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1918

Institutes of South African Architects and the Chapter of South African Quantity Surveyors

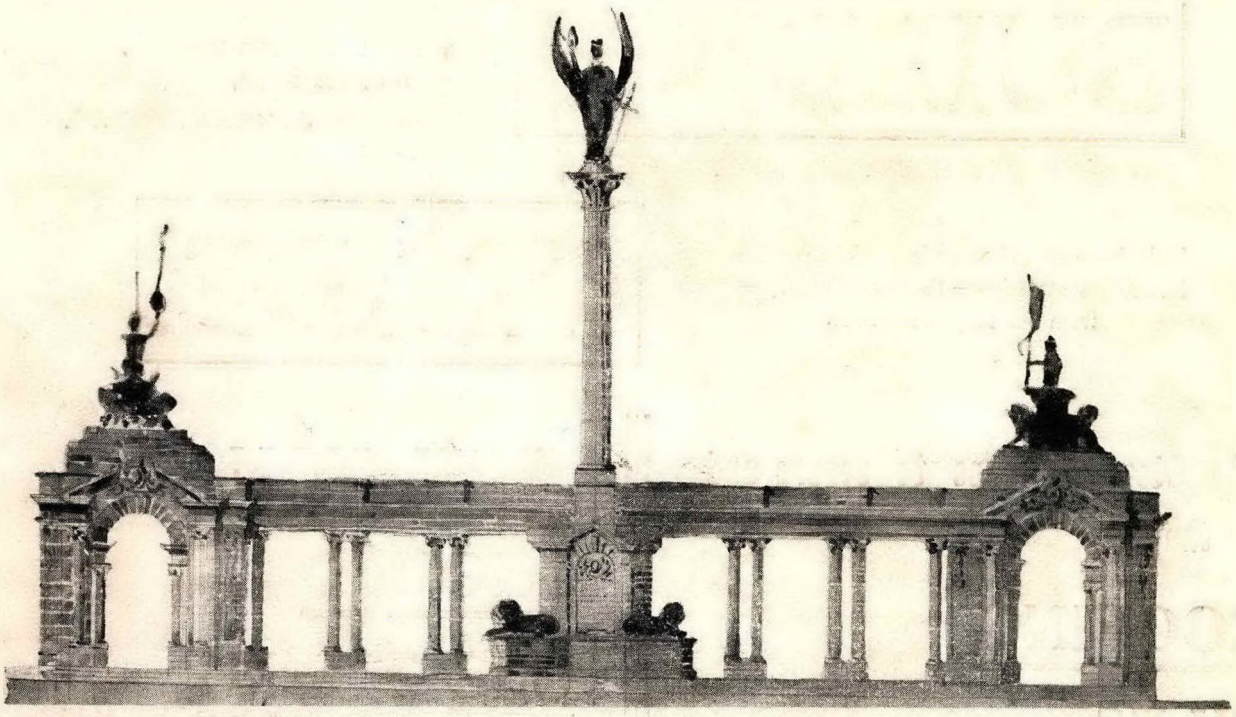
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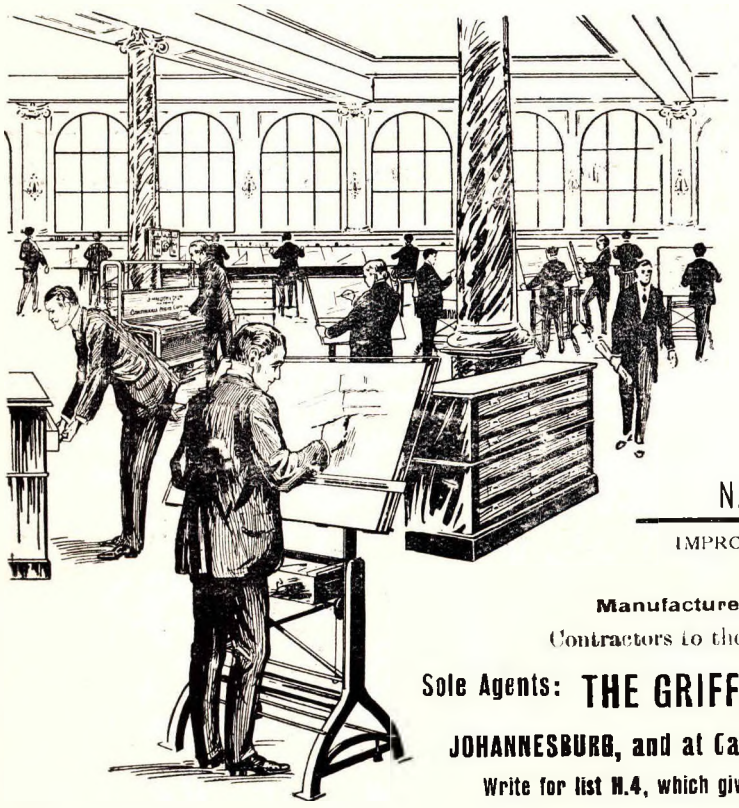
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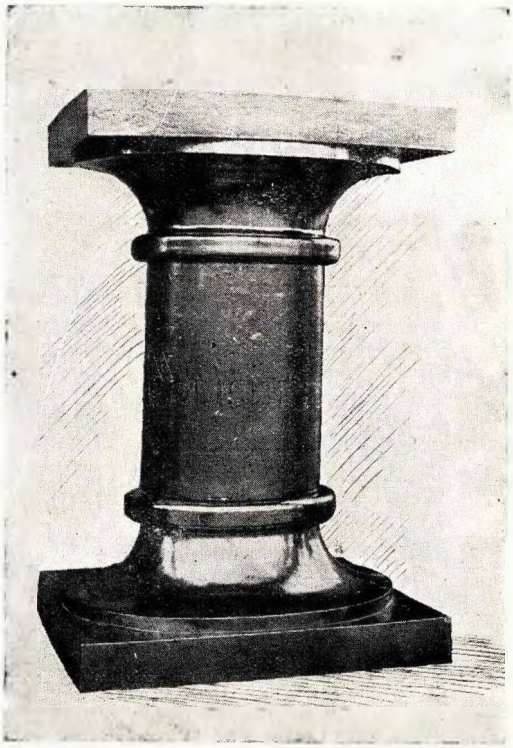
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A SCHOOL OF ARCHITECTURE.

Those who study the Home professional journals will have seen the all-important subject of the education of the architect has been again occupying the attention of the profession recently, as it did some years ago when the Royal Institute of Bristol Architects appointed a committee to go into the question and report. At that time the work of the Architectural Association was much extended in the direction of training, and from a supplementary course to office training it became a School of Architecture, where those intending to follow the profession of an architect might spend their first three or four years in a systematic and methodical manner the science and art of architecture.

It must be perfectly clear to the thinker that if an architect in practice has any work to speak of, he cannot occupy the dual position of practitioner and master too, and give individual attention to a pupil or two, at any rate nothing like the degrees of the master of a school.

If the reader has any doubts on the subject, let him peruse the curriculum of any of the Schools of Architecture such as the before-mentioned, the one attached to the London University; or the Liverpool, and see how the four years are mapped out, and then compare it with the desultory training obtained in some office. He must be a very prejudiced person indeed if he is not convinced that the school is the most scientific way of training an architect.

It is not, of course, suggested to do away with office training entirely, but it must be perfectly obvious,

that one who has had a thorough grounding in the theory of building construction—with demonstration in the workshop and on buildings,—study materials, and design with a practical knowledge of the styles and their application to modern building, is not only likely to be of more use to the practitioner, but what is more to the purpose, he will more readily assimilate and understand what takes place in the office—in the routine of dealing with clients and builders as well as the management of an office, the superintendance of the work, the adjustment of accounts, and the hundred and one things of an architect's work.

As a rule a pupil under the old system of last century, after three or four years, was able to do little more than complete a set of drawings under supervision, certainly not capable of starting in practice or even taking the control of an office.

It may serve a useful purpose, and may be helpful to those contemplating entering the profession, to give a rough outline of the work of a school such as the A.A.

Before entering the school the would-be architect has to give some proof of his proficiency in general knowledge and taste for drawing, and the school has the advantage of testing the student's aptitude for the profession. "If he should find the work uncongenial, he can abandon the purusuit of architecture."

First Year is devoted to the elementary study of the main divisions of architecture and building construction, by lectures and study under the master's supervision. Drawing, both perspective and freehand, Vacation work is set to follow the reading in measuring and sketching buildings. Visits and excursions are arranged under supervision of the masters.

Test papers are set at the end o fthe first year, and these being satisfactorily dealt with by the student he is allowed to enter for the second year, otherwise he has to extend his knowledge in the evening school until he is sufficiently proficient.

Second Year's Course is so arranged as to link up the general course of the first year with the specialized course of the third year into two main divisions, historical study and modern construction. This is done in a similar manner to the first year, by lecture and personal study and demonstrations on buildings and in the workshop. Drawing portion being greatly extended, and frequently by modelling. Life study is introduced at this stage. Students are also required to attend evening lectures. A further list of text books is provided for the students to study under supervision. Test papers are again to be answered, and on the student giving satisfaction is allowed to take up the Third Year Course.

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A student obtaining the third year certificate exempts him from the Intermediate Examination of that Institute and also the probationer's examination (except in the subject of design) for the Royal Academy School, where the student comes in contact with the leading men of the profession.

Special courses are also arranged for the final examination of the R.I.B.A.

It may be a little premature to form a school at present, but it is quite time South African architects seriously considered the subject, if the sub-continent is not to be left behind. Very few indeed are able to send their sons to Europe to be trained, which, of course, would be the best thing to do.

We ought before closing the profession by an Architect's Act, have provided the proper means of training and examining applicants for admission, as it now stands it is much like putting the horse before the cart.

"The International Correspondence School" of London serves as a useful substitution, but it will be recognised that the personal attention of a master is distinctly an advantage, to say nothing of the contact of the students with each other stimulating them in their efforts to excel.

The writer has experienced some opposition—when speaking to individuals on the subject—to the idea of keeping in a line or even advancing with the European countries by such means, but such opposition has, generally, come from those who have not had the experience of architectural training outside an office.

Prof. F. M. Simpson, when lecturing a short time back at the R.I.B.A., gave expression to the following remarks:—"A course of training in a School of Architecture should I submit be compulsory for all students. At present it is only optional. I have already advocated this. It is useless to expect unity amongst architects so long as there is variance as regards the essentials of architectural education, and some students receive no training at all except what they obtain in an architect's office."

E. J. WELLMAN.

A NATIONAL NECESSITY.

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

Repeatedly I have drawn attention to the grave neglect of Afforestation in this country and shown how seriously other governments and peoples have looked upon the subject. It would, however, seem as though my utterances are but "a voice crying in the wilderness," for the governing powers and the mass of the people have not yet awakened to this national necessity.

