Assistant Sanitary Inspector unless he had passed the examination in Sanitary Science, and had been employed in a Sanitary Inspectors' office for at least one year."

This is a very drastic rule, but the idea is to elevate the profession of a Sanitary Inspector and attract well educated men to it. In view of the proposal to initiate a course of instruction at the Technical School, Johannesburg, early next year for candidates qualifying for this profession the above proposal comes at an opportune time for guidance.

In a case brought before the Grimsby Magistrates for adulterating bread with calcium phosphate, it was stated that if a person ate a pound of such bread he would consume a quarter of a tea-spoonful of plaster of Paris.

With reference to the high death-rate from tuberculosis in the Dolgelly District, the M.O.H. states that he is continually receiving complaints that the ventilation of Churches and Chapels is in a shocking state. The windows are never opened from one week to the other, and no wonder people become ill during the services.

- *Typhoid Fever Mortality*—London.

1869—1884, average '25 per 1,000 per annum.

1912—1916, " '025 " "

At Hove, 1-3rd of the Town's refuse is crushed, and the M.O.H. states that the resulting mixture, which looks like damp ashes with some paper, is a valuable manure, the analysis of which is as good as that of ordinary stable manure. The demand for it has been in excess of the supply.

A woman applying recently to the Magistrate at Marylebone for a process against her husband for desertion, said he had been invalided out of the Army on pension as a typhoid carrier and was now working at a dairy!

There was an examination for persons qualifying for the Sanitary Inspector's Certificate on Friday, 30th November, and Monday, 3rd December, 1917, at the rooms of the Transvaal University College, Eloff Street, Johannesburg, under the

auspices of the Royal Sanitary Institute. In future these examinations will not take place in June as heretofore, but on last Friday in November.

Mr. Munsie, Chief Sanitary Officer of the Krugersdorp Town Council, has been proposed by the Sanitary Inspectors' Association as a member of the S.A. Board of Examiners of the Royal Sanitary Institute, and accepted by the Institute.

Lt.-Col. J. Irvine Smith, M.R.C.V.S., of Johannesburg, has also been appointed a member of the same board, in connection with Meat Inspection.

Mr. R. Beattie and Capt. Gordon were invited by the S.A. School of Mines and Technology, Johannesburg, to join an Advisory Committee on courses in Sanitation, and it has been decided to extend the present course, to include all the subjects in the Royal Sanitary Institute's syllabus for Sanitary Inspectors.

**News and Notes.**

The need of a Town Planning Committee in the Transvaal is being slowly recognised. At present the lay-out of townships is left entirely to the mercy of the owner of the land and with a few noteworthy exceptions, like the Transvaal Consolidated Lands, Ltd., on their Braamfontein Estates, ignore all the claims of beauty and contour value. The creation of a Town Planning Committee, to whom all new plans should be submitted, would mark an advance, as they could guide the formation of town plans into lines likely to make for beautiful dorps instead of the present rigid grid-iron methods adopted by land-owners, whose only aspiration is one of horrible greed.

The informative and inspiring articles appearing in this *Journal* from the able pen of Mr. D. M. Burton, on the highly important subject of afforestation, should awaken a definite interest among architects and builders. There should be a combined deputation of these callings to the Minister for Agriculture to lay before him the need of such progress in the Union.

The use of Colonial timbers is growing. Rhodesian mahogany, put into the Johannesburg Municipal Abattoir Offices some eighteen months ago, is showing very fine results. There are quite 1,750 square feet of this wood in wainscotings, windows, doors, counters, chairs, desks and tables. Not a single joint has opened, and panels up to 2 feet across show no shrinkage whatever. There is hardly a move in a mitre, and windows exposed for 18 months to fierce afternoon suns are standing like metal. In the writer's experience of 27 years he has never seen any wood which has shown such unshrinkability as this particular Rhodesian mahogany. It has given so far much better results than Burmah teak, and the beauty of its grain becomes mellowed and enhanced the longer it stands.

The Johannesburg Municipality are now definitely prohibiting the installation of any Patent Dry Closets, not so much on health grounds as on those of general financial administration.

A scheme for large extensions to the Johannesburg Trade School has been prepared, and will be pushed forward at once.