That there can be no argument against my contentions in favour of National Afforestation goes without saying. It is quite clear that a distinct social benefit will accrue, while the government would have a first-class investment of a most remunerative nature.

Every properly governed State should carry out afforestation with suitable trees on a large scale so as to make it independent—even in special emergency—of importation from other lands. Until a country awakens to this fact it cannot be looked on as a progressive one, for the provision of the future welfare of the land is being neglected. To rely on importation for so vital a commodity places a country in an almost impossible position whenever such an emergency as war or other equally unfortunate contretemps occurs.

Let us glance for a moment at Great Britain and see the lesson we must learn.

During the years 1915 and 1916 the Imperial Government paid no less than £37,000,000 more than its pre-war value for imported timber. Notice that word "more" and ponder on the colossal figure I have quoted. Then apply my remarks. Can you come to any other conclusion than that a country which neglects afforestation on a large scale is failing in one of its most important and essential protective measures.

From the war view the aspect is even more serious and harmful. We are told that no less than 7,000,000 net tons of shipping were required for the purpose of conveying the timber to the shores of Great Britain. That net tonnage approximately represents some 14,000,000 tons dead weight. This vast tonnage has been lost to the Allies at a time when shipping was so important a factor in the provisioning of the different countries and provisioning and munitioning of the great armies in the various battle areas.

In England the Reconstruction Committee have just recently considered this question of national afforestation and have come to the conclusion that some £15,000,000 should be spent during the next forty years after the war. They think that after the expiration of that period the scheme would be self-supporting. They propose that a quarter of a million acres should be planted, some hundred and fifty thousand acres by the State itself and the balance by various local governing bodies, who should be assisted by the Nation. They estimated that such a scheme would eventually result in at least 25,000 families—representing some 125,000 souls—being settled on the land.

If afforestation is so important a matter in Europe, it is certainly none the less so in this country. On the contrary, this being a new country, with a sparse population and vast open spaces, the necessity becomes doubly vital.

To say that we must wait because the war is on is a quite insufficient excuse. Development must go on simultaneously with the due prosecution of the war. It would be quite as sane to suggest that education should cease and the railways stop running until peace again reigns over this restless world. If war is to arrest all development we shall be in a parlous condition when peace with folded wings once more broods over this planet. Yet it is alleged that money shortage owing to the war is the cause of the curtailment of expense in the direction of afforestation. Is the Government so blind that it cannot see that every year lost is an irreparable injury done to the country and the future generations in this sunny clime.

The fact that the public have not yet awakened to the urgency of the question is no excuse for the exhibition of apathy by our Parliament. Our legislators will talk themselves hoarse over some petty party dispute or trivial financial question, but when so important a matter as afforestation comes forward a few bored and sleepy members form the quorum in the House of Assembly.

In times of peace approximately 10,000,000 cubic feet of manufactured pine timber, valued at £529,000, was imported into this country, and to this must be added another half-million pounds to cover the value of other manufactured timber so imported. At the end of this article will be found some tables of imports culled from the Annual Report of the Forest Department for 1917.

The whole of this timber, approximately 15,000,000 cubic feet in measurement, can and should be grown in this country. Yet we find that the best our Government is prepared to do is to grant a few thousands of pounds towards the current year's expenditure on afforestation.

What we need is at least a million pounds per annum for the next fifteen years, and the Afforestation Department knows this quite well.

Surely the Government will not refuse adequate provision if the urgent need for such expenditure is made clear to them. It is not a political question, but, on the contrary, it is one which will in the future

affect all, irrespective of which party they belong to.

If the Afforestation Department is to justify itself it must be supported with ample funds. but the Department must not fail to show what its full requirements are and to press for the necessary financial provision to carry out over a period of years a comprehensive scheme of development. The Department should also complete a detailed survey of the various forest areas, even though the task be no light one, for such would enable research work of great importance to the future to be carried out.

It is so wearying to read all the twaddle written concerning the placing of soldiers on small undeveloped farms. Naturally the great majority of them will prefer an open air life after their strenuous experiences in the battle areas, but what is the use of putting a man who knows nothing about farming on a piece of wild veld. The man may gain some experience of farming under difficulties, but he is certain ere long to have no banking account. Then he will be left to drift back to the ranks of the unemployed in the towns. On the other hand, a developed farm is too costly for the average returned soldier to purchase.

Afforestation will provide a healthy, open air means of earning a permanent livelihood for the returned soldier. The country needs that twenty millions or more of trees should be planted each year. Here is the opportunity of making suitable provision for the returned soldier. Such a step will not only solve the problem of the "returned soldier," but will benefit the whole country enormously within a very few years. It would mean the inauguration of a great and highly profitable industry for the country.

It is said that some two hundred square miles of fertile soil is annually washed away in the brooks and rivers of the United States of America. What must be the annual loss to South Africa? Surely it must be very much greater! If one notes but the discolouration for miles out of the sea due to the soil brought down in our rivers one can quickly gather some idea of the extent of the erosion proceeding in the country. Afforestation will do much towards preventing such loss of soil.

The writer being keenly interested in the practical side of afforestation, induced several large landowners to go in for tree planting. Picture his disappointment at learning that these people had applied to the Government for stocks and had been unable to obtain their requirements. Surely something should be done to remedy such an unfortunate state of affairs. If the Government will not set about afforestry on a large scale itself, surely it should assist those who are willing to undertake some part of the task. The Government Department should be prepared to give the fullest advice and some material assistance to those anxious to plant trees. It should tell them what class of tree to plant and where to plant, and provide the young trees for such purpose.

But it is not only every farm that should have its forest or trees. The different municipalities should utilise much of their town lands for afforestation, and so build up a valuable asset for the coming generation. Such plantations would also provide protection for cattle, and so would serve a useful purpose even during the period of growth.

Natal, the garden province, seems to be well ahead in the direction of tree growing. It is really cheering to read the following words from the report for that Province of the Conservator of Forests:—

> "It is a pleasing feature of forestry operations in Natal to note the very general way in which farmers and public bodies are planting trees. The species most favoured are Eucalyptus. The demand for transplants has increased considerably, and while the Department sales have increased, the various private nurserymen in Natal supply the bulk of transplants required. Not a few of the farmers and public bodies raise their own transplants."

From the very able report of the Union Conservator of Forests one draws the conclusion that more public sympathy towards his department should be given, as also more generous grants from the Ministry for Finance. Should such aids be given, development will really take place and the foundation will have been laid of a great and profitable afforestation scheme.

May I, in conclusion, suggest that the Forestry Department might very well issue pamphlets giving a series of illustration of the different woods grown in South Africa, and informing the public as to the localities and soils suitable for their respective growth. Landowners would much appreciate such leaflets, and considerable aid towards the advancement of afforestation will be thereby given.

S.A.R. BIG PUSH.

The attention of our readers is drawn to the South African Railways and Harbours "Big Push" in aid of the Governor-General's Fund.

Any drawings, pictures or models in connection with transport by road, rail, water or air, either loaned for exhibition or given for purposes of sale, will be greatly appreciated ;and may be forwarded to the Registrar of this Association, who will hand them over to the exhibition authorities.

Extract from Annual Report of the Forest Department, 1917.

Total Imports	1916		1915		1914	
Unmanufactured	Cubic ft.	Value	Cubic ft.	Value	Cubic ft.	Value
Teak ...	62,852	£19,027	53,346	£19,717	48,701	£17,441
Hickory ...	11,343	2,064	16,281	2,783	15,956	2,234
Jarrah and Karri	23,659	2,231	112,317	7,665	289,107	17,624
Mahogany ...	4,022	1,569	4,022	1,109	5,802	1,430
Oak	198,443	35,933	194,633	26,439	114,360	15,650
Pine	5,159,427	427,142	4,042,192	247,812	7,437,567	396,942
Poplar ...	50,664	8,155	34,539	5,212	40,054	5,407
Walnut ...	33,663	6,304	42,182	5,386	42,637	6,337
All other (not otherwise described)	396,800	33,459	487,469	37,054	975,539	55,059
Flooring and Ceiling ...	1,192,614	136,396	912,216	76,651	2,039,736	143,305
Other, Planed, Grooved ...	108.858	12,572	110.145	12,308	173,744	18,093
Total ...	7,242,345	£684,852	6,009,342	£442,136	11,183,203	£679,522

This probably is chiefly Yellow Poplar or Tulip, and not true Poplar (Populus),

Total Imports	1916		1915		1914	
Manufactured.	Number	Value	Number	Value	Number	Value
Boxes (empty and parts thereof) ...	—	£188,603	—	£106,829	—	£85,228
Casks (empty) ...	—	8,493	—	7,194	—	8,278
Handles for Picks, &c.	—	21,918	—	14,580	—	15,217
Houses and Frames	—	27,823	—	17,474	—	51,992
Match-making Material ...	—	—	—	—	—	22
Staves ...	371,931	8,316	467,715	7,582	479,180	9,842
All other (not otherwise described ...	—	55,453	—	36,686	—	38,420
Total ...	371,931	310,606	467,715	190,345	479,180	208,999
Wood Pulp or Wool	—	6,796	—	4,134	—	4,285
Railway Sleepers ...	—	3,316	—	16,484	—	30,206
Total ...	371,931	£320,718	467,715	£210,963	479,180	243,490

This does not, however, include articles largely manufactured of wood, such as vehicles and furniture.

CERAMICS FROM THE SCULPTOR'S POINT OF VIEW.

By John Adams, A.R.C.A., London.

In young countries such as this the artist has special problems to solve, but at the same time if he has sufficient courage, he also has the splendid opportunity of interpreting new conditions of life, and of discovering for himself and all who come after him, fresh and original sources of beauty. In architecture, for example, one believes that the men who first created the fine Cape homesteads must have had a clear vision of the soul of the country, and so their work is still a source of inspiration to the architects of the present day. In landscape painting (the youngest of the arts), we have already several works that are nothing less than a revelation of the spirit of the land itself. In sculpture there are a few 18th Century works of great beauty, which might readily influence some young South African sculptor of the future, and which contain more than a hint of a fine sculpturesque treatment for faience. But in craftwork, it seems to me that the field for sincere research remains practically unexplored, and I believe that great things are going to be done by the South African craftsmen of the future. I am not forgetting that many old farmsteads contain beautiful woodwork and furniture which have already suggested modern developments as at Groote Schuur and other places; but fine design is practically non-existant in such crafts as domestic and ecclesiastical wall decoration, pottery and tile-work, printer's work, jewellery and silversmithing and half a dozen other crafts which one regards as of first importance. It is our duty as well as our privilege to give the young students every possible opportunity, and to prepare public opinion to understand and to appreciate the work which these students will accomplish. For they cannot readily work for "those who are dull in applause of false in their condemnation." If I may take that as my text, I should like to give you some idea of one phase of art which has interested me during the past few years, and which might possibly be used as a means of expressing South African ideals and of beautifying the interiors and exteriors of South African buildings. I propose to deal with Architectural Faience, Ceramic figures, birds, beasts, etc, and decorative modelling in combination with shapes such as vases."

Pottery as a Craft.—I will proceed to give you an idea of how pottery is made, as well as I am able without tangible equipment.

This photograph was taken at Longton, the pottery towns are built over, a series of hills and valleys in North Staffordshire in the following order, starting with Tunstall in the North, through Burslem, Hanley, Stoke and Fenton, to Longton. Many of you will be familiar with the life of the district through Arnold Bennett's novels of the Five Towns. This slide shows a marl hole or clay pit. The various white clays that pottery and porcelain are made of are not found in Staffordshire but come from Dorset, Devon and Cornwall. The local marl pits are worked for the sake of their fireclays, and for their red and butt clays. From the fireclays the potter makes sanitary wares, tiles, and the fireclay boxes, called Saggers, which contain the ware when it is fired in the oven From the red and butt clays are made tiles and teapots principally. People often wonder why this district became the centre of the pottery industry in England, but it is easy to understand when one remembers that it was not until the second half of the 18th Century that the potter began to make white earthenware, and until that period, the fine red clays and abundance of coal, wood, and water in the district, made it an ideal centre for his activities.

The potter calls the clay he uses, the "body." Clay may be used for coarse wares just as it is dug out of the clay pit, but usually a pottery body is a mixture of certain pulverised rocks and earths. These are weighed out in their proper proportions, broken up, soaked in water, and run into a machine called a plunger. Then this liquid clay is run into what is called a slip-press, where all the water is squeezed out, leaving plastic clay behind, ready for wedging. When the modeller has finished making a shape, the mould maker makes plaster piece moulds from the model for the potters to use. It is difficult to lay down rules for the moulds required for making pottery figures, because each modelled subject would present its own problem. In designing ceramic figures, the first thing to consider is the shape of the mass. There are both practical and aesthetic reasons for making the silhouette as simple as possible. This will be better understood when we have discussed the slides of specimens that will be shown on the screen presently; but generally speaking, one can say that there should be no long narrow pieces projecting from the main mass. These would not only make difficulties in mould-making, but also in pressing the clay into the moulds, and in drying and

firing the pieces. I do not say that certain shapes are impossible to make; but I do say that shapes which are not simple and sculpturesque have no right to exist in pottery.

This, and the next few slides hardly come within the scope of our subject as they do not deal with relief work directly, but we must remember that modelling in high or low relief, modelled direct on to the ware or applied in the form of clay presses or by stamps, has in many periods been the means of producing fine pieces.

We will suppose that the figure has been modelled and a piece mould has been made in plaster. The mould is dried before being used. There are two ways of making a figure, one is by pressing clay into the mould, and the other is by pouring slip into it. In either case the mould absorbs a certain amount of moisture, and when the piece is about cheese-hard, the mould is taken apart and the slip casting (or the clay press, as the case may be) is taken out and touched up. The seam marks are taken off and then it is allowed to dry slowly before going into the oven.

These clay figures are not placed in the oven without some protection from the flames. Here you see a man at work making saggers or fireclay boxes in which to place the ware, and here you see the inside of an oven full of saggers that are filled with clayware ready to be fired to what is called the biscuit state. When the oven is full, the entrance or clamming is filled in with firebricks, and all the apertures are stopped up with a mixture of clay and sand. The fires are started very slowly, and the ware is given every opportunity of getting rid of any moisture which may happen to remain behind after the drying of the ware, before the temperature inside the oven begins to get really hot. Afterwards the firing proceeds more rapidly until the required temperature is reached, when the oven is allowed to cool down slowly. Some of the large ovens in the potteries are firing and cooling for a continuous period of ten days, and the temperatures recorded vary between 1,000 deg. C. for common earthenware, and 1,300 deg. C. for stoneware and English china. The highest temperature in the world is reached at Copenhagen, where the Felspathic porcelain of which I shall show examples later on, is fired at about 1,470 deg. C. The fuel may be either gas, coal and coke, or wood. Coal and coke are almost entirely used in England, with the exception of small gas-firing muffles in the Schools of Art, but the artist-potters of France, and the Royal Factories of Sevres, Berlin, and Copenhagen all use a good deal of wood. The historic wares were all fired with wood, which leaevs the atmosphere of the kiln quite free from sulphur, and I am quite sure that where the cost of wood is not prohibitive, it is by far the best material for firing superfine pieces.

When the ware comes out of the oven for the first time, it has an unglazed surface like the back of a tile, and is called "biscuit." It is then given a coating of glaze, either by dipping the ware into a vessel holding a large quantity, or where only a small quantity is possible, by spraying or by painting. It is then placed in the kiln and fired again, but this time, having a fusible material on it which would make it liable to stick to its support when the glaze had fused, the piece is placed on a small biscuit fragment with points, called a hilt, from which it is readily detached. The must not expect the later figures to be necessarily better than the earlier ones. The history of art is a succession of progress and of decadence, followed probably by a dormant period, or even by absolute kiln is fired up to a point usually a little above the complete fusing point of the glaze, and on cooling down it is taken out of the kiln a finished product unless there is gilding or on glaze decoration to be applied. The making of glazes and colours is a difficult matter for anyone not in a works where the necessary conveniences are at hand, and besides that it necessarily takes a long period of study to be able to understand the behaviour of the various ingredients under different conditions, so that the artist is well advised to buy his glazes ready made from the commercial supply houses. Though one must confess there is alomst always a horrible tradey appearance about many of their productions, and every indepenednt artist-potter sooner or later turns his attention to the making of glazes on this account.

Potting in South Africa.

It will be instructive to note what has already been done in Souh Africa in regard to pottery, so that we may see how much ground has been covered up to the present time. There are no artist potters in South Africa, and, leaving the brick and tile works out of the

question for the moment, the only pottery works is that established by the Rand Brick, Pottery and Lime Co., Ltd., at Olifantsfontein in the Transvaal in 1905. China clay, flint and felspar were found in the country, but, no doubt, much of the finer materials were imported. They made general earthenware, wall tiles, floor tiles, earthenware pipes, stoneware bottles and utilitarian ware of that class. The general earthenware section of the works was compelled to close down in 1914 owing to competition from imported wares.

In Natal we have the Indian potter, who makes rather crude pots of red clay thrown on the wheel, which are mainly used for their wedding and funeral ceremonies, and then, of course, there is the block ware, not thrown on a wheel, but built up by hand by the native. None of these need detain us very long, as they have no bearing on the artistic side of pottery, and I will now show you some examples which artists would necessarily study, if only for their technique, on commencing to make ceramic figures.

The construction of this part of my paper has been the most difficult. The point I wish to put clearly before you,—the artistic possiblities of the materials—would lose its force if I adhered strictly to a chronological order. This method would mean inevitably the inclusion of several classes of pottery which the artist will have nothing to do with, such as a good deal of the 18h Century German poreclain. It is vile in taste, even if clever from the potter's point of view, and desirable according to the collector's idea of values. This omission must make my tale a disconnected one, but I am looking forward rather than backward. However, wherever I can I will indicate the trend of the various pieces we are considering. One extinction. What I intend to do is to pick out certain types which seem to be most worthy of the artists attention, and to say a little about their history and technique. The general drift appears to have been from East to West (or from Asia to Europe). Now-a-days the drift is returning from West to East, and we are repaying our debt to China and Japan for showing us how to make fine porcelain and stoneware, by helping them to destroy their own fine native arts, in producing rubbish for the European markets.

Commercial men should be occasionally reminded of his debt to the artists of by-gone days, even the forms of the letters which he clicks out on his typewriter were invented by the primitive artist who made drawings of objects.

Examples—Terra Cotta.	Della Robbia Italian terra cottas	*Modern Treatment.*
Dried clay and lightly fired clay shapes and figures made from the earliest times in Asia.		Business buildings Harrod's Stores, Coliseum, London
Greek and Roman terra cottas.		
Underglaze Painted Tiles.		Butchers, fishmongers and dairy shops
Persian, Turkish, Indian.		De Morgan's tiles.
Stoneware.	Rhenish stoneware, 16th and 17th Centuries.	Drain pipes, ginger beer bottles, Doulton vases.
Made in China at a very early date.	English, 17th and 18th Centuries	Martin Bros.
Porcelain.	Introduced into Europe in the 18th Century	Finest types to-day—Copenhagen, Sevres. Minton & Co.
Made in China.		Chemical utensils.
Tin Enamel.	Della Robbia Italian Maiolica Delft wares	Glazed bricks, French peasant wares, tin enamelled saucepans, railway enamelled advertisements, baths, etc.
Employed by the Arabs and Spaniards.		

So that art and civilisation have not only spread from East to West, but in most cases that which started as art in the earlier periods becomes a purely utilitarian or commercial aset in the 19th or 20th Century.

Greek and Roman Terra Cottas.

The earliest pottery figures to reach a high standard of ability were the Tonagra terra cotta figures of the Greeks and the Romans. The name Tonagra has been bestowed on a whole series of idealised studies from life representing youths, maidens and children in every-day costume which were discovered in the graves at Tonagra. The finest figures were made from

the 5th to the 3rd Centuries B.C. Sometimes these terra cottas were intended as ornaments, sometimes as objects of worship, some of them are caricatures of comic actors. The points to observe are, that they reflect the life of their period, as all great art does, and although they are perfectly adapted to their material, they always retain the solidity and breadth of the great works in marble and bronze which inspired them. They were made by pressing common red or buff clay into a two-part mould, and they were then fired at a low heat, afterwards being coated with a limewash and decorated on the top of that with colour and gold. There is a fine collection both of the figures and of the moulds in the British Museum. Their makers occupied no distinguished position in the realm of art, but these figures remain perfect examples of how beauty is achieved with the simplest means and the commonest materials.

Italian Terra Cottas.

After the downfall of the Roman Empire in the West, the artistic use of terra cotta was abandoned for many centuries, though here and there in Italy and parts of France and Germany that had once been Roman Provinces, decorated terra cotta work was carried on in a minor way. The true renaissance of its use came during the great revival of the arts during the 14th and 15th Centuries, when it was adopted once more to architectural service in the Gothic buildings of Northern Italy and of Germany. That is to say, the work we are now discussing was made over 1,500 years later than the Greek Tonagra figures. We find the sculptors of the Italian Renaissance turning to this material as a medium for the production of reliefs, busts, and even groups of life-size figures, and much of the Florentine terra cotta work of the 15th Century by men like Jecopo della Quercia and Donatello—is amongst the most beautiful plastic work the world has ever seen. To-night we have only sufficient time to nibble at our subject in each period, and this phase of terra cotta deserves much more than that. In one of the rooms of the Victoria and Albert Museum, London, there is a very good collection of Renaissance terra cottas.