Mr. Gordon Leith, one of our members, who is a Lieutenant with the British Army in France, has been awarded the Military Cross for valour in leading his men in action. He is suffering from a gas attack, and it is reported to have affected his eyes, but we have, happily, had no confirmation of the rumour that he had been blinded.

The South Australian Government convened an important Town Planning Conference in Adelaide in September. This subject is much debated in Australia, and the Governments there do not hesitate to employ well known experts for lecturing tours.



The Great Australian Trans-continental Railway (from East to West) from Port Augusta to Kalgoorlie has been completed, thus linking the North of Queensland with Perth and Fremantle. The journey from Brisbane to Perth will take 5 days 15 hours, of which 16½ hours will be consumed in the various capitals waiting for the connecting train. There are 26,906½ miles of railway in Australia, with a gross revenue of £22,603,451, returning only 2.91 per cent. nett on capital. But then! they don't try to run for profit but for the public. The reverse is the case in South Africa, and our fares, etc., are much higher.

Owing to the scarcity of the galvanized article the Johannesburg Council are permitting temporarily the use of black iron water piping.

The Johannesburg Works' Committee recently approved of a garage and warehouse with 12 inch hollow walls (brick) as panels, each panel being carried on re-inforced concrete beams, and these latter being carried on heavy solid brick piers.

The little State of Victoria, Australia, about the size of Natal, put out 83,000,000 cubic feet of timber per annum. Mr. Burton, in his last article, reckoned that *all* the timber in Natal is available, would, if cut to supply the Union, last a little over a year. Victoria's output for one year would supply the Union of South Africa for ten years, and the supply is kept always going.

No one, who knows Natal slightly, would doubt its capacity to grow huge timber. The Editor lately was staying near Estcourt and saw solid blue gums 6 to 8 feet thick, and 130 feet high, each tree being sufficient to fill many railway trucks.

Mr. Cecil Alder, our Registrar, who is in France, has been transferred to the Imperial Army Service Corps as a full Lieutenant. He is helping to feed a section of line with ammunition and provisions, and does not escape the amiable attention of the enemy's guns while on the road.

Mr. Harry G. Veale has returned to the Rand after a long absence in Durban, and is resuming practice as an architect on his own account at Henwood's Arcade, President Street, Johannesburg.

The Union Government has notified the establishment of a Health Department. Previously the Union M.O.H. was a lone official without proper machinery. As statistics are as the life-blood for health work, the new department will be welcome, and it is hoped that a Union Health Act will soon eventuate, as it is much needed, for outside of towns there are no proper sanitary laws or safeguards.

The business in building merchandise, so long carried on by the late Mr. John Forrest in Johannesburg, will in future be carried on under the title of Forrest and Hughes, Limited, as notified in our advertising columns.

Owing to prolonged absence on War Work, Mr. D. Ivor Lewis resigned his position as Vice-President of the Association of Transvaal Architects, and Mr. D. M. Burton was elected in his place. Mr. Harrison resigned his seat on the Council, as he was unable to devote the necessary time to it. To fill the two vacancies thus created the Council co-opted Messrs. Donaldson and Bowie.

It has been decided to ask the Minister of Agriculture to receive a joint deputation of the National Federation of Building Trade Employers and the Association of Transvaal Architects to urge that much more be done for commercial afforestation. The Transvaal Institute of Architects and the Society of Architects (S.A. Branch) and the Secretary of the Agricultural Union are also being asked to join in with the deputation.

## REVIEW OF ARCHITECTURAL JOURNALS.

The elimination of slums is one of the greatest boons resulting from the war; England is determined to no longer have slums, she is further forced to acknowledge that no man after years of open life under strict discipline, healthy occupation, free from the debasing influences of slum life, is going back to the slums. This applies not only to the men at the front, but also to the men and women at the munition works. 163,000 houses erected annually for the next 10 years—that is over 1½ million houses—is the minimum estimate of the Government requirements. A more glorious opportunity for the town planner never existed; will the Government give him the chance and will he rise to this important occasion? The exact method of procedure has not yet been decided on, but it has been suggested that the work should be divided amongst certain municipal areas, each municipality being responsible for its quota. Provided the municipalities view this matter in the spirit of the Grand Manner, such an arrangement should be satisfactory.