In the 16th Century, when so many artists became tired of merely being good, and started to be clever, a more realistic style was introduced, and their terra cottas were painted with oil-colours. It is a singular thing that when art becomes decadent, it shows an amazing ignorance of the right use of material, and it tries to make one thing look like something else. Pine-wood panelling which painted white in the 18th Century, was grained in imitation of oak by the early Victorians. White plaster, a delightful material, is jointed like stonework; and mosaic is so cleverly done that it looks like an oil painting.

Della Robbia Ware.

The name Della Robbia ware is given to Italian terra cottas, by the Della Robbia family, which were coated with tin enamels in white, green, blue, yellow orange and purple. At the time that they were produced very fine painted tin-enamelled wares,—the Maiodica wares of Italy—were being made, and undoubtedly the idea of enamelling the relief came from the same source as the Maiolica, if not from the Maiolica wares themselves. Many writers have attributed the "invention" of tin enamelling to Luca della Robbia, but such historians must be perfectly ignorant of the early history of Italian Miaolican and of the earlier Moorish work.

Luca della Robbia was born in 1400 and died in 1482. By far the finest work is by him, though his nephew Andrea (1435-1525) also did very fine things under Luca's influence. Many members of the della Robbia family worked at these enamelled relief down to about the middle of the 16th Century. The movement had its birth in the best years of the revival of sculpture in Italy, and followed with the other branches of art the natural courses of decadence. Giovanni, the son of Andrea della Robbia, a painter rather than a sculptor by tendency, introduced realistically painted back-grounds and flesh tints. He even painted the terra cotta with oil colours without an intervening coat of enamel, a much cheaper and realistic method, but a rather degraded one. This ware was used as an inset to the grey stone architecture, for altar pieces, and for monuments. Some of the pieces are very large and must have presented a considerable problem in the way of successful drying and firing.

The Italians in England.

For various reasons the Renaissance was slow to gain a footing in England. Brunellschi died in 1444, Alberti in 1472, 40 years before the first Italian artist of importance had set foot in England, and both these men had done work such as could not have been conceived in England for at least 150 years later. The continuous building traditions in the country in the early years of the 16th Century was Gothic rather than Renaissance. The first memorable introduction of foreign workmen into England was due to Henry VIII. and Wolsey. By an indenture dated January 11, 1515, Wolsey leased Hampton Court for 99 years, and he at once set to work to transform it into a magnificent palace. The fabric was built by Englishmen, but Italians were employed on the ornament. The fine terra cotta busts of the Emperors over the entrance are by Giovanni de Majano. This panel is also from Hampton Court. It is set in the brick wall above the gateway of the clock tower, and is dated 1525. It represents Wolsey's arms supported by two amorini under a cardinal's hat. Many other buildings were

decorated in England with terra cotta down to 1540, showing Italian influence, but after the departure of the Italians very little was done in this way, and the next revival did not come about until the middle of the 19th Century.

Mid-Victorian Activity.

The Great Exhibition held in London in 1851, showed the degredation of art that had come about since the extinction of the Renaissance tradition about the end of the 18th Century. If you cast your minds back to this earlier period you will remember that in pottery we had Wedgwood, Adams, Wheildon and Turner. In furniture such men as Chippendale, Sheraton and Hepplewhite. In architecture, the Brothers Adam and Sir William Chambers. The ornamental details of Wedgwood's jasperware, of Sheraton's inlaid woodwork, and of the Brothers Adam's stucco decoration had become rather finicking and anaemic, but there was still a good deal of fine taste displayed in the late 18th Century work, as well as a high standard of craftsmanship, and a feeling for the right use of material. English pottery was simply splendid as I shall presently show. The Great Exhibition of 1851 showed to what depths our design and workmanship had sunk since the Georgian period, and a national effort was made to raise the standard of taste in all matters of desingn. One of the results was the extension of the art school system and a central institution in London, now the Royal College of Art, where, by the way, the great Alfred Stevens was a master. I mention these points because of the revival of the use of terra cotta in England, as a decorative and constructional building material a revival which we owe directly to this mid-Victorian Renaissance of design.

This beautiful terra cotta building in Exhibition Road, London, may be well known to many of you. It is the old Royal College of Science, and its constructional side was designed by the officers of the Royal Engineers, while the decorative work was by Godfrey Sykes, James Gamble, and Reuben Townroe, assisted by the South Kensington students of that day. One may say that the modelled work is of the school of Alfred Stevens, and Stevens often visited Sykes' studio while the work was in progress. I want you to realize that these men were breaking fresh ground. They had no national tradition in terra cotta to help them over the technical side of the difficulties. They also executed the terra cotta on the quadrangle of the South Kensington Museum and on the Albert Hall.

In 1869 a competition was announced for designs for terra cotta relief to be inserted in the new Wedgwood Institute at Burslem, and the selected competitor was a South Kensington student named Rowland Morris. The work consisted of several horizontal panels showing the various operations in the making of pottery, and 12 panels of the months of the year, of which these are two. Morris was then 21 years old, and was allowed to model his commission in the school at South Kensington.

Since those days, an enormous number of buildings have been faced with either glazed or unglazed terra cotta in England, but the great bulk of it is purely commercial in character. Occasionally one sees a building where it has been used rather well, such as Pagani's Restaurant by Professor Pite, or a house in Addison Road, London, by Halsey Ricardo, but we are still waiting for the man who will shoy us the right use of this fine material. I have an idea that the white walls of South African buildings would look splendid if they had ceramic insets, strongly modelled and fine in colour. In the sunlight they would look very jewelly and precious, and surely a decorative treatment of the birds, beasts, and the plants of South Africa would supply a motif which would not only be delightful, but would be entirely fresh and inventive as far as pottery is concerned. One has visions of gardens with large terra cotta or glazed stoneware plant pots, and garden figures of nymphs and Fauns all jolly with colour; and of restful courtyards decorated with tiling as rich and cool as those delightful Persian faiences in turquoise, green and white; and all of them drawing inspiration from the wealth of natural beauty with which we are surrounded, and the sunlight which makes bright colour a necessity.

English and Continental Ceramic Figures.

The rest of my paper I intend to devote to a consideration of some of the English and Continental ceramic figures which have been done since the middle of the 18th Century. Before that date we had fine stoneware figures made by Dwight, of Fulham, at the end of the 17th Century, but of these unfortunately I have no slides. The English 18th Century potter was often a genius, and considering his difficulties, a first-rate artist. These figures, fashioned for the crowd, are typically English, and are entirely of the 18th Century. They are crude and bucolic may be, but they are full of character, and they are fresh inventions. There is nothing like them in any other country or period. I ask you to consider for one moment whether the spirit which created these things was not alive and full of vitality. We have had no popular ceramic art since the spotted dog, the shepherd and shepherdness, and similar earthenware productions of the 18th Century. These were the cottage ornaments of our grandfather's days, and one looks in vain in English homes to-day for ceramic figures showing the same spirit of enterprise. We must be content for the present with what one can only call " bric-a-

brac," with tenth-rate versions of 18th Century Dresden and Sevres.

In 1845 a white unglazed body, called parian was invented in which figures were made by the thousand. You have all seen them under the inverted glass shades in Victorian drawing rooms. I think we may disregard this phase of English pottery, and also pass over the really fine work accomplished by foreign artists at Minton's works in the " seventies," because it was French rather than English in character, and has had no effect upon local traditions. No English firm before the war was producing ceramic figures in accordance with the spirit of the age, and the most interesting work has been done by my friends Harold Stabler and his wife of London. Mr. Stabler is the instructor in metal work at the Royal College of Art, and without any previous knowledge of pottery processes whatever, he has succeeded in producing figures which are bound to have an influence on the trend of English potting in the future. This charming piece was shown at Paris in 1914, and at the Royal Academy in 1915, where one of them was bought by Sir George Frampton and another by Mr. Arthur Hacker, A.R.A., on varnishing day. As this work is done in their spare time, they have not produced many pieces so far, and they are certainly to be congratulated on striking out so boldly on a new path.

I must make a diversion here to show you a stoneware horse made in China during the T'ang dynasty (618-906 A.D.), because I believe the influence of these pieces will be shown in many on artist-potter's work in the future as it already is in Mr. Stablers. Very little has been known about them until quite recently, but they have been unearthed by the railway engineer in his excavations in the graveyards. It was the custom in early periods for ladies of the harem and the military guards to be buried with their deceased lord, along with his horses, sheep, camels, etc. In more humane times these glazed stoneware figures were substituted for live victims, but the former practice no doubt secured the Royal Master a longer life than he might otherwise have had. The Chinese are the greatest of all potters. The marvellous statue of a Buddhist apostle, 4 ft. 2 in. high, made in the period we are discussing, and lately placed on view in the new galleries at the British Museum, shows their skill as potters and their ability as artists. This horse, 2 ft. 3 in. high, is in the Loan Court of the Victoria and Albert Museum, South Kensington. It belongs to Mr. Benson, and he very kindly gave me permission to make a slide from it. The body and legs were pressed in separate moulds and then stuck together. The mane was built to the horse, being a thin slab of clay batted out and cut to the required shape, and then very dexterously laid on the horses neck and modelled into a resemblance of a horse's mane with a toothed tool. What a magnificent convention this mane is, and apart from the daring (and complete success) of the convention, how wonderfully agile the potter was in his delicate, yet masterly, handling of awkward masses of clay. There is no niggling, no faking, and no patching up. It must have been done with splendid speed and decision and then left alone. The whole result speaks of a man who was so perfect a master of his materials that he had no need for trivialities.

I am showing you this horse which I made because it was directly inspired by Mr. Benson's Chinese piece, though mine is entirely different in technique. I am not so dexterous as to be able to " build " a horse like the Chinaman did, so mine was modelled and moulded in the ordinary way. The main problem, as I expect the Chinaman found, was to support the weight of clay contained in the horse's body on the four legs, not only in drying but also in the firing.

This is a pot-pourri bowl I made, also influenced by Chinese work, showing how modelled accessories may be applied to shapes.