Another and not less important post-war matter occupying the minds of the Government is that of labour and machinery. It is contended that not sufficient use is made of existing plant, and that, with a view of supplying the great demand after the war, also of giving employment to returning and disabled soldiers and also women, the maximum amount of return should be obtained from existing machinery and plant. It is contended that no machinery or tools should ever remain idle; to attain this object, it is suggested there should be four shifts of six hours to each plant; by so doing there is naturally so much less plant, machinery and buildings required and consequently less rent, rates, insurance, etc., as against the small amount of depreciation in wear and tear. With the modern methods of hygienic construction of factories, workshops, etc., and the almost perfect methods of imitating daylight by electricity, there should be no objection to such a scheme being adopted, in fact, one wonders why we have been so negligent in the past in leaving our machinery two-thirds of the 24 hours of each day practically idle and useless.

Considerable attention is being given by building employers to the bomb-proofing of buildings, based on the experiences gained by the several air raids; it is contended that even after this war the protection of buildings from bombs must be looked upon as a primary means of defence just as fortifications or other means are found necessary in times of peace just as in times of war.

From experiences gained the following observations have been made, viz.:—

That the magnitude of the explosive depends upon the percussion fuse, if delicately constructed that it, explodes immediately it strikes something hard, the damage is confined to projections above the roof; if, on the other hand, the fuse is not delicately adjusted, the bomb may go through the roof and one or two floors before exploding. The light reinforced concrete roof erected today is not considered sufficient to stop the fall of one of these bombs, which, when dropped from a height of 13,000 feet, has a velocity of 624 miles per hour at the moment of impact. The aim and object in building bomb-proof buildings is not necessarily to stop the bomb, but to explode it, before it enters the building, rather than after. The following observations are made regarding the safety of individuals generally:—The ground floor is considered the most dangerous part of a building, on account of the fragments flying in a horizontal direction, whereas, an upper floor, provided it has a floor or two above of concrete, is practically immune; the safest place in a room is considered near the walls and the



safest part of the walls near the fireplace, this presumably in case of collapse of roof or floors, which would be in the centre.

It is only natural that friends and relatives of those who have fallen at the front are anxious to erect some memorial to their memory, and it has become difficult for the bodies representing municipalities, cathedrals, and other institutions to refuse the permission of these enthusiastic individuals from defacing such places. The Dean and Chapter of one of the most important Cathedrals at Home, amongst other arguments, says: "Intensely interesting as the individual heroic acts of our men at the Front are to ourselves, and to the present generation, it is doubtful whether anything should be publicly commemorated in the minster, which is not of sufficient importance to deserve and to evoke permanent and national interest. The war is not yet at an end, and it is obviously unwise to be filling up spaces piecemeal before we are in a position to take a comprehensive view of what will be required by way of commemoration of the thousands of officers and men who have given their lives for their country."

Apropos of war memorials, it is interesting to note a letter from the resident of the R.I.B.A. to the Prime Minister suggesting that with reference to the proposed National War Museum, that the most desirable procedure would be by a public competition amongst the architects of the whole Empire. It is regrettable, however, that the President did not further suggest that no such competition should take place till those architects fighting at the front had returned. It is extraordinary the ease with which we ignore the interests of those whose interests should come first in our minds. What can be the thoughts in the minds of those risking their lives for us at the front to find that our only gratitude to them for permitting us to live peacefully is to deprive them of their rights in competing for Victory and other memorials for which they have been the primary parties in winning these honours which it is considered necessary to commemorate?

Rodin, the greatest of modern sculptors, has passed away, and though the home journals announcing his death have not arrived, one could write pages of this illustrious man's career. One of the most important declarations he made in his last days was that Rheims Cathedral should be left in ruins as a perpetual monument to German ignominy. He says the devastated cathedral would be the most sublime souvenir of the war it could be possible to imagine. No doubt, Rodin was satisfied there was no other alternative consistent with his great mind. To re-erect the cathedral from drawings and documents would be but a 20th century reproduction of what it was, to pull down the remains and re-erect a new cathedral would be nothing more or less than a modern building.

Apropos of the question of increasing the strength of concrete by using a substitute for water, exhaustive experiments have been made in the use of oil, and in every case the concrete decreased in strength where under compression, and it was found that no advantage whatever was gained from the imperious point of view which its supporters claimed.

The history of the Chair of Architecture at Sydney University is disclosed in a biography of the wife of the Premier of New South Wales, where it is stated she is a most brilliant journalist and interested in all matters affecting literature and art. She was not only responsible for the establishment of this chair, but stipulated that it should be conditional that women should be admitted.

R. H.

## THE VALUE OF PIERS.

By G. GRANGER FLEMING, Licentiate R.I.B.A.

It is a question of practical import how much strength piers afford to walls, and if a saving is effected by the reduction of thickness of walls through their introduction. In this, as in many other things, it is well to take a practical instance and to make comparisons.

A case that came under my observation lately was that of a wall 20 feet long and 15 feet high. The question was whether a wall 1 ft. 2 in. in thickness would be stronger or weaker than one 9 in. thick with a pier 2 ft. 3 in.  $\times$  2 ft. 3 in. in the centre going to the full height.

The formula for finding out what pressure of wind per square foot the wall would withstand is as follows:—

$W/t^2$  this being based on the resistance of the wall being proportional to the weight of its materials, to the square of its thickness, and inversely to its height.

In the above

$W$  = weight of cubic foot of wall.

$t$  = thickness of wall.

$H$  = height of wall.

Taking  $W$  @ 112 lbs. per cubic foot the formula would in the instance before us work out thus:

$$112 \times \left(\frac{14}{12}\right)^2$$

$$15$$

$$112 \times 196$$

$$15 \times 144$$

$$= 10\frac{1}{2} \text{ lbs. per square foot.}$$

This is simple enough in the case of the 1 ft. 2 in. wall without pier, and by multiplying this  $10\frac{1}{2}$  lbs. by the number of square feet of surface the total wind pressure can be arrived at

Thus.—Length = 20 ft, height = 15 ft.

Area =  $20 \times 15 = 300$  sq. ft.

Total wind pressure =  $10\frac{1}{2} \times 300 = 3,150$  lbs.

It is a more difficult matter when one comes to calculate the combined strengths of the 9 in. wall and the pier.

For the 9 in. wall the same process can be gone through Here

$$\frac{W \times \left(\frac{1}{12}\right)^2}{H} \text{ becomes } \frac{112 \times \left(\frac{9}{12}\right)^2}{15}$$

$$112 \times 81$$

$$15 \times 144$$

$$= 4 \text{ 1-5 lbs. per sq. ft.}$$

The pressure which the pier would resist can be taken not only as a 2 ft. 3 in. pier but as 3 ft., that is the projection or thickness of pier plus the thickness of wall = 2 ft. 3 in. + 9 in. = 3 ft.

$$\text{Then formula } \frac{W \times \left(\frac{1}{12}\right)^2}{H} \text{ becomes } \frac{112 \times \left(\frac{36}{12}\right)^2}{15}$$

$$112 \times 9$$

$$15$$

$$= 67 \text{ lbs. per square foot.}$$

Now the area of the 9 in. wall is:—

Height, 15 ft.

Length, 20 ft., less width of pier, that is 2 ft. 3 in. = 17-9.

Thus it is 15 ft.  $\times$  17 ft. 9 in. = 266 sq. ft., which at 4 1-5 lbs. = 1,117 lbs.



And the area of the pier is:—

Height, 15 ft., multiplied by breadth, 2 ft. 3 in.  
= 34 square feet, which at 67 lbs. =  
2,278 lbs.

Now, if it takes 1,117 lbs. to overturn the 9 in. wall, and 2,278 to overturn the pier, if the wall and the pier can be made thoroughly one, most practical men would take it that their united strength would equal their sum, that is that they will unitedly resist the combined forces = 1,117 + 2,278, or 3,395 lbs.

If this is assumed, it will be seen that the 9 in. wall with a pier of 2 ft. 3 in. x 2 ft. 3 in. is really slightly stronger than the 1 ft. 2 in. wall. And it is to be hoped that it would be for we who have to do with these things practically would not be inclined to put in such a heavy pier.

As we have gone so far we might just inquire what would really be the size of pier that would make up the equivalent to the strength of the 1 ft. 2 in. wall. It would require to be slightly less, and we might leave it the same breadth, that is 2 ft. 3 in., but reduce it to 1 ft. 11 in. in projection.

Then the resistance would be worked out thus:—

$$\frac{W \times \left(\frac{1}{12}\right)^2}{H} = \frac{112 \times \left(\frac{32}{12}\right)^2}{15}$$

$$\frac{112 \times 1024}{15 \times 144} = 53 \text{ lbs.}$$

This taken multiplied by area of pier as before, viz., 34 sq. feet = 53 x 34 = 1,802 lbs., which added to resistance of wall, which we found to be 1,175 lbs. gives a total resistance of 2,977 lbs., or rather less than that of the 1 ft. 2 in. wall.