We now come to the figures which are acknowledged to be the finest modern pieces in the world. They are made at the Royal Copenhagen Factory, in Denmark. This factory was first established in 1779, but come under its present management in 1883 with Philip Schon as director. Since then they have shown the way to all the Continental potters in scientific glazes, in painted wares, and in modelled wares. It is remarkable that Denmark with no coal and no minerals, with no quartz and no China clay, should stand to-day as the leading porcelain factory in Europe. I hesitate to make comparisons between their progress and the stagnation of English potters before the war. Mr. Arup, the London representative of the Copenhagen factory, told me something of the conditions under which the artist does his work at Copenhagen. He works from ten till two, and then has the rest of the day for making animal and other studies, and preparing for his next day's work. There is a Zoo next to the factory, and it is also well provided with plants and birds. I leave you to form your own conclusions of the result of this intelligent co-operation.

Let me show you how the Germans, ready to take a hint from anybody, have played the sedulous ape to the Copenhagen factory, but instead of producing pieces valued up to £100 each, they have turned out tolerably well-modelled ceramic figures on a commercial basis by the thousand, while British manufacturers have not even considered the decorative possiblities of this new point of view. One does not claim for them a high standard of taste because they were frankly commercial, but compared with German work

of twenty years ago, they show remarkable progress.

The French artist-potters, as well as the Government factory of Sevres, have produced fine pieces under the influence of the Copenhagen artists. This is by a French sculptor named Carriés, who produced a good deal of pottery similar in colour and texture to the old Chinese and Japanese wares.

I do not think anyone up to the present has published a history of modelled pottery, and my paper is based on material I accumulated in studying the subject for my own purposes in London; and it is necessarily somewhat disconnected in character because I have left out much of the less interesting work, such as the 18th Century Jasper ware, as I do not consider it has any message for us in South Africa. At the Durban School of Art we have commenced to experiment with local clays, and have reasonable hopes of one day producing interesting pottery. If progress is slow, let us look outside the schools and try to arouse in the authorities and the general public a sense of their responsibilities with regard to the future of South African art. Let us aim high, for few of us ever get more than we aim for, and most of us usually get less. In a young country, art propaganda is often a difficult and a thankless task, but I believe that the work of the artist, dealing with the soul of the country, is as necessary as that of the engineer or the financier. There are so few artists in this great country and so much to be done. If I have assisted in turning your thoughts in a new direction, I shall regard it as another step along the road which we are all travelling, no matter whether our chosen means of expression is marble, paint, clay, or brick and stone.

ANTITHISES—

Recently it has been stated on good authority—though in quite another direction—that the critical faculty has in our time been cultivated so as to overshadow and perhaps reduce the efficiency of the creative faculty; and as these faculties are principal in the production of architecture from the lowest plane of work to the very highest there is possibly a danger that creative faculty may be seriously set back at a time when opportunities are almost certain to present themselves plentifully for its useful exercise.

The suggestion is that for one man who developes the creative faculty there are many who develope the critical faculty, and that because it is easier to criticize—to analyse, to dissest and show the good and bad parts of any matter—than to find and assemble the parts requisite for the production of even a most moderate work, the majority turn their attention that way, and instead of assisting the creative faculty in reality do their best to stifle it.

The statement—except in its conclusion—reads like a truism newly stated, but not new though important. Unless a proper balance can be maintained no work can be prosperously carried on; for the critic is as important for its proper development as the maker.

There is no great difficulty in suggesting where the fault probably lies, at all events where there is a common and distructive fault in the critic, viz.:—his hostility. No criticism should be hostile, the very office of it is to improve, nourish, and confirm. So that we may assume that when criticism becomes obstructive or distinctive it ceases to have any useful purpose and begins to take a useless even a vicious course, perhaps as dangerous to the critic as to the object of his criticism. But on the other hand, when directed to the improvement of anything no criticism can be too searching or too intense.

There is no hostility here, the diletante and quid perfect, but it is hardly regarded as criticism although using the critical faculty—improving, nourishing and confirming—quite beneficent. This is the manner of it. An invention is put on the market. Its maker has spent much time upon it, criticised and tried every part of it, and finding it work well so far as he is able to judge has ventured to take out a patent for it. The venture turns out well, comes definitely before the public as good and a useful thing, is manufactured and becomes known all over the world. The critics now begin their work. They have a personal interest in their work; the interest, namely, of making an improvement, an added patent we may say, tending in the direction of perfection, to which by one or more such the invention is made to approximate.

There is no hostility here, the delitante and quid nunes have no chance with such a method, they have but a superficial outlook, generally based upon the passing fashion, and far removed from the insight required to observe with any accuracy, further still from the vision of an inventor!

This, of course, is only one instance out of many, but it is the surely characteristic of the best type of criticism and one not clearly developed until modern times. It is a method capable of extension in all directions, applicable to perhaps all things and even all thoughts. At all events it is capable of very extended application and being entirely beneficent, injurious to no one and advantageous to many will, it is hoped, reduce the scope of prefessional critics within the limits of those who have a thorough practical knowledge of the subjects they handle.

Then we should have two great faculties active for mutual assistance and opposed to mutual distruction, working steadily towards perfection with the energy of enthusiasm, the industry of devotion and vision intellectually great.



L'EGLISE SAINT VULFRAN. ABBEVILLE. FRANCE.

A·SUGGESTED·WAR·MEMORIAL WEST·OF·TOWN·HALL JOHANNESBURG

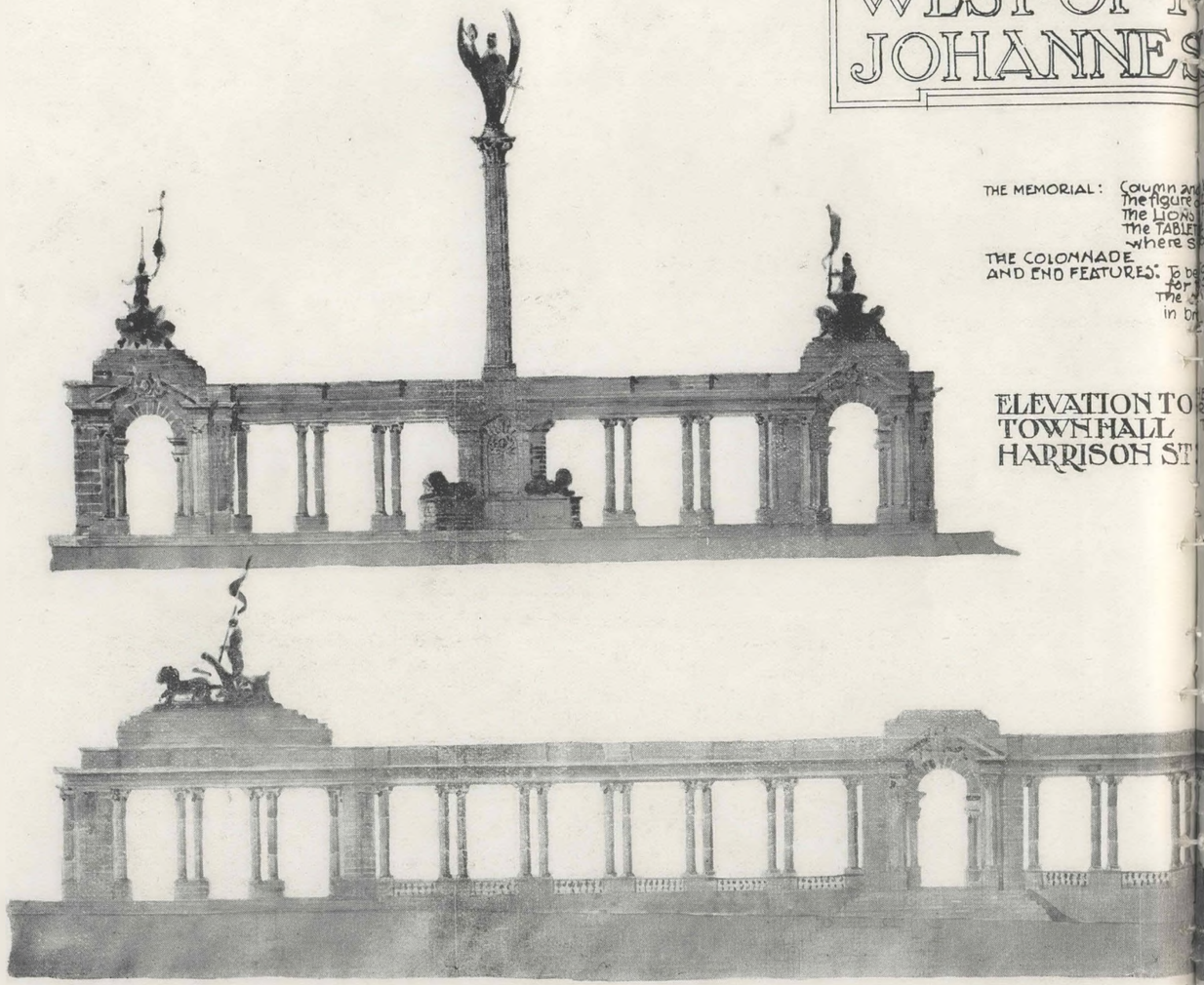
H.G. Veale Architect

THE MEMORIAL: Column and ... be erected in Transvaal granite
The figure ... TRIUMPHANT to be in bronze
The LIONS ... in bronze
The TABLETS ... to have Bas-reliefs of incidents in the war
where so ... were engaged

THE COLONNADE AND END FEATURES: To be ... one and shall be adapted as shelters for ... engers
The ... groups surmounting ends to be in br...

... FORUM: Colonnades 20 feet wide. The FORUM to emblematical of FREEDOM of SPEECH. The circular backing to have frequent recesses for sculptured groups.

... MUSEUM & MUNICIPAL THEATRE: To be the culminating feature of the design.