One would like to pursue this till we get the two sums equal, and this can be done by reducing the length of the wall and leaving the pier constant. To arrive at length of wall or centres at which piers should be distributed the formula would be:

$$l \times 15 \times 10\frac{1}{2} = (7 - 2\frac{1}{4}) \times 15 \times 4 \quad 1.5 + 1,802.$$

This 1,802 being the resistance of the pier, and the formula simply working out that the resistance of the whole of the 1 ft. 2 in. wall is to equal the resistance of the pier plus the whole of the 9 in. wall with breadth of pier left out.

$$\text{i.e., } 157\frac{1}{2}l = 63l = 142 + 1,802.$$

$$\text{or } 94\frac{1}{2}l = 1,660.$$

$$\text{and } l = 17.7, \text{ say, } 18 \text{ ft.}$$

This is a much simpler way of calculating than that given in text-books, and although possibly not theoretically exact, yet it would probably satisfy most practical men.

A further inquiry as to saving of cost would be useful, but this and other points can wait till a further issue. Meantime I shall be glad to have any criticisms or suggestions for further studies from technical friends. These could be sent to me, care of the Editor, or in the form of letters addressed to him.

### COMPETITIONS.

The word "competitions" calls up memories of joyous successes and bitter disappointments to many; strong advocacy of the system and vehement denunciations of it. In a way these diverse opinions are the natural outcome of personal experiences; success spells approbation, while failure tends to dissatisfaction and opposition.

No one, however, can oppose the competitive system without laying himself open to the charge of fostering favouritism and patronage, both odious reminders of the evils of hy-gone

ages. We may not realise the vision of a new world after the War, when "comradeship" will replace "competition," but let us not forsake the ideal of equality of opportunity which is undoubtedly aided by honest and fair competition. In spite of many failures the competitive system is the only way to settle the rival claims of contending parties, and if only impartiality and justice are upheld, there need be no fear of the result being generally acceptable. There is a right way and a wrong way of doing things, and the public, through our Association, must be educated up to appreciate the value of open and fair competition in building schemes. This implies the loyal support of every member of our Association to its Council in their effort to improve the existing conditions and put a stop to the exploiting of the profession by unscrupulous parties who are out for "plans below par."

Competitions should be open to all members of the profession who are qualified to practice, and should be carried out under proper conditions, giving the fullest information possible and adjudicated by a competent assessor of repute, whose decision must be final and binding on all.

I cannot call to mind a single instance of a miscarriage of an award where these essential requirements have been fulfilled. Dissatisfaction is often expressed at the first news of a result because the various schemes are not generally known, but only an egotist would deny the justice of an award on inspecting the designs where proper conditions have ruled.

The lapses have occurred and will continue so long as laymen arrogate the functions of professional men and have the temerity (in some instances one is tempted to say dishonesty of purpose) to make awards without expert advice, and architects on the other hand are found willing to gamble their skill and knowledge against opponents with loaded dice.

One of the most despicable practices is to call for competitive plans from architects or tenders from contractors when the employers have decided in their own minds who is to get the work, and they are by their action merely endeavouring to obtain various ideas or a check on the tenders as the case may be. This practice cannot be denounced too strongly, and the only way to stop it is to boycott the persons or institutions that countenance it.

There are certain individuals who profess not to believe in competitions, yet how many owe their start in practice to winning a competition, and these very people are among their number. Others again would abolish competition altogether, but suggest no substitute for it, and they themselves call for competitive tenders from contractors. Clearly these views show great inconsistency, and one is prone to think that disapprobation is mainly due to disappointment and failure, and the only way to appease the objectors is to place the work in their hands, when doubtless all will be well. We hear much of the advantage of a "limited" over an "open" competition; one is told that a great deal of wasted labour and energy is avoided by limiting the number of competitors, and it is possible to remunerate each competitor by reducing their numbers. The principle of the limited competition, however, is bad because it implies selection of a favoured few and shuts the door to the keen, ambitious, and trained worker who happens to be "unknown." The mind is the standard of the man in our Army and Navy to-day, and the ranker has every opportunity of proving his worth. Let us follow this lead and debar no one from coming to the forefront in our profession through lack of opportunity to distinguish himself.