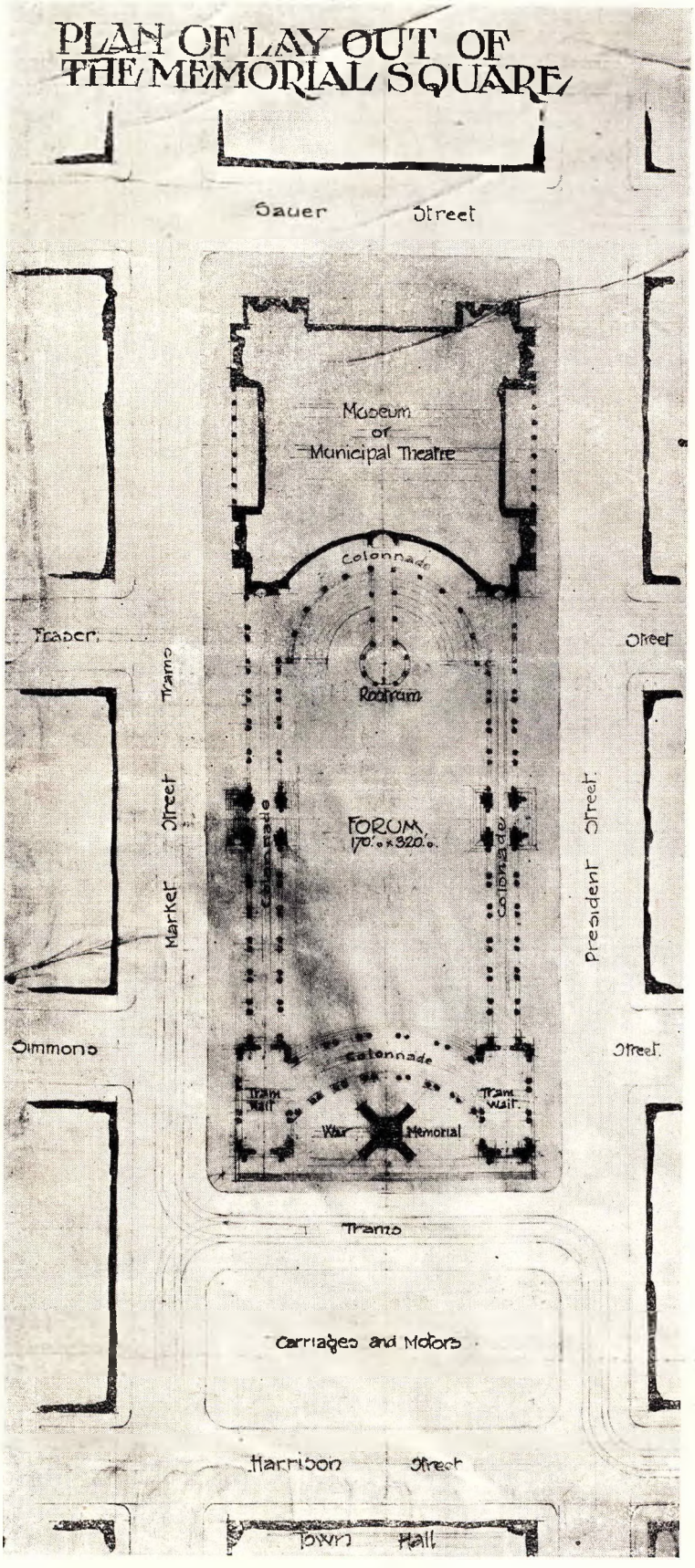


ELEVATION TO TOWN HALL HARRISON ST...



...ATION TO PRESIDENT STREET:

MUSEUM OR MUNICIPAL THEATRE.



A suggested War Memorial, West of Town Hall, Johannesburg.—H. G. Veale, Architect.



INTERIOR, LADY CHAPEL, LIVERPOOL CATHEDRAL.—Mr. G. Gilbert Scott, A.R.A., Architect.

For this manner of criticism is reciprocal, the critical faculty and the constructive faculty working alternately upon the same matter not hostile but in earnest co-operation. The inventor, who may perhaps be called the preventor, or person moving foremost in the matter is the first critic but in most cases not able to see the latent defects of his own inventions, so that after he has done all he can awaits with interest if not with extreme pleasure the changes which will be rung upon it ere it stands perfect of its kind—passed out of the hands of the friendly critics who are each reaping something indirectly for their directly gratuitous labour. With, we may say, their certificate upon it—"we have tired this, examined it thoroughly and added what appeared necessary for its triumphant success. Witness our patents upon it for " which we are content to receive the fees which the said success will return to us." No thought here of hostility, not even rivalry—kindly criticism, fraternal emulation, mutual profit. What could be better done? Bravo, constructive critics; encore, and encore again!

But—architecture! It was stated above that the two faculties, critical and constructive, were principal in the production of architecture, and probably no one will dispute it except those who think the dream is the whole matter—there very often is no dream, not even a general conception fixed or fugitive of a proposed architecture or piece of architecture.

A really fine building has been described as the most impressive thing that has been devised by the mind of man. If so, there is no wonder that a clear mental conception of the design in a work of even moderate importance is rare.

But the modern method of production is in manner of achievement similar to that above described though not so easily traceable; designs not being patented, nor even improvements. Something of the kind has been done—but apparently in ignorance of the nature of the thing patented—and at all events such a method is clearly not capable of general application.

To see the working of the method as aplied to achitecture in a clear light, freed from the intricacies which modern necessities impose upon modern architecture, and which have as yet perhaps not been fully grasped, we must glance at earlier times and what has been most inaptly named Gothic architecture, and which affords the most easily traceable examples.

Architecture had been getting stereotyped. An extraordinary succession of buildings affording but little variety, made no great appeal to the Western world. It was probably the result as in Egypt of a sort of religious proprietorship exercised in matters of art, so that cribbed and confined architecture seemed to approach crystallization. The Romans had, however, introduced arched construction at first probably to allow the increase of the intercolumnniation without producing an attenuated effect, and afterwards for utilitarian purposes, and this new feature was accepted as an invention of merit. It was soon known all the then world over used in every possible way enriched by moulding sculpture and colour until late in the eleventh or early in the twelfth century, possibly by the natural appearance of it produced by intersecting semi-circular arches, the pointed arch appeared, and at first was used indiscriminately with the round arch not very resolutely and seemingly for variety. But the critics—the friendly constructive critics were at work, and bye-and-bye it appeared stamped with approval for universal arch work, a means of overcoming easily difficulties then of importance both for building construction and variety of proportion and arrangement. The stamp of approval was universally accepted all over Western Europe, and from that time probably every important building was constructed in what has been called the pointed style. The method is the same. The critical and constructive mentalities working in unison. It was continued until war and plague and famine set architecture aside for a while, and men's thoughts turned in another direction.

Returning for a moment to our own time, it may seem an impertinence under existing circumstances to discusss how to apply these considerations to the architecture of to-day, or how to chasten the diletante and professional critics, so that laying aside superficial criticism and criticism of policy they may confine their activities to the more arduous but beneficient method suggested above.

But it may briefly be put forward as a practical way of making a start, that if following the example noticeable in South Africa, and there though appearing perhaps in a nebulous manner—groups or schools of architecture could be formed following the lead of some distinguished man, or surrounding some man of promise, a good forward movement could be made and the work be done under the pleasant conditions of good fellowship.

Architects are often supposed, whether rightly or wrongly, generally unfriendly to each other in business at all events lacking the camaraderie of the painter and sculptor. There may be good reason for the appearances which make the impression, or the impression may be entirely erroneous, but however that may be, if we could have some visible undeniable groups of friendly workers it seems certain that good would come of it.

G. W. NICOLAY.

REVIEW OF ARCHITECTURAL JOURNALS.

Those members of our profession, and there are many who have been searching for a satisfactory definition of the word "Architect," will be interested in the several definitions given in one of our contemporary journals. The word is derived from the Greek Architekton, meaning a master builder, it is theoretically defined as "one who designs, specifies and erects a work of architecture,' and defined practically as "one who designs, specifies and supeintends the erection of a work of Architecture."

On being asked in a Court of Law what an Architect was, the reply was once given—a man who practices Architecture, just as a lawyer practices law, and a doctor medicine, but the answer only led to further complications by the witness being asked then what is Architecture? to this we might say he could have replied in numerous ways, our contemporary says Architecture is the art and science that seeks to harmonize in a building the requirements of utility, stability and beauty. A famous French writer gave a more subtle and poetic answer even than this, viz.: "Architecture is the art of constructing buildings upon scientific principles in proportion and beauty."

While others have applied the old definition of art to architecture, viz.: "The representation of an idea in matter," naturally meaning that our buildings should represent the purposes for which they are erected, and express the religious, social and civic aspirations of the people, country and nation together with the local geographical, geological and climatic conditions.

That flats and flat dwellers have come to stay seems a certainty, and apart from the conditons caused through the war which have undoubtedly given preference to flats, there are some people in America who consider them the natural outcome of the changing conditions of the economical life of the people, the old-fashioned home, according to them, is doomed, there is no longer any necessity for a home.

It is argued that parents are the last persons that should be responsible for the future of their children, the majority of parents are unsuitable by nature or by their calling to train children for the battle of life, the most successful men have been taken away from the roof of their parents in their youth, have been sent to boarding school, colleges and universities, and the natures they have inherited from their parents have been usurped by a new environment, training and education.

Therefore, the home being no longer required for the purpose of creating a home or family life, flats are resorted to, but there being no pleasure in working for oneself, the flats must be run at a minimum of work and trouble, so the demand is supplied by a large restaurant attached to each block of flats, run as a co-operative affair by a small committee chosen by the occupants of the respective flats.

Enthusiasts of village settlements with ideal homes will find it very difficult to fall into line with this new phase of life.

The Americans follow no precedences, in fact they more often establish them, and it is interesting to note some ideas in their war hospitals at the front. Profiting on the experience of their Allies, they have produced a perfect plan of a military hospital—and some of the special features are worthy of notice, in case of fire or panic they have adopted the novel plan of hinging that portion of the wall at the back of the bed which, when released, falls down and forms a ramp, on which the beds can be run. The buildings which are all one-storey are built up of standard five foot units, portable and easy of construction and removal.

Amongst the novel attachments to the hospital may be mentioned a portable bath, wheeled into any room with water served from an adjacent tap, and the waste attached to an adjacent outlet. Provision is made for every emergency, including ordinary operations of all kinds, eye, ear, nose and throat complaints, dental and laboratory work, and epidemics of all descriptions, convalescents, and a special building for neuralogical patients; while the details of cooking, heating, laundry, administration, etc., are the acme of perfection.

America has not neglected to profit from the mistakes made by her Allies and benefit by their experience, and it is interesting to note that she acknowledges a scope and sphere for architects, amongst the many spheres of usefulness, mentioned is camouflage, and it is claimed that architects generally become with little training good camoufleurs, and have really become adepts in the preparation of large canvasses, which in texture of colour resemble or mimic natural

objects. That the Allies have lost golden opportunities of employing members of the profession has been repeatedly mentioned in these articles, more particularly in military engineering.

That the engineering profession has proved its worth in this direction may be mentioned by the fact that the well-known reinforced concrete expert of Melbourne, Australia, Sir J. Monash, M.C.E., has risen from a civilian to the new command of the whole of the Australian troops in France in succession to Sir Birdwood.

A somewhat incongrous position has arsien in connection with the adoption of the decimal standards. While the enthusiasts of the decimal standards are working energetically to attain their ends, the British Government is losing no time in pushing the " Brtiish standards " on to foreign countries, and instead of introducing into England foreign measurements and coinage they are translating into foreign languages the equivalents of all the English standards, and spreading them broadcast over all foreign countries, the services of the Consular offices having been placed at the disposal of the Standards' Committee for this purpose, this will naturally make the work of the decimal enthusiasts all the more difficult, if it does not kill their enthusiasm altogether.