The advisability of appointing one person or a jury to assess the designs in a competition is often debated. I am a strong advocate for one assessor only who should be acceptable to all



the competitors. The strong man in any jury or board will assert himself, and as often as not manages to get his own views accepted by a majority and carries conviction with them. Why not accept the inevitable and let one person decide the issue instead of chancing unanimity with a jury or looking for a minority report which is sure to cause dissatisfaction? The jury system is in bad odour with our judges at the Courts on account of the inconsistent and at times unjust verdicts obtained by this means, and arbitrations with two arbitrators and an umpire often result in the decisions resting with the umpire, so one is led to the conclusion that in practice the single judge principles leaves little to be desired. The need for some action to safeguard our interests is shown by a recent advertisement in our local papers headed "City of Capetown."

"Competitive Designs and Specifications and Tenders are invited for the construction of Garden Villages, minima of 100 dwellings on a site off Klipfontein Road, Rondebosch, and 80 dwellings on a site off Koeberg Road, Maitland."

Designs, Specifications and Tenders under Seal endorsed "Tenders for Workmen's Dwellings," must be deposited in the Tender Box," etc.

This is instructive to show the trend of public opinion as exemplified by a Municipal Council; the architect is to be subservient to the contractor, and presumably in the opinion of these City Fathers this attitude towards our profession is acceptable. I have had an opportunity of discussing this matter with a Cape Town Councillor, and he justified it on the ground that little skill was needed for the designs and the dwellings were only intended for coloured people. Are we content to leave it at that?

N. T. COWIN.

### A FIT OF THE BLUES.

By G. GRANGER FLEMING, Licentiate R.I.B.A.

THE YOUNG 'UN: Well, of all the rotten professions this one takes the cake. And the members of it, with one or two exceptions are a poor lot.

THE OLD HAND: Now, now, my boy, go gashly! Law and the lawyers are bad enough, but there's no use painting them utterly black.

THE YOUNG 'UN: The law! Who's talking of the law? The law can give us points and win hands down.

THE OLD HAND: Well, you must mean the medical profession. It's the fashion now-a-days to rail at the doctors, but crowds who sneer at them are glad of their help.

THE YOUNG 'UN: There you are again. Who's up against the doctors? Man, can't you understand? It this ramshackle old profession of Architecture to which you and I are tied, that's the most rotten on the face of the earth.

THE OLD HAND: Oh, that's your idea, young man! I suppose your losing the Competition has given you the blues. But out with it, laddie! You've had something on your chest for a while. Let's hear all the bad things about the old profession.

THE YOUNG 'UN: Well, to start. We're a mongrel sort of business; a cross between an engineer and an artist. The public know what an engineer is, and what an artist is. But they've little or no time for our kind of mixture.

Then although we pretend to be so artistic and public minded, we are as keen a cut-throat lot as as you'll find in any business. Look at that office building, which should have been yours, and was taken from under your nose by our big friends down the street. Why, man, it's worse than any of the Commercial competitions we hear so much about.

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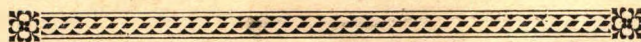
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And that word "Competition" to an Architect is enough to give a double dose of the blues. Here we are—you an experienced man and I just through my training. We produce a scheme which everyone declares to be tip-top, and yet we don't even get a place. Why? Simply because neither of us hob knob with these big pots, the assessors.

And if you want more, I'll tell you what I feel most of all. Here you are a middle-aged man man, with brains enough to run a couple of offices, and yet you can hardly earn bread and cheese. Excuse this personal reference, but I'm thinking of myself when the greyhairs begin to come. If it weren't for this game leg of mine I'd enlist right away, or turn tram conductor, or get into something or other with some prospect of a decent living.

Now, don't you think I've made out a pretty good case against the profession?

THE OLD HAND: Well, you have in a way; but it seems to me your indictment is more against human nature and things in general rather than against our particular line. Let's go into it seriatim.

I'm touched by your reference to me, old fellow, but don't you go wasting your sympathy. I guess that I've got on all right, and have no fear for the future.