We are continually reading of most complicated litigation regarding ancient lights and rights and ways and other complications that makes one feel in this country how fortunate we are to be free from all such disabilities, it is true that we have no right of light or right of ways in Johannesburg, but if we are not careful we shall land our clients into other more serious complications, viz., regarding boundaries, etc., it has never been made generally known that the whole of Johannesburg has been re-surveyed, and that it is now an exception to find a stand its original length and breadth, viz., 100 or 50 Cape feet, the reason being that all encroachments were taken into consideration in the new survey, and the boundaries adjusted accordingly, so it behoves every Architect to obtain from a surveyor the new pegs and new size of stand before attempting to build, as no excuse will now be considerd for any future encroachments, the new pegs being the final boundaries.

Apropos of the recent successful legislation in the Pretoria Tow Council, which enforces all plans to be signed by a registered Architect, and the further attempts to have a dean of Guild established, it is interesting to note that in a large town in England the Architects have devised a scheme whereby all plans submitted to the Town Council are submitted to a committee of local Architects, whose criticisms on same are forwarded to the owner's Architect, the argument in support of such a procedure being that it is better for the designer to receive the criticisms of his contemporaries before than after the stage of bricks and mortar, whether the conclusion arrived at however, viz., that the designer would welcome the opinion of his contemporaries, is true, time will tell, but it is probably a debatable matter, but the underlying principles arrived at are undoubtably in the right direction.

Our friends, the Australians, seem to have the same problems that we have, but evidently have different methods of solving them, with reference to the vexed question of trade custom discounts. After much deliberation, the Federated Council of Australian Institutes of Architects passed the following resolution, viz.: " That the words Prime Cost, or the initials P.C. applied in the specification to goods to be obtained and fixed by the contractor, shall mean the sum paid to the merchant for such goods in the ordinary course of delivery, but not deducting trade discount or discount for cash, etc., etc.

Further, in the event of the proprietor supplying any such goods the amount to be deducted from the contract price shall be the sums set against them in the specification less 10 per cent.

The question of naming streets has been again in prominence by the fact of so many streets of the same name appearing in the one town, notably in London and Glasgow, the American system, though devoid of all historic associations and, of course, only applicable to the Grid iron plan of township, undoubtedly lends itself to the easy and practical means of locating places, all the streets running North and South are Avenues, starting on the West side, First Avenue and onwards; while all the streets running East and West are streets, starting on the South, First Street and onwards. The nearest approach to this system, which is perhaps an improvement, was adopted by our local Kensington township, naming the first street in the township Albermarle, commencing with A. and continuing on each letter of the alphabet, but unfortunately our local friends found they had not sufficient streets and so

sandwiched more in between and named them regardless of this perfect system, any and every name, the consequence being that you may be the other end of the township looking for a street with R., and you find it is a new one sandwiched in between perhaps B. and C.

It is not often in the profession of architecture that youthful genius is sufficiently pronounced to carry the day from all contemporary men of experience and reputation.

Mr. G. Gilbert Scott, who has recently been elected an Associate of the Royal Academy, beat all competitors for the Liverpool Cathedral, at the age of 24, by having his design accepted for the greatest Ecclesiastical building of modern times and the largest Cathedral of Great Britain.

By his election to the Royal Academy he joins such famous men as Sir Ernest George, Sir E. L. Luytens, and Mr. Ernest Newton. Mr. Scott is at the present time in the Royal Marine Engineers, illustrating again the great claim our country has on all and sundry, whether genius or otherwise. May such men as Scott be spared for the future of our race and future generations.

An illustration of the Lady Chapel of Liverpool Cathedral appears in this issue.

R. H.

LETTER TO THE EDITOR.

Re Benoni Town Hall Competition.

To the Editor, *Building*, Johannesburg.

Dear Sir,—I understand there is a misconception of facts connected with the promotion and conduct of this competition, which the following particulars may help to dispel.

The Municipal Council of Benoni, after deciding to promote a competition for designs for their new Town Hall, appointed their Acting Town Engineer as Joint Assessor, and he was solely responsible for the production, issue, and replies to competitors' questions on, the conditions of competition.

This Association was approached by the Benoni Council to nominate an Assessor to act conjointly with the Acting Town Engineer, and duly nominated Mr. E. H. Waugh, before Mr. Waugh's nomination had been accepted by the Municipality the conditions of competition were issued.

My Association immediately made representations, in writing, to the Benoni Municipality to have same amended in the following particulars:

(a) An extension of the time.

(b) Acceptance of pencil drawings instead of ink.

(c) A reduction in the scale from ⅛in. to 1-16in.

The Benoni Municipality replied agreeing to (a) and (b), but refused to reduce the scale.

My object in writing you on this matter is to demonstrate that this Council's nominee, Mr. E. H. Waugh, had nothing to do with the preliminaries connected with this competition.

Yours faithfully,

M. K. CARPENTER,

Registrar.

WHAT THE ASSOCIATION IS DOING.

Since the last issue the Hon. Business Manager of this Journal, Mr. D. M. Sinclair, M.S.A., found it necessary to tender his resignation. The Council, in regretfully accepting same, placed on record the Association's appreciation and thanks to Mr. Sinclair for the time and labour expended in materially helping to bring about the present success of the Journal.

The Registrar, Mr. M. K. Carpenter, has been confirmed in that position, and also appointed Business Manager of the Journal, and in future all matters relating to the Association and its Journal can be attended to any day between the hours of 2 p.m. and 5 p.m. at the office of the Association, 68, Exploration Buildings, telephone No. 5821.

On July 24 and two following days a qualifying examination was held in the School of Mines and Technology, at which three candidates presented themselves. The Board of Examiners comprised Messrs. E. H. Waugh, Ernest M. Powers, S. C. Dowsett and H. G. Veale, the latter also officiating as Moderator. All three of the candidates were successful in passing the examination and subsequently were elected by Council to membership of the Association and registered as Architects, their names are:

Montague John Heir.

Harold Wolseley Spicer.

William Benjamin Turner Newham.

The Benevolent Fund has benefited to the extent of £5 2s. Two guineas of this amount was received from an anonymous donor through Mr. F. L. M. Fleming, and £3 was donated by Mr. J. S. Bowie, of Springs.

Members are again reminded of the Architects' Sectional Fund in support of the Governor-General's "Big Push." Monthly subscriptions and donations are earnestly solicited, and should be sent to the Registrar of the Association, who is acting as Hon. Secretary to this Fund. Cheques should be made payable to the Governor-General's Fund, Architects' Section, and will be acknowledged in the columns of this Journal.

We regret having to record the death of one of our members whilst a prisoner in enemy hands. Sergt. John Adams, of the 1st S.A.I., saw service in German West prior to proceeding overseas with the Infanrty Brigade. As notified in our last issue, he was reported missing on the Western Front last March, and we are now officially informed of his death from wounds while a prisoner in Germany.

Members are particularly requested to mention the name of this journal, *Building*, when corresponding with advertisers.

Members will encourage the success of this official journal of the Association by passing all their enquiries to firms represented in the advertising section, a gazetteer for this purpose is provided on page 3.

OUR ILLUSTRATIONS.

FRONTISPIECE.

Suggested War Meforial for Johannesburg.—This illustration is the eastern portion of sketch design for the lay-out of the Square immediately west of the Town Hall. We are indebted to Mr. H. G. Veale for his sketches and suggestions for a War Memorial worthy of Johannesburg. The complete scheme is illustrated in our centre pages.

LADY CHAPEL, LIVERPOOL CATHEDRAL.

The interior of the Lady Chapel of Liverpool Cathedral is of particular interest and value; being the first portion of Mr. G. Gilbert Scott's great work, we are able to appreciate and anticipate to some extent the noble proportions and beautiful detail of the completed Cathedral. It is very rarely that the opportunity occurs for an architect in modern times to carry out a building in the true Gothic style, and Liverpool Cathedral carries out the best traditions and spirit of the glorious Gothic architecture of the Middle Ages.

L'EGLISE "SAINT VULFRAN," ABERVILLE, FRANCE.

This beautiful example of French Gothic of the decorative period is situated on the Somme, and so far as is known still remains intact. We are indebted to a "Springbok" of the 1st South African Infantry Brigade who is at present in hospital in France, for the opportunity of reproducing this picture of a perfect piece of architecture.

The 1st South African General Hospital attached to the B.E.F. in France is in close proximity to this noble edifice.

A SUGGESTED WAR MEMORIAL AT JOHANNESBURG.

I feel it is not premature and, therefore, no apology is necessary in opening a discussion as to the erection of a memorial to commemorate the most stupendous human upheaval in the world's history.

We cannot conceive what the ultimate results of the great war will be, but that the world will emerge from the gigantic and terrible ordeal a better, juster, more liberal and more tolerant world is undoubtedly the aim and object of our statesmen and soldiers, as well as those noble wives, mothers and fathers who have so bravely given up their loved ones in the great cause.

Of the men who have laid down their lives or have been disabld in the war, no words can be framed to adequately convey a nation's thanks. We simply have to bare our heads in silence and tears.

As the largest town in South Africa, Johannesburg has perhaps contributed the greatest number of men to the army, and it is fitting that a memorial should be erected here of a more national character than other cities may find possible; although one would like to see grand monuments as well as memorials of a useful nature undertaken in every city in the Union.

Fortunately for Johannesburg there is an ideal site in the heart of the town available. The western portion of the Market Square has been reserved for some such object, and my idea is that this ground should

be devoted to a memorial of such a character that it should not only be a monument to the dead, but also a permanent and lasting inspiration to the living and the future generations.

In this rough sketch I have tried to symbolise three ideas. First, a monument to the dead. Second, a memorial for the use of the living, in the form of a forum or meeting place for freedom of speech. Third, a memorial for the benefit of the future generations in the erection of a museum or municipal theatre, where our children may have an opportunity of acquiring culture and learning.

Thus: The monument to the dead is typified by a granite column of noble dimensions, surmounted by a bronze figure of "Justice triumphant." This column is supported on a large base whereon the names of the fallen are inscribed in letters of gold, and, guarded by couchant lions, signifying that justice has been triumphant through the sacrifice of the blood of heroes and the strength of the nation's character.

The *forum* symbolises freedom as another great aim of the struggle and, as freedom of speech is the most valued possession of the peoples of the British Empire, so shall this Forum become Johannesburg's court of free speech for its citizens.

The third feature: A museum and municipal theatre serves possibly the most significant object. To engender learning and culture in the future generations—a place where our children and their children may have demonstrated to them the great lessons and principals of freedom, liberty, justice and tolerance, and thus, by such education, the coming races may be brought to become noble members of a civilisation, the solid foundations for which the whole Empire is to-day engaged on laying down and cementing with its blood and treasure.