And as to competitions. Do drop that critical note. The great majority of competitions are conducted fairly. There have been cases where the assessor was biassed but it is not the rule. Take the last one. Why, man, it is as clear as daylight that the best plan was chosen. Not the most showy, but the one with the real touch in it, and I, for one, am content that the best should win.

As to cut-throat competition inside the profession, I admit there's too much of it. But when you get to know the men as I know them, you will find them generally a very decent

lot, quite anxious to do the straight things by their fellow practitioners, and above, taking work away from another Architect by any underhand methods.

As to your first objection, that we are hybrids, when you examine it, it is our chief glory.

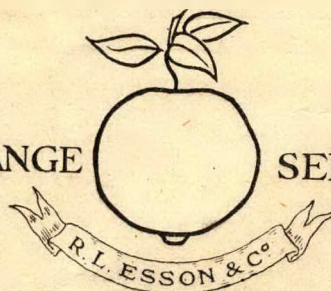
Would you have us with a soul akin to steel, working in rolled joists and ferro-concrete construction, studying nothing but utility and economy? Or, on the other hand, would you have us be mere dreamers, painting some fancy things on canvas? Is it not better that we should be both men of business and men of art, with the broad world outlook, and yet with an eye to beauty.

As to the public estimation of us, it is largely through ignorance that they so esteem us. When it comes to the pass we can prove ourselves to be men of practical knowledge, and even the War Office now admits this.

My own belief is, and it is one that is gripping me more and more as the years go by, that our profession is one of the very best if a man wants to get pleasure out of his work, and to feel that he is not only spending himself in it, but that it is building up in him a capacity both for the utilitarian and ideal aspects of life. Why, man, that very drawing you are working on now, with its bold pillars and its delicate tracery is emblematic of the old profession. It combines strength with beauty, and its joy of expression is begotten of your thorough knowledge of the principles of construction and your trained appreciation of the art values. In what other line of business will you get such a combination? No, no, my boy! let the outsider in his ignorance of the facts criticize the profession, but we who are inside let us do our bit and see that we truly serve the public. We shall then deserve appreciation, and we shall most assuredly receive it.

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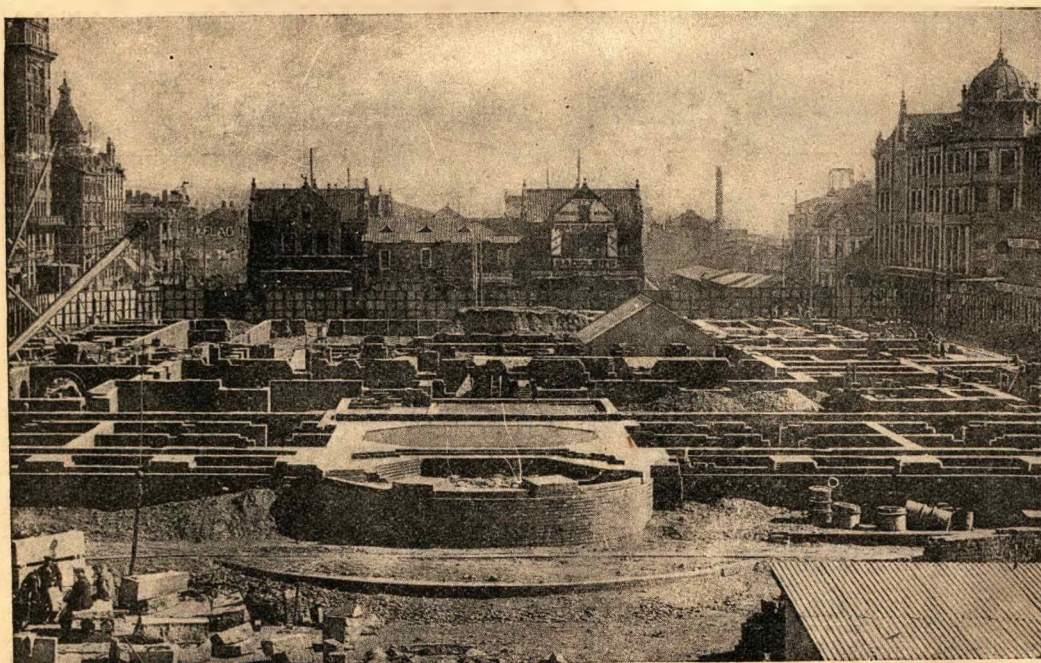
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