I put this suggestion forward in the full hope that when the time arrives Johannesburg will undertake a war memorial worthy of itself and of the greatness of the occasion. That we may not be content with the erection of a simple memorial, but shall erect a monument of a grand nature which will prove of actual value to the living and be a constant source of inspiration to those who come after us.

The cost of such an undertaking should not be gauged in money value alone: the money cost should not hinder its fulfillment, for the real cost has already been defrayed in the lives of some of the best manhood which Johannesburg ever possessed.

H. G. VEALE.

GOVERNOR-GENERAL'S FUND: ARCHITECTS' SECTION.

Subscriptions received during the months of July and August:—

July.

D. A. McCubbin	£1	0	0
B. R. Avery	1	0	0
Baker & Fleming	1	0	0
H. Hancock	2	2	0
D. M. Burton	1	0	0
G. S. Burt Andrews	1	1	0
Anonymous (2 months) ...	1	0	0
D. M. Sinclair (12 months) ...	12	0	0
C. Hosking (3 months) ...	3	3	6
Allen Wilson	1	1	0
J. S. Bowie	1	0	0
Cowin & Powers	1	0	0
Howden & Stewart	2	2	0
		£28	9 6

August.

Baker & Fleming	1	0	0
D. M. Burton	1	0	0
D. A. McCubbin	1	0	0
J. A. Moffat	1	1	0
H. Hancock	2	2	0
B. R. Avery	1	1	0
Cowin & Powers	1	0	0
	8	4	0

Of the foregoing amounts £35 13s. 6d. has been paid over to the Hon. Treasurer of the Central Fund.

M. K. CARPENTER,

Hon. Secretary.

CAUSES OF EFFLORENSCENCE ON MASONRY.

Methods for Preventing the Trouble—How the Deposits may be Removed.

By W. C. Dumas.

It is not uncommon to see an otherwise excellent piece of brickwork or masonry marred by a scum of white efflorescence on the surface. Sometimes these deposits appear in the mortar joints. This is not only unsightly, but in some cases may positively endanger the strength of the work. The cause of these deposits is now fairly well understood, and several methods

have been proposed for preventing their formation. The remedy must, however, be applied during the course of manufacture of the brick, or at the time of the mixing of the mortar.

The amounts of the salts which compose these scums vary between 0.001 per cent. and 0.50 per cent. As little as one thousandth of 1 per cent. can be seen on the surface of a brick. The maximum is about one-half of 1 per cent.

In most cases, these efflorescences are sulphates, but they may be almost any other soluble salt. Lime is the chief offender, and in the majority of cases the greater part of these deposits consists of sulphate of lime. Analysis show these residues to contain in addition to sulphate of lime, magnesium sulphate, potassium sulphate, sodium sulphate, and aluminium sulphate in lesser proportions.

Why do these salts form in certain cases and in other cases they do not? In the manufacture of brick, the principal materials used are water, clay and coal. All of these materials may contain impurities, which contribute to scum formation. The coal may contain a high percentage of sulphur, which during the burning process unites with the insoluble materials of the clay to form soluble salts to a greater or lesser extent. Afterwards, especially if the bricks are used where they are exposed continually to moisture, the soluble salts are gradually brought to the surface by the capillary action of the moisture in the interstices and pores of the brick and then deposited on the surface as a scum.

The clays used in the manufacture of brick may contain soluble salts caused in them by weathering. This is often the case, especially if the material has been obtained near the surface where decomposition takes place faster. In the case of clays of this kind, future trouble can be avoided by first leaching out the soluble salts. A more expensive process is to add barium salts to the wet clay before moulding.

Some waters used in the manufacture of brick and earthwares of all kinds carry much dissolved matter, which is incorporated with the clay in the mixing. When the raw bricks are dried and burned, and the water is evaporated, the chemicals contained in the water are left behind and may prove a troublesome source of scum formation. Such waters should be treated before they are used to remove the objectionable salts.

The drying and burning processes have much to do with the tendency of the product to form scums.

First, the drying must be steady and rapid, and condensation of moisture during this stage must not take place. Afterwards, thorough burning must be had in order to give a hard, compact brick, as well as to cause a partial combination of the soluble salts with the silica of the clay.

The causes and prevention of efflorescence in mortars are the same as those for brick. It is very essential to prevent the formation of scums in mortars because these deposits weaken the material in the mortar joints.

Many patents have been taken out for the prevention of efflorescence on bricks. Some of these patents call for the coating of the outer surface of the wall with some material impervious to water after the bricks are in place. Others of these patents provide various substances which are incorporated in the clays before they are burned. But the surest way to produce a sound product is to control the purity of all materials entering into its manufacture.

Occasionally the cause of the trouble is outside the brick itself. There is a case on record where a certain kind of sand-lime bricks showed a marked efflorescence. Upon examination, it was found that the materials used in the manufacture were free from soluble salts. Finally, the trouble was traced to the storage yards where cinders and ashes had been dumped. The sulphates and other soluble salts from them had been absorbed by the raw brick and were the cause of the trouble.

Efflorescence deposits can be removed from walls without much trouble. If the greater part of the scum is calcium sulphate, a dilute solution of hydrochloric acid consisting of one part of strong acid to five parts of water, will do the work. In certain other cases, the wall is first washed with a solution of hard soap consisting of two pounds of soap to the gallon. After this, it is washed with an alum solution containing one pound to the gallon.

INTERESTING PARS ON SANITATION AND PUBLIC HEALTH MATTERS——

Recent experiments on frozen ice-cream have proved beyond doubt that diphtheria and typhoid organisms are not killed by freezing.

It will be well to bear this in mind during the summer months.

Studies have recently been made in America which have resulted in the discovery that children occupying class rooms ventilated by open windows

were less subject to respiratory troubles than children occupying similar class-rooms ventilated by mechanical methods.

Under Interstate Regulations preventive efforts against the importation of typhus from Mexico were instituted in 1917. Travel by rail from El Paso by the Mexican labouring classes or their families was not permitted—" unless they were provided with a certificate showing that they had been de-loused, bathed and vaccinated, and that their clothing and baggage had been disinfected."

From the date of this ruling being enforced no cases of typhus in the United States have been traced to El Paso.

(We might with advantage adopt similar measures in connection with the movements of natives in South Africa.)

The President of the Madras City Corporation says:—" I reiterate my belief in the absolute necessity from the sanitarian's point of view of tramway extension." " Relief of overcrowding " is an idle phrase unless extension of chaep and rapid communications there be to lend deality to it.

The American Government allowance of water to its soldiers is 50 gallons per capita per day, or 80 per cent. more water on the average than is supplied in the British, French, Belgian, German or Canadian Cantonments.

The cost of installing the water supplies to the American Army Cantonments has been about one-fifth as great as the installation of average municipal plants. It is estimated that 25 per cent. of this difference in cost is due to the distribution mains being of wood-stave pipe, which is 60 per cent. the price of cast iron.

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In announcing new drainage projects of several hundred square miles in the fever-stricken districts of Bengal, Lord Ronaldshez, Governor of Bengal, said that the grim tragedy of malaria was causing annually 350,000 deaths.

Bolshevism in sanitation must be as hopeless of success under strain of circumstances as in politics.

As the Sergeant is the backbone of the British Army, it can safely be said that the Sanitary Inspetcor is the backbone of any organization dealing with the health of communities.

At a recent deputation to Local Government Board, England, appointed by the Sanitary Inspectors' Association, Sir James Crichton-Browne, the eminent physician and President of the Association, in addressing the Parliamentary Secretary to the Board (Mr. Stephen Walsh, M.P.), made use of the following expression:—

"I do not hesitate to say that but for practical sanitation we should have lost this war long ago." "It is the skilled intelligent devotion of the Sanitary Corps that has maintained a level of health never before approached in any campaign."

"Look at Serbia, where there is no sanitation. Why, in the first four months of 1915 out of an army of 300,000; 150,000 men went down with typhus, and of these 30,000 died; while of 350 doctors, 126 succumbed to these diseases and 45 died.

R. BEATTIE.

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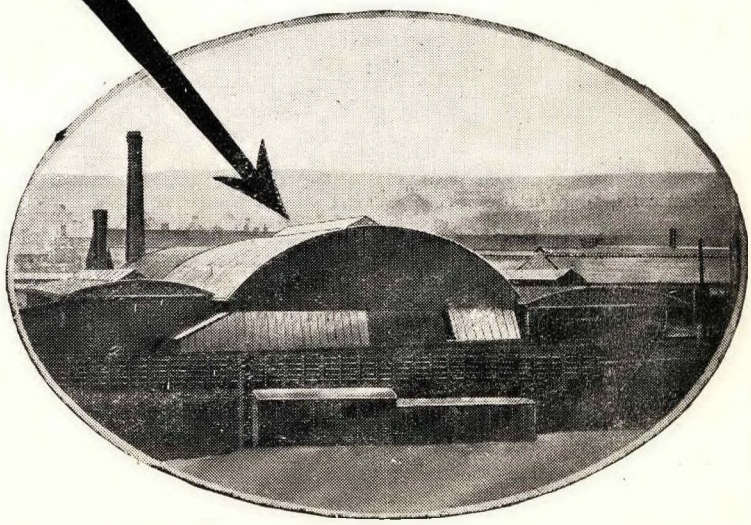
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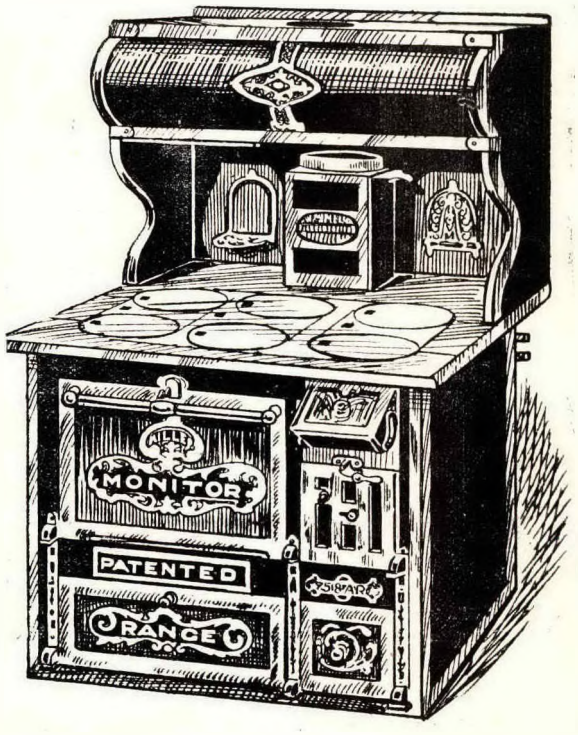
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